

**1** Hydraulics **3-284**

**2** Hydraulic Quick Release Couplings **285-320**

**3** Pneumatic Quick Release Couplings **321-406**

**4** Monitor & Test **407-446**

**5 Pneumatic & Vacuum** **447-762**

**6** Push-in Fittings & Tubing **763-918**

**7** Valves & Actuation **919-1060**

**8** Ring Main **1061-1136**

**9** Hose Tails, Adaptors, Fittings & Manifolds **1137-1224**

**10** Stainless Steel **1225-1332**

**11** Malleable Iron **1333-1398**

**12** Hose, Couplings, Ducting & Hose Reels **1399-1510**

**13** Clips & Clamps **1511-1558**

**14** Paint, Sprays & Adhesives **1559-1590**

**15** Blow Guns, Vacuum & Nozzles **1591-1616**

**16** Fuelling, Lubrication, Wash Down & Misting **1617-1696**

**17** Compressors & Air Tools **1697-1726**

**18** Hand Tools & PPE **1727-1765**

# SECTION 5

## Pneumatic & Vacuum

**5.01** ISO 6432 Cylinders & Accessories **450-477**

**5.02** ISO 15552 Cylinders & Accessories **478-515**

**5.03** Compact Cylinders & Accessories **516-536**

**5.04** Cartridge & Roundline Cylinders **537-541**

**5.05** Grippers & Drives **542-544**

**5.06** Manual & Mechanical Valves **545-574**

**5.07** Solenoid Valves **575-599**

**5.08** Pilot Valves **600-610**

**5.09** Logic, Specialist & ISO Mount Valves **611-636**

**5.10** Air Preparation **637-704**

**5.11** Air Boosters **705-706**

**5.12** Suction Cups **707-749**

**5.13** Suction Cup Fittings **750-754**

**5.14** Vacuum Pumps **755-757**

**5.15** Point of use complete Pump & Cup Units **758-760**

**5.16** Vacuum Filters **761-762**

# SECTION 5

## 5.01 ISO 6432 Cylinders & Accessories

- Pneumatic Mini Cylinders
- Round Cylinders
- Mountings
- Stainless Steel Mini Cylinders
- Mini Air Cylinders
- Attachments & Accessories
- Mini-ISO Cylinders



450-477



## 5.02 ISO 15552 Cylinders & Accessories

- ISO 15552 Cylinders
- Mountings
- Accessories
- Reed Switches
- Attachments



478-515



## 5.03 Compact Cylinders & Accessories

- Compact Cylinders
- ISO 21287 Compact Cylinders
- ISO 21287 Cylinders
- Reed Switches
- Proximity Sensors
- ISO Compact Cylinders
- Repair Kits
- DFM Guided Drives
- Mountings & Accessories



516-536



## 5.04 Cartridge & Roundline Cylinders

- Pneumatic Cylinder & Transmitters
- Round RNDC Cylinders
- Roundline Cylinders & Mountings
- Round RNDC Cylinder Accessories



537-541



## 5.05 Grippers & Drives

- Pneumatic Grippers
- Semi-Rotary Drives



542-544



## 5.06 Manual & Mechanical Valves

- Panel Mount Valves
- Top Lever Valves
- Mechanically & Manually Actuated Valves
- Mechanical & Manual Valves
- Aerial Valves
- Directional Control Valves
- VME Roller Valves
- Push/Pull Valves
- Lever Valves
- Plunger Valves



545-574

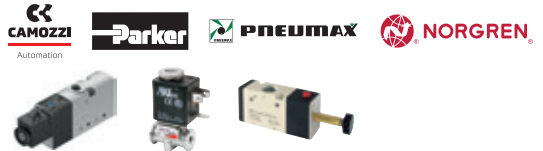


## 5.07 Solenoid Valves

- Solenoid Valves
- Electrically Actuated Directional Control Valves
- Solenoid Actuated Poppet Valves
- Solenoid Control Valves
- In-line Valves
- Pneumatic Valves
- In-line Piston Spool Valves
- Manifolds



575-599



## 5.08 Pilot Valves

- Pilot Valves
- Directional Control Valves
- 3/2 Pneumatic Valves
- Pneumatically Operated Valves
- Solenoid Valves
- 5/2 Pneumatic Valves
- 5/3 Pneumatic Valves



600-610



# Pneumatics & Vacuum

## 5.09 Logic, Specialist & ISO Mount Valves

- Logic Valves
- Timers & Controls
- ISO Valves
- Non-return Valves
- Directional Control Valves
- Pressure & Vacuum Valves
- Industrial Vibrators
- Ball & Check Valves
- Mufflers
- Proportional Valves
- Exhaust Flow Regulators
- Automatic Valves
- Silencers
- Pneumatic Logic Valves



611-636

## 5.10 Air Preparation

- Filters, Regulators & Lubriactors
- Soft Start Valves
- Porting Blocks
- Pressure Regulators
- Filter Regulators
- Modular Valves
- Minature FRLs
- Pressure Switches
- Air Treatment Units
- Fixing Brackets
- Accessories



637-704

## 5.11 Air Boosters

- Pressure Booster
- Air Pressure Boosters



705-706

## 5.12 Suction Cups

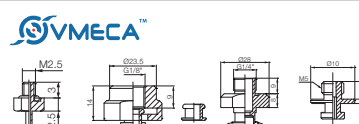
- Single Bellows
- Direct Mount Bellows
- Double Bellows
- Bellows & Cross Groove
- Long Multi Bellows
- Dual Lip Suction Cups
- Oval Universal Cups
- Universal Cups
- Flat Cups
- Flat & Curve Cups
- Mark Free Cups
- Flat Structure
- Deep Cups
- Foam Rubber Cups



707-749

## 5.13 Suction Cup Fittings

- VU/VB/VF/VBL/VBU/VBX/VFC Series
- BL5040 Series
- VOBL 35 x 90 Series
- FF Series
- BL5040 Series



750-754

## 5.14 Vacuum Pumps

- Green Pumps
- VSM Pumps
- VCS Pumps
- Magic Pumps
- Turtle Pumps



755-757

## 5.15 Point of use complete Pump & Cup Units

- Vacuum Grippers
- Suction Lips



758-760

## 5.16 Vacuum Filters

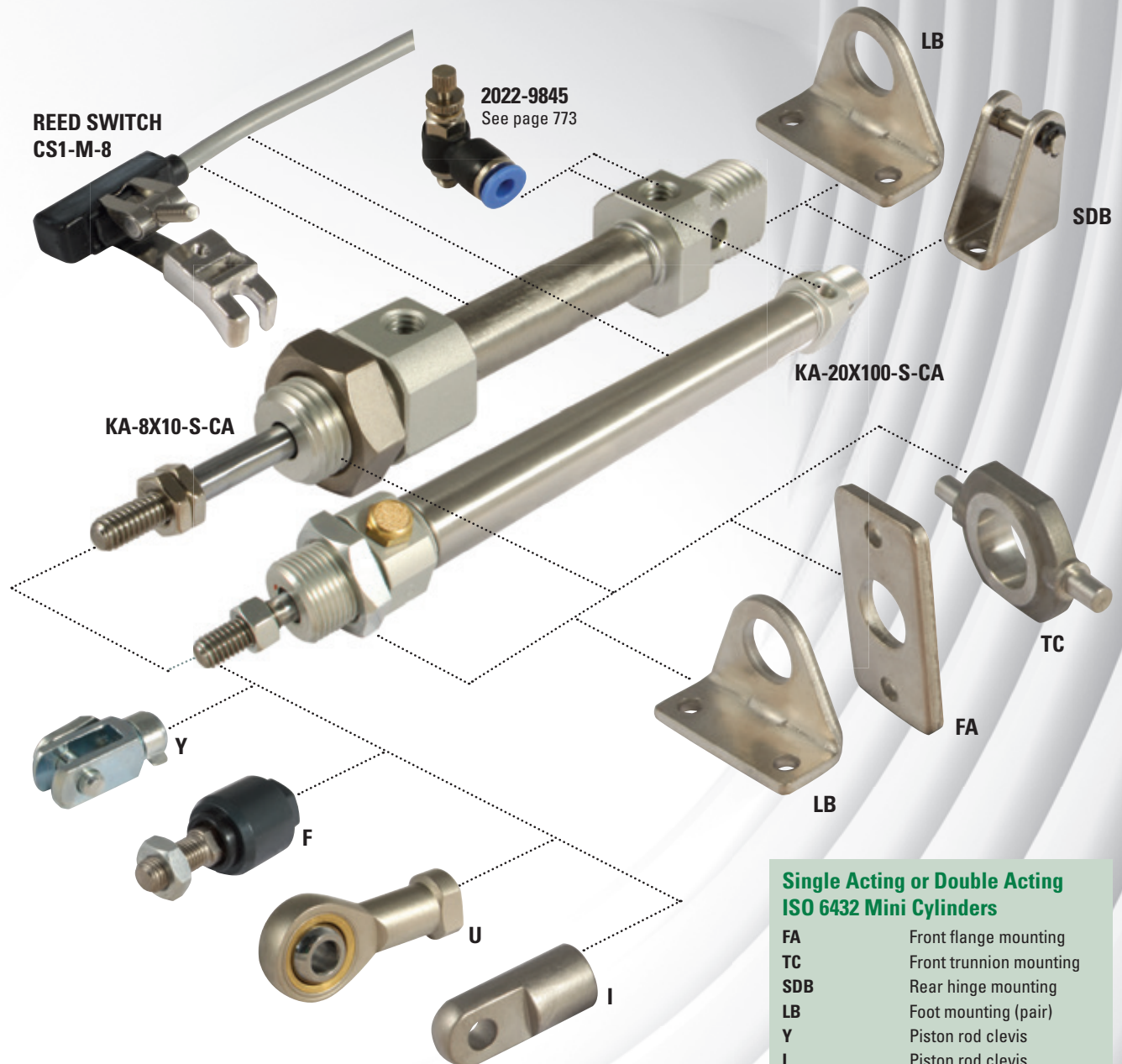
- In-line Vacuum Filters
- Replacement Elements
- Vacuum Pump Filters
- Blower Intake Filter
- High Volume Muffler



761-762

# PNEUMATIC ISO 6432 MINI CYLINDERS

## Accessories & Mounting Selector



**REED SWITCH**  
CS1-M-8

**2022-9845**  
See page 773

KA-8X10-S-CA

KA-20X100-S-CA

LB

SDB

TC

FA

LB

Y

F

U

I

### Single Acting or Double Acting ISO 6432 Mini Cylinders

FA	Front flange mounting
TC	Front trunnion mounting
SDB	Rear hinge mounting
LB	Foot mounting (pair)
Y	Piston rod clevis
I	Piston rod clevis
F	Piston rod floating joint
U	Piston rod universal joint
<b>Reed Switches</b>	Two wire N/O with LED

**Cylinders**  
Pages 452-454

**Mountings**  
Pages 454-455

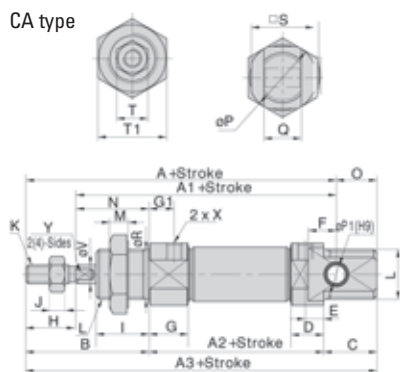
**Reed Switches**  
Page 455

**Cylinder Guides**  
Page 456

## Technical Information

### KA Series

CA type



Bore	A	A1	A2	A3	A4	A5	A6	B	C	C1	C2	D	E	F	G	G1	H	I
8	76	64	46	86	74	—	—	28	12	9.5	5	9.5	5	6	11.5	7	12	12
10	76	64	46	86	74	—	—	28	12	9.5	5	9.5	5	6	11.5	7	12	12
12	91	75	50	105	88	—	—	38	17	10.5	6	10.5	6	9	12.5	8	16	17
16	98	82	56	111	94	111	94	38	17	10.5	6	10.5	6	9	12.5	8	16	17
20	115	95	62	126	106	126	106	44	20	14.5	7.5	14.5	7.5	12	14.5	7.5	20	20
25	126	104	65	137	114.5	137	115	50	22	16	8	16	8	12	16	8	22	22
32	—	—	—	—	125	140	126	58	14	16.5	9	—	—	—	16.5	9	20	30
40	—	—	—	—	158	174	158	69	16	22	12	—	—	—	—	12	24	35

Bore	J	K	L	M	N	O	P	P1	Q	R	S	T	T1	X	V	W	Y
8	2.5	M4 x 0.7	M12 x 1.25	6	16	10	17	4	8	12	15	7	17	M5 x 0.8	4	—	—
10	2.5	M4 x 0.7	M12 x 1.25	6	16	10	17	4	8	12	15	7	17	M5 x 0.8	4	—	—
12	5	M6 x 1.0	M16 x 1.5	6	22	14	20	6	12	16	18	10	22	M5 x 0.8	6	—	5
16	5	M6 x 1.0	M16 x 1.5	6	22	13	22	6	12	16	20	10	22	M5 x 0.8	6	13.5	5
20	6	M8 x 1.25	M22 x 1.5	7	24	11	29	8	16	22	25	12	29	1/8"	8	16.5	6
25	6	M10 x 1.25	M22 x 1.5	7	28	11	33.5	8	16	22	30	17	29	1/8"	10	18.5	8
32	6	M10 x 1.25	M30 x 1.5	7	38	—	37.5	—	—	30	34.5	17	36	1/8"	12	10.5	10
40	7	M12 x 1.25	M38 x 1.5	8	45	—	46.5	—	—	38	42.5	17	46	1/4"	16	12.5	14

### KB Series

Ø16 to Ø25

Bore	A	A1	A2	A3	A4	A5	B	C	D
16	98	82	56	111	94	111	38	17	12.1
20	115	95	62	126	106	126	44	20	14.5
25	126	104	65	137	113.5	137	50	22	16

Bore	D1	D2	D3	E	F	G	G1	G2
16	7	9	12.1	6	9	12.5	7.5	9.5
20	7.5	10.5	14.5	8	12	14.5	7.5	10.5
25	8	10.5	14.5	8	12	16	8	12

Bore	H	I	J	K	L	M	O	N
16	16	17	5	M6 x 1.0	M16 x 1.5	6	13	22
20	20	20	6	M8 x 1.25	M22 x 1.5	7	11	24
25	22	22	6	M10 x 1.25	M22 x 1.5	7	11	28

Bore	P	Q	R	S	T	T1	V	W	X
16	22	12	5	20	10	22	6	13.5	M5 x 0.8
20	29	16	6	25	12	29	8	16.5	1.8"
25	33.5	16	9	30	17	29	10	18.5	1/8"

Ø32 &amp; Ø40

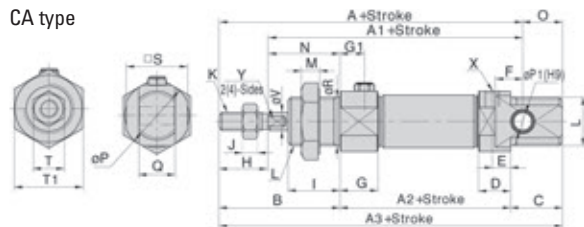
Bore	A2	A4	A5	B	C	D	D1	D2	D3	D4
32	68	124	140	58	14	16.5	9	11.5	14.5	7.5
40	89	157.5	174	69	16	22	12	12	21.5	11.5

Bore	D5	G	G1	G2	H	I	J	K
32	11	16.5	9	11.8	20	30	6	M10 x 1.25
40	14	22	12	12	24	35	7	M12 x 1.25

Bore	L	M	N	P	S	T	T1	V	W	X
32	M30 x 1.5	7	38	37.5	34.5	17	36	12	10.5	1/8"
40	M38 x 1.5	8	45	46.5	42.5	17	46	16	12.5	1/4"

### KC Series

CA type



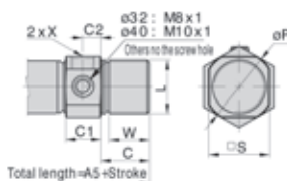
### Inner Structure



No.	Item	Material
1	Rod	304
2	Rod nut	Carbon steel
3	Front cover packing	NBR
4	Front cover nut	Carbon steel
5	Bushing	Wear-resistant material
6	Front cover	Aluminium
7	Barrel	304
8	Bumper	TPU
9	Piston	303*
10	Piston O-ring	NBR
11	Wear ring	Wear-resistant material
12	Nut	Carbon steel
13	Back cover	Aluminium alloy

\*16-40 bore: aluminium alloy.

CM type



Bore Stroke	A			A1		
	0-50	51-100	101-150	0-50	51-100	101-150
8	101	—	—	89	—	—
10	101	—	—	89	—	—
12	116	—	—	100	—	—
16	123	148	—	107	132	—
20	140	165	190	120	145	170
25	151	176	201	129	154	179
32	—	—	—	—	—	—
40	—	—	—	—	—	—

Bore Stroke	A4			A5		
	0-50	51-100	101-150	0-50	51-100	101-150
8	99	—	—	—	—	—
10	99	—	—	—	—	—
12	113	—	—	—	—	—
16	119	144	—	136	161	—
20	131	156	181	151	176	201
25	139.5	164.5	189.5	162	187	212
32	150	175	200	165	190	215
40	183	208	233	199	224	249

Bore Stroke	A2			A3		
	0-50	51-100	101-150	0-50	51-100	101-150
8	71	—	—	111	—	—
10	71	—	—	111	—	—
12	75	—	—	130	—	—
16	81	106	—	136	161	—
20	87	112	137	151	176	201
25	90	115	140	162	187	212
32	—	—	—	—	—	—
40	—	—	—	—	—	—

Bore Stroke	A6						
	0-50	51-100	101-150	B	C	C1	C2
8	—	—	—	28	12	9.5	5
10	—	—	—	28	12	9.5	5
12	—	—	—	38	17	10.5	5
16	119	144	—	38	17	10.5	5
20	131	156	181	44	20	14.5	7.5
25	140	165	190	50	22	16	8
32	151	176	201	58	14	16.5	9
40	183	208	233	69	16	22	12

# PNEUMATIC CYLINDERS



## ISO 6432 Mini Cylinders

### Medium:

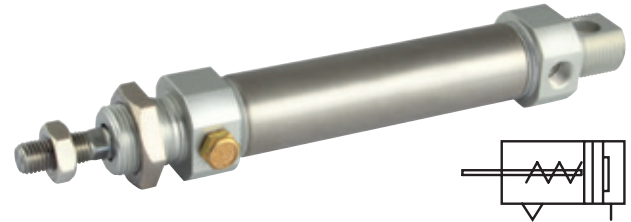
Clean compressed air. Filtered (40µm) and lubricated cushioning-bumper.

**Please note:** Bore sizes 8mm-12mm and 32mm-40mm are available on a lead time. Please contact our sales office for details.



Working Temperature:  
-20°C to +70°C

Working Pressure:  
2 to 10 bar



### Stainless Steel Piston Rod and Barrel as Standard

### Magnetic Single Acting

0334	Bore mm	Stroke mm	Thread	Locknut Thread	Piston Rod Thread
KC-8X10-S-CA	8	10	M5	M12 x 1.25	M4 x 0.7
KC-8X15-S-CA	8	15	M5	M12 x 1.25	M4 x 0.7
KC-8X20-S-CA	8	20	M5	M12 x 1.25	M4 x 0.7
KC-8X25-S-CA	8	25	M5	M12 x 1.25	M4 x 0.7
KC-8X30-S-CA	8	30	M5	M12 x 1.25	M4 x 0.7
KC-8X40-S-CA	8	40	M5	M12 x 1.25	M4 x 0.7
KC-8X50-S-CA	8	50	M5	M12 x 1.25	M4 x 0.7
KC-10X10-S-CA	10	10	M5	M12 x 1.25	M4 x 0.7
KC-10X15-S-CA	10	15	M5	M12 x 1.25	M4 x 0.7
KC-10X20-S-CA	10	20	M5	M12 x 1.25	M4 x 0.7
KC-10X25-S-CA	10	25	M5	M12 x 1.25	M4 x 0.7
KC-10X30-S-CA	10	30	M5	M12 x 1.25	M4 x 0.7
KC-10X40-S-CA	10	40	M5	M12 x 1.25	M4 x 0.7
KC-10X50-S-CA	10	50	M5	M12 x 1.25	M4 x 0.7
KC-12X10-S-CA	12	10	M5	M16 x 1.5	M6 x 1.0
KC-12X15-S-CA	12	15	M5	M16 x 1.5	M6 x 1.0
KC-12X20-S-CA	12	20	M5	M16 x 1.5	M6 x 1.0
KC-12X25-S-CA	12	25	M5	M16 x 1.5	M6 x 1.0
KC-12X30-S-CA	12	30	M5	M16 x 1.5	M6 x 1.0
KC-12X40-S-CA	12	40	M5	M16 x 1.5	M6 x 1.0
KC-12X50-S-CA	12	50	M5	M16 x 1.5	M6 x 1.0
KC-16X10-S-CA	16	10	M5	M16 x 1.5	M6 x 1.0
KC-16X15-S-CA	16	15	M5	M16 x 1.5	M6 x 1.0
KC-16X20-S-CA	16	20	M5	M16 x 1.5	M6 x 1.0
KC-16X25-S-CA	16	25	M5	M16 x 1.5	M6 x 1.0
KC-16X30-S-CA	16	30	M5	M16 x 1.5	M6 x 1.0
KC-16X40-S-CA	16	40	M5	M16 x 1.5	M6 x 1.0
KC-16X50-S-CA	16	50	M5	M16 x 1.5	M6 x 1.0
KC-16X60-S-CA	16	60	M5	M16 x 1.5	M6 x 1.0
KC-16X75-S-CA	16	75	M5	M16 x 1.5	M6 x 1.0
KC-16X80-S-CA	16	80	M5	M16 x 1.5	M6 x 1.0
KC-16X100-S-CA	16	100	M5	M16 x 1.5	M6 x 1.0
KC-20X10-S-CA	20	10	1/8"	M22 x 1.5	M8 x 1.25
KC-20X15-S-CA	20	15	1/8"	M22 x 1.5	M8 x 1.25
KC-20X20-S-CA	20	20	1/8"	M22 x 1.5	M8 x 1.25
KC-20X25-S-CA	20	25	1/8"	M22 x 1.5	M8 x 1.25
KC-20X30-S-CA	20	30	1/8"	M22 x 1.5	M8 x 1.25
KC-20X40-S-CA	20	40	1/8"	M22 x 1.5	M8 x 1.25
KC-20X50-S-CA	20	50	1/8"	M22 x 1.5	M8 x 1.25
KC-20X60-S-CA	20	60	1/8"	M22 x 1.5	M8 x 1.25
KC-20X75-S-CA	20	75	1/8"	M22 x 1.5	M8 x 1.25
KC-20X80-S-CA	20	80	1/8"	M22 x 1.5	M8 x 1.25

0334	Bore mm	Stroke mm	Thread	Locknut Thread	Piston Rod Thread
KC-20X100-S-CA	20	100	1/8"	M22 x 1.5	M8 x 1.25
KC-20X125-S-CA	20	125	1/8"	M22 x 1.5	M8 x 1.25
KC-20X150-S-CA	20	150	1/8"	M22 x 1.5	M8 x 1.25
KC-25X10-S-CA	25	10	1/8"	M22 x 1.5	M10 x 1.25
KC-25X20-S-CA	25	20	1/8"	M22 x 1.5	M10 x 1.25
KC-25X25-S-CA	25	25	1/8"	M22 x 1.5	M10 x 1.25
KC-25X30-S-CA	25	30	1/8"	M22 x 1.5	M10 x 1.25
KC-25X40-S-CA	25	40	1/8"	M22 x 1.5	M10 x 1.25
KC-25X50-S-CA	25	50	1/8"	M22 x 1.5	M10 x 1.25
KC-25X60-S-CA	25	60	1/8"	M22 x 1.5	M10 x 1.25
KC-25X75-S-CA	25	75	1/8"	M22 x 1.5	M10 x 1.25
KC-25X80-S-CA	25	80	1/8"	M22 x 1.5	M10 x 1.25
KC-25X100-S-CA	25	100	1/8"	M22 x 1.5	M10 x 1.25
KC-25X125-S-CA	25	125	1/8"	M22 x 1.5	M10 x 1.25
KC-25X150-S-CA	25	150	1/8"	M22 x 1.5	M10 x 1.25
KC-32X10-S-CM	32	10	1/8"	M30 x 1.5	M10 x 1.25
KC-32X15-S-CM	32	15	1/8"	M30 x 1.5	M10 x 1.25
KC-32X20-S-CM	32	20	1/8"	M30 x 1.5	M10 x 1.25
KC-32X25-S-CM	32	25	1/8"	M30 x 1.5	M10 x 1.25
KC-32X30-S-CM	32	30	1/8"	M30 x 1.5	M10 x 1.25
KC-32X40-S-CM	32	40	1/8"	M30 x 1.5	M10 x 1.25
KC-32X50-S-CM	32	50	1/8"	M30 x 1.5	M10 x 1.25
KC-32X60-S-CM	32	60	1/8"	M30 x 1.5	M10 x 1.25
KC-32X75-S-CM	32	75	1/8"	M30 x 1.5	M10 x 1.25
KC-32X80-S-CM	32	80	1/8"	M30 x 1.5	M10 x 1.25
KC-32X100-S-CM	32	100	1/8"	M30 x 1.5	M10 x 1.25
KC-32X125-S-CM	32	125	1/8"	M30 x 1.5	M10 x 1.25
KC-32X150-S-CM	32	150	1/8"	M30 x 1.5	M10 x 1.25
KC-40X10-S-CM	40	10	1/4"	M38 x 1.5	M12 x 1.25
KC-40X15-S-CM	40	15	1/4"	M38 x 1.5	M12 x 1.25
KC-40X20-S-CM	40	20	1/4"	M38 x 1.5	M12 x 1.25
KC-40X25-S-CM	40	25	1/4"	M38 x 1.5	M12 x 1.25
KC-40X30-S-CM	40	30	1/4"	M38 x 1.5	M12 x 1.25
KC-40X40-S-CM	40	40	1/4"	M38 x 1.5	M12 x 1.25
KC-40X50-S-CM	40	50	1/4"	M38 x 1.5	M12 x 1.25
KC-40X60-S-CM	40	60	1/4"	M38 x 1.5	M12 x 1.25
KC-40X75-S-CM	40	75	1/4"	M38 x 1.5	M12 x 1.25
KC-40X80-S-CM	40	80	1/4"	M38 x 1.5	M12 x 1.25
KC-40X100-S-CM	40	100	1/4"	M38 x 1.5	M12 x 1.25
KC-40X125-S-CM	40	125	1/4"	M38 x 1.5	M12 x 1.25
KC-40X150-S-CM	40	150	1/4"	M38 x 1.5	M12 x 1.25

Tech Sheet 3001

## ISO 6432 Mini Cylinders

### Medium:

Clean compressed air. Filtered (40µm) and lubricated cushioning  
KA-Bumper, KB-Adjustable.

Please note: Bore sizes 32mm-40mm are available on a lead time.

Please contact our sales office for details.



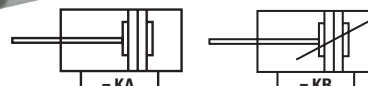
° Working Temperature:  
-20°C to +70°C

Working Pressure:  
1 to 10 bar

### Stainless Steel Piston Rod and Barrel as Standard

### Magnetic Double Acting

0334	Bore mm	Stroke mm	Thread	Locknut Thread	Piston Rod Thread
KA-8X15-S-CA	8	15	M5	M12 x 1.25	M4 x 0.7
KA-8X20-S-CA	8	20	M5	M12 x 1.25	M4 x 0.7
KA-8X25-S-CA	8	25	M5	M12 x 1.25	M4 x 0.7
KA-8X30-S-CA	8	30	M5	M12 x 1.25	M4 x 0.7
KA-8X40-S-CA	8	40	M5	M12 x 1.25	M4 x 0.7
KA-8X50-S-CA	8	50	M5	M12 x 1.25	M4 x 0.7
KA-8X60-S-CA	8	60	M5	M12 x 1.25	M4 x 0.7
KA-8X75-S-CA	8	75	M5	M12 x 1.25	M4 x 0.7
KA-8X80-S-CA	8	80	M5	M12 x 1.25	M4 x 0.7
KA-8X100-S-CA	8	100	M5	M12 x 1.25	M4 x 0.7
KA-8X125-S-CA	8	125	M5	M12 x 1.25	M4 x 0.7
KA-8X150-S-CA	8	150	M5	M12 x 1.25	M4 x 0.7
KA-10X10-S-CA	10	10	M5	M12 x 1.25	M4 x 0.7
KA-10X15-S-CA	10	15	M5	M12 x 1.25	M4 x 0.7
KA-10X20-S-CA	10	20	M5	M12 x 1.25	M4 x 0.7
KA-10X25-S-CA	10	25	M5	M12 x 1.25	M4 x 0.7
KA-10X30-S-CA	10	30	M5	M12 x 1.25	M4 x 0.7
KA-10X40-S-CA	10	40	M5	M12 x 1.25	M4 x 0.7
KA-10X50-S-CA	10	50	M5	M12 x 1.25	M4 x 0.7
KA-10X60-S-CA	10	60	M5	M12 x 1.25	M4 x 0.7
KA-10X75-S-CA	10	75	M5	M12 x 1.25	M4 x 0.7
KA-10X80-S-CA	10	80	M5	M12 x 1.25	M4 x 0.7
KA-10X100-S-CA	10	100	M5	M12 x 1.25	M4 x 0.7
KA-10X125-S-CA	10	125	M5	M12 x 1.25	M4 x 0.7
KA-10X150-S-CA	10	150	M5	M12 x 1.25	M4 x 0.7
KA-10X160-S-CA	10	160	M5	M12 x 1.25	M4 x 0.7
KA-10X175-S-CA	10	175	M5	M12 x 1.25	M4 x 0.7
KA-10X200-S-CA	10	200	M5	M12 x 1.25	M4 x 0.7
KA-12X10-S-CA	12	10	M5	M16 x 1.5	M6 x 1.0
KA-12X15-S-CA	12	15	M5	M16 x 1.5	M6 x 1.0
KA-12X20-S-CA	12	20	M5	M16 x 1.5	M6 x 1.0
KA-12X25-S-CA	12	25	M5	M16 x 1.5	M6 x 1.0
KA-12X30-S-CA	12	30	M5	M16 x 1.5	M6 x 1.0
KA-12X40-S-CA	12	40	M5	M16 x 1.5	M6 x 1.0
KA-12X50-S-CA	12	50	M5	M16 x 1.5	M6 x 1.0
KA-12X60-S-CA	12	60	M5	M16 x 1.5	M6 x 1.0
KA-12X75-S-CA	12	75	M5	M16 x 1.5	M6 x 1.0
KA-12X80-S-CA	12	80	M5	M16 x 1.5	M6 x 1.0
KA-12X100-S-CA	12	100	M5	M16 x 1.5	M6 x 1.0
KA-12X125-S-CA	12	125	M5	M16 x 1.5	M6 x 1.0
KA-12X150-S-CA	12	150	M5	M16 x 1.5	M6 x 1.0
KA-12X175-S-CA	12	175	M5	M16 x 1.5	M6 x 1.0
KA-12X200-S-CA	12	200	M5	M16 x 1.5	M6 x 1.0
KA-12X250-S-CA	12	250	M5	M16 x 1.5	M6 x 1.0
KB-16X10-S-CA	16	10	M5	M16 x 1.5	M6 x 1.0
KB-16X15-S-CA	16	15	M5	M16 x 1.5	M6 x 1.0
KB-16X20-S-CA	16	20	M5	M16 x 1.5	M6 x 1.0
KB-16X25-S-CA	16	25	M5	M16 x 1.5	M6 x 1.0
KB-16X30-S-CA	16	30	M5	M16 x 1.5	M6 x 1.0



0334	Bore mm	Stroke mm	Thread	Locknut Thread	Piston Rod Thread
KB-16X40-S-CA	16	40	M5	M16 x 1.5	M6 x 1.0
KB-16X50-S-CA	16	50	M5	M16 x 1.5	M6 x 1.0
KB-16X60-S-CA	16	60	M5	M16 x 1.5	M6 x 1.0
KB-16X75-S-CA	16	75	M5	M16 x 1.5	M6 x 1.0
KB-16X80-S-CA	16	80	M5	M16 x 1.5	M6 x 1.0
KB-16X100-S-CA	16	100	M5	M16 x 1.5	M6 x 1.0
KB-16X125-S-CA	16	125	M5	M16 x 1.5	M6 x 1.0
KB-16X150-S-CA	16	150	M5	M16 x 1.5	M6 x 1.0
KB-16X160-S-CA	16	160	M5	M16 x 1.5	M6 x 1.0
KB-16X175-S-CA	16	175	M5	M16 x 1.5	M6 x 1.0
KB-16X200-S-CA	16	200	M5	M16 x 1.5	M6 x 1.0
KB-16X250-S-CA	16	250	M5	M16 x 1.5	M6 x 1.0
KB-16X300-S-CA	16	300	M5	M16 x 1.5	M6 x 1.0
KB-20X10-S-CA	20	10	1/8"	M22 x 1.5	M8 x 1.25
KB-20X15-S-CA	20	15	1/8"	M22 x 1.5	M8 x 1.25
KB-20X20-S-CA	20	20	1/8"	M22 x 1.5	M8 x 1.25
KB-20X25-S-CA	20	25	1/8"	M22 x 1.5	M8 x 1.25
KB-20X30-S-CA	20	30	1/8"	M22 x 1.5	M8 x 1.25
KB-20X40-S-CA	20	40	1/8"	M22 x 1.5	M8 x 1.25
KB-20X50-S-CA	20	50	1/8"	M22 x 1.5	M8 x 1.25
KB-20X60-S-CA	20	60	1/8"	M22 x 1.5	M8 x 1.25
KB-20X75-S-CA	20	75	1/8"	M22 x 1.5	M8 x 1.25
KB-20X80-S-CA	20	80	1/8"	M22 x 1.5	M8 x 1.25
KB-20X100-S-CA	20	100	1/8"	M22 x 1.5	M8 x 1.25
KB-20X125-S-CA	20	125	1/8"	M22 x 1.5	M8 x 1.25
KB-20X150-S-CA	20	150	1/8"	M22 x 1.5	M8 x 1.25
KB-20X160-S-CA	20	160	1/8"	M22 x 1.5	M8 x 1.25
KB-20X175-S-CA	20	175	1/8"	M22 x 1.5	M8 x 1.25
KB-20X200-S-CA	20	200	1/8"	M22 x 1.5	M8 x 1.25
KB-20X250-S-CA	20	250	1/8"	M22 x 1.5	M8 x 1.25
KB-20X300-S-CA	20	300	1/8"	M22 x 1.5	M8 x 1.25
KB-20X350-S-CA	20	350	1/8"	M22 x 1.5	M8 x 1.25
KB-20X400-S-CA	20	400	1/8"	M22 x 1.5	M8 x 1.25
KB-20X450-S-CA	20	450	1/8"	M22 x 1.5	M8 x 1.25
KB-20X500-S-CA	20	500	1/8"	M22 x 1.5	M8 x 1.25
KB-25X10-S-CA	25	10	1/8"	M22 x 1.5	M10 x 1.25
KB-25X15-S-CA	25	15	1/8"	M22 x 1.5	M10 x 1.25
KB-25X20-S-CA	25	20	1/8"	M22 x 1.5	M10 x 1.25
KB-25X25-S-CA	25	25	1/8"	M22 x 1.5	M10 x 1.25
KB-25X30-S-CA	25	30	1/8"	M22 x 1.5	M10 x 1.25
KB-25X40-S-CA	25	40	1/8"	M22 x 1.5	M10 x 1.25
KB-25X50-S-CA	25	50	1/8"	M22 x 1.5	M10 x 1.25
KB-25X60-S-CA	25	60	1/8"	M22 x 1.5	M10 x 1.25
KB-25X75-S-CA	25	75	1/8"	M22 x 1.5	M10 x 1.25
KB-25X80-S-CA	25	80	1/8"	M22 x 1.5	M10 x 1.25
KB-25X100-S-CA	25	100	1/8"	M22 x 1.5	M10 x 1.25
KB-25X125-S-CA	25	125	1/8"	M22 x 1.5	M10 x 1.25
KB-25X150-S-CA	25	150	1/8"	M22 x 1.5	M10 x 1.25

Tech Sheet 3001

Further sizes in this range continued on next page

# PNEUMATIC CYLINDERS



## ISO 6432 Mini Cylinders

### Medium:

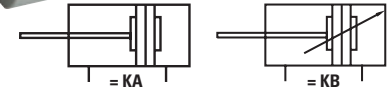
Clean compressed air. Filtered (40µm) and lubricated cushioning KA-Bumper, KB-Adjustable.

**Please note:** Bore sizes 32mm-40mm are available on a lead time.

**Please contact our sales office for details.**

**Working Temperature:**  
-20°C to +70°C

**Working Pressure:**  
1 to 10 bar



### Stainless Steel Piston Rod and Barrel as Standard

### Magnetic Double Acting

0334	Bore mm	Stroke mm	Thread	Locknut Thread	Piston Rod Thread
KB-25X160-S-CA	25	160	1/8"	M22 x 1.5	M10 x 1.25
KB-25X175-S-CA	25	175	1/8"	M22 x 1.5	M10 x 1.25
KB-25X200-S-CA	25	200	1/8"	M22 x 1.5	M10 x 1.25
KB-25X250-S-CA	25	250	1/8"	M22 x 1.5	M10 x 1.25
KB-25X300-S-CA	25	300	1/8"	M22 x 1.5	M10 x 1.25
KB-25X350-S-CA	25	350	1/8"	M22 x 1.5	M10 x 1.25
KB-25X400-S-CA	25	400	1/8"	M22 x 1.5	M10 x 1.25
KB-25X450-S-CA	25	450	1/8"	M22 x 1.5	M10 x 1.25
KB-25X500-S-CA	25	500	1/8"	M22 x 1.5	M10 x 1.25
KB-25X600-S-CA	25	600	1/8"	M22 x 1.5	M10 x 1.25
KB-32X10-S-CM	32	10	1/8"	M30 x 1.5	M10 x 1.25
KB-32X15-S-CM	32	15	1/8"	M30 x 1.5	M10 x 1.25
KB-32X20-S-CM	32	20	1/8"	M30 x 1.5	M10 x 1.25
KB-32X25-S-CM	32	25	1/8"	M30 x 1.5	M10 x 1.25
KB-32X30-S-CM	32	30	1/8"	M30 x 1.5	M10 x 1.25
KB-32X40-S-CM	32	40	1/8"	M30 x 1.5	M10 x 1.25
KB-32X50-S-CM	32	50	1/8"	M30 x 1.5	M10 x 1.25
KB-32X60-S-CM	32	60	1/8"	M30 x 1.5	M10 x 1.25
KB-32X75-S-CM	32	75	1/8"	M30 x 1.5	M10 x 1.25
KB-32X80-S-CM	32	80	1/8"	M30 x 1.5	M10 x 1.25
KB-32X100-S-CM	32	100	1/8"	M30 x 1.5	M10 x 1.25
KB-32X125-S-CM	32	125	1/8"	M30 x 1.5	M10 x 1.25
KB-32X150-S-CM	32	150	1/8"	M30 x 1.5	M10 x 1.25
KB-32X160-S-CM	32	160	1/8"	M30 x 1.5	M10 x 1.25
KB-32X175-S-CM	32	175	1/8"	M30 x 1.5	M10 x 1.25
KB-32X200-S-CM	32	200	1/8"	M30 x 1.5	M10 x 1.25
KB-32X250-S-CM	32	250	1/8"	M30 x 1.5	M10 x 1.25
KB-32X300-S-CM	32	300	1/8"	M30 x 1.5	M10 x 1.25

0334	Bore mm	Stroke mm	Thread	Locknut Thread	Piston Rod Thread
KB-32X350-S-CM	32	350	1/8"	M30 x 1.5	M10 x 1.25
KB-32X400-S-CM	32	400	1/8"	M30 x 1.5	M10 x 1.25
KB-32X450-S-CM	32	450	1/8"	M30 x 1.5	M10 x 1.25
KB-32X500-S-CM	32	500	1/8"	M30 x 1.5	M10 x 1.25
KB-32X600-S-CM	32	600	1/8"	M30 x 1.5	M10 x 1.25
KB-40X10-S-CM	40	10	1/4"	M38 x 1.5	M12 x 1.25
KB-40X15-S-CM	40	15	1/4"	M38 x 1.5	M12 x 1.25
KB-40X20-S-CM	40	20	1/4"	M38 x 1.5	M12 x 1.25
KB-40X25-S-CM	40	25	1/4"	M38 x 1.5	M12 x 1.25
KB-40X30-S-CM	40	30	1/4"	M38 x 1.5	M12 x 1.25
KB-40X40-S-CM	40	40	1/4"	M38 x 1.5	M12 x 1.25
KB-40X50-S-CM	40	50	1/4"	M38 x 1.5	M12 x 1.25
KB-40X60-S-CM	40	60	1/4"	M38 x 1.5	M12 x 1.25
KB-40X75-S-CM	40	75	1/4"	M38 x 1.5	M12 x 1.25
KB-40X80-S-CM	40	80	1/4"	M38 x 1.5	M12 x 1.25
KB-40X100-S-CM	40	100	1/4"	M38 x 1.5	M12 x 1.25
KB-40X125-S-CM	40	125	1/4"	M38 x 1.5	M12 x 1.25
KB-40X150-S-CM	40	150	1/4"	M38 x 1.5	M12 x 1.25
KB-40X160-S-CM	40	160	1/4"	M38 x 1.5	M12 x 1.25
KB-40X175-S-CM	40	175	1/4"	M38 x 1.5	M12 x 1.25
KB-40X200-S-CM	40	200	1/4"	M38 x 1.5	M12 x 1.25
KB-40X250-S-CM	40	250	1/4"	M38 x 1.5	M12 x 1.25
KB-40X300-S-CM	40	300	1/4"	M38 x 1.5	M12 x 1.25
KB-40X350-S-CM	40	350	1/4"	M38 x 1.5	M12 x 1.25
KB-40X400-S-CM	40	400	1/4"	M38 x 1.5	M12 x 1.25
KB-40X450-S-CM	40	450	1/4"	M38 x 1.5	M12 x 1.25
KB-40X500-S-CM	40	500	1/4"	M38 x 1.5	M12 x 1.25
KB-40X600-S-CM	40	600	1/4"	M38 x 1.5	M12 x 1.25

Tech Sheet 3001

## ISO 6432 Mountings



### Front Flange Mounting FA

0334	Bore mm
F-KA8FA	8/10
F-KA12FA	12/16
F-KA20FA	20/25

Tech Sheet 3002



### Front Trunnion Mounting TC

0334	Bore mm
F-KA8TC	8/10
F-KA12TC	12/16
F-KA20TC	20/25
F-KA32TC	32
F-KA40TC	40

Tech Sheet 3003



## ISO 6432 Mountings



### Rear Hinge Mounting SDB

0334	Bore mm
F-KA8SDB	8/10
F-KA12SDB	12/16
F-KA20SDB	20/25
F-KA32SDB	32
F-KA40SDB	40
Tech Sheet 3004	



### Foot Mounting LB, (Pair)

0334	Bore mm
F-KA8LB	8/10
F-KA12LB	12/16
F-KA20LB	20/25
F-KA32LB	32
F-KA40LB	40
Tech Sheet 3005	



### Piston Rod Clevis Y

0334	Bore mm	Thread
F-M04070YE	8/10	M4 x 0.7
F-M06100YE	12/16	M6 x 1
F-M08125YE	20	M8 x 1.25
F-M1025YE	25/32	M10 x 1.25
Tech Sheet 3006		



### Piston Rod Clevis I

0334	Bore mm	Thread
F-M06100I	12/16	M6 x 1
F-M08125I	20	M8 x 1.25
F-M10125I	25/32	M10 x 1.25
F-M12125I	40	M12 x 1.25
Tech Sheet 3007		



### Piston Rod Floating Joint F

0334	Bore mm	Thread
F-M08125F	20	M8 x 1.25
F-M10125F	25/32	M10 x 1.25
F-M12125F	40	M12 x 1.25
Tech Sheet 3008		



### Piston Rod Universal Joint U

0334	Bore mm	Thread
F-M04070U	8/10	M4 x 0.7
F-M06100U	12/16	M6 x 1
F-M08125U	20	M8 x 1.25
F-M10125U	25/32	M10 x 1.25
F-M12125U	40	M12 x 1.25
Tech Sheet 3009		

## Reed Switches to suit ISO 6432



### Two Wire, N/O with LED

0334	Bore mm	Voltage
CS1-M-8	8	5-240V AC/DC
CS1-M-10	10	5-240V AC/DC
CS1-M-12	12	5-240V AC/DC
CS1-M-16	16	5-240V AC/DC
CS1-M-20	20	5-240V AC/DC
CS1-M-25	25	5-240V AC/DC
CS1-M-32	32	5-240V AC/DC
CS1-M-40	40	5-240V AC/DC
Tech Sheet 3010		

# PNEUMATIC CYLINDERS



## ISO 6432 Mini Cylinder Guides

The guide unit allows for standard ISO 6432 cylinder to move loads with high positioning accuracy.

### Features and Benefits

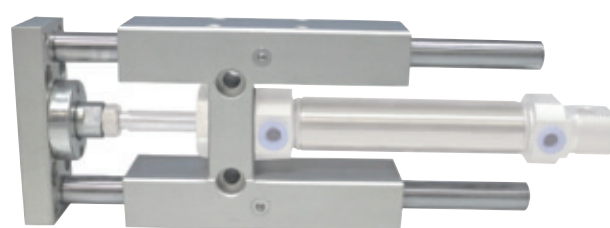
- Protection against rotation at high torques.
- High guide precision for cylinder guiding.
- Supplied plain or recirculating ball bearing guides.



### With Slide Bearings

0334	Bore mm	Stroke mm
KRF-16X50-0	16	50
KRF-16X100-0	16	100
KRF-16X160-0	16	160
KRF-16X200-0	16	200
KRF-16X250-0	16	250
KRF-16X320-0	16	320
KRF-16X400-0	16	400
KRF-16X500-0	16	500
KRF-20X50-0	20	50
KRF-20X100-0	20	100
KRF-20X160-0	20	160
KRF-20X200-0	20	200
KRF-20X250-0	20	250
KRF-20X320-0	20	320
KRF-20X400-0	20	400
KRF-20X500-0	20	500
KRF-25X50-0	25	50
KRF-25X100-0	25	100
KRF-25X160-0	25	160
KRF-25X200-0	25	200
KRF-25X250-0	25	250
KRF-25X320-0	25	320
KRF-25X400-0	25	400
KRF-25X500-0	25	500

Tech Sheet 20893



### With Ball Bearings

0334	Bore mm	Stroke mm
KRF-16X50-1	16	50
KRF-16X100-1	16	100
KRF-16X160-1	16	160
KRF-16X200-1	16	200
KRF-16X250-1	16	250
KRF-16X320-1	16	320
KRF-16X400-1	16	400
KRF-16X500-1	16	500
KRF-20X50-1	20	50
KRF-20X100-1	20	100
KRF-20X160-1	20	160
KRF-20X200-1	20	200
KRF-20X250-1	20	250
KRF-20X320-1	20	320
KRF-20X400-1	20	400
KRF-20X500-1	20	500
KRF-25X50-1	25	50
KRF-25X100-1	25	100
KRF-25X160-1	25	160
KRF-25X200-1	25	200
KRF-25X250-1	25	250
KRF-25X320-1	25	320
KRF-25X400-1	25	400
KRF-25X500-1	25	500

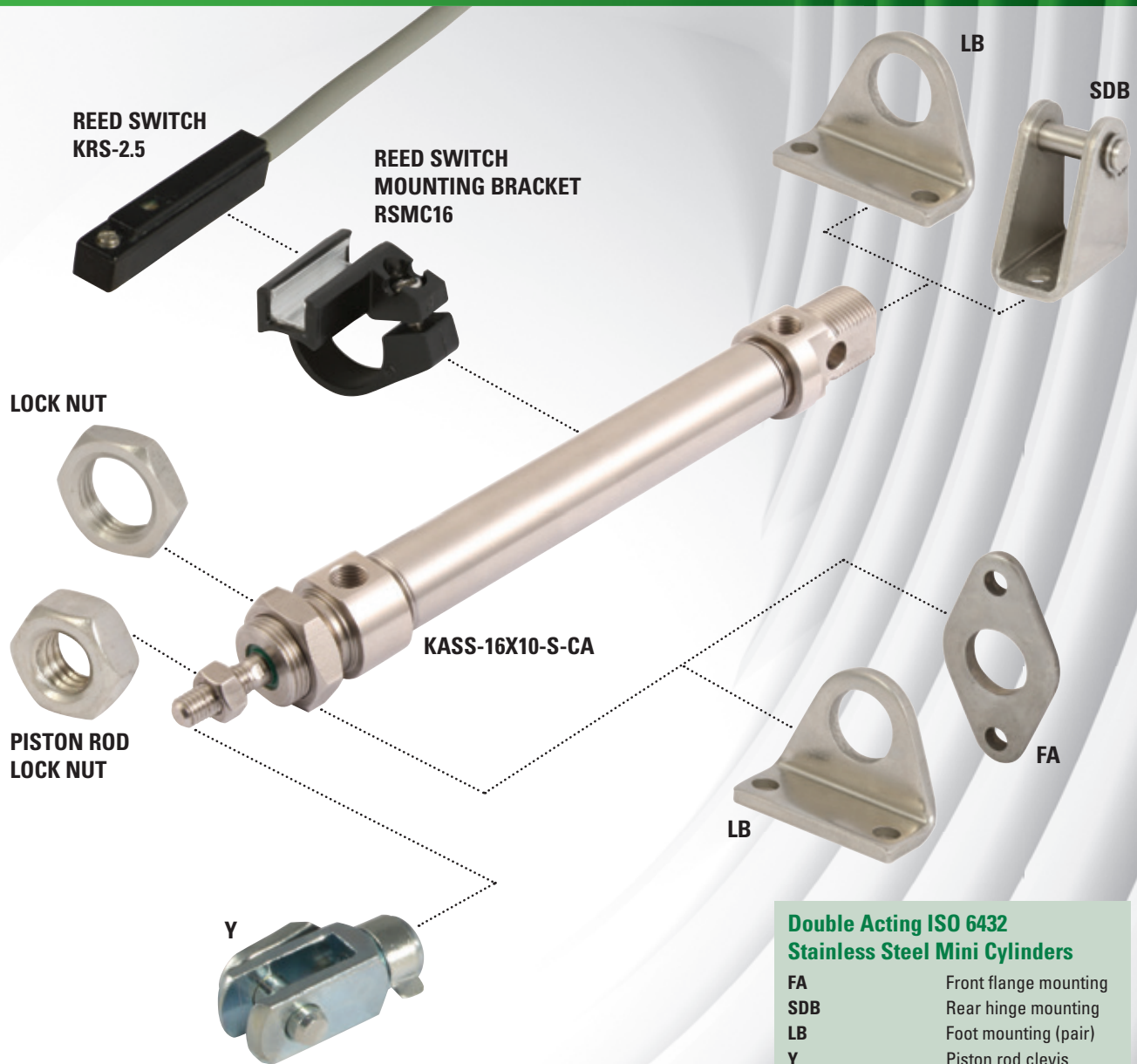
Tech Sheet 20894

# PNEUMATIC STAINLESS STEEL ISO 6432 MINI CYLINDERS

## Accessories & Mounting Selector

stainless  
steel

FT PRO®



### Double Acting ISO 6432 Stainless Steel Mini Cylinders

FA	Front flange mounting
SDB	Rear hinge mounting
LB	Foot mounting (pair)
Y	Piston rod clevis

Lock Nut

Piston Rod Lock Nut

Reed Switches Two wire N/O with LED

Reed Switch Bracket

**Cylinders**

Pages 452-454

**Mountings**

Pages 454-455

**Reed Switches**

Page 455

**Cylinder Guides**

Page 456

# PNEUMATIC STAINLESS STEEL ISO 6432 MINI CYLINDERS

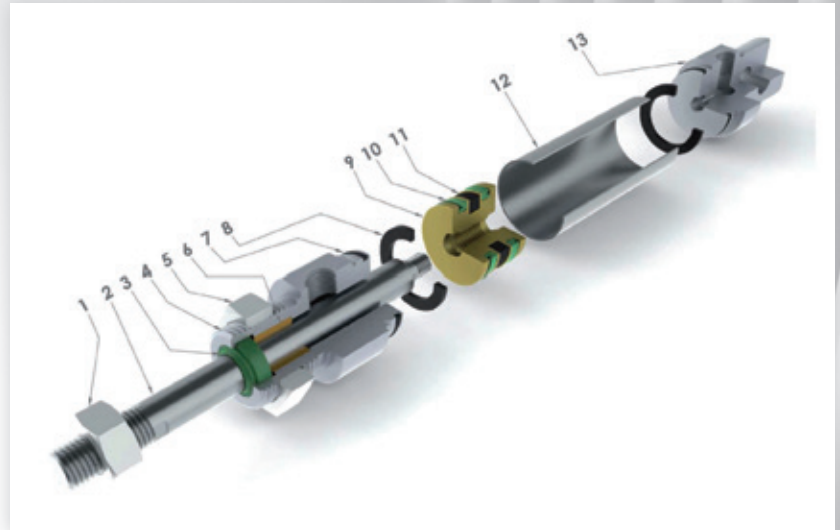
stainless  
steel



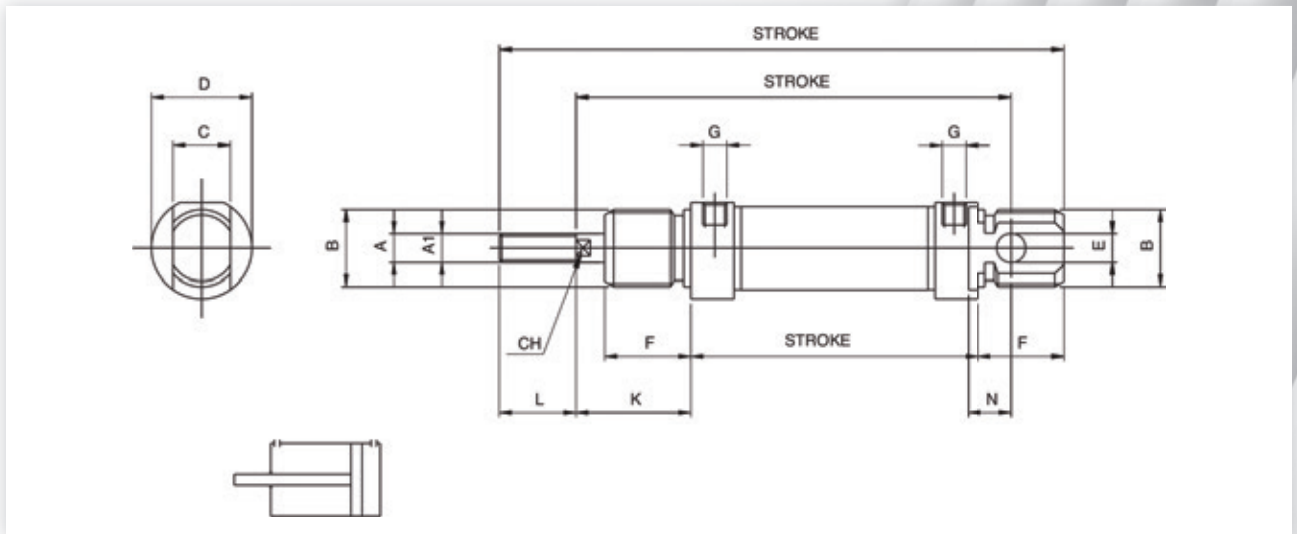
## Technical Information

### Component Parts & Materials

No.	Item	Material
1	Nut	Steel AISI 304
2	Piston rod	Steel AISI 306
3	Rod seal	Polyurethane
4	Front cover	Steel AISI 304
5	Nut	Steel AISI 304
6	Bearing	Sintered bronze
7	O-ring seals	Nitrile
8	Bumper	Neoprene
9	Piston	Brass
10	Piston seal	Polyurethane
11	Magnet	Plastoferrite
12	Mini cylinder shape body	Steel AISI 304
13	Back cover	Steel AISI 304



### Double Acting Magnetic



### KASS...

Ø mm	A	A1	B	C	D	E	F	G	K	L	M	N	P	R	CH
16	M6	6	M16 x 1.5	12	19	6	18	M5	22	16	109	9	53	82	5
20	M8	8	M22 x 1.5	16	27	8	20	1/8G	24	20	131	12	67	95	7
25	M10 x 1.25	10	M22 x 1.5	16	30	8	22	1/8G	28	22	140	12	68	104	9

## Stainless Steel ISO 6432 Mini Cylinders

Full stainless steel double acting, magnetic, bumper cushioned cylinders.

Available in:

Bore sizes: 16, 20 and 25mm

Stroke lengths: 10, 25, 50, 80, 100, 125, 160, 200, 250 and 320mm

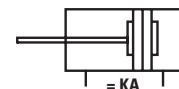
Intermediate strokes are available upon request, please contact our Business Development Team.

Suitable for all industrial fields, but particularly suitable for use in corrosive environments.



Working Temperature:  
0°C to +80°C

Operating Pressure:  
2-10 bar



stainless steel

### Magnetic Double Acting

0333	Bore mm	Stroke mm	Thread	Locknut Thread	Piston Rod Thread
KASS-16X10-S-CA	16	10	M5	M16 x 1.5	M6
KASS-16X25-S-CA	16	25	M5	M16 x 1.5	M6
KASS-16X50-S-CA	16	50	M5	M16 x 1.5	M6
KASS-16X80-S-CA	16	80	M5	M16 x 1.5	M6
KASS-16X100-S-CA	16	100	M5	M16 x 1.5	M6
KASS-16X125-S-CA	16	125	M5	M16 x 1.5	M6
KASS-16X160-S-CA	16	160	M5	M16 x 1.5	M6
KASS-16X200-S-CA	16	200	M5	M16 x 1.5	M6
KASS-16X250-S-CA	16	250	M5	M16 x 1.5	M6
KASS-16X320-S-CA	16	320	M5	M16 x 1.5	M6
KASS-20X10-S-CA	20	10	1/8"	M22 x 1.5	M8
KASS-20X25-S-CA	20	25	1/8"	M22 x 1.5	M8
KASS-20X50-S-CA	20	50	1/8"	M22 x 1.5	M8
KASS-20X80-S-CA	20	80	1/8"	M22 x 1.5	M8
KASS-20X100-S-CA	20	100	1/8"	M22 x 1.5	M8
KASS-20X125-S-CA	20	125	1/8"	M22 x 1.5	M8
KASS-20X160-S-CA	20	160	1/8"	M22 x 1.5	M8
KASS-20X200-S-CA	20	200	1/8"	M22 x 1.5	M8
KASS-20X250-S-CA	20	250	1/8"	M22 x 1.5	M8
KASS-20X320-S-CA	20	320	1/8"	M22 x 1.5	M8
KASS-25X10-S-CA	25	10	1/8"	M22 x 1.5	M10 x 1.25
KASS-25X25-S-CA	25	25	1/8"	M22 x 1.5	M10 x 1.25
KASS-25X50-S-CA	25	50	1/8"	M22 x 1.5	M10 x 1.25
KASS-25X80-S-CA	25	80	1/8"	M22 x 1.5	M10 x 1.25
KASS-25X100-S-CA	25	100	1/8"	M22 x 1.5	M10 x 1.25
KASS-25X125-S-CA	25	125	1/8"	M22 x 1.5	M10 x 1.25
KASS-25X160-S-CA	25	160	1/8"	M22 x 1.5	M10 x 1.25
KASS-25X200-S-CA	25	200	1/8"	M22 x 1.5	M10 x 1.25
KASS-25X250-S-CA	25	250	1/8"	M22 x 1.5	M10 x 1.25
KASS-25X320-S-CA	25	320	1/8"	M22 x 1.5	M10 x 1.25

Tech Sheet 10287



# PNEUMATIC CYLINDERS

## Stainless Steel ISO 6432 Mountings

stainless steel



### Front Flange Mounting FA

0333	Bore mm
F-KASS16FA	16
F-KASS20FA	20/25

stainless steel



### Foot Mounting LB, (single)

0333	Bore mm
F-KASS16LB	16
F-KASS20LB	20/25

stainless steel



### Rear Hinge Mounting SDB

0333	Bore mm
F-KASS16SDB	16
F-KASS20SDB	20/25

stainless steel



### Piston Rod Clevis Y

0333	Bore mm	Thread
F-KASS16Y	16	M6 x 1
F-KASS20Y	20	M8 x 1.25
F-KASS25Y	25	M10 x 1.25

stainless steel



### Lock Nut

0333	Bore mm	Thread
F-KASS16LN	16	M16 x 1.5
F-KASS20LN	20/25	M22 x 1.5

stainless steel



### Piston Rod Lock Nut

0333	Bore mm	Thread
F-KASS16PLN	16	M6
F-KASS20PLN	20	M8
F-KASS25PLN	25	M10 x 1.25

## Reed Switches



### Two Wire, N/O with LED

0333	Voltage
KRS-2.5	5-240V AC/DC


## Reed Switch Mounting Brackets



0333	Bore mm
RSMC16	16
RSMC20	20
RSMC25	25



FESTO



# Simply: part of the solution

## The Festo ★ Core Range

### The benefits at a glance:

- Over 2200 products in the range
- Fast delivery
- Attractively priced

### Core Range for automation

The Festo Core Range is our selection of the most important products and functions that solve the majority of your automation tasks.

Simplify your procurements -  
Just look for the blue star!



# CYLINDERS

For the full range and more information, please contact one of our sales team.

## DSNU ROUND CYLINDER CETOP RP 52 P ISO 6432



### Features



### Product Description

**DSNU**

Cylinder  
Type

- **16**

Bore Size  
mm

- **100**

Stroke Size  
mm

- **PPS**

Cushioning  
PPS - Self adjusting  
P - Polymer  
PPV - Adjustable

- **A**

Magnetic





## Double Acting, Elastic Polymer Cushioning Rings

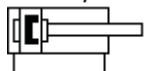
- Diameter 12-25mm: ISO 6432
- For very high demands on running characteristics, service life and load capacity
- Stainless Steel piston rod
- Comprehensive range of accessories

See page 468 for sensor mounts and sensors

Ambient Temperature:  
-20°C to +80°C

Working Pressure:  
1.5 to 10 bar (12mm Piston)  
1 to 10 bar (Piston: 16, 20, 25)

### Elastic Polymer Cushioning



### Polymer, Magnetic

0009	Piston Diameter mm	Stroke mm	Piston Rod Thread	Manufacturer's Code
19189	12	10	M6	DSNU-12-10-P-A
1908255	12	15	M6	DSNU-12-15-P-A
1908256	12	20	M6	DSNU-12-20-P-A
19190	12	25	M6	DSNU-12-25-P-A
1908257	12	30	M6	DSNU-12-30-P-A
19191	12	40	M6	DSNU-12-40-P-A
19192	12	50	M6	DSNU-12-50-P-A
1908258	12	60	M6	DSNU-12-60-P-A
19193	12	80	M6	DSNU-12-80-P-A
19194	12	100	M6	DSNU-12-100-P-A
19195	12	125	M6	DSNU-12-125-P-A
19196	12	160	M6	DSNU-12-160-P-A
19197	12	200	M6	DSNU-12-200-P-A
19198	16	10	M6	DSNU-16-10-P-A
1908259	16	15	M6	DSNU-16-15-P-A
1908260	16	20	M6	DSNU-16-20-P-A
19199	16	25	M6	DSNU-16-25-P-A
1908261	16	30	M6	DSNU-16-30-P-A
1908262	16	35	M6	DSNU-16-35-P-A
19200	16	40	M6	DSNU-16-40-P-A
19201	16	50	M6	DSNU-16-50-P-A
1908263	16	60	M6	DSNU-16-60-P-A
1908264	16	70	M6	DSNU-16-70-P-A
19202	16	80	M6	DSNU-16-80-P-A
19203	16	100	M6	DSNU-16-100-P-A
19204	16	125	M6	DSNU-16-125-P-A
1908265	16	150	M6	DSNU-16-150-P-A
19205	16	160	M6	DSNU-16-160-P-A
19206	16	200	M6	DSNU-16-200-P-A

Tech Sheet 70225

### Polymer, Magnetic

0009	Piston Diameter mm	Stroke mm	Piston Rod Thread	Manufacturer's Code
19207	20	10	M8	DSNU-20-10-P-A
1908282	20	15	M8	DSNU-20-15-P-A
1908283	20	20	M8	DSNU-20-20-P-A
19208	20	25	M8	DSNU-20-25-P-A
1908284	20	30	M8	DSNU-20-30-P-A
1908285	20	35	M8	DSNU-20-35-P-A
19209	20	40	M8	DSNU-20-40-P-A
19210	20	50	M8	DSNU-20-50-P-A
1908286	20	60	M8	DSNU-20-60-P-A
1908287	20	70	M8	DSNU-20-70-P-A
19211	20	80	M8	DSNU-20-80-P-A
19212	20	100	M8	DSNU-20-100-P-A
19213	20	125	M8	DSNU-20-125-P-A
1908288	20	150	M8	DSNU-20-150-P-A
19214	20	160	M8	DSNU-20-160-P-A
19215	20	200	M8	DSNU-20-200-P-A
19216	20	250	M8	DSNU-20-250-P-A
19217	20	300	M8	DSNU-20-300-P-A
34718	20	320	M8	DSNU-20-320-P-A
19218	25	10	M10 x 1.25	DSNU-25-10-P-A
1908305	25	15	M10 x 1.25	DSNU-25-15-P-A
1908306	25	20	M10 x 1.25	DSNU-25-20-P-A
19219	25	25	M10 x 1.25	DSNU-25-25-P-A
1908307	25	30	M10 x 1.25	DSNU-25-30-P-A
1908308	25	35	M10 x 1.25	DSNU-25-35-P-A
19220	25	40	M10 x 1.25	DSNU-25-40-P-A
19221	25	50	M10 x 1.25	DSNU-25-50-P-A
1908309	25	60	M10 x 1.25	DSNU-25-60-P-A
1908310	25	70	M10 x 1.25	DSNU-25-70-P-A
19222	25	80	M10 x 1.25	DSNU-25-80-P-A
19223	25	100	M10 x 1.25	DSNU-25-100-P-A
19224	25	125	M10 x 1.25	DSNU-25-125-P-A
1908311	25	150	M10 x 1.25	DSNU-25-150-P-A
19225	25	160	M10 x 1.25	DSNU-25-160-P-A
19226	25	200	M10 x 1.25	DSNU-25-200-P-A
19227	25	250	M10 x 1.25	DSNU-25-250-P-A
19228	25	300	M10 x 1.25	DSNU-25-300-P-A
34719	25	320	M10 x 1.25	DSNU-25-320-P-A

Tech Sheet 70226

# DIN ISO 6432 ROUND CYLINDERS, DSNU

# FESTO



## Double Acting, Adjustable Pneumatic Cushioning

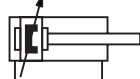
- Diameter 16-25mm: ISO 6432
- For very high demands on running characteristics, service life and load capacity
- Stainless Steel piston rod
- Comprehensive range of accessories

See page 468 for sensor mounts and sensors

Ambient Temperature:  
-20°C to +80°C

Working Pressure:  
1 to 10 bar

### Adjustable Cushioning



### Magnetic

0009	Piston Diameter mm	Stroke mm	Piston Rod Thread	Manufacturer's Code
1908266	16	10	M6	DSNU-16-10-PPV-A
1908267	16	15	M6	DSNU-16-15-PPV-A
1908268	16	20	M6	DSNU-16-20-PPV-A
33973	16	25	M6	DSNU-16-25-PPV-A
1908269	16	30	M6	DSNU-16-30-PPV-A
1908270	16	35	M6	DSNU-16-35-PPV-A
19229	16	40	M6	DSNU-16-40-PPV-A
19230	16	50	M6	DSNU-16-50-PPV-A
1908271	16	60	M6	DSNU-16-60-PPV-A
1908272	16	70	M6	DSNU-16-70-PPV-A
19231	16	80	M6	DSNU-16-80-PPV-A
19232	16	100	M6	DSNU-16-100-PPV-A
19233	16	125	M6	DSNU-16-125-PPV-A
1908273	16	150	M6	DSNU-16-150-PPV-A
19234	16	160	M6	DSNU-16-160-PPV-A
19235	16	200	M6	DSNU-16-200-PPV-A

Tech Sheet 70229

### Magnetic

0009	Piston Diameter mm	Stroke mm	Piston Rod Thread	Manufacturer's Code
1908289	20	10	M8	DSNU-20-10-PPV-A
1908290	20	15	M8	DSNU-20-15-PPV-A
1908291	20	20	M8	DSNU-20-20-PPV-A
33974	20	25	M8	DSNU-20-25-PPV-A
1908292	20	30	M8	DSNU-20-30-PPV-A
1908293	20	35	M8	DSNU-20-35-PPV-A
19236	20	40	M8	DSNU-20-40-PPV-A
19237	20	50	M8	DSNU-20-50-PPV-A
1908294	20	60	M8	DSNU-20-60-PPV-A
1908295	20	70	M8	DSNU-20-70-PPV-A
19238	20	80	M8	DSNU-20-80-PPV-A
19239	20	100	M8	DSNU-20-100-PPV-A
19240	20	125	M8	DSNU-20-125-PPV-A
1908296	20	150	M8	DSNU-20-150-PPV-A
19241	20	160	M8	DSNU-20-160-PPV-A
19242	20	200	M8	DSNU-20-200-PPV-A
19243	20	250	M8	DSNU-20-250-PPV-A
19244	20	300	M8	DSNU-20-300-PPV-A
34720	20	320	M8	DSNU-20-320-PPV-A
1908312	25	10	M10 x 1.25	DSNU-25-10-PPV-A
1908313	25	15	M10 x 1.25	DSNU-25-15-PPV-A
1908314	25	20	M10 x 1.25	DSNU-25-20-PPV-A
33975	25	25	M10 x 1.25	DSNU-25-25-PPV-A
1908315	25	30	M10 x 1.25	DSNU-25-30-PPV-A
1908316	25	35	M10 x 1.25	DSNU-25-35-PPV-A
19245	25	40	M10 x 1.25	DSNU-25-40-PPV-A
19246	25	50	M10 x 1.25	DSNU-25-50-PPV-A
1908317	25	60	M10 x 1.25	DSNU-25-60-PPV-A
1908318	25	70	M10 x 1.25	DSNU-25-70-PPV-A
19247	25	80	M10 x 1.25	DSNU-25-80-PPV-A
19248	25	100	M10 x 1.25	DSNU-25-100-PPV-A
19249	25	125	M10 x 1.25	DSNU-25-125-PPV-A
1908319	25	150	M10 x 1.25	DSNU-25-150-PPV-A
19250	25	160	M10 x 1.25	DSNU-25-160-PPV-A
19251	25	200	M10 x 1.25	DSNU-25-200-PPV-A
19252	25	250	M10 x 1.25	DSNU-25-250-PPV-A
19253	25	300	M10 x 1.25	DSNU-25-300-PPV-A
34721	25	320	M10 x 1.25	DSNU-25-320-PPV-A

Tech Sheet 70230

# FESTO

new  
product



For Festo Tube Regulators  
see page 814

# DIN ISO 6432 ROUND CYLINDERS, DSNU

# FESTO

## Double Acting, Self-adjusting Pneumatic Cushioning



- Diameter 16-25mm: ISO 6432
- For very high demands on running characteristics, service life and load capacity
- Stainless Steel piston rod
- Comprehensive range of accessories

See page 468 for sensor mounts and sensors

Ambient Temperature:  
-20°C to +80°C

Working Pressure:  
1 to 10 bar

### Self-adjusting Cushioning



### Magnetic

0009	Piston Diameter mm	Stroke mm	Piston Rod Thread	Manufacturer's Code
1908274	16	10	M6	DSNU-16-10-PPS-A
1908275	16	15	M6	DSNU-16-15-PPS-A
1908276	16	20	M6	DSNU-16-20-PPS-A
559263	16	25	M6	DSNU-16-25-PPS-A
1908277	16	30	M6	DSNU-16-30-PPS-A
1908278	16	35	M6	DSNU-16-35-PPS-A
559264	16	40	M6	DSNU-16-40-PPS-A
559265	16	50	M6	DSNU-16-50-PPS-A
1908279	16	60	M6	DSNU-16-60-PPS-A
1908280	16	70	M6	DSNU-16-70-PPS-A
559266	16	80	M6	DSNU-16-80-PPS-A
559267	16	100	M6	DSNU-16-100-PPS-A
559268	16	125	M6	DSNU-16-125-PPS-A
1908281	16	150	M6	DSNU-16-150-PPS-A
559269	16	160	M6	DSNU-16-160-PPS-A
559270	16	200	M6	DSNU-16-200-PPS-A

Tech Sheet 70231

### Magnetic

0009	Piston Diameter mm	Stroke mm	Piston Rod Thread	Manufacturer's Code
1908297	20	10	M8	DSNU-20-10-PPS-A
1908298	20	15	M8	DSNU-20-15-PPS-A
1908299	20	20	M8	DSNU-20-20-PPS-A
559271	20	25	M8	DSNU-20-25-PPS-A
1908300	20	30	M8	DSNU-20-30-PPS-A
1908301	20	35	M8	DSNU-20-35-PPS-A
559272	20	40	M8	DSNU-20-40-PPS-A
559273	20	50	M8	DSNU-20-50-PPS-A
1908302	20	60	M8	DSNU-20-60-PPS-A
1908303	20	70	M8	DSNU-20-70-PPS-A
559274	20	80	M8	DSNU-20-80-PPS-A
559275	20	100	M8	DSNU-20-100-PPS-A
559276	20	125	M8	DSNU-20-125-PPS-A
1908304	20	150	M8	DSNU-20-150-PPS-A
559277	20	160	M8	DSNU-20-160-PPS-A
559278	20	200	M8	DSNU-20-200-PPS-A
559279	20	250	M8	DSNU-20-250-PPS-A
559280	20	300	M8	DSNU-20-300-PPS-A
559281	20	320	M8	DSNU-20-320-PPS-A
1908320	25	10	M10 x 1.25	DSNU-25-10-PPS-A
1908321	25	15	M10 x 1.25	DSNU-25-15-PPS-A
1908322	25	20	M10 x 1.25	DSNU-25-20-PPS-A
559282	25	25	M10 x 1.25	DSNU-25-25-PPS-A
1908323	25	30	M10 x 1.25	DSNU-25-30-PPS-A
1908324	25	35	M10 x 1.25	DSNU-25-35-PPS-A
559283	25	40	M10 x 1.25	DSNU-25-40-PPS-A
559284	25	50	M10 x 1.25	DSNU-25-50-PPS-A
1908325	25	60	M10 x 1.25	DSNU-25-60-PPS-A
1908326	25	70	M10 x 1.25	DSNU-25-70-PPS-A
559285	25	80	M10 x 1.25	DSNU-25-80-PPS-A
559286	25	100	M10 x 1.25	DSNU-25-100-PPS-A
559287	25	125	M10 x 1.25	DSNU-25-125-PPS-A
1908327	25	150	M10 x 1.25	DSNU-25-150-PPS-A
559288	25	160	M10 x 1.25	DSNU-25-160-PPS-A
559289	25	200	M10 x 1.25	DSNU-25-200-PPS-A
559290	25	250	M10 x 1.25	DSNU-25-250-PPS-A
559291	25	300	M10 x 1.25	DSNU-25-300-PPS-A
559292	25	320	M10 x 1.25	DSNU-25-320-PPS-A

Tech Sheet 70232

# FESTO

**new product**



For Festo Differential Pressure Regulators see page 816

# ROUND CYLINDERS, DSNU-S


# FESTO




## Compact Double Acting, Elastic Polymer Cushioning Rings

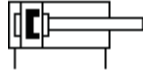
- Compact variant of standards-based cylinder DSNU
- Diameter 12-25mm
- Space saving

See page 468 for sensor mounts and sensors

 Ambient Temperature:  
-20°C to +80°C

 Working Pressure:  
1 to 10 bar

Elastic Polymer Cushioning



### Magnetic

0009	Piston Diameter mm	Stroke mm	Piston Rod Thread	Manufacturer's Code
5211896	12	10	M6	DSNU-S-12-10-P-A
5211897	12	15	M6	DSNU-S-12-15-P-A
5211898	12	20	M6	DSNU-S-12-20-P-A
5211899	12	25	M6	DSNU-S-12-25-P-A
5211900	12	30	M6	DSNU-S-12-30-P-A
5211901	12	40	M6	DSNU-S-12-40-P-A
5211903	12	50	M6	DSNU-S-12-50-P-A
5211904	12	60	M6	DSNU-S-12-60-P-A
5211905	12	80	M6	DSNU-S-12-80-P-A
5211906	12	100	M6	DSNU-S-12-100-P-A
5211908	12	125	M6	DSNU-S-12-125-P-A
5211909	12	150	M6	DSNU-S-12-150-P-A
5216087	16	10	M6	DSNU-S-16-10-P-A
5216088	16	15	M6	DSNU-S-16-15-P-A
5216089	16	20	M6	DSNU-S-16-20-P-A
5216090	16	25	M6	DSNU-S-16-25-P-A
5216091	16	30	M6	DSNU-S-16-30-P-A
5216093	16	40	M6	DSNU-S-16-40-P-A
5216094	16	50	M6	DSNU-S-16-50-P-A
5216095	16	60	M6	DSNU-S-16-60-P-A
5216096	16	80	M6	DSNU-S-16-80-P-A
5216098	16	100	M6	DSNU-S-16-100-P-A
5216099	16	125	M6	DSNU-S-16-125-P-A
5216100	16	150	M6	DSNU-S-16-150-P-A
5216101	16	200	M6	DSNU-S-16-200-P-A

Tech Sheet 70227

### Magnetic

0009	Piston Diameter mm	Stroke mm	Piston Rod Thread	Manufacturer's Code
5224633	20	10	M8	DSNU-S-20-10-P-A
5224634	20	15	M8	DSNU-S-20-15-P-A
5224635	20	20	M8	DSNU-S-20-20-P-A
5224636	20	25	M8	DSNU-S-20-25-P-A
5224637	20	30	M8	DSNU-S-20-30-P-A
5224639	20	40	M8	DSNU-S-20-40-P-A
5224641	20	50	M8	DSNU-S-20-50-P-A
5224642	20	60	M8	DSNU-S-20-60-P-A
5224643	20	80	M8	DSNU-S-20-80-P-A
5224644	20	100	M8	DSNU-S-20-100-P-A
5224645	20	125	M8	DSNU-S-20-125-P-A
5224646	20	150	M8	DSNU-S-20-150-P-A
5224647	20	200	M8	DSNU-S-20-200-P-A
5228227	25	10	M8	DSNU-S-25-10-P-A
5228228	25	15	M8	DSNU-S-25-15-P-A
5228229	25	20	M8	DSNU-S-25-20-P-A
5228230	25	25	M8	DSNU-S-25-25-P-A
5228231	25	30	M8	DSNU-S-25-30-P-A
5228232	25	40	M8	DSNU-S-25-40-P-A
5228233	25	50	M8	DSNU-S-25-50-P-A
5228234	25	60	M8	DSNU-S-25-60-P-A
5228235	25	80	M8	DSNU-S-25-80-P-A
5228236	25	100	M8	DSNU-S-25-100-P-A
5228237	25	125	M8	DSNU-S-25-125-P-A
5228238	25	150	M8	DSNU-S-25-150-P-A
5228239	25	200	M8	DSNU-S-25-200-P-A

Tech Sheet 70228

# ROUND CYLINDERS, DSNU-S

# FESTO

## Compact Double Acting, Self-adjusting Pneumatic Cushioning



- Compact variant of standards-based cylinder DSNU
- Diameter 16-25mm
- Space saving

See page 468 for sensor mounts and sensors

Ambient Temperature:  
-20°C to +80°C

Working Pressure:  
1 to 10 bar

### Self-adjusting Cushioning



### Magnetic

0009	Piston Diameter mm	Stroke mm	Piston Rod Thread	Manufacturer's Code
5217238	16	25	M6	DSNU-S-16-25-PPS-A
5217239	16	30	M6	DSNU-S-16-30-PPS-A
5217240	16	40	M6	DSNU-S-16-40-PPS-A
5217241	16	50	M6	DSNU-S-16-50-PPS-A
5217242	16	60	M6	DSNU-S-16-60-PPS-A
5217243	16	80	M6	DSNU-S-16-80-PPS-A
5217244	16	100	M6	DSNU-S-16-100-PPS-A
5217245	16	125	M6	DSNU-S-16-125-PPS-A
5217246	16	150	M6	DSNU-S-16-150-PPS-A
5217248	16	200	M6	DSNU-S-16-200-PPS-A

Tech Sheet 70233

### Magnetic

0009	Piston Diameter mm	Stroke mm	Piston Rod Thread	Manufacturer's Code
5225836	20	25	M8	DSNU-S-20-25-PPS-A
5225837	20	30	M8	DSNU-S-20-30-PPS-A
5225838	20	40	M8	DSNU-S-20-40-PPS-A
5225839	20	50	M8	DSNU-S-20-50-PPS-A
5225840	20	60	M8	DSNU-S-20-60-PPS-A
5225841	20	80	M8	DSNU-S-20-80-PPS-A
5225842	20	100	M8	DSNU-S-20-100-PPS-A
5225843	20	125	M8	DSNU-S-20-125-PPS-A
5225844	20	150	M8	DSNU-S-20-150-PPS-A
5225846	20	200	M8	DSNU-S-20-200-PPS-A
5228452	25	25	M8	DSNU-S-25-25-PPS-A
5228453	25	30	M8	DSNU-S-25-30-PPS-A
5228454	25	40	M8	DSNU-S-25-40-PPS-A
5228455	25	50	M8	DSNU-S-25-50-PPS-A
5228456	25	60	M8	DSNU-S-25-60-PPS-A
5228457	25	80	M8	DSNU-S-25-80-PPS-A
5228458	25	100	M8	DSNU-S-25-100-PPS-A
5228459	25	125	M8	DSNU-S-25-125-PPS-A
5228460	25	150	M8	DSNU-S-25-150-PPS-A
5228461	25	200	M8	DSNU-S-25-200-PPS-A

Tech Sheet 70234

# FESTO



For **Festo Air Prep MS Series**  
see pages 657-662

# CYLINDER ATTACHMENTS & ACCESSORIES

**FESTO**


## Mounting Components for Drive Units



**Foot Mounting, ISO 6432, Version S1,  
For DSNU Standard Cylinder**

0009	To Suit Bore mm	Quantity	Manufacturer's Code
5125	12/16	1	HBN-12/16X1
5126	12/16	2	HBN-12/16X2
5127	20/25	1	HBN-20/25X1
5128	20/25	2	HBN-20/25X2

Tech Sheet 70217



**Foot Mounting, ISO 6432, Version S3,  
For DSNU-S Space Saving Cylinder**

0009	To Suit Bore mm	Quantity	Manufacturer's Code
5407772	12/16	1	HBN-S-12/16X1
5407787	20/25	1	HBN-S-20/25X1
5407847	20/25	2	HBN-S-20/25X2

Tech Sheet 70218



**Clevis Foot Swivel Mounting, ISO 6432**

0009	To Suit Bore mm	Manufacturer's Code
6058	12/16	LBN-12/16
6059	20/25	LBN-20/25

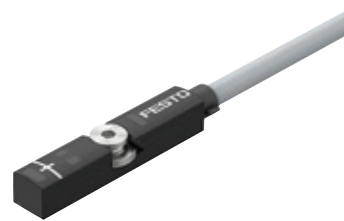
Tech Sheet 70216

## Mounting Components for Sensors



**SMBR, Clip Mounting Kits**

0009	Type
175091	SMBR-8
175092	SMBR-8-10
175093	SMBR-8-12
175094	SMBR-8-16
175095	SMBR-8-20
175096	SMBR-8-25
175097	SMBR-8-32
175098	SMBR-8-40
175099	SMBR-8-50
175100	SMBR-8-63



**Proximity Sensors For T-Slot,  
Non-contacting**

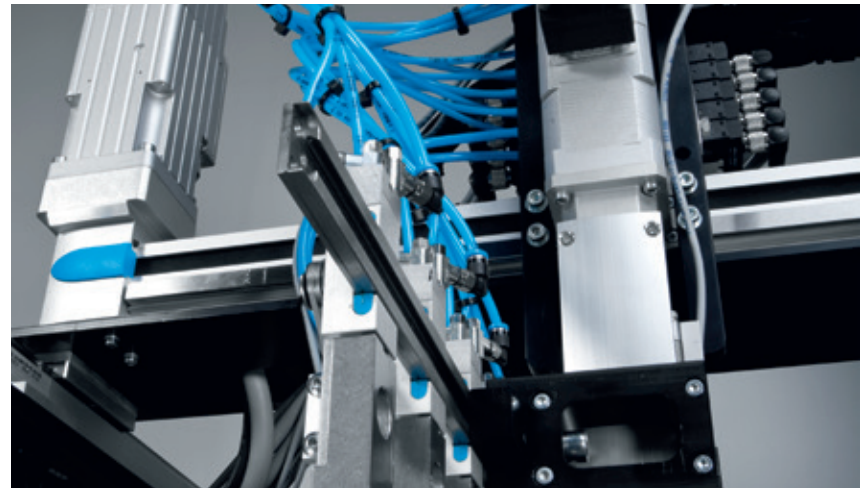
0009	Type N/O Contact
574334	SMT-8M-A-PS-24V-E-0.3-M8D (PNP)
574339	SMT-8M-A-NS-24V-E-0.3-M8D (NPN)



**Cable Type NEBU**

0009	Designation
541334	Connecting cable

**T Slot**

**C Slot**


# ISO 6432 MINI CYLINDERS

## ISO 6432 Single Acting Cylinders

### Technical Data for all ISO 6432 Cylinders

° Temperature Range:  
10°C to +80°C

Maximum Operating Pressure:  
10 bar

• Fluid: lubricated or unlubricated air  
• Inrush pressure: Ø10-12 = 0.8 bar, Ø16-25 = 0.6 bar

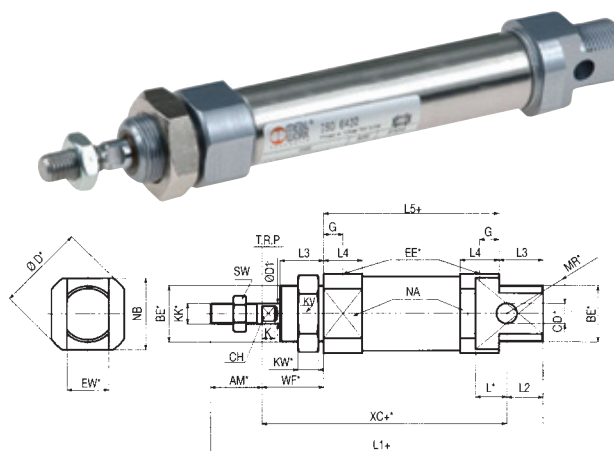
• Forces generated at 6 bar thrust/retraction:  
Ø16: 108N/95N, Ø20: 169N/148N, Ø25: 265N/228N

### Dimensions

Ø	AM	BE	ØCD	ØD	ØD1	G	EE	EW	L	L1	L2	L3	L4	L5	KK	XC	WF	KW	KV	MR	NA	NB	SW	CH	K
10	12	M12 x 1.25	4	17	4	6	M5	8	6	86	10	12	10	46	M4	64	16	7	19	12	15	15	7	3	3
12	16	M16 x 1.5	6	19	6	6	M5	12	9	104	13	17	10	49	M6	75	22	8	24	16	17	17	10	5	3
16	16	M16 x 1.5	6	23	6	6	M5	12	9	111	13	17	10	56	M6	82	22	8	24	16	20	20	10	5	3.5
20	20	M22 x 1.5	8	34	8	8	G1/8	16	12	129	14	17	15	68	M8	95	24	10	32	18	28	28	13	7	4.6
25	22	M22 x 1.5	8	34	10	9	G1/8	16	12	143	17	20	18	73	M10 x 1.25	104	28	10	32	21	30	30	17	8	5

### Non-magnetic

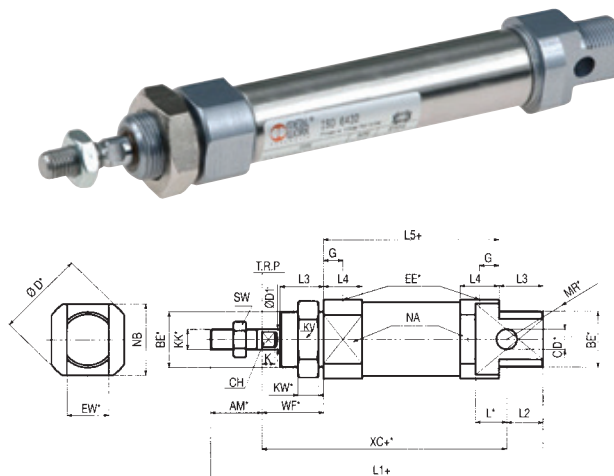
9146	Diameter mm	Stroke mm
1110100010XN	10	10
1110100025XN	10	25
1110100050XN	10	50
1110120010CN	12	10
1110120025CN	12	25
1110120050CN	12	50
1110160010CN	16	10
1110160025CN	16	25
1110160050CN	16	50
1110200010CN	20	10
1110200025CN	20	25
1110200050CN	20	50
1110250010CN	25	10
1110250025CN	25	25
1110250050CN	25	50



## ISO 6432 Double Acting Cylinders

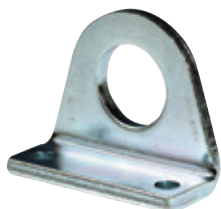
### Magnetic

9146	Diameter mm	Stroke mm
1120160010CN	16	10
1120160025CN	16	25
1120160050CN	16	50
1120160080CN	16	80
1120160100CN	16	100
1120160125CN	16	125
1120160160CN	16	160
1120160200CN	16	200
1120200010CN	20	10
1120200025CN	20	25
1120200050CN	20	50
1120200080CN	20	80
1120200100CN	20	100
1120200125CN	20	125
1120200160CN	20	160
1120200200CN	20	200
1120200250CN	20	250
1120250010CN	25	10
1120250025CN	25	25
1120250050CN	25	50
1120250080CN	25	80
1120250100CN	25	100
1120250125CN	25	125
1120250160CN	25	160
1120250200CN	25	200
1120250250CN	25	250
1120250320CN	25	320



# ISO 6432 MINI CYLINDERS ACCESSORIES

## Foot Mounting



### To suit ISO 6432 Cylinders

9146	To Suit Size mm
W0950080001	10
W0950120001	12-16
W0950200001	20-25

## Flange Mounting



### To suit ISO 6432 Cylinders

9146	To Suit Size mm
W0950080002	10
W0950120002	12-16
W0950200002	20-25

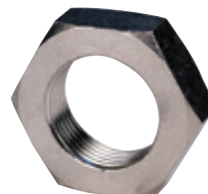
## Counter Support



### To suit ISO 6432 Cylinders

9146	To Suit Size mm
W0950080005	10
W0950120005	12-16
W0950200005	20-25

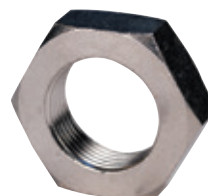
## Cylinder Head Nut



### To suit ISO 6432 Cylinders

9146	To Suit Size mm	Thread
W0950080010	10	M12 x 1.25
W0950120010	16	M16 x 1.5
W0950200010	25	M22 x 1.5

## Piston Rod Nut



### To suit ISO 6432 Cylinders

9146	To Suit Size mm	Thread
W0950080011	10	M4
W0950120011	16	M6
W0950200011	20	M8
W0950322010	25	M10 x 1.25

## Fork Clevis



### To suit ISO 6432 Cylinders

9146	To Suit Size mm	Thread
W0950080020	10	M4
W0950120020	12-16	M6
W0950200020	20	M8
W0950322020	25	M10 x 1.25

## Spherical Rod Eye



### To suit ISO 6432 Cylinders

9146	To Suit Size mm	Thread
W0950080025	10	M4
W0950120025	12-16	M6
W0950200025	20	M8
W0950322025	25	M10 x 1.25

## Reed Switch & Bracket



### To suit ISO 6432 Cylinders

9146	Description/To Suit
W0950000201	Reed Switch
W0950000510	10
W0950000512	12
W0950000516	16
W0950000520	20
W0950000525	25



# ISO 6432 MINI AIR CYLINDERS, ALL STAINLESS STEEL

## ISO 6432 Mini Cylinders, Double Acting

### Technical Specification

- ISO 6432 stainless steel micro-cylinders are available in various versions with a wide range of accessories
- With or without magnet execution
- Double-acting, single or through-rod
- Gaskets: polyurethane or FKM/FPM (for high temperatures)
- Fixing accessories

### Fluid

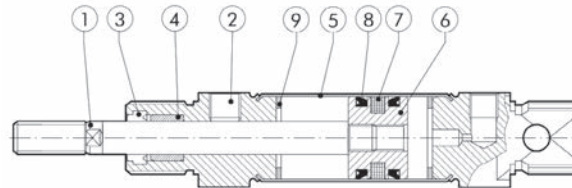
Lubricated or non-lubricated air

**Temperature Range:**  
10°C to +80°C

**Maximum Operating Pressure:**  
10 bar



- |   |   |
|---|---|
| 1. Piston rod: AISI 316 steel                 | 7. Piston gasket: polyurethane or FKM/FPM |
| 2. Head: AISI 304 steel                       | 8. Magnet: plastoferrite                  |
| 3. Piston rod gasket: polyurethane or FKM/FPM | 9. Static O-rings: NBR or FKM/FPM         |
| 4. Guide bushing: sintered bronze             |   |
| 5. Barrel: AISI 304 steel                     |   |
| 6. Piston: brass                              |   |



### Magnetic

9146	Ø mm	Stroke mm
W1800160010	16	10
W1800160025	16	25
W1800160050	16	50
W1800160080	16	80
W1800160100	16	100
W1800160125	16	125
W1800160160	16	160
W1800160200	16	200
W1800160250	16	250
W1800160320	16	320
W1800200010	20	10
W1800200025	20	25
W1800200050	20	50
W1800200080	20	80
W1800200100	20	100
W1800200125	20	125
W1800200160	20	160

9146	Ø mm	Stroke mm
W1800200200	20	200
W1800200250	20	250
W1800200320	20	320
W1800200400	20	400
W1800250010	25	10
W1800250025	25	25
W1800250050	25	50
W1800250080	25	80
W1800250100	25	100
W1800250125	25	125
W1800250160	25	160
W1800250200	25	200
W1800250250	25	250
W1800250320	25	320
W1800250400	25	400
W1800250500	25	500

# ISO 6432 MINI AIR CYLINDER ACCESSORIES, ALL STAINLESS STEEL

## Foot Mountings



To suit ISO 6432 Mini Cylinders

9146	To Suit Size mm
W095X120001	16
W095X200001	20/25

## Female Hinges



To suit ISO 6432 Mini Cylinders

9146	To Suit Size mm
W095X120005	16
W095X200005	20/25

## Rod Nuts



To suit ISO 6432 Mini Cylinders

9146	To Suit Size mm	Thread
W095X120011	16	M6 x 1
W095X200011	20	M8 x 1
W095X322011	25/32	M10 x 1.25

## Cylinder Head Nuts



To suit ISO 6432 Mini Cylinders

9146	To Suit Size mm	Thread
W095X120010	16	M16 x 1.25
W095X200010	20/25	M22 x 1.5

## Flange



To suit ISO 6432 Mini Cylinders

9146	Size to Suit mm
W095X120002	16
W095X200002	20/25

## Fork Clevis



To suit ISO 6432 Cylinders

9146	To Suit Size mm	Thread
W095X120020	16	M6 x 1
W095X200020	20	M8 x 1
W095X322020	25/32	M10 x 1.25

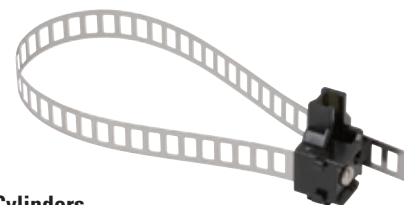
## Reed Switch



To suit ISO 6432 Mini Cylinders

9146	Description
W0952028184	With M8 Connection

## Mounting for Reed Switch



To suit ISO 6432 Mini Cylinders

9146	To Suit Size mm
W0950001103	8-63

We have access to **over 10,000 product lines available** via Norgren's European Distribution Centre. Contact our business development team with your Norgren requirements.

Norgren's extensive product range comprises of other leading brands including: **Pneufit, Herion, Buschjost, Martonair, Lintra, Excelon Plus and Fleetfit.**



### VACUUM

Vacuum is most commonly used for picking and placing components in assembly automation systems. Generated from a compressed air supply, this can be controlled very simply in order to

perform most common tasks. The range includes a range of pumps, cups, switches and accessories; easily selected and applied.



### PRESSURE SWITCHES

Pressure switches can be used to automatically monitor pressure levels in a compressed air system. They can however also be used for more complex monitoring functions in air, water or hydraulic applications.



### ACTUATORS

Pneumatic actuators (sometimes called cylinders) are the product used to provide motion and force to industrial automation applications. Linear and rotary output, they are available in all manner of sizes and styles to suit most requirements.

Norgren has a long history of production of this kind of device – an early example of a pneumatic actuator was the original Martonair air hoist. They now include rodded, rodless, compact, roundline, guided and other ranges.



### AIR PREPARATION

Correct air preparation is essential for best performance. Norgren has a great reputation in this area, and its ranges have been at the forefront of industry for many years.



### VALVES

In industrial automation, valves can be as simple or complex as required. Norgren has many brand names associated with its valve ranges – Herion,

Buschjost, Walter, FAS, Webber, Watson Smith, Maxseal, Enots and Martonair.

# ISO 6432 CYLINDERS & MOUNTINGS



## ISO 6432 Cylinders

- Magnetic piston as standard
- Generally conforms to ISO 6432
- High strength, double crimped end cap design
- Corrosion resistant

**Working Temperature:**  
-10°C to +80°C

**Working Pressure:**  
2 to 10 bar

**Standard:**  
ISO 6432

**Buffer:**  
Polyurethane

**Operation:**  
Single acting (sprung in),  
magnetic piston, buffer cushioning

- Nose mounting nut and piston rod locknut as standard
  - Optional port arrangement for compact installation
- Medium:**  
Compressed air, filtered, lubricated or non-lubricated

**Barrel:**  
Stainless steel  
(austenitic)

**Piston Rod:**  
Stainless steel  
(austenitic)

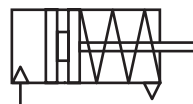
**Seals:**  
Nitrile rubber

**End Covers:**  
Clear anodised  
aluminium alloy

### Single Acting RM/28000/M

0036	Bore mm	Stroke mm	Thread
RM/28010/M/10	10	10	M5
RM/28010/M/25	10	25	M5
RM/28010/M/50	10	50	M5
RM/28020/M/10	20	10	G1/8
RM/28020/M/25	20	25	G1/8
RM/28020/M/50	20	50	G1/8
RM/28025/M/10	25	10	G1/8
RM/28025/M/25	25	25	G1/8
RM/28025/M/50	25	50	G1/8

Tech Sheet 10316



**Working Temperature:**  
-10°C to +80°C

**Working Pressure:**  
1 to 10 bar

**Medium:**  
Compressed air, filtered,  
lubricated or non-lubricated

**Standard:**  
ISO 6432

**Buffer:**  
Polyurethane

**Operation:**  
Double acting, magnetic  
piston with buffer or  
adjustable cushioning

**Barrel:**  
Stainless steel  
(austenitic)

**Piston Rod:**  
Stainless steel  
(austenitic)

**Wiper:**  
Polyurethane

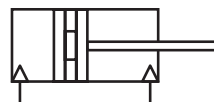
**Seals:**  
Nitrile rubber

**End Covers:**  
Clear anodised  
aluminium alloy

### Double Acting RM/8000/M

0036	Bore mm	Stroke mm	Thread
RM/8010/M/25	10	25	M5
RM/8010/M/50	10	50	M5
RM/8010/M/80	10	80	M5
RM/8010/M/100	10	100	M5
RM/8012/M/25	12	25	M5
RM/8012/M/50	12	50	M5
RM/8016/M/25	16	25	M5
RM/8016/M/50	16	50	M5
RM/8016/M/100	16	100	M5
RM/8020/M/25	20	25	G1/8
RM/8020/M/50	20	50	G1/8
RM/8020/M/80	20	80	G1/8
RM/8020/M/100	20	100	G1/8
RM/8025/M/25	25	25	G1/8
RM/8025/M/50	25	50	G1/8
RM/8025/M/80	25	80	G1/8
RM/8025/M/100	25	100	G1/8

Tech Sheet 10316



## ISO 6432 Mountings



### Female Piston Rod Clevis

0036	Bore mm
QM/8010/25	10
QM/8012/25	12 & 16
QM/8020/25	20
QM/8025/25	25

Tech Sheet 10316



### Piston Rod Eye

0036	Bore mm
QM/8010/32	10
QM/8012/32	12 & 16
QM/8020/32	20
QM/8025/32	25

Tech Sheet 10316



### Clevis Foot Mounting

0036	Bore mm
QM/947	10
QM/8012/24	12 & 16
QM/8020/24	20 & 25

Tech Sheet 10316

# ISO 6432 CYLINDERS

## Proximity Switches to suit Series 24, 32, 60 & 61



### T Slot

0158	Description	Voltage
CST 220	2 Wire	10-110V AC/DC
CST 232	3 Wire	5-30V AC/DC
CST 332	Hall Effect, 3 Wire, PNP	27V DC

Tech Sheet 20084



### T Slot, M8

0158	Description	Voltage
CST 250	2 Wire	10-110V AC/DC
CST 262	3 Wire	5-30V AC/DC
CST 362	Hall Effect, 3 Wire, PNP	27V DC

Tech Sheet 20084

### Extension Lead

0158	Length Metres
GG08B3C25050	5

Tech Sheet 20084

## Proximity Switch Brackets



### Series 24

0158	OD mm
S-CST 02	16
S-CST 03	20
S-CST 04	25

Tech Sheet 20084



### Series 60

0158	OD mm
S-CST 25	32-63
S-CST 26	80-100

Tech Sheet 20084

## Series 24, Double Acting Cylinders

Single and double-acting  
Standard CETOP RP52P DIN/ISO 6432  
Stainless steel rod and tube  
Anodized AL end-blocks

Type of construction: flanged

Operation: single-acting or double-acting

Materials: end-blocks = anodized AL,  
tube and rod = stainless steel, piston = AL,  
seals = NBR - PU, other parts = see coding

Brackets: screw, flange, feet, trunnion

Stroke min – max: Ø 16: 10 - 600 mm; Ø 20 - Ø 25: 10 - 1000 mm

Bores: Ø 16, 20, 25

Fluid: Filtered air, without lubrication. If lubricated air is used, it is recommended to use oil ISO VG32. Once applied the lubrication should never be interrupted.

Speed: 10 to 1000 mm/sec (without load)

° Operating temperature:  
0°C to 80°C (with dry air -20°C)

⊖ Operating pressure:  
1 to 10 bar (double-acting);  
2 to 10 bar (single-acting)



### M5, Ø16mm

0158	Stroke mm
24N2A16A010	10
24N2A16A025	25
24N2A16A040	40
24N2A16A050	50
24N2A16A080	80
24N2A16A100	100
24N2A16A125	125
24N2A16A160	160
24N2A16A200	200

Tech Sheet 1844

### G1/8", Ø25mm

0158	Stroke mm
24N2A25A010	10
24N2A25A025	25
24N2A25A040	40
24N2A25A050	50
24N2A25A080	80
24N2A25A100	100
24N2A25A125	125
24N2A25A160	160
24N2A25A200	200
24N2A25A250	250
24N2A25A300	300
24N2A25A320	320
24N2A25A400	400
24N2A25A500	500

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### G1/8", Ø20mm

0158	Stroke mm
24N2A20A010	10
24N2A20A025	25
24N2A20A040	40
24N2A20A050	50
24N2A20A080	80
24N2A20A100	100
24N2A20A125	125
24N2A20A160	160
24N2A20A200	200
24N2A20A250	250
24N2A20A300	300

Tech Sheet 1844



For Super-Rapid Compact Fittings  
see page 832

# ISO 6432 CYLINDERS



## Mini-ISO Cylinders



### Micro Cylinders Double Acting 8mm-16mm

0110	Bore mm	Stroke mm
1280.10.15.M	10	15
1280.10.100.M	10	100
1280.12.15.M	12	15
1280.12.50.M	12	50
1280.12.100.M	12	100
1280.12.250.M	12	250
1280.12.300.M	12	300
1280.16.50.M	16	50
1280.16.75.M	16	75
1280.16.80.M	16	80
1280.16.100.M	16	100
1280.16.150.M	16	150
1280.16.160.M	16	160
1280.16.200.M	16	200

### Micro Cylinders Double Acting No Rear Eye 8mm-16mm

0110	Bore mm	Stroke mm
1281.12.150.M	12	150
1281.16.80.M	16	80
1281.16.150.M	16	150

### Micro Cylinders Double Acting No Rear Eye 20mm-32mm

0110	Bore mm	Stroke mm
1281.20.50.M	20	50
1281.20.200.M	20	200
1281.25.50.M	25	50
1281.25.75.M	25	75
1281.25.160.M	25	160
1281.32.50.M	32	50
1281.32.75.M	32	75
1281.32.200.M	32	200
1281.32.300.M	32	300

### Micro Cylinders Double Acting 20mm-32mm

0110	Bore mm	Stroke mm
1280.20.15.M	20	15
1280.20.25.M	20	25
1280.20.50.M	20	50
1280.20.75.M	20	75
1280.20.80.M	20	80
1280.20.150.M	20	150
1280.20.200.M	20	200
1280.20.250.M	20	250
1280.20.300.M	20	300
1280.20.350.M	20	350
1280.25.15.M	25	15
1280.25.25.M	25	25
1280.25.50.M	25	50
1280.25.75.M	25	75
1280.25.80.M	25	80
1280.25.100.M	25	100
1280.25.125.M	25	125
1280.25.200.M	25	200
1280.25.250.M	25	250
1280.25.300.M	25	300
1280.25.400.M	25	400
1280.32.50.M	32	50
1280.32.150.M	32	150
1280.32.250.M	32	250
1280.32.400.M	32	400



For PNEUMAX Air Preparation  
see page 700

## Mini-ISO Cylinder Mountings



**1580U Reed Switch c/w LED**

0110	Description
1580U	LED Reed Switch N/O



**1500.U Switch Clamps 12mm-32mm**

0110	Bore mm
1280.16.F	16



**Rod Clevis c/w Pin 8mm-32mm**

0110	Bore mm
1200.12.04	12



**1580.U Switch Clamps 8mm-32mm**

0110	Bore mm
1280.8.FS	8



**Foot Bracket 8mm-32mm**

0110	Bore mm
1200.8.01	8



**Rod Clevis c/w Pin & Clip 8mm-32mm**

0110	Bore mm
1200.25.04/1	25



**1500U Reed Switch c/w LED**

0110	Description
1500.U	LED Reed Switch N/O



**Flange Bracket 8mm-32mm**

0110	Bore mm
1200.8.02	8



**Rod Nut & Locking Ring 8mm-32mm**

0110	Bore mm
1200.8.05	8



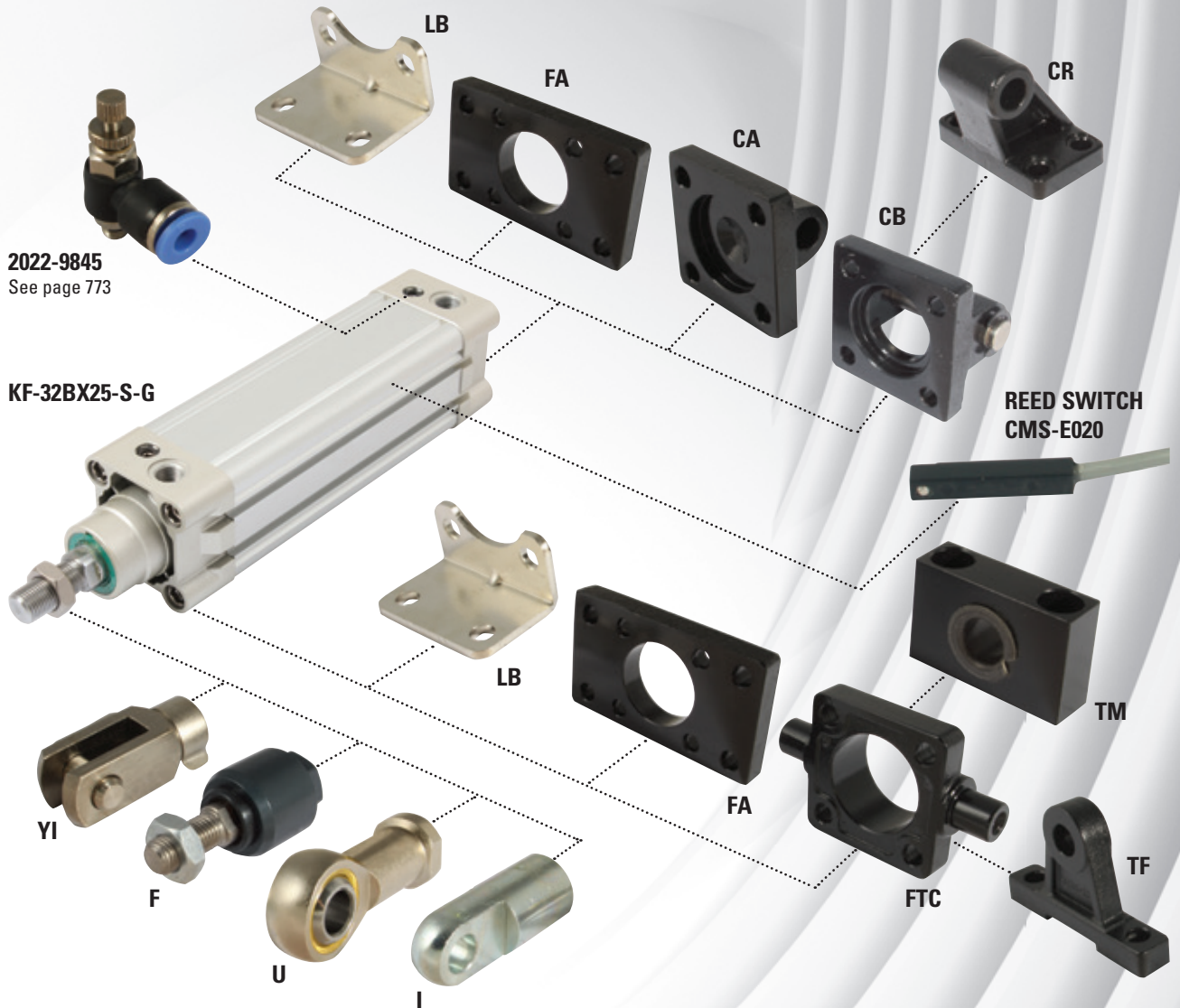
**Rear Eye Bracket 8mm-32mm**

0110	Bore mm
1200.32.03	32

# PNEUMATIC GEN 1 & 2 ISO 1552 CYLINDERS

## Accessories & Mounting Selector

stainless steel



### ISO 1552 Cylinders

<b>FA</b>	Front and rear flange mounting	<b>CR</b>	Rear bracket mounting
<b>FTC</b>	Front trunnion mounting	<b>LB</b>	Foot mounting (pair)
<b>TF</b>	Front trunnion clevis mounting	<b>YI</b>	Piston rod clevis
<b>TM</b>	Trunnion support mounting	<b>I</b>	Piston rod clevis
<b>CA</b>	Rear eye mounting	<b>F</b>	Piston rod floating joint
<b>CB</b>	Rear clevis mounting	<b>U</b>	Piston rod universal joint
		<b>Reed Switches</b>	Two wire N/O with LED

**Cylinders**  
Pages 480-483

**Mountings**  
Pages 484-485

**Reed Switches**  
Page 485

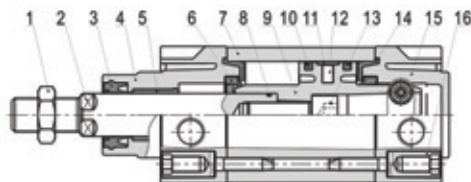
**Cylinder Guides**  
Page 486



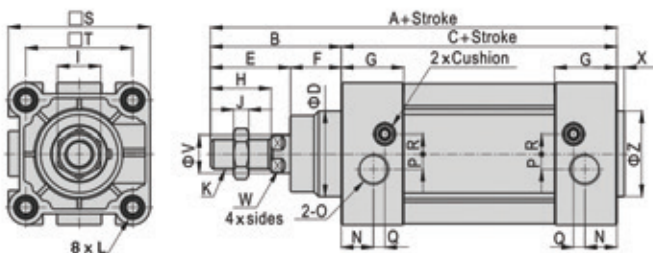
## Technical Information

### Inner Structure & Material of Major Parts

No.	Item	Material
1	Rod nut	Stainless steel
2	Piston rod	Blank: medium carbon steel B: 304 stainless steel
3	Front cover packing	TPU
4	Front cover	Aluminium alloy
5	Bushing	Wear-resistant material
6	Cushioning O-ring	TPU
7	Barrel	Aluminium alloy
8	O-ring	Nitrile
9	Piston	Aluminium alloy
10	Piston seal	TPU
11	Wear ring	Wear-resistant material
12	Magnet	Plastic/rubber (Ø125)
13	Bolt	Carbon steel
14	Buffer gasket	TPU
15	Back cover	Aluminium alloy
16	Screw	Carbon steel/stainless steel



### Dimensions



Bore Size/Item	A	B	C	D	E	F	G	H	I	J	K	L	N	P	Q	R	S	T	V	W	X	Z
32	142	48	94	30	29	19	27.5	22	17	6	M10 x 1.25	M6	13.5	5.8	6	6.3	46.5	32.5	12	10	3	30
40	159	54	105	35	33	21	32	24	17	7	M12 x 1.25	M6	17.5	6	5.5	9	54	38	16	13	3.5	35
50	175	69	106	40	42	27	31	32	23	8	M16 x 1.5	M8	14	8	5	10.5	64	46.5	20	17	3.5	40
63	190	69	121	45	42	27	33	32	23	8	M16 x 1.5	M8	17	8	6	10.5	75	56.5	20	17	4	45
80	214	86	128	45	53	33	33	40	26	10	M20 x 1.5	M10	16.5	8	8.5	12.5	93	72	25	22	4	45
100	229	91	138	55	55	36	37	40	26	10	M20 x 1.5	M10	19.5	10	7	12	110	89	25	22	4	55
125	279	119	160	60	74	45	46	54	41	13.5	M27 x 2	M12	23	11	12	11	135	110	32	27	4	60

# PNEUMATIC CYLINDERS



## Gen 1 ISO 15552 Cylinders

### Medium:

Clean compressed air. Filtered (40µm) and lubricated adjustable cushioning.

**Piston Rod Material:** Chrome plated carbon steel.

**Please note:** Bore sizes 125mm are available on a lead time.

**Please contact our sales office for details.**



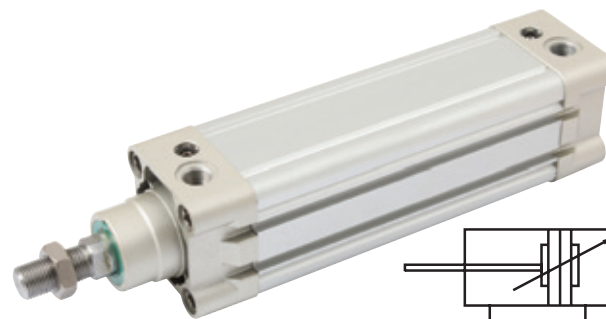
**Working Temperature:**  
-20°C to +80°C

**Working Pressure:**  
1 to 10 bar

### Chrome Plated Carbon Steel Piston Rod as Standard

### Magnetic Double Acting, Adjustable Cushioning, BSPP

0414	Bore mm	Stroke mm	Thread	Piston Rod Thread
KI-32X25-S-G	32	25	1/8"	M10 x 1.25
KI-32X50-S-G	32	50	1/8"	M10 x 1.25
KI-32X75-S-G	32	75	1/8"	M10 x 1.25
KI-32X80-S-G	32	80	1/8"	M10 x 1.25
KI-32X100-S-G	32	100	1/8"	M10 x 1.25
KI-32X125-S-G	32	125	1/8"	M10 x 1.25
KI-32X150-S-G	32	150	1/8"	M10 x 1.25
KI-32X160-S-G	32	160	1/8"	M10 x 1.25
KI-32X175-S-G	32	175	1/8"	M10 x 1.25
KI-32X200-S-G	32	200	1/8"	M10 x 1.25
KI-32X250-S-G	32	250	1/8"	M10 x 1.25
KI-32X300-S-G	32	300	1/8"	M10 x 1.25
KI-32X350-S-G	32	350	1/8"	M10 x 1.25
KI-32X400-S-G	32	400	1/8"	M10 x 1.25
KI-32X450-S-G	32	450	1/8"	M10 x 1.25
KI-32X500-S-G	32	500	1/8"	M10 x 1.25
KI-40X25-S-G	40	25	1/4"	M12 x 1.25
KI-40X50-S-G	40	50	1/4"	M12 x 1.25
KI-40X75-S-G	40	75	1/4"	M12 x 1.25
KI-40X80-S-G	40	80	1/4"	M12 x 1.25
KI-40X100-S-G	40	100	1/4"	M12 x 1.25
KI-40X125-S-G	40	125	1/4"	M12 x 1.25
KI-40X150-S-G	40	150	1/4"	M12 x 1.25
KI-40X160-S-G	40	160	1/4"	M12 x 1.25
KI-40X175-S-G	40	175	1/4"	M12 x 1.25
KI-40X200-S-G	40	200	1/4"	M12 x 1.25
KI-40X250-S-G	40	250	1/4"	M12 x 1.25
KI-40X300-S-G	40	300	1/4"	M12 x 1.25
KI-40X350-S-G	40	350	1/4"	M12 x 1.25
KI-40X400-S-G	40	400	1/4"	M12 x 1.25
KI-40X450-S-G	40	450	1/4"	M12 x 1.25
KI-40X500-S-G	40	500	1/4"	M12 x 1.25
KI-40X600-S-G	40	600	1/4"	M12 x 1.25
KI-40X700-S-G	40	700	1/4"	M12 x 1.25
KI-40X800-S-G	40	800	1/4"	M12 x 1.25
KI-50X25-S-G	50	25	1/4"	M16 x 1.5
KI-50X50-S-G	50	50	1/4"	M16 x 1.5
KI-50X75-S-G	50	75	1/4"	M16 x 1.5
KI-50X80-S-G	50	80	1/4"	M16 x 1.5
KI-50X100-S-G	50	100	1/4"	M16 x 1.5
KI-50X125-S-G	50	125	1/4"	M16 x 1.5
KI-50X150-S-G	50	150	1/4"	M16 x 1.5
KI-50X160-S-G	50	160	1/4"	M16 x 1.5
KI-50X175-S-G	50	175	1/4"	M16 x 1.5
KI-50X200-S-G	50	200	1/4"	M16 x 1.5
KI-50X250-S-G	50	250	1/4"	M16 x 1.5



0414	Bore mm	Stroke mm	Thread	Piston Rod Thread
KI-50X300-S-G	50	300	1/4"	M16 x 1.5
KI-50X350-S-G	50	350	1/4"	M16 x 1.5
KI-50X400-S-G	50	400	1/4"	M16 x 1.5
KI-50X450-S-G	50	450	1/4"	M16 x 1.5
KI-50X500-S-G	50	500	1/4"	M16 x 1.5
KI-50X600-S-G	50	600	1/4"	M16 x 1.5
KI-50X700-S-G	50	700	1/4"	M16 x 1.5
KI-50X800-S-G	50	800	1/4"	M16 x 1.5
KI-50X900-S-G	50	900	1/4"	M16 x 1.5
KI-50X1000-S-G	50	1000	1/4"	M16 x 1.5
KI-63X25-S-G	63	25	3/8"	M16 x 1.5
KI-63X50-S-G	63	50	3/8"	M16 x 1.5
KI-63X75-S-G	63	75	3/8"	M16 x 1.5
KI-63X80-S-G	63	80	3/8"	M16 x 1.5
KI-63X100-S-G	63	100	3/8"	M16 x 1.5
KI-63X125-S-G	63	125	3/8"	M16 x 1.5
KI-63X150-S-G	63	150	3/8"	M16 x 1.5
KI-63X160-S-G	63	160	3/8"	M16 x 1.5
KI-63X175-S-G	63	175	3/8"	M16 x 1.5
KI-63X200-S-G	63	200	3/8"	M16 x 1.5
KI-63X250-S-G	63	250	3/8"	M16 x 1.5
KI-63X300-S-G	63	300	3/8"	M16 x 1.5
KI-63X350-S-G	63	350	3/8"	M16 x 1.5
KI-63X400-S-G	63	400	3/8"	M16 x 1.5
KI-63X450-S-G	63	450	3/8"	M16 x 1.5
KI-63X500-S-G	63	500	3/8"	M16 x 1.5
KI-63X600-S-G	63	600	3/8"	M16 x 1.5
KI-63X700-S-G	63	700	3/8"	M16 x 1.5
KI-63X800-S-G	63	800	3/8"	M16 x 1.5
KI-63X900-S-G	63	900	3/8"	M16 x 1.5
KI-63X1000-S-G	63	1000	3/8"	M16 x 1.5
KI-80X25-S-G	80	25	3/8"	M20 x 1.5
KI-80X50-S-G	80	50	3/8"	M20 x 1.5
KI-80X75-S-G	80	75	3/8"	M20 x 1.5
KI-80X80-S-G	80	80	3/8"	M20 x 1.5
KI-80X100-S-G	80	100	3/8"	M20 x 1.5
KI-80X125-S-G	80	125	3/8"	M20 x 1.5
KI-80X150-S-G	80	150	3/8"	M20 x 1.5
KI-80X160-S-G	80	160	3/8"	M20 x 1.5
KI-80X175-S-G	80	175	3/8"	M20 x 1.5
KI-80X200-S-G	80	200	3/8"	M20 x 1.5
KI-80X250-S-G	80	250	3/8"	M20 x 1.5
KI-80X300-S-G	80	300	3/8"	M20 x 1.5
KI-80X350-S-G	80	350	3/8"	M20 x 1.5
KI-80X400-S-G	80	400	3/8"	M20 x 1.5

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Further sizes in this range continued on next page

## Gen 1 ISO 15552 Cylinders

### Medium:

Clean compressed air. Filtered (40µm) and lubricated adjustable cushioning.

**Piston Rod Material:** Chrome plated carbon steel.

**Please note:** Bore sizes 125mm are available on a lead time.

Please contact our sales office for details.



### ° Working Temperature:

-20°C to +80°C

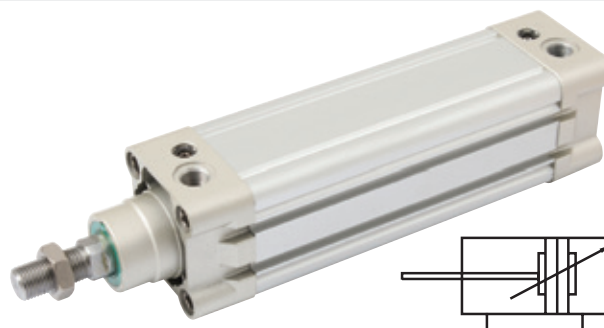
### Working Pressure:

1 to 10 bar

### Chrome Plated Carbon Steel Piston Rod as Standard

### Magnetic Double Acting, Adjustable Cushioning, BSPP

0414	Bore mm	Stroke mm	Thread	Piston Rod Thread
KI-80X450-S-G	80	450	3/8"	M20 x 1.5
KI-80X500-S-G	80	500	3/8"	M20 x 1.5
KI-80X600-S-G	80	600	3/8"	M20 x 1.5
KI-80X700-S-G	80	700	3/8"	M20 x 1.5
KI-80X800-S-G	80	800	3/8"	M20 x 1.5
KI-80X900-S-G	80	900	3/8"	M20 x 1.5
KI-80X1000-S-G	80	1000	3/8"	M20 x 1.5
KI-100X25-S-G	100	25	1/2"	M20 x 1.5
KI-100X50-S-G	100	50	1/2"	M20 x 1.5
KI-100X75-S-G	100	75	1/2"	M20 x 1.5
KI-100X80-S-G	100	80	1/2"	M20 x 1.5
KI-100X100-S-G	100	100	1/2"	M20 x 1.5
KI-100X125-S-G	100	125	1/2"	M20 x 1.5
KI-100X150-S-G	100	150	1/2"	M20 x 1.5
KI-100X160-S-G	100	160	1/2"	M20 x 1.5
KI-100X175-S-G	100	175	1/2"	M20 x 1.5
KI-100X200-S-G	100	200	1/2"	M20 x 1.5
KI-100X250-S-G	100	250	1/2"	M20 x 1.5
KI-100X300-S-G	100	300	1/2"	M20 x 1.5
KI-100X350-S-G	100	350	1/2"	M20 x 1.5
KI-100X400-S-G	100	400	1/2"	M20 x 1.5
KI-100X450-S-G	100	450	1/2"	M20 x 1.5
KI-100X500-S-G	100	500	1/2"	M20 x 1.5
KI-100X600-S-G	100	600	1/2"	M20 x 1.5
KI-100X700-S-G	100	700	1/2"	M20 x 1.5



0414	Bore mm	Stroke mm	Thread	Piston Rod Thread
KI-100X800-S-G	100	800	1/2"	M20 x 1.5
KI-100X900-S-G	100	900	1/2"	M20 x 1.5
KI-100X1000-S-G	100	1000	1/2"	M20 x 1.5
KI-125X25-S-G	125	25	1/2"	M27 x 2
KI-125X50-S-G	125	50	1/2"	M27 x 2
KI-125X75-S-G	125	75	1/2"	M27 x 2
KI-125X80-S-G	125	80	1/2"	M27 x 2
KI-125X100-S-G	125	100	1/2"	M27 x 2
KI-125X125-S-G	125	125	1/2"	M27 x 2
KI-125X150-S-G	125	150	1/2"	M27 x 2
KI-125X160-S-G	125	160	1/2"	M27 x 2
KI-125X175-S-G	125	175	1/2"	M27 x 2
KI-125X200-S-G	125	200	1/2"	M27 x 2
KI-125X250-S-G	125	250	1/2"	M27 x 2
KI-125X300-S-G	125	300	1/2"	M27 x 2
KI-125X350-S-G	125	350	1/2"	M27 x 2
KI-125X400-S-G	125	400	1/2"	M27 x 2
KI-125X450-S-G	125	450	1/2"	M27 x 2
KI-125X500-S-G	125	500	1/2"	M27 x 2
KI-125X600-S-G	125	600	1/2"	M27 x 2
KI-125X700-S-G	125	700	1/2"	M27 x 2
KI-125X800-S-G	125	800	1/2"	M27 x 2
KI-125X900-S-G	125	900	1/2"	M27 x 2
KI-125X1000-S-G	125	1000	1/2"	M27 x 2

Tech Sheet 10657



For FT Air Preparation  
see page 637



For Reed Switches see page 455

# PNEUMATIC CYLINDERS



## Gen 2 ISO 15552 Cylinders

### Medium:

Clean compressed air. Filtered (40µm) and lubricated adjustable cushioning.

**Piston Rod Material:** Stainless steel 304.

**Please note:** Bore sizes 125mm are available on a lead time.

**Please contact our sales office for details.**



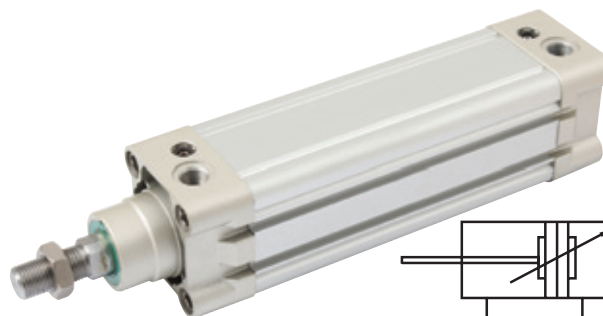
**Working Temperature:**  
-20°C to +80°C

**Working Pressure:**  
1 to 10 bar

### Stainless Steel Piston Rod as Standard

### Magnetic Double Acting, Adjustable Cushioning, BSPP

0413	Bore mm	Stroke mm	Thread	Piston Rod Thread
KI-32BX25-S-G	32	25	1/8"	M10 x 1.25
KI-32BX50-S-G	32	50	1/8"	M10 x 1.25
KI-32BX75-S-G	32	75	1/8"	M10 x 1.25
KI-32BX80-S-G	32	80	1/8"	M10 x 1.25
KI-32BX100-S-G	32	100	1/8"	M10 x 1.25
KI-32BX125-S-G	32	125	1/8"	M10 x 1.25
KI-32BX150-S-G	32	150	1/8"	M10 x 1.25
KI-32BX160-S-G	32	160	1/8"	M10 x 1.25
KI-32BX175-S-G	32	175	1/8"	M10 x 1.25
KI-32BX200-S-G	32	200	1/8"	M10 x 1.25
KI-32BX250-S-G	32	250	1/8"	M10 x 1.25
KI-32BX300-S-G	32	300	1/8"	M10 x 1.25
KI-32BX350-S-G	32	350	1/8"	M10 x 1.25
KI-32BX400-S-G	32	400	1/8"	M10 x 1.25
KI-32BX450-S-G	32	450	1/8"	M10 x 1.25
KI-32BX500-S-G	32	500	1/8"	M10 x 1.25
KI-40BX25-S-G	40	25	1/4"	M12 x 1.25
KI-40BX50-S-G	40	50	1/4"	M12 x 1.25
KI-40BX75-S-G	40	75	1/4"	M12 x 1.25
KI-40BX80-S-G	40	80	1/4"	M12 x 1.25
KI-40BX100-S-G	40	100	1/4"	M12 x 1.25
KI-40BX125-S-G	40	125	1/4"	M12 x 1.25
KI-40BX150-S-G	40	150	1/4"	M12 x 1.25
KI-40BX160-S-G	40	160	1/4"	M12 x 1.25
KI-40BX175-S-G	40	175	1/4"	M12 x 1.25
KI-40BX200-S-G	40	200	1/4"	M12 x 1.25
KI-40BX250-S-G	40	250	1/4"	M12 x 1.25
KI-40BX300-S-G	40	300	1/4"	M12 x 1.25
KI-40BX350-S-G	40	350	1/4"	M12 x 1.25
KI-40BX400-S-G	40	400	1/4"	M12 x 1.25
KI-40BX450-S-G	40	450	1/4"	M12 x 1.25
KI-40BX500-S-G	40	500	1/4"	M12 x 1.25
KI-40BX600-S-G	40	600	1/4"	M12 x 1.25
KI-40BX700-S-G	40	700	1/4"	M12 x 1.25
KI-40BX800-S-G	40	800	1/4"	M12 x 1.25
KI-50BX25-S-G	50	25	1/4"	M16 x 1.5
KI-50BX50-S-G	50	50	1/4"	M16 x 1.5
KI-50BX75-S-G	50	75	1/4"	M16 x 1.5
KI-50BX80-S-G	50	80	1/4"	M16 x 1.5
KI-50BX100-S-G	50	100	1/4"	M16 x 1.5
KI-50BX125-S-G	50	125	1/4"	M16 x 1.5
KI-50BX150-S-G	50	150	1/4"	M16 x 1.5
KI-50BX160-S-G	50	160	1/4"	M16 x 1.5
KI-50BX175-S-G	50	175	1/4"	M16 x 1.5
KI-50BX200-S-G	50	200	1/4"	M16 x 1.5
KI-50BX250-S-G	50	250	1/4"	M16 x 1.5



0413	Bore mm	Stroke mm	Thread	Piston Rod Thread
KI-50BX300-S-G	50	300	1/4"	M16 x 1.5
KI-50BX350-S-G	50	350	1/4"	M16 x 1.5
KI-50BX400-S-G	50	400	1/4"	M16 x 1.5
KI-50BX450-S-G	50	450	1/4"	M16 x 1.5
KI-50BX500-S-G	50	500	1/4"	M16 x 1.5
KI-50BX600-S-G	50	600	1/4"	M16 x 1.5
KI-50BX700-S-G	50	700	1/4"	M16 x 1.5
KI-50BX800-S-G	50	800	1/4"	M16 x 1.5
KI-50BX900-S-G	50	900	1/4"	M16 x 1.5
KI-50BX1000-S-G	50	1000	1/4"	M16 x 1.5
KI-63BX25-S-G	63	25	3/8"	M16 x 1.5
KI-63BX50-S-G	63	50	3/8"	M16 x 1.5
KI-63BX75-S-G	63	75	3/8"	M16 x 1.5
KI-63BX80-S-G	63	80	3/8"	M16 x 1.5
KI-63BX100-S-G	63	100	3/8"	M16 x 1.5
KI-63BX125-S-G	63	125	3/8"	M16 x 1.5
KI-63BX150-S-G	63	150	3/8"	M16 x 1.5
KI-63BX160-S-G	63	160	3/8"	M16 x 1.5
KI-63BX175-S-G	63	175	3/8"	M16 x 1.5
KI-63BX200-S-G	63	200	3/8"	M16 x 1.5
KI-63BX250-S-G	63	250	3/8"	M16 x 1.5
KI-63BX300-S-G	63	300	3/8"	M16 x 1.5
KI-63BX350-S-G	63	350	3/8"	M16 x 1.5
KI-63BX400-S-G	63	400	3/8"	M16 x 1.5
KI-63BX450-S-G	63	450	3/8"	M16 x 1.5
KI-63BX500-S-G	63	500	3/8"	M16 x 1.5
KI-63BX600-S-G	63	600	3/8"	M16 x 1.5
KI-63BX700-S-G	63	700	3/8"	M16 x 1.5
KI-63BX800-S-G	63	800	3/8"	M16 x 1.5
KI-63BX900-S-G	63	900	3/8"	M16 x 1.5
KI-63BX1000-S-G	63	1000	3/8"	M16 x 1.5
KI-80BX25-S-G	80	25	3/8"	M20 x 1.5
KI-80BX50-S-G	80	50	3/8"	M20 x 1.5
KI-80BX75-S-G	80	75	3/8"	M20 x 1.5
KI-80BX80-S-G	80	80	3/8"	M20 x 1.5
KI-80BX100-S-G	80	100	3/8"	M20 x 1.5
KI-80BX125-S-G	80	125	3/8"	M20 x 1.5
KI-80BX150-S-G	80	150	3/8"	M20 x 1.5
KI-80BX160-S-G	80	160	3/8"	M20 x 1.5
KI-80BX175-S-G	80	175	3/8"	M20 x 1.5
KI-80BX200-S-G	80	200	3/8"	M20 x 1.5
KI-80BX250-S-G	80	250	3/8"	M20 x 1.5
KI-80BX300-S-G	80	300	3/8"	M20 x 1.5
KI-80BX350-S-G	80	350	3/8"	M20 x 1.5
KI-80BX400-S-G	80	400	3/8"	M20 x 1.5

Tech Sheet 10657

Further sizes in this range continued on next page

## Gen 2 ISO 15552 Cylinders

### Medium:

Clean compressed air. Filtered (40µm) and lubricated adjustable cushioning.

**Piston Rod Material:** Stainless steel 304

**Please note:** Bore sizes 125mm are available on a lead time.

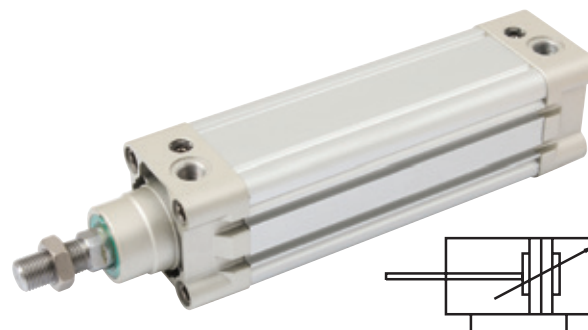
Please contact our sales office for details.



**Working Temperature:**  
-20°C to +80°C

**Working Pressure:**  
1 to 10 bar

**Stainless Steel Piston Rod as Standard**



### Magnetic Double Acting, Adjustable Cushioning, BSPP

0413	Bore mm	Stroke mm	Thread	Piston Rod Thread
KI-80BX450-S-G	80	450	3/8"	M20 x 1.5
KI-80BX500-S-G	80	500	3/8"	M20 x 1.5
KI-80BX600-S-G	80	600	3/8"	M20 x 1.5
KI-80BX700-S-G	80	700	3/8"	M20 x 1.5
KI-80BX800-S-G	80	800	3/8"	M20 x 1.5
KI-80BX900-S-G	80	900	3/8"	M20 x 1.5
KI-80BX1000-S-G	80	1000	3/8"	M20 x 1.5
KI-100BX25-S-G	100	25	1/2"	M20 x 1.5
KI-100BX50-S-G	100	50	1/2"	M20 x 1.5
KI-100BX75-S-G	100	75	1/2"	M20 x 1.5
KI-100BX80-S-G	100	80	1/2"	M20 x 1.5
KI-100BX100-S-G	100	100	1/2"	M20 x 1.5
KI-100BX125-S-G	100	125	1/2"	M20 x 1.5
KI-100BX150-S-G	100	150	1/2"	M20 x 1.5
KI-100BX160-S-G	100	160	1/2"	M20 x 1.5
KI-100BX175-S-G	100	175	1/2"	M20 x 1.5
KI-100BX200-S-G	100	200	1/2"	M20 x 1.5
KI-100BX250-S-G	100	250	1/2"	M20 x 1.5
KI-100BX300-S-G	100	300	1/2"	M20 x 1.5
KI-100BX350-S-G	100	350	1/2"	M20 x 1.5
KI-100BX400-S-G	100	400	1/2"	M20 x 1.5
KI-100BX450-S-G	100	450	1/2"	M20 x 1.5
KI-100BX500-S-G	100	500	1/2"	M20 x 1.5
KI-100BX600-S-G	100	600	1/2"	M20 x 1.5
KI-100BX700-S-G	100	700	1/2"	M20 x 1.5

0413	Bore mm	Stroke mm	Thread	Piston Rod Thread
KI-100BX800-S-G	100	800	1/2"	M20 x 1.5
KI-100BX900-S-G	100	900	1/2"	M20 x 1.5
KI-100BX1000-S-G	100	1000	1/2"	M20 x 1.5
KI-125BX25-S-G	125	25	1/2"	M27 x 2
KI-125BX50-S-G	125	50	1/2"	M27 x 2
KI-125BX75-S-G	125	75	1/2"	M27 x 2
KI-125BX80-S-G	125	80	1/2"	M27 x 2
KI-125BX100-S-G	125	100	1/2"	M27 x 2
KI-125BX125-S-G	125	125	1/2"	M27 x 2
KI-125BX150-S-G	125	150	1/2"	M27 x 2
KI-125BX160-S-G	125	160	1/2"	M27 x 2
KI-125BX175-S-G	125	175	1/2"	M27 x 2
KI-125BX200-S-G	125	200	1/2"	M27 x 2
KI-125BX250-S-G	125	250	1/2"	M27 x 2
KI-125BX300-S-G	125	300	1/2"	M27 x 2
KI-125BX350-S-G	125	350	1/2"	M27 x 2
KI-125BX400-S-G	125	400	1/2"	M27 x 2
KI-125BX450-S-G	125	450	1/2"	M27 x 2
KI-125BX500-S-G	125	500	1/2"	M27 x 2
KI-125BX600-S-G	125	600	1/2"	M27 x 2
KI-125BX700-S-G	125	700	1/2"	M27 x 2
KI-125BX800-S-G	125	800	1/2"	M27 x 2
KI-125BX900-S-G	125	900	1/2"	M27 x 2
KI-125BX1000-S-G	125	1000	1/2"	M27 x 2

Tech Sheet 10657



For **Reed Switches**  
see page 485



# PNEUMATIC CYLINDERS



## ISO 15552 Mountings



### Front/Rear Flange Mounting FA

0334	Bore mm
F-KF32FA	32
F-KF40FA	40
F-KF50FA	50
F-KF63FA	63
F-KF80FA	80
F-KF100FA	100
F-KF125FA	125

Tech Sheet 3012



### Front Trunnion Mounting FTC

0334	Bore mm
F-KF32FTC	32
F-KF40FTC	40
F-KF50FTC	50
F-KF63FTC	63
F-KF80FTC	80
F-KF100FTC	100
F-KF160FTC	160

Tech Sheet 3013



### Front Trunnion Clevis Mounting TF

0334	Bore mm
F-KF32TF	32
F-KF40TF	40/50
F-KF63TF	63/80
F-KF125TF	100/125

Tech Sheet 3014



### Trunnion Support Mounting TM

0334	Bore mm
F-KF32TM	32
F-KF40TM	40/50
F-KF63TM	63/80
F-KF125TM	100/125
F-KF160TM	160/200

Tech Sheet 3015



### Rear Eye Mounting CA

0334	Bore mm
F-KF32CA	32
F-KF40CA	40
F-KF50CA	50
F-KF63CA	63
F-KF80CA	80
F-KF100CA	100
F-KF125CA	125
F-KF160CA	160
F-KF200CA	200

Tech Sheet 3016



### Rear Clevis Mounting CB

0334	Bore mm
F-KF32CB	32
F-KF40CB	40
F-KF50CB	50
F-KF63CB	63
F-KF80CB	80
F-KF100CB	100
F-KF125CB	125
F-KF160CB	160
F-KF200CB	200

Tech Sheet 3017



### Rear Bracket Mounting CR

0334	Bore mm
F-KF32CR	32
F-KF40CR	40
F-KF50CR	50
F-KF63CR	63
F-KF80CR	80
F-KF100CR	100
F-KF125CR	125
F-KF160CR	160
F-KF200CR	200

Tech Sheet 3018



### Foot Mounting LB, (Pair)

0334	Bore mm
F-KF32LB	32
F-KF40LB	40
F-KF50LB	50
F-KF63LB	63
F-KF80LB	80
F-KF100LB	100
F-KF125LB	125
F-KF160LB	160

Tech Sheet 3019



### Piston Rod Clevis YI

0334	Bore mm	Thread
F-M10125YI	32	M10 x 1.25
F-M12125YI	40	M12 x 1.25
F-M16150YI	50/63	M16 x 1.5
F-M20150YI	80/100	M20 x 1.5
F-M27200YI	125	M27 x 2
F-M36200YI	160/200	M36 x 2

Tech Sheet 3020

## ISO 15552 Mountings



### Piston Rod Clevis I

0334	Bore mm	Thread
F-M10125II	25/32	M10 x 1.25
F-M12125II	40	M12 x 1.25
F-M16150II	50/63	M16 x 1.5
F-M20150II	80/100	M20 x 1.5
F-M27200II	125	M27 x 2

Tech Sheet 3021



### Piston Rod Floating Joint F

0334	Bore mm	Thread
F-M10125F	25/32	M10 x 1.25
F-M12125F	40	M12 x 1.25
F-M16150F	50/63	M16 x 1.5
F-M20150F	80/100	M20 x 1.5

Tech Sheet 3022



### Piston Rod Universal Joint U

0334	Bore mm	Thread
F-M10125U	25/32	M10 x 1.25
F-M12125U	40	M12 x 1.25
F-M16150U	50/63	M16 x 1.5
F-M20150U	80/100	M20 x 1.5
F-M27200U	125	M27 x 2
F-M36200U	160/200	M36 x 2

Tech Sheet 3023

## Reed Switches to suit ISO 15552

° Working Temperature:  
-10°C to +70°C



### Two Wire, N/O with LED

0413	Length mm	Voltage
CSM-E020	2	5-240V AC/DC
CSM-E050	5	5-240V AC/DC

Tech Sheet 20890

### Three Wire, NO Current Flows Out (PNP)

0413	Length mm	Voltage
DSM-EP020	2	5-30V DC
DSM-EP050	5	5-30V DC

Tech Sheet 20890

### Three Wire, NO Current Flows In (NPN)

0413	Length mm	Voltage
DSM-EN020	2	5-30V DC
DSM-EN050	5	5-30V DC

Tech Sheet 20890



For FT Pro One Touch+ Plastic  
Push-in Fittings Emergency Kits  
see page 781

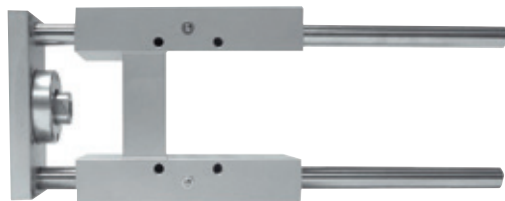


## ISO 15552 Standard Cylinder Guides

The guide unit allows for standard ISO 15552 cylinder to move loads with high positioning accuracy.

### Features and Benefits

- Protection against rotation at high torques.
- High guide precision for cylinder guiding.
- Supplied plain or recirculating ball bearing guides.



### With Slide Bearings

0334	Bore mm	Stroke mm
KRF-32X50-0	32	50
KRF-32X100-0	32	100
KRF-32X160-0	32	160
KRF-32X200-0	32	200
KRF-32X250-0	32	250
KRF-32X320-0	32	320
KRF-32X400-0	32	400
KRF-32X500-0	32	500
KRF-40X50-0	40	50
KRF-40X100-0	40	100
KRF-40X160-0	40	160
KRF-40X200-0	40	200
KRF-40X250-0	40	250
KRF-40X320-0	40	320
KRF-40X400-0	40	400
KRF-40X500-0	40	500
KRF-50X50-0	50	50
KRF-50X100-0	50	100
KRF-50X160-0	50	160
KRF-50X200-0	50	200
KRF-50X250-0	50	250
KRF-50X320-0	50	320
KRF-50X400-0	50	400
KRF-50X500-0	50	500
KRF-63X50-0	63	50
KRF-63X100-0	63	100
KRF-63X160-0	63	160
KRF-63X200-0	63	200
KRF-63X250-0	63	250
KRF-63X320-0	63	320
KRF-63X400-0	63	400
KRF-63X500-0	63	500
KRF-80X50-0	80	50
KRF-80X100-0	80	100
KRF-80X160-0	80	160
KRF-80X200-0	80	200
KRF-80X250-0	80	250
KRF-80X320-0	80	320
KRF-80X400-0	80	400
KRF-80X500-0	80	500
KRF-100X50-0	100	50
KRF-100X100-0	100	100
KRF-100X160-0	100	160
KRF-100X200-0	100	200
KRF-100X250-0	100	250
KRF-100X320-0	100	320
KRF-100X400-0	100	400
KRF-100X500-0	100	500

Tech Sheet 20891



### With Ball Bearings

0334	Bore mm	Stroke mm
KRF-32X50-1	32	50
KRF-32X100-1	32	100
KRF-32X160-1	32	160
KRF-32X200-1	32	200
KRF-32X250-1	32	250
KRF-32X320-1	32	320
KRF-32X400-1	32	400
KRF-32X500-1	32	500
KRF-40X50-1	40	50
KRF-40X100-1	40	100
KRF-40X160-1	40	160
KRF-40X200-1	40	200
KRF-40X250-1	40	250
KRF-40X320-1	40	320
KRF-40X400-1	40	400
KRF-40X500-1	40	500
KRF-50X50-1	50	50
KRF-50X100-1	50	100
KRF-50X160-1	50	160
KRF-50X200-1	50	200
KRF-50X250-1	50	250
KRF-50X320-1	50	320
KRF-50X400-1	50	400
KRF-50X500-1	50	500
KRF-63X50-1	63	50
KRF-63X100-1	63	100
KRF-63X160-1	63	160
KRF-63X200-1	63	200
KRF-63X250-1	63	250
KRF-63X320-1	63	320
KRF-63X400-1	63	400
KRF-63X500-1	63	500
KRF-80X50-1	80	50
KRF-80X100-1	80	100
KRF-80X160-1	80	160
KRF-80X200-1	80	200
KRF-80X250-1	80	250
KRF-80X320-1	80	320
KRF-80X400-1	80	400
KRF-80X500-1	80	500
KRF-100X50-1	100	50
KRF-100X100-1	100	100
KRF-100X160-1	100	160
KRF-100X200-1	100	200
KRF-100X250-1	100	250
KRF-100X320-1	100	320
KRF-100X400-1	100	400
KRF-100X500-1	100	500

Tech Sheet 20892



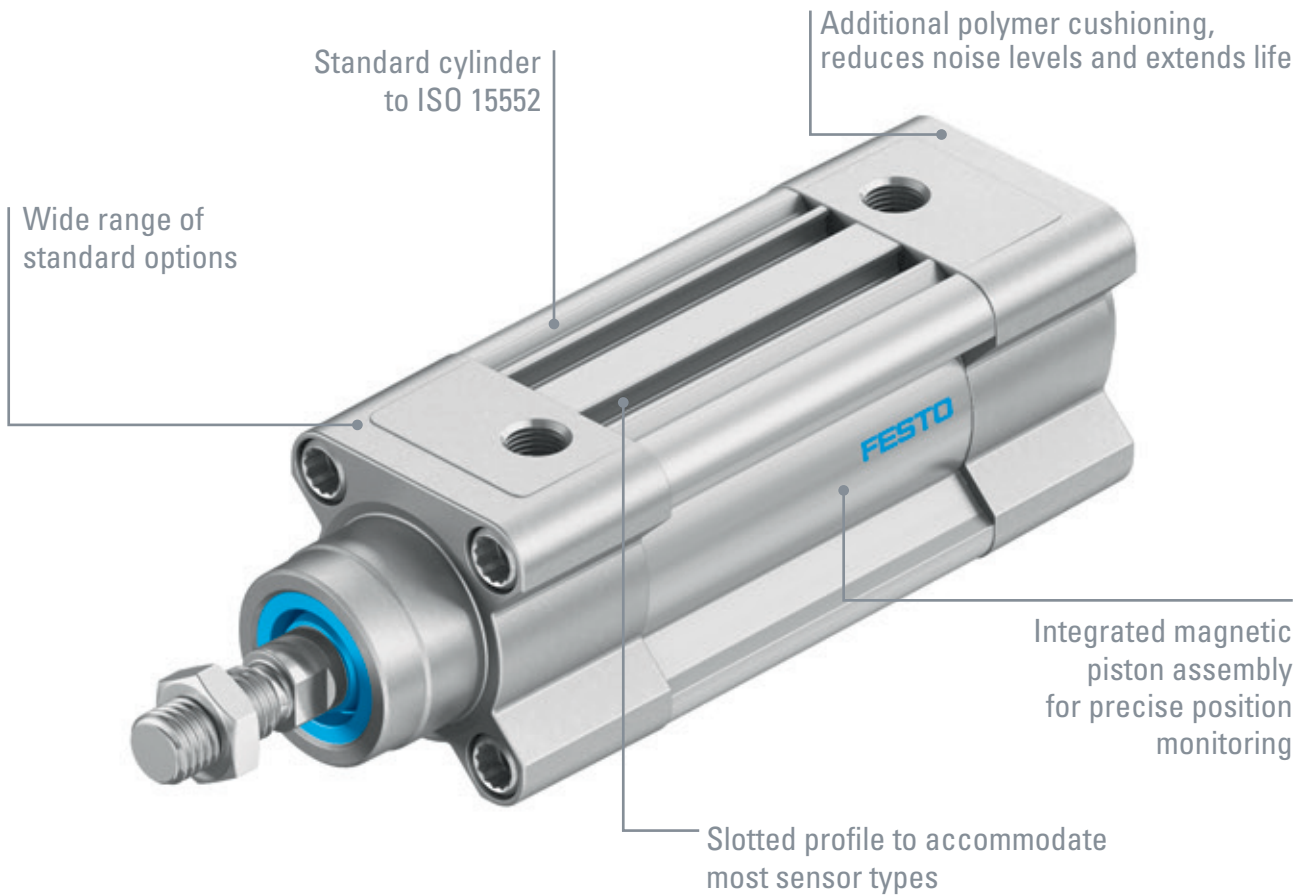
# CYLINDERS

For the full range and more information, please contact one of our sales team.

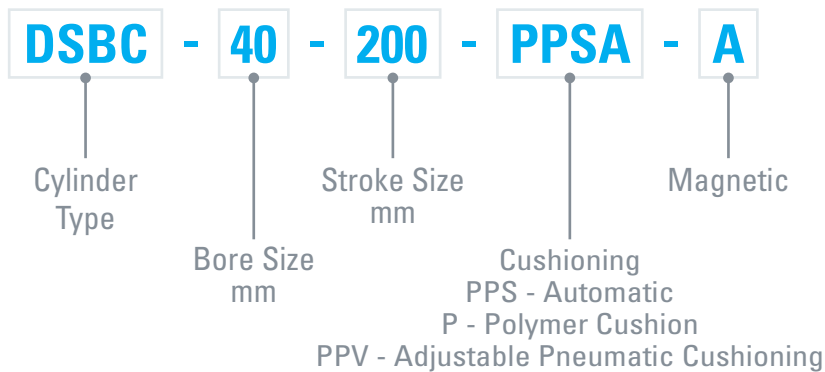
## DSBC STANDARD CYLINDER



### Features



### Product Description



# ISO 15552 STANDARD CYLINDERS, DSBC

# FESTO



## Double Acting, Adjustable Pneumatic Cushioning

- Strokes of up to 2800mm
- Excellent flexibility thanks to wide range of variants
- Extensive range of accessories makes it possible to install the cylinder virtually anywhere
- T-Slot

### Magnetic

0009	Piston Diameter mm	Stroke mm	Piston Rod Thread	Manufacturer's Code
2123069	32	20	M10 x 1.25	DSBC-32-20-PPVA-N3
1376422	32	25	M10 x 1.25	DSBC-32-25-PPVA-N3
2123070	32	30	M10 x 1.25	DSBC-32-30-PPVA-N3
1376423	32	40	M10 x 1.25	DSBC-32-40-PPVA-N3
1376424	32	50	M10 x 1.25	DSBC-32-50-PPVA-N3
2123071	32	60	M10 x 1.25	DSBC-32-60-PPVA-N3
2123072	32	70	M10 x 1.25	DSBC-32-70-PPVA-N3
1376425	32	80	M10 x 1.25	DSBC-32-80-PPVA-N3
1376426	32	100	M10 x 1.25	DSBC-32-100-PPVA-N3
1376427	32	125	M10 x 1.25	DSBC-32-125-PPVA-N3
2123073	32	150	M10 x 1.25	DSBC-32-150-PPVA-N3
1376428	32	160	M10 x 1.25	DSBC-32-160-PPVA-N3
1376429	32	200	M10 x 1.25	DSBC-32-200-PPVA-N3
1376430	32	250	M10 x 1.25	DSBC-32-250-PPVA-N3
2123074	32	300	M10 x 1.25	DSBC-32-300-PPVA-N3
1376431	32	320	M10 x 1.25	DSBC-32-320-PPVA-N3
1376432	32	400	M10 x 1.25	DSBC-32-400-PPVA-N3
1376433	32	500	M10 x 1.25	DSBC-32-500-PPVA-N3

Tech Sheet 70239

### Magnetic

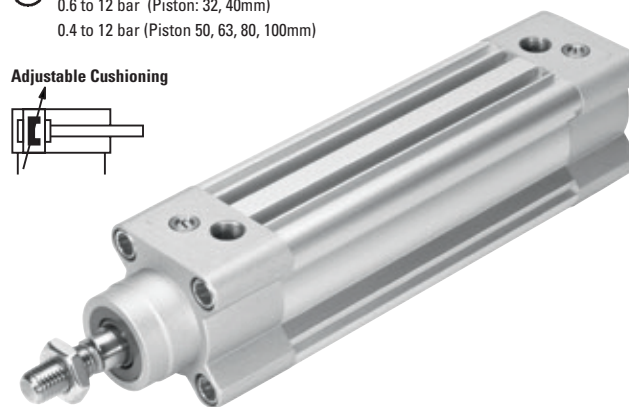
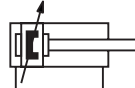
0009	Piston Diameter mm	Stroke mm	Piston Rod Thread	Manufacturer's Code
2123166	40	20	M12 x 1.25	DSBC-40-20-PPVA-N3
1376656	40	25	M12 x 1.25	DSBC-40-25-PPVA-N3
2123167	40	30	M12 x 1.25	DSBC-40-30-PPVA-N3
1376657	40	40	M12 x 1.25	DSBC-40-40-PPVA-N3
1376658	40	50	M12 x 1.25	DSBC-40-50-PPVA-N3
2123224	40	60	M12 x 1.25	DSBC-40-60-PPVA-N3
2123225	40	70	M12 x 1.25	DSBC-40-70-PPVA-N3
1376659	40	80	M12 x 1.25	DSBC-40-80-PPVA-N3
1376660	40	100	M12 x 1.25	DSBC-40-100-PPVA-N3
1376661	40	125	M12 x 1.25	DSBC-40-125-PPVA-N3
2123226	40	150	M12 x 1.25	DSBC-40-150-PPVA-N3
1376662	40	160	M12 x 1.25	DSBC-40-160-PPVA-N3
1376663	40	200	M12 x 1.25	DSBC-40-200-PPVA-N3
1376664	40	250	M12 x 1.25	DSBC-40-250-PPVA-N3
2123227	40	300	M12 x 1.25	DSBC-40-300-PPVA-N3
1376665	40	320	M12 x 1.25	DSBC-40-320-PPVA-N3
1376666	40	400	M12 x 1.25	DSBC-40-400-PPVA-N3
1376667	40	500	M12 x 1.25	DSBC-40-500-PPVA-N3
2098969	50	20	M16 x 1.5	DSBC-50-20-PPVA-N3
1366948	50	25	M16 x 1.5	DSBC-50-25-PPVA-N3
2098970	50	30	M16 x 1.5	DSBC-50-30-PPVA-N3
1366949	50	40	M16 x 1.5	DSBC-50-40-PPVA-N3
1366950	50	50	M16 x 1.5	DSBC-50-50-PPVA-N3
2098972	50	60	M16 x 1.5	DSBC-50-60-PPVA-N3
2098973	50	70	M16 x 1.5	DSBC-50-70-PPVA-N3
1366951	50	80	M16 x 1.5	DSBC-50-80-PPVA-N3
1366952	50	100	M16 x 1.5	DSBC-50-100-PPVA-N3
1366953	50	125	M16 x 1.5	DSBC-50-125-PPVA-N3
2098974	50	150	M16 x 1.5	DSBC-50-150-PPVA-N3
1366954	50	160	M16 x 1.5	DSBC-50-160-PPVA-N3
1366955	50	200	M16 x 1.5	DSBC-50-200-PPVA-N3
1366956	50	250	M16 x 1.5	DSBC-50-250-PPVA-N3
2098975	50	300	M16 x 1.5	DSBC-50-300-PPVA-N3
1366957	50	320	M16 x 1.5	DSBC-50-320-PPVA-N3
1366958	50	400	M16 x 1.5	DSBC-50-400-PPVA-N3
1366959	50	500	M16 x 1.5	DSBC-50-500-PPVA-N3

Tech Sheet 70240

° Ambient Temperature:  
-20°C to +80°C

Working Pressure:  
0.6 to 12 bar (Piston: 32, 40mm)  
0.4 to 12 bar (Piston 50, 63, 80, 100mm)

### Adjustable Cushioning



### Magnetic

0009	Piston Diameter mm	Stroke mm	Piston Rod Thread	Manufacturer's Code
2125490	63	20	M16 x 1.5	DSBC-63-20-PPVA-N3
1383578	63	25	M16 x 1.5	DSBC-63-25-PPVA-N3
2125491	63	30	M16 x 1.5	DSBC-63-30-PPVA-N3
1383579	63	40	M16 x 1.5	DSBC-63-40-PPVA-N3
1383580	63	50	M16 x 1.5	DSBC-63-50-PPVA-N3
2125492	63	60	M16 x 1.5	DSBC-63-60-PPVA-N3
2125493	63	70	M16 x 1.5	DSBC-63-70-PPVA-N3
1383581	63	80	M16 x 1.5	DSBC-63-80-PPVA-N3
1383582	63	100	M16 x 1.5	DSBC-63-100-PPVA-N3
1383583	63	125	M16 x 1.5	DSBC-63-125-PPVA-N3
2125494	63	150	M16 x 1.5	DSBC-63-150-PPVA-N3
1383584	63	160	M16 x 1.5	DSBC-63-160-PPVA-N3
1383585	63	200	M16 x 1.5	DSBC-63-200-PPVA-N3
1383586	63	250	M16 x 1.5	DSBC-63-250-PPVA-N3
2125495	63	300	M16 x 1.5	DSBC-63-300-PPVA-N3
1383587	63	320	M16 x 1.5	DSBC-63-320-PPVA-N3
1383588	63	400	M16 x 1.5	DSBC-63-400-PPVA-N3
1383589	63	500	M16 x 1.5	DSBC-63-500-PPVA-N3
2126594	80	20	M20 x 1.5	DSBC-80-20-PPVA-N3
1383333	80	25	M20 x 1.5	DSBC-80-25-PPVA-N3
2126595	80	30	M20 x 1.5	DSBC-80-30-PPVA-N3
1383334	80	40	M20 x 1.5	DSBC-80-40-PPVA-N3
1383335	80	50	M20 x 1.5	DSBC-80-50-PPVA-N3
2126597	80	60	M20 x 1.5	DSBC-80-60-PPVA-N3
2126598	80	70	M20 x 1.5	DSBC-80-70-PPVA-N3
1383336	80	80	M20 x 1.5	DSBC-80-80-PPVA-N3
1383337	80	100	M20 x 1.5	DSBC-80-100-PPVA-N3
1383338	80	125	M20 x 1.5	DSBC-80-125-PPVA-N3
2126599	80	150	M20 x 1.5	DSBC-80-150-PPVA-N3
1383339	80	160	M20 x 1.5	DSBC-80-160-PPVA-N3
1383340	80	200	M20 x 1.5	DSBC-80-200-PPVA-N3
1383341	80	250	M20 x 1.5	DSBC-80-250-PPVA-N3
2126600	80	300	M20 x 1.5	DSBC-80-300-PPVA-N3
1383342	80	320	M20 x 1.5	DSBC-80-320-PPVA-N3
1383343	80	400	M20 x 1.5	DSBC-80-400-PPVA-N3
1383344	80	500	M20 x 1.5	DSBC-80-500-PPVA-N3

Tech Sheet 70241



## Double Acting, Self-adjusting Pneumatic Cushioning

- Strokes of up to 2800mm
- Extensive range of accessories makes it possible to install the cylinder virtually anywhere
- Excellent flexibility thanks to wide range of variants
- T-Slot

### Magnetic

0009	Piston Diameter mm	Stroke mm	Piston Rod Thread	Manufacturer's Code
2123085	32	20	M10 x 1.25	DSBC-32-20-PPSA-N3
1376467	32	25	M10 x 1.25	DSBC-32-25-PPSA-N3
2123086	32	30	M10 x 1.25	DSBC-32-30-PPSA-N3
1376468	32	40	M10 x 1.25	DSBC-32-40-PPSA-N3
1376469	32	50	M10 x 1.25	DSBC-32-50-PPSA-N3
2123087	32	60	M10 x 1.25	DSBC-32-60-PPSA-N3
2123088	32	70	M10 x 1.25	DSBC-32-70-PPSA-N3
1376470	32	80	M10 x 1.25	DSBC-32-80-PPSA-N3
1376471	32	100	M10 x 1.25	DSBC-32-100-PPSA-N3
1376472	32	125	M10 x 1.25	DSBC-32-125-PPSA-N3
2123089	32	150	M10 x 1.25	DSBC-32-150-PPSA-N3
1376473	32	160	M10 x 1.25	DSBC-32-160-PPSA-N3
1376474	32	200	M10 x 1.25	DSBC-32-200-PPSA-N3
1376475	32	250	M10 x 1.25	DSBC-32-250-PPSA-N3
2123090	32	300	M10 x 1.25	DSBC-32-300-PPSA-N3
1376476	32	320	M10 x 1.25	DSBC-32-320-PPSA-N3
1376477	32	400	M10 x 1.25	DSBC-32-400-PPSA-N3
1376478	32	500	M10 x 1.25	DSBC-32-500-PPSA-N3

Tech Sheet 70242

### Magnetic

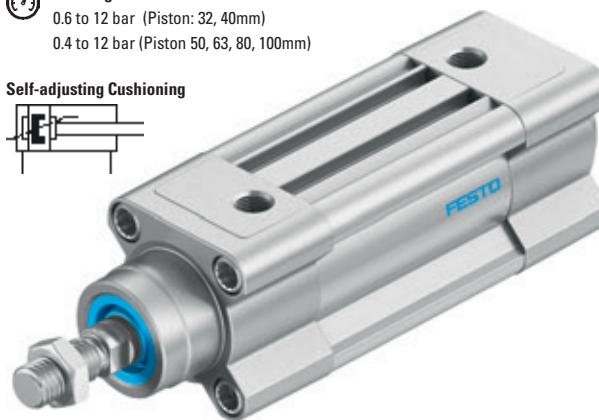
0009	Piston Diameter mm	Stroke mm	Piston Rod Thread	Manufacturer's Code
2123780	40	20	M12 x 1.25	DSBC-40-20-PPSA-N3
1376903	40	25	M12 x 1.25	DSBC-40-25-PPSA-N3
2123781	40	30	M12 x 1.25	DSBC-40-30-PPSA-N3
1376904	40	40	M12 x 1.25	DSBC-40-40-PPSA-N3
1376905	40	50	M12 x 1.25	DSBC-40-50-PPSA-N3
2123782	40	60	M12 x 1.25	DSBC-40-60-PPSA-N3
2123783	40	70	M12 x 1.25	DSBC-40-70-PPSA-N3
1376906	40	80	M12 x 1.25	DSBC-40-80-PPSA-N3
1376907	40	100	M12 x 1.25	DSBC-40-100-PPSA-N3
1376908	40	125	M12 x 1.25	DSBC-40-125-PPSA-N3
2123784	40	150	M12 x 1.25	DSBC-40-150-PPSA-N3
1376909	40	160	M12 x 1.25	DSBC-40-160-PPSA-N3
1376910	40	200	M12 x 1.25	DSBC-40-200-PPSA-N3
1376911	40	250	M12 x 1.25	DSBC-40-250-PPSA-N3
2123785	40	300	M12 x 1.25	DSBC-40-300-PPSA-N3
1376912	40	320	M12 x 1.25	DSBC-40-320-PPSA-N3
1376913	40	400	M12 x 1.25	DSBC-40-400-PPSA-N3
1376914	40	500	M12 x 1.25	DSBC-40-500-PPSA-N3
2102628	50	20	M16 x 1.5	DSBC-50-20-PPSA-N3
1376301	50	25	M16 x 1.5	DSBC-50-25-PPSA-N3
2102629	50	30	M16 x 1.5	DSBC-50-30-PPSA-N3
1376304	50	40	M16 x 1.5	DSBC-50-40-PPSA-N3
1376305	50	50	M16 x 1.5	DSBC-50-50-PPSA-N3
2102630	50	60	M16 x 1.5	DSBC-50-60-PPSA-N3
2102631	50	70	M16 x 1.5	DSBC-50-70-PPSA-N3
1376306	50	80	M16 x 1.5	DSBC-50-80-PPSA-N3
1376307	50	100	M16 x 1.5	DSBC-50-100-PPSA-N3
1376308	50	125	M16 x 1.5	DSBC-50-125-PPSA-N3
2102632	50	150	M16 x 1.5	DSBC-50-150-PPSA-N3
1376309	50	160	M16 x 1.5	DSBC-50-160-PPSA-N3
1376310	50	200	M16 x 1.5	DSBC-50-200-PPSA-N3
1376311	50	250	M16 x 1.5	DSBC-50-250-PPSA-N3
2102633	50	300	M16 x 1.5	DSBC-50-300-PPSA-N3
1376312	50	320	M16 x 1.5	DSBC-50-320-PPSA-N3
1376313	50	400	M16 x 1.5	DSBC-50-400-PPSA-N3
1376314	50	500	M16 x 1.5	DSBC-50-500-PPSA-N3

Tech Sheet 70243

Ambient Temperature:  
-20°C to +80°C

Working Pressure:  
0.6 to 12 bar (Piston: 32, 40mm)  
0.4 to 12 bar (Piston 50, 63, 80, 100mm)

### Self-adjusting Cushioning



### Magnetic

0009	Piston Diameter mm	Stroke mm	Piston Rod Thread	Manufacturer's Code
2126684	63	20	M16 x 1.5	DSBC-63-20-PPSA-N3
1383632	63	25	M16 x 1.5	DSBC-63-25-PPSA-N3
2126685	63	30	M16 x 1.5	DSBC-63-30-PPSA-N3
1383633	63	40	M16 x 1.5	DSBC-63-40-PPSA-N3
1383634	63	50	M16 x 1.5	DSBC-63-50-PPSA-N3
2126686	63	60	M16 x 1.5	DSBC-63-60-PPSA-N3
2126687	63	70	M16 x 1.5	DSBC-63-70-PPSA-N3
1383635	63	80	M16 x 1.5	DSBC-63-80-PPSA-N3
1383636	63	100	M16 x 1.5	DSBC-63-100-PPSA-N3
1383637	63	125	M16 x 1.5	DSBC-63-125-PPSA-N3
2126688	63	150	M16 x 1.5	DSBC-63-150-PPSA-N3
1383638	63	160	M16 x 1.5	DSBC-63-160-PPSA-N3
1383639	63	200	M16 x 1.5	DSBC-63-200-PPSA-N3
1383640	63	250	M16 x 1.5	DSBC-63-250-PPSA-N3
2126689	63	300	M16 x 1.5	DSBC-63-300-PPSA-N3
1383641	63	320	M16 x 1.5	DSBC-63-320-PPSA-N3
1383642	63	400	M16 x 1.5	DSBC-63-400-PPSA-N3
1383643	63	500	M16 x 1.5	DSBC-63-500-PPSA-N3
2126636	80	20	M20 x 1.5	DSBC-80-20-PPSA-N3
1383366	80	25	M20 x 1.5	DSBC-80-25-PPSA-N3
2126637	80	30	M20 x 1.5	DSBC-80-30-PPSA-N3
1383367	80	40	M20 x 1.5	DSBC-80-40-PPSA-N3
1383368	80	50	M20 x 1.5	DSBC-80-50-PPSA-N3
2126638	80	60	M20 x 1.5	DSBC-80-60-PPSA-N3
2126639	80	70	M20 x 1.5	DSBC-80-70-PPSA-N3
1383369	80	80	M20 x 1.5	DSBC-80-80-PPSA-N3
1383370	80	100	M20 x 1.5	DSBC-80-100-PPSA-N3
1383371	80	125	M20 x 1.5	DSBC-80-125-PPSA-N3
2126640	80	150	M20 x 1.5	DSBC-80-150-PPSA-N3
1383372	80	160	M20 x 1.5	DSBC-80-160-PPSA-N3
1383373	80	200	M20 x 1.5	DSBC-80-200-PPSA-N3
1383374	80	250	M20 x 1.5	DSBC-80-250-PPSA-N3
2126641	80	300	M20 x 1.5	DSBC-80-300-PPSA-N3
1383375	80	320	M20 x 1.5	DSBC-80-320-PPSA-N3
1383376	80	400	M20 x 1.5	DSBC-80-400-PPSA-N3
1383377	80	500	M20 x 1.5	DSBC-80-500-PPSA-N3

Tech Sheet 70244

# CYLINDER ATTACHMENTS & ACCESSORIES

**FESTO**

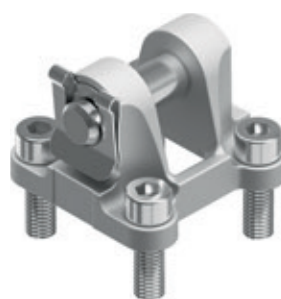

## ISO 15552 Cylinders Mounting Components for Drive Units



### Standard Swivel Flange with Spherical Rod Eye, ISO 15552

0009	To Suit Bore mm	Manufacturer's Code
174397	32	SNCS-32
174398	40	SNCS-40
174399	50	SNCS-50
174400	63	SNCS-63
174401	80	SNCS-80

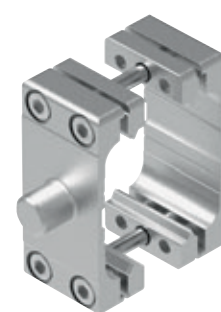
Tech Sheet 70220



### Standard Swivel Flange, ISO 15552

0009	To Suit Bore mm	Manufacturer's Code
174383	32	SNC-32
174384	40	SNC-40
174385	50	SNC-50
174386	63	SNC-63
174387	80	SNC-80

Tech Sheet 70222



### Trunnion Mounting Kit, ISO 15552

0009	To Suit Bore mm	Manufacturer's Code
2213233	32	DAMT-V1-32-A
2214899	40	DAMT-V1-40-A
2214909	50	DAMT-V1-50-A
2214971	63	DAMT-V1-63-A
163529	80	DAMT-V1-80-A

Tech Sheet 70224



### Wide Swivel Flange, ISO 15552

0009	To Suit Bore mm	Manufacturer's Code
174404	32	SNCL-32
174405	40	SNCL-40
174406	50	SNCL-50
174407	63	SNCL-63
174408	80	SNCL-80

Tech Sheet 70221



### Wide Swivel Flange, ISO 15552

0009	To Suit Bore mm	Manufacturer's Code
174390	32	SNCB-32
174391	40	SNCB-40
174392	50	SNCB-50
174393	63	SNCB-63
174394	80	SNCB-80

Tech Sheet 70223



### SGS, Rod Eyes

0009	Thread	Manufacturer's Code
9254	M6	SGS-M6
9255	M8	SGS-M8
9261	M10 x 1.25	SGS-M10X1.25
9262	M12 x 1.25	SGS-M12X1.25
9263	M16 x 1.5	SGS-M16X1.5
9264	M20 x 1.5	SGS-M20X1.5

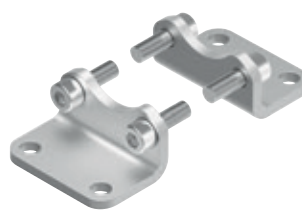
Tech Sheet 71576



### Clevis Foot Mounting, ISO 15552

0009	To Suit Bore mm	Manufacturer's Code
33890	32	LNG-32
33891	40	LNG-40
33892	50	LNG-50
33893	63	LNG-63
33894	80	LNG-80

Tech Sheet 70215



### Foot Mountings, ISO 15552

0009	To Suit Bore mm	Manufacturer's Code
174369	32	HNC-32
174370	40	HNC-40
174371	50	HNC-50
174372	63	HNC-63
174373	80	HNC-80

Tech Sheet 70219

For use with all cylinders.



### Rod Clevis

0009	Thread	Manufacturer's Code
3110	M6	SG-M6
3111	M8	SG-M8
6144	M10 x 1.25	SG-M10X1.25
6145	M12 x 1.25	SG-M12X1.25
6146	M16 x 1.25	SG-M16X1.5
6147	M20 x 1.5	SG-M20X1.5

Tech Sheet 71577

# ISO 15552 CYLINDERS

## Double Acting Cylinders

### Technical Data for ISO 15552 Cylinders

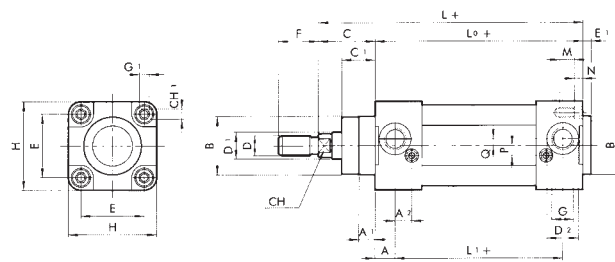
- Fluid: unlubricated air (lubrication, if used, must be continuous)
- Sensor magnet: all versions come complete with magnet
- Piston rod material: C40 chromed steel Ø32-63
- Piston seal: NBR

**Temperature Range:**  
10°C to +70°C

**Maximum Operating Pressure:**  
10 bar

### Dimensions

Ø	A	A1	A2	B	C	C1	CH	CH1	D	D1	D2	E	E1	F	G	G1	H	Ø	L	L0	L1	L2	M	N	P	Q
32	10	7	10	30	26	16	10	6	M10 x 1.25	12	15	32.5	5	22	G1/8	M6	47	32	120	94	74	146	9	4.5	6	4
40	12	9	10	35	30	20	13	6	M12 x 1.25	16	19	38	5	24	G1/4	M6	53	40	135	105	81	165	9	4.5	6	4
50	14	14	10	40	37	25	17	8	M16 x 1.5	20	19	46.5	5	32	G1/4	M8	65	50	143	106	78	180	12	5.5	6	6
63	16	14	10	45	37	25	17	8	M16 x 1.5	20	23	56.5	5	32	G3/8	M8	75	63	158	121	89	195	12	5.5	6	6
80	18	12	12	45	46	33	22	10	M20 x 1.5	25	23	72	8	40	G3/8	M10	95	80	174	128	92	220	16	5.5	10	7
100	20	14	12	55	51	38	22	10	M20 x 1.5	25	27	89	8	40	G1/2	M10	115	100	189	138	98	240	16	5.5	10	7
125	25	21	10	60	65	45	27	12	M27 x 2	32	27	110	8	54	G1/2	M12	140	125	225	160	110	290	19	6.5	12	8



**More Sizes Available**  
Up to 320mm diameter  
& 2600mm stroke



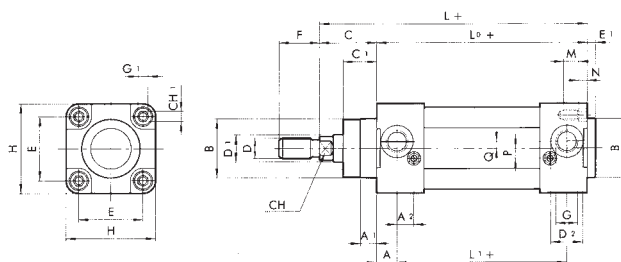
### Magnetic & Cushioned

9195	Diameter (mm)	Stroke (mm)
1213320025CN	32	25
1213320050CN	32	50
1213320080CN	32	80
1213320100CN	32	100
1213320125CN	32	125
1213320160CN	32	160
1213320200CN	32	200
1213320250CN	32	250
1213320320CN	32	320
1213320400CN	32	400
1213320500CN	32	500
1213400025CN	40	25
1213400050CN	40	50
1213400080CN	40	80
1213400100CN	40	100
1213400125CN	40	125
1213400160CN	40	160

9195	Diameter (mm)	Stroke (mm)
1213400200CN	40	200
1213400250CN	40	250
1213400320CN	40	320
1213400400CN	40	400
1213400500CN	40	500
1213500025CN	50	25
1213500050CN	50	50
1213500080CN	50	80
1213500100CN	50	100
1213500125CN	50	125
1213500160CN	50	160
1213500200CN	50	200
1213500250CN	50	250
1213500320CN	50	320
1213500400CN	50	400
1213500500CN	50	500

# ISO 15552 CYLINDERS

## Double Acting Cylinders



**More Sizes Available**  
Up to 320mm diameter  
& 2600mm stroke



### Magnetic & Cushioned

9195	Diameter (mm)	Stroke (mm)
1213630025CN	63	25
1213630050CN	63	50
1213630080CN	63	80
1213630100CN	63	100
1213630125CN	63	125
1213630160CN	63	160
1213630200CN	63	200
1213630250CN	63	250
1213630320CN	63	320
1213630400CN	63	400
1213630500CN	63	500
1213800025AN	80	25
1213800050AN	80	50
1213800080AN	80	80
1213800100AN	80	100
1213800125AN	80	125
1213800160AN	80	160
1213800200AN	80	200
1213800250AN	80	250
1213800320AN	80	320
1213800400AN	80	400

9195	Diameter (mm)	Stroke (mm)
1213800500AN	80	500
1213A10025AN	100	25
1213A10050AN	100	50
1213A10080AN	100	80
1213A10100AN	100	100
1213A10125AN	100	125
1213A10160AN	100	160
1213A10200AN	100	200
1213A10250AN	100	250
1213A10320AN	100	320
1213A10400AN	100	400
1213A10500AN	100	500
1213A20100AN	125	100
1213A20125AN	125	125
1213A20160AN	125	160
1213A20200AN	125	200
1213A20250AN	125	250
1213A20320AN	125	320
1213A20400AN	125	400
1213A20500AN	125	500



For **Metal Work Standard Series FRL's 'Syntesi'**  
see pages **668-672**



# ISO 15552 CYLINDERS

## Double Acting Cylinders

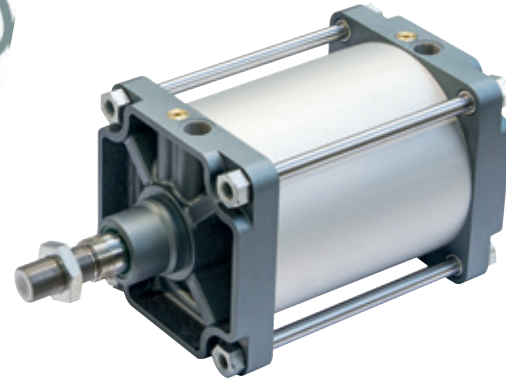
### Technical Data for ISO 15552 Cylinders Ø 160-320

- Design: round barrel with tie rods
- Sensor magnet: all versions come complete with magnet
- Piston rod material: C45 steel, chromed
- Piston seal: NBR
- Options: available with mounted intermediate hinge

**Temperature Range:**  
10°C to +80°C

**Maximum Operating Pressure:**  
10 bar

**More Sizes Available**  
Up to 320mm diameter  
& 2600mm stroke



### Magnetic & Cushioned

9195	Diameter mm	Stroke mm
W1211600025	160	25
W1211600050	160	50
W1211600080	160	80
W1211600100	160	100
W1211600125	160	125
W1211600160	160	160
W1211600200	160	200
W1211600250	160	250
W1211600320	160	320
W1211600400	160	400
W1211600500	160	500
W1212000025	200	25
W1212000050	200	50
W1212000080	200	80
W1212000100	200	100
W1212000125	200	125
W1212000160	200	160
W1212000200	200	200
W1212000250	200	250
W1212000320	200	320
W1212000400	200	400
W1212000500	200	500

9195	Diameter mm	Stroke mm
W1212500025	250	25
W1212500050	250	50
W1212500080	250	80
W1212500100	250	100
W1212500125	250	125
W1212500160	250	160
W1212500200	250	200
W1212500250	250	250
W1212500320	250	320
W1212500400	250	400
W1212500500	250	500
W1213200025	320	25
W1213200050	320	50
W1213200080	320	80
W1213200100	320	100
W1213200125	320	125
W1213200160	320	160
W1213200200	320	200
W1213200250	320	250
W1213200320	320	320
W1213200400	320	400
W1213200500	320	500

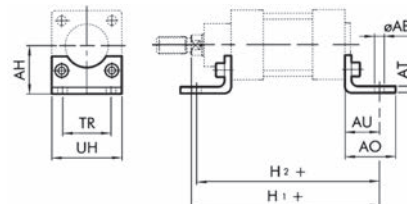
For dimensions and further technical information refer to sales team.

# ISO 15552 CYLINDERS ACCESSORIES

## Foot Mounting

### To suit ISO 15552 Cylinders

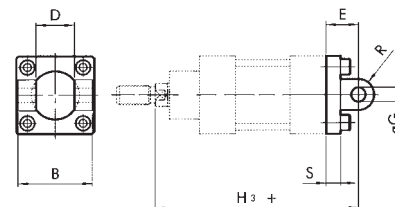
9146	∅	AB	AH	AO	AT	AU	TR	UH	H1	H2
W0950322001	32	7	32	35	4	24	32	45	144	142
W0950402001	40	9	36	43	4	28	36	52	163	161
W0950502001	50	9	45	47	4	32	45	65	175	170
W0950632001	63	9	50	47	6	32	50	75	190	185
W0950802001	80	12	63	61	6	41	63	95	215	210
W0951002001	100	14	71	66	6	41	75	115	230	220
W0951252001	125	16	90	60	7	45	90	140	270	250
W0951602001	160	18	115	80	10	60	115	180	319	300
W0952002001	200	22	135	100	10	70	135	220	345	320



## Female Hinge

### To suit ISO 15552 Cylinders

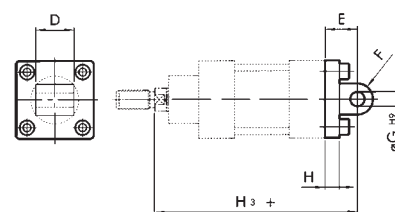
9146	∅	B	D	E	∅G	H3	R	S
W0950322003	32	45	26	22	10	142	11	10
W0950402003	40	52	28	25	12	160	13	10
W0950502003	50	60	32	27	12	170	13	12
W0950632003	63	70	40	32	16	190	17	12
W0950802003	80	90	50	36	16	210	17	16
W0951002003	100	110	60	41	20	230	21	16
W0951252003	125	130	70	50	25	275	26	20
W0951602003	160	170	90	55	30	314	25	20
W0952002003	200	170	90	60	30	335	25	25



## Male Hinge

### To suit ISO 15552 Cylinders

9146	∅	D	E	F	∅G	H	H2
W0950322004	32	26	22	11	10	10	142
W0950402004	40	28	25	13	12	10	160
W0950502004	50	32	27	13	12	12	170
W0950632004	63	40	32	17	16	12	190
W0950802004	80	50	36	17	16	16	210
W0951002004	100	60	41	21	20	16	230
W0951252004	125	70	50	26	25	20	1590
W0951602004	160	90	55	25	30	20	314
W0952002004	200	90	60	25	30	25	335



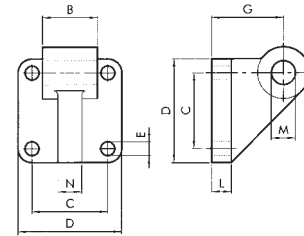


# ISO 15552 CYLINDERS ACCESSORIES

## Male 90° Hinge

To suit ISO 15552 Cylinders

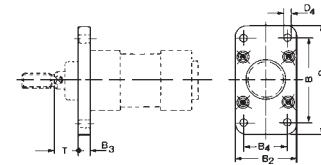
9146	Ø	B	C	D	E	G	L	M	N
W0950322108	32	25.5	25	45	7	32	10	10	10
W0950402108	40	27.5	32	52	7	36	10	12	12
W0950502108	50	31.5	32	65	9	45	12	12	12
W0950632108	63	39.5	40	75	9	50	16	16	15
W0950802108	80	49.5	40	95	11	63	16	16	15
W0951002108	100	59.5	50	115	11	21	20	20	22
W0951252008	125	70	50	25	14	90	16	25	22



## Flange Mounting

To suit ISO 15552 Cylinders

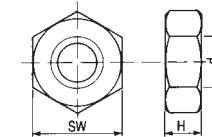
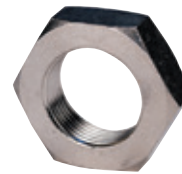
9146	Ø	B	B1	B2	B3	B4	ØD4	T
W0950322002	32	64	80	50	10	32	7	16
W0950402002	40	72	90	55	10	36	9	20
W0950502002	50	90	110	65	12	45	9	25
W0950632002	63	100	120	75	12	50	9	25
W0950802002	80	126	153	95	16	63	12	30
W0951002002	100	150	178	115	16	75	14	35
W0951252002	125	180	220	140	20	90	16	45
W0951602002	160	230	270	180	20	115	18	59
W0952002002	200	270	312	225	25	135	22	70



## Piston Rod Nut

To suit ISO 15552 Cylinders

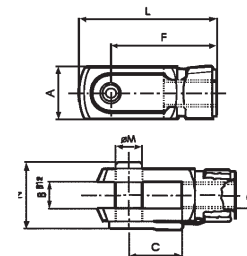
9146	Ø	D	H	SW
W0950322010	32	M10 x 1.25	6	17
W0950402010	40	M12 x 1.25	7	19
W0950502010	50-63	M16 x 1.5	8	24
W0950802010	80-100	M20 x 1.5	9	30
W0951252010	125	M27 x 2	12	74
W0951602010	160/200	M36 x 2	14	55



## Fork Clevis

To suit ISO 15552 Cylinders

9146	Ø	M	A	B	C	L	F	D
W0950322020	32	10	20	10	20	52	40	M10 x 1.25
W0950402020	40	12	24	12	24	62	48	M12 x 1.25
W0950502020	50/63	16	32	16	32	83	64	M16 x 1.5
W0950802020	80/100	20	40	20	40	106	80	M20 x 1.5
W0951252020	125	30	55	30	55	148	110	M27 x 2
W0951602008	160/200	90	63	154	18	140	20	30
W0951602020	160/200	35	70	35	72	188	144	M36 x 2

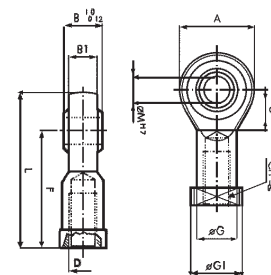


# ISO 1552 CYLINDERS ACCESSORIES

## Spherical Rod Eye

To suit ISO 1552 Cylinders

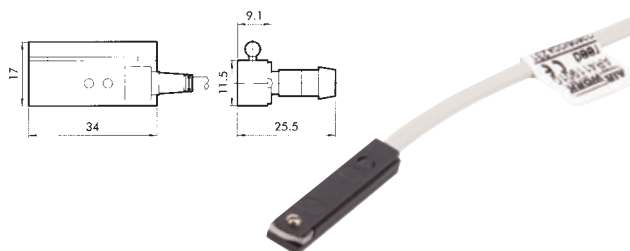
9146	Ø	M	B1	B	A	L	F	D	CH	ØG
W0950322025	32	10	10.5	14	28	57	43	M10 x 1.25	17	15
W0950402025	40	12	12	16	32	66	50	M12 x 1.25	19	17.5
W0950502025	50/63	16	15	21	42	85	64	M16 x 1.5	22	22
W0950802025	80/100	20	18	25	50	102	77	M20 x 1.5	30	27.5
W0951252025	125	30	25	37	70	145	110	M27 x 2	41	40
W0952002025	160/200	35	28	43	80	165	125	M36 x 2	58	46



## Reed Switch

Technical Data

Type		Contact
Maximum AC/DC voltage	V	Reed + varistor + LED 2 wires Reed + varistor + LED NO 220 ISO cylinder
Maximum current at +25°C	mA	1,000
Power with inductive load	VA	15
Power with resistive load	Watt	50
Switch-on time	M sec	1.2
Switch-off time	M sec	0.1
Cable length		2.5m
Cable material		Soft PVC
Switch-on point	Gauss	110
Switch-off point	Gauss	95
Contact resistance		0.1



To suit ISO 1552 Cylinders

9146	Description
W0950000201	Reed Sensor ACC.DSM2-C525

## Reed Switch Bracket

To suit ISO 1552 Cylinders

9146	Description	Cylinder Diameter
W0950000711	Bracket ACC. D.32 DST 80	32-40
W0950000712	Bracket ACC. D.50 DST 81	50-63
W0950000713	Bracket ACC. D.80-100-125 DST 82	80-125
0951602093	Bracket ACC. D.160-200	160-200



## Seal Kits

Other variants available on request



To suit ISO 1552 Cylinders

9146	Ø	Material
0090320502	32	NBR
0090400502	40	NBR
0090500502	50	NBR
0090630502	63	NBR
0090800502	80	NBR
0091000502	100	NBR
0091250502	125	NBR

## Sensor Tester with M8 & M12 Connections

This sensor tester features the following:

- A green light and acoustic signal indicating correct operation
- Sensors can be checked without having to be disassembled
- M8 and M12 connections and terminal board for direct connection to the wires
- PNP or NPN switching button

Technical Data

- Container material: PA 6.6 blue
- Degree of protection: IP00
- Connections: M8 and M12 plug-socket type with 40cm cable
- Additional connections: three terminals for wire connection
- Power supply: 9V DC (battery type 6LR61)
- Internal voltage: 15V DC
- Green light: tester switched on
- Yellow light: sensor in operation
- Red light: battery fla



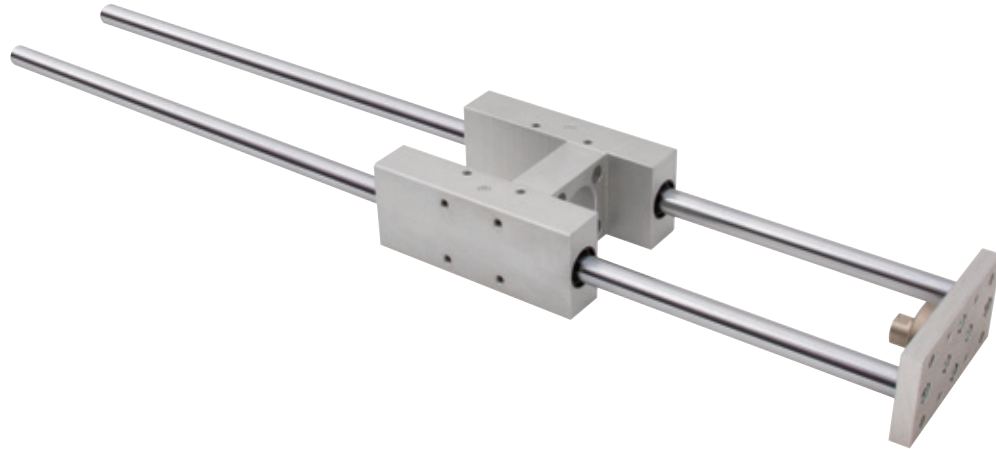
## Automatic Switch Off

9146	Dimensions (mm)
W0950060000	63 x 88 x 24

# CYLINDER GUIDE UNITS FOR ISO15552 CYLINDER

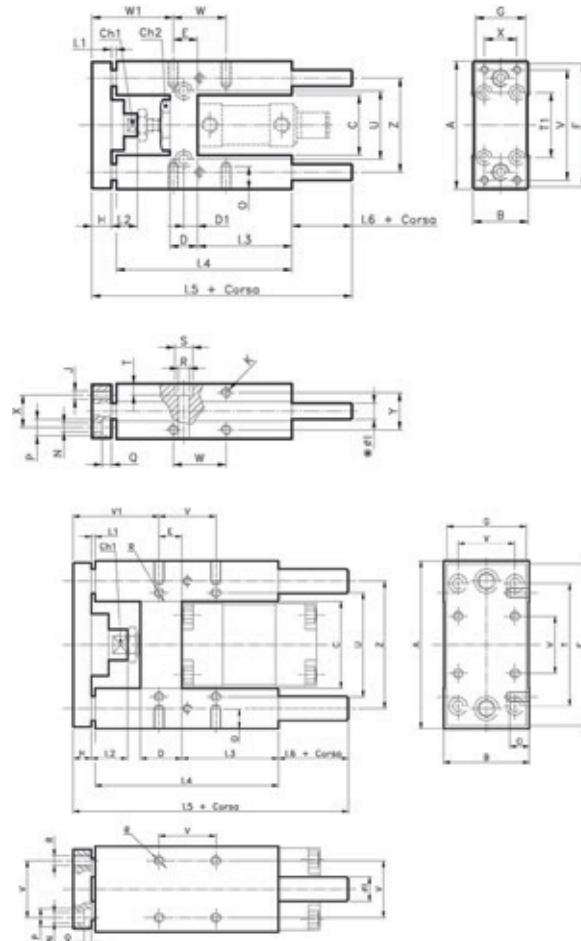
## Profile (GD4) & (GDM)

**More Sizes Available**  
Up to 100mm diameter  
& 1000mm stroke



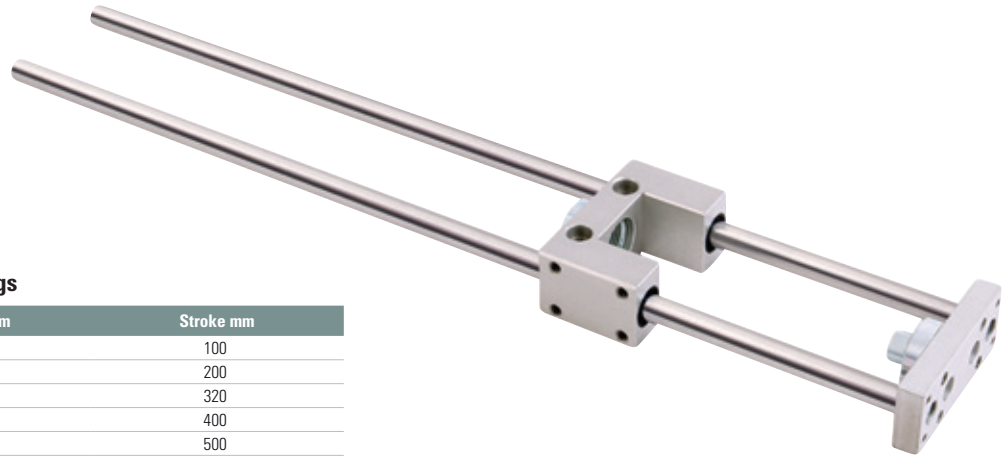
### With Self-lubricating Bushings

9147	Diameter mm	Stroke mm
HGU020-0100	20	100
HGU020-0200	20	200
HGU020-0250	20	250
HGU020-0320	20	320
HGU020-0400	20	400
HGU020-0500	20	500
HGU032-0100	32	100
HGU032-0200	32	200
HGU032-0250	32	250
HGU032-0320	32	320
HGU032-0400	32	400
HGU032-0500	32	500
HGU040-0100	40	100
HGU040-0200	40	200
HGU040-0250	40	250
HGU040-0320	40	320
HGU040-0400	40	400
HGU040-0500	40	500
HGU050-0100	50	100
HGU050-0200	50	200
HGU050-0250	50	250
HGU050-0320	50	320
HGU050-0400	50	400
HGU050-0500	50	500
HGU063-0100	63	100
HGU063-0200	63	200
HGU063-0250	63	250
HGU063-0320	63	320
HGU063-0400	63	400
HGU063-0500	63	500



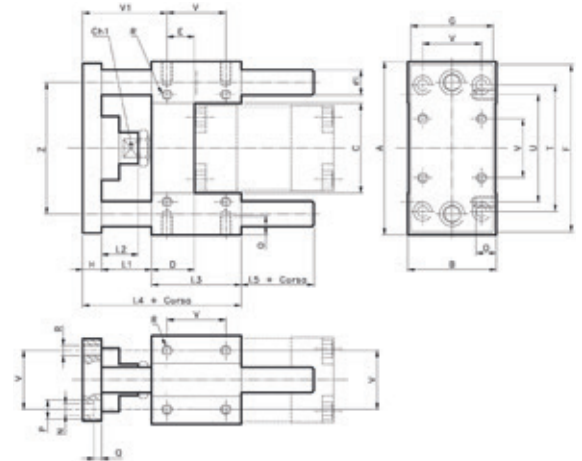
# CYLINDER GUIDE UNITS FOR ISO15552 CYLINDER

## Profile (GD4) & (GDM)



### With Self-lubricating Bushings

9147	Diameter mm	Stroke mm
UGU020-0100	20	100
UGU020-0200	20	200
UGU020-0320	20	320
UGU020-0400	20	400
UGU020-0500	20	500
UGU032-0100	32	100
UGU032-0200	32	200
UGU032-0250	32	250
UGU032-0320	32	320
UGU032-0400	32	400
UGU032-0500	32	500
UGU040-0100	40	100
UGU040-0200	40	200
UGU040-0250	40	250
UGU040-0320	40	320
UGU040-0400	40	400
UGU040-0500	40	500
UGU050-0100	50	100
UGU050-0200	50	200
UGU050-0250	50	250
UGU050-0320	50	320
UGU050-0400	50	400
UGU050-0500	50	500
UGU063-0100	63	100
UGU063-0200	63	200
UGU063-0250	63	250
UGU063-0320	63	320
UGU063-0400	63	400
UGU063-0500	63	500

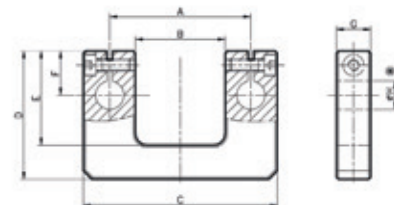


### Rear End Plate



### To suit Guide Units

9147	Description
KG3043.20	For 20/25mm Guide Units
KG3043.32	For 32mm Guide Units
KG3043.40	For 40mm Guide Units
KG3043.50	For 50mm Guide Units
KG3043.63	For 63mm Guide Units



# ISO 15552 CYLINDERS, SERIES HCR (HIGH CORROSION RESISTANCE)

## Uses stainless steel fixing

In some applications, cylinders are exposed to aggressive environments (e.g. the dairy, fruit and vegetable, and food industry) or to substances and washings with aggressive detergents (e.g. caustic soda, hydrochloric acid and lactic acid). Under these conditions, the HCR series cylinders ensure better corrosion resistance.

Cylinders made to ISO 15552, designed and built with materials and/or surface treatments that are highly resistant to corrosion

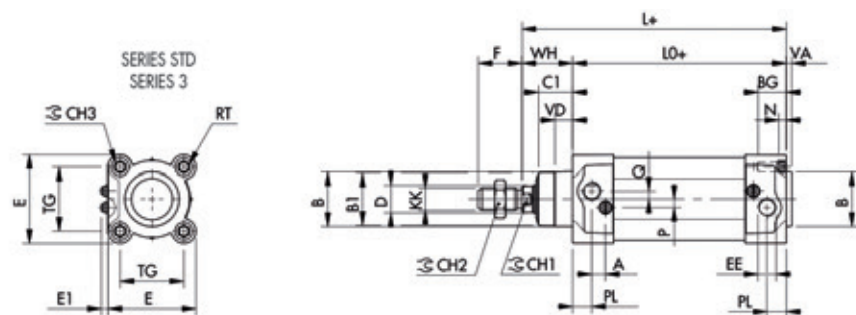
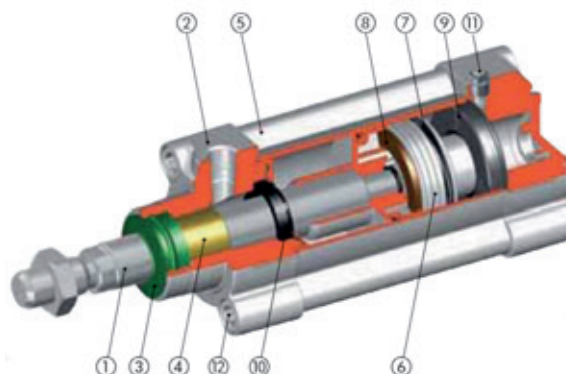
They come in various versions and with specific range of accessories

- with or without magnet
- with single or through piston rod

Also available with liner in the STD series or series 3



1.	Piston rod: AISI 316, thickness chromed
2.	Head: anodised pressure die-cast aluminium, epoxy-vinyl ester and epoxy-resin powder coating
3.	Piston rod gasket: special polyurethane
4.	Guide bushing: steel strip with bronze and PTFE insert
5.	Barrel: drawn anodised calibrated aluminium
6.	Semi-piston: made of self-lubricating technopolymer with built-in cushioning olives (aluminium with technopolymer shoe for Ø 80, 10 and 125)
7.	Piston gasket: NBR
8.	Magnet: plastoferrite
9.	Buffer + static O-rings: NBR
10.	Cushioning gasket: NBR
11.	Needle: AISI 316, screws: AISI 316
12.	Screws: AISI 316



Ø	PL	VD	A	B	B1	WH	C1	CH1	CH2	CH3	KK	D	TG	VA	F	EE	RT	E	E1 min	E1 max	L	LO	ZM	BG	N	P	Q
32	10	6.5	10	30	28	26	16	10	17	6	M10 x 1.25	12	32.5	4	22	G1/8	M6	46	5.5	8.4	120	94	146	14.5	4.5	6	4
40	12	8	10	35	33	30	20	13	19	6	M12 x 1.25	16	38	4	24	G1/4	M6	54	4.5	8.4	135	105	165	14.5	4.5	6	4
50	14	13	10	40	38	37	25	17	24	8	M16 x 1.5	20	46.5	4	32	G1/4	M8	64.5	4.5	8.9	143	106	180	17.5	5.5	6	6
63	16	14	10	45	40	37	25	17	24	8	M16 x 1.5	20	56.5	4	32	G3/8	M8	75.5	4.1	9.5	158	121	195	17.5	5.5	6	6
80	18	12	12	45	43	46	33	22	30	10	M20 x 1.5	25	72	4	40	G3/8	M10	94	6.2	12.2	174	128	220	21.5	5.5	10	7
100	20	14	12	55	49	51	38	22	30	10	M20 x 1.5	25	89	4	40	G1/2	M10	111	6.7	12.2	189	138	240	21.5	5.5	10	7
125	25	20	10	60	54	65	45	27	41	12	M27 x 2	32	110	6	54	G1/2	M12	135	5.7	12.7	225	160	290	25.5	6.5	12	8

# ISO 15552 CYLINDERS, SERIES HCR (HIGH CORROSION RESISTANCE)

## ISO 15552 HCR Double Acting Cylinders

Uses stainless steel accessories



### Magnetic & Cushioned

9195	Diameter mm	Stroke mm
1213320025BL	32	25
1213320050BL	32	50
1213320080BL	32	80
1213320100BL	32	100
1213320125BL	32	125
1213320160BL	32	160
1213320200BL	32	200
1213320250BL	32	250
1213320320BL	32	320
1213320400BL	32	400
1213320500BL	32	500
1213400025BL	40	25
1213400050BL	40	50
1213400080BL	40	80
1213400100BL	40	100
1213400125BL	40	125
1213400160BL	40	160
1213400200BL	40	200
1213400250BL	40	250
1213400320BL	40	320
1213400400BL	40	400
1213400500BL	40	500
1213500025BL	50	25
1213500050BL	50	50
1213500080BL	50	80
1213500100BL	50	100
1213500125BL	50	125
1213500160BL	50	160
1213500200BL	50	200
1213500250BL	50	250
1213500320BL	50	320
1213500400BL	50	400
1213500500BL	50	500
1213630025BL	63	25
1213630050BL	63	50
1213630080BL	63	80
1213630100BL	63	100

9195	Diameter mm	Stroke mm
1213630125BL	63	125
1213630160BL	63	160
1213630200BL	63	200
1213630250BL	63	250
1213630320BL	63	320
1213630400BL	63	400
1213630500BL	63	500
1213800025WL	80	25
1213800050WL	80	50
1213800080WL	80	80
1213800100WL	80	100
1213800125WL	80	125
1213800160WL	80	160
1213800200WL	80	200
1213800250WL	80	250
1213800320WL	80	320
1213800400WL	80	400
1213800500WL	80	500
1213A10025WL	100	25
1213A10050WL	100	50
1213A10080WL	100	80
1213A10100WL	100	100
1213A10125WL	100	125
1213A10160WL	100	160
1213A10200WL	100	200
1213A10250WL	100	250
1213A10320WL	100	320
1213A10400WL	100	400
1213A10500WL	100	500
1213A20100WL	125	100
1213A20125WL	125	125
1213A20160WL	125	160
1213A20200WL	125	200
1213A20250WL	125	250
1213A20320WL	125	320
1213A20400WL	125	400
1213A20500WL	125	500

For correct magnetic sensors & fitting  
contact sales department

# ISO 15552 AIR CYLINDERS, ALL STAINLESS STEEL

## Technical Specifications

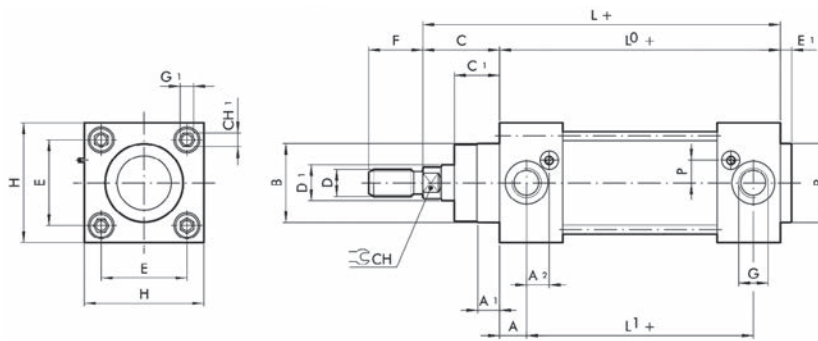
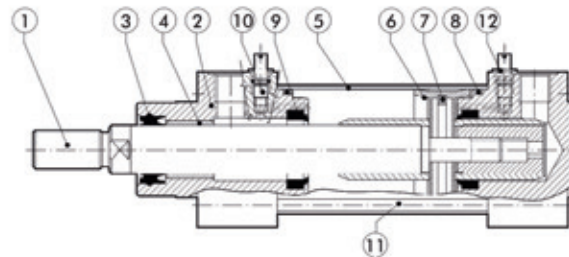
Fluid: lubricated or non-lubricated air

**Temperature Range:**  
10°C to +80°C

**Maximum Operating Pressure:**  
10 bar



1. Piston rod: AISI 316 steel
2. Head: AISI 304 steel
3. Piston rod gasket: polyurethane or FKM/FPM
4. Guide bushing: sintered bronze
5. Barrel: AISI 304 steel
6. Enbloc gasket: NBR or FKM/FPM
7. Magnet: plastoferrite
8. Static O-rings: NBR or FKM/FPM
9. Cushioning gasket: polyurethane or FKM/FPM
10. Cushioning needle: AISI 304 steel
11. Tie rod: AISI 316 steel
12. Needle-retaining ring: technopolymer



Ø	A	A <sub>1</sub>	A <sub>2</sub>	B	C	C <sub>1</sub>	CH	CH <sub>1</sub>	D	D <sub>1</sub>	E	E <sub>1</sub>	F	G	G <sub>1</sub>	H	L	L <sub>0</sub>	L <sub>1</sub>	L <sub>2</sub>	P
32	13	9	11.3	30	26	18	10	6	M10 x 1.25	12	32.5	4	22	G1/8	M6	50	120	94	68	146	6
40	14	9	13	35	30	22	13	6	M12 x 1.25	16	38	4	24	G1/4	M6	55	135	105	77	165	8
50	14	9	12.7	40	37	25.5	17	8	M16 x 1.5	20	46.5	4	32	G1/4	M8	65	143	106	78	180	11.8
63	16	9	15.8	45	37	25	17	8	M16 x 1.5	20	56.5	4	32	G3/8	M8	75	158	121	89	195	11.7
80	17	10	16.3	45	46	35	22	-	M20 x 1.5	25	72	4	40	G3/8	M10	95	174	128	94	220	15.5
100	18	10	15.5	55	51	38	22	-	M20 x 1.5	25	89	4	40	G1/2	M10	110	189	138	102	240	15.5
125	18	11	20	60	65	46	27	-	M27 x 2	32	110	6	54	G1/2	M12	140	225	160	124	290	15

# ISO 15552 AIR CYLINDERS, ALL STAINLESS STEEL

## ISO 15552 Cylinders, Double Acting

### Technical Specifications

Fluid: lubricated or non-lubricated air

 **Temperature Range:**  
10°C to +80°C

 **Maximum Operating Pressure:**  
10 bar



### Magnetic

9146	Diameter mm	Stroke mm
W1840320025	32	25
W1840320050	32	50
W1840320080	32	80
W1840320100	32	100
W1840320125	32	125
W1840320160	32	160
W1840320200	32	200
W1840320250	32	250
W1840320320	32	320
W1840320400	32	400
W1840320500	32	500
W1840400025	40	25
W1840400050	40	50
W1840400080	40	80
W1840400100	40	100
W1840400125	40	125
W1840400160	40	160
W1840400200	40	200
W1840400250	40	250
W1840400320	40	320
W1840400400	40	400
W1840400500	40	500
W1840500025	50	25
W1840500050	50	50
W1840500080	50	80
W1840500100	50	100
W1840500125	50	125
W1840500160	50	160
W1840500200	50	200
W1840500250	50	250
W1840500320	50	320
W1840500400	50	400
W1840500500	50	500

9146	Diameter mm	Stroke mm
W1840630025	63	25
W1840630050	63	50
W1840630080	63	80
W1840630100	63	100
W1840630125	63	125
W1840630160	63	160
W1840630200	63	200
W1840630250	63	250
W1840630320	63	320
W1840630400	63	400
W1840630500	63	500
W1840800025	80	25
W1840800050	80	50
W1840800080	80	80
W1840800100	80	100
W1840800125	80	125
W1840800160	80	160
W1840800200	80	200
W1840800250	80	250
W1840800320	80	320
W1840800400	80	400
W1840800500	80	500
W1841000025	100	25
W1841000050	100	50
W1841000080	100	80
W1841000100	100	100
W1841000125	100	125
W1841000160	100	160
W1841000200	100	200
W1841000250	100	250
W1841000320	100	320
W1841000400	100	400
W1841000500	100	500



# ISO 15552 AIR CYLINDER ACCESSORIES, ALL STAINLESS STEEL



## Foot Mounting



To suit ISO 15552 Cylinders

9146	To Suit Size mm
W095X322001	32
W095X402001	40
W095X502001	50
W095X632001	63
W095X802001	80
W095XA12001	100

## Male 90° Hinge



To suit ISO 15552 Cylinders

9146	To Suit Size mm
W095X322008	32
W095X402008	40
W095X502008	50
W095X632008	63
W095X802008	80
W095XA12008	100

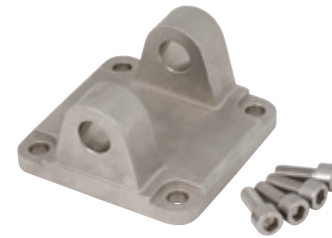
## Male Hinge



To suit ISO 15552 Cylinders

9146	To Suit Size mm
W095X322004	32
W095X402004	40
W095X502004	50
W095X632004	63
W095X802004	80
W095XA12004	100

## Female Hinge



To suit ISO 15552 Cylinders

9146	To Suit Size mm
W095X322003	32
W095X402003	40
W095X502003	50
W095X632003	63
W095X802003	80
W095XA12003	100



For Syntesi Metal Work  
Standard Series FRL's  
see page 666

# ISO 15552 AIR CYLINDER ACCESSORIES, ALL STAINLESS STEEL

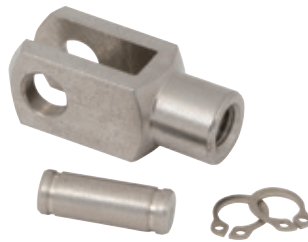
## Hinge Pin



To suit ISO 15552 Cylinders

9146	To Suit Size mm
W095X322050	32
W095X402050	40
W095X502050	50
W095X632050	63
W095X802050	80
W095XA12050	100

## Fork Clevis



To suit ISO 15552 Cylinders

9146	To Suit Size mm	Thread
W095X322020	25/32	M10 x 1.25
W095X402020	40	M12 x 1.25
W095X502020	50/63	M16 x 1.5
W095X802020	80/100	M20 x 1.5

## Intermediate Hinge



To suit ISO 15552 Cylinders

9146	To Suit Size mm
W095X322007	32
W095X402007	40
W095X502007	50
W095X632007	63
W095X802007	80
W095XA12007	100

## Flange



To suit ISO 15552 Cylinders

9146	To Suit Size mm
W095X322002	32
W095X402002	40
W095X502002	50
W095X632002	63
W095X802002	80
W095XA12002	100

## Rod Nuts



To suit ISO 15552 Cylinders

9146	To Suit Size	Thread
W095X322011	25/32	M10 x 1.25
W095X402011	40	M12 x 1.25
W095X502011	50/63	M16 x 1.5
W095X802011	80/100	M20 x 1.5

## Reed Switch



To suit ISO 15552 Cylinders

9146	Thread
W0952022180	With Moulded Cable
W0952028184	With M8 Connection

## Mounting for Reed Switch



To suit ISO 15552 Cylinders

9146
W0950001100

# ISO 15552 CYLINDERS & MOUNTINGS



## ISO 15552 Cylinders

- Cylinder conforms to ISO 15552
- High performance adaptive cushioning system "ACS"
- Polyurethane seals ensure efficient low friction operation and long life
- Switches can be mounted flush with the profile barrel
- Comprehensive range of standard mountings

**Medium:** Compressed air, filtered,

lubricated or non-lubricated

**Operation:** Double acting, adjustable cushioning.

**Profile:** Anodised aluminium

**Piston Rod:** Stainless steel (martensitic)

**Piston Rod Seals:** Polyurethane

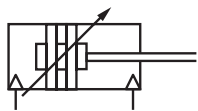
**Piston Seals:** Polyurethane

**O-Rings:** Nitrile Rubber

**End Covers:** Pressure diecast aluminium

**Working Temperature:**  
-20°C to +80°C

**Working Pressure:**  
1 to 16 bar



### PROFILE BARREL



### Double Acting, 8020 Series

0036	Bore mm	Stroke mm	Thread
PRA/802032/M/25	32	25	1/8"
PRA/802032/M/50	32	50	1/8"
PRA/802032/M/80	32	80	1/8"
PRA/802032/M/100	32	100	1/8"
PRA/802032/M/125	32	125	1/8"
PRA/802032/M/160	32	160	1/8"
PRA/802032/M/200	32	200	1/8"
PRA/802032/M/250	32	250	1/8"
PRA/802032/M/320	32	320	1/8"
PRA/802040/M/50	40	50	1/4"
PRA/802040/M/80	40	80	1/4"
PRA/802040/M/100	40	100	1/4"
PRA/802040/M/160	40	160	1/4"
PRA/802040/M/200	40	200	1/4"
PRA/802050/M/25	50	25	1/4"
PRA/802050/M/50	50	50	1/4"
PRA/802050/M/80	50	80	1/4"
PRA/802050/M/100	50	100	1/4"
PRA/802050/M/125	50	125	1/4"
PRA/802050/M/160	50	160	1/4"
PRA/802050/M/200	50	200	1/4"
PRA/802050/M/250	50	250	1/4"
PRA/802050/M/320	50	320	1/4"
PRA/802063/M/25	63	25	3/8"
PRA/802063/M/50	63	50	3/8"
PRA/802063/M/80	63	80	3/8"
PRA/802063/M/100	63	100	3/8"
PRA/802063/M/125	63	125	3/8"
PRA/802063/M/160	63	160	3/8"
PRA/802063/M/200	63	200	3/8"
PRA/802063/M/250	63	250	3/8"
PRA/802063/M/320	63	320	3/8"
PRA/802080/M/25	80	25	3/8"
PRA/802080/M/50	80	50	3/8"
PRA/802080/M/80	80	80	3/8"
PRA/802080/M/160	80	160	3/8"
PRA/802080/M/200	80	200	3/8"
PRA/802080/M/250	80	250	3/8"
PRA/802100/M/50	100	50	1/2"
PRA/802100/M/100	100	100	1/2"
PRA/802100/M/125	100	125	1/2"
PRA/802100/M/160	100	160	1/2"
PRA/802100/M/250	100	250	1/2"
PRA/802100/M/320	100	320	1/2"

Tech Sheet 71373

### Self adjusting cushioning feature

### ROUND BARREL



### Tie rod double acting cylinder, round barrel RA/802 Series

0036	Bore mm	Stroke mm	Thread
RA/802032/M/25	32	25	1/8"
RA/802032/M/50	32	50	1/8"
RA/802032/M/80	32	80	1/8"
RA/802032/M/100	32	100	1/8"
RA/802032/M/125	32	125	1/8"
RA/802032/M/160	32	160	1/8"
RA/802032/M/200	32	200	1/8"
RA/802032/M/250	32	250	1/8"
RA/802032/M/320	32	320	1/8"
RA/802040/M/25	40	25	1/4"
RA/802040/M/50	40	50	1/4"
RA/802040/M/80	40	80	1/4"
RA/802040/M/100	40	100	1/4"
RA/802040/M/125	40	125	1/4"
RA/802040/M/200	40	200	1/4"
RA/802040/M/250	40	250	1/4"
RA/802040/M/320	40	320	1/4"
RA/802050/M/25	50	25	1/4"
RA/802050/M/50	50	50	1/4"
RA/802050/M/80	50	80	1/4"
RA/802050/M/160	50	160	1/4"
RA/802050/M/200	50	200	1/4"
RA/802050/M/250	50	250	1/4"
RA/802063/M/25	63	25	3/8"
RA/802063/M/50	63	50	3/8"
RA/802063/M/100	63	100	3/8"
RA/802063/M/250	63	250	3/8"
RA/802063/M/320	63	320	3/8"
RA/802080/M/25	80	25	3/8"
RA/802080/M/50	80	50	3/8"
RA/802080/M/80	80	80	3/8"
RA/802080/M/100	80	100	3/8"
RA/802080/M/160	80	160	3/8"
RA/802080/M/200	80	200	3/8"

Tech Sheet 71751

# ISO 15552 CYLINDERS & MOUNTINGS



## ISO 15552 Mountings



### Female Piston Rod Clevis

0036	Bore mm
QM/8025/25	25
QM/8050/25	50/63
QM/8080/25	80/100

Tech Sheet 10317



### Piston Rod Eye

0036	Bore mm
QM/8050/32	50/63
QM/8080/32	80/100

Tech Sheet 10317



### Foot Mounting

0036	Bore mm
QA/8032/21	32
QA/8050/21	50
QA/8063/21	63
QA/8080/21	80
QA/8100/21	100

Tech Sheet 10317



### Rear Swivel Flange

0036	Bore mm
QA/8032/23	32
QA/8040/23	40
QA/8050/23	50
QA/8063/23	63
QA/8080/23	80
QA/8100/23	100

Tech Sheet 10317



### Standard Service Kits

0036	Bore mm
QA/8032/00	32
QA/8040/00	40
QA/8050/00	50
QA/8063/00	63
QA/8100/00	100

Tech Sheet 10317



### Reed Switch

0036	Length Metre
M/50/LSU/2V	2
M/50/LSU/5V	5
M/50/LSU/10V	10

Tech Sheet 10317

## IMPERIAL CYLINDERS



### Imperial Cylinders

- Large range of bore sizes – ideal for a wide variety of industrial applications
- Extensive choice of mountings
- Long established design – proven ruggedness and reliability
- Adjustable cushioning

**Working Temperature:**  
-5°C to +80°C

**Working Pressure:**  
2 to 10 bar

**Medium:** Compressed air, filtered, lubricated or non-lubricated

**Operation:** Double acting, adjustable cushioning

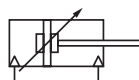
**Piston Rod and Tie Rods:** Stainless steel (martensitic)

**Barrel:** Anodised aluminium

**Piston and End Covers:**

Aluminium

**Seals:** Nitrile



### Double Acting Imperial RM/900

0036	Bore Inch	Stroke mm	Thread
RM/925/75	2.1/2"	75	G3/8
RM/925/100	2.1/2"	100	G3/8
RM/925/150	2.1/2"	150	G3/8
RM/930/75	3"	75	G3/8
RM/930/100	3"	100	G3/8
RM/930/150	3"	150	G3/8
RM/930/300	3"	300	G3/8
RM/940/100	4"	100	G3/8
RM/940/150	4"	150	G3/8
RM/940/300	4"	300	G3/8

Tech Sheet 20131

### In-line Positioner Cylinders

**Medium:** Compressed air, filtered, non-lubricated.

**Response time:** 10 secs max. for 200mm stroke.

**Working Temperature:**  
-20°C to +80°C

**Working Pressure:**  
2 to 10 bar

**Materials:**

**Piston Rod and Valve Spool:** Stainless steel. Piston rod end and zero.

**Adjuster:** Zinc plated steel

**Valve Bush:** Brass cylinder barrel and piston.

**Valve Body:** Aluminium alloy



### M/1525, M1540 - G1/4

0036	Bore Inch	Stroke mm
M/1525/75	2.1/2"	75
M/1525/125	2.1/2"	125
M/1525/200	2.1/2"	200
M/1540/75	4"	75
M/1540/125	4"	125
M/1540/200	4"	200

Tech Sheet 10360

# ISO 1552 CYLINDERS



## Series 61, Double Acting Cylinders Aluminium Profile ISO 1555

- In compliance with ISO 15552 standards and with the previous DIN/ISO 6431 – VDMA 24562 standards.
- Rolled stainless steel rod
- Clean design with adjustable pneumatic cushioning
- Special designs available

**Type of construction:** with tie-rods (inside the profile)

**Operation:** double-acting, single-acting, tandem.

Low friction version: double-acting only.

**Materials:** standard = aluminium end-blocks and piston, rolled stainless steel AISI 420B rod, anodised aluminium tube, zinc-plated steel tie-rods and tie-rod nuts, PU seals. Low friction = standard materials with NBR piston seal and NBR rod seal (FKM rod seal on request).

**Type of mounting:** with front rear flange, foot mounting, with front/rear/centre/ swivel trunnion.

**Strokes, min – max:** 10 to 2500mm.


**Speed:** 10 to 1000mm/sec, no load (standard versions). 5 to 1000mm/sec, no load (low friction version).

**Fluid:** filtered air, without lubrication. For standard versions only: if lubricated air is used, it is recommended to use oil ISOVG32. Once applied the lubrication should never be interrupted.

**Full range of ISO cylinders available including large bore (160, 200 and 250mm) and stainless steel options.**

**Non-stock strokes available on request.**

 **Operating temperature:**  
0°C to +80°C (with dry air: +20°C).

 **Operating pressure:**  
1 to 10 bar (standard versions).  
0.1 to 10 bar (low friction version).



### G1/8", Ø32mm

0158	Stroke mm
61M2P032A0025	25
61M2P032A0050	50
61M2P032A0075	75
61M2P032A0080	80
61M2P032A0100	100
61M2P032A0125	125
61M2P032A0150	150
61M2P032A0160	160
61M2P032A0200	200
61M2P032A0250	250
61M2P032A0300	300
61M2P032A0320	320
61M2P032A0400	400
61M2P032A0500	500
61M2P032A0600	600
61M2P032A0700	700
61M2P032A0800	800
61M2P032A0900	900
61M2P032A1000	1000

Tech Sheet 1841

### G1/4", Ø40mm

0158	Stroke mm
61M2P040A0025	25
61M2P040A0050	50
61M2P040A0075	75
61M2P040A0080	80
61M2P040A0100	100
61M2P040A0125	125
61M2P040A0150	150
61M2P040A0160	160
61M2P040A0200	200
61M2P040A0250	250
61M2P040A0300	300
61M2P040A0320	320
61M2P040A0400	400
61M2P040A0500	500
61M2P040A0600	600
61M2P040A0700	700
61M2P040A0800	800
61M2P040A0900	900
61M2P040A1000	1000

Tech Sheet 1841

### G1/4", Ø50mm

0158	Stroke mm
61M2P050A0025	25
61M2P050A0050	50
61M2P050A0075	75
61M2P050A0080	80
61M2P050A0100	100
61M2P050A0125	125
61M2P050A0150	150
61M2P050A0160	160
61M2P050A0200	200
61M2P050A0250	250
61M2P050A0300	300
61M2P050A0320	320
61M2P050A0400	400
61M2P050A0500	500
61M2P050A0600	600
61M2P050A0800	800
61M2P050A0900	900
61M2P050A1000	1000

Tech Sheet 1841

### G3/8", Ø63mm

0158	Stroke mm
61M2P063A0025	25
61M2P063A0050	50
61M2P063A0075	75
61M2P063A0080	80
61M2P063A0100	100
61M2P063A0125	125
61M2P063A0150	150
61M2P063A0160	160
61M2P063A0200	200
61M2P063A0250	250
61M2P063A0300	300
61M2P063A0320	320
61M2P063A0400	400
61M2P063A0500	500
61M2P063A0600	600
61M2P063A0700	700
61M2P063A0800	800
61M2P063A0900	900
61M2P063A1000	1000

Tech Sheet 1841

### G3/8", Ø80mm

0158	Stroke mm
61M2P080A0025	25
61M2P080A0050	50
61M2P080A0075	75
61M2P080A0080	80
61M2P080A0100	100
61M2P080A0125	125
61M2P080A0150	150
61M2P080A0160	160
61M2P080A0200	200
61M2P080A0250	250
61M2P080A0300	300
61M2P080A0320	320
61M2P080A0500	500
61M2P080A0600	600
61M2P080A0700	700
61M2P080A0800	800
61M2P080A0900	900
61M2P080A1000	1000

Tech Sheet 1841

### G1/2", Ø100mm

0158	Stroke mm
61M2P100A0025	25
61M2P100A0050	50
61M2P100A0080	80
61M2P100A0100	100
61M2P100A0125	125
61M2P100A0150	150
61M2P100A0160	160
61M2P100A0200	200
61M2P100A0250	250
61M2P100A0300	300
61M2P100A0320	320
61M2P100A0400	400
61M2P100A0500	500
61M2P100A0600	600
61M2P100A0700	700
61M2P100A0800	800
61M2P100A0900	900
61M2P100A1000	1000

Tech Sheet 1841

### G1/2", Ø125mm

0158	Stroke mm
61M2P125A0025	25
61M2P125A0050	50
61M2P125A0075	75
61M2P125A0080	80
61M2P125A0100	100
61M2P125A0125	125
61M2P125A0150	150
61M2P125A0160	160
61M2P125A0200	200
61M2P125A0250	250
61M2P125A0300	300
61M2P125A0320	320
61M2P125A0400	400
61M2P125A0500	500
61M2P125A0600	600
61M2P125A0700	700
61M2P125A0800	800
61M2P125A0900	900
61M2P125A1000	1000

Tech Sheet 1841

# ISO 1552 CYLINDERS



## Series 63, Double Acting Cylinders ISO 1552

Series 63 pneumatic cylinders comply with the ISO 1552 standard. They have been developed to guarantee high performance whilst also offering significant reduction in weight.

The new adjustable pneumatic and mechanical cushioning system ensures Series 63 also reduces the noise caused by the impact of the piston on the end block.

**Type of construction:** profile (with screws)

**Operation:** double-acting.

**Materials:** aluminium end blocks, technopolymer (nominal bore 32mm) or aluminium (nominal bore 40 to 125mm) piston, rolled stainless steel AISI 420B piston rod, zinc-plated steel piston rod nut, anodised aluminium tube, NBR-PU rod, piston and cushion seals.

**Type of Mounting:** with front/rear flange, foot mounting, with centre/front/rear/swivel trunnion.

**Strokes, min – max:** 10 to 2500mm.

**Non-stock strokes available on request.**

**Speed:** 10 to 500mm/sec, no load.

**Fluid:** filtered air, in class 7.8.4, according to ISO 8573-1, without lubrication. If lubricated air is used, it is recommended to use oil ISOVG32. Once applied, the lubrication should never be interrupted.

**Non-stock strokes available on request.**

**Operating temperature:**  
°C to +80°C (with dry air: -20°C).

**Operating pressure:**  
1 to 10 bar.



### G1/8", Ø32mm

0158	Stroke mm
63MP2C032A0025	25
63MP2C032A0050	50
63MP2C032A0075	75
63MP2C032A0080	80
63MP2C032A0100	100
63MP2C032A0125	125
63MP2C032A0150	150
63MP2C032A0160	160
63MP2C032A0200	200
63MP2C032A0250	250
63MP2C032A0300	300
63MP2C032A0320	320
63MP2C032A0400	400
63MP2C032A0500	500
63MP2C032A0600	600
63MP2C032A0700	700
63MP2C032A0800	800
63MP2C032A0900	900

Tech Sheet 68272

### G1/4", Ø50mm

0158	Stroke mm
63MP2C050A0025	25
63MP2C050A0050	50
63MP2C050A0075	75
63MP2C050A0080	80
63MP2C050A0100	100
63MP2C050A0125	125
63MP2C050A0150	150
63MP2C050A0160	160
63MP2C050A0200	200
63MP2C050A0250	250
63MP2C050A0300	300
63MP2C050A0320	320
63MP2C050A0400	400
63MP2C050A0500	500
63MP2C050A0600	600
63MP2C050A0700	700
63MP2C050A0800	800
63MP2C050A0900	900

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### G1/4", Ø40mm

0158	Stroke mm
63MP2C040A0025	25
63MP2C040A0050	50
63MP2C040A0075	75
63MP2C040A0080	80
63MP2C040A0100	100
63MP2C040A0125	125
63MP2C040A0150	150
63MP2C040A0160	160
63MP2C040A0200	200
63MP2C040A0250	250
63MP2C040A0300	300
63MP2C040A0320	320
63MP2C040A0400	400
63MP2C040A0500	500
63MP2C040A0600	600
63MP2C040A0700	700
63MP2C040A0800	800
63MP2C040A0900	900

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### G3/8", Ø63mm

0158	Stroke mm
63MP2C063A0025	25
63MP2C063A0050	50
63MP2C063A0075	75
63MP2C063A0080	80
63MP2C063A0100	100
63MP2C063A0125	125
63MP2C063A0150	150
63MP2C063A0160	160
63MP2C063A0200	200
63MP2C063A0250	250
63MP2C063A0300	300
63MP2C063A0320	320
63MP2C063A0400	400
63MP2C063A0500	500
63MP2C063A0600	600
63MP2C063A0700	700
63MP2C063A0800	800
63MP2C063A0900	900

Tech Sheet 68272

### G3/8", Ø80mm

0158	Stroke mm
63MP2C080A0025	25
63MP2C080A0050	50
63MP2C080A0075	75
63MP2C080A0080	80
63MP2C080A0100	100
63MP2C080A0125	125
63MP2C080A0150	150
63MP2C080A0160	160
63MP2C080A0200	200
63MP2C080A0250	250
63MP2C080A0300	300
63MP2C080A0320	320
63MP2C080A0400	400
63MP2C080A0500	500
63MP2C080A0600	600
63MP2C080A0700	700
63MP2C080A0800	800
63MP2C080A0900	900
63MP2C080A0985	985

Tech Sheet 68272

### G1/2", Ø100mm

0158	Stroke mm
63MP2C100A0025	25
63MP2C100A0050	50
63MP2C100A0075	75
63MP2C100A0080	80
63MP2C100A0100	100
63MP2C100A0125	125
63MP2C100A0150	150
63MP2C100A0160	160
63MP2C100A0200	200
63MP2C100A0250	250
63MP2C100A0300	300
63MP2C100A0320	320
63MP2C100A0400	400
63MP2C100A0500	500
63MP2C100A0600	600
63MP2C100A0700	700
63MP2C100A0800	800
63MP2C100A0900	900

Tech Sheet 68272

### G1/2", Ø125mm

0158	Stroke mm
63MP2C125A0025	25
63MP2C125A0050	50
63MP2C125A0075	75
63MP2C125A0080	80
63MP2C125A0100	100
63MP2C125A0125	125
63MP2C125A0150	150
63MP2C125A0160	160
63MP2C125A0200	200
63MP2C125A0250	250
63MP2C125A0300	300
63MP2C125A0320	320
63MP2C125A0400	400
63MP2C125A0500	500
63MP2C125A0600	600
63MP2C125A0700	700
63MP2C125A0800	800
63MP2C125A0900	900

Tech Sheet 68272

# ISO 15552 CYLINDERS



## Series 40, Double Acting Cylinders ISO 15552

Series 40 cylinders have been designed in compliance with ISO 15552 standards and with previous DIN/ISO 6431-VDMA 24562 standards.

A permanent magnet on the piston of these cylinders is able to send, through proximity switches mounted on the cylinder sliding axis, electrical signals to indicate its position.

**Type of construction:** with tie-rods.

**Operation:** double-acting.

**Materials:** aluminium end blocks and piston, rolled stainless steel AISI 420B (nominal bore 160-200mm) piston rod, zinc-plated piston rod nut, anodised aluminium tube, zinc-plated steel tie-rods and tie-rod nuts, NBR-PU rod, piston and cushion seals, brass rod scraper.

**Operating temperature:**  
0°C to +80°C (with dry air: -20°C).

**Operating pressure:**  
1 to 10 bar.

**Type of Mounting:** with tie-rods, with front/rear flange, foot mounting, with centre/front rear/swivel trunnion.

**Strokes, min – max:** 10 to 2500mm.

**Speed:** 10 to 500mm/sec, no load.

**Fluid:** filtered air without lubrication. If lubricated air is used, it is recommended to use oil ISOVG32. Once applied, the lubrication should never be interrupted.

**250 and 320mm bore cylinders are available upon request.**



### G3/4", Ø160mm

0158	Stroke mm
40M2L160A0050	50
40M2L160A0080	80
40M2L160A0100	100
40M2L160A0150	150
40M2L160A0200	200
40M2L160A0250	250
40M2L160A0300	300
40M2L160A0400	400
40M2L160A0500	500
40M2L160A0600	600
40M2L160A0700	700
40M2L160A0800	800
40M2L160A0900	900
40M2L160A1000	1000
40M2L160A1250	1250
40M2L160A1500	1500
40M2L160A1750	1750
40M2L160A2000	2000

Tech Sheet 68271

### G3/4", Ø200mm

0158	Stroke mm
40M2L200A0050	50
40M2L200A0080	80
40M2L200A0100	100
40M2L200A0150	150
40M2L200A0200	200
40M2L200A0250	250
40M2L200A0300	300
40M2L200A0400	400
40M2L200A0500	500
40M2L200A0600	600
40M2L200A0700	700
40M2L200A0800	800
40M2L200A0900	900
40M2L200A1000	1000
40M2L200A1250	1250
40M2L200A1500	1500
40M2L200A1750	1750
40M2L200A2000	2000

Tech Sheet 68271



For **In-line Flow Control Valves**  
see page **636**



# ISO & VDMA CYLINDER MOUNTINGS

## Piston Rod Mountings



### Piston Rod Swivel Ball Ends, Mod GA

0158	Bore mm	To Suit Unit
GA 8/10	8/10	24
GA 12/16	12/16	24
GA 20	20	24
GA 25/32	25/32	60,61,63
GA 40	40	60,61,63
GA 50/63	50/63	60,61,63
GA 80/100	80/100	60,61,63
GA 41 125	125	60,61,63
GA 160/200	160/200	40

Tech Sheet 1844



### Piston Rod Fork Ends, Mod G

0158	Bore mm	To Suit Unit
G 12/16	12/16	24
G 20	20	24
G 25/32	25/32	24,60,61,63
G 40	40	60,61,63
G 50/63	50/63	60,61,63
G 80/100	80/100	60,61,63
G 41 125	125	60,61,63
G 160/200	160/200	40

Tech Sheet 1844



### Self Aligning Rod, Mod GK

0158	Bore mm	To Suit Unit
GK 25 32	25/32	60,61,63
GK 40	40	60,61,63
GK 50 63	50/63	60,61,63
GK 80 100	80/100	60,61,63
GK 125	125	60,61,63
GK 160 200	160/200	40

Tech Sheet 1844



### Piston Rod Socket Joint, Mod GY

0158	Bore mm	To Suit Unit
GY 32	32	60,61,63
GY 40	40	60,61,63
GY 50 63	50/63	60,61,63
GY 80 100	80/100	60,61,63

Tech Sheet 1844

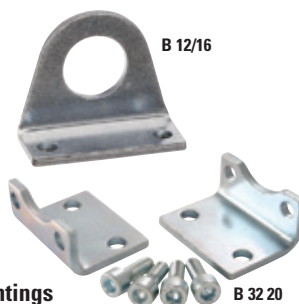


### Piston Rod Lock Nut, Mod U

0158	Bore mm	To Suit Unit
U 12/16	12/16	24
U 20	20	24
U 25/32	25/32	24,60,61,63
U 40	40	60,61,63
U 50/63	50/63	60,61,63
U 80/100	80/100	60,61,63
U 41 125	125	60,61,63
U 160/200	160/200	40

Tech Sheet 1844

## Foot Mountings



### Foot Mountings (Pair), Mod B

0158	Bore mm	To Suit Unit
B 12/16	12/16	24
B 20/25	20/25	24
B 41 32	32	60,61,63
B 41 40	40	60,61,63
B 41 50	50	60,61,63
B 41 63	63	60,61,63
B 41 80	80	60,61,63
B 41 100	100	60,61,63
B 41 125	125	60,61,63
B 41 160	160	40
B 41 200	200	40

Tech Sheet 1844

## Flange Mountings



### Front & Rear Flange Mounts, Mod E

0158	Bore mm	To Suit Unit
E 12/16	12/16	24
E 20/25	20/25	24

Tech Sheet 1844

### Front & Rear Flange Mounts, Mod D & E

0158	Bore mm	To Suit Unit
D E 41 32	32	60,61,63
D E 41 40	40	60,61,63
D E 41 50	50	60,61,63
D E 41 63	63	60,61,63
D E 41 80	80	60,61,63
D E 41 100	100	60,61,63
D E 41 125	125	60,61,63
D E 41 160	160	40
D E 41 200	200	40

Tech Sheet 1844

## Trunnion Mountings



### Rear Male Trunnion Mounts, Mod L

0158	Bore mm	To Suit Unit
L 41 32	32	60,61,63
L 41 40	40	60,61,63
L 41 50	50	60,61,63
L 41 63	63	60,61,63
L 41 80	80	60,61,63
L 41 125	125	60,61,63
L 41 160	160	40
L 41 200	200	40

Tech Sheet 1844

### Rear Female Trunnion Mounts, Mod C & C H



0158	Bore mm	To Suit Unit
C 41 32	32	60,61,63
C 41 40	40	60,61,63
C 41 50	50	60,61,63
C 41 63	63	60,61,63
C H 41 80	80	60,61,63
C H 41 100	100	60,61,63
C H 41 125	125	60,61,63
C H 41 160	160	40
C H 41 200	200	40

Tech Sheet 1844



# ISO & VDMA CYLINDER MOUNTINGS

## Trunnion Mountings

### Rear Trunnion Ball Joint Mounts, Mod R



0158	Bore mm	To Suit Unit
R 41 32	32	60,61,63
R 41 40	40	60,61,63
R 41 50	50	60,61,63
R 41 63	63	60,61,63
R 41 80	80	60,61,63
R 41 100	100	60,61,63
R 41 125	125	60,61,63

Tech Sheet 1844

### Rear Trunnion Mounts, Mod I



0158	Bore mm	To Suit Unit
I 12/16	12/16	24
I 20/25	20/25	24

Tech Sheet 1844

### Rear 90° Male Trunnion Mounts, Mod ZC



0158	Bore mm	To Suit Unit
ZC 32	32	60,61,63
ZC 40	40	60,61,63
ZC 50	50	60,61,63
ZC 63	63	60,61,63
ZC 80	80	60,61,63
ZC 100	100	60,61,63
ZC 125	125	60,61,63

Tech Sheet 1844

### 90° Swivel Combination Trunnion, Mod ZS



0158	Bore mm	To Suit Unit
ZS 160	160	40
ZS 200	200	40

Tech Sheet 1844

### Front Female Trunnion Mounts, Mod H & CH



0158	Bore mm	To Suit Unit
H 41 32	32	60,61,63
H 41 40	40	60,61,63
H 41 50	50	60,61,63
H 60 63	63	60,61,63

Tech Sheet 1844

### Centre Trunnion Mounts, Mod F



0158	Bore mm	To Suit Unit
F 32	32	60,61,63
F 40	40	60,61,63
F 50	50	60,61,63
F 63	63	60,61,63
F 80	80	60,61,63
F 100	100	60,61,63
F 125	125	60,61,63
F 160	160	40
F 200	200	40

Tech Sheet 1844

### 61 Series Centre Trunnion Mounts, Mod F



0158	Bore mm
F 61 32	32
F 61 40	40
F 61 50	50
F 61 80	80
F 61 100	100
F 61 125	125

Tech Sheet 1844

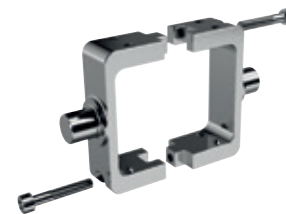
### Centre Trunnion Counter Brackets, Mod BF



0158	Bore mm	To Suit Unit
BF 40 50	40/50	60,61,63
BF 63 80	63/80	60,61,63
BF 100 125	100/125	60,61,63
BF 160 200	160/200	40

Tech Sheet 1844

### Centre Trunnion for 63 Series Profile Cylinders, Mod F



0158	Bore mm	To Suit Unit
F 63 32	32	63
F 63 40	40	63
F 63 50	50	63
F 63 63	63	63
F 63 80	80	63
F 63 100	100	63
F 63 125	125	63

Tech Sheet 1844

### Clevis Pin, to suit C & CH Mountings



0158	Bore mm	To Suit Unit
S 32	32	60,61,63
S 40	40	60,61,63
S 50	50	60,61,63
S 63	63	60,61,63
S 80	80	60,61,63
S 100	100	60,61,63
S 125	125	60,61,63
S 160 200	160/200	40

Tech Sheet 1844

# ISO 15552 CYLINDERS



## Double Action Pneumatic Profile Cylinders ISO 15552

The P1F, in bore sizes Ø32 to 125mm, is a smooth profile linear pneumatic cylinder conforming to the ISO 15552 standard. It utilises internal composite technology (piston) to save weight, while assuring the high performance and functionality expected of an ISO cylinder. With aluminium sandblasted front and rear end covers, multi-layer PTFE-coated steel bearing with stainless steel piston rod, pneumatic cushioning and magnetic piston with polyurethane (PUR) seals as standard, this is our industrial profile ISO cylinder.

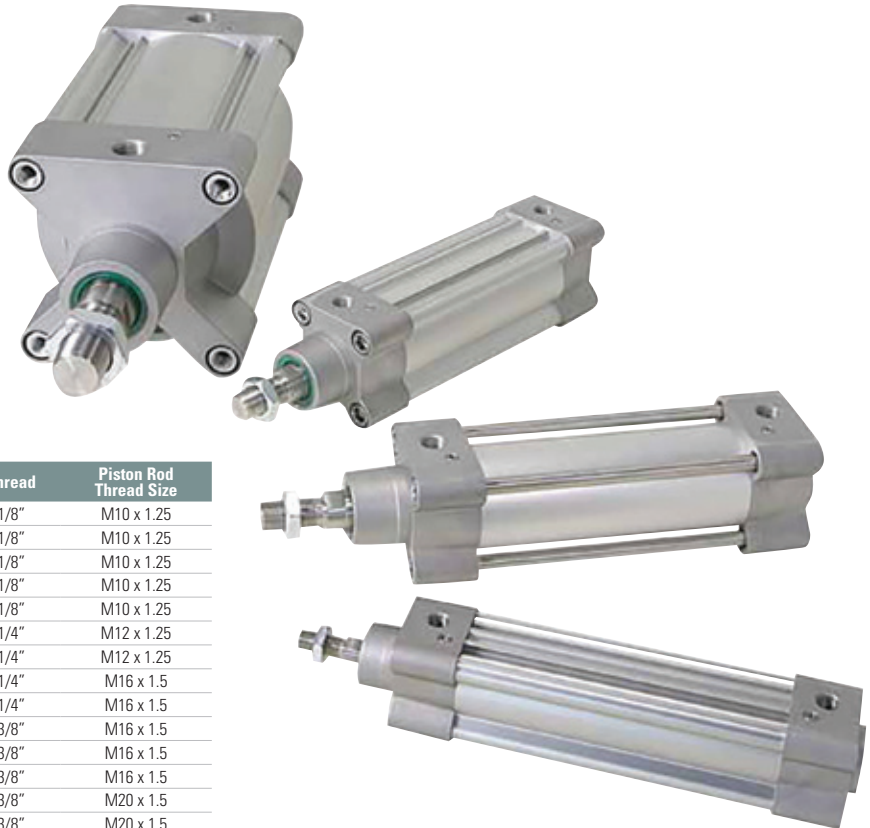
Challenges encountered within rigorous environments require leading engineered solutions and products. Meeting these exacting needs, the P1F provides the answer for high and low temperature applications. It is engineered to provide superior performance in harsh conditions, using proven class-leading seal technology for reliable operation, and long service life in temperatures down to -40°C and up to +150°C. With robust corrosion-resistant body and optional metal scraper, the P1F leads the way in today's changing climate.

### Applications:

- Factory automation
- Machine tools
- Packaging machinery
- Vehicle assembly facilities
- Material handling
- Outdoor
- Transport

 **Working Temperature:**  
-20 to +80 (Standard)

 **Maximum Working Pressure:**  
10 bar



### ISO 15552

0678	Bore mm	Stroke mm	Thread	Piston Rod Thread Size
P1F-S032MS-0050	32	50	1/8"	M10 x 1.25
P1F-S032MS-0080	32	80	1/8"	M10 x 1.25
P1F-S032MS-0100	32	100	1/8"	M10 x 1.25
P1F-S032MS-0125	32	125	1/8"	M10 x 1.25
P1F-S032MS-0160	32	160	1/8"	M10 x 1.25
P1F-S040MS-0050	40	50	1/4"	M12 x 1.25
P1F-S040MS-0125	40	125	1/4"	M12 x 1.25
P1F-S050MS-0080	50	80	1/4"	M16 x 1.5
P1F-S050MS-0100	50	100	1/4"	M16 x 1.5
P1F-S063MS-0100	63	100	3/8"	M16 x 1.5
P1F-S063MS-0200	63	200	3/8"	M16 x 1.5
P1F-S063MS-0500	63	500	3/8"	M16 x 1.5
P1F-S080MS-0100	80	100	3/8"	M20 x 1.5
P1F-S080MS-0200	80	200	3/8"	M20 x 1.5
P1F-S100MS-0025	100	25	1/2"	M20 x 1.5
P1F-S100MS-0200	100	200	1/2"	M20 x 1.5
P1F-S125MS-0250	125	250	1/2"	M27 x 2

Tech Sheet 68754



For Parker LF 3000 Push-in Fittings  
see pages 793-799

# ISO VDMA CYLINDER ACCESSORIES



## Parker VDMA Cylinders



### ISO6431 VDMA Flange MF1/MF2

0678	Cylinder Dia mm
P1C-4KMB	32



### ISO6431/VDMA Foot Bracket MS1

0678	Cylinder Dia mm
P1C-4LMF	40



### ISO6431/VDMA Clevis Bracket GA

0678	Cylinder Dia mm
P1C-4KMCA	32



### ISO6431/VDMA Clevis Bracket MP2

0678	Cylinder Dia mm
P1C-4LMT	40
P1C-4NMT	63



### ISO6431 VDMA Rear Pivot Bracket with Rigid Bearing

0678	Cylinder Dia mm
P1C-4KMD	32



### ISO6431/VDMA Clevis Bracket MP4

0678	Cylinder Dia mm
P1C-4KME	32
P1C-4LME	40
P1C-4NME	63



### Reed Sensors & Mountings

0678	Description
P8S-GSFLX	Reed Switch c/w 3m PVC Cable
9126344341	3m Cable with 8mm Round Connector
9126344342	10m Cable with 8mm Round Connector



### Solid State PNP Sensor & Cable

0678	Description
P8S-GPMHX	PNP Sensor c/w 0.27m Lead
P8S-GPFLX	PNP 3 Metre Flying Lead.



### ISO6431 VDMA Cylinder Repair Kits

0678	Bore mm
P1D-6KRN	32
P1D-6LRN	40
P1D-6MRN	50
P1D-6NRN	63
P1D-6PRN	80
P1D-6RRN	125



### ISO Cylinder Repair Kits


0678	Bore mm
32-2110AR	32
40-2110AR	40

# ISO 15552 CYLINDERS



## Cylinders series 1319 ISO5552 VDMA Ecolight

 **Working Temperature:**  
-5°C to +70°C  
with standard seals

 **Maximum Pressure:**  
10 bar



### Ecolight Cylinders ISO 15552 VDMA 32mm-50mm

0110	Bore mm	Stroke mm	Port Size
1391.32.50.01	32	50	1/8"
1391.32.100.01	32	100	1/8"
1391.32.125.01	32	125	1/8"
1391.32.150.01	32	150	1/8"
1391.32.200.01	32	200	1/8"
1391.32.250.01	32	250	1/8"
1391.32.300.01	32	300	1/8"
1391.32.350.01	32	350	1/8"
1391.32.450.01	32	450	1/8"
1391.32.500.01	32	500	1/8"
1391.40.50.01	40	50	1/4"
1391.40.100.01	40	100	1/4"
1391.40.150.01	40	150	1/4"
1391.40.200.01	40	200	1/4"
1391.40.250.01	40	250	1/4"
1391.40.300.01	40	300	1/4"
1391.40.350.01	40	350	1/4"
1391.40.400.01	40	400	1/4"
1391.40.500.01	40	500	1/4"
1391.40.600.01	40	600	1/4"
1391.50.25.01	50	25	1/4"
1391.50.50.01	50	50	1/4"
1391.50.75.01	50	75	1/4"
1391.50.100.01	50	100	1/4"
1391.50.125.01	50	125	1/4"
1391.50.150.01	50	150	1/4"
1391.50.200.01	50	200	1/4"
1391.50.250.01	50	250	1/4"
1391.50.300.01	50	300	1/4"
1391.50.350.01	50	350	1/4"
1391.50.400.01	50	400	1/4"
1391.50.500.01	50	500	1/4"
1391.50.1000.01	50	1000	1/4"

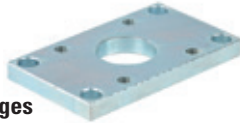
### Ecolight Cylinders ISO 15552 VDMA 63mm-100mm

0110	Bore mm	Stroke mm	Port Size
1391.63.25.01	63	25	3/8"
1391.63.100.01	63	100	3/8"
1391.63.150.01	63	150	3/8"
1391.63.200.01	63	200	3/8"
1391.63.250.01	63	250	3/8"
1391.63.300.01	63	300	3/8"
1391.63.350.01	63	350	3/8"
1391.63.450.01	63	450	3/8"
1391.80.200.01	80	200	3/8"
1391.80.250.01	80	250	3/8"
1391.80.300.01	80	300	3/8"
1391.80.500.01	80	500	3/8"
1391.80.1000.01	80	1000	3/8"
1391.100.25.01	100	25	1/2"
1391.100.50.01	100	50	1/2"
1391.100.75.01	100	75	1/2"
1391.100.125.01	100	125	1/2"
1391.100.150.01	100	150	1/2"
1391.100.200.01	100	200	1/2"
1391.100.250.01	100	250	1/2"
1391.100.300.01	100	300	1/2"
1391.100.350.01	100	350	1/2"
1391.100.400.01	100	400	1/2"
1391.100.450.01	100	450	1/2"
1391.100.500.01	100	500	1/2"
1391.100.600.01	100	600	1/2"
1391.100.800.01	100	800	1/2"

### Ecolight Cylinders ISO 15552 VDMA 125mm-200mm

0110	Bore mm	Stroke mm	Port Size
1391.125.300.01	125	300	1/2"
1391.160.700.01	160	700	3/4"

## VDMA Cylinder Mountings



**Front & Rear Flanges  
- Aluminium**

0110	Bore mm
1390.63.03F	63
1390.80.03F	80
1390.100.03F	100



**Foot Brackets - Steel**

0110	Bore mm
1320.40.05/1F	40



**Front Cylinder Clevis  
- Aluminium**

0110	Bore mm
1380.50.08F	50
1380.63.08F	63
1380.100.08F	100



**Rear Clevis MP2  
- Aluminium**

0110	Bore mm
1380.32.09F	32
1380.40.09F	40
1380.50.09F	50
1380.63.09F	63
1380.80.09F	80
1380.100.09F	100



**Rear Clevis MP4  
- Aluminium**

0110	Bore mm
1380.40.09/1F	40
1380.50.09/1F	50
1380.63.09/1F	63
1380.100.09/1F	100



**Simple Rear Trunnion  
complete with Support  
(Not ISO) - Aluminium**

0110	Bore mm
1380.40.11F	40
1380.50.11F	50
1380.63.11F	63
1380.100.11F	100

**Square Angle Trunnion  
- Aluminium**



0110	Bore mm
1380.32.35F	32
1380.63.35F	63
1380.80.35F	80
1380.100.35F	100

**Standard Trunnion  
(not ISO) - Aluminium**



0110	Bore mm
1380.32.10F	32



**Rear Narrow Clevis  
- Aluminium**

0110	Bore mm
1380.80.30F	80



**Rear Male Clevis  
complete with  
Jointed Head - Aluminium**

0110	Bore mm
1380.32.15F	32
1380.40.15F	40
1380.50.15F	50
1380.80.15F	80



**Rod Clevis complete  
with Pin - Steel**

0110	Bore mm
1320.40.13F	40
1320.50.13F	50
1320.80.13F	80
1320.100.13F	100



**Rod Clevis complete  
with Clip - Steel**

0110	Bore mm
1320.32.13/1F	32
1320.40.13/1F	40
1320.50.13/1F	50
1320.63.13/1F	63
1320.80.13/1F	80
1320.100.13/1F	100

**Rod Lock Nuts**



0110	Bore mm
1320.32.18F	32



**Ball Joint**

0110	Bore mm
1320.32.32F	32
1320.40.32F	40
1320.50.32F	50
1320.63.32F	63



**Self Aligning Joint**

0110	Bore mm
1320.32.33F	32
1320.40.33F	40



**1580U Reed Switch complete with LED**

0110	Description
1580U	LED Reed Switch N/O



**1500U Reed Switch  
complete with LED**

0110	Description
1500.U	LED Reed Switch N/O



**1500U Sensor Clamp**

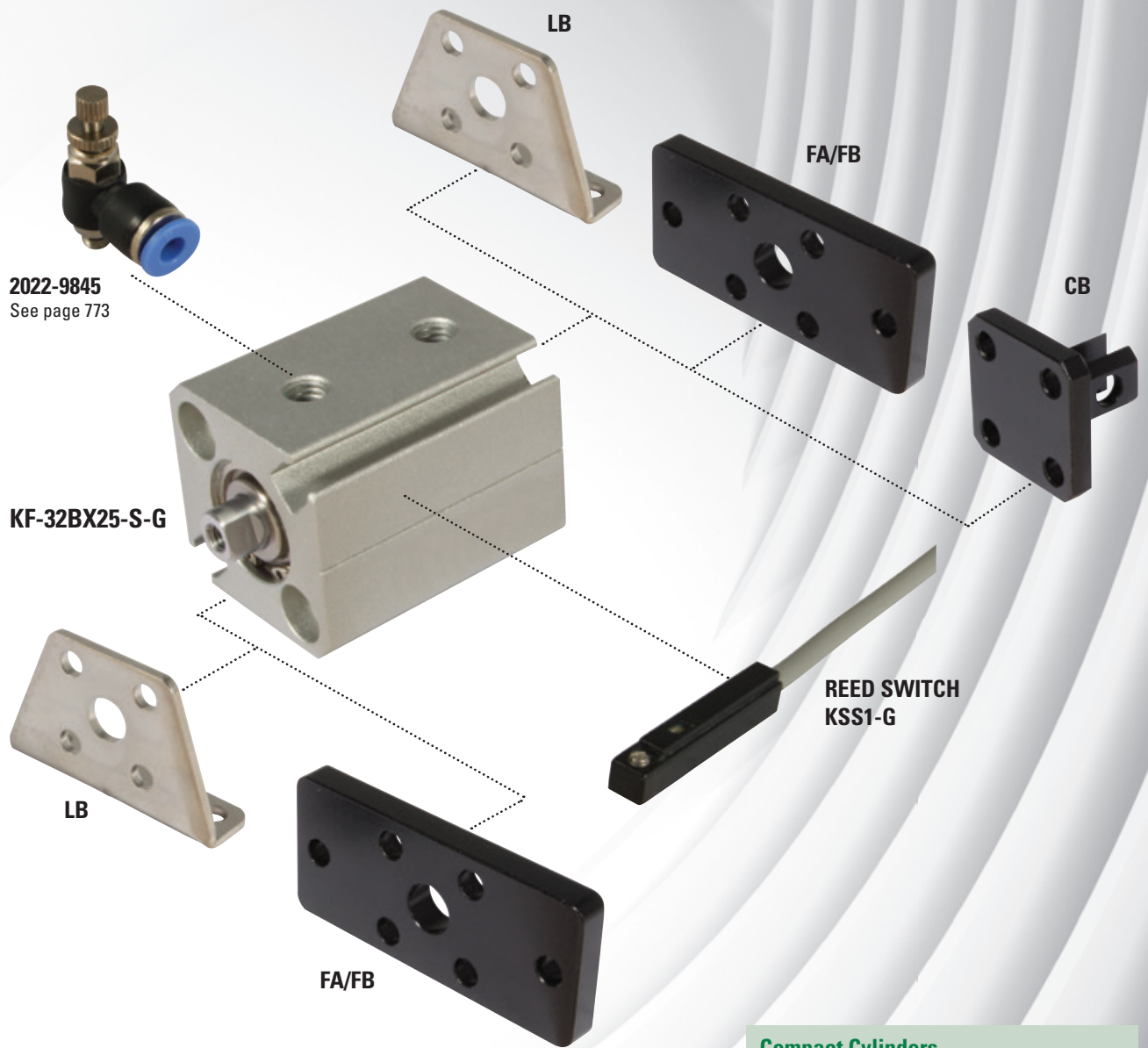
0110	Bore mm
1390.A	32 & 40

# PNEUMATIC COMPACT MAGNETIC CYLINDERS

## Accessories & Mounting Selector

stainless  
steel

FT PRO<sup>®</sup>



**Cylinders**  
Pages 518-519

**Mountings**  
Pages 520

**Reed Switches**  
Page 520

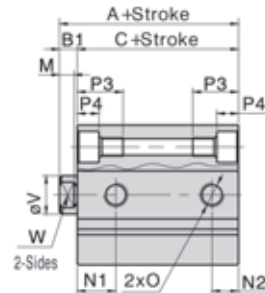
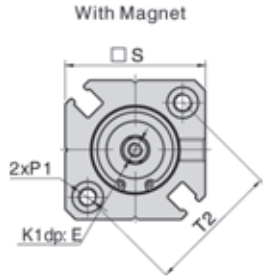
### Compact Cylinders

CB	Rear clevis mounting
FA/FB	Front and rear flange mounting
LB	Foot mounting (pair)
Reed Switches	Two wire N/O with LED

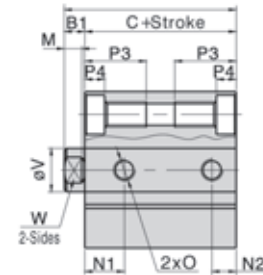
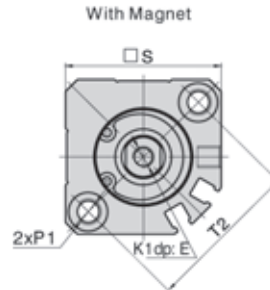
## Technical Information

### Dimensions

Ø12 and Ø16



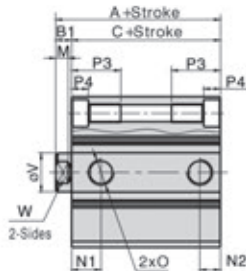
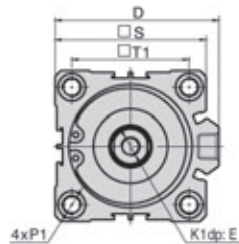
Ø20 and Ø25



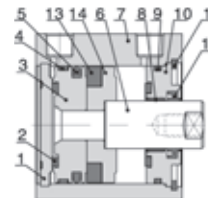
Model Item/ Bore	With Magnet							N1		N2		O	P1	P3	P4	S	T1	T2	V	W	
	A	C	B1	D	E	K1	M	Without Magnet	With Magnet	Without Magnet	With Magnet										
12	31.5	28	3.5	-	6	M3 x 0.5	3.5	7.5	9	5	7	M5 x 0.8	2 sides: Ø6.5 Thread: M4 x 0.7 Through hole: Ø3.4	11	3.5	25	15.5	22	6	5	
16	34	30.5	3.5	-	8	M4 x 0.7	3	8	9.5		5.5	M5 x 0.8	2 sides: Ø9 Thread: M6 x 1.0 Through hole: Ø5.2	17	7	36	25.5	36	10	8	
20	36	31.5	4.5	-	7	M5 x 0.8	4	9	9.5		5.5	M5 x 0.8	2 sides: Ø9 Thread: M6 x 1.0 Through hole: Ø5.2	17	7	40	28	40	12	10	
25	37.5	32.5	5	25	12	M6 x 1.0	4.5		11		5.5										

### Dimensions

Ø32 and Ø100 (stroke ≤100)



### Inner Structure



Model	With Magnet							N1		N2		
	A	C	B1	D	E	K1	M	Without Magnet	With Magnet	Without Magnet	With Magnet	
32	St.=5	40	33	7	49.5	13	M8 x 1.25	6	7.5	10.5	6.5	7.5
	St.>5								10.5			7.5
40	46.5	39.5	7	57	13	M8 x 1.25	6		11			8
50	St.=5	48.5	40.5	8	71	15	M10 x 1.5	6.5	9	10.5	9	10.5
	St.>5								10.5			10.5
63	St.=5	54	46	8	84	15	M10 x 1.5	6.5	14	15	9.5	10.5
	St.>5								15			10.5
80	63.5	53.5	10	104	20	M16 x 2.0	8.5		16			14
100	75	63	12	123.5	26	M20 x 2.5	9.5		20			17.5

Item/Bore	O	P1	P3	P4	S	T1	T2	V	W
32	1/8"	2 sides: Ø9 Thread: M6 x 1.0 Through hole: Ø5.2	17	7	45	34	-	16	14
40	1/8"	2 sides: Ø9 Thread: M6 x 1.0 Through hole: Ø5.2	17	7	53	40	-	16	14
50	1/4"	2 sides: Ø11 Thread: M8 x 1.25 Through hole: Ø6.5	22	8	64	50	-	20	17
63	1/4"	2 sides: Ø14 Thread: M10 x 1.5 Through hole: Ø8.7	28.5	10.5	77	60	-	20	17
80	3/8"	2 sides: Ø17.5 Thread: M12 x 1.75 Through hole: Ø10.7	35.5	13.5	98	77	-	25	22
100	3/8"	2 sides: Ø17.5 Thread: M12 x 1.75 Through hole: Ø10.7	35.5	13.5	117	94	-	32	27

No.	Bore/Item	Material				
		12 & 16	20	25	32	10-100
1	Back cover	-		Aluminium Alloy		
2	Bumper		TPU			NBR
3	Piston	Brass		Aluminium Alloy		
4	Wear ring		-			Wear-resistant material
5	Piston O-ring			NBR		
6	Piston Rod	Carbon steel with 20µm chrome plated				
7	Body	Aluminium alloy				
8	Bushing		-			Wear-resistant material
9	Cover Gasket	NBR				
10	Front Cover	Brass		Aluminium alloy		
11	C clip	Spring steel				
12	Front cover packing	NBR				
13	Magnet	Sintered metal (neodymium-iron-boron)				Plastic
14	Magnet holder	Brass		Aluminium Alloy		

# PNEUMATIC CYLINDERS



## Compact Magnetic Cylinders

### Medium:

Clean compressed air. Filtered (40µm) and lubricated cushioning-buffer.

**Body:** Aluminium

**Seals:** Nitrile

**Working Temperature:**  
-20°C to +80°C

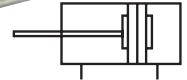
**Working Pressure:**  
1 to 10 bar



See page 520 for Compact Cylinder Standard and Viton Seal Kits

### Double Acting

0334	Bore mm	Stroke mm	Thread	Piston Rod Thread
KKS-12X5	12	5	M5 x 0.8	M3 x 0.5
KKS-12X10	12	10	M5 x 0.8	M3 x 0.5
KKS-12X20	12	20	M5 x 0.8	M3 x 0.5
KKS-12X25	12	25	M5 x 0.8	M3 x 0.5
KKS-12X30	12	30	M5 x 0.8	M3 x 0.5
KKS-12X40	12	40	M5 x 0.8	M3 x 0.5
KKS-12X50	12	50	M5 x 0.8	M3 x 0.5
KKS-16X5	16	5	M5 x 0.8	M4 x 0.7
KKS-16X10	16	10	M5 x 0.8	M4 x 0.7
KKS-16X15	16	15	M5 x 0.8	M4 x 0.7
KKS-16X25	16	25	M5 x 0.8	M4 x 0.7
KKS-16X30	16	30	M5 x 0.8	M4 x 0.7
KKS-16X35	16	35	M5 x 0.8	M4 x 0.7
KKS-16X50	16	50	M5 x 0.8	M4 x 0.7
KKS-16X55	16	55	M5 x 0.8	M4 x 0.7
KKS-16X60	16	60	M5 x 0.8	M4 x 0.7
KKS-20X5	20	5	M5 x 0.8	M5 x 0.8
KKS-20X10	20	10	M5 x 0.8	M5 x 0.8
KKS-20X15	20	15	M5 x 0.8	M5 x 0.8
KKS-20X20	20	20	M5 x 0.8	M5 x 0.8
KKS-20X25	20	25	M5 x 0.8	M5 x 0.8
KKS-20X30	20	30	M5 x 0.8	M5 x 0.8
KKS-20X40	20	40	M5 x 0.8	M5 x 0.8
KKS-20X45	20	45	M5 x 0.8	M5 x 0.8
KKS-20X50	20	50	M5 x 0.8	M5 x 0.8
KKS-20X70	20	70	M5 x 0.8	M5 x 0.8
KKS-20X80	20	80	M5 x 0.8	M5 x 0.8
KKS-20X90	20	90	M5 x 0.8	M5 x 0.8
KKS-20X100	20	100	M5 x 0.8	M5 x 0.8
KKS-25X5	25	5	M5 x 0.8	M6 x 1
KKS-25X10	25	10	M5 x 0.8	M6 x 1
KKS-25X15	25	15	M5 x 0.8	M6 x 1
KKS-25X20	25	20	M5 x 0.8	M6 x 1
KKS-25X25	25	25	M5 x 0.8	M6 x 1
KKS-25X30	25	30	M5 x 0.8	M6 x 1
KKS-25X35	25	35	M5 x 0.8	M6 x 1
KKS-25X40	25	40	M5 x 0.8	M6 x 1
KKS-25X45	25	45	M5 x 0.8	M6 x 1
KKS-25X50	25	50	M5 x 0.8	M6 x 1
KKS-25X60	25	60	M5 x 0.8	M6 x 1
KKS-25X70	25	70	M5 x 0.8	M6 x 1
KKS-25X75	25	75	M5 x 0.8	M6 x 1
KKS-25X80	25	80	M5 x 0.8	M6 x 1
KKS-25X90	25	90	M5 x 0.8	M6 x 1
KKS-25X100	25	100	M5 x 0.8	M6 x 1



0334	Bore mm	Stroke mm	Thread	Piston Rod Thread
KKS-32X5	32	5	1/8"	M8 x 1.25
KKS-32X10	32	10	1/8"	M8 x 1.25
KKS-32X15	32	15	1/8"	M8 x 1.25
KKS-32X20	32	20	1/8"	M8 x 1.25
KKS-32X25	32	25	1/8"	M8 x 1.25
KKS-32X30	32	30	1/8"	M8 x 1.25
KKS-32X35	32	35	1/8"	M8 x 1.25
KKS-32X40	32	40	1/8"	M8 x 1.25
KKS-32X45	32	45	1/8"	M8 x 1.25
KKS-32X50	32	50	1/8"	M8 x 1.25
KKS-32X60	32	60	1/8"	M8 x 1.25
KKS-32X70	32	70	1/8"	M8 x 1.25
KKS-32X75	32	75	1/8"	M8 x 1.25
KKS-32X80	32	80	1/8"	M8 x 1.25
KKS-32X100	32	100	1/8"	M8 x 1.25
KKS-32X125	32	125	1/8"	M8 x 1.25
KKS-32X150	32	150	1/8"	M8 x 1.25
KKS-40X5	40	5	1/8"	M8 x 1.25
KKS-40X10	40	10	1/8"	M8 x 1.25
KKS-40X15	40	15	1/8"	M8 x 1.25
KKS-40X20	40	20	1/8"	M8 x 1.25
KKS-40X25	40	25	1/8"	M8 x 1.25
KKS-40X30	40	30	1/8"	M8 x 1.25
KKS-40X35	40	35	1/8"	M8 x 1.25
KKS-40X40	40	40	1/8"	M8 x 1.25
KKS-40X45	40	45	1/8"	M8 x 1.25
KKS-40X50	40	50	1/8"	M8 x 1.25
KKS-40X60	40	60	1/8"	M8 x 1.25
KKS-40X75	40	75	1/8"	M8 x 1.25
KKS-40X100	40	100	1/8"	M8 x 1.25
KKS-40X125	40	125	1/8"	M8 x 1.25
KKS-50X10	50	10	1/4"	M10 x 1.5
KKS-50X15	50	15	1/4"	M10 x 1.5
KKS-50X20	50	20	1/4"	M10 x 1.5
KKS-50X25	50	25	1/4"	M10 x 1.5
KKS-50X30	50	30	1/4"	M10 x 1.5
KKS-50X40	50	40	1/4"	M10 x 1.5
KKS-50X45	50	45	1/4"	M10 x 1.5
KKS-50X50	50	50	1/4"	M10 x 1.5
KKS-50X60	50	60	1/4"	M10 x 1.5
KKS-50X70	50	70	1/4"	M10 x 1.5
KKS-50X75	50	75	1/4"	M10 x 1.5
KKS-50X80	50	80	1/4"	M10 x 1.5
KKS-50X90	50	90	1/4"	M10 x 1.5
KKS-50X100	50	100	1/4"	M10 x 1.5

Tech Sheet 3027

Further sizes in this range continued on next page



## Compact Magnetic Cylinders

### Medium:

Clean compressed air. Filtered (40µm) and lubricated cushioning-buffer.

**Body:** Aluminium

**Seals:** Nitrile

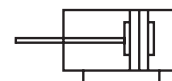


### ° Working Temperature:

-20°C to +80°C

### Working Pressure:

1 to 10 bar



See page 520 for Compact Cylinder Standard and Viton Seal Kits

### Double Acting

0334	Bore mm	Stroke mm	Thread	Piston Rod Thread
KKS-50X125	50	125	1/4"	M10 x 1.5
KKS-50X150	50	150	1/4"	M10 x 1.5
KKS-50X250	50	250	1/4"	M10 x 1.5
KKS-63X5	63	5	1/4"	M10 x 1.5
KKS-63X15	63	15	1/4"	M10 x 1.5
KKS-63X20	63	20	1/4"	M10 x 1.5
KKS-63X25	63	25	1/4"	M10 x 1.5
KKS-63X30	63	30	1/4"	M10 x 1.5
KKS-63X35	63	35	1/4"	M10 x 1.5
KKS-63X50	63	50	1/4"	M10 x 1.5
KKS-63X60	63	60	1/4"	M10 x 1.5
KKS-63X75	63	75	1/4"	M10 x 1.5
KKS-63X80	63	80	1/4"	M10 x 1.5
KKS-63X100	63	100	1/4"	M10 x 1.5
KKS-63X125	63	125	1/4"	M10 x 1.5
KKS-63X150	63	150	1/4"	M10 x 1.5
KKS-63X250	63	250	1/4"	M10 x 1.5
KKS-80X5	80	5	3/8"	M16 x 2
KKS-80X10	80	10	3/8"	M16 x 2
KKS-80X15	80	15	3/8"	M16 x 2
KKS-80X20	80	20	3/8"	M16 x 2
KKS-80X25	80	25	3/8"	M16 x 2
KKS-80X30	80	30	3/8"	M16 x 2
KKS-80X35	80	35	3/8"	M16 x 2
KKS-80X40	80	40	3/8"	M16 x 2
KKS-80X45	80	45	3/8"	M16 x 2
KKS-80X50	80	50	3/8"	M16 x 2
KKS-80X60	80	60	3/8"	M16 x 2
KKS-80X70	80	70	3/8"	M16 x 2
KKS-80X75	80	75	3/8"	M16 x 2

0334	Bore mm	Stroke mm	Thread	Piston Rod Thread
KKS-80X80	80	80	3/8"	M16 x 2
KKS-80X90	80	90	3/8"	M16 x 2
KKS-80X100	80	100	3/8"	M16 x 2
KKS-80X125	80	125	3/8"	M16 x 2
KKS-80X150	80	150	3/8"	M16 x 2
KKS-80X175	80	175	3/8"	M16 x 2
KKS-80X200	80	200	3/8"	M16 x 2
KKS-80X250	80	250	3/8"	M16 x 2
KKS-100X5	100	5	3/8"	M20 x 2.5
KKS-100X10	100	10	3/8"	M20 x 2.5
KKS-100X15	100	15	3/8"	M20 x 2.5
KKS-100X20	100	20	3/8"	M20 x 2.5
KKS-100X25	100	25	3/8"	M20 x 2.5
KKS-100X30	100	30	3/8"	M20 x 2.5
KKS-100X35	100	35	3/8"	M20 x 2.5
KKS-100X40	100	40	3/8"	M20 x 2.5
KKS-100X45	100	45	3/8"	M20 x 2.5
KKS-100X50	100	50	3/8"	M20 x 2.5
KKS-100X60	100	60	3/8"	M20 x 2.5
KKS-100X70	100	70	3/8"	M20 x 2.5
KKS-100X75	100	75	3/8"	M20 x 2.5
KKS-100X80	100	80	3/8"	M20 x 2.5
KKS-100X90	100	90	3/8"	M20 x 2.5
KKS-100X100	100	100	3/8"	M20 x 2.5
KKS-100X125	100	125	3/8"	M20 x 2.5
KKS-100X150	100	150	3/8"	M20 x 2.5
KKS-100X175	100	175	3/8"	M20 x 2.5
KKS-100X200	100	200	3/8"	M20 x 2.5
KKS-100X250	100	250	3/8"	M20 x 2.5

Tech Sheet 3027

# PNEUMATIC CYLINDERS

## Compact Cylinder Mountings



### Rear Clevis Mounting CB

0334	Bore mm
KSS-20-CB	20
KSS-32-CB	32
KSS-40-CB	40
KSS-50-CB	50
KSS-63-CB	63
KSS-80-CB	80

Tech Sheet 3028



### Front/Rear Flange Mounting FA/FB

0334	Bore mm
KSS-12-FAFB	12
KSS-16-FAFB	16
KSS-20-FAFB	20
KSS-25-FAFB	25
KSS-32-FAFB	32
KSS-40-FAFB	40
KSS-50-FAFB	50
KSS-63-FAFB	63
KSS-80-FAFB	80

Tech Sheet 3029



### Foot Mountings LB (Pair)

0334	Bore mm	To Suit Stroke
KSS-12-LB	12	All
KSS-20-LB	20	>15
KSS-25-LB	25	>10
KSS-32-LB	32	>10
KSS-40-LB	40	All
KSS-50-LB	50	>15
KSS-63-LB	63	>10
KSS-100-LB	100	>15

Tech Sheet 3030

### Foot Mountings LBS (Pair) Short Stroke

0334	Bore mm	To Suit Stroke
KSS-20-LBS-P1	20	<10
KSS-25-LBS-P1	25	<5
KSS-50-LBS-P1	50	<10

Tech Sheet 3030

## Reed Switches to suit Compact Cylinders



### Two Wire, N/O with LED 2 Metres

0334	Bore mm	Voltage
KSS1-G	32-100	5-240V AC/DC

Tech Sheet 3031

## Repair Kits to suit Compact Cylinders



### Standard

0334	Bore mm
KKSRK-12	12
KKSRK-16	16
KKSRK-20	20
KKSRK-25	25
KKSRK-32	32
KKSRK-40	40
KKSRK-50	50
KKSRK-63	63
KKSRK-80	80

Tech Sheet 20388

### Viton

0334	Bore mm
KKSRK-12-V	12
KKSRK-20-V	20
KKSRK-50-V	50

Tech Sheet 20389

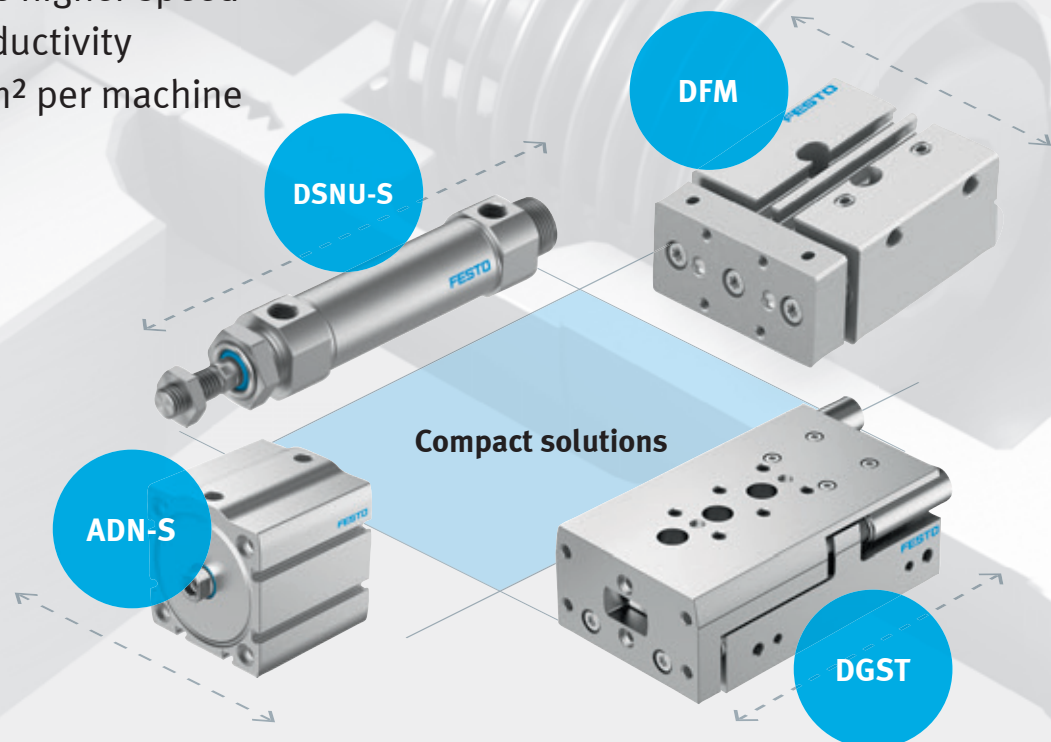
# Save space, increase productivity

**FESTO**

Pneumatic components are often the preferred option for machines since they have a high power density. Smaller components are ever more popular because they are easy to use, save energy and help to boost productivity too.

## Benefits of compact products

- Lower energy consumption
- Less material used
  - smaller CO<sub>2</sub> footprint
- More space for other movements
  - increased productivity
- Less mass means higher speed
  - increased productivity
- Less expensive m<sup>2</sup> per machine



# CYLINDERS

For the full range and more information, please contact one of our sales team.

## ADN COMPACT CYLINDER ISO 21287 (Male & Female Piston Rod)



### Features

Up to 50% less fitting space compared to standard cylinders

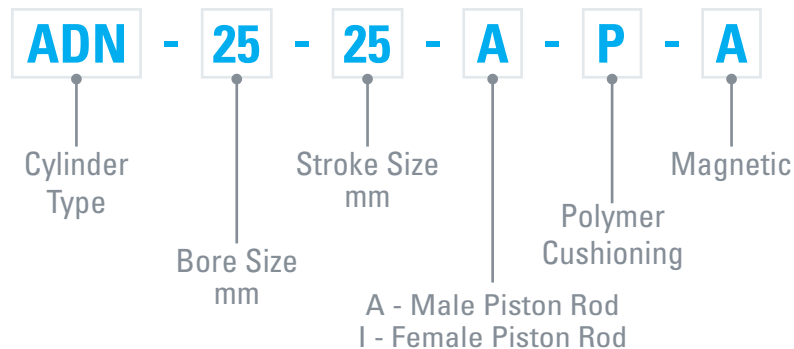
High speeds and machine cycles due to excellent running and cushioning characteristics

Comprehensive range of mounting accessories



Patented 3 component piston

### Product Description

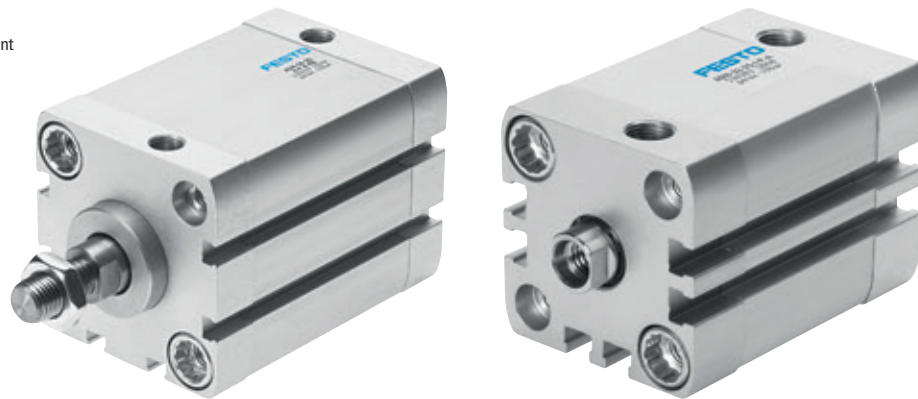
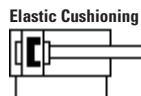




## Double Acting, Elastic Cushioning Rings

- Compact cylinders with standard dimensions
- Comply with the standard ISO 21287
- Innovative technology for maximum speeds
- Flexible in use thanks to easy-to-configure variant
- T-Slot

Ambient Temperature:  
-20°C to +80°C



### Magnetic Male Piston Rod Thread

0009	Piston Diameter mm	Stroke mm	Piston Rod Thread	Manufacturer's Code
536204	12	5	M5	ADN-12-5-A-P-A
536205	12	10	M5	ADN-12-10-A-P-A
536206	12	15	M5	ADN-12-15-A-P-A
536207	12	20	M5	ADN-12-20-A-P-A
536208	12	25	M5	ADN-12-25-A-P-A
536209	12	30	M5	ADN-12-30-A-P-A
536210	12	40	M5	ADN-12-40-A-P-A
536219	16	5	M5	ADN-16-5-A-P-A
536220	16	10	M5	ADN-16-10-A-P-A
536221	16	15	M5	ADN-16-15-A-P-A
536222	16	20	M5	ADN-16-20-A-P-A
536223	16	25	M5	ADN-16-25-A-P-A
536224	16	30	M5	ADN-16-30-A-P-A
536225	16	40	M5	ADN-16-40-A-P-A
536331	16	50	M5	ADN-16-50-A-P-A
536234	20	5	M8	ADN-20-5-A-P-A
536235	20	10	M8	ADN-20-10-A-P-A
536236	20	15	M8	ADN-20-15-A-P-A
536237	20	20	M8	ADN-20-20-A-P-A
536238	20	25	M8	ADN-20-25-A-P-A
536239	20	30	M8	ADN-20-30-A-P-A
536240	20	40	M8	ADN-20-40-A-P-A
536241	20	50	M8	ADN-20-50-A-P-A
536352	20	60	M8	ADN-20-60-A-P-A
536251	25	5	M8	ADN-25-5-A-P-A
536252	25	10	M8	ADN-25-10-A-P-A
536253	25	15	M8	ADN-25-15-A-P-A
536254	25	20	M8	ADN-25-20-A-P-A
536255	25	25	M8	ADN-25-25-A-P-A
536256	25	30	M8	ADN-25-30-A-P-A
536257	25	40	M8	ADN-25-40-A-P-A
536258	25	50	M8	ADN-25-50-A-P-A
536373	25	60	M8	ADN-25-60-A-P-A

Tech Sheet 20563

### Magnetic Female Piston Rod Thread

0009	Piston Diameter mm	Stroke mm	Piston Rod Thread	Manufacturer's Code
536211	12	5	M3	ADN-12-5-I-P-A
536212	12	10	M3	ADN-12-10-I-P-A
536213	12	15	M3	ADN-12-15-I-P-A
536214	12	20	M3	ADN-12-20-I-P-A
536215	12	25	M3	ADN-12-25-I-P-A
536216	12	30	M3	ADN-12-30-I-P-A
536217	12	40	M3	ADN-12-40-I-P-A
536226	16	5	M4	ADN-16-5-I-P-A
536227	16	10	M4	ADN-16-10-I-P-A
536228	16	15	M4	ADN-16-15-I-P-A
536229	16	20	M4	ADN-16-20-I-P-A
536230	16	25	M4	ADN-16-25-I-P-A
536231	16	30	M4	ADN-16-30-I-P-A
536232	16	40	M4	ADN-16-40-I-P-A
536341	16	50	M4	ADN-16-50-I-P-A
536242	20	5	M6	ADN-20-5-I-P-A
536243	20	10	M6	ADN-20-10-I-P-A
536244	20	15	M6	ADN-20-15-I-P-A
536245	20	20	M6	ADN-20-20-I-P-A
536246	20	25	M6	ADN-20-25-I-P-A
536247	20	30	M6	ADN-20-30-I-P-A
536248	20	40	M6	ADN-20-40-I-P-A
536249	20	50	M6	ADN-20-50-I-P-A
536362	20	60	M6	ADN-20-60-I-P-A
536259	25	5	M6	ADN-25-5-I-P-A
536260	25	10	M6	ADN-25-10-I-P-A
536261	25	15	M6	ADN-25-15-I-P-A
536262	25	20	M6	ADN-25-20-I-P-A
536263	25	25	M6	ADN-25-25-I-P-A
536264	25	30	M6	ADN-25-30-I-P-A
536265	25	40	M6	ADN-25-40-I-P-A
536266	25	50	M6	ADN-25-50-I-P-A
536383	25	60	M6	ADN-25-60-I-P-A

Tech Sheet 20562

# ISO 21287 COMPACT CYLINDERS, ADN

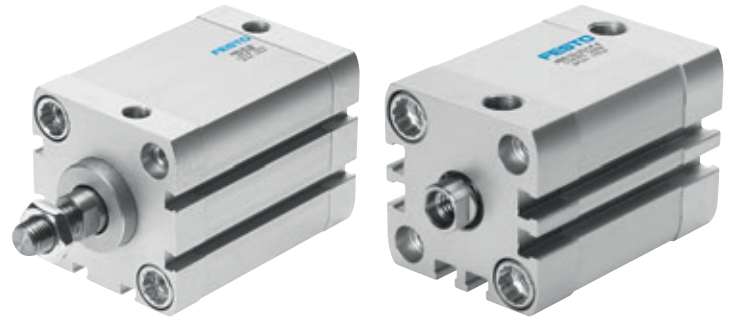
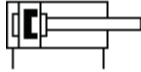
**FESTO**


## Double Acting, Elastic Cushioning Rings

- Compact cylinders with standard dimensions
- Comply with the standard ISO 21287
- Innovative technology for maximum speeds
- Flexible in use thanks to easy-to-configure variant
- T-Slot

Ambient Temperature:  
 -20°C to +80°C

### Elastic Cushioning



### Magnetic Male Piston Rod Thread

0009	Piston Diameter mm	Stroke mm	Piston Rod Thread	Manufacturer's Code
536268	32	5	M10 x 1.25	ADN-32-5-A-P-A
536269	32	10	M10 x 1.25	ADN-32-10-A-P-A
536270	32	15	M10 x 1.25	ADN-32-15-A-P-A
536271	32	20	M10 x 1.25	ADN-32-20-A-P-A
536272	32	25	M10 x 1.25	ADN-32-25-A-P-A
536273	32	30	M10 x 1.25	ADN-32-30-A-P-A
536274	32	40	M10 x 1.25	ADN-32-40-A-P-A
536275	32	50	M10 x 1.25	ADN-32-50-A-P-A
536276	32	60	M10 x 1.25	ADN-32-60-A-P-A
536277	32	80	M10 x 1.25	ADN-32-80-A-P-A
536289	40	5	M10 x 1.25	ADN-40-5-A-P-A
536290	40	10	M10 x 1.25	ADN-40-10-A-P-A
536291	40	15	M10 x 1.25	ADN-40-15-A-P-A
536292	40	20	M10 x 1.25	ADN-40-20-A-P-A
536293	40	25	M10 x 1.25	ADN-40-25-A-P-A
536294	40	30	M10 x 1.25	ADN-40-30-A-P-A
536295	40	40	M10 x 1.25	ADN-40-40-A-P-A
536296	40	50	M10 x 1.25	ADN-40-50-A-P-A
536297	40	60	M10 x 1.25	ADN-40-60-A-P-A
536298	40	80	M10 x 1.25	ADN-40-80-A-P-A
536310	50	5	M12 x 1.25	ADN-50-5-A-P-A
536311	50	10	M12 x 1.25	ADN-50-10-A-P-A
536312	50	15	M12 x 1.25	ADN-50-15-A-P-A
536313	50	20	M12 x 1.25	ADN-50-20-A-P-A
536314	50	25	M12 x 1.25	ADN-50-25-A-P-A
536315	50	30	M12 x 1.25	ADN-50-30-A-P-A
536316	50	40	M12 x 1.25	ADN-50-40-A-P-A
536317	50	50	M12 x 1.25	ADN-50-50-A-P-A
536318	50	60	M12 x 1.25	ADN-50-60-A-P-A
536319	50	80	M12 x 1.25	ADN-50-80-A-P-A
536332	63	10	M12 x 1.25	ADN-63-10-A-P-A
536333	63	15	M12 x 1.25	ADN-63-15-A-P-A
536334	63	20	M12 x 1.25	ADN-63-20-A-P-A
536335	63	25	M12 x 1.25	ADN-63-25-A-P-A
536336	63	30	M12 x 1.25	ADN-63-30-A-P-A
536337	63	40	M12 x 1.25	ADN-63-40-A-P-A
536338	63	50	M12 x 1.25	ADN-63-50-A-P-A
536339	63	60	M12 x 1.25	ADN-63-60-A-P-A
536340	63	80	M12 x 1.25	ADN-63-80-A-P-A
536353	80	10	M16 x 1.5	ADN-80-10-A-P-A
536354	80	15	M16 x 1.5	ADN-80-15-A-P-A
536355	80	20	M16 x 1.5	ADN-80-20-A-P-A
536356	80	25	M16 x 1.5	ADN-80-25-A-P-A
536357	80	30	M16 x 1.5	ADN-80-30-A-P-A
536358	80	40	M16 x 1.5	ADN-80-40-A-P-A
536359	80	50	M16 x 1.5	ADN-80-50-A-P-A
536360	80	60	M16 x 1.5	ADN-80-60-A-P-A
536361	80	80	M16 x 1.5	ADN-80-80-A-P-A

Tech Sheet 71595

### Magnetic Female Piston Rod Thread

0009	Piston Diameter mm	Stroke mm	Piston Rod Thread	Manufacturer's Code
536278	32	5	M8	ADN-32-5-I-P-A
536279	32	10	M8	ADN-32-10-I-P-A
536280	32	15	M8	ADN-32-15-I-P-A
536281	32	20	M8	ADN-32-20-I-P-A
536282	32	25	M8	ADN-32-25-I-P-A
536283	32	30	M8	ADN-32-30-I-P-A
536284	32	40	M8	ADN-32-40-I-P-A
536285	32	50	M8	ADN-32-50-I-P-A
536286	32	60	M8	ADN-32-60-I-P-A
536287	32	80	M8	ADN-32-80-I-P-A
536299	40	5	M8	ADN-40-5-I-P-A
536300	40	10	M8	ADN-40-10-I-P-A
536301	40	15	M8	ADN-40-15-I-P-A
536302	40	20	M8	ADN-40-20-I-P-A
536303	40	25	M8	ADN-40-25-I-P-A
536304	40	30	M8	ADN-40-30-I-P-A
536305	40	40	M8	ADN-40-40-I-P-A
536306	40	50	M8	ADN-40-50-I-P-A
536307	40	60	M8	ADN-40-60-I-P-A
536308	40	80	M8	ADN-40-80-I-P-A
536320	50	5	M10	ADN-50-5-I-P-A
536321	50	10	M10	ADN-50-10-I-P-A
536322	50	15	M10	ADN-50-15-I-P-A
536323	50	20	M10	ADN-50-20-I-P-A
536324	50	25	M10	ADN-50-25-I-P-A
536325	50	30	M10	ADN-50-30-I-P-A
536326	50	40	M10	ADN-50-40-I-P-A
536327	50	50	M10	ADN-50-50-I-P-A
536328	50	60	M10	ADN-50-60-I-P-A
536329	50	80	M10	ADN-50-80-I-P-A
536342	63	10	M10	ADN-63-10-I-P-A
536343	63	15	M10	ADN-63-15-I-P-A
536344	63	20	M10	ADN-63-20-I-P-A
536345	63	25	M10	ADN-63-25-I-P-A
536346	63	30	M10	ADN-63-30-I-P-A
536347	63	40	M10	ADN-63-40-I-P-A
536348	63	50	M10	ADN-63-50-I-P-A
536349	63	60	M10	ADN-63-60-I-P-A
536350	63	80	M10	ADN-63-80-I-P-A
536363	80	10	M12	ADN-80-10-I-P-A
536364	80	15	M12	ADN-80-15-I-P-A
536365	80	20	M12	ADN-80-20-I-P-A
536366	80	25	M12	ADN-80-25-I-P-A
536367	80	30	M12	ADN-80-30-I-P-A
536368	80	40	M12	ADN-80-40-I-P-A
536369	80	50	M12	ADN-80-50-I-P-A
536370	80	60	M12	ADN-80-60-I-P-A
536371	80	80	M12	ADN-80-80-I-P-A

Tech Sheet 71596

# ISO 21287 COMPACT CYLINDERS, ADN

# FESTO



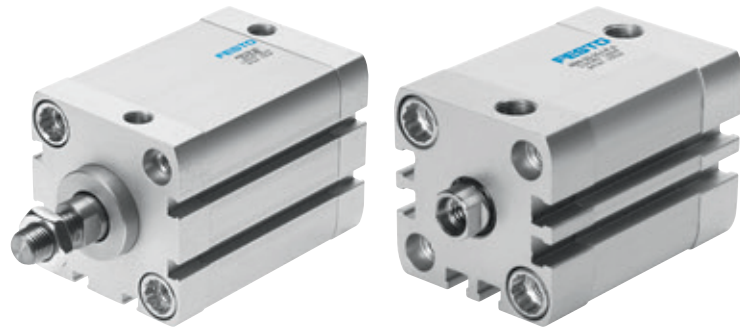
## Double Acting, Self-adjusting Pneumatic Cushioning

- Compact cylinders with standard dimensions
- Comply with the standard ISO 21287
- Innovative technology for maximum speeds
- Flexible in use thanks to easy-to-configure variant
- Profile slot for proximity senso
- T-Slot

° Ambient Temperature:  
-20°C to +80°C

Working Pressure:  
1 to 10 bar

### Self-adjusting Cushioning



### Magnetic Male Piston Rod Thread

0009	Piston Diameter mm	Stroke mm	Piston Rod Thread	Manufacturer's Code
572655	32	10	M10 x 1.25	ADN-32-10-A-PPS-A
572656	32	15	M10 x 1.25	ADN-32-15-A-PPS-A
572657	32	20	M10 x 1.25	ADN-32-20-A-PPS-A
572658	32	25	M10 x 1.25	ADN-32-25-A-PPS-A
572659	32	30	M10 x 1.25	ADN-32-30-A-PPS-A
572660	32	40	M10 x 1.25	ADN-32-40-A-PPS-A
572661	32	50	M10 x 1.25	ADN-32-50-A-PPS-A
572662	32	60	M10 x 1.25	ADN-32-60-A-PPS-A
572663	32	80	M10 x 1.25	ADN-32-80-A-PPS-A
572673	40	10	M10 x 1.25	ADN-40-10-A-PPS-A
572674	40	15	M10 x 1.25	ADN-40-15-A-PPS-A
572675	40	20	M10 x 1.25	ADN-40-20-A-PPS-A
572676	40	25	M10 x 1.25	ADN-40-25-A-PPS-A
572677	40	30	M10 x 1.25	ADN-40-30-A-PPS-A
572678	40	40	M10 x 1.25	ADN-40-40-A-PPS-A
572679	40	50	M10 x 1.25	ADN-40-50-A-PPS-A
572680	40	60	M10 x 1.25	ADN-40-60-A-PPS-A
572681	40	80	M10 x 1.25	ADN-40-80-A-PPS-A
572691	50	10	M12 x 1.25	ADN-50-10-A-PPS-A
572692	50	15	M12 x 1.25	ADN-50-15-A-PPS-A
572693	50	20	M12 x 1.25	ADN-50-20-A-PPS-A
572694	50	25	M12 x 1.25	ADN-50-25-A-PPS-A
572695	50	30	M12 x 1.25	ADN-50-30-A-PPS-A
572696	50	40	M12 x 1.25	ADN-50-40-A-PPS-A
572697	50	50	M12 x 1.25	ADN-50-50-A-PPS-A
572698	50	60	M12 x 1.25	ADN-50-60-A-PPS-A
572699	50	80	M12 x 1.25	ADN-50-80-A-PPS-A
572709	63	10	M12 x 1.25	ADN-63-10-A-PPS-A
572710	63	15	M12 x 1.25	ADN-63-15-A-PPS-A
572711	63	20	M12 x 1.25	ADN-63-20-A-PPS-A
572712	63	25	M12 x 1.25	ADN-63-25-A-PPS-A
572713	63	30	M12 x 1.25	ADN-63-30-A-PPS-A
572714	63	40	M12 x 1.25	ADN-63-40-A-PPS-A
572715	63	50	M12 x 1.25	ADN-63-50-A-PPS-A
572716	63	60	M12 x 1.25	ADN-63-60-A-PPS-A
572717	63	80	M12 x 1.25	ADN-63-80-A-PPS-A
572727	80	10	M16 x 1.5	ADN-80-10-A-PPS-A
572728	80	15	M16 x 1.5	ADN-80-15-A-PPS-A
572729	80	20	M16 x 1.5	ADN-80-20-A-PPS-A
572730	80	25	M16 x 1.5	ADN-80-25-A-PPS-A
572731	80	30	M16 x 1.5	ADN-80-30-A-PPS-A
572732	80	40	M16 x 1.5	ADN-80-40-A-PPS-A
572733	80	50	M16 x 1.5	ADN-80-50-A-PPS-A
572734	80	60	M16 x 1.5	ADN-80-60-A-PPS-A
572735	80	80	M16 x 1.5	ADN-80-80-A-PPS-A

Tech Sheet 71597

### Magnetic Female Piston Rod Thread

0009	Piston Diameter mm	Stroke mm	Piston Rod Thread	Manufacturer's Code
572646	32	10	M8	ADN-32-10-I-PPS-A
572647	32	15	M8	ADN-32-15-I-PPS-A
572648	32	20	M8	ADN-32-20-I-PPS-A
572649	32	25	M8	ADN-32-25-I-PPS-A
572650	32	30	M8	ADN-32-30-I-PPS-A
572651	32	40	M8	ADN-32-40-I-PPS-A
572652	32	50	M8	ADN-32-50-I-PPS-A
572653-FESTO	32	60	M8	ADN-32-60-I-PPS-A
572654	32	80	M8	ADN-32-80-I-PPS-A
572664	40	10	M8	ADN-40-10-I-PPS-A
572665	40	15	M8	ADN-40-15-I-PPS-A
572666	40	20	M8	ADN-40-20-I-PPS-A
572667	40	25	M8	ADN-40-25-I-PPS-A
572668	40	30	M8	ADN-40-30-I-PPS-A
572669	40	40	M8	ADN-40-40-I-PPS-A
572670	40	50	M8	ADN-40-50-I-PPS-A
572671	40	60	M8	ADN-40-60-I-PPS-A
572672	40	80	M8	ADN-40-80-I-PPS-A
572682	50	10	M10	ADN-50-10-I-PPS-A
572683	50	15	M10	ADN-50-15-I-PPS-A
572684	50	20	M10	ADN-50-20-I-PPS-A
572685	50	25	M10	ADN-50-25-I-PPS-A
572686	50	30	M10	ADN-50-30-I-PPS-A
572687	50	40	M10	ADN-50-40-I-PPS-A
572688	50	50	M10	ADN-50-50-I-PPS-A
572689	50	60	M10	ADN-50-60-I-PPS-A
572690	50	80	M10	ADN-50-80-I-PPS-A
572700	63	10	M10	ADN-63-10-I-PPS-A
572701	63	15	M10	ADN-63-15-I-PPS-A
572702	63	20	M10	ADN-63-20-I-PPS-A
572703	63	25	M10	ADN-63-25-I-PPS-A
572704	63	30	M10	ADN-63-30-I-PPS-A
572705	63	40	M10	ADN-63-40-I-PPS-A
572706	63	50	M10	ADN-63-50-I-PPS-A
572707	63	60	M10	ADN-63-60-I-PPS-A
572708	63	80	M10	ADN-63-80-I-PPS-A
572718	80	10	M12	ADN-80-10-I-PPS-A
572719	80	15	M12	ADN-80-15-I-PPS-A
572720	80	20	M12	ADN-80-20-I-PPS-A
572721	80	25	M12	ADN-80-25-I-PPS-A
572722	80	30	M12	ADN-80-30-I-PPS-A
572723	80	40	M12	ADN-80-40-I-PPS-A
572724	80	50	M12	ADN-80-50-I-PPS-A
572725	80	60	M12	ADN-80-60-I-PPS-A
572726	80	80	M12	ADN-80-80-I-PPS-A

Tech Sheet 71598

# PROXIMITY SENSORS

## For T-Slot For DSBC/ADN/DSNU Cylinders

- Switching output via reed contact or non-contacting
- Insertable in the slot from above, does not protrude beyond the cylinder profil
- Variant suitable for use with energy chains and robots
- Cable clip and inscription labels included in the scope of delivery
- With switching status indication
- Selected types in accordance with ATEX directive for potentially explosive atmospheres

 **Ambient Temperature:**  
-40°C to +70°C



### With Reed Contacts

0010	Function	Connection	Cable Length Metres	Manufacturer's Code
543872	N/O Contact, 2 Wire	Open End	2.5	SME-8M-ZS-24V-K-2,5-OE
543861	N/O Contact, 3 Wire	M8 Thread Rotatable	0.3	SME-8M-DS-24V-K-0,3-M8D
543862	N/O Contact, 3 Wire	Open End	2.5	SME-8M-DS-24V-K-2,5-OE
543863	N/O Contact, 3 Wire	Open End	5.0	SME-8M-DS-24V-K-5,0-OE
546799	N/C Contact, 3 Wire	Open End	7.5	SME-8M-DO-24V-K-7,5-OE

Tech Sheet 70211

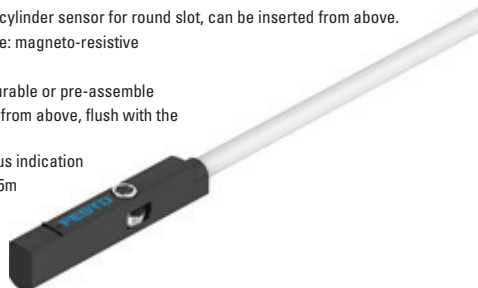
### Non-contacting

0009	Function	Connection	Cable Length Metres	Manufacturer's Code
574334	PNP N/O Contact, 3 Wire	M8 Thread Rotatable	0.3	SMT-8M-A-PS-24V-E-0,3-M8D
574337	PNP N/O Contact, 3 Wire	M12 Thread Rotatable	0.3	SMT-8M-A-PS-24V-E-0,3-M12
574339	NPN N/O Contact, 3 Wire	M8 Thread Rotatable	0.3	SMT-8M-A-NS-24V-E-0,3-M8D
574335	PNP N/O Contact, 3 Wire	Open End	2.5	SMT-8M-A-PS-24V-E-2,5-OE
574338	NPN N/O Contact, 3 Wire	Open End	2.5	SMT-8M-A-NS-24V-E-2,5-OE
574341	PNP N/O Contact, 2 Wire	Open End	5.0	SMT-8M-A-ZS-24V-E-5,0-OE-EX2
574336	PNP N/O Contact, 3 Wire	Open End	5.0	SMT-8M-A-PS-24V-E-5,0-OE
574340	PNP N/C Contact, 3 Wire	Open End	7.5	SMT-8M-A-PO-24V-E-7,5-OE

Tech Sheet 70212

## For C-Slot For ADN/ADVC/DFM

- Magneto-resistive cylinder sensor for round slot, can be inserted from above.
- Measuring principle: magneto-resistive
- For universal use
- Individually configurable or pre-assemble
- Inserted in the slot from above, flush with the cylinder profil
- LED switching status indication
- Cable length 0.3, 2.5m



### Proximity Sensors SMT-10M, for C-Slot


0009	N/O Contact	Cable Length (m)	Type
551373	PNP	2.5	SMT-10M-PS-24V-E-2,5-L-OE
551375	PNP	0.3	SMT-10M-PS-24V-E-0,3-L-M8D
551377	NPN	2.5	SMT-10M-NS-24V-E-2,5-L-OE
551379	NPN	0.3	SMT-10M-NS-24V-E-0,3-L-M8D
551382	Non-contacting, 2-wire	2.5	SMT-10M-ZS-24V-E-2,5-L-OE

Tech Sheet 70212

# FESTO

## For C-Slot For ADN/ADVC/DFM

- Switching output via reed contact or non-contacting
- Insertable in the slot from above, does not protrude beyond the cylinder profil
- Suitable for use with energy chains and robots
- Cable clip and inscription labels included in the scope of delivery
- With switching status indication

 **Ambient Temperature:**  
-40°C to +70°C



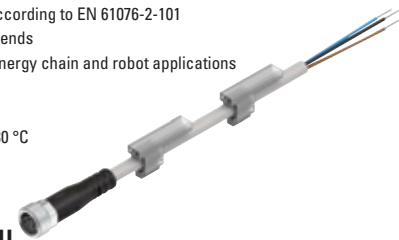
### With Reed Contacts

0010	Function	Connection	Cable Length Metres	Manufacturer's Code
551367	N/O Contact, 3 Wire	M8 Thread Rotatable	0.3	SME-10M-DS-24V-E-0,3-L-M8D
551369	N/O Contact, 2 Wire	Open End	2.5	SME-10M-ZS-24V-E-2,5-L-OE
551365	N/O Contact, 3 Wire	Open End	2.5	SME-10M-DS-24V-E-2,5-L-OE

Tech Sheet 70213



- Modular cable system with unlimited combination options for sockets, cable lengths and cable qualities. Matches all devices with M8 and M12 plugs such as proximity switches, pressure switches, sensors, transmitters, flow sensors and others
- For thread M8 x 1 A-coded according to EN 61076-2-104
- For thread M12 x 1 A-coded according to EN 61076-2-101
- Pre-assembled at one or both ends
- Designs for static, standard, energy chain and robot applications
- Cable length 0.1 - 30m
- With PVC or PUR cable
- Ambient temperature -25 to +80 °C



### Connecting Cable NEBU

0009	Number of wires	Cable Length (m)	Type
541333	3	2.5	NEBU-M8G3-K-2,5-LE3
541334	3	5	NEBU-M8G3-K-5-LE3
541338	3	2.5	NEBU-M8W3-K-2,5-LE3
541341	3	5	NEBU-M8W3-K-5-LE3

Tech Sheet 70212



# CYLINDERS

For the full range and more information, please contact one of our sales team.

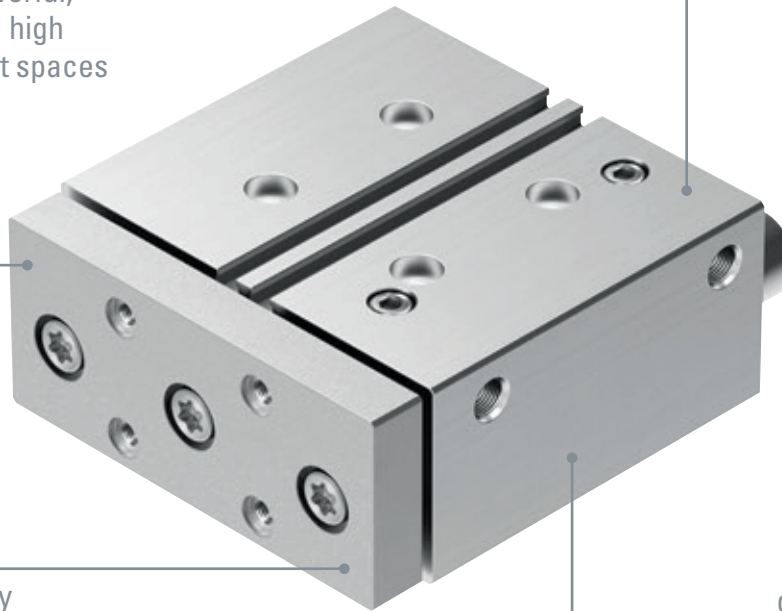
## DFM GUIDED DRIVES



### Features

Compact and powerful, can reliably move high loads even in tight spaces

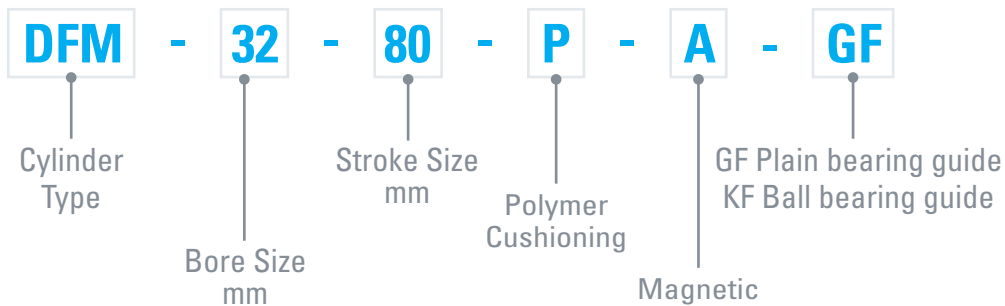
Plain or recirculating ball bearing guide



Choice of assembly and air port options for every application

Reliable and sturdy due to superior guide characteristics

### Product Description



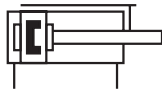
# DFM GUIDED DRIVES

**FESTO**

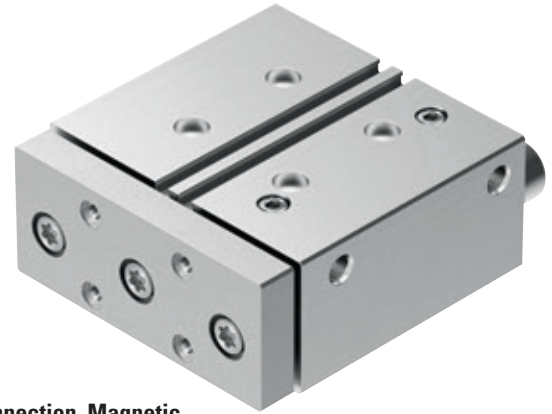

## Sliding Guided Drives with Plain Bearing, Double Acting

- Drive and guide unit in a single housing
- Sturdy and precise
- Plain bearing guide
- High resistance to torques and lateral forces
- Wide range of applications
- Selected types in accordance with ATEX directive for potentially explosive atmospheres
- Sensor C Slot SMT 10G
- C Slot 6 to 10 bore
- T Slot 12 to 63 bore

**Ambient Temperature:**  
-20°C to +80°C



**Working Pressure:**  
2 to 8 bar (Piston: 6mm)  
1.5 to 8 bar (Piston: 10mm)  
2 to 10 bar (Piston: 12, 16, 20mm)  
1.5 to 10 bar (Piston: 25, 32, 40mm)  
1 to 10 bar (Piston: 50, 63mm)



### M3 Connection, Magnetic

0009	Cylinder Bore mm	Cylinder Stroke Length mm	Manufacturer's Code
4149944	6	5	DFM-6-5-P-A-GF
4149945	6	10	DFM-6-10-P-A-GF
4149946	6	15	DFM-6-15-P-A-GF
4149947	6	20	DFM-6-20-P-A-GF
4154768	10	5	DFM-10-5-P-A-GF
4154769	10	10	DFM-10-10-P-A-GF
4154770	10	15	DFM-10-15-P-A-GF
4154799	10	20	DFM-10-20-P-A-GF

Tech Sheet 70196

### M5 Connection, Magnetic Sensors T Slot SMT-8M

0009	Cylinder Bore mm	Cylinder Stroke Length mm	Manufacturer's Code
170824	12	10	DFM-12-10-P-A-GF
170825	12	20	DFM-12-20-P-A-GF
170826	12	25	DFM-12-25-P-A-GF
170827	12	30	DFM-12-30-P-A-GF
170828	12	40	DFM-12-40-P-A-GF
170829	12	50	DFM-12-50-P-A-GF
170830	12	80	DFM-12-80-P-A-GF
170831	12	100	DFM-12-100-P-A-GF
170832	16	10	DFM-16-10-P-A-GF
170833	16	20	DFM-16-20-P-A-GF
170834	16	25	DFM-16-25-P-A-GF
170835	16	30	DFM-16-30-P-A-GF
170836	16	40	DFM-16-40-P-A-GF
170837	16	50	DFM-16-50-P-A-GF
170838	16	80	DFM-16-80-P-A-GF
170839	16	100	DFM-16-100-P-A-GF
170840	20	20	DFM-20-20-P-A-GF
170841	20	25	DFM-20-25-P-A-GF
170842	20	30	DFM-20-30-P-A-GF
170843	20	40	DFM-20-40-P-A-GF
170844	20	50	DFM-20-50-P-A-GF
170845	20	80	DFM-20-80-P-A-GF
170846	20	100	DFM-20-100-P-A-GF

Tech Sheet 70197

**T Slot**

**C Slot**


### G1/8 Connection, Magnetic

0009	Cylinder Bore mm	Cylinder Stroke Length mm	Manufacturer's Code
170847	25	20	DFM-25-20-P-A-GF
170848	25	25	DFM-25-25-P-A-GF
170849	25	30	DFM-25-30-P-A-GF
170850	25	40	DFM-25-40-P-A-GF
170851	25	50	DFM-25-50-P-A-GF
170852	25	80	DFM-25-80-P-A-GF
170853	25	100	DFM-25-100-P-A-GF
170854	32	20	DFM-32-20-P-A-GF
170855	32	25	DFM-32-25-P-A-GF
170856	32	30	DFM-32-30-P-A-GF
170857	32	40	DFM-32-40-P-A-GF
170858	32	50	DFM-32-50-P-A-GF
170859	32	80	DFM-32-80-P-A-GF
170860	32	100	DFM-32-100-P-A-GF
170861	32	125	DFM-32-125-P-A-GF
170862	32	160	DFM-32-160-P-A-GF
170863	32	200	DFM-32-200-P-A-GF
170864	40	25	DFM-40-25-P-A-GF
170865	40	50	DFM-40-50-P-A-GF
170866	40	80	DFM-40-80-P-A-GF
170867	40	100	DFM-40-100-P-A-GF
170868	40	125	DFM-40-125-P-A-GF
170869	40	160	DFM-40-160-P-A-GF
170870	40	200	DFM-40-200-P-A-GF

Tech Sheet 70198

### G1/4 Connection, Magnetic

0009	Cylinder Bore mm	Cylinder Stroke Length mm	Manufacturer's Code
170871	50	25	DFM-50-25-P-A-GF
170872	50	50	DFM-50-50-P-A-GF
170873	50	80	DFM-50-80-P-A-GF
170874	50	100	DFM-50-100-P-A-GF
170875	50	125	DFM-50-125-P-A-GF
170876	50	160	DFM-50-160-P-A-GF
170877	50	200	DFM-50-200-P-A-GF
170878	63	25	DFM-63-25-P-A-GF
170879	63	50	DFM-63-50-P-A-GF
170880	63	80	DFM-63-80-P-A-GF
170881	63	100	DFM-63-100-P-A-GF
170882	63	125	DFM-63-125-P-A-GF
170883	63	160	DFM-63-160-P-A-GF
170884	63	200	DFM-63-200-P-A-GF

Tech Sheet 70199

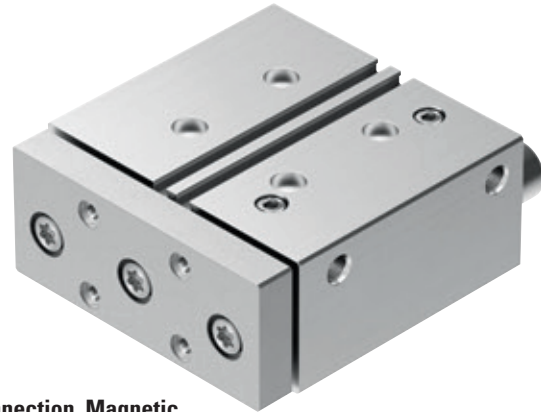
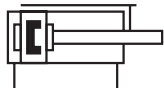


## Recirculating Ball Bearing Guided Drives, Double Acting

- Drive and guide unit in a single housing
- Sturdy and precise
- Plain or Recirculating ball bearing guide
- High resistance to torques and lateral forces
- Wide range of applications
- Selected types in accordance with ATEX directive for potentially explosive atmospheres
- C Slot 6 to 10 bore
- T Slot 12 to 63 bore

**Ambient Temperature:**  
-20°C to +80°C

**Working Pressure:**  
2 to 10 bar (Piston: 12, 16, 20mm)  
1.5 to 10 bar (Piston: 25, 32, 40mm)  
1 to 10 bar (Piston: 50, 63mm)



### M5 Connection, Magnetic

0009	Cylinder Bore mm	Cylinder Stroke Length mm	Manufacturer's Code
170899	12	10	DFM-12-10-P-A-KF
170900	12	20	DFM-12-20-P-A-KF
170901	12	25	DFM-12-25-P-A-KF
170902	12	30	DFM-12-30-P-A-KF
170903	12	40	DFM-12-40-P-A-KF
170904	12	50	DFM-12-50-P-A-KF
170905	12	80	DFM-12-80-P-A-KF
170906	12	100	DFM-12-100-P-A-KF
170907	16	10	DFM-16-10-P-A-KF
170908	16	20	DFM-16-20-P-A-KF
170909	16	25	DFM-16-25-P-A-KF
170910	16	30	DFM-16-30-P-A-KF
170911	16	40	DFM-16-40-P-A-KF
170912	16	50	DFM-16-50-P-A-KF
170913	16	80	DFM-16-80-P-A-KF
170914	16	100	DFM-16-100-P-A-KF
170915	20	20	DFM-20-20-P-A-KF
170916	20	25	DFM-20-25-P-A-KF
170917	20	30	DFM-20-30-P-A-KF
170918	20	40	DFM-20-40-P-A-KF
170919	20	50	DFM-20-50-P-A-KF
170920	20	80	DFM-20-80-P-A-KF
170921	20	100	DFM-20-100-P-A-KF

Tech Sheet 70200

T Slot



C Slot



### G1/8 Connection, Magnetic

0009	Cylinder Bore mm	Cylinder Stroke Length mm	Manufacturer's Code
170922	25	20	DFM-25-20-P-A-KF
170923	25	25	DFM-25-25-P-A-KF
170924	25	30	DFM-25-30-P-A-KF
170925	25	40	DFM-25-40-P-A-KF
170926	25	50	DFM-25-50-P-A-KF
170927	25	80	DFM-25-80-P-A-KF
170928	25	100	DFM-25-100-P-A-KF
170929	32	20	DFM-32-20-P-A-KF
170930	32	25	DFM-32-25-P-A-KF
170931	32	30	DFM-32-30-P-A-KF
170932	32	40	DFM-32-40-P-A-KF
170933	32	50	DFM-32-50-P-A-KF
170934	32	80	DFM-32-80-P-A-KF
170935	32	100	DFM-32-100-P-A-KF
170936	32	125	DFM-32-125-P-A-KF
170937	32	160	DFM-32-160-P-A-KF
170938	32	200	DFM-32-200-P-A-KF
170939	40	25	DFM-40-25-P-A-KF
170940	40	50	DFM-40-50-P-A-KF
170941	40	80	DFM-40-80-P-A-KF
170942	40	100	DFM-40-100-P-A-KF
170943	40	125	DFM-40-125-P-A-KF
170944	40	160	DFM-40-160-P-A-KF
170945	40	200	DFM-40-200-P-A-KF

Tech Sheet 70201

### G1/4 Connection, Magnetic

0009	Cylinder Bore mm	Cylinder Stroke Length mm	Manufacturer's Code
170946	50	25	DFM-50-25-P-A-KF
170947	50	50	DFM-50-50-P-A-KF
170948	50	80	DFM-50-80-P-A-KF
170949	50	100	DFM-50-100-P-A-KF
170950	50	125	DFM-50-125-P-A-KF
170951	50	160	DFM-50-160-P-A-KF
170952	50	200	DFM-50-200-P-A-KF
170953	63	25	DFM-63-25-P-A-KF
170954	63	50	DFM-63-50-P-A-KF
170955	63	80	DFM-63-80-P-A-KF
170956	63	100	DFM-63-100-P-A-KF
170957	63	125	DFM-63-125-P-A-KF
170958	63	160	DFM-63-160-P-A-KF
170959	63	200	DFM-63-200-P-A-KF

Tech Sheet 70202

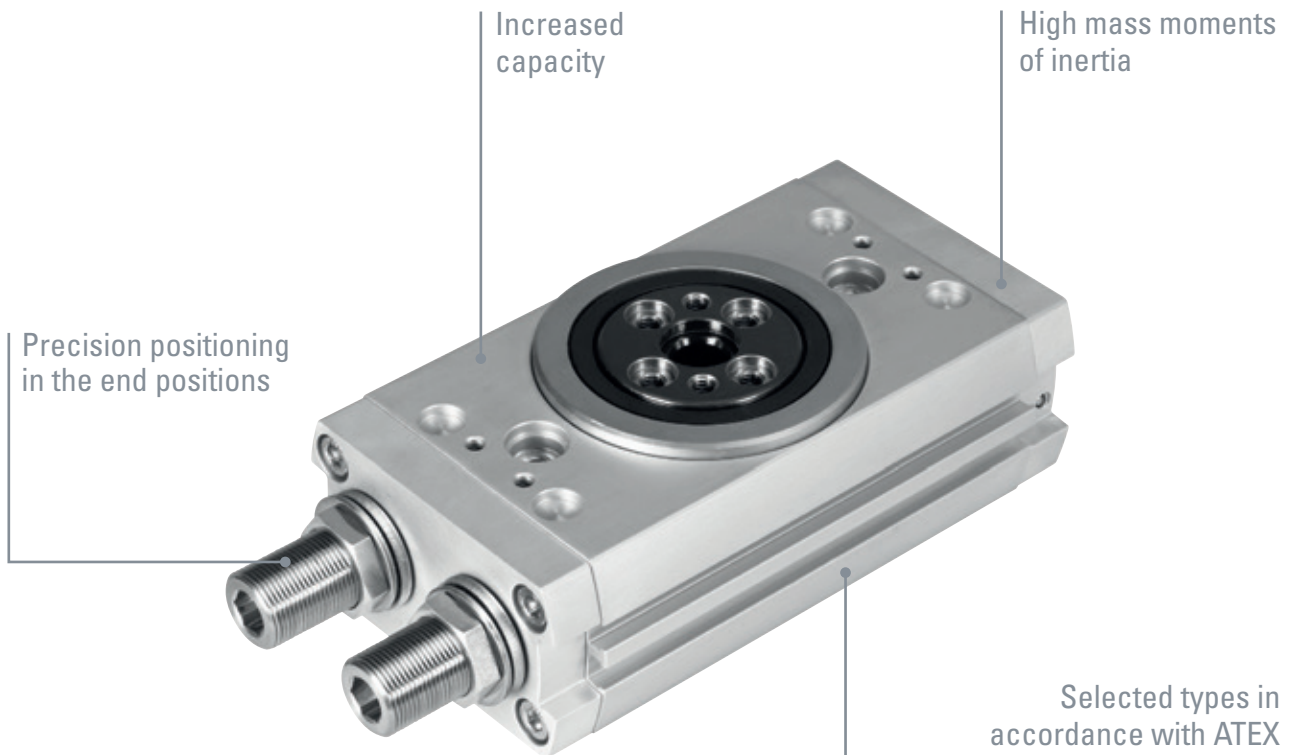
# CYLINDERS

For the full range and more information, please contact one of our sales team.

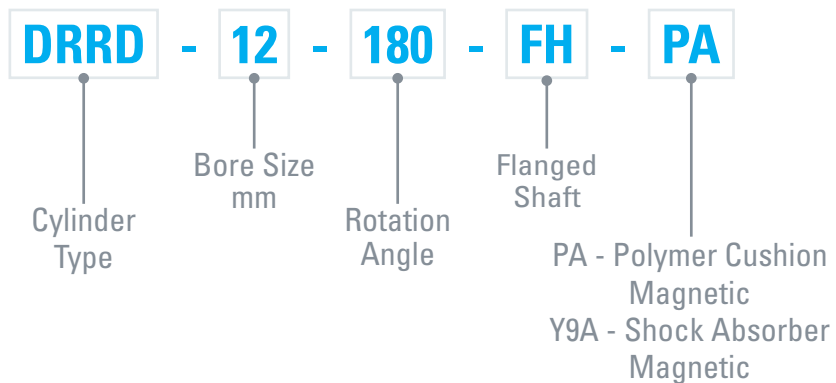
## DRRD SEMI-ROTARY DRIVE



### Features



### Product Description



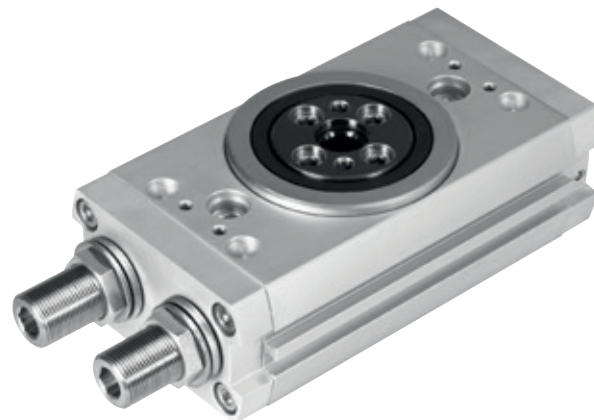
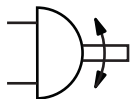


## Rack & Pinion

- Modern and compact design
- Lighter than other semi-rotary drives
- Housing protected against splash water and dust
- Selected types in accordance with ATEX directive for potentially explosive atmospheres
- T-Slot 8M

**Ambient Temperature:**  
-10°C to +60°C

**Working Pressure:**  
3 to 8 bar



### Elastic Cushioning Rings, M5 Connection

0009	Size mm	Manufacturer's Code
1577238	16	DRRD-16-180-FH-PA
1395606	20	DRRD-20-180-FH-PA
1359980	25	DRRD-25-180-FH-PA

Tech Sheet 70205

### Elastic Cushioning Rings, G1/8 Connection

0009	Size mm	Manufacturer's Code
1578512	32	DRRD-32-180-FH-PA
1526825	35	DRRD-35-180-FH-PA
1503269	40	DRRD-40-180-FH-PA

Tech Sheet 70206

### Self-adjusting Linear Shock Absorber, M5 Connection

0009	Size mm	Manufacturer's Code
1644389	16	DRRD-16-180-FH-Y9A
1427379	20	DRRD-20-180-FH-Y9A
1360248	25	DRRD-25-180-FH-Y9A

Tech Sheet 70207

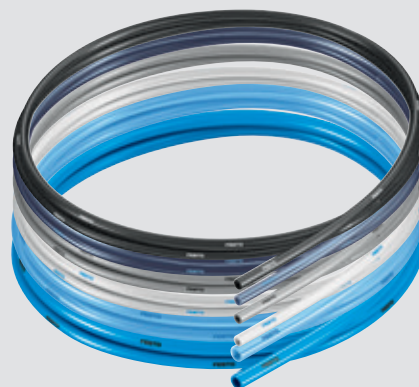
### Self-adjusting Linear Shock Absorber, G1/8 Connection

0009	Size mm	Manufacturer's Code
1578518	32	DRRD-32-180-FH-Y9A
1547102	35	DRRD-35-180-FH-Y9A
1526986	40	DRRD-40-180-FH-Y9A

Tech Sheet 70208



For **FESTO** pneumatic tubing  
see pages **911-912**



# ISO 21287 CYLINDERS

## Compact Series Liner

Compact cylinder to ISO 21287, LINER series, available in different versions to meet all possible requirements. Below sizes listed are most popular, if you require an alternative size please contact the sales office

The heads have been eliminated for ease of installation, improved sturdiness and precision. The metal lining is designed to withstand heavy-duty work, tensile stress and impact. Technopolymer parts can withstand dynamic and pneumatic thrust. The lining virtually acts as a "bearing" to which most of user accessories are attached. The wide range of anchors provide numerous fixing points. Retractable magnetic limit switches can be mounted to identify the position in the cylinder grooves.



### Double Acting, Male Piston Rod

9146	Bore mm	Stroke mm
2800200005XP	20	5
2800200010XP	20	10
2800200015XP	20	15
2800200020XP	20	20
2800200025XP	20	25
2800200040XP	20	40
2800200050XP	20	50
2800250005XP	25	5
2800250010XP	25	10
2800250015XP	25	15
2800250020XP	25	20
2800250025XP	25	25
2800250040XP	25	40
2800250050XP	25	50
2800320005CP	32	5
2800320010CP	32	10
2800320015CP	32	15
2800320020CP	32	20
2800320025CP	32	25
2800320040CP	32	40
2800320050CP	32	50
2800400005CP	40	5
2800400010CP	40	10
2800400015CP	40	15
2800400020CP	40	20
2800400025CP	40	25
2800400040CP	40	40
2800400050CP	40	50

9146	Bore mm	Stroke mm
2800500005CP	50	5
2800500010CP	50	10
2800500015CP	50	15
2800500020CP	50	20
2800500025CP	50	25
2800500040CP	50	40
2800500050CP	50	50
2800630005CP	63	5
2800630010CP	63	10
2800630015CP	63	15
2800630020CP	63	20
2800630025CP	63	25
2800630040CP	63	40
2800630050CP	63	50
2800800005AP	80	5
2800800010AP	80	10
2800800015AP	80	15
2800800020AP	80	20
2800800025AP	80	25
2800800040AP	80	40
2800800050AP	80	50
2800100005AP	100	5
2800100010AP	100	10
2800100015AP	100	15
2800100020AP	100	20
2800100025AP	100	25
2800100040AP	100	40
2800100050AP	100	50

Please contact our Sales Department for full range of accessories

# ISO 21287 CYLINDERS

## Compact Series Liner

Compact cylinder to ISO 21287, LINER series, available in different versions to meet all possible requirements. Below sizes listed are most popular, if you require an alternative size please contact the sales office

The heads have been eliminated for ease of installation, improved sturdiness and precision. The metal lining is designed to withstand heavy-duty work, tensile stress and impact. Technopolymer parts can withstand dynamic and pneumatic thrust. The lining virtually acts as a "bearing" to which most of user accessories are attached. The wide range of anchors provide numerous fixing points. Retractable magnetic limit switches can be mounted to identify the position in the cylinder grooves.



### Double Acting, Female Piston Rod

9146	Bore mm	Stroke mm
2900200005XP	20	5
2900200010XP	20	10
2900200015XP	20	15
2900200020XP	20	20
2900200025XP	20	25
2900200040XP	20	40
2900200050XP	20	50
2900250005XP	25	5
2900250010XP	25	10
2900250015XP	25	15
2900250020XP	25	20
2900250025XP	25	25
2900250040XP	25	40
2900250050XP	25	50
2900320005CP	32	5
2900320010CP	32	10
2900320015CP	32	15
2900320020CP	32	20
2900320025CP	32	25
2900320040CP	32	40
2900320050CP	32	50
2900400005CP	40	5
2900400010CP	40	10
2900400015CP	40	15
2900400020CP	40	20
2900400025CP	40	25
2900400040CP	40	40
2900400050CP	40	50

9146	Bore mm	Stroke mm
2900500005CP	50	5
2900500010CP	50	10
2900500015CP	50	15
2900500020CP	50	20
2900500025CP	50	25
2900500040CP	50	40
2900500050CP	50	50
2900630005CP	63	5
2900630010CP	63	10
2900630015CP	63	15
2900630020CP	63	20
2900630025CP	63	25
2900630040CP	63	40
2900630050CP	63	50
2900800005AP	80	5
2900800010AP	80	10
2900800015AP	80	15
2900800020AP	80	20
2900800025AP	80	25
2900800040AP	80	40
2900800050AP	80	50
2900100005AP	100	5
2900100010AP	100	10
2900100015AP	100	15
2900100020AP	100	20
2900100025AP	100	25
2900100040AP	100	40
2900100050AP	100	50

Please contact our Sales Department for full range of accessories

# COMPACT CYLINDERS & MOUNTINGS



## Compact Cylinders

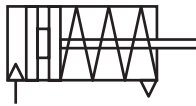
- One third the basic length of a corresponding VDMA/ISO model
- Low friction, long life seal design
- Fully non-corrodible specification
- Non-lube operation
- Optional non-rotating piston rod (non-rotating or guided piston rod on RM/92000/M)
- Standard magnetic piston for full control system versatility

**Medium:**  
Compressed air, filtered, lubricated or non-lubricated

**Operation:**  
RM/91000/M Single acting, non-cushioned, magnetic sprung in RM/92000/M  
Double acting, buffer cushioning

**Barrel and End Caps:**  
Anodised aluminium alloy

**Piston Rod:**  
RM/91000/M Stainless steel  
(Ø 12 to 40mm austenitic)  
RM/92000/M Stainless steel  
(Ø 12 to 40mm austenitic,  
Ø 50 to 100mm martensitic)  
**Seals:**  
PUR and/or NBR



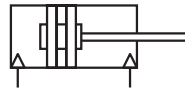
° Working Temperature:  
-5°C to +80°C

Working Pressure:  
2 to 10 bar

### Single Acting RM/91000/M

0036	Bore mm	Stroke mm	Thread
RM/91032/M/25	32	25	G1/8
RM/91040/M/25	40	25	G1/8

Tech Sheet 10362



° Working Temperature:  
-5°C to +80°C

Working Pressure:  
1 to 10 bar

### Double Acting RM/92000/M

0036	Bore mm	Stroke mm	Thread
RM/92012/M/10	12	10	M5
RM/92016/M/10	16	10	M5
RM/92016/M/15	16	15	M5
RM/92016/M/20	16	20	M5
RM/92020/M/10	20	10	M5
RM/92020/M/15	20	15	M5
RM/92020/M/25	20	25	M5
RM/92020/M/30	20	30	M5
RM/92020/M/40	20	40	M5
RM/92020/M/50	20	50	M5
RM/92025/M/10	25	10	M5
RM/92025/M/20	25	20	M5
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RM/92025/M/40	25	40	M5
RM/92025/M/50	25	50	M5
RM/92032/M/10	32	10	G1/8
RM/92032/M/15	32	15	G1/8
RM/92032/M/20	32	20	G1/8
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RM/92032/M/50	32	50	G1/8
RM/92032/M/60	32	60	G1/8
RM/92032/M/80	32	80	G1/8
RM/92040/M/5	40	5	G1/8
RM/92040/M/10	40	10	G1/8
RM/92040/M/20	40	20	G1/8
RM/92040/M/25	40	25	G1/8
RM/92040/M/30	40	30	G1/8
RM/92040/M/50	40	50	G1/8
RM/92050/M/10	50	10	G1/8
RM/92050/M/20	50	20	G1/8
RM/92050/M/25	50	25	G1/8
RM/92050/M/30	50	30	G1/8
RM/92050/M/40	50	40	G1/8
RM/92050/M/50	50	50	G1/8
RM/92050/M/100	50	100	G1/8
RM/92063/M/15	63	15	G1/4
RM/92063/M/25	63	25	G1/4
RM/92063/M/40	63	40	G1/4
RM/92080/M/25	80	25	G1/4
RM/92080/M/40	80	40	G1/4
RM/92080/M/50	80	50	G1/4
RM/92080/M/60	80	60	G1/4
RM/92080/M/80	80	80	G1/4
RM/92100/M/30	100	30	G1/4
RM/92100/M/50	100	50	G1/4

Tech Sheet 10361

## Compact Mountings



### Female Piston Rod Clevis

0036	Bore mm
QM/57063/25	80 & 100

Tech Sheet 10361



### Flange Mounting

0036	Bore mm
QM/90016/22	16
QM/90025/22	25
QM/90040/22	40
QM/90050/22	50
QM/90063/22	63
QM/90080/22	80
QM/90100/22	100

Tech Sheet 10361



For Norgren Excelon Plus  
see page 686



# ISO COMPACT CYLINDERS & MOUNTINGS



## ISO Compact Cylinders & Mountings

- Conforms to ISO 21287
- Up to 30% shorter than full
- ISO/VDMA actuators
- Uses standard ISO/VDMA mountings

**Medium:**  
Compressed air, filtered, lubricated or non-lubricated

**Operation:** RA/192000/MX, Double acting, magnetic piston, female piston rod thread, buffer cushioning

**Materials:**  
**Profile barrel:** Anodized aluminium  
**End covers:** Pressure diecast aluminium  
**Piston rod:** Stainless steel  
**Piston rod seals:** PUR  
**Piston seals:** NBR  
**O-rings:** NBR

**Working Temperature:**  
-5°C to +80°C

**Working Pressure:**  
0 to 10 bar



### RA/192000 Series

0036	Bore mm	Stroke mm	Thread
RA/192020/MX/10	20	10	M5
RA/192020/MX/15	20	15	M5
RA/192020/MX/20	20	20	M5
RA/192020/MX/25	20	25	M5
RA/192020/MX/30	20	30	M5
RA/192020/MX/40	20	40	M5
RA/192020/MX/50	20	50	M5
RA/192025/MX/10	25	10	M5
RA/192025/MX/15	25	15	M5
RA/192025/MX/20	25	20	M5
RA/192025/MX/25	25	25	M5
RA/192025/MX/30	25	30	M5
RA/192025/MX/40	25	40	M5
RA/192025/MX/50	25	50	M5
RA/192032/MX/10	32	10	1/8"
RA/192032/MX/15	32	15	1/8"
RA/192032/MX/20	32	20	1/8"
RA/192032/MX/25	32	25	1/8"
RA/192032/MX/30	32	30	1/8"
RA/192032/MX/40	32	40	1/8"
RA/192032/MX/50	32	50	1/8"
RA/192032/MX/60	32	60	1/8"
RA/192032/MX/80	32	80	1/8"
RA/192040/MX/10	40	10	1/8"
RA/192040/MX/15	40	15	1/8"
RA/192040/MX/20	40	20	1/8"
RA/192040/MX/25	40	25	1/8"
RA/192040/MX/30	40	30	1/8"

0036	Bore mm	Stroke mm	Thread
RA/192040/MX/40	40	40	1/8"
RA/192040/MX/50	40	50	1/8"
RA/192050/MX/10	50	10	1/8"
RA/192050/MX/15	50	15	1/8"
RA/192050/MX/20	50	20	1/8"
RA/192050/MX/25	50	25	1/8"
RA/192050/MX/30	50	30	1/8"
RA/192050/MX/40	50	40	1/8"
RA/192050/MX/50	50	50	1/8"
RA/192050/MX/60	50	60	1/8"
RA/192063/M/15	63	15	1/8"
RA/192063/M/25	63	25	1/8"
RA/192063/M/40	63	40	1/8"
RA/192063/M/50	63	50	1/8"
RA/192063/M/60	63	60	1/8"
RA/192063/M/80	63	80	1/8"
RA/192080/M/15	80	15	1/8"
RA/192080/M/25	80	25	1/8"
RA/192080/M/40	80	40	1/8"
RA/192080/M/50	80	50	1/8"
RA/192080/M/60	80	60	1/8"
RA/192080/M/80	80	80	1/8"
RA/192100/M/15	100	15	1/8"
RA/192100/M/25	100	25	1/8"
RA/192100/M/40	100	40	1/8"
RA/192100/M/50	100	50	1/8"
RA/192100/M/60	100	60	1/8"
RA/192100/M/80	100	80	1/8"

Tech Sheet 71752

## Mountings



### Front Flange

0036	Bore mm
QA/192020/22	20
QA/192025/22	25
QA/8032/22	32
QA/8040/22	40
QA/8050/22	50
QA/8063/22	63
QA/8080/22	80
QA/8100/22	100

Tech Sheet 71752



### Piston Rod Clevis

0036	Bore mm
QM/8020/25	20
QM/8025/25	25
QM/8032/35	32
QM/8040/25	40
QM/8050/25	50
QM/8080/25	80

Tech Sheet 71752



### Foot C

0036	Bore mm
QM/192020/21	20
QM/192025/21	25
QA/192032/21	32
QA/192040/21	40
QA/192050/21	50
QA/192063/21	63
QA/192080/21	80
QA/192100/21	100

Tech Sheet 71752



### Rear Clevis

0036	Bore mm
QA/8032/23	32
QA/8040/23	40
QA/8050/23	50
QA/8063/23	63
QA/8080/23	80
QA/8100/23	100

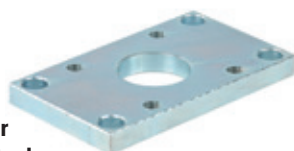
Tech Sheet 71752

# PNEUMATIC ACTUATION

## Compact Cylinders & Accessories

### Compact Cylinders ISO 21287 Double Acting 20mm-100mm

0110	Bore mm	Stroke mm
1540.20.15.01.1	20	15
1540.20.50.01.1	20	50
1540.25.50.01.1	25	50
1540.25.60.01.1	25	60
1540.32.15.01.1	32	15
1540.32.20.01.1	32	20
1540.32.30.01.1	32	30
1540.32.60.01.1	32	60
1540.32.200.01.1	32	200
1540.40.75.01.1	40	75
1540.50.30.01.1	50	30
1540.50.35.01.1	50	35
1540.50.50.01.1	50	50
1540.50.100.01.1	50	100
1540.63.25.01.1	63	25
1540.63.50.01.1	63	50
1540.63.100.01.1	63	100
1540.100.80.01.1	100	80



**Front & Rear Flanges - Steel**

0110	Bore mm
1540.20.03F	20



**Foot Brackets MS1 - Steel**

0110	Bore mm
1540.20.05/1F	20



**Rear Clevis MP2 - Aluminium**

0110	Bore mm
1380.32.09F	32
1380.40.09F	40
1380.50.09F	50
1380.63.09F	63
1380.80.09F	80
1380.100.09F	100

**Rear Narrow Clevis - Aluminium**



0110	Bore mm
1380.80.30F	80



**Rear Clevis MP4 - Aluminium**

0110	Bore mm
1380.40.09/1F	40
1380.50.09/1F	50
1380.63.09/1F	63
1380.100.09/1F	100



**Rear Male Clevis complete with Jointed Head - Aluminium**

0110	Bore mm
1380.32.15F	32
1380.40.15F	40
1380.50.15F	50
1380.80.15F	80

**Square Angle Trunnion - Aluminium**



0110	Bore mm
1380.32.35F	32
1380.63.35F	63
1380.80.35F	80
1380.100.35F	100



**1580U Reed Switch complete with LED**

0110	Description
1580U	LED Reed Switch N/O

Please contact our Sales Department for full range of accessories

# PNEUMATIC CYLINDER & TRANSMITTERS



## Pencil Cylinder

The miniature cylinder with a piston diameter of 3mm is for general-purpose use in testing and other operations in very restricted spaces. Even with its small dimensions the cylinder offers the technical features of the proven series of larger miniature cylinders.



### Single Acting

0047	Bore mm	Stroke mm
KU-40.100	3	6
Tech Sheet 10289		

## Position Transmitter & Clamp

This unit acts as a 3/2 valve, it can be actuated either by a magnetic cylinder piston or by iron (FE). Use the clamp 33.006 to mount the transmitter onto the cylinder.

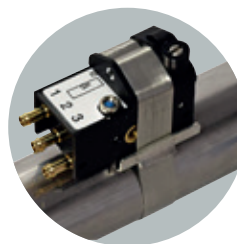
Suitable for sizes 8mm to 100mm. For other applications, the 4mm thread on the other side of the housing can be used.

**Medium:** Compressed air oil free

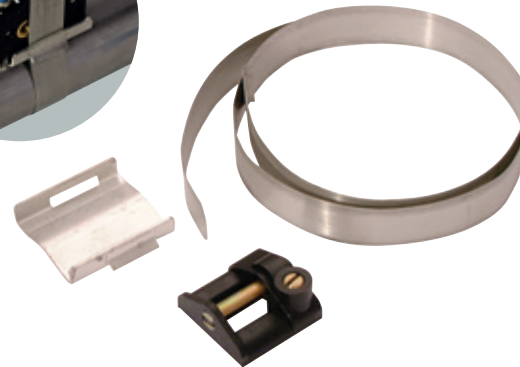
### Transmitter not included

**Working Temperature:**  
10° to + 60°C

**Working Pressure:**  
2 to 6 bar



Transmitter  
not included



### Transmitter, Pneumatic

0047	ID mm
KU-33.21.326	3
Tech Sheet 10290	

### Clamp

0047	To Suit
KU-33.006	8mm to 100mm Cylinders
Tech Sheet 10290	



For FT Pro hose reels  
see pages 1449-1453



# ROUND RNDC CYLINDERS

## Double Acting Cylinders

### Clean profile cylinders available in different versions

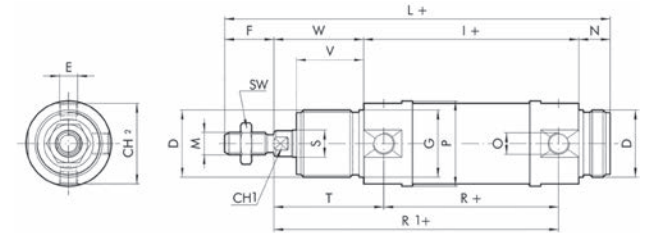
- Configuration with or without magnet
- Single and double acting
- Single or through-rod
- Pneumatic cushioning on request
- Range of gaskets available in NBR, polyurethane and FKM/FPM (for high temperatures)

### Technical Specification

- Fluid: unlubricated air (lubrication, if used, must be continuous)
- Sensor magnet: all versions come complete with magnet
- Piston rod material: C45 chrome rod, technopolymmer piston rod
- Piston seal: NBR

° Temperature Range:  
10°C to +80°C

Maximum Operating Pressure:  
10 bar

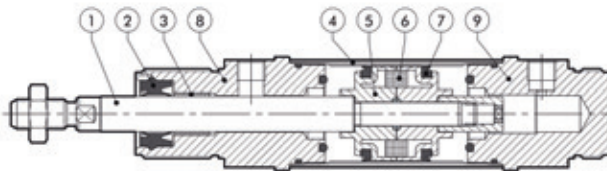


### Dimensions

Ø	D	E	F	ØG	CH1	I	L	M	N	O	ØP	R	ØS	SW	T	CH2	V	W	L1
32	M30x1.5	M8x1	22	30	10	96	172	M10x1.25	14	G1/8	38	78	12	17	49	36	30	40	220
40	M38x1.5	M10x1	24	38	13	113	198	M12x1.25	16	G1/4	46	89	16	19	57	43	35	45	251
50	M45x1.5	M12x1.5	32	45	17	120	220	M16x1.5	18	G1/4	57	96	20	24	62	54	38	50	284

### Components

1. Piston rod: C45 steel or stainless steel, thick chromed
2. Piston rod gasket: polyurethane, NBR or FKM/FPM
3. Guide bushing: steel strip with bronze and PTFE insert
4. Barrel: drawn anodised aluminium alloy
5. Half-piston: self-lubricating technopolymmer with integrated cushioning olives
6. Magnet: plastroferrite
7. Piston gasket: polyurethane, NBR or FKM/FPM
8. Head: anodised aluminium alloy



Other variants  
available  
on request



### Magnetic & Cushioned

9195	Diameter mm	Stroke mm
1120320025CN	32	25
1120320050CN	32	50
1120320080CN	32	80
1120320100CN	32	100
1120320125CN	32	125
1120320160CN	32	160
1120320200CN	32	200
1120320250CN	32	250
1120400025CN	40	25
1120400050CN	40	50
1120400080CN	40	80
1120400100CN	40	100

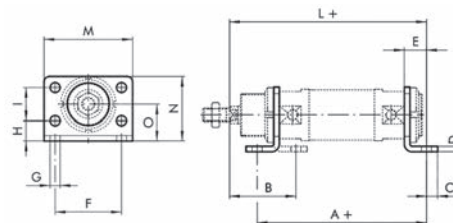
9195	Diameter mm	Stroke mm
1120400125CN	40	125
1120400160CN	40	160
1120400200CN	40	200
1120400250CN	40	250
1120500025CN	50	25
1120500050CN	50	50
1120500080CN	50	80
1120500100CN	50	100
1120500125CN	50	125
1120500160CN	50	160
1120500200CN	50	200
1120500250CN	50	250

# ROUND RNDC CYLINDER ACCESSORIES

## Foot Mounting

### To suit RNDC Cylinders

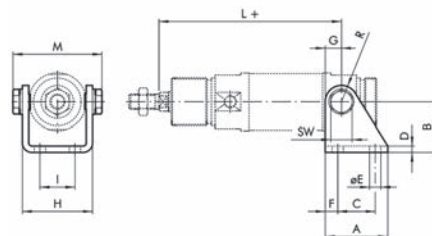
9146	Ø	A	B	C	D	E	F	G	H	I	L	M	N	O
W0950320002	32	124	50	7	4	14	52	7	14	28	150	66	49	28
W0950400002	40	153	60	10	5	20	60	9	18	30	178	80	58	33
W0950500002	50	160	64	10	6	20	70	9	20	40	190	90	70	40



## Counter Support

### To suit RNDC Cylinders

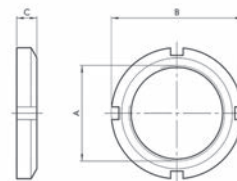
9146	Ø	A	B	C	D	E	F	G	H	I	L	M	R	SW
W0950320005	32	40	35	24	4	7	8	12	46.1	20	127	60	12	13
W0950400005	40	50	40	30	5	9	10	13	57.5	28	146	74	13	17
W0950500005	50	54	45	34	6	9	10	14	69.1	36	158	89	14	19



## Head Lock Ring

### To suit RNDC Cylinders

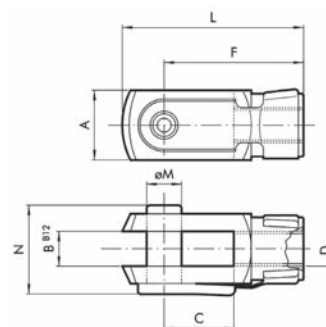
9146	Ø	A	B	C
W0950320010	32	M30 x 1.5	45	7
W0950400010	40	M38 x 1.5	50	8
W0950500010	50	M45 x 1.5	58	9



## Fork Clevis

### To suit RNDC Cylinders

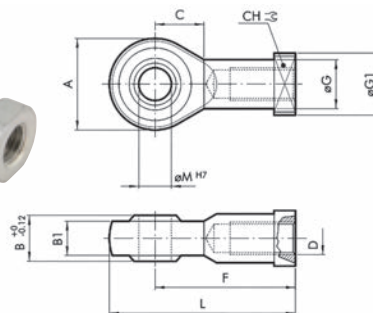
9146	Ø	ØM	A	B	C	L	F	D	N
W0950322020	32	10	20	10	20	52	40	M10 x 1.25	26
W0950402020	40	12	24	12	24	62	48	M12 x 1.25	32
W0950502020	50/63	16	32	16	32	83	64	M16 x 1.5	40



## Spherical Rod Eye

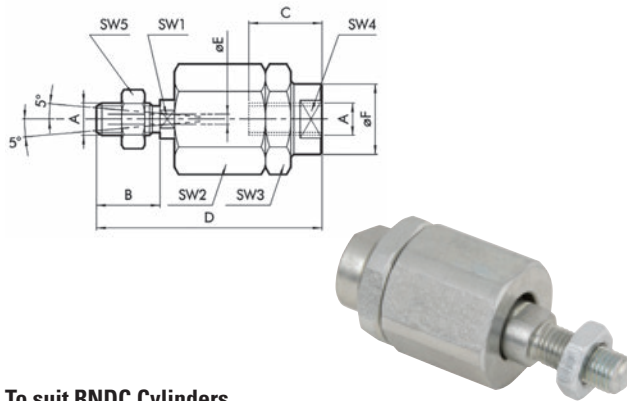
### To suit RNDC Cylinders

9146	Ø	ØM	C	B1	B	A	L	F	D	ØG	CH
W0950322025	32	10	15	10.5	14	28	57	43	M10 x 1.25	15	17
W0950402025	40	12	17	12	16	32	66	50	M12 x 1.25	17.5	19
W0950502025	50	16	22	15	21	42	85	64	M16 x 1.5	22	22



# ROUND RNDC CYLINDER ACCESSORIES

## Articulated Joint



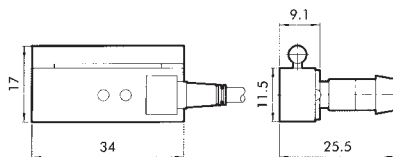
To suit RNDC Cylinders

9146	Ø	A	B	C	D	ØE	ØF	SW1	SW2	SW3	SW4	SW5
W0950322030	32	M10 x 1.25	20	20	71	4	22	12	30	30	19	17
W0950402030	40	M12 x 1.25	24	20	75	4	22	12	30	30	19	19
W0950502030	50	M16 x 1.5	32	32	103	4	32	20	41	41	30	24

## Reed Switch & Bracket

### Technical Data

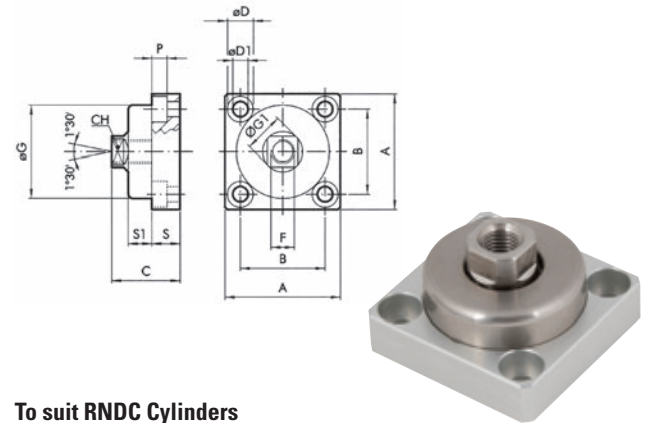
Type		Contact
Maximum AC/DC voltage	V	Reed + varistor + LED 2 wires
		Reed + varistor + LED NO
		220 ISO cylinder
Maximum current at +25°C	mA	1,000
Power with inductive load	VA	15
Power with resistive load	Watt	50
Switch-on time	M sec	1.2



To suit ISO 6432 Cylinders

9146	Description
W0950000201	Reed Switch

## Flexible Collar



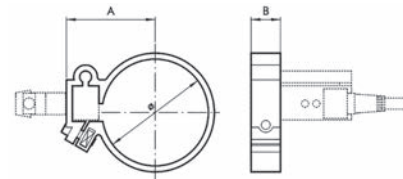
To suit RNDC Cylinders

9146	Ø	A	B	C	CH	ØD	ØD1	F	ØG	ØG1	P	S	S1
W0950326021	32	49	36	30	13	11	6.5	M10 x 1.25	39.5	17	6.5	12	10
W0950406021	40	59	42	36	15	14	8.5	M12 x 1.25	44	19	8.5	15	13.5
W0950506021	50	79	58	44	22	17	10.5	M16 x 1.5	59	26	10.5	20	15

## Reed Switch & Bracket

### Technical Data

Type		Contact
Switch-off time	M sec	0.1
Cable length		2.5m
Cable material		Soft PVC
Switch-on point	Gauss	110
Switch-off point	Gauss	95
Contact resistance		0.1



To suit RNDC Cylinders

9146	Description
W0950000132	Bracket for RNDC Ø32 Cylinder
W0950000140	Bracket for RNDC Ø40 Cylinder
W0950000150	Bracket for RNDC Ø50 Cylinder

# ROUNDLINE CYLINDERS & MOUNTINGS



## Roundline Cylinders

- One fifth shorter than the basic length of a corresponding VDMA/ISO cylinder
- Low friction, long life seals
- High strength, double crimped end cap design
- Standard magnetic piston for full control system versatility
- Non-lube operation
- Choice of porting option for compact installation

### Medium:

Compressed air, filtered, lubricated or non-lubricated

### Operation (Double Acting):

Double acting, buffer cushioning

### Piston Rod (Single Acting):

Stainless steel (16 mm bore martensitic, 20 to 40mm bore austenitic)

### Piston Rod (Double Acting):

Stainless steel (16mm bore martensitic, 20 to 63mm bore austenitic)

Barrel: Stainless steel (austenitic)

Seals and O-Rings: Nitrile

Wiper: Polyurethane

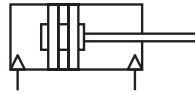
End Covers: Aluminium



### Single Acting:



### Double Acting:



Working Temperature:  
-5°C to +80°C

Working Temperature:  
-5°C to +80°C

Working Pressure:  
2 to 10 bar

Working Pressure:  
1 to 10 bar

### Single Acting RT/57100/M, Side Port - Sprung In

0036	Bore mm	Stroke mm	Thread
RT/57116/M/25	16	25	M5
RT/57120/M/25	20	25	Rc 1/8
RT/57125/M/25	25	25	Rc 1/8
RT/57125/M/50	25	50	Rc 1/8
RT/57132/M/50	32	50	Rc 1/8
RT/57140/M/50	40	50	Rc 1/8

Tech Sheet 10315

### Single Acting RT/57100/M, Axial Port - Sprung In

0036	Bore mm	Stroke mm	Thread
RT/57116/MC/25	16	25	M5

Tech Sheet 10315

### Double Acting RT/57200/M, Side Port - Rear Eye

0036	Bore mm	Stroke mm	Thread
RT/57216/M/25	16	25	M5
RT/57216/M/80	16	80	M5
RT/57220/M/10	20	10	Rc 1/8
RT/57220/M/25	20	25	Rc 1/8
RT/57220/M/100	20	100	Rc 1/8
RT/57225/M/25	25	25	Rc 1/8
RT/57225/M/50	25	50	Rc 1/8
RT/57225/M/80	25	80	Rc 1/8
RT/57225/M/100	25	100	Rc 1/8
RT/57225/M/160	25	160	Rc 1/8
RT/57232/M/25	32	25	Rc 1/8
RT/57232/M/50	32	50	Rc 1/8
RT/57232/M/80	32	80	Rc 1/8
RT/57232/M/100	32	100	Rc 1/8
RT/57232/M/160	32	160	Rc 1/8
RT/57240/M/50	40	50	Rc 1/8
RT/57240/M/80	40	80	Rc 1/8
RT/57240/M/100	40	100	Rc 1/8

Tech Sheet 10315

### Double Acting RT/57200/M, Side Port - Flat End

0036	Bore mm	Stroke mm	Thread
RT/57216/MF/10	16	10	M5
RT/57220/MF/50	20	50	Rc 1/8
RT/57225/MF/25	25	25	Rc 1/8
RT/57225/MF/50	25	50	Rc 1/8
RT/57240/MF/80	40	80	Rc 1/8

Tech Sheet 10315

## Roundline Mountings



### Clevis Foot Mounting

0036	Bore mm
QM/946	16
QM/57025/24	25
QM/57040/24	40

Tech Sheet 10315



### Piston Rod Locknut

0036	Bore mm
M/P1501/60	20
M/P1501/89	25 & 32
M/P1501/90	40

Tech Sheet 10315



### Female Piston Rod Clevis

0036	Bore mm
QM/57016/25	16
QM/57020/25	20
QM/57025/25	25
QM/57032/25	32

Tech Sheet 10315



### Piston Rod Eye

0036	Bore mm
QM/8040/32	40

Tech Sheet 10315



### Switch Mounting Bracket (QM33)

0036	Bore mm
QM/33/032/22	32
QM/33/040/22	40

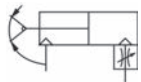
Tech Sheet 10315

## Pneumatic Grippers

- Uses a single piston structure to generate a large gripping force
- Integrated variable flow valve to conveniently adjust the speed of opening and closing of the fingers
- Precise positioning accuracy when gripping components
- Body profile adapted with grooves for mounting sensor switches
- Integrated magnet for added control
- Gripping jaw opening and closing angle 30° to -10°
- Single acting N/O available on request
- Interchangeability: SMC



KHFY: Double Acting



### Double Acting, Angular Style

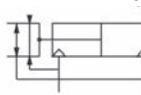
0415	Thread	Bore mm	Optimum Gripping Points Length mm
KHFY6	M3 x 0.5	6	30
KHFY10	M3 x 0.5	10	30
KHFY16	M5 x 0.8	16	40
KHFY20	M5 x 0.8	20	60
KHFY25	M5 x 0.8	25	70
KHFY32	M5 x 0.8	32	85

Tech Sheet 20470

- Integrated linear guide rail for high precision and rigidity
- Positioning pin at the base of the unit to prevent deviation of the rail and body
- Deeper hole on the body to improve precision and consistency when dismantling and positioning
- Variable positioning jaws
- Body profile adapted with grooves for mounting sensor switches
- Other finger types available on request
- Single acting N/O and N/C available on request
- Interchangeability: SMC



KHfZ: Double Acting



### Double Acting, Parallel Style

0415	Thread	Bore mm	Optimum Gripping Points Length mm	Open Diameter mm	Closed Diameter mm
KHfZ10	M3 x 0.5	6	5-50	15.5	11.5
KHfZ16	M5 x 0.8	16	5-55	21.0	15.0
KHfZ20	M5 x 0.8	20	5-80	26.5	16.5
KHfZ25	M5 x 0.8	25	5-100	33.5	19.5

Tech Sheet 20471

### How to select product:

Please select pneumatic finger according to the following steps:

The selection of the effective gripping force → the confirmation of the gripping point → the confirmation of the external force put on the gripping jaw.

The selection of the gripping force:  
The gripping work-pieces shown, on the impact condition of ordinary handling state, taking safety coefficient  $a=4$ , have a gripping force that is more than 10-20 times of the mass of the gripped objects

$\mu = 0.2$	$\mu = 0.1$
$F = \frac{mg}{2 \times 0.2} \times 4$	$F = \frac{mg}{2 \times 0.1} \times 4$
$= 10 \times mg$	$= 20 \times mg$
10 times of the mass of the gripped objects	20 times of the mass of the gripped objects

F: gripping force (N)

$\mu$ : friction coefficient between fittings and work-pieces

m: mass of work-pieces

g: acceleration of gravity ( $=9.8\text{m/s}^2$ )

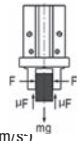
The condition that the work-pieces won't drop is  $2 \times \mu F > mg$ , so:

$$F > \frac{mg}{2 \times \mu}$$

Safety coefficient is a, so F is:

$$F = \frac{mg}{2 \times \mu} \times a$$

Note: if the friction coefficient  $\mu > 0.2$ , for safety, please also select clamping force according to the principle of 10-20 times of the mass of the clamped objects. As for large acceleration and shock, it requires for greater safety coefficient.



Slim profile for discreet safe mounting to grippers.

### Sensor Switch, Two-line, N/O

0415	Connection	Connecting Cable	Length Metres
KDS1-H-C08	Straight	M8 Quick Joint	0.15
KDS1-H-020	Straight	-	2
KDS1-H-030	Straight	-	3
KDS1-H-050	Straight	-	5
KDS1-HL-C08	90°	M8 Quick Joint	0.15
KDS1-HL-020	90°	-	2
KDS1-HL-030	90°	-	3
KDS1-HL-050	90° Connection	-	5

Tech Sheet 20472

### Sensor Switch, Three-line NPN with No Contact (Current Flows In), N/O

0415	Connection	Connecting Cable	Length Metres
KDS1-H-N-C08	Straight	M8 Quick Joint	0.15
KDS1-H-N-020	Straight	-	2
KDS1-H-N-030	Straight	-	3
KDS1-H-N-050	Straight	-	5
KDS1-HL-N-C08	90°	M8 Quick Joint	0.15
KDS1-HL-N-020	90°	-	2
KDS1-HL-N-030	90°	-	3
KDS1-HL-N-050	90°	-	5

Tech Sheet 20472

### Sensor Switch, Three-line PNP with No Contact (Current Flows Out), N/O

0415	Connection	Connecting Cable	Length Metres
KDS1-H-P-C08	Straight	M8 Quick Joint	0.15
KDS1-H-P-020	Straight	-	2
KDS1-H-P-030	Straight	-	3
KDS1-H-P-050	Straight	-	5
KDS1-HL-P-C08	90°	M8 Quick Joint	0.15
KDS1-HL-P-020	90°	-	2
KDS1-HL-P-030	90°	-	3
KDS1-HL-P-050	90°	-	5

Tech Sheet 20472



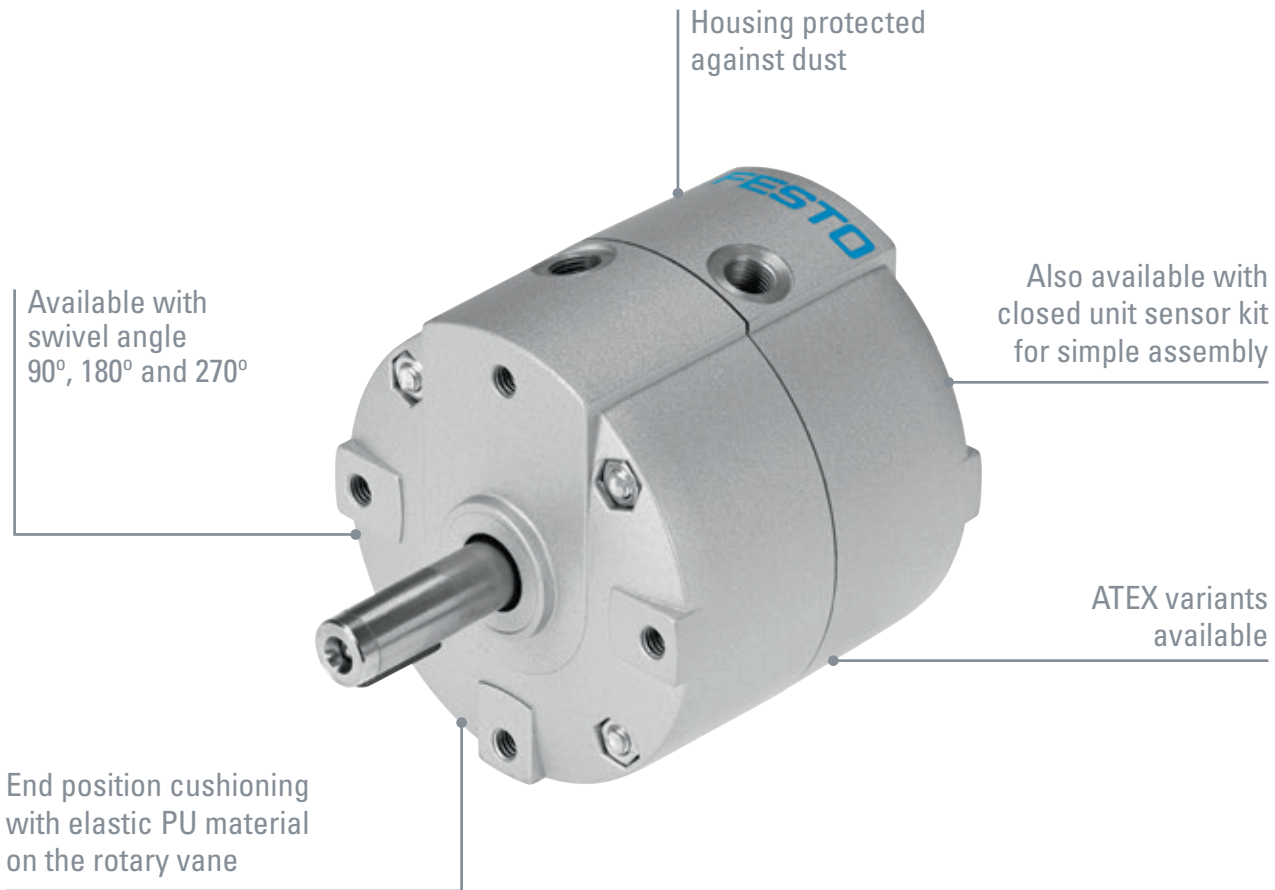
# CYLINDERS

For the full range and more information, please contact one of our sales team.

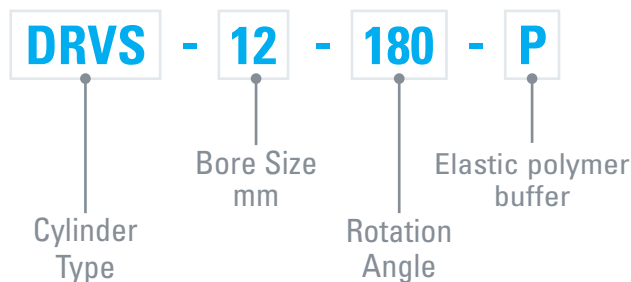
## DRVS SEMI-ROTARY VANE DRIVE



### Features



### Product Description



# SEMI-ROTARY DRIVES, DRVS

# FESTO



## Rotary Vane, Double Acting

- Modern and compact design
- Lighter than other semi-rotary drives
- Housing protected against splash water and dust
- Selected types in accordance with ATEX directive for potentially explosive atmospheres

**Ambient Temperature:**  
-10°C to +60°C

**Working Pressure:**  
3.5 to 8 bar (Size: 6, 8mm)  
2.5 to 8 bar (Size: 12, 16mm)  
2 to 8 bar (Size: 25, 32, 40mm)



### Elastic Cushioning Rings, M3 Connection

0009	Size	Nominal Swivel Angle	Manufacturer's Code
1845706	6	90°	DRVS-6-90-P
1845707	6	180°	DRVS-6-180-P
1845708	8	90°	DRVS-8-90-P
1845709	8	180°	DRVS-8-180-P

Tech Sheet 20564

### Elastic Cushioning Rings, M5 Connection

0009	Size	Nominal Swivel Angle	Manufacturer's Code
1845710	12	90°	DRVS-12-90-P
1845711	12	180°	DRVS-12-180-P
1845712	12	270°	DRVS-12-270-P
1845713	16	90°	DRVS-16-90-P
1845714	16	180°	DRVS-16-180-P
1845715	16	270°	DRVS-16-270-P
1845716	25	90°	DRVS-25-90-P
1845717	25	180°	DRVS-25-180-P
1845718	25	270°	DRVS-25-270-P

Tech Sheet 71599



### Position Sensor

0009	Weight	For Drives	Type
2619969	25g	DSM 6, DRVS 6	SRBS-Q12-6-E270-EP-1-S-M8

### Elastic Cushioning Rings, G1/8 Connection

0009	Size	Nominal Swivel Angle	Manufacturer's Code
1845719	32	90°	DRVS-32-90-P
1845720	32	180°	DRVS-32-180-P
1845721	32	270°	DRVS-32-270-P
1845722	40	90°	DRVS-40-90-P
1845723	40	180°	DRVS-40-180-P
1845724	40	270°	DRVS-40-270-P

Tech Sheet 71600

# FESTO



For **Festo MS Series**  
see page **658**

## Panel Mount Valves, Manual & Mechanical 3/2 Way Valves

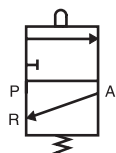
**Medium:** Clean compressed air. Filtered (40µm)

**Material:** Valve body aluminium alloy

**Seals:** Nitrile

**Working Temperature:**  
-20°C to +70°C

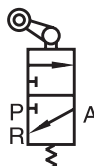
**Maximum Working Pressure:**  
10 bar



### Basic Valve, Metric & BSPP

0335	Thread
K3M3B-05	M5
K3M3B-06	1/8"
K3M3B-08	1/4"

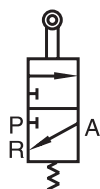
Tech Sheet 3097



### One Way Roller Lever Valve, Metric & BSPP

0335	Thread
K3M3L-05	M5
K3M3L-06	1/8"
K3M3L-08	1/4"

Tech Sheet 3097



### Roller Lever Valve, Metric & BSPP

0335	Thread
K3M3R-05	M5
K3M3R-06	1/8"
K3M3R-08	1/4"

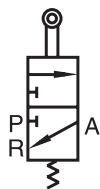
Tech Sheet 3097



### Lever/Lever, Metric & BSPP

0335	Thread
K3M3Y-05	M5
K3M3Y-06	1/8"
K3M3Y-08	1/4"

Tech Sheet 3097

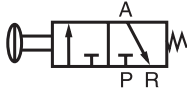


### Roller Valve, Metric & BSPP

0335	Thread
K3M3V-05	M5
K3M3V-06	1/8"
K3M3V-08	1/4"

Tech Sheet 3097

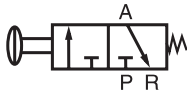
## Panel Mount Valves, Manual &amp; Mechanical 3/2 Way Valves

**Medium:** Clean compressed air. Filtered (40µm)**Material:** Valve body aluminium alloy**Seals:** Nitrile**Working Temperature:**  
-20°C to +70°C**Maximum Working Pressure:**  
10 bar

## Push Button (Shrouded), Metric &amp; BSPP

0335	Thread	Colour
K3M3PF-05-B	M5	Black
K3M3PF-05-G	M5	Green
K3M3PF-05-R	M5	Red
K3M3PF-06-B	1/8"	Black
K3M3PF-06-G	1/8"	Green
K3M3PF-06-R	1/8"	Red
K3M3PF-08-B	1/4"	Black
K3M3PF-08-G	1/4"	Green
K3M3PF-08-R	1/4"	Red

Tech Sheet 3097



## Push Button (External), Metric &amp; BSPP

0335	Thread	Colour
K3M3PP-05-B	M5	Black
K3M3PP-05-G	M5	Green
K3M3PP-05-R	M5	Red
K3M3PP-06-B	1/8"	Black
K3M3PP-06-G	1/8"	Green
K3M3PP-06-R	1/8"	Red
K3M3PP-08-B	1/4"	Black
K3M3PP-08-G	1/4"	Green
K3M3PP-08-R	1/4"	Red

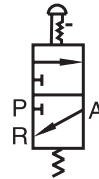
Tech Sheet 3097



## Palm Button, Metric &amp; BSPP

0335	Thread	Colour
K3M3PM-05-B	M5	Black
K3M3PM-05-G	M5	Green
K3M3PM-05-R	M5	Red
K3M3PM-06-B	1/8"	Black
K3M3PM-06-G	1/8"	Green
K3M3PM-06-R	1/8"	Red
K3M3PM-08-B	1/4"	Black
K3M3PM-08-G	1/4"	Green
K3M3PM-08-R	1/4"	Red

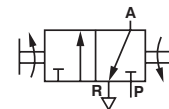
Tech Sheet 3097



## Palm Button, Latching, Metric &amp; BSPP

0335	Thread	Colour
K3M3PL-05-R	M5	Red
K3M3PL-06-R	1/8"	Red
K3M3PL-08-R	1/4"	Red

Tech Sheet 3097



## 2 Position Selector Switch, Metric &amp; BSPP

0335	Thread
K3M3HS05	M5
K3M3HS06	1/8"
K3M3HS08	1/4"

Tech Sheet 3097

## Manual 3/2 Way Valves

**Medium:** Clean compressed air. Filtered (40µm) and lubricated  
**Material:** Aluminium alloy  
**Seals:** Nitrile

**Working Temperature:**  
 -20°C to +70°C

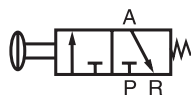
**Maximum Working Pressure:**  
 8 bar



### Push/Pull, BSPP

0335	Thread
CKL110-06	1/8"
CKL210-08	1/4"
CKL310-10	3/8"

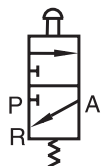
Tech Sheet 3032



### Push Button (Shrouded), 1/8" BSPP

0335	Colour
KSCPF-06-B	Black
KSCPF-06-G	Green
KSCPF-06-R	Red

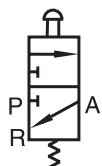
Tech Sheet 3038



### Push Button (External), 1/8" BSPP

0335	Colour
KSCPP-06-B	Black
KSCPP-06-G	Green
KSCPP-06-R	Red

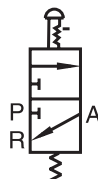
Tech Sheet 3038



### Palm Button, 1/8" BSPP

0335	Colour
KSCPM-06-B	Black
KSCPM-06-G	Green
KSCPM-06-R	Red

Tech Sheet 3038



### Palm Button, Latching, 1/8" BSPP

0335	Colour
KSCPL-06-R	Red

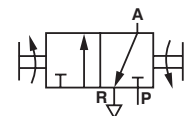
Tech Sheet 3038



### Lever/Lever, 1/8" BSPP

0335	Colour
KSY-06	

Tech Sheet 3038



### Switch, 1/8" BSPP

0335	Colour
KSCHS-06-B	Black
KSCHS-06-G	Green
KSCHS-06-R	Red

Tech Sheet 3038



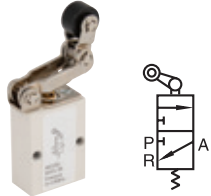
° Working Temperature:  
-20°C to +70°C

## Mechanical 3/2 Way Valves

Maximum Working Pressure:  
8 bar

### One Way Roller Lever, 1/8" BSPP

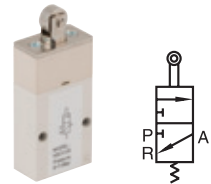
**0335**  
**KSCL-06**  
Tech Sheet 3038



Maximum Working Pressure:  
8 bar

### Roller, 1/8" BSPP

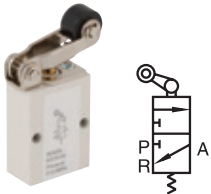
**0335**  
**KSCV-06**  
Tech Sheet 3038



Maximum Working Pressure:  
8 bar

### Roller Lever, 1/8" BSPP

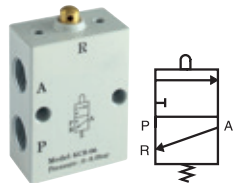
**0335**  
**KSCR-06**  
Tech Sheet 3038



Maximum Working Pressure:  
8 bar

### Plunger, 1/8" BSPP

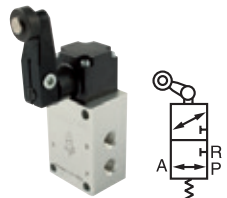
**0335**  
**KCB-06**  
Tech Sheet 3038



Maximum Working Pressure:  
10 bar

### Roller/Spring, 1/8" BSPP

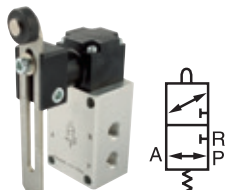
**0335**  
**ZMCR-06-W**  
Tech Sheet 10061



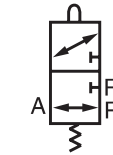
Maximum Working Pressure:  
10 bar

### Adjustable Roller/Spring, 1/8" BSPP

**0335**  
**ZMCJ-06-W**  
Tech Sheet 10061



Maximum Working Pressure:  
10 bar



### Antenna/Spring, 1/8" BSPP

**0335**  
**ZMCP-06-W**  
Tech Sheet 10061



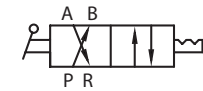
## Manual 4/2 Way Valves

Maximum Working Pressure:  
10 bar

### Lever/Lever, BSPP

0335	Thread
DKHV210-06-S	1/8"
DKHV310-08-S	1/4"
DKHV310-10-S	3/8"
DKHV410-15-S	1/2"
DKHV410-20-S	3/4"

Tech Sheet 3033



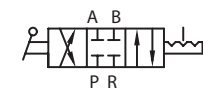
## Manual 4/3 Way Valves

Maximum Working Pressure:  
10 bar

### Lever/Lever/Lever (Fully Sealed Mid Position), BSPP

0335	Thread
DKHV230-C-06-S	1/8"
DKHV330-C-08-S	1/4"
DKHV330-C-10-S	3/8"
DKHV430-C-15-S	1/2"
DKHV430-C-20-S	3/4"

Tech Sheet 3033



° Working Temperature:  
-20°C to +70°C



## Manual 5/2 Way Valves

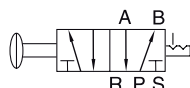
Maximum Working Pressure:  
8 bar



### Push/Pull, BSPP

0335	Thread
DKL110-06	1/8"
DKL210-08	1/4"
DKL310-10	3/8"

Tech Sheet 3034



Maximum Working Pressure:  
8 bar



### Lever/Lever, BSPP

0335	Thread
DKH210-06	1/8"
DKH310-08	1/4"
DKH310-10	3/8"

Tech Sheet 3041



## Manual 5/3 Way Valves

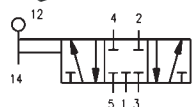
Maximum Working Pressure:  
8 bar



### Lever/Lever/Lever, Fully Sealed Mid Position, BSPP

0335	Thread
DKH230-C-06	1/8"
DKH230-C-08	1/4"
DKH330-C-10	3/8"

Tech Sheet 3045



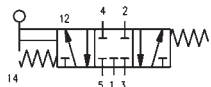
Maximum Working Pressure:  
8 bar



### Lever/Spring/Lever, Fully Sealed Mid Position, BSPP

0335	Thread
DKHA230-C-06	1/8"
DKHA230-C-08	1/4"
DKHA330-C-10	3/8"

Tech Sheet 3046



## Manual 5/2 Way Foot Valves

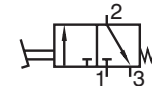
Maximum Working Pressure:  
8 bar



### Foot/Spring, 1/4" BSPP

0335	Description
DKF210-08	-
DKF210-08G	Guarded

Tech Sheet 3055



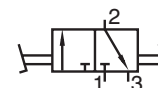
Maximum Working Pressure:  
8 bar



### Foot/Foot, 1/4" BSPP

0335	Description
DKF210-08L	-
DKF210-08LG	Guarded

Tech Sheet 3055



## Flow Control Valves

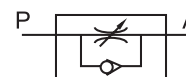
Maximum Working Pressure:  
0.5 to 10 bar



### Uni-directional, BSPP

0335	Thread
K100-06	1/8"
K200-08	1/4"
K300-10	3/8"
K300-15	1/2"

Tech Sheet 3056



## 3/2 Hand Slide Valves

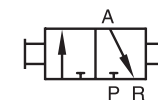
Maximum Working Pressure:  
10 bar



### Hand Slide Valves, BSPP

0335	Thread
KSV-06	1/8"
KSV-08	1/4"
KSV-10	3/8"
KSV-15	1/2"
KSV-20	3/4"
KSV-25	1"

Tech Sheet 3035



# MECHANICAL VALVES, MINIATURE

## Technical Data

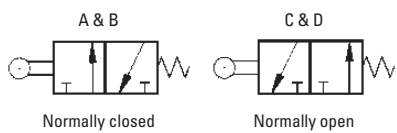
- Valve fitting port: push-in fitting for pip diameter, 4mm tube or M5 thread
- Fluid: filtered air without lubrication. Lubrication, if used, must be continuous
- Type: with poppet
- Nominal diameter: 2.5mm
- Conductance C: 16.5 NI/min – bar
- Critical ratio b: 0.003 bar/bar
- Flow rate at 6 bar P 0.5 bar: 35 NI/min
- Flow rate at 6 bar P 1 bar: 60 NI/min
- Actuation force, plunger at 6 bar: 8N

- Recommended lubricant: ISO and UNI FD22
- Installation: in any position

**Operating Temperature Range:**  
10°C to +60°C

**Operating Pressure:**  
0.5-10 bar

## 'VME' Roller Valve



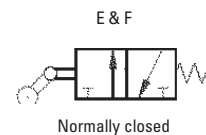
### 4mm Push-in Fittings

9149	Description	Figure
W3501000200	3/2 Way, Normally Closed, Bottom Ported	A
W3501001201	3/2 Way, Normally Closed, Side Ported	B
W3501000201	3/2 Way, Normally Open, Bottom Ported	C
W3501001200	3/2 Way, Normally Open, Side Ported	D

### M5 Thread

9149	Description	Figure
W3501000211	3/2 Way, Normally Closed, Bottom Ported	A
W3501001211	3/2 Way, Normally Closed, Side Ported	B
W3501000210	3/2 Way, Normally Open, Bottom Ported	C
W3501001210	3/2 Way, Normally Open, Side Ported	D

## 'VME' One Way Roller Valve



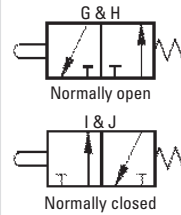
### 4mm Push-in Fittings

9149	Description	Figure
W3501000300	3/2 Way, Normally Closed, Bottom Ported	E
W3501001301	3/2 Way, Normally Closed, Side Ported	F

### M5 Thread

9149	Description	Figure
W3501000311	3/2 Way, Normally Closed, Bottom Ported	E
W3501001311	3/2 Way, Normally Closed, Side Ported	F

## 'VME' Plunger Valve



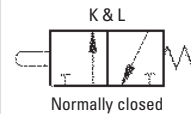
### 4mm Push-in Fittings

9149	Description	Figure
W3501000101	3/2 Way, Normally Open, Bottom Ported	G
W3501001100	3/2 Way, Normally Open, Side Ported	H
W3501000100	3/2 Way, Normally Closed, Bottom Ported	I
W3501001101	3/2 Way, Normally Closed, Side Ported	J

### M5 Thread

9149	Description	Figure
W3501000110	3/2 Way, Normally Open, Bottom Ported	G
W3501001110	3/2 Way, Normally Open, Side Ported	H
W3501000111	3/2 Way, Normally Closed, Bottom Ported	I
W3501001111	3/2 Way, Normally Closed, Side Ported	J

## 'VME' Panel Mounted Plunger Valve



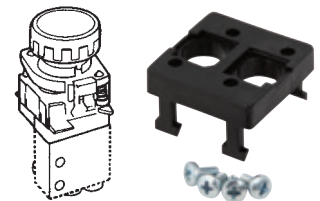
### 4mm Push-in Fittings

9149	Description	Figure
W3501000400	3/2 Way, Normally Closed, Bottom Ported	K
W3501001401	3/2 Way, Normally Closed, Side Ported	L

### M5 Thread

9149	Description	Figure
W3501000411	3/2 Way, Normally Closed, Bottom Ported	K
W3501001411	3/2 Way, Normally Closed, Side Ported	L

## Adaptor Plate



### For 'VME' Push Button

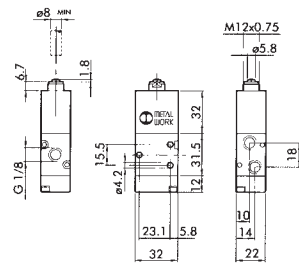
9149	Description
0351000050	For Plunger Valves





# MECHANICAL VALVES

## 3/2 Sensitive Plunger Valve



### G1/8 Ports

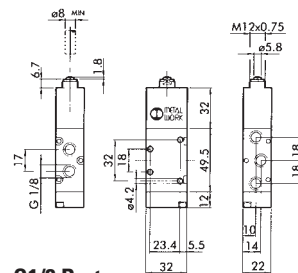
9149

#### Description

7001000200

3/2 G1/8" Normally Closed

## 5/2 Sensitive Plunger Valve



### G1/8 Ports

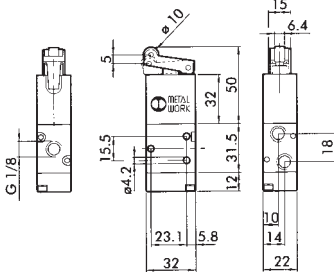
9149

#### Description

7001000210

5/2 G1/8"

## 3/2 Sensitive Roller Lever Valve



### G1/8 Ports

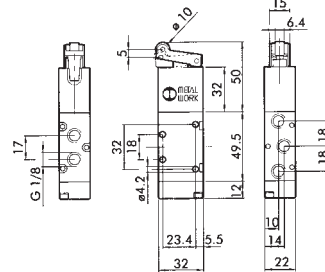
9149

#### Description

7001000400

3/2 G1/8" Normally Closed

## 5/2 Sensitive Roller Lever Valve



### G1/8 Ports

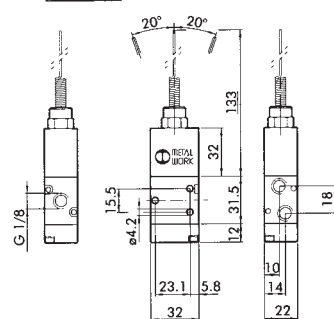
9149

#### Description

7001000410

5/2 G1/8"

## 3/2 Sensitive Aerial Valve



### G1/8 Ports

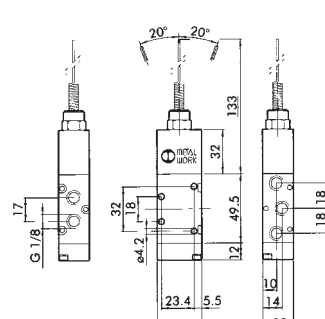
9149

#### Description

7001000700

3/2 G1/8" Normally Closed

## 5/2 Sensitive Aerial Valve



### G1/8 Ports

9149

#### Description

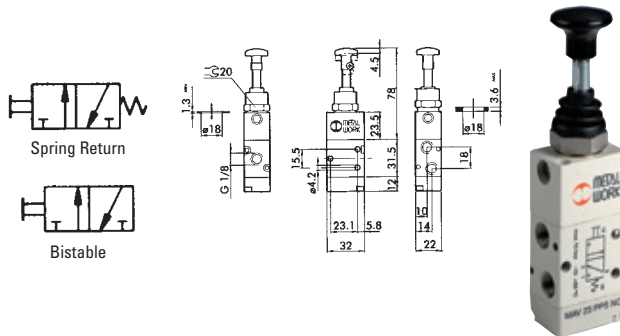
7001000710

5/2 G1/8"



# HAND VALVES

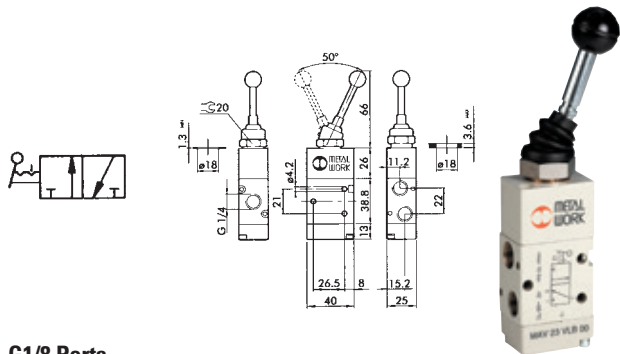
## 3/2 Push/Pull Valve



### G1/8 Ports

9149	Description
7010001200	3/2 NC Spring Return, G1/8"
7010001300	3/2 NC Bistable, G1/8"

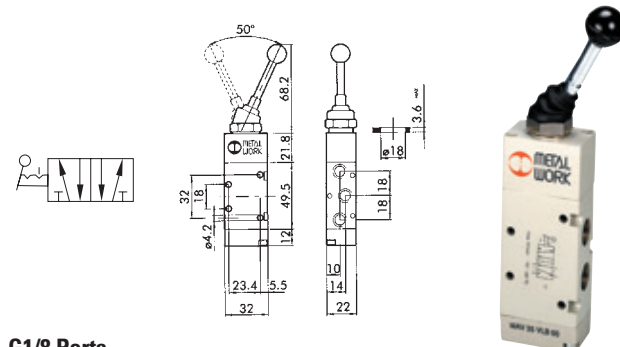
## 3/2 Top Lever Valve



### G1/8 Ports

9149	Description
7010001400	3/2 Bistable, G1/8"

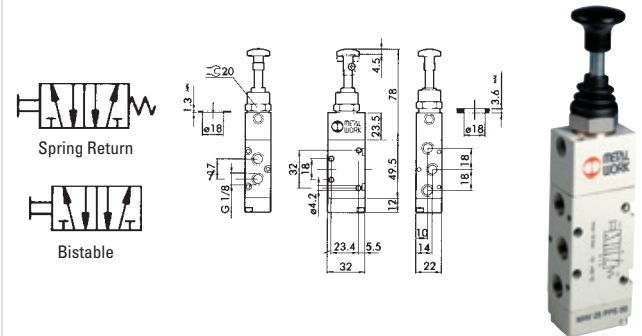
## 5/2 Top Lever Valve



### G1/8 Ports

9149	Description
7010001700	5/2 Bistable, G1/8"

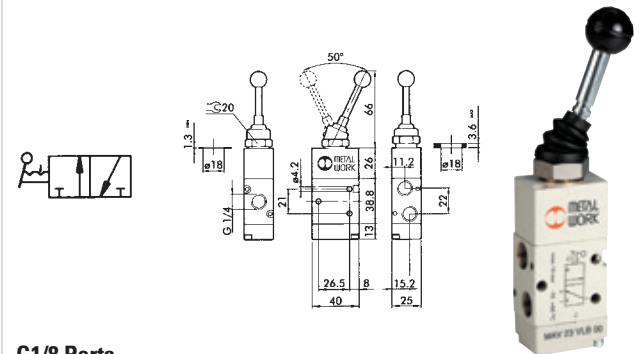
## 5/2 Push/Pull Valve



### G1/8 Ports

9149	Description
7010001500	5/2 Spring Return, G1/8"
7010001600	5/2 Bistable, G1/8"

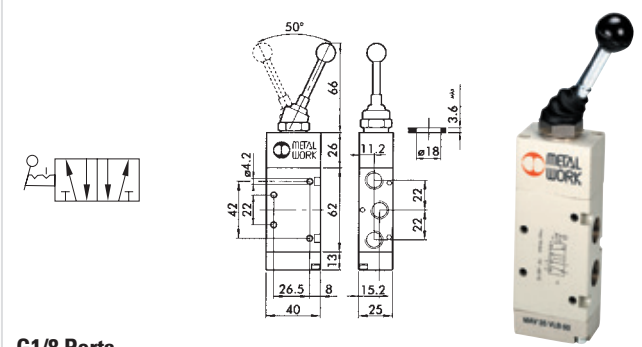
## 3/2 Top Lever Valve



### G1/8 Ports

9149	Description
7020001400	3/2 Bistable, G1/4"

## 5/2 Top Lever Valve



### G1/8 Ports

9149	Description
7020001700	5/2 Bistable, G1/4"



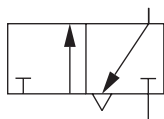


## M/1553 In-line

- Extremely compact
- Extensive range of electrical style operating heads
- Very light operating forces
- Particularly suitable for control panels

**Working Temperature:**  
-20°C to +80°C

**Working Pressure:**  
-0,9 to 10 bar



**Medium:**  
Compressed air, filtered, lubricated and non-lubricate

**Panel Mounting:**  
Hole size Ø 22 mm thickness 5 mm

**Flow:** 59 L/min

**Body:** Plastic

**Roller Operator:** Plastic

**Plunger:** Brass

**Seals:** Nitrile



### Mechanical

0036	Thread	Function	Actuation
M/1553/14	M5	3/2	Plunger/Spring
M/1553/8	M5	3/2	Roller/Spring

Tech Sheet 10530

## T-Lockouts

- Fully isolates supply pressure
- Lockable
- Rapid exhaust
- Ideal for isolating supply lines during maintenance and servicing
- High flo



## CR14, BSPP

0036	BSPP Thread
CR143B	3/8"
CR143C	1/2"
CR144A	3/4" (1" body)

Tech Sheet 20742

## Two-Hand Control Unit

**Working Temperature:**  
+5°C to +40°C

**Working Pressure:**  
3 to 8 bar



## XSHC04

0036
XSHC04

Tech Sheet 1346

## S/666, S/667 In-line

- Poppet design – high flow with compact size
- Extensive range of mechanical and manual operators
- Long established design – proven reliability
- Normally open and normally closed models

**Working Temperature:**  
-20°C to +80°C

**Working Pressure:**  
2-10 bar

**Medium:**  
Compressed air, filtered lubricated and non-lubricated

**Panel Mounting:**  
Hole size Ø 29 mm  
(Ø 16 mm lever valves)

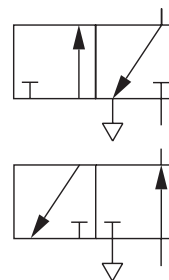
Thickness 9,5 mm  
(4 mm lever valves)

**Flow:**  
N/C: 197 L/min  
N/O: 177 L/min

**Body:**  
Die-cast zinc alloy

**Piston:** Plastic

**Seals:** Nitrile



### Mechanical

0036	Thread	Function	Actuation
S/666/14	G1/8	3/2 N/C	Plunger/Spring
S/667/14	G1/8	3/2 N/O	Plunger/Spring
S/666/8	G1/8	3/2 N/C	Roller/Spring
S/667/8	G1/8	3/2 N/O	Roller/Spring
S/666/108	G1/8	3/2 N/C	Variable Roller/Spring

Tech Sheet 10531

### Manual

0036	Thread	Function	Actuation	Colour
S/666/1	G1/8	3/2 N/C	Button/Spring	-
PS/666/1/R	G1/8	3/2 N/C	Button (Panel Mounting)/Spring	Red
PS/666/1/G	G1/8	3/2 N/C	Button (Panel Mounting)/Spring	Green
PS/666/1/N	G1/8	3/2 N/C	Button (Panel Mounting)/Spring	Black
S/666/6	G1/8	3/2 N/C	Lever/Spring (Panel Mounting)	-
S/666/7	G1/8	3/2 N/C	Lever/Lever (Panel Mounting)	-
S/666/117	G1/8	3/2 N/C	Lever (Long)/Lever (Panel Mounting)	-

Tech Sheet 10531

# SUPER X ACTUATED IN-LINE



## Mechanically & Manually

- Wide range of operators
- Suitable for multi-directional flow and dual supply applications
- High flow capacity
- Lightweight corrosion resistant materials

**Medium:**  
Compressed air, filtered, lubricated and non-lubricated

**Flow: Size L/min**  
G1/8 335  
G1/4 965

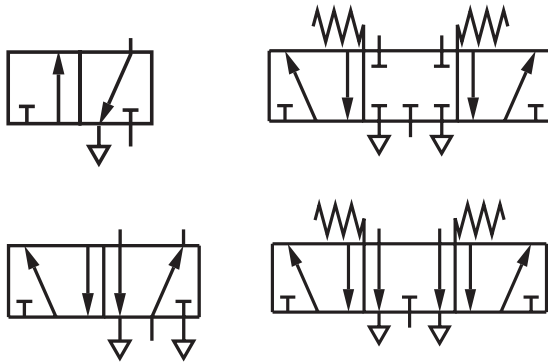
**Body:**  
Die-cast aluminium alloy

**End Cover:**  
Aluminium or glass filled nylon

**Seals:**  
Nitrile rubber

**Working Temperature:**  
0°C to +70°C

**Maximum Working Pressure:**  
10 bar



## Mechanical

0036	Thread	Function	Actuation
0304002	G1/8	3/2	Plunger/Spring
0304020	G1/8	3/2	Roller/Spring
0302930	G1/8	3/2	Roller Lever (Heavy-duty)/Spring
0302940	G1/8	3/2	One Way Trip (Heavy-duty)/Spring
0304320	G1/8	3/2	Antenna Valve
X304400	G1/8	5/2	Plunger/Spring
X304510	G1/8	5/2	Roller Lever/Spring
X303930	G1/8	5/2	Roller Lever (Heavy-duty)/Spring
X304630	G1/8	5/2	Sensitive Roller Lever/Spring
X304720	G1/8	5/2	Antenna/Spring
0306002	G1/4	3/2	Plunger/Spring
0306020	G1/4	3/2	Roller/Spring
0306110	G1/4	3/2	Roller Lever/Spring
X306400	G1/4	5/2	Plunger/Spring
X306420	G1/4	5/2	Roller/Spring
X306510	G1/4	5/2	Roller Lever/Spring

Tech Sheet 10582



## Manual

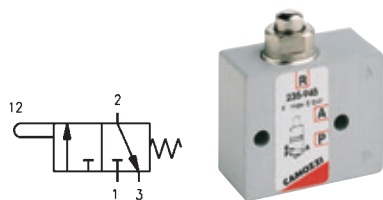
0036	Thread	Function	Actuation	Colour
0304040	G1/8	3/2	Button/Spring	Black
0304050	G1/8	3/2	Button/Spring	Green
0304060	G1/8	3/2	Button/Spring	Red
0303660	G1/8	3/2	Button Palm/Spring	Red
0303670	G1/8	3/2	Button Palm/Spring	Green
0303680	G1/8	3/2	Button Palm/Spring	Black
0304140	G1/8	3/2	Button (Shrouded)/Spring	Black
0304150	G1/8	3/2	Button (Shrouded)/Spring	Green
0304160	G1/8	3/2	Button (Shrouded)/Spring	Red
0304080	G1/8	3/2	Button/Pilot	Black
0304380	G1/8	3/2	Lever/Spring	Black
0304260	G1/8	3/2	Lever Knob/Spring	Black
0304370	G1/8	3/2	Lever/Lever	Black
0304030	G1/8	3/2	Toggle/Toggle	Black
0304250	G1/8	3/2	Knob/Knob	Black
X304550	G1/8	5/2	Button (Shrouded)/Spring	Green
X304480	G1/8	5/2	Button/Pilot	Black
X304650	G1/8	5/2	Knob, Push/Knob, Pull	Black
X304780	G1/8	5/2	Lever/Spring	Black
X304430	G1/8	5/2	Toggle/Toggle	Black
X304770	G1/8	5/2	Lever/Lever	Black
X304640	G1/8	5/2	Knob/Knob or Pilot	Black
X304820	G1/8	5/2	Pedal/Spring	Black
X304840	G1/8	5/2	Pedal/Pedal	Black
X334380	G1/8	5/3	Lever/Spring/Lever	Black
X334780	G1/8	5/3	Level/Spring/Lever	Black
X334370	G1/8	5/3	Lever/Lever/Lever	Black
0306040	G1/4	3/2	Button/Spring	Black
0306380	G1/4	3/2	Lever/Spring	Black
0306370	G1/4	3/2	Lever/Lever	Black
0306250	G1/4	3/2	Knob/Knob	Black
X306440	G1/4	5/2	Button/Spring	Black
X306780	G1/4	5/2	Lever/Spring	Black
X306770	G1/4	5/2	Lever/Lever	Black
X306650	G1/4	5/2	Knob/Knob	Black
X306820	G1/4	5/2	Pedal/Spring	Black
X306840	G1/4	5/2	Pedal/Pedal	Black
X336380	G1/4	5/3	Lever/Spring/Lever	Black
X336780	G1/4	5/3	Lever/Spring/Lever	Black
X336370	G1/4	5/3	Lever/Lever/Lever	Black

Tech Sheet 10582



# DIRECTIONAL CONTROL VALVES

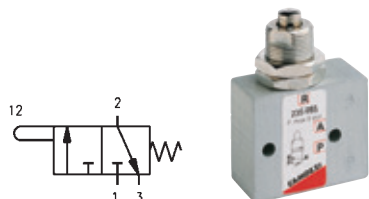
## Series 2, Mechanically Operated Mini-Valves



### 3/2 Plunger Type Valves

0158	Thread
235 945	M5
234 945	Ø4mm

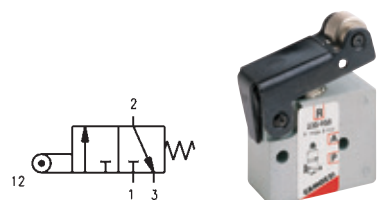
Tech Sheet 1850



### 3/2 Panel Mounted Plunger Type Valves

0158	Thread
235 985	M5
234 985	Ø4mm

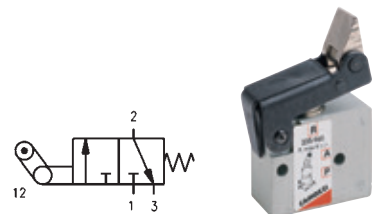
Tech Sheet 1850



### 3/2 Roller Lever Type Valves

0158	Thread
235 955	M5
234 955	Ø4mm

Tech Sheet 1850

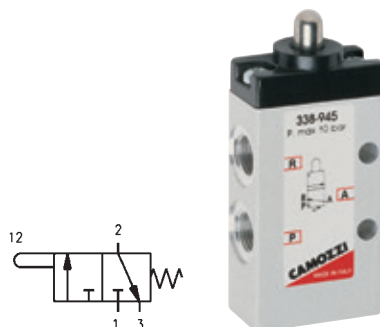


### 3/2 One Way Trip Type Valves

0158	Thread
235 965	M5
234 965	Ø4mm

Tech Sheet 1850

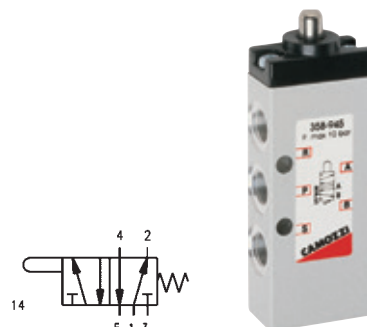
## Series 3, Mechanically Operated Valves



### G1/8\", 3/2 Plunger Type Valve

0158	Thread
338 945	G1/8"

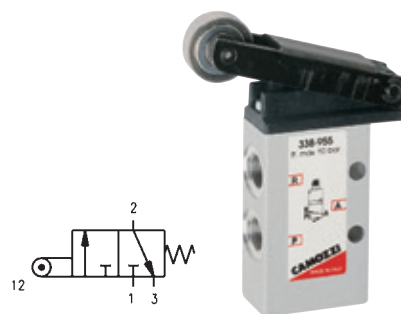
Tech Sheet 1851



### G1/8\", 5/2 Plunger Type Valve

0158	Thread
358 945	G1/8"

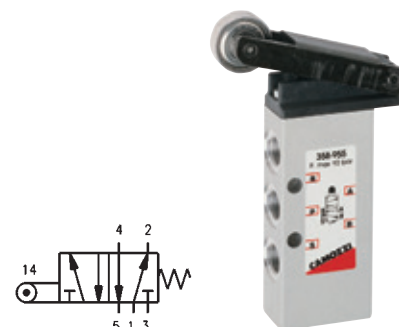
Tech Sheet 1851



### G1/8\", 3/2 Roller Lever Type Valve

0158	Thread
338 955	G1/8"

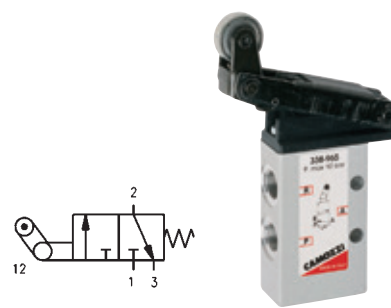
Tech Sheet 1851



### G1/8\", 5/2 Roller Lever Type Valve

0158	Thread
358 955	G1/8"

Tech Sheet 1851



### G1/8\", 3/2 Roller Lever One Way Trip Type Valve

0158	Thread
338 965	G1/8"

Tech Sheet 1851



### G1/8\", 5/2 Roller Lever One Way Trip Type Valve

0158	Thread
358 965	G1/8"

Tech Sheet 1851

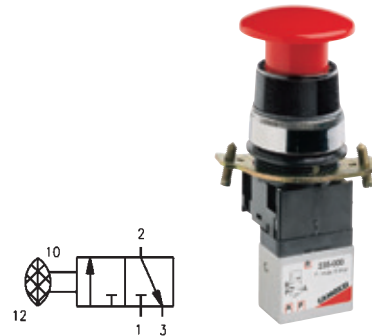
# DIRECTIONAL CONTROL VALVES

## Series 2, Manually Operated Console Mini-Valves



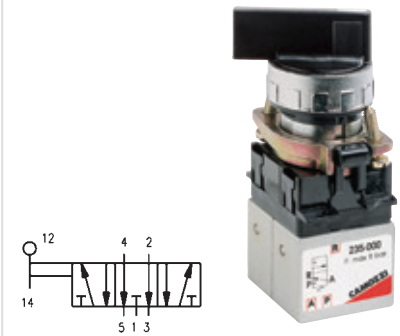
### 3/2 Push Button Spring Return Valves

0158	Thread
235 895	M5
234 895	Ø4mm
Tech Sheet 1852	



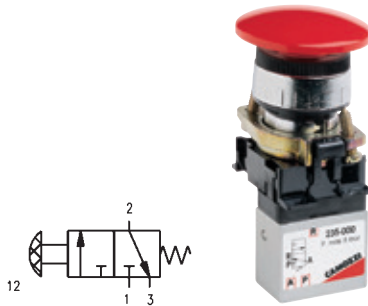
### 3/2 Stable Palm Switch

0158	Thread
235 970	M5
234 970	Ø4mm
Tech Sheet 1852	



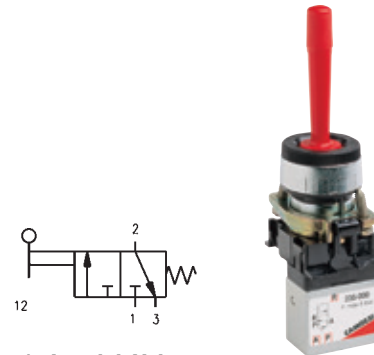
### 5/3 3 Position Selector Switch

0158	Thread
285 870	M5
284 870	Ø4mm
Tech Sheet 1852	



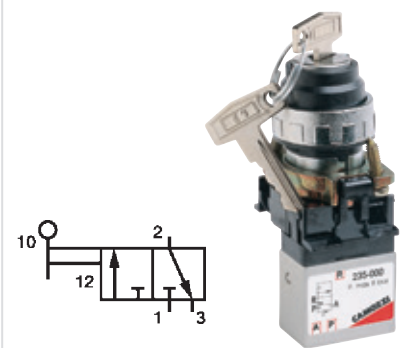
### 3/2 Palm Switch Spring Return Valves

0158	Thread
235 975	M5
234 975	Ø4mm
Tech Sheet 1852	



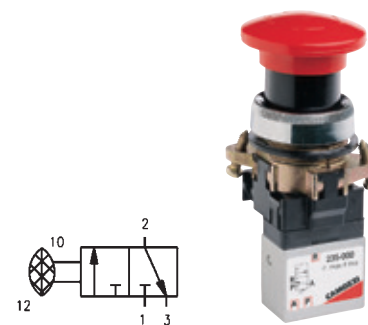
### 3/2 Joystick Valve

0158	Thread
235 905	M5
234 905	Ø4mm
Tech Sheet 1852	



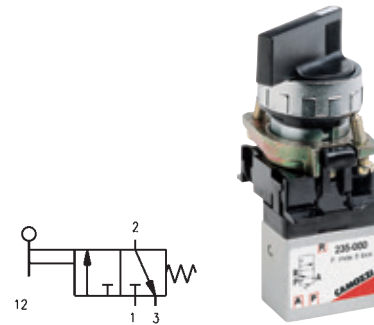
### 3/2 3 Key Switch

0158	Thread
235 904	M5
234 904	Ø4mm
Tech Sheet 1852	



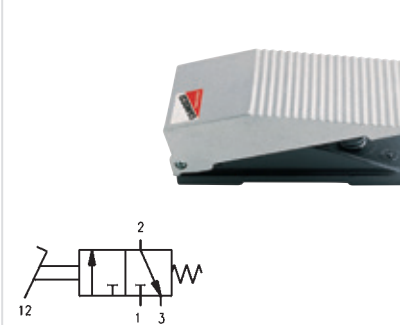
### 3/2 Twist Lock Palm Switch

0158	Thread
235 972	M5
234 972	Ø4mm
Tech Sheet 1852	



### 3/2 2 Position Selector Switch

0158	Thread
235 990	M5
234 990	Ø4mm
Tech Sheet 1852	

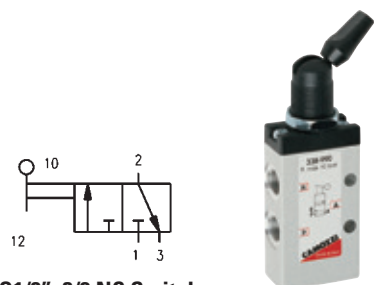


### 3/2 Foot Operated Valves

0158	Thread
235 925	M5
234 925	Ø4mm
Tech Sheet 1852	

# DIRECTIONAL CONTROL VALVES

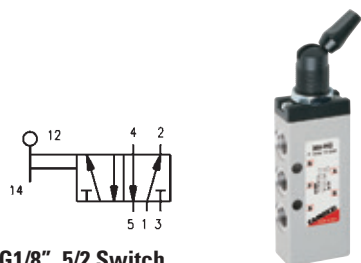
## Series 3, 4 & VMS Manually Operated Valves



**G1/8", 3/2 NC Switch**

0158	Thread
338 990	G1/8"

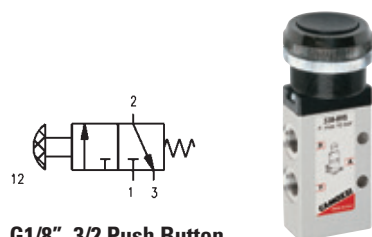
Tech Sheet 10309



**G1/8", 5/2 Switch**

0158	Thread
358 990	G1/8"

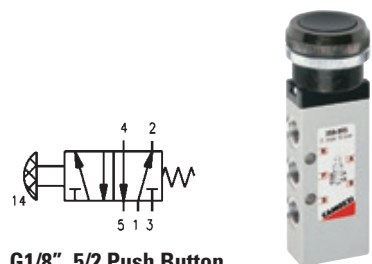
Tech Sheet 10309



**G1/8", 3/2 Push Button**

0158	Thread	Colour
338 895	G1/8"	Black
338 896	G1/8"	Green
338 897	G1/8"	Red

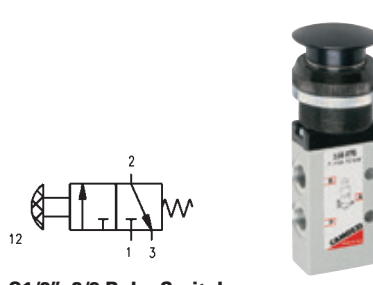
Tech Sheet 10309



**G1/8", 5/2 Push Button**

0158	Thread	Colour
358 895	G1/8"	Black
358 896	G1/8"	Green
358 897	G1/8"	Red

Tech Sheet 10309



**G1/8", 3/2 Palm Switch**

0158	Thread	Colour
338 975	G1/8"	Black
338 976	G1/8"	Green
338 977	G1/8"	Red

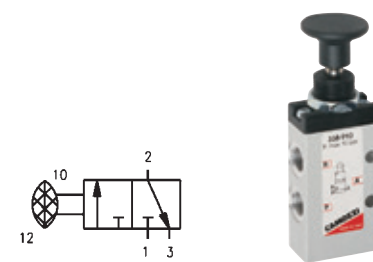
Tech Sheet 10309



**G1/8", 5/2 Palm Switch**

0158	Thread	Colour
358 975	G1/8"	Black
358 976	G1/8"	Green
358 977	G1/8"	Red

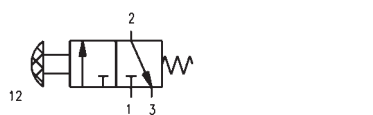
Tech Sheet 10309



**G1/8", 3/2 Push/Pull Knob Bistable**

0158	Thread
338 910	G1/8"

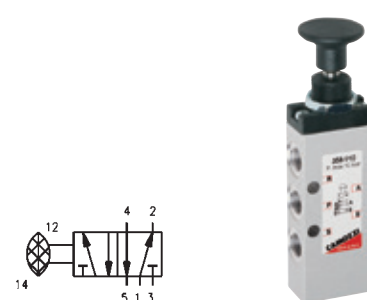
Tech Sheet 10309



**G1/8", 3/2 Push Knob Monostable**

0158	Thread
338 915	G1/8"

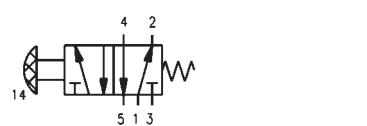
Tech Sheet 10309



**G1/8", 5/2 Push/Pull Knob Bistable**

0158	Thread
358 910	G1/8"

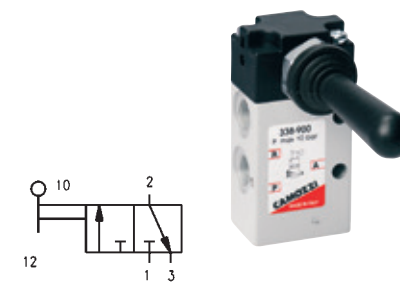
Tech Sheet 10309



**G1/8", 5/2 Push Knob Monostable**

0158	Thread
358 915	G1/8"

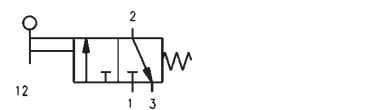
Tech Sheet 10309



**G1/8", 3/2 Lever Valve Bistable**

0158	Thread
338 900	G1/8"

Tech Sheet 10309



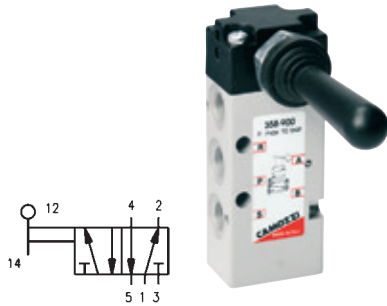
**G1/8", 3/2 Lever Valve Monostable**

0158	Thread
338 905	G1/8"

Tech Sheet 10309

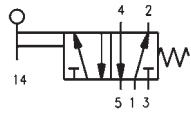
# DIRECTIONAL CONTROL VALVES

## Series 3, 4 & VMS Manually Operated Valves



**G1/8", 5/2 Lever Valve Bistable**

0158	Thread
<b>358 900</b>	G1/8"
Tech Sheet 10309	



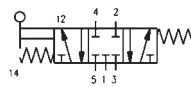
**G1/8", 5/2 Lever Valve Monostable**

0158	Thread
<b>358 905</b>	G1/8"
Tech Sheet 10309	



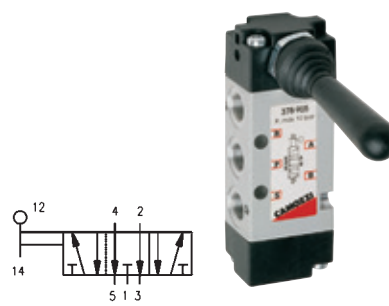
**G1/8", 5/3 CC Lever Valve Bistable**

0158	Thread
<b>368 900</b>	G1/8"
Tech Sheet 10309	



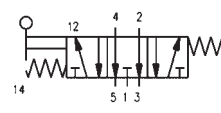
**G1/8", 5/3 CC Lever Valve Monostable**

0158	Thread
<b>368 905</b>	G1/8"
Tech Sheet 10309	



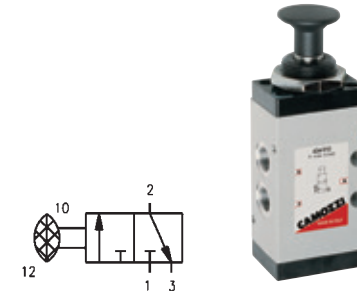
**G1/8", 5/3 CO Lever Valve Bistable**

0158	Thread
<b>378 900</b>	G1/8"
Tech Sheet 10309	



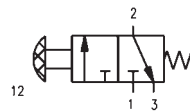
**G1/8", 5/3 CO Lever Valve Monostable**

0158	Thread
<b>378 905</b>	G1/8"
Tech Sheet 10309	



**G1/4", 3/2 Push/Pull Knob Bistable**

0158	Thread
<b>434 910</b>	G1/4"
Tech Sheet 10309	



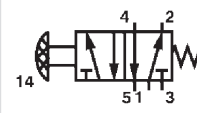
**G1/4", 3/2 Push Knob Monostable**

0158	Thread
<b>434 915</b>	G1/4"
Tech Sheet 10309	



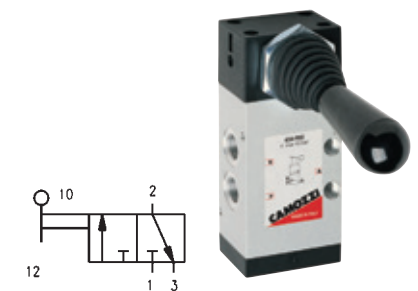
**G1/4", 5/2 Push/Pull Knob Bistable**

0158	Thread
<b>454 910</b>	G1/4"
Tech Sheet 10309	



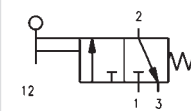
**G1/4", 5/2 Push Knob Monostable**

0158	Thread
<b>454 915</b>	G1/4"
Tech Sheet 10309	



**G1/4", 3/2 Lever Bistable**

0158	Thread
<b>434 900</b>	G1/4"
Tech Sheet 10309	



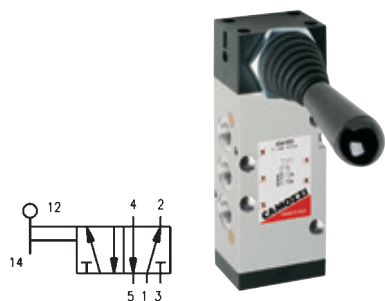
**G1/4", 3/2 Lever Monostable**

0158	Thread
<b>434 905</b>	G1/4"
Tech Sheet 10309	

# DIRECTIONAL CONTROL VALVES

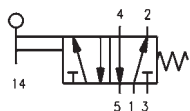


## Series 3, 4 & VMS Manually Operated Valves



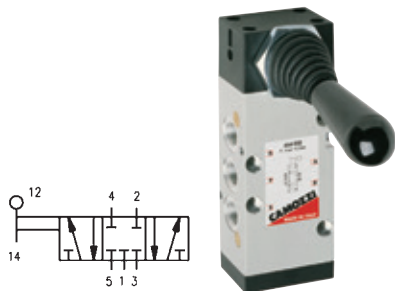
### G1/4\", 5/2 Lever Valve Bistable

0158	Thread
454 900	G1/4"
Tech Sheet 10309	



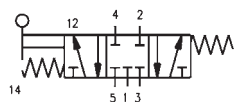
### G1/4\", 5/2 Lever Valve Monostable

0158	Thread
454 905	G1/4"
Tech Sheet 10309	



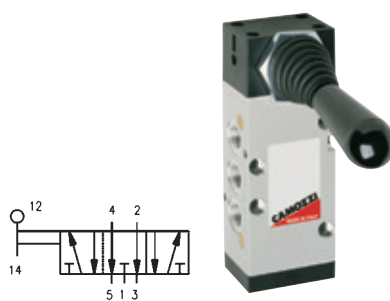
### G1/4\", 5/3 CC Lever Valve Bistable

0158	Thread
464 900	G1/4"
Tech Sheet 10309	



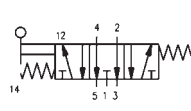
### G1/4\", 5/3 CC Lever Valve Monostable

0158	Thread
464 905	G1/4"
Tech Sheet 10309	



### G1/4\", 5/3 CO Lever Valve Bistable

0158	Thread
474 900	G1/4"
Tech Sheet 10309	



### G1/4\", 5/3 CO Lever Valve Monostable

0158	Thread
474 905	G1/4"
Tech Sheet 10309	



### G1/8\", 3/2 Joystick Lever Valve

0158	Thread
234 9054	G1/8"
Tech Sheet 10309	



### Slide Valves

0158	Thread
VMS 105 M5	M5
VMS 118 1/8"	1/8"
VMS 114 1/4"	1/4"
VMS 138 3/8"	3/8"
VMS 112 1/2"	1/2"
VMS 134 3/4"	3/4"
Tech Sheet 10309	

# PNEUMATIC VALVES & ACCESSORIES

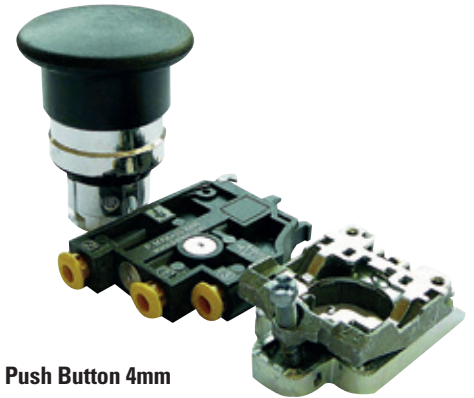


## Parker Mechanical Valves



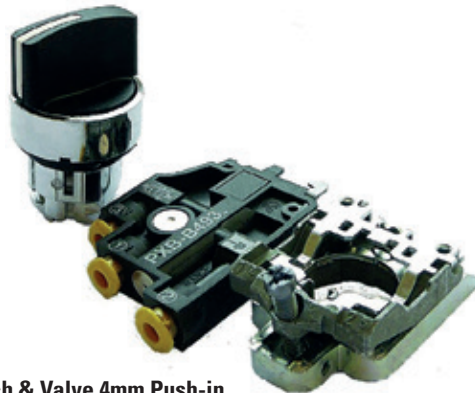
**Push Button & Valve Spring Return 4mm Push-in**

0678	Flow l/min	Description
PXB-B4131BA2	240	Black with 1 NC Valve



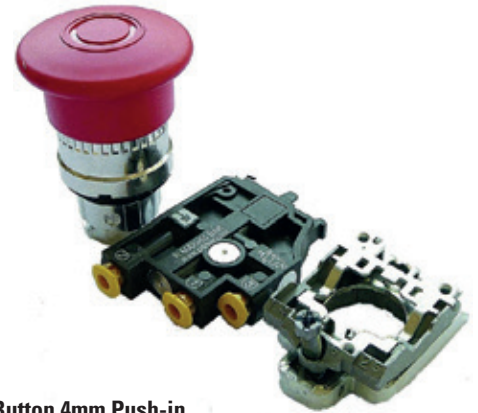
**Mushroom Head Push Button 4mm Push-in**

0678	Flow l/min	Description
PXB-B4131BC2	240	Black - Spring Return - with 1 NC Valve



**Selector Switch & Valve 4mm Push-in**

0678	Flow l/min	Description
PXB-B4131BD2	240	Black - 2 Positions - with 1 NC Valve



**Latching Push Button 4mm Push-in**

0678	Flow l/min	Description
PXB-B4131BT4	240	Red - Latching - with 1 NC Valve



stainless  
steel

For **Parker Angle Seat Valves**  
see page 1051



## Mechanical Valves



### Push Buttons & Valves (Separate Components)

0681	Description
PXB-B4931	Switch Valve - Flow 240 l/min NO/NC



### Micro Plunger & Roller Limit Valves 4mm

0681	Actuator	Return
PXC-M601A110	Steel Plunger	Spring Return
PXC-M121	Plastic Roller	Spring Return
PXC-M521	Plastic Roller	Spring Return



### B43 / B53 Lever Valves G1/8" - G1/4"

0681	Type	Actuator	Return	Thread BSPP
B43003ES	3-2	Palm Lever	Spring Return	1/8"
B43003LS	3-2	Lock Down Lever	Spring Return	1/8"
B43004LS	5-2	Lock Down Lever	Spring Return	1/8"
B53003LT	3-2	Lever	Lever	1/4"
B53004LT	5-2	Lever	Lever	1/4"



### B43 / B53 Valves 3/2 & 5/2 Button Operated G1/8" - G1/4"

0681	Type	Actuator	Return	Thread BSPP
B43003BXS	3-2	Button	Spring	1/8"
B43003HXS	3-2	Button	Button	1/8"
B53003HX	3-2	Button	Button	1/4"
B53004HXS	5-2	Button	Spring	1/4"
B43004HXS	5-2	Button	Button	1/8"



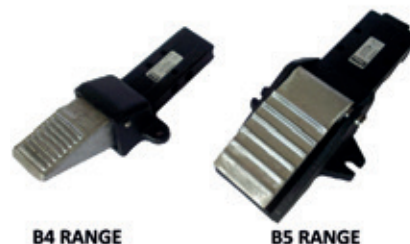
### B43/B53 3/2 Trip Valves G1/8" - G1/4"

0681	Type	Actuator	Return	Thread BSPP
B43003CS	3-2	Plunger	Spring Return	1/8"
B43003RS	3-2	Roller Lever	Spring Return	1/8"
B43003RTS	3-2	One Way Roller Trip	Spring Return	1/8"



### B53 Spool Valve Panel Mounting Kit

0681	Description
M53004L-10A	B53 Series Panel Mounting Kit



### B43 / B53 Foot Pedal 3/2 & 5/2 Valves G1/8" - G1/4"

0681	Type	Actuator	Return	Thread BSPP
B43003FS	3-2	Foot Pedal	Spring Return	1/8"
B53003FS	3-2	Foot Pedal	Spring Return	1/4"
B53004FS	3-2	Foot Pedal	Spring Return	1/4"



### Heavy-duty Lever 3/2 Poppet Valve G1/2"

0681	Actuator	Return	Thread BSPP
B203L	Lever	Lever	1/2"

# PNEUMATIC VALVES & ACCESSORIES



## Mechanical Valves



**Viking Xtreme 3/2 & 5/2 Lever Operated G1/8" G1/4" & G1/2"**

0681	Type	Actuator	Return	Thread BSPP
P2LAX511VV	5-2	Lever	Lever	1/8"
P2LAX511VS	5-2	Lever	Spring	1/8"
P2LDX514VS	5-2	Lever	Spring	1/2"



**Viking Xtreme Valve 5/3 Lever Operated G1/4" & G1/2"**

0681	Actuator	Mid Position	Return	Thread BSPP
P2L BX61222	Lever	Closed	Lever	1/4"
P2L BX61211	Lever	Closed	Spring	1/4"
P2L BX81211	Lever	Vented	Spring	1/4"

## Pilot & Solenoid Valves



**B3 Series 1/8" Valves Pilot & Solenoid**

0681	Type	Actuator	Return	Voltage (if applicable)
B345000XXH	5-2	Air	Air	N/A



For **Parker Solenoid Valves**  
see pages 1036-1038





# 3/2 PNEUMATIC VALVES

## Series 104 Miniature Manual & Mechanical, 4mm Push-in Connectors



**Handle complete with Integrated Valve, Metric 3/2 - 4mm**

0110	Function
105.32.6.40C	Normally Closed



**Tappet/Spring Return, Metric**

0110	Function
104.32.0.1.LC	Normally Closed
104.32.0.1.PA	Normally Open



**Lever Plastic Roller/Spring Return, Metric**

0110	Function
104.32.2.1.LA	Normally Open
104.32.2.1.LC	Normally Closed
104.32.2.1.PA	Normally Open



**Lever Unidirectional - Spring Return, Metric**

0110	Function
104.32.3.1.PC	Normally Closed



**Lever Metal Roller Bearing - Spring Return, Metric**

0110	Function
104.32.2.1/1.LA	Normally Closed



**Raised Push Button/Spring Return Side Connection, Metric**

0110	Colour	Function
104.32.6.23/1.LC	Red	Normally Closed
104.32.6.23/3.LC	Green	Normally Closed



**Raised Push Button/Spring Return Rear Connection, Metric**

0110	Colour	Function
104.32.6.23/3.PC	Green	Normally Closed
104.32.6.23/4.PC	Yellow	Normally Closed



**Palm Push Button Locking, Metric**

0110	Colour	Function
104.32.6.25.PA	Red	Normally Open



**Flush Push Button/Spring Return Side Connection, Metric**

0110	Colour	Function
104.32.6.22/3.LC	Green	Normally Closed

# 3/2 PNEUMATIC VALVES



## Series 104 Miniature Manual & Mechanical, 4mm Push-in Connectors



**Flush Push Button/Spring Return Rear Connection, Metric**

0110	Colour	Function
104.32.6.22/2.PC	Black	Normally Open



**2/2 Switch Short Lever, Rear Connection**

0110	Function
104.22.6.30.PC	Normally Closed



**Raised Push Button/Step/Step, Side Connection, Metric**

0110	Thread	Colour	Function
104.32.6.31.LA	Clear	Clear	Normally Open



**Switch Long Lever, Side Connection**

0110	Function
104.32.6.27.LC	Normally Closed



**Key Switch, Rear Connection**

0110	Function
104.32.6.28.PC	Normally Closed



**Switch Short Lever, Side Connection**

0110	Function
104.32.6.30.LC	Normally Closed
104.32.6.30.PC	Normally Closed



For Air Preparation  
see pages 700-702



# 3/2 PNEUMATIC VALVES

## Series Techno Manual & Mechanical



**Tappet/Spring Return, BSPP**

0110	Thread	Function
T228.32.0.1	1/8"	Normally Closed



**Lever Plastic Roller/Spring Return, BSPP**

0110	Thread	Function
T228.32.2.1	1/8"	Normally Closed



**Lever Metal Roller/Spring Return, BSPP**

0110	Thread	Function
T228.32.2.1/2	1/8"	Normally Closed



**Lever Metal Roller Bearing/Spring Return, BSPP**

0110	Thread	Function
T228.32.2.1/1	1/8"	Normally Closed



**Push Button/Spring Return, BSPP**

0110	Thread	Function
T224.32.8.1	1/4"	Normally Closed



**Palm Push Button Locking, BSPP**

0110	Thread	Function
T228.32.6.25	1/8"	Normally Closed



**Flush 30mm Push Button/Spring Return, BSPP**

0110	Thread	Colour
T228.32.6.1/2	1/8"	Black
T228.32.6.1/3	1/8"	Green



**2 Position Key Switch, BSPP**

0110	Thread
T228.32.6.28	1/8"



**2 Position Switch Short Lever**

0110	Thread	Function
T228.32.6.27	1/8"	Normally Closed



**Lateral Lever**

0110	Thread	Colour	Actuation
T228.32.9/2	1/8"	Black	Lever/Lever



**Lateral Lever**

0110	Thread	Colour	Actuation
T224.32.9.1/2	1/4"	Black	Lever/Spring
T224.32.9/2	1/4"	Black	Lever/Lever
T224.32.9/3	1/4"	Green	Lever/Lever

# 3/2 PNEUMATIC VALVES



## Series 200 Manual & Mechanical



### Tappet/Spring Return, BSPP

0110	Thread	Description	Function
228.32.0.1	1/8"	-	Normally Closed
228.32.1.1	1/8"	Panel Mount	Normally Closed



### Lever Plastic Roller/Spring Return, BSPP

0110	Thread	Function
228.32.2.1	1/8"	Normally Closed



### Lever Metal Roller/Spring Return, BSPP

0110	Thread	Function
228.32.2.1/2	1/8"	Normally Closed



### Lever Metal Roller Bearing/Spring Return, BSPP

0110	Thread	Function
228.32.2.1/1	1/8"	Normally Closed



### Lever Roller Bidirectional/Spring Return, BSPP

0110	Thread	Function
228.32.4.1	1/8"	Normally Closed



### Push Button/Spring Return, BSPP

0110	Thread	Function
228.32.8.1	1/8"	Normally Closed



### Palm Push Button Locking, BSPP

0110	Thread	Function
228.32.6.25	1/8"	Normally Closed



### Flush 30mm Push Button/Spring Return, BSPP

0110	Thread	Function
228.32.6.1/2	1/8"	Normally Closed
228.32.6.1/1	1/8"	Normally Closed
228.32.6.1/3	1/8"	Normally Closed



### Sensitive 30mm Push Button/Differential, BSPP

0110	Thread	Colour	Function
228.32.6.13/1	1/8"	Red	Normally Closed
228.32.6.13/3	1/8"	Green	Normally Closed



### 2 Position Key Switch, BSPP

0110	Thread	Function
228.32.6.28	1/8"	Normally Closed



### Switch Short Lever, BSPP

0110	Thread	Function
228.32.6.27	1/8"	



### Lever

0110	Thread	Colour	Actuation	Function
228.32.9.1/2	1/8"	Black	Spring Return	Normally Closed
228.32.9/2	1/8"	Black	Stable 2 Position	Normally Closed



### Lever, BSPP

0110	Thread	Colour	Actuation	Function
224.32.9.1/2	1/4"	Black	Spring Return	Normally Closed
224.32.9.1/1	1/4"	Red	Spring Return	Normally Closed
224.32.9.2	1/4"	Black	Stable 2 Position	Normally Closed
224.32.9.3	1/4"	Green	Stable 2 Position	Normally Closed



### Lever, BSPP

0110	Thread	Actuation
212.32.9.1	1/2"	Spring Return



### Guarded Foot Valve

0110	Thread	Actuation	Function
228.32.10.2/1	1/8"	Foot/Spring	Normally Closed
228.32.10/1	1/8"	Foot/Foot	Normally Closed

# 5/2 PNEUMATIC VALVES



## Series 104 Minature Manual & Mechanical, 4mm Push-in Connectors



**Raised Push Button Step/Step, Metric**

0110	Colour
104.52.6.31.L	Clear



**Flush Push Button/Spring Return/  
Rear Connection, Metric**

0110	Colour
104.52.6.22/2.P	Black



**Switch Short Lever/  
Side Connection, Metric**

0110
104.52.6.30.L



**Palm Push Button Locking, Metric**

0110	Colour
104.52.6.25.L	Red



**Key Switch/Side Connection, Metric**

0110
104.52.6.28.L

**Switch Short Lever/  
Rear Connection, Metric**

0110
104.52.6.30.P

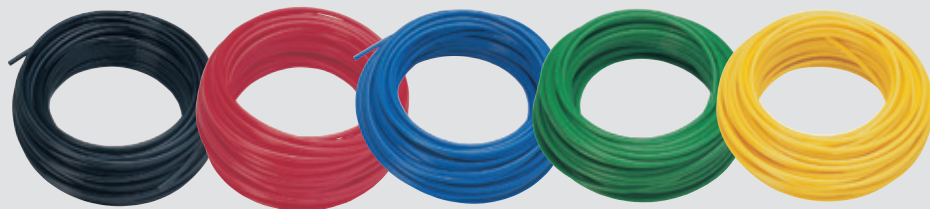


**Flush Push Button/Spring Return/  
Side Connection, Metric**

0110	Colour
104.52.6.22/1.L	Red

**Switch Long Lever/Rear  
Connection, Metric**

0110
104.52.6.27.P



For **Nylon Tube**  
see pages **913-917**

# 5/2 PNEUMATIC VALVES



## Series Techno Manual & Mechanical



**Tappet /Spring Return/Panel Mount, BSPP**

0110	Thread
T228.52.1.1	1/8"



**Lever Metal Roller/Spring Return, BSPP**

0110	Thread
T228.52.2.1/2	1/8"



**Palm Push Button Locking, BSPP**

0110	Thread
T228.52.6.25	1/8"



**Key Switch, BSPP**

0110	Thread
T228.52.6.28	1/8"



**Switch Short Lever, BSPP**

0110	Thread
T228.52.6.27	1/8"



**Front Facing Lever, BSPP**

0110	Thread	Colour
T228.52.55/2	1/8"	Black



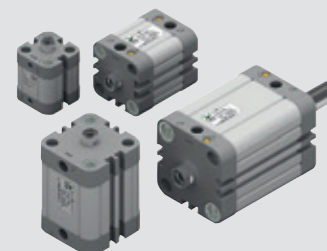
**Lateral Lever, BSPP**

0110	Thread	Colour	Function
T228.52.9.1/3	1/8"	Green	Lever/Spring
T228.52.9/2	1/8"	Black	Lever/Lever
T228.52.9/1	1/8"	Red	Lever/Lever



**Lateral Lever, BSPP**

0110	Thread	Colour	Description
T224.52.9.1/2	1/4"	Black	Lever/Spring
T224.52.9/2	1/4"	Black	Lever/Lever
T224.52.9/1	1/4"	Red	Lever/Lever
T224.52.9/3	1/4"	Green	Lever/Lever



**For Pneumax Compact Cylinders**  
see page 536

# 5/2 PNEUMATIC VALVES



## Series 200 Manual & Mechanical



**Tappet/Spring Return/Panel Mount, BSPP**

0110	Thread
228.52.1.1	1/8"



**Lever Plastic Roller/Spring Return, BSPP**

0110	Thread
228.52.2.1	1/8"



**Lever Metal Roller/Spring Return, BSPP**

0110	Thread
228.52.2.1/2	1/8"



**Lever Metal Roller Bearing/Spring Return, BSPP**

0110	Thread
228.52.2.1/1	1/8"



**Lever Roller Bidirectional/Spring Return, BSPP**

0110	Thread
228.52.4.1	1/8"



**Push Button/Spring Return, BSPP**

0110	Thread
224.52.8.1	1/4"



**Palm Push Button Locking, BSPP**

0110	Thread	Colour
228.52.6.25	1/8"	Red



**2 Position Switch, Short Lever, BSPP**

0110	Thread
228.52.6.27	1/8"



**2 Position Key Switch, BSPP**

0110	Thread
228.52.6.28	1/8"



**2 Position Front Facing Lever, BSPP**

0110	Thread	Colour
228.52.55/2	1/8"	Black
228.52.55/1	1/8"	Red
228.52.55/3	1/8"	Green



**2 Position Lever, BSPP**

0110	Thread	Colour
228.52.9/2	1/8"	Black



**Lever/Spring Return, BSPP**

0110	Thread	Colour
224.52.9.1/2	1/4"	Black
224.52.9.1/1	1/4"	Red
224.52.9.1/3	1/4"	Green



**2 Position Locking Lever, BSPP**

0110	Thread
224.52.9.2	1/4"



**2 Position Stable Lever, BSPP**

0110	Thread
212.52.9	1/2"



**Guarded Foot Valve/Spring Return, BSPP**

0110	Thread
228.52.10.1/1	1/8"
214.52.10.1/1	1/4"



**Miniaturised Foot Valve/Spring, BSPP**

0110	Thread
228.52.10.1P	1/8"



**Foot Valve/Spring Return, BSPP**

0110	Thread
228.52.10.1	1/8"

# 5/3 PNEUMATIC VALVES

## Eco 22 Solenoid Valves



### Lever/Stable 3 Position, BSPP

0110	Thread	Colour	Function
T228.53.31.9/2	1/8"	Black	Closed Centre
T228.53.32.9/2	1/8"	Black	Open Centre



### Lever/Spring To Centre, BSPP

0110	Thread	Colour	Description
T228.53.32.9.1/2	1/8"	Black	Open Centre
T228.53.32.9.1/1	1/8"	Red	Open Centre



### Lever/Spring To Centre, BSPP

0110	Thread	Colour	Function
T224.53.31.9.1/2	1/8"	Black	Closed Centre
T224.53.32.9.1/2	1/8"	Black	Open Centre
T224.53.31.9.1/3	1/8"	Green	Closed Centre



### Lever/Stable 3 Position, BSPP

0110	Thread	Colour	Function
T224.53.31.9/2	1/8"	Black	Closed Centre
T224.53.32.9/2	1/8"	Black	Open Centre
T224.53.31.9/3	1/8"	Green	Closed Centre

## Series 200 Manual & Mechanical



### Lever/Spring To Centre, BSPP

0110	Thread	Colour	Function
228.53.31.9.1/2	1/8"	Black	Closed Centre
228.53.32.9.1/2	1/8"	Black	Open Centre
228.53.31.9.1/1	1/8"	Red	Closed Centre



### Lever/Stable 3 Position, BPP

0110	Thread	Colour	Function
228.53.31.9/2	1/8"	Black	Closed Centre
228.53.31.9/1	1/8"	Red	Closed Centre



### Lever/Spring To Centre, BSPP

0110	Thread	Colour	Function
224.53.31.9.1/2	1/4"	Black	Closed Centre
224.53.31.9.1/3	1/4"	Green	Closed Centre



### Lever/3 Position Locking, BSPP

0110	Thread	Function
224.53.31.9.2	1/4"	Closed Centre



### Lever, BSPP

0110	Description	Thread	Function
212.53.31.9.1	Spring/Lever	1/2"	Closed Centre
212.53.31.9	Lever/ Lever	1/2"	Closed Centre



### Foot Valve/Spring To Centre, BSPP

0110	Thread	Function
228.53.32.10.1	1/8"	Open Centre



**Medium:** Clean compressed air. Filtered (40µm) and lubricated  
**Body Material:** Aluminium alloy  
**Seals:** Nitrile

**Working Temperature:**  
 -20°C to +70°C

**Working Pressure:**  
 1.5 to 8 bar



## Solenoid 3/2 Way Valves



**Direct Acting, Normally Closed, M5**

0335	Voltage
KCV1-M5-B	24V DC
KCV1-M5-C	110V 50/60Hz
KCV1-M5-A	220V 50/60Hz
Tech Sheet 3107	



**Direct Acting, Normally Closed, 1/8" BSPP**

0335	Voltage
KCV1-06-B	24V DC
KCV1-06-C	110V 50/60Hz
KCV1-06-A	220V 50/60Hz
Tech Sheet 3107	



**Solenoid/Spring, Normally Open, BSPP**

0335	Thread
CKV210-06-NO	1/8"
CKV210-08-NO	1/4"
CKV310-10-NO	3/8"
Tech Sheet 3039	



**Solenoid/Spring, Normally Closed, BSPP**

0335	Thread
CKV210-06-NC	1/8"
CKV210-08-NC	1/4"
CKV310-10-NC	3/8"
Tech Sheet 3039	



**Solenoid/Solenoid, BSPP**

0335	Thread
CKV220-06	1/8"
CKV220-08	1/4"
CKV320-10	3/8"
Tech Sheet 3039	



For Pre wired  
 moulded DIN Plugs  
 see page 1043



## Gang Mount Components, to suit KCV Series



**Coupling Screws & O-Ring**

0335
KCV1-P31
Tech Sheet 3107



**Coupling Screws & End Fixing Nuts**

0335
KCV1-P30
Tech Sheet 3107



**Base Plate**

0335
KCV1-P32
Tech Sheet 3107

## SOLENOID VALVES

**Medium:** Clean compressed air. Filtered (40µm) and lubricated  
**Body Material:** Aluminium alloy  
**Seals:** Nitrile

**Working Temperature:**  
 -20°C to +70°C

**Working Pressure:**  
 1.5 to 8 bar



## Solenoid 5/2 Way Valves



## Solenoid/Spring, BSPP

0335	Thread
DKV210-06	1/8"
DKV210-08	1/4"
DKV310-10	3/8"
DKV410-15	1/2"

Tech Sheet 3040



## Solenoid/Solenoid, BSPP

0335	Thread
DKV220-06	1/8"
DKV220-08	1/4"
DKV320-10	3/8"
DKV420-15	1/2"

Tech Sheet 3040

## Solenoid 5/3 Way Valves



## Solenoid/Solenoid, Fully Sealed Mid Position, BSPP

0335	Thread
DKV230C-06	1/8"
DKV230C-08	1/4"
DKV330C-10	3/8"
DKV430C-15	1/2"

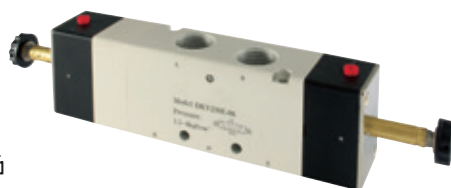
Tech Sheet 3040



## Solenoid/Solenoid, Centre Open Pressurised, BSPP

0335	Thread
DKV230P-06	1/8"
DKV230P-08	1/4"
DKV330P-10	3/8"
DKV430P-15	1/2"

Tech Sheet 3040



## Solenoid/Solenoid, Supply Sealed Mid Position, BSPP

0335	Thread
DKV230E-06	1/8"
DKV230E-08	1/4"
DKV330E-10	3/8"
DKV430E-15	1/2"

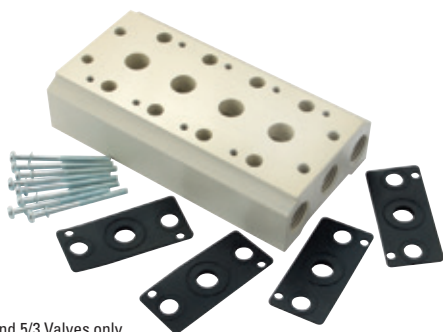
Tech Sheet 3040



For **Silencers**  
 see page 631



## Valve Manifolds



Suitable for use with 5/2 and 5/3 Valves only

Please contact our Technical Department if larger manifolds are required up to 16 stations.

### B Series, to suit 1/8" & 1/4" BSPP Valves, 1/4" BSPP Inlet

0335	No. of Stations
BOOKM-1F	1
BOOKM-2F	2
BOOKM-3F	3
BOOKM-4F	4
BOOKM-5F	5
BOOKM-6F	6
BOOKM-8F	8
BOOKM-10F	10

Tech Sheet 3042

Please contact our Technical Department if larger manifolds are required up to 12 stations.

### C Series, to suit 3/8" BSPP Valves, 3/8" BSPP Inlet

0335	No. of Stations
COOKM-1F	1
COOKM-2F	2
COOKM-3F	3
COOKM-4F	4
COOKM-5F	5
COOKM-6F	6
COOKM-8F	8
COOKM-10F	10

Tech Sheet 3042

Maximum number of stations available is 8.

### D Series, to suit 1/2" BSPP Valves, 1/2" BSPP Inlet

0335	No. of Stations
DOOKM-1F	1
DOOKM-2F	2
DOOKM-3F	3
DOOKM-4F	4
DOOKM-5F	5
DOOKM-6F	6
DOOKM-8F	8

Tech Sheet 3042

## Blanking Plates



### Single

0335	To Suit
BOOKM-B	B Series
COOKM-B	C Series
DOOKM-B	D Series

Tech Sheet 3042

## 5/2 Namur Solenoid Valves



### Solenoid/Spring, BSPP

0335	Thread
DKM310-08	1/4"
DKM310-10	3/8"

Tech Sheet 3043



### Solenoid/Solenoid, BSPP

0335	Thread
DKM320-08	1/4"
DKM320-10	3/8"

Tech Sheet 3043

## Solenoid Coils & Plugs



### Coil & LED Connector

0335	Voltage
K-12DC	12V DC
K-24DC	24V DC
K-24AC	24V 50/60Hz
K-110AC	110V 50/60Hz
K-220AC	220V 50/60Hz

Tech Sheet 3044

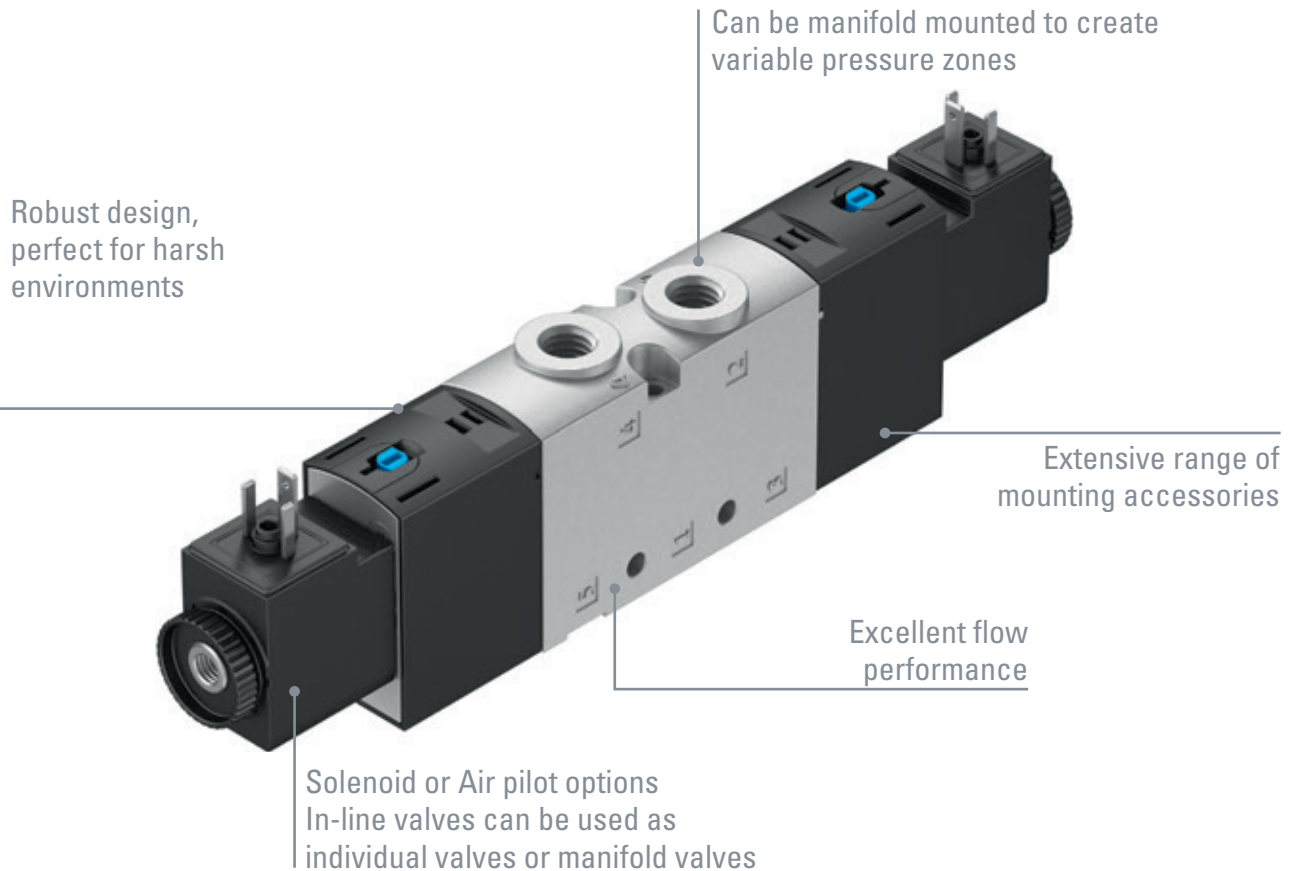
# VALVES

For the full range and more information, please contact one of our sales team.

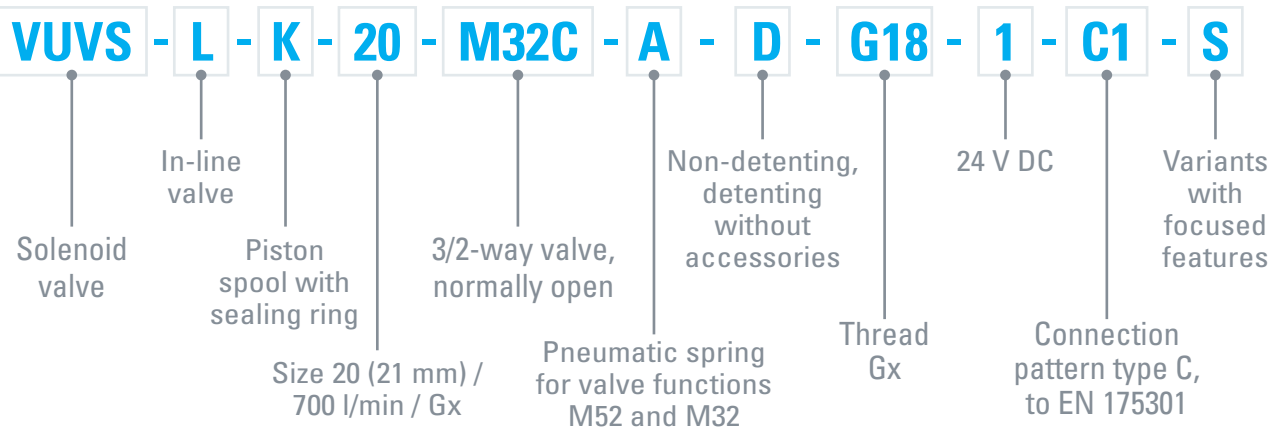
## VUVS UNIVERSAL DIRECTIONAL CONTROL VALVES



### Features



### Product Description



# IN-LINE PISTON SPOOL VALVES WITH SEALING RING, VUVS

# FESTO



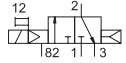
**Ambient Temperature:**  
-5°C to +50°C

- Flow rate up to 2300 l/min
- In-line valves can be used as individual valves or manifold valves
- Variable pressure zones

- Universal valve, sturdy and durable
- Low-cost, no limitations with regard to performance
- Can be used as individual valves or manifold valves VTUS

## In-line Electrical Connection Pattern Type B

**Working Pressure:**  
1.5 to 8 bar

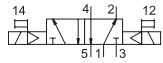


### 3/2 Way Solenoid/Pneumatic Spring with Internal Pilot Supply, Normally Closed

0009	Thread	Size mm	Voltage	Manufacturer's Code
8043217	G1/4"	25	24V DC	VUVS-LK25-M32C-AD-G14-1B2-S
8049880	G3/8"	30	24V DC	VUVS-LK30-M32C-AD-G38-1B2-S

Tech Sheet 70803

**Working Pressure:**  
1.5 to 8 bar

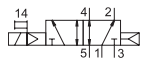


### 5/2 Way Solenoid/Solenoid with Internal Pilot Supply

0009	Thread	Size mm	Voltage	Manufacturer's Code
8043219	G1/4"	25	24V DC	VUVS-LK25-B52-D-G14-1B2-S
8049882	G3/8"	30	24V DC	VUVS-LK30-B52-D-G38-1B2-S

Tech Sheet 70804

**Working Pressure:**  
1.5 to 8 bar



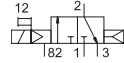
### 5/2 Way Solenoid/Pneumatic Spring with Internal Pilot Supply

0009	Thread	Size mm	Voltage	Manufacturer's Code
8043218	G1/4"	25	24V DC	VUVS-LK25-M52-AD-G14-1B2-S
8049881	G3/8"	30	24V DC	VUVS-LK30-M52-AD-G38-1B2-S

Tech Sheet 70805

## In-line Electrical Connection Pattern Type C

**Working Pressure:**  
1.5 to 8 bar

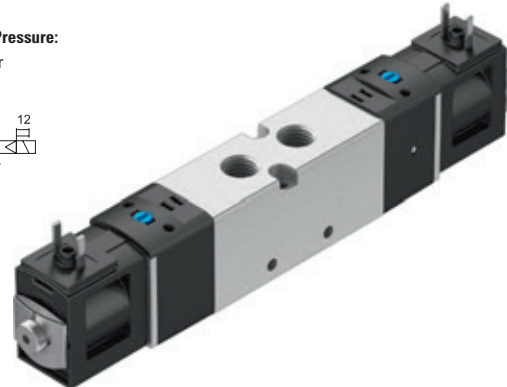
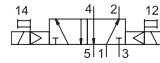


### 3/2 Way Solenoid/Pneumatic Spring with Internal Pilot Supply, Normally Closed

0009	Thread	Size mm	Voltage	Manufacturer's Code
8043213	G1/8"	20	24V DC	VUVS-LK20-M32C-AD-G18-1C1-S

Tech Sheet 70806

**Working Pressure:**  
1.5 to 8 bar

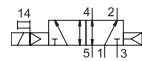


### 5/2 Way Solenoid/Solenoid with Internal Pilot Supply

0009	Thread	Size mm	Voltage	Manufacturer's Code
8043215	G1/8"	20	24V DC	VUVS-LK20-B52-D-G18-1C1-S

Tech Sheet 70808

**Working Pressure:**  
1.5 to 8 bar



### 5/2 Way Solenoid/Pneumatic Spring with Internal Pilot Supply

0009	Thread	Size mm	Voltage	Manufacturer's Code
8043214	G1/8"	20	24V DC	VUVS-LK20-M52-AD-G18-1C1-S

Tech Sheet 70807

# IN-LINE PISTON SPOOL VALVES, VUVS

# FESTO



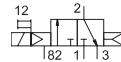
**Ambient Temperature:**  
-5°C to +50°C

- Flow rate up to 2300 l/min
- In-line valves can be used as individual valves or manifold valves
- Variable pressure zones

- Universal valve, sturdy and durable
- Low-cost, no limitations with regard to performance
- Can be used as individual valves or manifold valves VTUS

## In-line Electrical Connection Pattern Type C

**Working Pressure:**  
2.5 to 10 bar

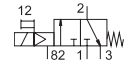


### 3/2 Way Solenoid/Pneumatic Spring with Internal Pilot Supply, Normally Closed

0009	Thread	Size mm	Voltage	Manufacturer's Code
575475	G1/4"	25	24V DC	VUVS-L25-M32C-AD-G14-F8-1C1
575568	G3/8"	30	24V DC	VUVS-L30-M32C-AD-G38-F8-1C1

Tech Sheet 70809

**Working Pressure:**  
2.5 to 10 bar

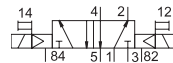


### 3/2 Way Solenoid/Mechanical Spring with Internal Pilot Supply, Normally Closed

0009	Thread	Size mm	Voltage	Manufacturer's Code
575274	G1/8"	20	24V DC	VUVS-L20-M32C-MD-G18-F7-1C1
575477	G1/4"	25	24V DC	VUVS-L25-M32C-MD-G14-F8-1C1
575570	G3/8"	30	24V DC	VUVS-L30-M32C-MD-G38-F8-1C1

Tech Sheet 70810

**Working Pressure:**  
1.5 to 10 bar

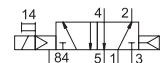


### 5/2 Way Solenoid/Solenoid with Internal Pilot Supply

0009	Thread	Size mm	Voltage	Manufacturer's Code
575265	G1/8"	20	24V DC	VUVS-L20-B52-D-G18-F7-1C1
575518	G1/4"	25	24V DC	VUVS-L25-B52-D-G14-F8-1C1
575611	G3/8"	30	24V DC	VUVS-L30-B52-D-G38-F8-1C1

Tech Sheet 70813

**Working Pressure:**  
2.5 to 10 bar



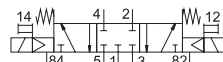
### 5/2 Solenoid/Mechanical Spring Valves with Internal Pilot Supply

0009	Thread	Size mm	Voltage	Manufacturer's Code
575264	G1/8"	20	24V DC	VUVS-L20-M52-MD-G18-F7-1C1
575511	G1/4"	25	24V DC	VUVS-L25-M52-MD-G14-F8-1C1
575604	G3/8"	30	24V DC	VUVS-L30-M52-MD-G38-F8-1C1

Tech Sheet 70811

**Working Pressure:**  
2.5 to 10 bar

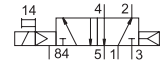
### 5/3 Way Solenoid/Solenoid, Fully Closed Mid Position with Internal Pilot Supply



0009	Thread	Size mm	Voltage	Manufacturer's Code
575268	G1/8"	20	24V DC	VUVS-L20-P53C-MD-G18-F7-1C1
575525	G1/4"	25	24V DC	VUVS-L25-P53C-MD-G14-F8-1C1
575618	G3/8"	30	24V DC	VUVS-L30-P53C-MD-G38-F8-1C1

Tech Sheet 70814

### 5/2 Way Solenoid/Pneumatic Spring with Internal Pilot Supply



0009	Thread	Size mm	Voltage	Manufacturer's Code
575263	G1/8"	20	24V DC	VUVS-L20-M52-AD-G18-F7-1C1
575503	G1/4"	25	24V DC	VUVS-L25-M52-AD-G14-F8-1C1
575596	G3/8"	30	24V DC	VUVS-L30-M52-AD-G38-F8-1C1

Tech Sheet 70812

# ACCESSORIES FOR VALVES

# FESTO

Solenoid Valves  
5.07

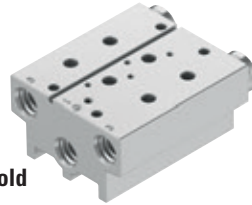
## Manifold Blocks includes Seals & Screws for Mounting Valves



**Common Supply Manifold for Mounting Both Sides, Size 20**

0009	Thread	No. of Stations	Manufacturer's Code
576363	G3/8	2	VABM-B10-20-G38-2-P53
576365	G3/8	4	VABM-B10-20-G38-4-P53
576367	G3/8	6	VABM-B10-20-G38-6-P53
576369	G3/8	8	VABM-B10-20-G38-8-P53
576371	G3/8	10	VABM-B10-20-G38-10-P53

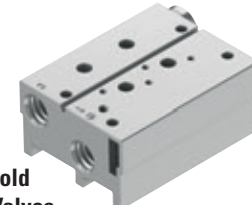
Tech Sheet 70145



**Compact Manifold Blocks for 5/2 & 5/3 Valves, Size 20**

0009	Thread	No. of Stations	Manufacturer's Code
576417	G1/4	2	VABM-B10-20S-G14-2
576419	G1/4	4	VABM-B10-20S-G14-4
576421	G1/4	6	VABM-B10-20S-G14-6
576423	G1/4	8	VABM-B10-20S-G14-8
576425	G1/4	10	VABM-B10-20S-G14-10

Tech Sheet 70143



**Compact Manifold Blocks for 3/2 Valves, Size 20**

0009	Thread	No. of Stations	Manufacturer's Code
576465	G1/4	2	VABM-B10-20S-G14-2-P3
576467	G1/4	4	VABM-B10-20S-G14-4-P3
576469	G1/4	6	VABM-B10-20S-G14-6-P3
576471	G1/4	8	VABM-B10-20S-G14-8-P3
576473	G1/4	10	VABM-B10-20S-G14-10-P3

Tech Sheet 70159

**Common Supply Manifold for Mounting Both Sides, Size 25**

0009	Thread	No. of Stations	Manufacturer's Code
8026219	G1/2	2	VABM-B10-25-G12-2-P53
8026221	G1/2	4	VABM-B10-25-G12-4-P53
8026223	G1/2	6	VABM-B10-25-G12-6-P53
8026225	G1/2	8	VABM-B10-25-G12-8-P53
8026227	G1/2	10	VABM-B10-25-G12-10-P53

Tech Sheet 71601

**Compact Manifold Blocks for 5/2 & 5/3 Valves, Size 25**

0009	Thread	No. of Stations	Manufacturer's Code
8026261	G3/8	2	VABM-B10-25S-G38-2
8026263	G3/8	4	VABM-B10-25S-G38-4
8026265	G3/8	6	VABM-B10-25S-G38-6
8026267	G3/8	8	VABM-B10-25S-G38-8
8026269	G3/8	10	VABM-B10-25S-G38-10

Tech Sheet 71602

**Compact Manifold Blocks for 3/2 Valves, Size 25**

0009	Thread	No. of Stations	Manufacturer's Code
8026297	G3/8	2	VABM-B10-25S-G38-2-P3
8026299	G3/8	4	VABM-B10-25S-G38-4-P3
8026301	G3/8	6	VABM-B10-25S-G38-6-P3
8026303	G3/8	8	VABM-B10-25S-G38-8-P3
576473	G1/4	10	VABM-B10-20S-G14-10-P3

Tech Sheet 70144

## Solenoid Coils VACS



**Solenoid Coil Without Plug Socket, Connection Pattern To EN 175301-803, Type C**

0009	Voltage	Manufacturer's Code
8025331	12V DC	VACS-C-C1-5
8025330	24V DC	VACS-C-C1-1
8025336	48V DC	VACS-C-C1-7
8025335	24V AC	VACS-C-C1-1A
8025337	48V AC	VACS-C-C1-7A

Tech Sheet 71578

## Plug Sockets MSSD



**To suit Type C to EN 175301-803**

0009	Manufacturer's Code
151687	MSSD-EB

Tech Sheet 70184

## Blanking Plates



**Cover Plates for VUVS, Common Supply**

0009	To Suit	Manufacturer's Code
576409	G3/8	VABB-B10-20-A
8026208	G1/2	VABB-B10-25-A
8026334	G3/4	VABB-B10-30-A

Tech Sheet 70159



**Cover Plates for VUVS, 3/2 Way Valves**

0009	To Suit	Manufacturer's Code
576411	G3/8	VABB-B10-20-E-P3
8026210	G1/2	VABB-B10-25-E-P3
8026336	G3/4	VABB-B10-30-E-P3

Tech Sheet 70161



**Cover Plates for VUVS, 5/2 & 5/3 Way Valves**

0009	To Suit	Manufacturer's Code
576410	G3/8	VABB-B10-20-E
8026209	G1/2	VABB-B10-25-E
8026335	G3/4	VABB-B10-30-E

Tech Sheet 70160

# ELECTRICALLY ACTUATED DIRECTIONAL CONTROL VALVES

# FESTO



## VUVS-L Series, Solenoid Valves, Type B, with 24V DC Solenoid Coil



### 3/2 Way, Normally Closed, Single Solenoid Valve with Internal Pilot Supply

0009	Thread	Size mm	Function	LPM	Manufacturer's Code
575481	G1/4	25	Mechanical Spring	1000	VUVS-L25-M32C-MD-G14-F8-1B2
575574	G3/8	30	Mechanical Spring	2300	VUVS-L30-M32C-MD-G38-F8-1B2
Tech Sheet 71579					



### 5/2 Way, Single Solenoid Valve with Internal Pilot Supply

0009	Thread	Size mm	Function	LPM	Manufacturer's Code
575513	G1/4	25	Mechanical Spring	1300	VUVS-L25-M52-MD-G14-F8-1B2
575606	G3/8	30	Mechanical Spring	2300	VUVS-L30-M52-MD-G38-F8-1B2
Tech Sheet 71580					



### 5/2 Way, Double Solenoid Valve with Internal Pilot Supply

0009	Thread	Size mm	Function	LPM	Manufacturer's Code
575520	G1/4	25	Mechanical Spring	1300	VUVS-L25-B52-D-G14-F8-1B2
575613	G3/8	30	Mechanical Spring	2300	VUVS-L30-B52-D-G38-F8-1B2
Tech Sheet 71581					

### 5/3 Way, Closed Mid Position, Solenoid Valve with Internal Pilot Supply

0009	Thread	Size mm	Function	LPM	Manufacturer's Code
575527	G1/4	25	Mechanical Spring	1200	VUVS-L25-P53C-MD-G14-F8-1B2
575620	G3/8	30	Mechanical Spring	2300	VUVS-L30-P53C-MD-G38-F8-1B2
Tech Sheet 71582					

### 5/3 Way, Exhausted Mid Position, Solenoid Valve with Internal Pilot Supply

0009	Thread	Size mm	Function	LPM	Manufacturer's Code
575541	G1/4	25	Mechanical Spring	1000	VUVS-L25-P53E-MD-G14-F8-1B2
Tech Sheet 71583					

## VUVS-L Series, Solenoid Valves, Type C, with 24V DC Solenoid Coil



### 5/3 Way, Closed Mid Position, Solenoid Valve with Internal Pilot Supply

0009	Thread	Size mm	Function	LPM	Manufacturer's Code
575266	G1/8	20	Mechanical Spring	600	VUVS-L20-P53E-MD-G18-F7-1C1
Tech Sheet 71584					



# SOLENOID CONTROL VALVES

## Solenoid Valves

Technical Data	1/8"	1/4"	3/8"	1/2"	Namur
Operating pressure:					
monostable bar			2.5 to 10		
bistable bar			1 to 10		
external pilot assisted bar			Vacuum to 10		
Minimum pilot pressure bar			2.5		
Operating temperature range			-10°C to +60°C		
Nominal diameter mm	5	7.5	13.3	15	7.5
Conductance C NI/min - bar	121.43	264.26	505.52	971.43	264.26
Critical ratio b bar/bar	0.32	0.27	0.32	0.43	0.27
Flow rate at 6 bar ΔP 0.5 bar NI/min	400	750	1560	3200	750
Flow rate at 6 bar ΔP 1 bar NI/min	550	1100	2150	4600	1100
TRA / TRR monostable at 6 bar ms	15/35	19/45	21/72	36/60	7/15
TRA / TRR bistable at 6 bar ms	20/20	21/21	18/18	30/30	7/7
Coil voltage values	12; 24 VDC – 24; 110; 220 V AC 50/60Hz				
Power	2 W (DC) 3.5VA (AC)				
Voltage tolerance %	-10 to +15				
Insulation class	F 155				

## Namur Interface Solenoid/Spring Valve



### G1/4 Ports

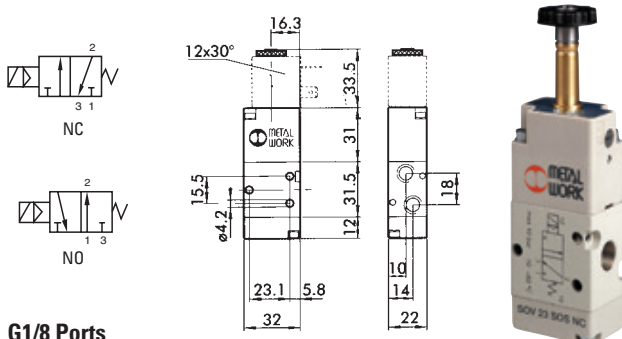
9149	Description
7021020100	Single Solenoid 5/2 G1/4"

## Namur Interface Solenoid/Solenoid Valve

### G1/4 Ports

9149	Description
7021020200	Double Solenoid 5/2 G1/4"

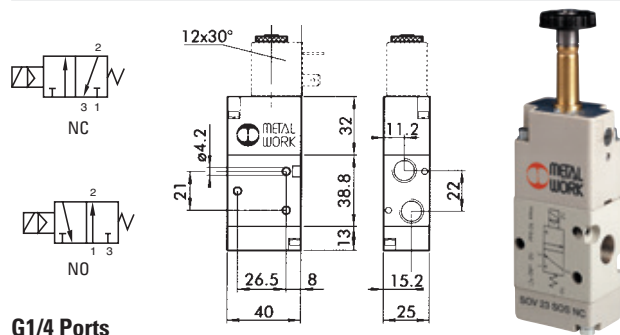
## 3/2 Solenoid/Spring Valve, Normally Open



### G1/8 Ports

9149	Description
7010020400	3/2 G1/8" NO

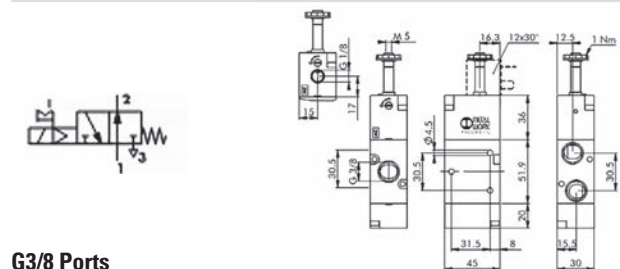
## 3/2 Solenoid/Spring Valve, Normally Open



### G1/4 Ports

9149	Description
7020020400	3/2 G1/4" NO

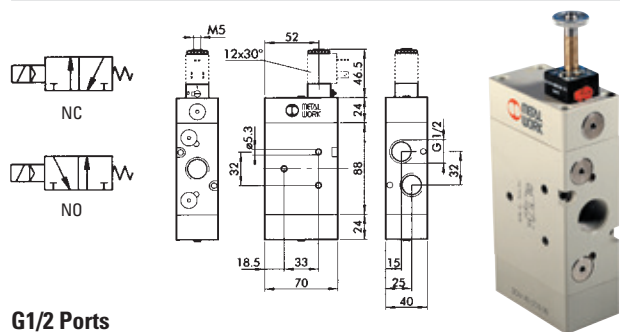
## 3/2 Solenoid/Spring Valve, Normally Open



### G3/8 Ports

9149	Description
7040020400	3/2 G3/8" NO

## 3/2 Solenoid/Spring Valve, Normally Open



### G1/2 Ports

9149	Description
7030020400	3/2 G1/2" NO Spring



For Pre wired  
moulded DIN Plugs  
see page 1043

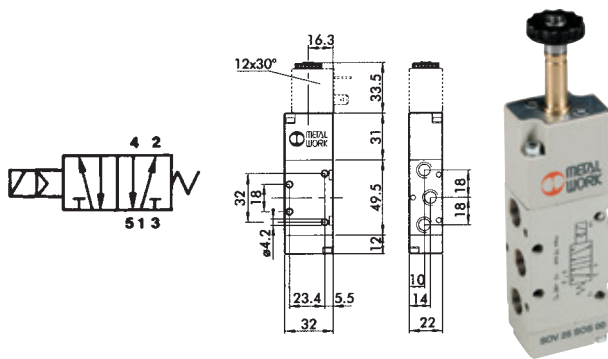




# SOLENOID CONTROL VALVES

## 5/2 Solenoid/Spring Valve

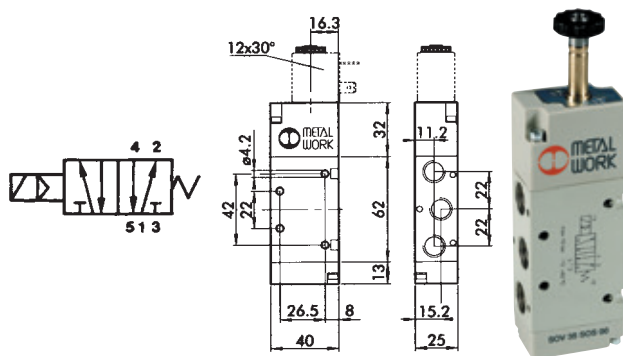
Note: solenoid coils must be ordered separately.



### G1/8 Ports

9149	Description
7010021100	5/2 G1/8"

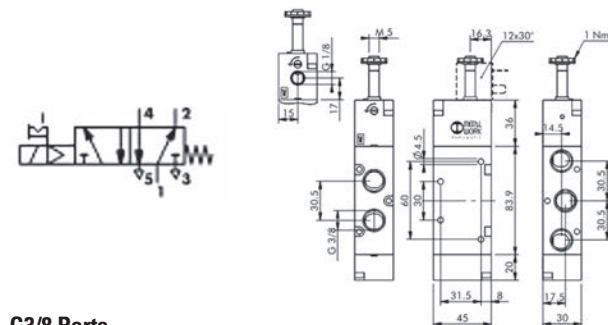
## 5/2 Solenoid/Spring Valve



### G1/4 Ports

9149	Description
7020021100	5/2 G1/4"

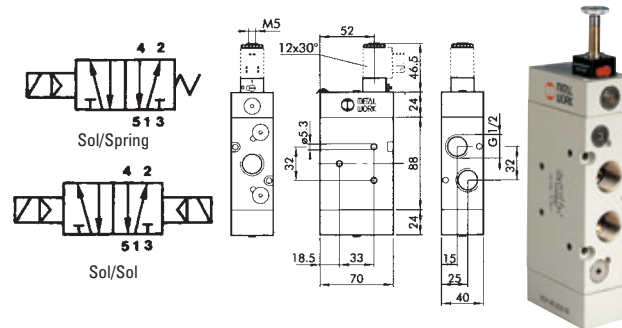
## 5/2 Solenoid/Spring Valve



### G3/8 Ports

9149	Description
7040021100	5/2 G3/8"

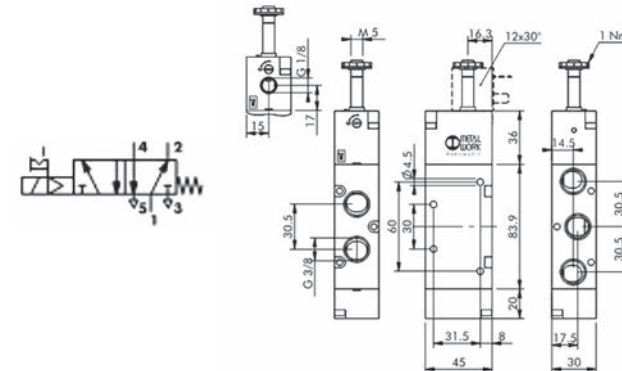
## 5/2 Solenoid/Spring Valve



### G1/2 Ports

9149	Description
7030021100	5/2 G1/2" Sol/Spring

## 5/2 Solenoid/Spring Valve, Assisted



### G3/8 Ports

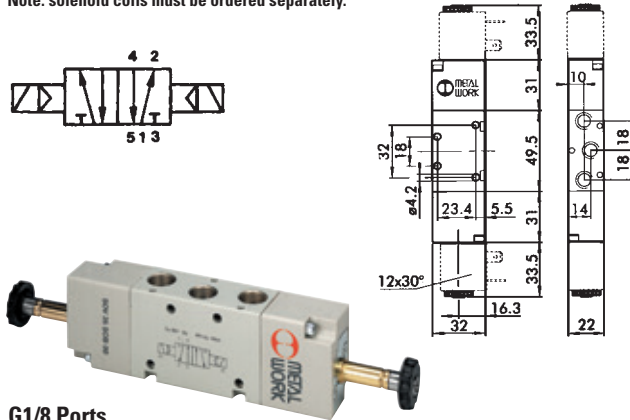
9149	Description
7040021500	5/2 G3/8" ASS

# SOLENOID CONTROL VALVES



## 5/2 Solenoid/Solenoid Valve

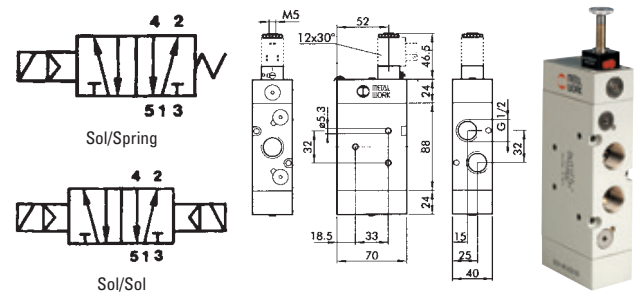
Note: solenoid coils must be ordered separately.



G1/8 Ports

9149	Description
7010021200	5/2 G1/8"

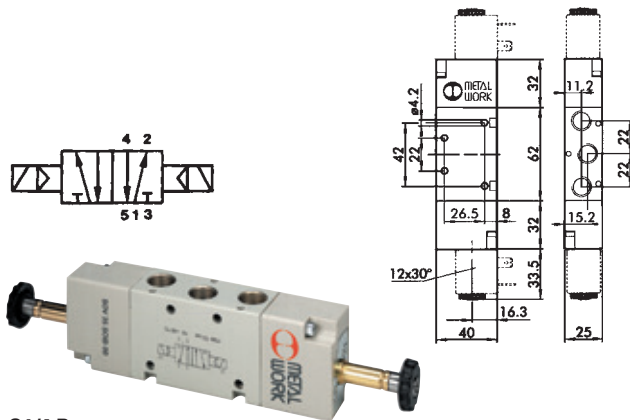
## 5/2 Solenoid/Solenoid Valve



G1/2 Ports

9149	Description
7030021200	5/2 G1/2" Sol/Sol

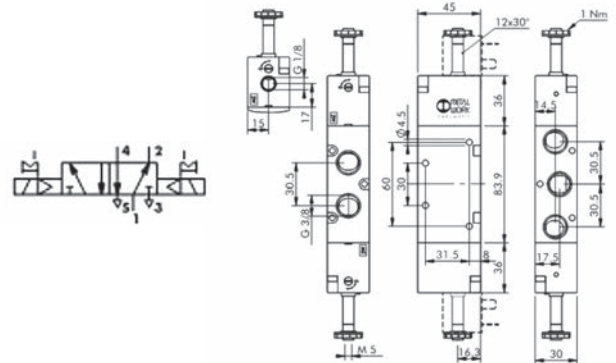
## 5/2 Solenoid/Solenoid Valve



G1/4 Ports

9149	Description
7020021200	5/2 G1/4"

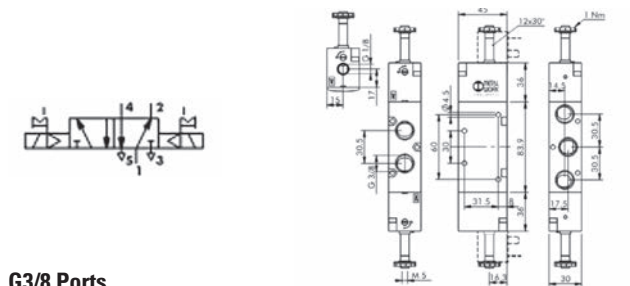
## 5/2 Solenoid/Solenoid Valve, Differential



G3/8 Ports

9149	Description
7040021300	5/2 G3/8"

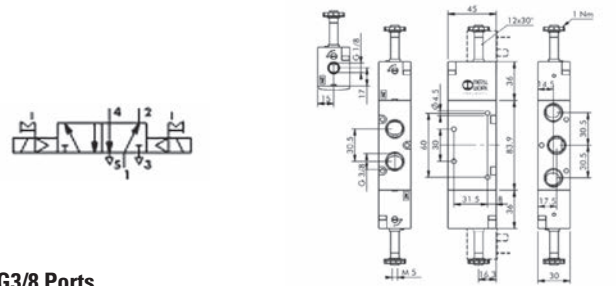
## 5/2 Solenoid/Solenoid Valve



G3/8 Ports

9149	Description
7040021200	5/2 G3/8"

## 5/2 Solenoid/Solenoid Valve, Assisted



G3/8 Ports

9149	Description
7040021600	5/2 G3/8" ASS

# SOLENOID CONTROL VALVES

## 5/3 Solenoid/Spring/Solenoid Valve, Pressure Centres

### Technical Data

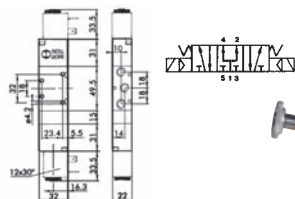
- Nominal diameter: 7.5mm
- Flow rate at 6 bar  $\Delta P$  0.5 bar: 750 NI/min
- Flow rate at 6 bar  $\Delta P$  1 bar: 1100 NI/min
- **Note:** solenoid coils must be ordered separately.

**Operating Temperature Range:**  
10°C to +60°C

**Operating Temperature Range:**  
-10°C to +60°C

**Maximum Temperature at 100% Solenoid rating:**  
+70°C at +20°C ambient

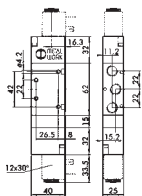
**Minimum Actuation Pressure:**  
2.5 bar



### G1/8 Ports

9149	Description
7010022300	5/3 G1/8" PC

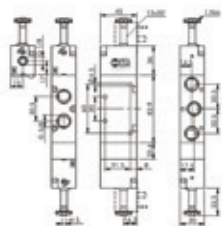
## 5/3 Solenoid/Spring/Solenoid Valve, Pressure Centres



### G1/4 Ports

9149	Description
7020022300	5/3 G1/4" PC

## 5/3 Solenoid/Spring/Solenoid Valve, Pressure Centres



Body only

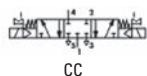
### G3/8 Ports

9149	Description
7040022300	5/3 G3/8" PC

## 5/3 Solenoid/Spring/Solenoid Valve, Closed Centres

### G3/8 Ports

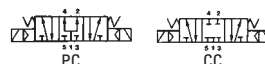
9149	Description
7040022100	5/3 G3/8" CC



## 5/3 Solenoid/Spring/Solenoid Valve, Pressure Centres

### Technical Data

- Monostable solenoid/spring: 2.5 bar to 10 bar
- Bistable solenoid/solenoid: 1 to 10 bar
- Nominal diameter: 15mm
- Flow rate at 6 bar  $\Delta P$  1 bar: 4600NI/min
- Absorbed power: 2W (DC) 3VA (AC)
- Voltages tolerances: -10°C to +15°C
- Degree of protection: IP65 - DIN 40050
- Solenoid rating: 100% ED



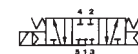
### G1/2 Ports

9149	Description
7030022300	G1/2" PC Solenoid

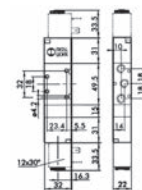
## 5/3 Solenoid/Spring/Solenoid Valve, Closed Centres

### G1/2 Ports

9149	Description
7030022100	G1/2" CC Solenoid



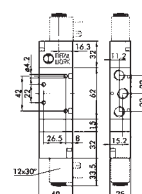
## 5/3 Solenoid/Spring/Solenoid Valve, Closed Centres



### G1/8 Ports

9149	Description
7010022100	5/3 G1/8" CC

## 5/3 Solenoid/Spring/Solenoid Valve, Closed Centres



### G1/4 Ports

9149	Description
7020022100	5/3 G1/4" CC

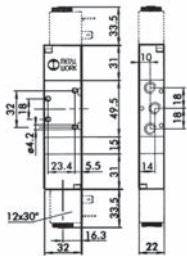
# SOLENOID CONTROL VALVES

## 5/3 Solenoid/Spring/Solenoid Valve, Open Centres

### Technical Data

- Nominal diameter: 7.5mm
- Flow rate at 6 bar  $\Delta P$  0.5 bar: 750 NI/min
- Flow rate at 6 bar  $\Delta P$  1 bar: 1100 NI/min
- **Note: solenoid coils must be ordered separately.**

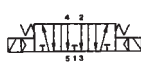
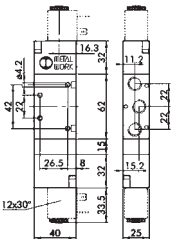
**Operating Temperature range:**  
-10°C to +60°C



### G1/8 Ports

9149	Description
7010022200	5/3 G1/8" OC

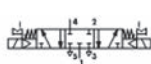
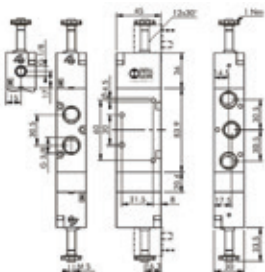
## 5/3 Solenoid/Spring/Solenoid Valve, Open Centres



### G1/4 Ports

9149	Description
7020022200	5/3 G1/4" OC

## 5/3 Solenoid/Spring/Solenoid Valve, Open Centres



### G3/8 Ports

9149	Description
7040022200	5/3 G3/8" OC

## 5/3 Solenoid/Spring/Solenoid Valve, Open Centres

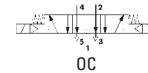
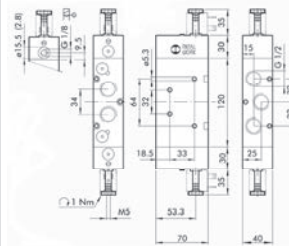
### Technical Data

- Monostable solenoid/spring: 2.5 bar to 10 bar
- Bistable solenoid/solenoid: 1 to 10 bar
- Nominal diameter: 15mm
- Flow rate at 6 bar  $\Delta P$  1 bar: 4600NI/min
- Absorbed power: 2W (DC) 3VA (AC)
- Voltages tolerances: -10°C to +15°C
- Degree of protection: IP65 - DIN 40050
- Solenoid rating: 100% ED

**Operating Temperature Range:**  
-10°C to +60°C

**Maximum Temperature at 100% Solenoid rating:**  
+70°C at +20°C ambient

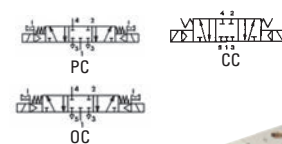
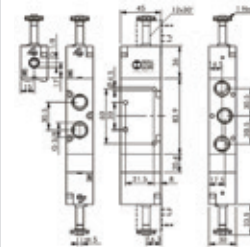
**Minimum Actuation Pressure:**  
2.5 bar



### G1/2 Ports

9149	Description
7030022200	G1/2" OC Solenoid

## 5/3 Solenoid/Spring/Solenoid Valve, Pressure Centres Assisted



### G3/8 Ports

9149	Description
7040022600	5/3 G3/8" PC ASS

## 5/3 Solenoid/Spring/Solenoid Valve, Closed Centres Assisted

### G3/8 Ports

9149	Description
7040022400	5/3 G3/8" CC ASS

## 5/3 Solenoid/Spring/Solenoid Valve, Open Centres Assisted

### G3/8 Ports

9149	Description
7040022500	5/3 G3/8" OC ASS

# SOLENOID CONTROL VALVES

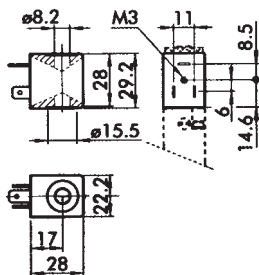
## Solenoid Coils for ISO 5599 Valves, Size 1

### Technical Data

- Voltage tolerances: -10% to +15%
- Insulation class: F155
- Degree of protection: IP65 - DIN 40050
- Solenoid rating: 100%
- Electric contact: AMP DIN 43650 2 contacts + 1 earth

**Operating Temperature Range:**  
-20°C to +120°C

**Maximum Temperature at 100% Solenoid Rating:**  
+70°C at +20°C ambient temperature



### 22mm

9149	Nominal Voltage	Power Inrush	Input Holding	Type
W0215000101	24V DC	2W	2W	22 Ø8 BA 2W-24V DC
W0215000111	24V 50/60Hz	4VA	3VA	22 Ø8 BA 3V-24V AC
W0215000121	110V 50/60Hz	4VA	2W	22 Ø8 BA 3VA-110V AC
W0215000131	220V 50/60Hz	4VA	2W	22 Ø8 3VA-220V AC

## Solenoid Coils, 5W

### Technical Data

- Monostable solenoid/spring: 2.5 bar to 10 bar
- Bistable solenoid/solenoid: 1 to 10 bar
- Nominal diameter: 15mm
- Flow rate at 6 bar ΔP 1 bar: 4600NI/min
- Absorbed power: 2W (DC) 3VA (AC)
- Voltages tolerances: -10°C to +15°C
- Degree of protection: IP65 - DIN 40050
- Solenoid rating: 100% ED
- **Note: solenoid coils must be ordered separately.**

**Operating Temperature Range:**  
-10°C to +60°C

**Maximum Temperature at 100% Solenoid Rating:**  
+70°C at +20°C ambient temperature

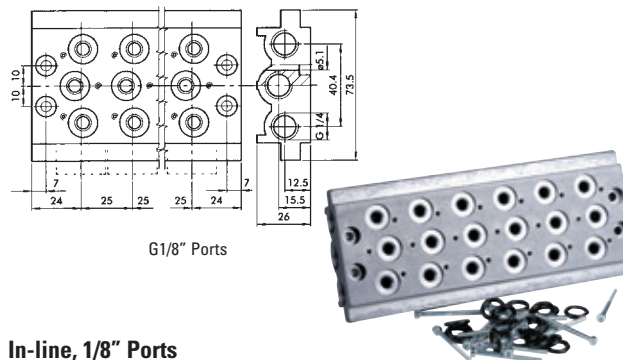
**Minimum Actuation Pressure:**  
2.5 bar



### 22mm

9182	Nominal Voltage	Power Inrush	Input Holding	Type
W0215000001	24V DC	5W	5W	22 Ø8 5W-24V DC
W0215000011	24V 50/60Hz	8VA	5VA	22 Ø8 5VA-24V AC
W0215000021	110V 50/60Hz	8VA	5VA	22 Ø8 5VA-110V AC
W0215000031	220V 50/60Hz	8VA	5VA	22 Ø8 5W-220V AC

## Manifolds

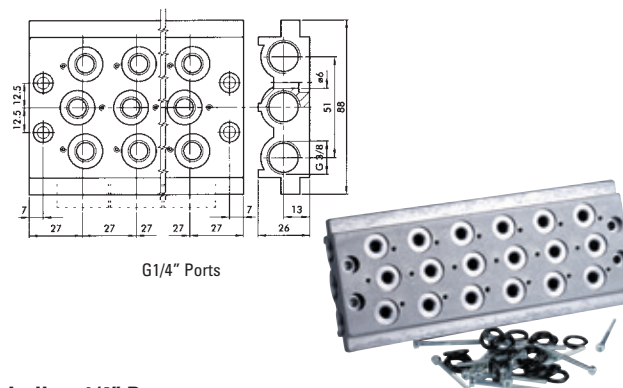


G1/8" Ports

### In-line, 1/8" Ports

9149	Description
0223000201	2 Position
0223000301	3 Position
0223000401	4 Position
0223000501	5 Position
0223000601	6 Position
0223000701	7 Position
0226004500	Blanking Plate Size 1/8"

## Manifolds



G1/4" Ports

### In-line, 1/4" Ports

9149	Description
0224000201	2 Position
0224000401	4 Position
0224000501	5 Position
0224000601	6 Position
0224000701	7 Position
0226004500	Blanking Plate Size 1/8"
0226005500	Blanking Plate Size 1/4"



For Pre wired moulded DIN Plugs  
see page 1043



# EXCEL 32 V03, V04 & V05 SERIES



- Extensive range of power and orifice size option
- G1/8, G1/4 and 7mm interface
- Compact installation
- Removable coil
- Standard exhaust diffuser
- Choice of manual override

### Medium:

Compressed air, filtered, lubricated and non-lubricate

### Materials:

Coil: Glass reinforced nylon

Armature: Stainless steel

### Base:

Zinc alloy (G1/8), brass (G1/4), polyester (interface)

Seals: Nitrile (viton top seat)

### Working Temperature:

-20°C to +50°C

**Note:** the below valves are only available in 24V DC.

5

## V03 Series

### V03 2/2 NC 24V DC 0-10 bar 1mm Orific

0036	Thread
V03A286J-B613A	G1/8
Tech Sheet 10363	

### V03 3/2 NC 24V DC 0-10 bar 1mm Orific

0036	Thread
V03X486J-B613A	Interface
V03A486J-B613A	G1/8
Tech Sheet 10363	

## V04 Series

### V04 2/2 SOL NC 0-10 bar 2.5mm Orific

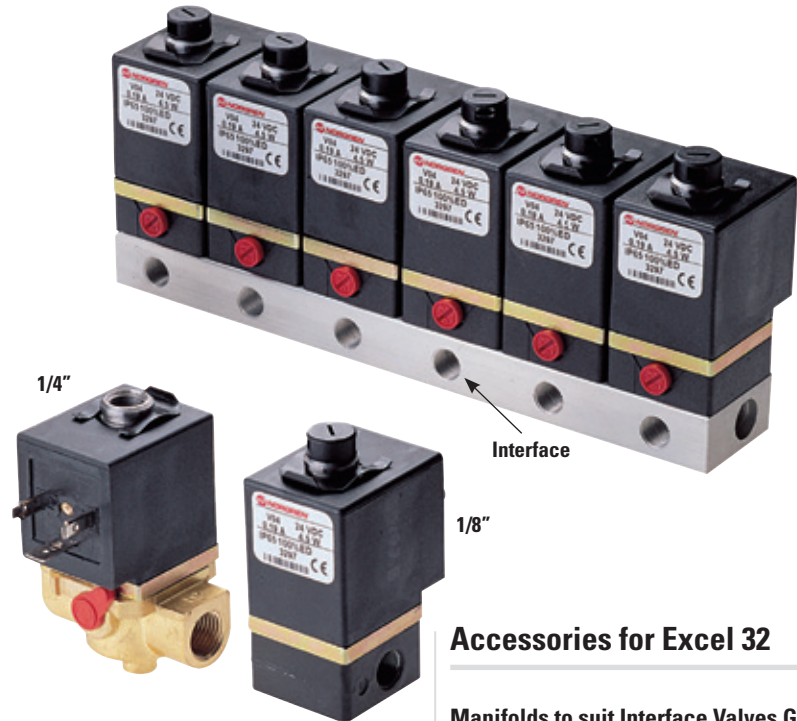
0036	Thread	Voltage
V04X286M-B623A	Interface	24V DC
V04A286M-B623A	G1/8	24V DC
V04A286M-B628A	G1/8	110/50-60
V04A286M-B629A	G1/8	220/50-60
V04B286M-B423A	G1/4	24V DC
V04B286M-B428A	G1/4	220/50-60
V04B286M-B429A	G1/4	220/50-60
Tech Sheet 10363		

### V04 3/2 SOL NC 0-10 bar 2mm Orific

0036	Thread	Voltage
V04X486L-B623A	Interface	24V DC
V04X486L-B628A	Interface	110/50-60
V04X486L-B629A	Interface	220/50-60
V04A486L-B623A	G1/8	24V DC
V04A486L-B628A	G1/8	110/50-60
V04A486L-B629A	G1/8	220/50-60
Tech Sheet 10363		

### V04 3/2 SOL NO 0-10 bar 2mm Orific

0036	Thread	Voltage
V04X386L-B623A	Interface	24V DC
V04X386L-B628A	Interface	110/50-60
V04X386L-B629A	Interface	220/50-60
V04A386L-B623A	G1/8	24V DC
V04A386L-B628A	G1/8	110/50-60
V04A386L-B629A	G1/8	220/50-60
Tech Sheet 10363		



## V05 Series

### V05 2/2 SOL NC 0-16 bar 2.5mm Orific

0036	Thread	Voltage
V05X286M-B633A	Interface	24V DC
V05X286M-B638A	Flange	110/120V
V05B286M-B433A	G1/4	24V DC
Tech Sheet 10363		

### V05 3/2 SOL NC 0-10 bar 2.5mm Orific

0036	Thread	Voltage
V05X486M-B633A	Interface	24V DC
V05X486M-B638A	Interface	110/50-60
V05X486M-B639A	Interface	220/50-60
V05A486M-B633A	G1/8	24V DC
V05A486M-B638A	G1/8	110/50-60
V05A486M-B639A	G1/8	220/50-60
Tech Sheet 10363		

## Accessories for Excel 32

### Manifolds to suit Interface Valves G1/8

0036	No. of Stations
M/P35598/1	1
M/P35598/2	2
M/P35598/3	3
M/P35598/4	4
M/P35598/5	5
M/P35598/6	6
M/P35598/8	8
M/P35598/9	9
M/P35598/10	10
Tech Sheet 10363	

### V03, V04 & V05 Spare Solenoid Coils

0036	To Suit	Voltage
V03X286A-Q1213	V03	24V DC
V04X286A-Q1228	V04	110/50-60
V04X286A-Q1229	V04	220/50-60
V05X286A-Q1233	V05	24V DC
V05X286A-Q1238	V05	110/50-60
V05X286A-Q1239	V05	220/50-60
Tech Sheet 10363		



## In-line Valves Solenoid/Pilot Operated

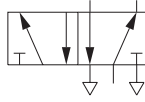
### High Flow Rates:

G1/8 - 750 L/min, G1/4 - 1,300 L/min,  
G3/8 - 2,600 L/min, G1/2 - 4,200 L/min available

**Multifunctional:** 3/2, 2x 3/2, 5/2, 5/3

**Medium:** Compressed air, filtered to 50micron, lubricated or non-lubricated

- Maintenance free
- Proven sealing system
- Small volumetric size
- Multiple solenoid/manual override variations



### Solenoid Actuated, BSPP

0036	Thread	Function	Actuation
V60A413A-A2000	1/8"	3/2 NC	Sol/Spring
V60A513A-A2000	1/8"	5/2	Sol/Spring
V60A511A-A3000	1/8"	5/2	Sol/Sol
V61B413A-A2000	1/4"	3/2 NC	Sol/Spring
V61B513A-A2000	1/4"	5/2	Sol/Spring
V61B511A-A3000	1/4"	5/2	Sol/Sol
V62C413A-A2000	3/8"	3/2 NC	Sol/Spring
V62C513A-A2000	3/8"	5/2	Sol/Spring
V62C511A-A3000	3/8"	5/2	Sol/Sol

Tech Sheet 20152



### Pilot Actuated, BSPP

0036	Thread	Function	Actuation
V60A4D7A-XA090	1/8"	3/2 NC	Pilot/Spring
V60A5D7A-XA090	1/8"	5/2	Pilot/Spring
V60A5DDA-XA020	1/8"	5/2	Pilot/Pilot
V61B4D7A-XA090	1/4"	3/2 NC	Pilot/Spring
V61B5D7A-XA090	1/4"	5/2	Pilot/Spring
V61B5DDA-XA020	1/4"	5/2	Pilot/Pilot
V62C4D7A-XA090	3/8"	3/2 NC	Pilot/Spring
V62C5D7A-XA090	3/8"	5/2	Pilot/Spring
V62C5DDA-XA020	3/8"	5/2	Pilot/Pilot

Tech Sheet 20152

## V60 Accessories



### Solenoid Coils 22mm DIN EN 175 301-803 (DIN 43650 B)

0036	Voltage
V10626-A13L	24V DC-2W
V10626-A18L	110V AC-4/2.5W
V10626-A19L	240V AC-6/5VA

Tech Sheet 20152

# EXCEL 22 M/48 & M/49 SERIES

## Solenoid Actuated 22mm Poppet Valves



### M5 3/2 Sol/Spring Sub-base

0036	Voltage
M/48/MAZ13J	24V DC
M/48/MAZ19J	220V AC

Tech Sheet 20154



### G1/8 3/2 Sol/Spring Sub-base

0036	Voltage
M/49/MAZ14J	24V AC
M/49/MAZ13J	24V DC
M/49/MAZ18J	110V AC
M/49/MAZ19J	220V AC

Tech Sheet 20154



### Spare Coils

0036	Voltage
QM/48/13J/21	24V DC
QM/48/14J/21	24V AC
QM/48/18J/21	110V AC
QM/48/19J/21	220V AC

Tech Sheet 20154



### Spare DIN 22mm Plug

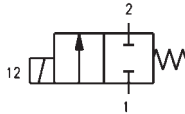
0036	Voltage
M/P19063	

Tech Sheet 20154

# DIRECTIONAL CONTROL VALVES

## Series A, Directly Operated Solenoid Valves

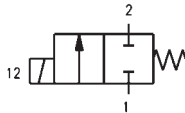
5



**M5, 2/2 NC Solenoid Valves (A32)**

0158	Orifice mm	Voltage
<b>A321 0C2</b>	1.5	Valve Only
<b>A321 0C2 U72</b>	1.5	12V DC 5W
<b>A321 0C2 U73</b>	1.5	24V DC 5W
<b>A321 0C2 U74</b>	1.5	48V DC 5.3W
<b>A321 0C2 U76</b>	1.5	110V DC 4.2W
<b>A321 0C2 U7H</b>	1.5	24V AC 3.5VA
<b>A321 0C2 U7K</b>	1.5	110V AC 4.3VA
<b>A321 0C2 U7J</b>	1.5	240V AC 4VA

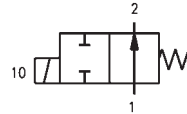
Tech Sheet 1845



**G1/8\", 2/2 NC Solenoid Valves (A32)**

0158	Orifice mm	Voltage
<b>A321 1C2</b>	1.5	Valve Only
<b>A321 1C2 U72</b>	1.5	12V DC 5W
<b>A321 1C2 U73</b>	1.5	24V DC 5W
<b>A321 1C2 U74</b>	1.5	48V DC 5.3W
<b>A321 1C2 U76</b>	1.5	110V DC 4.2W
<b>A321 1C2 U7H</b>	1.5	24V AC 3.5VA
<b>A321 1C2 U7K</b>	1.5	110V AC 4.3VA
<b>A321 1C2 U7J</b>	1.5	240V AC 4VA
<b>A321 1D2</b>	2	Valve Only
<b>A321 1D2 U72</b>	2	12V DC 5W
<b>A321 1D2 U73</b>	2	24V DC 5W
<b>A321 1D2 U74</b>	2	48V DC 5.3W
<b>A321 1D2 U76</b>	2	110V DC 4.2W
<b>A321 1D2 U7H</b>	2	24V AC 3.5VA
<b>A321 1D2 U7K</b>	2	110V AC 4.3VA
<b>A321 1D2 U7J</b>	2	240V AC 4VA
<b>A321 1E2</b>	2.5	Valve Only
<b>A321 1E2 U72</b>	2.5	12V DC 5W
<b>A321 1E2 U73</b>	2.5	24V DC 5W
<b>A321 1E2 U74</b>	2.5	48V DC 5.3W
<b>A321 1E2 U76</b>	2.5	110V DC 4.2W
<b>A321 1E2 U7H</b>	2.5	24V AC 3.5VA
<b>A321 1E2 U7K</b>	2.5	110V AC 4.3VA
<b>A321 1E2 U7J</b>	2.5	240V AC 4VA

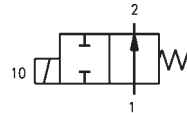
Tech Sheet 1845



**M5, 2/2 NO Solenoid Valves (A32)**

0158	Orifice mm	Voltage
<b>A322 0C2</b>	1.8	Valve Only
<b>A322 0C2 U72</b>	1.8	12V DC 5W
<b>A322 0C2 U73</b>	1.8	24V DC 5W
<b>A322 0C2 U74</b>	1.8	48V DC 5.3W
<b>A322 0C2 U76</b>	1.8	110V DC 4.2W
<b>A322 0C2 U7H</b>	1.8	24V AC 3.5VA
<b>A322 0C2 U7K</b>	1.8	110V AC 4.3VA
<b>A322 0C2 U7J</b>	1.8	240V AC 4VA

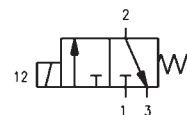
Tech Sheet 1845



**G1/8\", 2/2 NO Solenoid Valves (A32)**

0158	Orifice mm	Voltage
<b>A322 1C2</b>	1.8	Valve Only
<b>A322 1C2 U72</b>	1.8	12V DC 5W
<b>A322 1C2 U73</b>	1.8	24V DC 5W
<b>A322 1C2 U74</b>	1.8	48V DC 5.3W
<b>A322 1C2 U76</b>	1.8	110V DC 4.2W
<b>A322 1C2 U7H</b>	1.8	24V AC 3.5VA
<b>A322 1C2 U7K</b>	1.8	110V AC 4.3VA
<b>A322 1C2 U7J</b>	1.8	240V AC 4VA

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**M5, 3/2 NC Solenoid Valves (A33)**

0158	Orifice mm	Voltage
<b>A331 0C2</b>	1.5	Valve Only
<b>A331 0C2 U72</b>	1.5	12V DC 5W
<b>A331 0C2 U73</b>	1.5	24V DC 5W
<b>A331 0C2 U74</b>	1.5	48V DC 5.3W
<b>A331 0C2 U76</b>	1.5	110V DC 4.2W
<b>A331 0C2 U7H</b>	1.5	24V AC 3.5VA
<b>A331 0C2 U7K</b>	1.5	110V AC 4.3VA
<b>A331 0C2 U7J</b>	1.5	240V AC 4VA

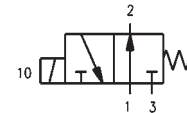
Tech Sheet 1845



**G1/8\", 3/2 NC Solenoid Valves (A33)**

0158	Orifice mm	Voltage
<b>A331 1C2</b>	1.5	Valve Only
<b>A331 1C2 U72</b>	1.5	12V DC 5W
<b>A331 1C2 U73</b>	1.5	24V DC 5W
<b>A331 1C2 U74</b>	1.5	48V DC 5.3W
<b>A331 1C2 U76</b>	1.5	110V DC 4.2W
<b>A331 1C2 U7H</b>	1.5	24V AC 3.5VA
<b>A331 1C2 U7K</b>	1.5	110V AC 4.3VA
<b>A331 1C2 U7J</b>	1.5	240V AC 4VA

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**M5, 3/2 NO Solenoid Valves (A33)**

0158	Orifice mm	Voltage
<b>A332 0C2</b>	1.5	Valve Only
<b>A332 0C2 U72</b>	1.5	12V DC 5W
<b>A332 0C2 U73</b>	1.5	24V DC 5W
<b>A332 0C2 U74</b>	1.5	48V DC 5.3W
<b>A332 0C2 U76</b>	1.5	110V DC 4.2W
<b>A332 0C2 U7H</b>	1.5	24V AC 3.5VA
<b>A332 0C2 U7K</b>	1.5	110V AC 4.3VA
<b>A332 0C2 U7J</b>	1.5	240V AC 4VA

Tech Sheet 1845

**G1/8\", 3/2 NO Solenoid Valves (A33)**

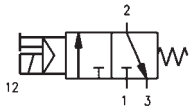
0158	Orifice mm	Voltage
<b>A332 1C2</b>	1.5	Valve Only
<b>A332 1C2 U72</b>	1.5	12V DC 5W
<b>A332 1C2 U73</b>	1.5	24V DC 5W
<b>A332 1C2 U74</b>	1.5	48V DC 5.3W
<b>A332 1C2 U76</b>	1.5	110V DC 4.2W
<b>A332 1C2 U7H</b>	1.5	24V AC 3.5VA
<b>A332 1C2 U7K</b>	1.5	110V AC 4.3VA
<b>A332 1C2 U7J</b>	1.5	240V AC 4VA

Tech Sheet 1845

# DIRECTIONAL CONTROL VALVES

## Series 3, Electro Pneumatically Operated Solenoid Valves

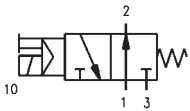
Actuation:  
Solenoid/Spring



### G1/8", 3/2 NC Single Solenoid Valves (338)

0158	Voltage
338 015 02	Valve Only
338 015 02 U7H	24V 50/60Hz 3.5VA
338 015 02 U7K	110V 50/60Hz 3.5VA
338 015 02 U7J	240V 50/60Hz 4VA
338 015 02 U72	12V DC 5W
338 015 02 U73	24V DC 5W
338 015 02 U74	48V DC 5W
338 015 02 U76	110V DC 5W
338 015 02 U77	24V DC 3W

Tech Sheet 1847

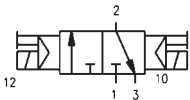


### G1/8", 3/2 NO Single Solenoid Valves (348)

0158	Voltage
348 015 02	Valve Only
348 015 02 U7H	24V 50/60Hz 3.5VA
348 015 02 U7K	110V 50/60Hz 3.5VA
348 015 02 U7J	240V 50/60Hz 4VA
348 015 02 U72	12V DC 5W
348 015 02 U73	24V DC 5W
348 015 02 U74	48V DC 5W
348 015 02 U76	110V DC 5W
348 015 02 U77	24V DC 3W

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Actuation:  
Solenoid/Solenoid

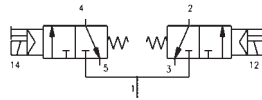


### G1/8", 3/2 Manual Override Double Solenoid Valves (338)

0158	Voltage
338 011 02 U7H	24V 50/60Hz 3.5VA
338 011 02 U7K	110V 50/60Hz 3.5VA
338 011 02 U7J	240V 50/60Hz 4VA
338 011 02 U72	12V DC 5W
338 011 02 U73	24V DC 5W
338 011 02 U74	48V DC 5W
338 011 02 U76	110V DC 5W
338 011 02 U77	24V DC 3W

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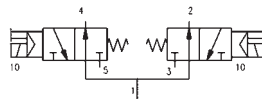
Actuation:  
Solenoid/Spring



### G1/8", 3/2 x 3/2 NC Double Solenoid Valves S.R. Solenoid Valves (338)

0158	Voltage
338D 015 02	Valve Only
338D 015 02 U7H	24V 50/60Hz 3.5VA
338D 015 02 U7K	110V 50/60Hz 3.5VA
338D 015 02 U7J	240V 50/60Hz 4VA
338D 015 02 U72	12V DC 5W
338D 015 02 U73	24V DC 5W
338D 015 02 U74	48V DC 5W
338D 015 02 U76	110V DC 5W
338D 015 02 U77	24V DC 3W

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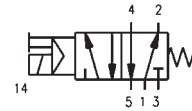


### G1/8", 3/2 x 3/2 NO Double Solenoid Valves S.R. Solenoid Valves (348)

0158	Voltage
348D 015 02	Valve Only
348D 015 02 U7H	24V 50/60Hz 3.5VA
348D 015 02 U7K	110V 50/60Hz 3.5VA
348D 015 02 U7J	240V 50/60Hz 4VA
348D 015 02 U72	12V DC 5W
348D 015 02 U73	24V DC 5W
348D 015 02 U74	48V DC 5W
348D 015 02 U76	110V DC 5W
348D 015 02 U77	24V DC 3W

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Actuation:  
Solenoid/Spring

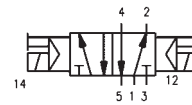


### G1/8", 5/2 Manual Override Single Solenoid Valves (358)

0158	Voltage
358 015 02	Valve Only
358 015 02 U7H	24V 50/60Hz 3.5VA
358 015 02 U7K	110V 50/60Hz 3.5VA
358 015 02 U7J	240V 50/60Hz 4VA
358 015 02 U72	12V DC 5W
358 015 02 U73	24V DC 5W
358 015 02 U74	48V DC 5W
358 015 02 U76	110V DC 5W
358 015 02 U77	24V DC 3W

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Actuation:  
Solenoid/Solenoid



### G1/8", 5/2 Manual Override Double Solenoid Valves (358)

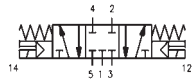
0158	Voltage
358 011 02	Valve Only
358 011 02 U7H	24V 50/60Hz 3.5VA
358 011 02 U7K	110V 50/60Hz 3.5VA
358 011 02 U7J	240V 50/60Hz 4VA
358 011 02 U72	12V DC 5W
358 011 02 U73	24V DC 5W
358 011 02 U74	48V DC 5W
358 011 02 U76	110V DC 5W
358 011 02 U77	24V DC 3W

Tech Sheet 1847

# DIRECTIONAL CONTROL VALVES

## Series 3, Electro Pneumatically Operated Solenoid Valves

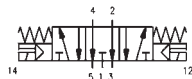
Actuation: Solenoid/Solenoid



### G1/8", 5/3 C/C Double Solenoid Valves (368)

0158	Voltage
368 011 02	Valve Only
368 011 02 U7H	24V 50/60Hz 3.5VA
368 011 02 U7K	110V 50/60Hz 3.5VA
368 011 02 U7J	240V 50/60Hz 4VA
368 011 02 U72	12V DC 5W
368 011 02 U73	24V DC 5W
368 011 02 U74	48V DC 5W
368 011 02 U76	110V DC 5W
368 011 02 U77	24V DC 3W

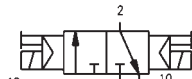
Tech Sheet 1847



### G1/8", 5/3 C/O Double Solenoid Valves (378)

0158	Voltage
378 011 02	Valve Only
378 011 02 U7H	24V 50/60Hz 3.5VA
378 011 02 U7K	110V 50/60Hz 3.5VA
378 011 02 U7J	240V 50/60Hz 4VA
378 011 02 U72	12V DC 5W
378 011 02 U73	24V DC 5W
378 011 02 U74	48V DC 5W
378 011 02 U76	110V DC 5W
378 011 02 U77	24V DC 3W

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### G1/8", 5/3 NC & NO Double Valve P/C Double Solenoid Valves (388)

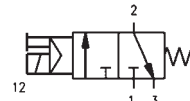
0158	Voltage
388 011 02	Valve Only
388 011 02 U7H	24V 50/60Hz 3.5VA
388 011 02 U7K	110V 50/60Hz 3.5VA
388 011 02 U7J	240V 50/60Hz 4VA
388 011 02 U72	12V DC 5W
388 011 02 U73	24V DC 5W
388 011 02 U74	48V DC 5W
388 011 02 U76	110V DC 5W
388 011 02 U77	24V DC 3W

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## Series 3, Electro Pneumatically Operated High Flow Solenoid Valves

Actuation: Solenoid/Spring



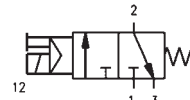
### G1/4", 3/2 NC Single Solenoid Valves (334)

0158	Voltage
334 015 02	Valve Only
334 015 02 U7H	24V 50/60Hz 3.5VA
334 015 02 U7K	110V 50/60Hz 3.5VA
334 015 02 U7J	230V 50/60Hz 4VA
334 015 02 U72	12V DC 5W
334 015 02 U73	24V DC 5W
334 015 02 U74	48V DC 5W
334 015 02 U76	110V DC 5W
334 015 02 U77	24V DC 3W

Tech Sheet 1847



Actuation: Solenoid/Spring

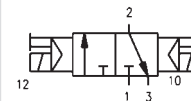


### G1/4", 3/2 NC External Servo Single Solenoid Valves (334)

0158	Voltage
334 E15 02	Valve Only
334 E15 02 U7H	24V 50/60Hz 3.5VA
334 E15 02 U7K	110V 50/60Hz 3.5VA
334 E15 02 U7J	230V 50/60Hz 4VA
334 E15 02 U72	12V DC 5W
334 E15 02 U73	24V DC 5W
334 E15 02 U74	48V DC 5W
334 E15 02 U76	110V DC 5W
334 E15 02 U77	24V DC 3W

Tech Sheet 1847

Actuation: Solenoid/Solenoid



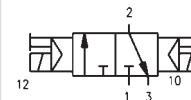
### G1/4", 3/2 NC Double Solenoid Valves (334)

0158	Voltage
334 011 02	Valve Only
334 011 02 U7H	24V 50/60Hz 3.5VA
334 011 02 U7K	110V 50/60Hz 3.5VA
334 011 02 U7J	230V 50/60Hz 4VA
334 011 02 U72	12V DC 5W
334 011 02 U73	24V DC 5W
334 011 02 U74	48V DC 5W
334 011 02 U76	110V DC 5W
334 011 02 U77	24V DC 3W

Tech Sheet 1847



Actuation: Solenoid/Solenoid



### G1/4", 3/2 External Servo Double Solenoid Valves (334)

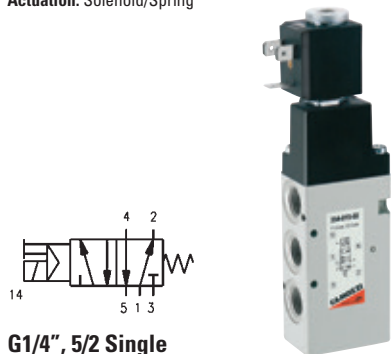
0158	Voltage
334 E11 02	Valve Only
334 E11 02 U7H	24V 50/60Hz 3.5VA
334 E11 02 U7K	110V 50/60Hz 3.5VA
334 E11 02 U7J	230V 50/60Hz 4VA
334 E11 02 U72	12V DC 5W
334 E11 02 U73	24V DC 5W
334 E11 02 U74	48V DC 5W
334 E11 02 U76	110V DC 5W
334 E11 02 U77	24V DC 3W

Tech Sheet 1847

# DIRECTIONAL CONTROL VALVES

## Series 3, Electro Pneumatically Operated High Flow Solenoid Valves

Actuation: Solenoid/Spring



**G1/4", 5/2 Single Solenoid Valves (354)**

0158	Voltage
354 015 02	Valve Only
354 015 02 U7H	24V 50/60Hz 3.5VA
354 015 02 U7K	110V 50/60Hz 3.5VA
354 015 02 U7J	230V 50/60Hz 4VA
354 015 02 U72	12V DC 5W
354 015 02 U73	24V DC 5W
354 015 02 U74	48V DC 5W
354 015 02 U76	110V DC 5W
354 015 02 U77	24V DC 3W

Tech Sheet 1847

Actuation: Solenoid/Spring

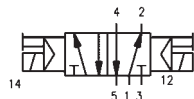


**G1/4", 5/2 External Servo Single Solenoid Valves (354)**

0158	Voltage
354 E15 02	Valve Only
354 E15 02 U7H	24V 50/60Hz 3.5VA
354 E15 02 U7K	110V 50/60Hz 3.5VA
354 E15 02 U7J	230V 50/60Hz 4VA
354 E15 02 U72	12V DC 5W
354 E15 02 U73	24V DC 5W
354 E15 02 U74	48V DC 5W
354 E15 02 U76	110V DC 5W
354 E15 02 U77	24V DC 3W

Tech Sheet 1847

Actuation: Solenoid/Solenoid



**G1/4", 5/2 Double Solenoid Valves (354)**

0158	Voltage
354 011 02	Valve Only
354 011 02 U7H	24V 50/60Hz 3.5VA
354 011 02 U7K	110V 50/60Hz 3.5VA
354 011 02 U7J	230V 50/60Hz 4VA
354 011 02 U72	12V DC 5W
354 011 02 U73	24V DC 5W
354 011 02 U74	48V DC 5W
354 011 02 U76	110V DC 5W
354 011 02 U77	24V DC 3W

Tech Sheet 1847

Actuation: Solenoid/Solenoid



**G1/4", 5/3 C/C Manual Override Double Solenoid Valves (364)**

0158	Voltage
364 011 02	Valve Only
364 011 02 U7H	24V 50/60Hz 3.5VA
364 011 02 U7K	110V 50/60Hz 4.3VA
364 011 02 U7J	240V 50/60Hz 4VA
364 011 02 U72	12V DC 5W
364 011 02 U73	24V DC 5W
364 011 02 U74	48V DC 5W
364 011 02 U76	110V DC 4.2W
364 011 02 U77	24V DC 3W

Tech Sheet 1847



**G1/4", 5/3 C/C Manual Override Double Solenoid Valves External Pilot (364)**

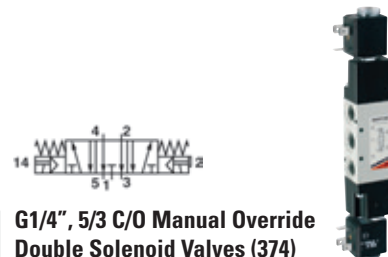
0158	Voltage
364 E11 02	Valve Only
364 E11 02 U7H	24V 50/60Hz 3.5VA
364 E11 02 U7K	110V 50/60Hz 4.3VA
364 E11 02 U7J	240V 50/60Hz 4VA
364 E11 02 U72	12V DC 5W
364 E11 02 U73	24V DC 5W
364 E11 02 U74	48V DC 5W
364 E11 02 U76	110V DC 4.2W
364 E11 02 U77	24V DC 3W

Tech Sheet 1847

**G1/4", 5/2 External Servo Double Solenoid Valves (354)**

0158	Voltage
354 E11 02	Valve Only
354 E11 02 U7H	24V 50/60Hz 3.5VA
354 E11 02 U7K	110V 50/60Hz 3.5VA
354 E11 02 U7J	230V 50/60Hz 4VA
354 E11 02 U72	12V DC 5W
354 E11 02 U73	24V DC 5W
354 E11 02 U74	48V DC 5W
354 E11 02 U76	110V DC 5W
354 E11 02 U77	24V DC 3W

Tech Sheet 1847



**G1/4", 5/3 C/O Manual Override Double Solenoid Valves (374)**

0158	Voltage
374 011 02	Valve Only
374 011 02 U7H	24V 50/60Hz 3.5VA
374 011 02 U7K	110V 50/60Hz 4.3VA
374 011 02 U7J	240V 50/60Hz 4VA
374 011 02 U72	12V DC 5W
374 011 02 U73	24V DC 5W
374 011 02 U74	48V DC 5W
374 011 02 U76	110V DC 4.2W
374 011 02 U77	24V DC 3W

Tech Sheet 1847



**G1/4", 5/3 C/O Manual Override Double Solenoid Valves External Pilot (374)**

0158	Voltage
374 E11 02	Valve Only
374 E11 02 U7H	24V 50/60Hz 3.5VA
374 E11 02 U7K	110V 50/60Hz 4.3VA
374 E11 02 U7J	240V 50/60Hz 4VA
374 E11 02 U72	12V DC 5W
374 E11 02 U73	24V DC 5W
374 E11 02 U74	48V DC 5W
374 E11 02 U76	110V DC 4.2W
374 E11 02 U77	24V DC 3W

Tech Sheet 1847

# DIRECTIONAL CONTROL VALVES

## Solenoid Coils for Electro Pneumatically Operated Valves

- Solenoid DIN connector use Form B.



### U70 Solenoid Coils

0158	Voltage
U7H	24V 50/60Hz 3.5VA
U7K	110V 50/60Hz 3.5VA
U7J	240V 50/60Hz 4VA
U77	24V DC 3W
U71	6V DC 5W
U72	12V DC 5W
U73	24V DC 5W
U74	48V DC 5W
U76	110V DC 5W
Tech Sheet 10313	

- Solenoid DIN connector use Form B.



### G70 Solenoid Coils

0158	Voltage
G7H	24V 50/60Hz 3.5VA
G7K	110V 50/60Hz 3.5VA
G7J	240V 50/60Hz 4VA
G79	48V DC 3W
G77	24V DC 3W
G72	12V DC 5W
G73	24V DC 5W
G76	110V DC 4W
Tech Sheet 10313	

- Solenoid DIN connector use Form A.



### A80 Solenoid Coils

0158	Voltage
A8B	24V 50/60Hz 5VA
A8D	110V 50/60Hz 5VA
A8E	220V 50/60Hz 5VA
A83	24V DC 4W
A84	48V DC 4W
A86	110V DC 4W
Tech Sheet 10313	

- Solenoid DIN connector use Form B.



### G80 Solenoid Coils

0158	Voltage
G93	24V Coil
Tech Sheet 10313	

## Solenoid DIN Connectors



### Black Connectors

0158	Type
KA132000B9	Form A 18mm Pin Spacing
KB132000B9	Form B 11mm Pin Spacing
Tech Sheet 10313	



### Grey Connectors

0158	Type
KA132000A9	Form A 18mm Pin Spacing
Tech Sheet 10313	



### Transparent Connectors, with LED

0158	Type
KA132V54T9	Form A 18mm Pin Spacing, 24V
KA132V55T9	Form A 18mm Pin Spacing, 115V
KA132V56T9	Form A 18mm Pin Spacing, 230V
KB132V54T9	Form B 11mm Pin Spacing, 24V
KB132V55T9	Form B 11mm Pin Spacing, 115V
KB132V56T9	Form B 11mm Pin Spacing, 230V
Tech Sheet 10313	

For **Banding & Tie Wraps**  
see page 1553



## Solenoid 5/2 Way Valve

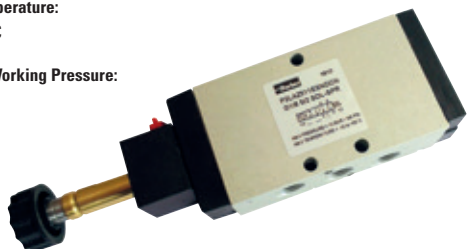
The **Viking Lite** valve range is robust, versatile and combines high performance with compact installation dimensions. The choice of G1/8, G1/4 or G3/8 port sizes provide large flow capacity and short change-over times. Low change-over pressure is also an important characteristic of this valve range.

Under pressure, radial expansion of the seal occurs to maintain sealing contact with the valve bore.

This sealing method reduces friction and gives lower pilot pressures, providing fast response and less wear. Valves do not require lubrication in operation but they can also be installed in systems that are lubricated.

**Working Temperature:**  
-10°C to +50°C

**Maximum Working Pressure:**  
10 bar



### Spring Return, Single Solenoid, BSPP

0681	Thread
P2LAZ511ESNDCN	1/8"
P2LBZ512ESNDCN	1/4"

Tech Sheet 68763

## Solenoid Coils & Plugs

### Solenoid Coils, 22mm

0681	Voltage
P2FCB449	24V DC
P2FCB453	110V AC
P2FCB457	230V AC

Tech Sheet 68763



### Connector Plug, IP65

0681	
3EV10V10	

Tech Sheet 68763



### Plug with LED & Protection

0681	To Suit
3EV10V20-110	110V AC

Tech Sheet 68763



## Pilot & Solenoid Valves

### B3 & B4 Series Coils 15mm

0681	Voltage
P2E-KV32B2	12V DC
P2E-KV32C2	24V DC



### B3 & B4 Series Solenoid Connectors / Cable Plugs

0681	Description
P8C-D	Standard IP65 without Flying Lead



### Viking Lite Valve 3/2 & 5/2 Solenoid Operated G1/8" - G1/4"

0681	Type	Actuator	Return	Thread BSPP
P2LBZ312ESNDCN	3-2	Electric	Spring	1/4"
P2LBZ512EENDCN	5-2	Electric	Electric	1/4"
P2LAZ511ESNDCN	5-2	Electric	Spring	1/8"

## 3/2 PNEUMATIC VALVES



### ECO 22 Solenoid Valves



#### Solenoid/Spring, BSPP

0110	Thread	Function
8880.32.C.39.F00	1/8"	Normally Closed

### ECO 22 Solenoid Valves - 1/4"



#### Solenoid/Spring, BSPP

0110	Thread	Function
8884.32.C.39.F00	1/4"	Normally Closed
8884.32.A.39.F00	1/4"	Normally Open

## 5/2 PNEUMATIC VALVES



### Eco 22 Solenoid Valves



#### Solenoid/Spring Valves, BSPP

0110	Thread
8880520039F00	1/8"
8884520039F00	1/4"



#### Solenoid/Solenoid, BSPP

0110	Thread
8880520035F00	1/8"
8884520035F00	1/4"

### 400 Series Valves



#### Solenoid/Spring, BSPP

0110	Thread
412/2.52.0.1.M2	1/2"



#### Solenoid/Solenoid, BSPP

0110	Thread
412/2.52.0.0.M2	1/2"

### T400 Series Tecno Eco Valves



#### Solenoid/Spring (Ext Pilot), BSPP

0110	Thread
T424.52.0.1.E.M2	1/4"

### T488 Series Tecno Valves



#### Solenoid/Differential Pilot (Ext Feed), BSPP

0110	Thread
T488.52.0.12E.M2	1/8"



#### Solenoid/Spring (Int Feed), BSPP

0110	Thread
T488.52.0.1.M2	1/8"

#### Solenoid/Spring (Ext Feed), BSPP

0110	Thread
T488.52.0.1E.M2	1/8"



#### Solenoid/Solenoid, BSPP

0110	Thread
T488.52.0.0.M2	1/8"



## Eco 22 Series



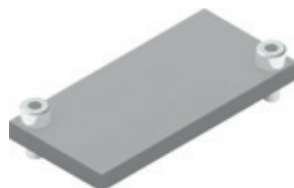
### Complete Manifolds 5/2 - 5/3

0110	Stations
888.02	2
888.03	3
888.04	4
888.05	5
888.06	6
888.07	7
888.08	8
888.09	9
888.10	10



### Modular 3/2 Solenoid/Spring Valves

0110	Thread	NO/NC
345.M1	4mm	N/C
305.M1	1/8"	N/C
305.M1/1	1/8"	N/O



### Manifold Closing Plate

0110	Description
888	Blanking Plate



### MF Type Coils

0110	Voltage
MF4	12V DC
MF5	24V DC
MF56	2V AC
MF57	110V AC
MF58	220V AC



### 888 Type Coil Caps

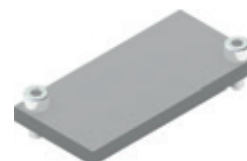
0110	Voltage
888.11.01	24V DC - 24V AC LED
888.11.02	110V AC LED
888.11.03	220V AC LED

## T400 Series



### Manifold Bases

0110	Description
T424.01	Single Complete Base



### Manifold Closing Plate

0110	Description
T424.00	Blanking Plate



### MB Type 22mm Coils

0110	Voltage
MB4	12V DC
MB5	24V DC
MB9	24V DC (2 watt)
MB56	24V AC
MB57	110V AC
MB58	22V DC



### 305 22mm Coil Caps

0110	Voltage
305.11.00	No LED
305.11.01L	24V DC LED
305.11.02L	110V AC LED
305.11.03L	240V AC LED

## T488 Series



### Manifold Bases

0110	Description
T488.01	Single Complete Base

## PILOT VALVES

**Medium:** Clean compressed air. Filtered (40µm) and lubricated  
**Body Material:** Aluminium alloy  
**Seals:** Nitrile

**Working Temperature:**  
 -20°C to +70°C

**Working Pressure:**  
 1.5 to 8 bar



## Pilot 3/2 Way Valves



## Pilot/Spring, Normally Open, BSPP

0335	Thread
CKA210-06-NO	1/8"
CKA210-08-NO	1/4"
CKA310-10-NO	3/8"

Tech Sheet 3036



## Pilot/Spring, Normally Closed, BSPP

0335	Thread
CKA210-06-NC	1/8"
CKA210-08-NC	1/4"
CKA310-10-NC	3/8"

Tech Sheet 3036



## Pilot/Pilot, BSPP

0335	Thread
CKA220-06	1/8"
CKA220-08	1/4"
CKA320-10	3/8"

Tech Sheet 3036

## Pilot 5/2 Way Valves



## Pilot/Spring, BSPP

0335	Thread
DKA210-06	1/8"
DKA210-08	1/4"
DKA310-10	3/8"
DKA410-15	1/2"

Tech Sheet 3037



## Pilot/Pilot, BSPP

0335	Thread
DKA220-06	1/8"
DKA220-08	1/4"
DKA320-10	3/8"
DKA420-15	1/2"

Tech Sheet 3037

**Medium:** Clean compressed air. Filtered (40µm) and lubricated  
**Body Material:** Aluminium alloy  
**Seals:** Nitrile

**Working Temperature:**  
 -20°C to +70°C

**Working Pressure:**  
 1.5 to 8 bar



## Pilot 5/3 Way Valves



### Pilot/Pilot, Fully Sealed Mid Position, BSPP

0335	Thread
DKA230C-06	1/8"
DKA230C-08	1/4"
DKA330C-10	3/8"
DKA430C-15	1/2"

Tech Sheet 3037



### Pilot/Pilot, Centre Open Pressurised, BSPP

0335	Thread
DKA230P-06	1/8"
DKA230P-08	1/4"
DKA330P-10	3/8"
DKA430P-15	1/2"

Tech Sheet 3037



### Pilot/Pilot, Supply Sealed Mid Position, BSPP

0335	Thread
DKA230E-06	1/8"
DKA230E-08	1/4"
DKA330E-10	3/8"
DKA430E-15	1/2"

Tech Sheet 3037



For **Stainless Steel Silencers**  
 see page 630

# Driven by Customers Designed by Metal Work



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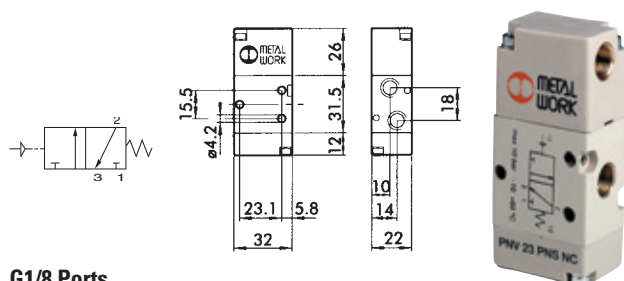
SYNTESI MONITORED DUMP VALVE

# PNEUMATICALLY OPERATED VALVES

## Pilot Valves

Technical Data	1/8"	1/4"	3/8"	1/2"
Operating Pressure Bar	Vacuum to 10			
Minimum pilot pressure:				
monostable bar	2.5 to 10			
bistable bar	1 to 10			
Operating temperature range	-10°C to +60°C			
Nominal diameter mm	5	7.5	13.3	15
Conductance C NI/min - bar	121.43	264.26	505.52	971.43
Critical ratio b bar/bar	0.32	0.27	0.32	0.43
Flow rate at 6 bar ΔP 0.5 bar NI/min	400	750	1560	3200
Flow rate at 6 bar ΔP 1 bar NI/min	550	1100	2150	4600
TRA / TRR monostable at 6 bar ms	6/15	7/15	5/28	16/46
TRA / TRR bistable at 6 bar ms	7/7	7/7	13/13	16/16

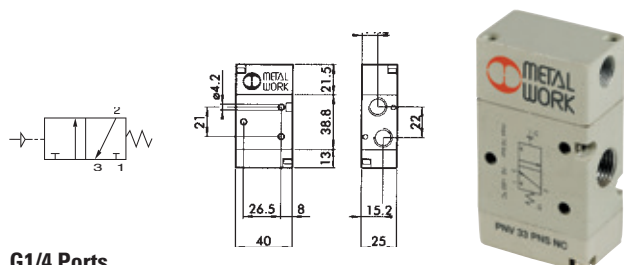
## 3/2 Pilot/Spring Valve



### G1/8 Ports

9149	Description
7010010200	3/2 G1/8"

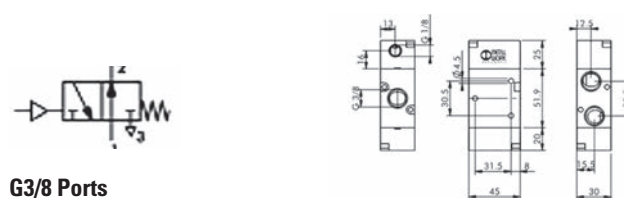
## 3/2 Pilot/Spring Valve



### G1/4 Ports

9149	Description
7020010200	3/2 G1/4"

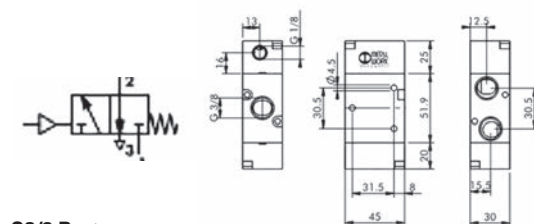
## 3/2 Pilot/Spring Valve



### G3/8 Ports

9149	Description
7040010400	3/2 G3/8" NO

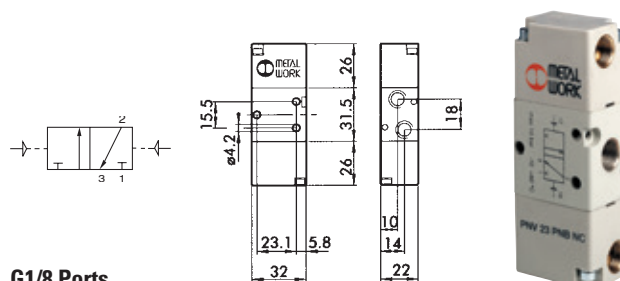
## 3/2 Pilot/Spring Valve, NC



### G3/8 Ports

9149	Description
7040010200	3/2 G3/8"

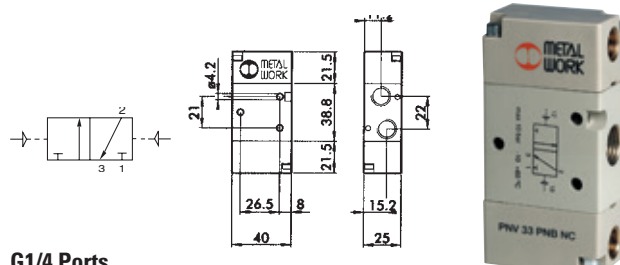
## 3/2 Pilot/Pilot Valve



### G1/8 Ports

9149	Description
7010010100	3/2 G1/8"

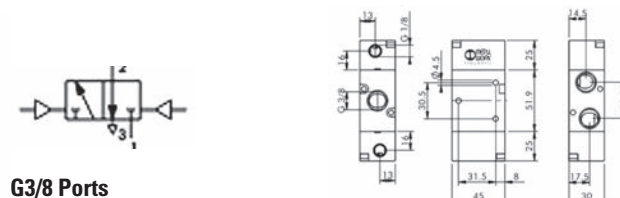
## 3/2 Pilot/Pilot Valve



### G1/4 Ports

9149	Description
7020010100	3/2 G1/4"

## 3/2 Pilot/Pilot Valve, NC



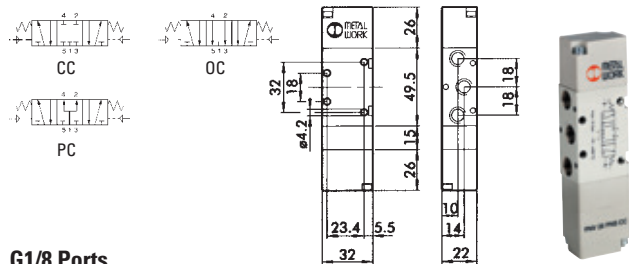
### G3/8 Ports

9149	Description
7040010100	3/2 G3/8" NC



# PNEUMATICALLY OPERATED VALVES

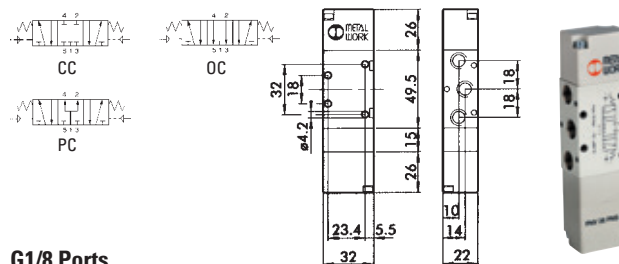
## 5/3 Pilot/Spring/Pilot Valve, CC



**G1/8 Ports**

9149	Description
7010012100	5/3 G1/8" CC

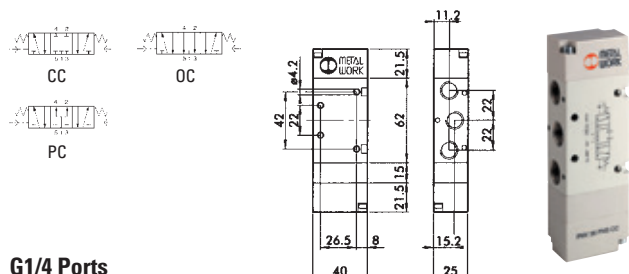
## 5/3 Pilot/Spring/Pilot Valve, OC



**G1/8 Ports**

9149	Description
7010012200	5/3 G1/8" OC

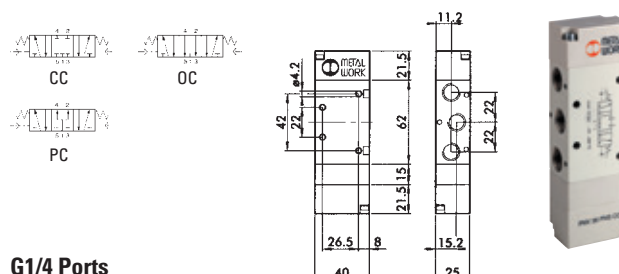
## 5/3 Pilot/Spring/Pilot Valve, CC



**G1/4 Ports**

9149	Description
7020012100	5/3 G1/4" CC

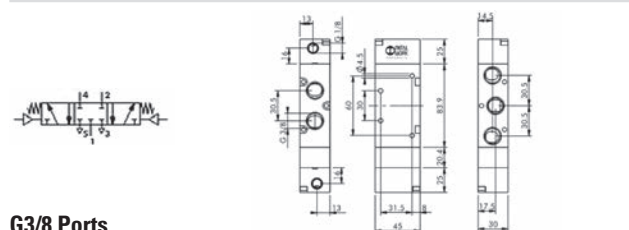
## 5/3 Pilot/Spring/Pilot Valve, OC



**G1/4 Ports**

9149	Description
7020012200	5/3 G1/4" OC

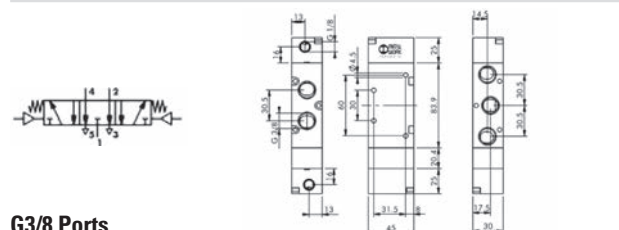
## 5/3 Pilot/Spring/Pilot Valve, CC



**G3/8 Ports**

9149	Description
7040012100	5/3 G3/8" CC

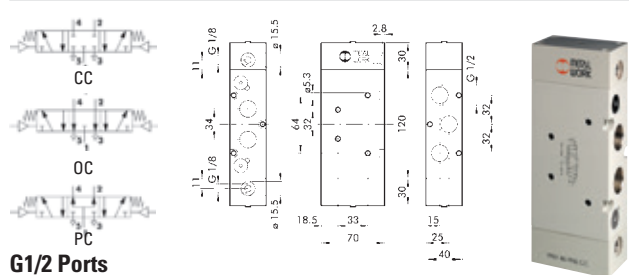
## 5/3 Pilot/Spring/Pilot Valve, OC



**G3/8 Ports**

9149	Description
7040012200	5/3 G3/8" OC

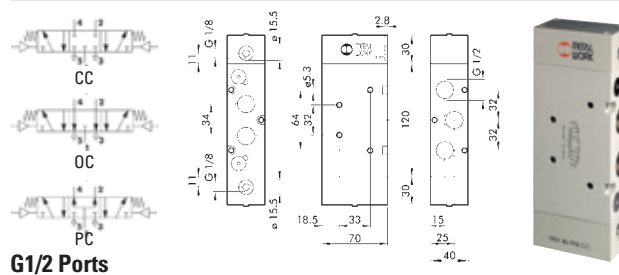
## 5/3 Pilot/Spring/Pilot Valve, CC



**G1/2 Ports**

9149	Description
7030012100	5/3 G1/2" CC

## 5/3 Pilot/Spring/Pilot Valve, OC



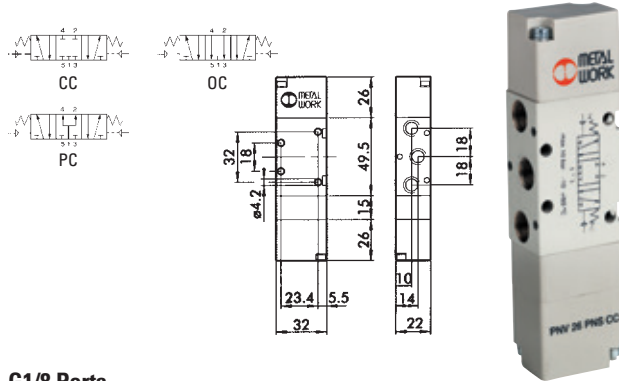
**G1/2 Ports**

9149	Description
7030012200	5/3 G1/2" OC

# PNEUMATICALLY OPERATED VALVES



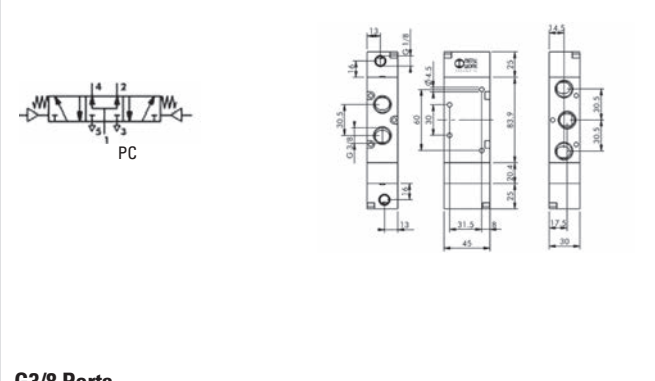
## 5/3 Pilot/Spring/Pilot Valve, PC



### G1/8 Ports

9149	Description
7010012300	5/3 G1/8" PC

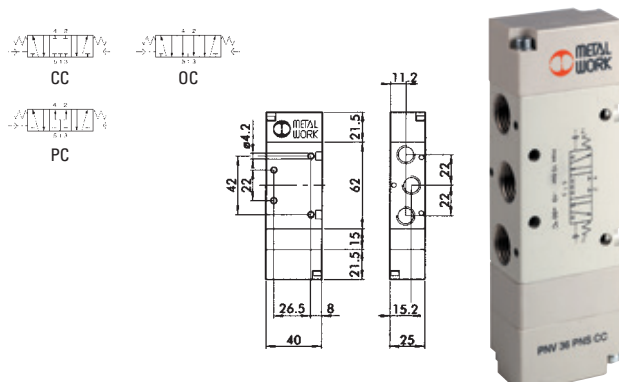
## 5/3 Pilot/Spring/Pilot Valve, PC



### G3/8 Ports

9149	Description
7040012300	5/3 G3/8" PC

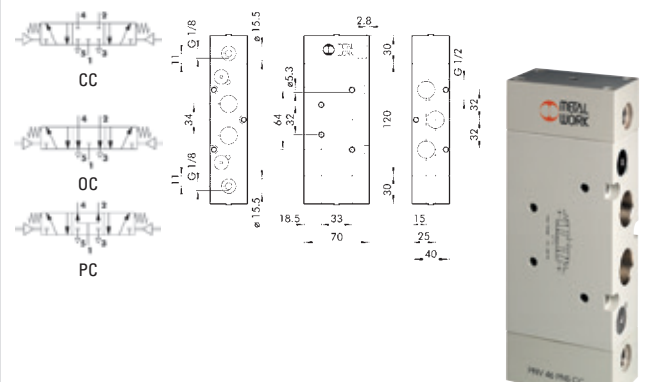
## 5/3 Pilot Valve, PC



### G1/4 Ports

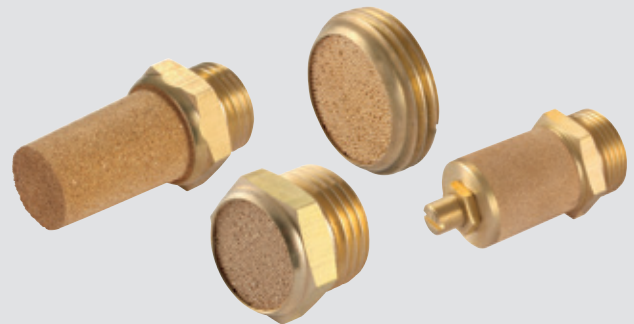
9149	Description
7020012300	5/3 G1/4" PC

## 5/3 Pilot/Spring/Pilot Valve, PC



### G1/2 Ports

9149	Description
7030012300	5/3 G1/2" PC

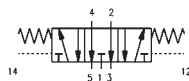


For **Silencers**  
see page **631**



# DIRECTIONAL CONTROL VALVES

## Series 3, In-line Pneumatically Operated Valves

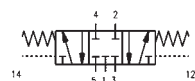


### 5/2 Pneumatic/Pneumatic Bistable

0158	Thread
358 033	G1/8"
354 033	G1/4"
Tech Sheet 1847	

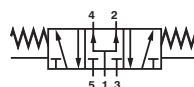
### 5/3 Pneumatic Open Centres

0158	Thread
378 033	G1/8"
374 033	G1/4"
Tech Sheet 1847	



### 5/3 Pneumatic Closed Centres

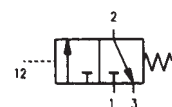
0158	Thread
368 033	G1/8"
364 033	G1/4"
Tech Sheet 1847	



### 5/3 Pneumatic Pressure Centres

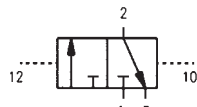
0158	Thread
388 033	G1/8"
384 033	G1/4"
Tech Sheet 1847	

## Series 3, In-line Pneumatically Operated Valves



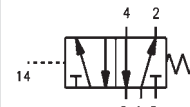
### 3/2 Pneumatic/Spring N/C

0158	Thread
338 035	G1/8"
338L 035	G1/8"
334 035	G1/4"
Tech Sheet 1847	



### 3/2 Pneumatic/Pneumatic Bistable

0158	Thread
338 033	G1/8"
338L 033	G1/8"
334 033	G1/4"
Tech Sheet 1847	



### Series 3, 5/2 Pneumatic/Spring Monostable

0158	Thread
358 035	G1/8"
354 035	G1/4"
Tech Sheet 1847	

# PNEUMATIC VALVES & ACCESSORIES



## Pilot & Solenoid Valves



### Viking Xtreme Valve 3/2 Pilot Operated G1/2"

0681	Actuator	Return	Thread BSPP
P2LDX314PS	Pilot	Spring	1/2"



### Viking Xtreme G1/2" Valves Pilot & Solenoid 5/2

0681	Actuator	Return	Voltage (if applicable)
P2LDX514ESNXXX	Electric	Spring Return	Less Solenoid



### ISOMAX Solenoid Operated Valves ISO 1 & 2

0681	ISO Size	Actuator	Return	Voltage (if applicable)
DX1-621-BN	1 - 43mm	Electric	Spring Return	Less Solenoid
DX2-621-BN	2 - 56mm	Electric	Spring Return	Less Solenoid
DX1-606-BN	1 - 43mm	Electric	Electric	Less Solenoid
DX2-606-BN	2 - 56mm	Electric	Electric	Less Solenoid



### Side Ported Manifold & End Plates ISO 1 & 2

0681	Description	Ported	Port Size	ISO Size
P2N-EM512MD	Manifold	Side	1/4" BSPP	1 - 43mm



### Heavy-duty Pilot 3/2 Poppet Valve G1/2"

0681	Actuator	Return
B203P	Pilot	Spring

# 3/2 PNEUMATIC VALVES

## Series 224 Pilot



### Pilot/Spring Return, BSPP

0110	Thread	Function
224.32.11.1	1/4"	Normally Closed



### Pilot/Pilot, BSPP

0110	Thread	Function
224.32.11.11	1/4"	Normally Closed

## Series T224 Tecno Eco



### Pilot/Spring Return

0110	Thread	Function
T224.32.11.1	1/4"	Normally Closed



### Pilot/Pilot

0110	Thread	Function
T224.32.11.11	1/4"	Normally Closed

## Series T200 Pilot



### Pilot/Spring Return, BSPP

0110	Thread	Function
T228.32.11.1	1/8"	Normally Closed



### Pilot/Pilot, BSPP

0110	Thread	Function
T228.32.11.11	1/8"	Normally Closed

## Series T400 Tecno Eco Pilot



### Pilot/Spring Return, BSPP

0110	Thread	Function
T488.32.11.1	1/8"	Normally Closed



### Pilot/Pilot, BSPP

0110	Thread	Function
T488.32.11.11	G1/8"	Normally Closed

## Series 212 Pilot



### Pilot/Spring Return, BSPP

0110	Thread	Function
212/2.32.11.1	1/2"	Normally Closed



### Pilot/Pilot, BSPP

0110	Thread	Function
212/2.32.11.11	1/2"	Normally Closed

## 200 Series Pilot Valves - 1/8"



### 200 Series Pilot/Spring Return 3/2 - G1/8"

0110	Description	Port Size
228.32.11.1	Pilot-Spring	G1/8"



### 200 Series Amplified Pilot/Spring Return 3/2 - G1/8"

0110	Description	Port Size
228.32.13.1	Amplified Pilot-Spring	G1/8"



### 200 Series Pilot/Pilot 3/2 - G1/8"

0110	Description	Port Size
228.32.11.11	Pilot-Pilot	G1/8"
228.32.11.12	Pilot-Ext Differential	G1/8"

## 5/2 PNEUMATIC VALVES



### Series 200 Pilot

#### Pilot/Spring Return, BSPP

0110	Thread
228.52.11.1	1/8"



#### Amplified Pilot/Spring Return, BSPP

0110	Thread
228.52.13.1	1/8"



#### Pilot/Pilot

0110	Thread
228.52.11.11	1/8"



#### Pilot/Pilot Differential External

0110	Thread
228.52.11.12	1/8"



### Series 224 Pilot

#### Pilot/Spring Return, BSPP

0110	Thread
224.52.11.1	1/4"



#### Pilot/Pilot, BSPP

0110	Thread
224.52.11.11	1/4"



### Series 212 Pilot

#### Pilot/Spring Return, BSPP

0110	Thread
212/2.52.11.1	1/2"



#### Pilot/Pilot, BSPP

0110	Thread
212/2.52.11.12	1/2"



### Series T200 Tecno Pilot

#### Pilot/Spring Return, BSPP

0110	Thread
T228.52.11.1	1/8"



#### Pilot/Pilot, BSPP

0110	Thread
T228.52.11.11	1/8"



### Series T224 Tecno Eco

#### Pilot/Spring Return, BSPP

0110	Thread
T224.52.11.1	1/4"



#### Pilot/Pilot, BSPP

0110	Thread
T224.52.11.11	1/4"



### Series T400 Tecno Pilot

#### Pilot/Spring Return, BSPP

0110	Thread
T488.52.11.1	1/8"



#### Pilot/Pilot, BSPP

0110	Thread
T488.52.11.11	1/8"



## 5/3 PNEUMATIC VALVES



### Series 224 Pilot

#### Pilot/Pilot, BSPP

0110	Thread	Function
224.53.31.11.11	1/4"	Closed Centre



### Series 224 Tecno Eco

#### Pilot/Pilot, BSPP

0110	Thread	Function
T224.53.31.11.11	1/4"	Closed Centre
T224.53.32.11.11	1/4"	Open Centre



### Series T400 Tecno Eco

#### Pilot/Pilot, BSPP

0110	Thread	Function
T488.53.31.11.11	1/8"	Closed Centre



**Medium:** Clean compressed air. Filtered (40µm) and lubricated  
**Body Material:** Aluminium alloy  
**Seals:** Nitrile

**Working Temperature:**  
 0°C to +60°C

**Working Pressure:**  
 2 to 10 bar



## NOT Valve



### 4mm Push-in Connection

9149

KP080394

Tech Sheet 3098

## AND Valve



### 4mm Push-in Connection

9149

KP080254

Tech Sheet 3098

## YES Valve



### 4mm Push-in Connection

9149

KP080494

Tech Sheet 3098

## Mono-stable Valve



### 4mm Push-in Connection

9149

KP040034

Tech Sheet 3098

## OR Valve



### 4mm Push-in Connection

9149

KP080214

Tech Sheet 3098



For Pneumatic Tube  
 see pages 895-904

# PNEUMATIC LOGIC VALVES

## Introduction

Logic elements are available with five different functions:  
OR, AND, NOT, YES, MEMORY.


Main features common to all elements:

- Adaptor for DIN rail bar (DIN EN 50022) integral with the body
- Built-in pressure indicator
- Pipe locking system using  $\varnothing 4$  built-in fitting

## Technical Specification

- Nominal diameter: 2.7mm
- Flow rate at 6 bar P 1 bar: 100 NI/min
- Reset:
  - AND, OR via compressed air
  - YES, NOT via mechanical spring

 **Operating Temperature Range:**  
-10°C to 60°C

 **Pressure Range:**  
YES, MEMORY, OR, AND from 0 to 8 bar  
pilot pressure from 1.5 to 8 bar  
NOT from 0.4 to 6 bar

## Logic Elements



### OR

9149	Description
W360400001	Function 4mm Fittings



### AND

9149	Description
W360400002	Function 4mm Fittings



### NOT

9149	Description
W360400003	Function 4mm Fittings



### YES

9149	Description
W360400004	Function 4mm Fittings



### MEMORY

9149	Description
W360400005	Function 4mm Fittings

## Technical Specification

Delay setting range: from 0 to 30, at 6 bar  
Signal shut off time: <0.1s



### Timer

9149	Description
W360400006	Timer with 4mm Fittings

# PNEUMATIC CONTROL



## Pneumatic Visual Indicators

**Maximum Working Pressure:**  
8 bar



### 22mm Diameter

0113	Colour	To Fit Tube Size mm
CZT-84 150 201	Red	4
CZT-84 150 202	Green	4
CZT-84 150 203	Yellow	4
Tech Sheet 1508		

## DIN Rail Mountable Pressure & Vacuum Switches



### IP20

0113	Function	To Fit Tube Size mm	Manual Override Detail	Switching Adjustment
CZT-81 513 501	Pressure Switch	4	Yes	2 to 8 bar
CZT-81 513 502	Pressure Switch	4	No	2 to 8 bar
CZT-81 513 552	Vacuum Switch	4	No	-0.3 to -0.8 bar
Tech Sheet 1509				

## Sub-base Mountable Pressure & Vacuum Switches



### IP54

0113	Manual Override Detail	Switching Adjustment
CZT-81 513 510	Yes	2 to 8 bar
Tech Sheet 1510		

## Sub-bases



### Push-in

0113	Type	To Fit Tube Size mm
CZT-81 532 001	Single/End Sub-base, DIN Rail Mount	4
CZT-81 532 102	Associable Sub-base, DIN Rail Mount	4
CZT-81 532 104	Single Sub-base, 2 x M4 Screw Mount	4
Tech Sheet 20085		

## Timers

- 2.7mm Orifice, 170 L/min
- Accuracy +/- 5%.
- Positive output gives a time delay then an output.
- Greater than 107 operations.
- Minimum Reset <0.1 sec.
- Negative output gives an immediate output that switches off after a delay.



**Working Temperature:**  
-5 to +50°C

### Sub-base Mounted

0113	Timer Range	Switching Output
CZT-81 503 710	0.1 to 15 Adjustable	Positive
CZT-81 506 710	0.1 to 15 Adjustable	Negative
CZT-81 503 720	0.1 to 30 Adjustable	Positive
CZT-81 506 720	0.1 to 30 Adjustable	Negative
CZT-81 503 725	0.1 to 60 Adjustable	Positive
CZT-81 507 540	0.4 Fixed Single Impulse Gen.	-
CZT-81 507 720	0.02 to 8 Hz Adj. Freq. Gen.	-
Tech Sheet 1513		

## Logic Elements

Flow rate based on 6 bar pressure rating.

**Working Pressure:**  
2 to 8 bar  
**Plug-in**



0113	Type	To Fit Tube Size mm	Litres per min
CZT-81 540 001	OR Gate	4	170
CZT-81 540 005	OR Gate	6	200
CZT-81 541 001	AND Gate	4	150
CZT-81 541 005	AND Gate	6	200
CZT-81 545 001	Vacuum	4	-
Tech Sheet 1511			

2.7mm orifice, 170 L/min. Greater than 107 operations

### Function:

#### OR Element:

The output signal "S" is present when a signal at "a" OR "b" is present. S = a OR b.

#### AND Element:

The output signal "S" is present only when signals "a" AND "b" are present simultaneously. S = a AND b.

#### YES Element:

The output signal "S" is only present when the pilot is present. S = a YES b.

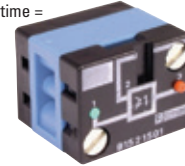
**Working Temperature:**  
-5 to +50°C

**Working Pressure:**  
2 to 8 bar

#### NOT Element:

The output signal "S" is present only if the input signal "a" is NOT present. The output signal is therefore the inverse of the pilot signal. S = NOT a. If the supply port is connected to a 2nd input "b" the function obtained is called Inhibition. S=NOT a AND b.

**Note:** Switching time = <4ms exception OR and AND.



## Sub-base Mounted

0113	Type	Colour
CZT-81 521 501	OR Gate	Blue
CZT-81 522 501	AND Gate	Green
CZT-81 501 025	YES Gate	Yellow
CZT-81 503 025	Yes Gate (Threshold)	Orange
CZT-81 504 025	NO Gate (Simple & Inhibition)	Light Grey
CZT-81 506 025	NO Gate (Threshold)	Dark Grey
Tech Sheet 1512		

## Interface Modular Valve Range

Ideal for DIN rail mounting applications.

Mechanical life 5 x 107.

Switching time 5 to 15ms.

IP rating when used with Sub-base IP20.

IP rating when used with DIN connector IP65.

**Note:** Flow rate based on 6 bar.

**Coil Consumption:** 1W

**Voltage:** 24V DC

**LPM:** 25 L/min

**Working Pressure:**  
1 to 8 bar



## Miniature Solenoid Valves & Sub-bases

0113	Function	Coil Consumption	Voltage	LPM
CZT-81 519 032	3/2 NC without Manual Override	1W	24VDC	25
CZT-81 519 632	3/2 NC with Maintained Manual Override	1W	24VDC	25
Tech Sheet 1515				

## Accessories

### LED Indicator

0113	Type	Voltage
CZT-81 513 052	Visual LED Indicator	24V AC/DC 50-60Hz
Tech Sheet 20741		



# COUNTERS



## Ratchet Counters

Rugged 4 and 5 figure hand-operated reset counters with push button actuator for easy operation. It can be used for unlimited counting chores. Traffic analysis, attendance, sporting events, farming and ranching operations, inventory control, surveys, laboratory studies, production counting and a variety of merchandises.



**4 Figure Ratchet Tally Counter with Reset**

0065  
2089-3731

Tech Sheet 20088



**5 Figure Ratchet Counter with Reset**

0065  
2089-3764

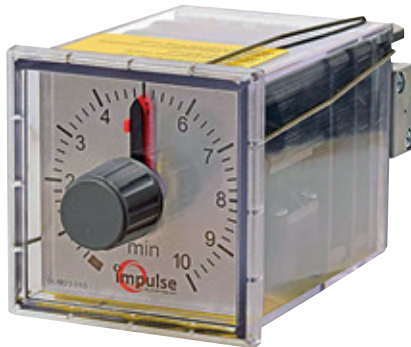
Tech Sheet 20088

## PNEUMATIC TIMERS & COUNTERS



### Timers 5/2

- Working Temperature:**  
-10 to +60°C
- Pressure Range:**  
1.2 to 10 bar



#### M5 Thread

0047	Timer Range
KU-54.022	3-100 sec, Normally Open or Normally Closed
KU-54.023	0.3-10 min, Normally Open or Normally Closed
KU-54.024	3-100 min, Normally Open or Normally Closed

Tech Sheet 175

### Timers 3/2

- Working Pressure:**  
2 to 6 bar



#### M5 Thread, NC

0047	Timer Range
KU-51.020.03.00	2-30 sec, Normally Closed
KU-51.020.30.00	20-300 sec, Normally Closed

Tech Sheet 176

### Pneumatic Preset Counters

- Working Temperature:**  
0 to +60°C
- Pressure Range:**  
2 to 8 bar



#### 5 Digit

0047	Thread
KU-50.680	M5

Tech Sheet 177



#### 6 Digit

0047	Thread
KU-50.670	M5

Tech Sheet 178



Working Temperature:  
0°C to +60°C



## Impulse Valves

Working Pressure:  
2 to 10 bar



### Normally Open, 1/8" BSPP

9149  
KP100014

Tech Sheet 3099

Working Pressure:  
2 to 10 bar



### Normally Closed, 1/8" BSPP

9149  
KP100094

Tech Sheet 3099

## Oscillating Valves

Working Pressure:  
2 to 10 bar



### Continuous Cycle, 1/4" BSPP

9149  
KP010444

Tech Sheet 3100

Working Pressure:  
2 to 10 bar



### Pneumatically Piloted, 1/4" BSPP

9149  
KP010464

Tech Sheet 3100

## Flip Flop Valve

Working Pressure:  
3 to 10 bar



### Pneumatically Piloted, 1/4" BSPP

9149  
KP100354


Tech Sheet 3103

## SPECIALIST VALVES

 Working Temperature:  
0°C to +60°C



### High Flow Pneumatic Timer for Automatic Return

 Working Pressure:  
2 to 10 bar




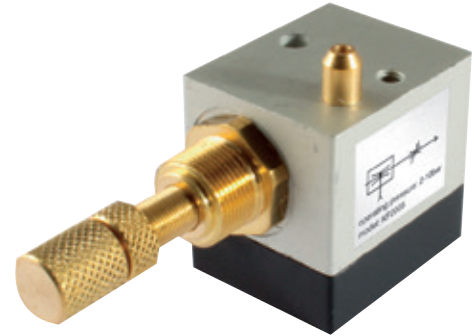
1/8" BSPP

9149  
KP000744

Tech Sheet 3101

### Vacuum Driven Liquid Sprayer

 Working Pressure:  
3 to 8 bar



M5 Thread

9149  
KP2005

Tech Sheet 3102

### Two Hand Safety Unit

 Working Temperature: 0°C to +60°C

 Working Pressure:  
3 to 8 bar



4mm Push-in

0341  
KP081564

Tech Sheet 3099

The pre-assembled unit is specially designed with the operator's safety in mind. The unit requires both hands of the operator to function; if both 3/2 button valves are not activated within 0.5 seconds of each other the unit will not operate.



Two Hand Safety Base Unit, 1/8" BSPP

9149  
KPBU081564

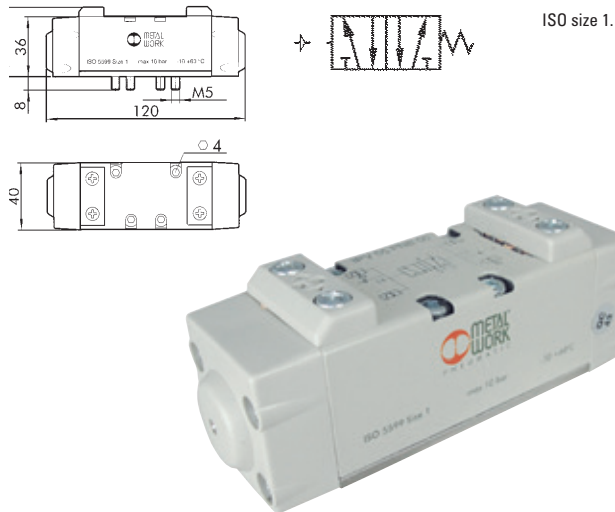
Tech Sheet 3099

# ISO VALVES

## Technical Data

ISO Size	Operating Pressure	Operating Temperature Range	Nominal Diameter	Flow Rate at 6 bar $\Delta P$ 0.5 bar	Flow Rate at 6 bar $\Delta P$ 1 bar
1	Vacuum $\rightarrow$ $\geq$ 10 bar	-10°C to 60°C $\geq$	7.5mm	700 NI/min	1100 NI/min
2			12mm	1800 NI/min	2700 NI/min

## Pneumatic ISO 5599 Valves



### 5/2 Pilot/Spring

9149	ISO Size
7051011100	1
7052011100	2

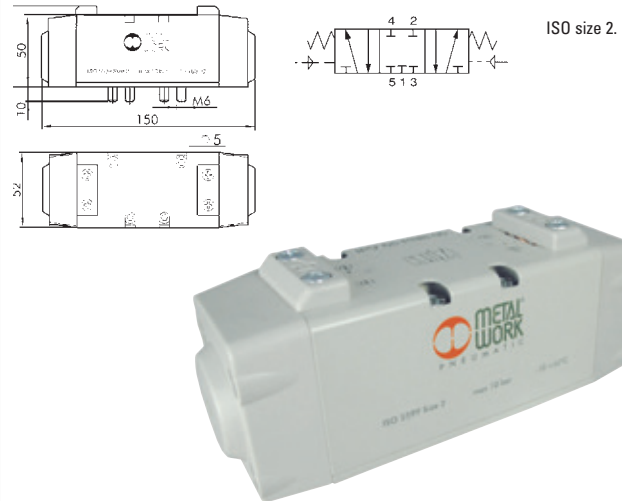
## Pneumatic ISO 5599 Valves



### 5/2 Pilot/Pilot

9149	ISO Size
7051011200	1
7052011200	2

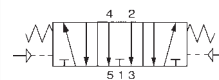
## Pneumatic ISO 5599 Valves



### 5/3 Pilot/Pilot Closed Centres

9149	ISO Size
7051012100	1
7052012100	2

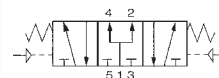
## Pneumatic ISO 5599 Valves



### 5/3 Pilot/Pilot Open Centres

9149	ISO Size
7051012200	1
7052012200	2

## Pneumatic ISO 5599 Valves

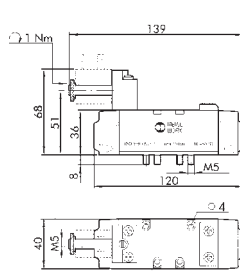


### 5/3 Pilot/Pilot Pressurised Centres

9149	ISO Size
7051012300	1
7052012300	2

# ISO VALVES

## Solenoid ISO 5599 Valves



ISO size 1.



### 5/2 Solenoid/Spring

9149	ISO Size
7051021100	1
7052021100	2

## Solenoid ISO 5599 Valves



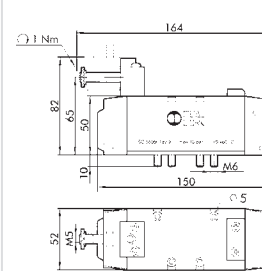
### 5/2 Solenoid/Solenoid

9149	ISO Size
7051021200	1
7052021200	2

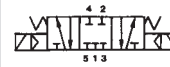
For Pre wired  
moulded DIN Plugs  
see page 1043



## Solenoid ISO 5599 Valves



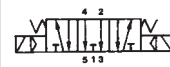
ISO size 2.



### 5/2 Solenoid/Solenoid Closed Centres

9149	ISO Size
7051022100	1
7052022100	2

## Solenoid ISO 5599 Valves



### 5/2 Solenoid/Solenoid Open Centres

9149	ISO Size
7051022200	1
7052022200	2

## Solenoid ISO 5599 Valves



### 5/3 Solenoid/Solenoid Pressurised Centres

9149	ISO Size
7051022300	1
7052022300	2

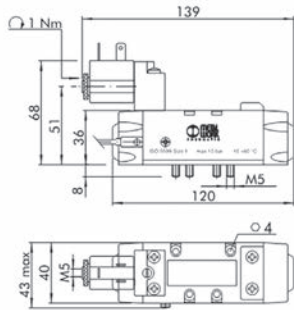
# ISO VALVES

## Safe Air Series Solenoid Spring Valves ISO 5599/1

- Nominal Diameter 7.5
- Flow Rate at 6 bar  $\Delta p$  0.5 bar 700 NI/min
- Flow rate at 6 bar  $\Delta p$  1bar 1100 NI/min

**Operating Temperature Range:**  
-10°C to 60°C

**Operating Pressure:**  
2.5 to 10 bar



### ISO 1, 2.5 Metre, 3 Wires

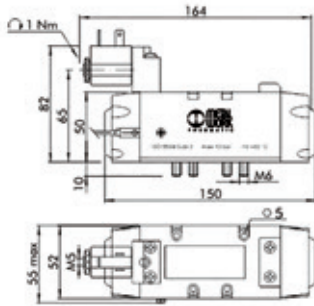
9149	Description
7057021100	Solenoid/Spring
7057021400	Solenoid/Spring Pilot

## Safe Air Series Solenoid Spring Valves ISO 5599/1

- Nominal Diameter 12
- Flow Rate at 6 bar  $\Delta p$  0.5 bar 1800 NI/min
- Flow Rate at 6 bar  $\Delta p$  1bar 2700 NI/min

**Operating Temperature Range:**  
-10°C to 60°C

**Operating Pressure:**  
2.5 to 10 bar



### ISO 2, 2.5 ISO 1, 2.5 Metre, 3 Wires

9149	Description
7058021100	Solenoid/Spring
7058021400	Solenoid/Spring Pilot

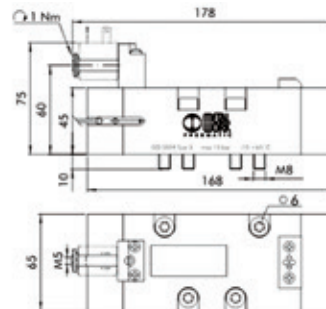


## Safe Air Series Solenoid Spring Valves ISO 5599/1

- Nominal Diameter 15
- Flow Rate at 6 bar  $\Delta p$  0.5 bar 3200 NI/min
- Flow Rate at 6 bar  $\Delta p$  1bar 4600 NI/min

**Operating Temperature Range:**  
-10°C to 60°C

**Operating Pressure:**  
2.5 to 10 bar



### ISO 3, 2.5 Metre, 3 Wires

9149	Description
7059021100	Solenoid/Spring
7059021400	Solenoid/Spring Pilot

# ACCESSORIES FOR ISO VALVES

## Solenoid Coils for ISO 5599 Valves, Size 1

### Technical Data

- Voltage tolerance: -10% to +15%
- Insulation class: F155
- Degree of protection: IP65 EN60529 with connector
- Avoid prolonged exposure to atmospheric agents
- Coil temperature range, 100% ED:  
+20°C to +70°C (ambient temperature)



22mm

9149	Description
W0215000101	24V DC
W0215000111	24V AC
W0215000121	110V AC
W0215000131	220V AC

9072	Description
M1NS2000	Form B Socket Connector

## Solenoid Coils for ISO 5599 Valves, Size 2



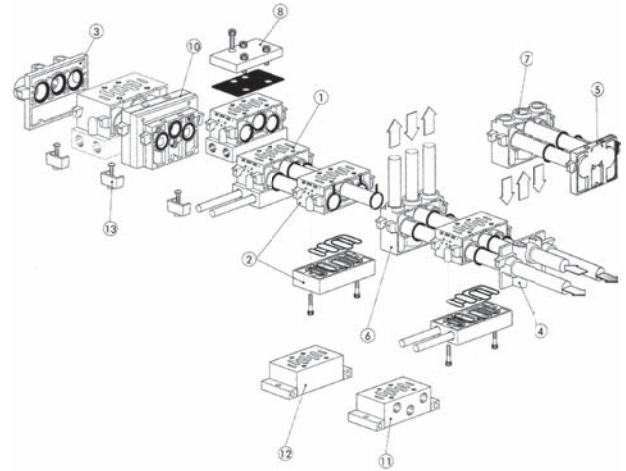
30mm

9182	Description
W0210010100	24V DC
W0210011100	24V AC
W0210012100	110V AC
W0210013100	220V AC



9072	Description
G1NU2000	Form A Socket Connector

## Sub-bases



### For ISO 5599 Valves, Size 1

9258	Description
0228000150	1) Manifold Base, Side Ports
0228000155	2) Manifold Base, Bottom Ports
0228000200	3) Input End Plate
0228000210	5) Blind End Plate
0228000300	6) Intermediate Plate, Top Ports
0228000301	7) Intermediate Plate, Back Ports
0228000500	8) Blanking Plate
0228000400	9) Intermediate Diaphragm
0228000100	11) Individual Base, Side Ports
0228000700	13) Assembly Kit

## Sub-bases

### For ISO 5599 Valves, Size 2

9258	Description
0228001150	1) Manifold Base, Side Ports
0228001155	2) Manifold Base, Bottom Ports
0228001200	3) Input End Plate
0228001210	5) Blind End Plate
0228001300	6) Intermediate Plate, Top Ports
0228001301	7) Intermediate Plate, Back Ports
0228001500	8) Blanking Plate
0228001400	9) Intermediate Diaphragm
0228001100	11) Individual Base, Side Ports
0228001700	13) Assembly Kit

# DIRECTIONAL CONTROL VALVES

## Series 9, Electro Pneumatically & Pneumatically Operated Valves\*

### Actuation:

Solenoid/Spring

- Coils also available separately



### Size 1, 5/2 Manual Override Spring Return Single Solenoid Valves (951)

0158	Voltage
951 000 P15 23	Valve Body
2085-9179	24V 50/60Hz 3.5VA
2085-9195	110V 50/60Hz 3.5VA
2085-9203	240V 50/60Hz 4VA
2085-9211	48V DC 3W
2085-9229	110V DC 3W
2085-9245	24V DC 3W
2085-9252	6V DC 5W
2085-9260	12V DC 5W
2085-9278	24V DC 5W
2085-9286	48V DC 5W
2085-9294	110V DC 5W

Tech Sheet 1849

### Size 2, 5/2 Manual Override Spring Return Single Solenoid Valves (952)

0158	Voltage
952 000 P15 23	Valve Only
2085-9310	24V 50/60Hz 3.5VA
2085-9328	110V 50/60Hz 3.5VA
2085-9336	240V 50/60Hz 4VA
2085-9344	48V DC 3W
2085-9351	110V DC 3W
2085-9369	24V DC 3W
2085-9377	6V DC 5W
2085-9385	12V DC 5W
2085-9393	24V DC 5W
2085-9401	48V DC 5W
2085-9419	110V DC 5W

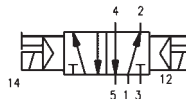
Tech Sheet 1849

### Size 3, 5/2 Manual Override Spring Return Single Solenoid Valves (953)

0158	Voltage
953 000 P15 23	Valve Only
2085-9435	24V 50/60Hz 3.5VA
2085-9443	110V 50/60Hz 3.5VA
2085-9450	240V 50/60Hz 4VA
2085-9468	48V DC 3W
2085-9476	110V DC 3W
2085-9484	24V DC 3W
2085-9492	6V DC 5W
2085-9500	12V DC 5W
2085-9518	24V DC 5W
2085-9526	48V DC 5W
2085-9534	110V DC 5W

Tech Sheet 1849

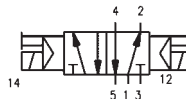
\*According to ISO 5599/1



### Size 1, 5/2 Manual Override Double Solenoid Valve (951)

0158	Voltage
951 000 P11 23	Valve Only
951 P11 23 U7H	24V 50/60Hz 3.5VA
951 P11 23 U7K	110V 50/60Hz 3.5VA
951 P11 23 U7J	240V 50/60Hz 4VA
951 P11 23 U72	12V DC 5W
951 P11 23 U73	24V DC 5W
951 P11 23 U74	48V DC 5W
951 P11 23 U76	110V DC 5W
951 P11 23 U77	24V DC 3W

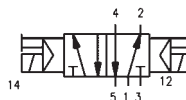
Tech Sheet 1849



### Size 2, 5/2 Manual Override Double Solenoid Valve (952)

0158	Voltage
952 000 P11 23	Valve Only
952 P11 23 U7H	24V 50/60Hz 3.5VA
952 P11 23 U7K	110V 50/60Hz 3.5VA
952 P11 23 U7J	240V 50/60Hz 4VA
952 P11 23 U72	12V DC 5W
952 P11 23 U73	12V DC 5W
952 P11 23 U74	48V DC 5W
952 P11 23 U76	110V DC 5W
952 P11 23 U77	24V DC 3W

Tech Sheet 1849



### Size 3, 5/2 Manual Override Double Solenoid Valve (953)

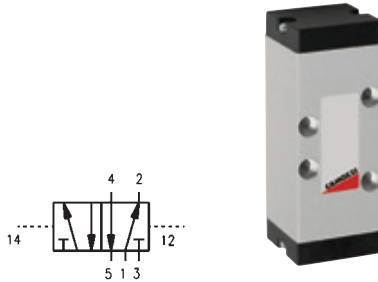
0158	Voltage
953-000-P11-23	Valve Only
953 P11 23 U7H	24V 50/60Hz 3.5VA
953 P11 23 U7K	110V 50/60Hz 3.5VA
953 P11 23 U7J	240V 50/60Hz 4VA
953 P11 23 U72	12V DC 5W
953 P11 23 U73	12V DC 5W
953 P11 23 U74	48V DC 5W
953 P11 23 U76	110V DC 5W
953 P11 23 U77	24V DC 3W

Tech Sheet 1849

Pneumatic spring return and 5/3 CO, CC options also available

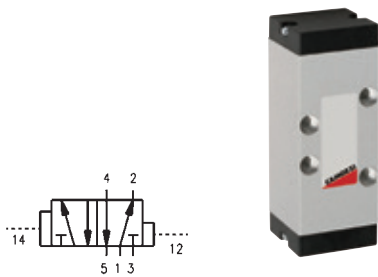
# DIRECTIONAL CONTROL VALVES

## Series 9, Electro Pneumatically & Pneumatically Operated Valves\*



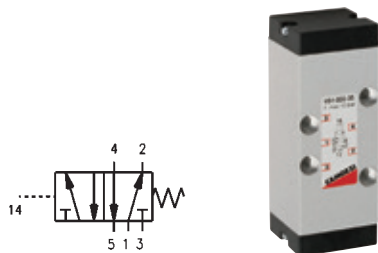
**5/2 Pneumatic/Pneumatic Return Valves (951, 952 & 953)**

0158	Port Size
951 000 33	Size 1
952 000 33	Size 2
953 000 33	Size 3
Tech Sheet 1849	



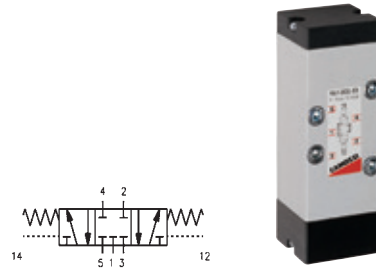
**5/2 Pneumatic Differential Return Valves (951, 952 & 953)**

0158	Port Size
951 000 34	Size 1
952 000 34	Size 2
953 000 34	Size 3
Tech Sheet 1849	



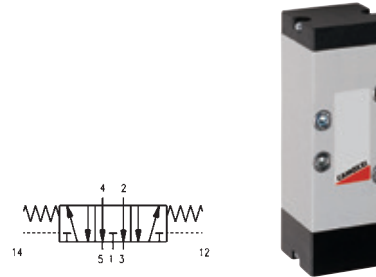
**5/2 Pneumatic Mechanical Spring Return Valves (951, 952 & 953)**

0158	Port Size
951 000 35	Size 1
952 000 35	Size 2
953 000 35	Size 3
Tech Sheet 1849	



**5/3 Pneumatic Closed Centres (961, 962 & 963)**

0158	Port Size
961 000 33	Size 1
962 000 33	Size 2
963 000 33	Size 3
Tech Sheet 1849	



**5/3 Pneumatic Open Centres (971, 972 & 973)**

0158	Port Size
971 000 33	Size 1
972 000 33	Size 2
973 000 33	Size 3
Tech Sheet 1849	



**Single Sub-base with Side Outlets**

0158	To Suit
901 F1A	ISO 1
902 F2A	ISO 2
903 F3A	ISO 3
Tech Sheet 1849	

\*According to ISO 5599/1



**Single Sub-base with Rear Outlets**

0158	To Suit
901 G1A	ISO 1
902 G2A	ISO 2
903 G3A	ISO 3
Tech Sheet 1849	



**Manifold Sub-base with Common Exhaust & Inlets**

0158	To Suit
901 C1A	ISO 1
902 C2A	ISO 2
903 C3A	ISO 3
Tech Sheet 1849	



**End Block for Manifold Sub-base**

0158	To Suit
901 H1	ISO 1
902 H2	ISO 2
903 H3	ISO 3
Tech Sheet 1849	



# SPECIAL PURPOSE VALVES

## In-line Progressive Starter

The in-line progressive starter is a valve that regulates the flow of air until the outlet pressure reaches a certain value, at which the valve opens and allows air to flow at full rate.

This valve can be used to control a group of valves or a single valve, it can also be mounted between another valve and an actuator.

The air that enters inlet 1 passes through a choke that has a knob adjustment to control the flow. The valve opens completely when the outlet pressure reaches about 60% of the inlet pressure. If the air supply is switched off, the valve discharges air from outlet 2 to inlet 1.

**Working Temperature:**  
-10°C to 70°C

**Maximum Working Pressure:**  
10 bar

**1/4" & 1/2"**

9149	Thread
W3606000002	G1/4"
W3606000004	G1/2"



# PRESSURE REGULATOR ASSEMBLY

## Line-on Line, RMV

### Valves

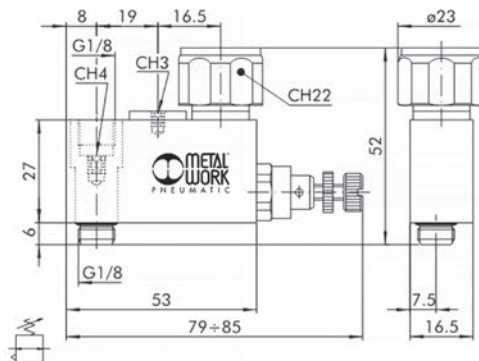
**Flow-rate at 6.3 bar DP 1 bar (NI/min):** 140

**Functional denomination:** Regulator

**Thread Type:** Cylindrical gas

**Threaded Port:** 1/8"

**Temperature:**  
-10°C to 50°C



**RMV, 1/8"**

9149	Description
9061601	Line on Line RMV 1/8" Pressure Regulator Assembly



# PRESSURE & VACUUM SWITCHES

## Adjustable Pressure Switch

This type of pressure switch features a high degree of miniaturisation and a modern attractive design.

It can be installed in any position and also mounted onto a wall by means of two transversal holes.

In order to reduce wiring times, it is supplied ready assembled with a 2-metre electric cable or an M8 connector with a 300-mm cable.

The contact is the switching type, which means it can be normally open or normally closed

A knurled push-lock handle is provided for regulation



**Working Temperature:**  
+50°C

**Maximum Working Pressure:**  
15 bar

### With 2 Metre Cable

9149	Thread
9000401	1/8"

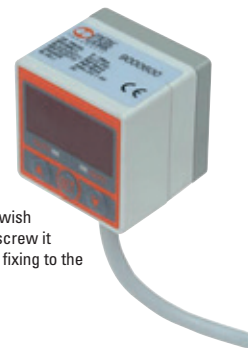
## Adjustable Pressure Switch

### With M8 Connector & 300mm Cable

9149	Thread
9000402	1/8"

## Digital Pressure Switch

The digital pressure switch can be used to transmit electric pressure signals and also display the pressure instantly. The signal is transmitted for two settable pressure values and with an analogue voltage signal. The values are clearly displayed on a LED video and different parameters can be entered from the keypad. Hysteresis can be adjusted and the unit of measurement for pressure can be modified. Two compressed air ports are provided, one at the back and one on the bottom. The pressure switch comes with a threaded plug in the bottom port. If you wish to connect to this port, merely unscrew the plug and screw it into the back port. A kit of accessories is provided for fixing to the top or wall, or to a panel.



**Maximum Working Pressure:**  
10 bar

### With Digital Display Showing Pressure Reading

9149
9000600

## Security Knob

NOTE: Pull outwards to remove the knob from the pressure switch on the unit. Insert the security knob and regulate the pressure switch. Then press the handle firmly to lock it in position. If the pressure switch needs to be reset, remove the security knob by forcing it laterally with a screwdriver.



### To suit 9000401 & 9000402

9149
9200703

# SPECIAL PURPOSE VALVES

## Two Hand Safety Valve

### Technical Specifications

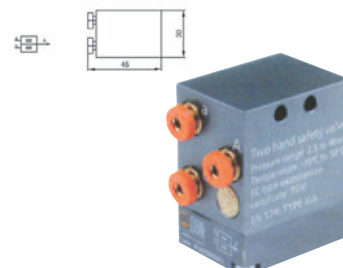
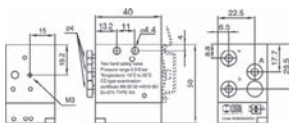
- Compressed air couplings: push-in fittings for Ø4mm pipe
- Fluid: filtered, non-lubricated compressed air
- Standard: EN574 type IIIA, TUV approved, certified M6020244919001
- Synchronisation, maximum time between two signals: 0.4 sec
- De-activation time, with 1000mm maximum pipe length: <0.05 sec
- Actuation: pneumatic
- Reset: spring operated
- Nominal diameter: 2.7mm
- Mounting position: any direction

### Materials

- Body: anodised aluminium
- Internal parts: brass and technopolymer
- Gaskets: NBR
- Spring: alloy steel

**Working Temperature:**  
-10°C to +60°C

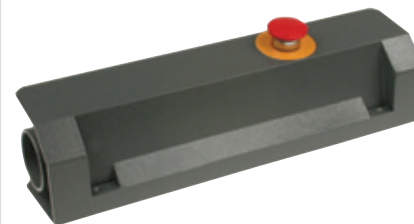
**Working Pressure:**  
2.5 to 8 bar



### 4mm Push-in Fittings

9149
W360500001

## Complete Two Handed Push Button Assembly



### 4mm Push-in Connections

9149	Description
0227700000	4mm OD Push-in Inlets & Outlets

# PNEUMATIC VIBRATORS

CORN • CEMENT • CHEMICAL • POWDERS • SAND • GRAVEL



## Pneumatic Ball Vibrators

### BSPP

0314	Thread	Min Pressure Bar	Max Pressure Bar	Air Consumption in Litres at 6 Bar
JM8	1/4"	2	6	195
JM10	1/4"	2	6	200
JM13	1/4"	2	6	225
JM16	1/4"	2	6	280
JM20	1/4"	2	6	340
JM25	1/4"	2	6	425
JM30	3/8"	2	6	570
JM36	3/8"	2	6	675

Tech Sheet 1012

- The JM range of ball vibrators produces a rotative vibration with infinitely variable amplitude and frequency. The frequency is controlled by air pressure. The vibrator is designed to perform the following activities: moving, feeding, compacting and/or separating of all kinds of materials such as chemical powders, corn, sand, gravel and cement, etc.
- It is designed for indoor and outdoor applications but not to be submerged in any kind of liquid.

° Maximum Working Temperature: +100°C (220°F)

Maximum Working Pressure: 6 bar

## Pneumatic Turbine Vibrators

### BSPP

0314	Thread	Min Pressure Bar	Max Pressure Bar	Air Consumption in Litres at 6 Bar
JMT8	1/8"	2	6	120
JMT10	1/8"	2	6	120
JMT13	1/4"	2	6	290
JMT16	1/4"	2	6	290
JMT20	1/4"	2	6	455
JMT25	1/4"	2	6	455
JMT30	3/8"	2	6	745
JMT36	3/8"	2	6	745

Tech Sheet 1013

- The JMT range of turbine vibrators produces a rotative vibration with infinitely variable amplitude and frequency. The frequency is controlled by air pressure. The vibrator is designed to perform the following activities: moving, feeding, compacting and/or separating of all kinds of materials such as chemical powders, corn, sand, gravel and cement, etc.

° Maximum Working Temperature: +100°C (220°F)

Maximum Working Pressure: 6 bar

## Piston Vibrators

### Aluminium, BSPP

0314	Thread	Min Pressure Bar	Min Pressure Bar	Air Consumption in Litres at 6 Bar
KFP-12-M	1/8"	2	6	20
KFP-18-M	1/8"	2	6	55
KFP-25-M	1/4"	2	6	88
KFP-35-M	1/4"	2	6	145

Tech Sheet 10158

# INDUSTRIAL VIBRATORS

## Model K Pneumatic Ball Vibrators



0024	VPM/N	BSP
<b>K8</b>	35000/360N	1/4"
<b>K10</b>	34000/710N	1/4"
<b>K13</b>	22500/870N	1/4"
<b>K16</b>	19500/1100N	1/4"
<b>K20</b>	16000/1720N	1/4"
<b>K25</b>	14000/2050N	1/4"
<b>K30</b>	12500/3210N	3/8"
<b>K36</b>	10000/4050N	3/8"

## Model DAR Pneumatic Roller Vibrators



0024	VPM/N	BSP
<b>DAR4</b>	25000/6690N	1/4"

## Model GT Pneumatic Turbine Vibrators



0024	VPM/N	BSP
<b>GT4</b>	15000/200N	1/8"
<b>GT6</b>	12500/210N	1/8"
<b>GT8</b>	46000/2910N	1/8"
<b>GT10</b>	37500/2400N	1/8"
<b>GT13</b>	33000/3730N	1/4"
<b>GT16</b>	24000/3160N	1/4"
<b>GT20</b>	23000/5520N	1/4"
<b>GT25</b>	17000/5070N	1/4"
<b>GT30</b>	16000/7540N	3/8"

## Model FP Pneumatic Linear Vibrators



0024	VPM/N	BSP
<b>FP12M</b>	6700/74N	1/8"
<b>FP25M</b>	4200/504N	1/4"
<b>FP35M</b>	4600/1080N	1/4"



For **Suction Cups Range and Magic Grips**  
see pages **707-760**

## Compact Non-return Valves

Working Temperature:  
-20°C to +150°C

Maximum Working Pressure: 145 psi  
Cracking Pressure: 0.5 psi



### Brass, Viton Seals, BSPP

0444	Thread
VFU8.V	1/8"
VFU4.V	1/4"
VFU3.V	3/8"
VFU2.V	1/2"

Tech Sheet 20354

Working Temperature: -10°C to +85°C  
 Maximum Working Pressure: 145 psi  
Cracking Pressure: 0.5 psi

### Brass, EPDM Seals

0444	Thread
VFU8.E	1/8"
VFU4.E	1/4"
VFU3.E	3/8"
VFU2.E	1/2"

Tech Sheet 20354

## Ported Non-return Valves

Working Temperature:  
-10°C to +85°C

Maximum Working Pressure: 145 psi  
Cracking Pressure: 0.5 psi



### Brass, Nitrile Seals, BSPP

0444	Thread
VUP8.M	1/8"
VUP4.M	1/4"

Tech Sheet 20355

Working Temperature: -20°C to +150°C  
 Maximum Working Pressure: 145 psi  
Cracking Pressure: 0.5 psi

### Brass, Viton Seals, BSPP

0444	Thread
VUP8.VM	1/8"
VUP4.VM	1/4"

Tech Sheet 20355

Working Temperature: -10°C to +85°C  
 Maximum Working Pressure: 145 psi  
Cracking Pressure: 0.5 psi

### Brass, EPDM Seals, BSPP

0444	Thread
VUP8.EM	1/8"
VUP4.EM	1/4"

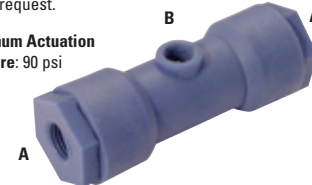
Tech Sheet 20355

## Air Pinch Valves

Control Pressure:  
20 to 40 psi greater than material pressure

N.B: Air pinch valve sleeves can be easily and economically replaced when they wear out. Other body and sleeve material options are available on request.

Maximum Actuation Pressure: 90 psi



### With Polypropylene Body & Buna Sleeve, BSPP

0253	Thread A	Thread B
PINCH-AP6372	1/4"	1/8"
PINCH-AP6304	3/8"	1/8"
PINCH-AP6252	5/8"	1/4"

Tech Sheet 10324

# VALVES



## Compact Non-return Valves, Brass

Working Temperature:  
-20°C to +80°C

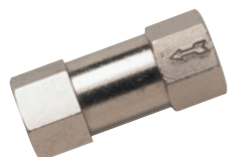
Maximum Working Pressure:  
8 bar (115 psi)  
Cracking Pressure:  
0.2 bar

Seal: Nitrile

### Type 6062, Metric & BSPP

0090	Thread
6062-M5	M5
6062-18	1/8"
6062-14	1/4"
6062-38	3/8"
6062-12	1/2"

Tech Sheet 1607



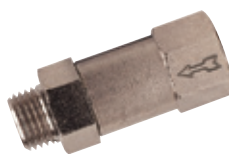
Working Temperature:  
-20°C to +80°C

Maximum Working Pressure:  
8 bar (115 psi)  
Cracking Pressure: 0.2 bar

### Type 6063, Male x Female, BSPP

0090	Thread
6063-18	1/8"
6063-14	1/4"
6063-38	3/8"
6063-12	1/2"

Tech Sheet 1607



## Quick Exhaust Valves, Brass

Working Temperature:  
-20°C to +80°C

### Type 6050, Metric & BSPP

0090	Thread
6050-M5	M5
6050-18	1/8"
6050-14	1/4"
6050-38	3/8"
6050-12	1/2"
6050-34	3/4"
6050-1	1"

Tech Sheet 552



## Push-in Non-return Valves

Working Temperature:  
-20°C to +80°C

Maximum Working Pressure:  
8 bar

1020	OD mm
6064-4	4
6064-6	6
6064-8	8

Tech Sheet 1608



# BALL & CHECK VALVES

stainless  
steel



## Flow Control Regulators

Stainless steel flow control regulators control the speed of a pneumatic cylinder (models LE-7820 7822) or the speed of a chemical of food fluid carried (model 7822: for fluids compatible with FKM and PTFE seals) in aggressive environments or submitted to high mechanical or chemical constraints.

Designed without retention zones, these models are perfectly suitable for food applications or requiring frequent washing of installations.

**Working Temperature:**  
-15°C to +120°C

**Working Pressure:**  
1 to 16 bar



### In-line, 1 Way Adjustment, BSPP

1012	Thread
LE-7820 00 10	1/8"
LE-7820 00 13	1/4"
LE-7820 00 17	3/8"
LE-7820 00 21	1/2"

Tech Sheet 10320

### In-line, Bi-directional, BSPP

1012	Thread
LE-7822 00 10	1/8"
LE-7822 00 13	1/4"
LE-7822 00 17	3/8"
LE-7822 00 21	1/2"

Tech Sheet 10320

## Adjustable Check Valves



Brass nickel plated

### Female, BSPP

1012	Thread	Cracking Pressure Bar
LE-7930 10 10	1/8"	1 to 0.10
LE-7930 13 13	1/4"	1 to 0.10
LE-7930 17 17	3/8"	1 to 0.15

Tech Sheet 10660

## Non-return Valves

Legris stainless steel non-return valves allow fluids to pass in one direction whilst blocking flow in the other direction. Robust and extremely compact, they are suitable for use as a safety item in all fluids circuits.

They are ideal for use in severe conditions and in aggressive environments.

**Operation:** A stainless steel valve blocks the fluid passage, when the pressure differential is lower than 0.25 bar.

**Working Temperature:**  
-20°C to +180°C

**Working Pressure:**  
0.5 to 40 bar



### Uni-directional, Female x Female, BSPP

1012	Thread	OD mm
LE-4890 10 10	1/8"	22
LE-4890 13 13	1/4"	22
LE-4890 17 17	3/8"	30
LE-4890 21 21	1/2"	30
LE-4890 27 27	3/4"	35
LE-4890 34 34	1"	42

Tech Sheet 10320



### Uni-directional, Female x Male, BSPP

1012	Thread	OD mm
LE-4892 10 10	1/8"	22
LE-4892 13 13	1/4"	22
LE-4892 17 17	3/8"	30
LE-4892 21 21	1/2"	30
LE-4892 27 27	3/4"	35
LE-4892 34 34	1"	42

Tech Sheet 10320



### Uni-directional, Male x Female, BSPP

1012	Thread	OD mm
LE-4891 10 10	1/8"	22
LE-4891 13 13	1/4"	22
LE-4891 17 17	3/8"	30
LE-4891 21 21	1/2"	30
LE-4891 27 27	3/4"	35
LE-4891 34 34	1"	42

Tech Sheet 10320



### Uni-directional, Female x Female, NPT

1012	Thread	OD mm
LE-4895 11 11	1/8"	22
LE-4895 14 14	1/4"	22
LE-4895 18 18	3/8"	30
LE-4895 22 22	1/2"	30

Tech Sheet 10320

## Adjustable Check Valves, Supply Version



Brass nickel plated

### Male x Female, BSPP

1012	Thread	Cracking Pressure Bar
LE-7931 10 10	1/8"	1 to 0.10
LE-7931 13 13	1/4"	1 to 0.10
LE-7931 17 17	3/8"	1 to 0.15

Tech Sheet 10660

# VALVES

## Auxiliary Valves

Working Temperature:  
-10°C to +60°C

Maximum Working Pressure:  
10 bar



### Straight Union Check Valve, Tube x Tube

0018	OD mm
331.05.04	4
331.05.06	6
331.05.08	8
331.05.10	10
331.05.12	12

Tech Sheet 10329



### Conical Check Out Valve, Tube x BSPT

0018	OD mm	Thread
331.01.04.18	4	1/8"
331.01.06.18	6	1/8"
331.01.06.14	6	1/4"
331.01.08.18	8	1/8"
331.01.08.14	8	1/4"
331.01.10.38	10	3/8"
331.01.12.38	12	3/8"
331.01.12.12	12	1/2"

Tech Sheet 10329



### Conical Check In Valve, Tube x BSPT

0018	OD mm	Thread
331.02.04.18	4	1/8"
331.02.06.18	6	1/8"
331.02.06.14	6	1/4"
331.02.08.18	8	1/8"
331.02.08.14	8	1/4"
331.02.10.38	10	3/8"
331.02.12.38	12	3/8"
331.02.12.12	12	1/2"

Tech Sheet 10329

## Ball Valves

• Vacuum - 750mm 1.1Hg



### Union Ball Valve, Tube x Tube

0018	OD mm
351.01.06.06	6
351.01.08.08	8
351.01.10.10	10
351.01.12.12	12

Tech Sheet 10330



### Straight Ball Valves, Tube x BSPP

0018	OD mm	Thread
351.03.06.18	6	1/8"
351.03.06.14	6	1/4"
351.03.08.18	8	1/8"
351.03.08.14	8	1/4"
351.03.08.38	8	3/8"
351.03.10.14	10	1/4"
351.03.10.38	10	3/8"
351.03.10.12	10	1/2"
351.03.12.38	12	3/8"
351.03.12.12	12	1/2"

Tech Sheet 10330



### 90° Elbow Union Ball Valves, Tube x Tube

0018	OD mm
351.04.06.06	6
351.04.08.08	8
351.04.12.12	12

Tech Sheet 10330



### 90° Elbow Union Ball Valves, Tube x BSPP

0018	OD mm	Thread
351.06.06.18	6	1/8"
351.06.06.14	6	1/4"
351.06.08.18	8	1/8"
351.06.08.14	8	1/4"
351.06.08.38	8	3/8"
351.06.10.14	10	1/4"
351.06.10.38	10	3/8"
351.06.10.12	10	1/2"
351.06.12.38	12	3/8"
351.06.12.12	12	1/2"

Tech Sheet 10330

# SILENCERS



## Plastic Silencers

Working Temperature:  
0°C to +75°C

Maximum Working  
Pressure: 10 bar



### Granular Filling (Dynamic), POM Body, Male Thread, BSPP

0423	Thread
YPS-18	1/8"
YPS-14	1/4"
YPS-38	3/8"
YPS-12	1/2"
YPS-34	3/4"
YPS-1	1"

Tech Sheet 823



### PE Body, Male Thread, BSPP

0423	Thread
PS-M5	M5
PS-18	1/8"
PS-14	1/4"
PS-38	3/8"
PS-12	1/2"
PS-34	3/4"

Tech Sheet 823



### PE Body with Restrictor, Male Thread, BSPP

0423	Thread
RS-18	1/8"
RS-14	1/4"
RS-38	3/8"
RS-12	1/2"

Tech Sheet 823



### PE Body, Metric Push-in

0423	Stem OD mm
S03STPI-6	6
S03WBPI-8	8
S04STPI-10	10
S05STPI-12	12

Tech Sheet 823



### Granular Filling (Dynamic), Acetal Resin Body, Male Thread, BSPP

0448	Thread
7070-1/8	1/8"
7070-1/4	1/4"
7070-3/8	3/8"
7070-1/2	1/2"
7070-3/4	3/4"
7070-1	1"

Tech Sheet 823



### Felt Filling (Static), Nylon Body, Male Thread, BSPPP

0448	Thread
7080-1/8	1/8"
7080-1/4	1/4"
7080-3/8	3/8"
7080-1/2	1/2"
7080-3/4	3/4"
7080-1	1"

Tech Sheet 823

## Steel Silencers

### Single Ported, Male Thread, BSPP



0449	Thread
SLS050	1/2"
SLS075	3/4"
SLS100	1"
SLS125	1.1/4"
SLS150	1.1/2"
SLS200	2"
SLS250	2.1/2"

Tech Sheet 20351

### Double Ported, Male Thread, BSPP



0449	Thread
SLD050	1/2"
SLD075	3/4"
SLD150	1.1/2"
SLD200	2"

Tech Sheet 20351

## Stainless Steel Silencers

stainless  
steel



BSPP

0423	Thread
S70-18	1/8"
S70-14	1/4"
S70-38	3/8"
S70-12	1/2"
S70-34	3/4"
S70-1	1"

## Stainless Steel Pad Silencers

Body: 304 stainless steel

Pad: 316 stainless steel

stainless  
steel



Metric & BSPP

0423	Thread
12020507	M5
12021007	1/8"
12021307	1/4"
12021707	3/8"
12022107	1/2"
12022707	3/4"
12023207	1"

Tech Sheet 20455



## Coned Brass & Sintered Bronze Silencers

### 7000, Male Thread, BSPP



0423	Thread
7000-1/8	1/8"
7000-1/4	1/4"
7000-3/8	3/8"
7000-1/2	1/2"
7000-3/4	3/4"
7000-1	1"

Tech Sheet 195

### 7030, Male Thread, NPT



0423	Thread
7030-1/8NPT	1/8"
7030-1/4NPT	1/4"
7030-3/8NPT	3/8"
7030-1/2NPT	1/2"
7030-3/4NPT	3/4"
7030-1NPT	1"

Tech Sheet 195

### 7030, Male Thread, Metric & BSPP



0423	Thread
7030-M5	M5
7030-1/8	1/8"
7030-1/4	1/4"
7030-3/8	3/8"
7030-1/2	1/2"
7030-3/4	3/4"
7030-1	1"

Tech Sheet 195

### 7040, Male Thread, Long, BSPP



0423	Thread
7040-1/8	1/8"
7040-1/4	1/4"
7040-3/8	3/8"
7040-1/2	1/2"
7040-3/4	3/4"

Tech Sheet 195

### Square Head Silencer, BSPP



0423	Thread
12041000	1/8"
12041300	1/4"
12041700	3/8"
12042100	1/2"
12042700	3/4"
12043200	1"

Tech Sheet 195

## Flat Brass & Sintered Bronze Silencers

### 7010, Male Thread, BSPP



0423	Thread
7010-M5	M5
7010-1/8	1/8"
7010-1/4	1/4"
7010-3/8	3/8"
7010-1/2	1/2"
7010-3/4	3/4"
7010-1	1"

Tech Sheet 195

### 7020, Male Thread, Metric & BSPP



0423	Thread
7020-M5	M5
7020-1/8	1/8"
7020-1/4	1/4"
7020-3/8	3/8"
7020-1/2	1/2"
7020-3/4	3/4"

Tech Sheet 195

### 7050, Male Thread, BSPP



0423	Thread
7050-1/8	1/8"
7050-1/4	1/4"
7050-3/8	3/8"
7050-1/2	1/2"

Tech Sheet 195

## Round Brass Silencers

### Metric & BSPP



0423	Thread
12100500	M5
12101000	1/8"
12101300	1/4"

## Flush Brass Silencers



### BSPP

0423	Thread
12001000	1/8"
12001300	1/4"
12001700	3/8"
12002100	1/2"
12002700	3/4"
12003200	1"

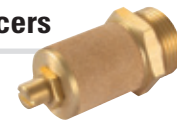
## Miniature Silencers



### Nickel Plated Brass, BSPP

1012	Thread
LE-0677 00 10	1/8"
LE-0677 00 13	1/4"
LE-0677 00 17	3/8"
LE-0677 00 21	1/2"
LE-0677 00 34	1"

## Adjustable Brass Restricting Silencers



### Metric & BSPP

0423	Thread
12090500	M5
12091000	1/8"
12091300	1/4"
12091700	3/8"
12092100	1/2"
12092700	3/4"
12093200	1"

## Exhaust Silencer Restrictor



### BSP

0423	Thread BSPP
ESR18	G1/8"
ESR14	G1/4"
ESR38	G3/8"
ESR12	G1/2"

# ALWITCO MUFFLERS



## Air Exhaust Muffler

- "The Original"... provides up to 85% noise reduction and 94% flow factor.
- Thoroughly proven on thousands of installations, the world-class Atomuffer® Air Exhaust Muffler expertly reduces Exponentially Perceived Noise (EPNdB) without impeding equipment performance. Its design takes explosive air exhaust noise discharged from valve exhaust ports and muffles it with optimized Constant Velocity (CV) flow factor. Exhaust air flows softly to atmosphere free of noise, oil fog, and contaminants, providing a clean, comfortable and productive work environment.
- The Air Exhaust Muffler features a unique obstruction-free expansion chamber. Standard Air Exhaust Muffler construction includes aluminium end covers, zinc-plated steel components and a cellulose fibre element.
- This design is recommended for general purpose air exhaust application for pressures up to 125 psi.



\*Multi-chamber muffler

### BSPT

9234	Thread BSPT	Model	Dimensions		Item Weight lbs	Flow SCFM
			Diameter Inches	Length		
0121001	R1/8"	B01	1.84"	0.19	44	
0121005	R1/2"	B05	3.15"	0.79	256	
0121007	R3/4"	B07	3.40"	1.04	544	
0121010	R1"	B10	3.90"	1.02	800	
0121015	R1.1/2"	B15	5.25"	3.27	2080	
0121030*	R3"	B30	7.00"	13.43	7200	

## Air Ejector Mufflers

- Featuring collimator inserts for concentrated air flow.
- Quickly and easily connected to any compressed air source. Concentrates the air stream in a narrow beam over a longer distance, delivering maximum force at a required point.
- Supplied as a complete unit with a cylindrical housing which can be directly attached to compressed air lines properly positioned for parts ejection or packaging requirements. Can be supplied with a standard plastic collimator insert or a special heat-resistant metal collimator insert (for use in locations with extremely high ambient temperatures).
- Separate collimator inserts also are available as a low-cost solution for applications where it is necessary to bore holes directly into a die and insert the collimator to provide exact air thrust.

**Working Temperature:**  
+10°C to +48°C

**Maximum Working Pressure:**  
8.6 bar



### NPT

9234	Thread NPT	Model	Dimensions		Item Weight lbs	Flow SCFM
			Hex	Length		
0152018	1/8"	A18	0.43	1.37	0.02	22
0152038	3/8"	A38	0.69	2.20	0.06	45
0152048	1/2"	A48	0.87	2.75	0.11	68
0152068	3/4"	A68	1.06	3.15	0.21	75

## End Flow Mufflers

- Directional flow in a compact design.
- Specifically designed for directing the flow of exhaust air in a single direction.
- Discharges exhaust air axially through a unique honey-combed end cap that disperses the air blast and dampens exhaust noise.
- Lightweight and small, standard model is constructed of zinc-plated steel. All stainless steel construction available for very corrosive or sensitive situations. Ideal for use in most locations facing any direction.

**Working Temperature:**  
+10°C to +48°C

**Maximum Working Pressure:**  
8.6 bar



### NPT

9234	Thread NPT	Model	Dimensions		Item Weight lbs	Flow SCFM
			Hex	Length		
0153028	1/4"	D28	0.56	1.75	0.04	72
0153038	3/8"	D38	0.69	2.20	0.07	136
0153068	3/4"	D68	1.06	3.15	0.22	400
0153108	1.1/4"	D108	1.68	4.50	0.62	800
0153128	1.1/2"	D128	2.00	5.00	0.78	880
0153168	2"	D168	2.37	5.50	1.29	1760

## Bantam™ Muffler

- Ideal for use where space is limited.
- Tough and compact, the Bantam™ Muffler is durably constructed of corrosion-resistant metals to withstand shock and continuous heavy duty use under all types of conditions.
- The Bantam™ Muffler is designed with a precise distribution of peripheral openings in a zinc-plated steel and brass acoustical element, which softly disperses exhaust air uniformly over a 360° pattern. All stainless steel construction is also available for very corrosive or sensitive situations.
- Supplied with a standard pipe thread fitting, the Bantam™ Muffler can be attached directly to the exhaust ports of air-operated equipment.

**Working Temperature:**  
+10°C to +48°C

**Maximum Working Pressure:**  
12 bar



### Steel

9234	Thread BSPT	Model	Dimensions		Item Weight lbs	Flow SCFM
			Hex	Length		
0554018	R1/8"	B18	0.43"	1.37"	0.02	44
0554048	R1/2"	B48	0.87"	2.75"	0.15	304
0554068	R3/4"	B68	1.06"	3.15"	0.27	560

# EXHAUST FLOW REGULATOR/ SILENCERS & AIR FUSES

## Exhaust Flow Regulator/ Silencers

- Compact, integral flow regulator and silencer units
- Captive regulating needle will not blow out when unscrewed
- Reduced dimensions

### Medium:

Compressed air, filtered, lubricated or non-lubricated, inert gases

### (T20)

**Body and Washer:** Nylon

**Adjusting Screw:**

High tensile zinc electroplated steel

**Silencer:** Porous polyethylene

### Mounting:

Directly in the exhaust port, hexagon key adjustment for flow regulation (T20)

### (0405)

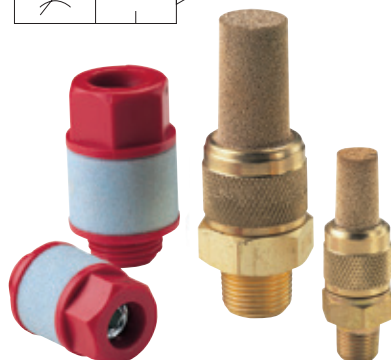
**Body and Nut:** Brass

**Needle:** Plastic

**Silencer:** Sintered bronze

**Working Temperature:**  
-20°C to +80°C

**Maximum Working Pressure:**  
10 bar



### Brass, BSPT

0036	Thread
04057100	1/8"
04057200	1/4"
04057300	3/8"
04057400	1/2"

Tech Sheet 10259

### Nylon, BSPT & Metric

0036	Thread
T20M0500	M5
T20C1800	1/8"
T20C2800	1/4"
T20C3800	3/8"
T20C4800	1/2"

Tech Sheet 10259

## Air Fuses

- Assists in complying with safety regulations
- Tamper proof
- Compact and safe design
- Low pressure drop
- Automatically resets after failure correction
- High corrosion resistance
- High air pressure rating

### Medium:

Compressed air, filtered, lubricated and non-lubricated, inert gases

### Mounting:

In-line two way valve. To be inserted between fixed air supply and flexible hose air line. See guidelines for typical installation

**Type:** Fixed uni-directional excess flow automatic shut off valve

**Body:** Aluminium

**Spring:** Stainless steel

**Internal Parts:** Brass

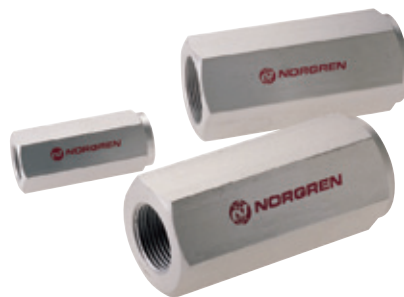
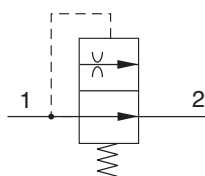
**Working Temperature:**  
-20°C to +80°C

At low temperature ensure fuse is not subjected to icy conditions which may prevent function

**Working Pressure:**  
Maximum 16 bar, minimum according to hose length  
Drop pressure at shut-off flow  
0,14 or 0,3 bar



PRODUCTS FOR  
SAFE SYSTEMS



### BSPP

0036	Thread	Shut Off Flow Rate at 7 bar dm <sup>3</sup> /s ±10%
T60C2890	1/4"	8.3
T60C3890	3/8"	19.14
T60C4890	1/2"	32.2
T60C6890	3/4"	48.3
T60C8890	1"	92

Tech Sheet 10510

## Shuttle Valves

- Allow two independent signal sources to be connected to a common pilot line
- Can be used to perform an 'OR' logic function
- Can be combined to operate from three or more sources
- Valves can be ganged together



### BSPP

0036	Thread
T65C1800	G1/8
T65C2800	G1/4

Tech Sheet 20750

**PORTWEST**

For Portwest PPE  
see page 1752-1760

# BLOCK FORM FLOW REGULATORS & QUICK EXHAUST VALVES



## Block Form Flow Regulators

- Compact size/low weight/ in-line units
- High flow performance
- Suitable for panel and wall mounting
- Adjustment can be locked
- Captive regulator needle will not blow out when unscrewed
- Adjusting knob position line

**Medium:** compressed air, filtered, lubricated or non-lubricated, inert gases

**(M5) Body:** Aluminium

**Seals:** Nitrile

**Needle:** Brass

(1/8", 1/4", 3/8", 1/2")

**Body:** Aluminium alloy

**Needle and Internal Parts:** Brass

**External Parts:** Aluminium alloy

**Working Temperature:**  
-20°C to +80°C

**Working Pressure:**  
1 to 10 bar (0.3 to 10 bar for M5)



### T1000 Series, BSPP & Metric

0036	Thread	Function
<b>T1000M0500</b>	M5	Uni-directional
<b>T1000C1800</b>	1/8"	Uni-directional
<b>T1000C2800</b>	1/4"	Uni-directional
<b>T1000C3800</b>	3/8"	Uni-directional
<b>T1000C4800</b>	1/2"	Uni-directional

Tech Sheet 10248

### T1100 Series, BSPP

0036	Thread	Function
<b>T1100C1800</b>	1/8"	Bi-directional
<b>T1100C2800</b>	1/4"	Bi-directional

Tech Sheet 10249

## Quick Exhaust Valves

**Medium:** Compressed air, filtered, lubricated or non-lubricated

**Body and Cover:** Zinc (1/8"-1/4") or Aluminium alloy (3/8"-1/2")

**Seals:** Nitrile

- Allows higher cylinder speeds to be achieved

**Working Temperature:**  
-20°C to +80°C

**Working Pressure:**  
0.5 to 10 bar



### T70 Series, BSPP

0036	Thread
<b>T70C1800</b>	1/8"
<b>T70C2800</b>	1/4"
<b>T70C3800</b>	3/8"
<b>T70C4800</b>	1/2"

Tech Sheet 10250



Customers who bought from this page also purchased  
**Brass & Nickel Plated Brass Hose Tails**  
see pages 1140-1147



# PROPORTIONAL VALVES



## Valves

- Closed loop air pilot operated proportional pressure control valve
- Adjustable for a wide range of applications
- Fast response
- Low power consumption
- High flow
- **Medium:** Compressed air filtered to 50µm, non-lubricated
- **Flow:** Up to 1200 L/min at 11 bar supply pressure

° Working Temperature: -20°C to +50°C

Supply Pressure: 14 bar max.



### VP50 Series Proportional Valves

0036	Control Signal	Output Bar
VP5010BJ111H00	0...10 V	0...10
VP5010BJ411H00	4...20 mA	0...10
VP5008BJ411H00	4...20 mA	0...8
VP5006BJ111H00	0...10 V	0...6
VP5006BJ411H00	4...20 mA	0...6
VP5002BJ111H00	0...10 V	0...2
VP5002BJ411H00	4...20 mA	0...2

Tech Sheet 10357

- Proven low power technology
- Reliable, rugged, open-loop device
- Compact and flexible design
- Excellent performance characteristics
- Output pressures up to 8 bar
- **Medium:** Oil free, dry air, filtered to 5µ

° Working Temperature: 0°C to +60°C

Output Pressure:  
0 to 1 bar (0 to 15 psi), 0 to 2 bar (0 to 30 psi),  
0 to 4 bar (0 to 60 psi), 0 to 6 bar (0 to 90 psi),  
0 to 8 bar (0 to 120 psi)

Supply Pressure:  
Minimum 1.5 bar (22 psi) above maximum output  
pressure 10 bar (150 psi) maximum



### VP12 Series Miniature Proportional Valves

0036	Control Signal	Output Bar
VP1204BG401Q00	4...20 mA	0...4
VP1204BG101Q00	0...10 V	0...4
VP1208BG401Q00	4...20 mA	0...8
VP1208BG101Q00	0...10 V	0...8

Tech Sheet 10358

# ADDITIONAL RANGES



## Heavy-duty Flow Regulators Uni-directional

- Heavy-duty general-purpose flow regulator, suitable for in line and wall mount
- Additional port sizes available



### BSPP

0036	Thread
M837	1/4"

Tech Sheet 20159

## Exhaust Port Filters

- Prevent the ingress of dirt with minimal flow restriction. Robust and compact. Screw directly into the exhaust port



### BSPP

0036	Thread
M/1511	1/8"
M/1512	1/4"
M/1514	1/2"
M/1516	3/4"
M/1518	1"

Tech Sheet 20158

## Plastic Silencers



### BSPP

0036	Thread
M/S1	1/8"
M/S2	1/4"
M/S3	3/8"
M/S4	1/2"
S/S6	3/4"

Tech Sheet 1356

## Quietaire Heavy-duty Silencers

- Brass mesh screen and aluminium construction provide improved flow, longer life and cleanable elements



### Male Thread, BSPT

0036	Thread
MB001B	1/8"
MB002B	1/4"
MB003B	3/8"
MB004B	1/2"
MB006B	3/4"
MB008B	1"

Tech Sheet 2058

### Female Thread, BSPT

0036	Thread
MA001B	1/8"
MA002B	1/4"
MA003B	3/8"
MA004B	1/2"
MA006B	3/4"

Tech Sheet 2058

### Female Thread, BSPP

0036	Thread
MA010C	1.1/4"
MA012C	1.1/2"
MA016C	2"

Tech Sheet 2058

# AUTOMATIC VALVES

## Shuttle Valve



### SCS

0158	Thread
SCS 668	G1/8"
Tech Sheet 1854	

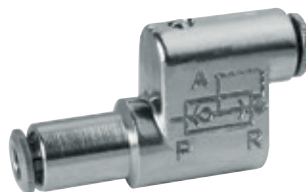
## Non-return Valves



### VNR

0158	Thread
VNR M5	M5
VNR 1/8	G1/8"
VNR 843 07	G1/4"
Tech Sheet 1854	

## Quick Exhaust Valves



### VSO

0158	OD mm
VSO 426 04	4
Tech Sheet 1854	



### VSC, BSPP

0158	Thread
VSC 588	G1/8"
VSC 544	G1/4"
VSC 522	G1/2"
Tech Sheet 1854	



### VSO, Standpipe Style

0158	Thread
VSO 425 M5	5
Tech Sheet 1854	

## In-line Flow Control Valves



### Uni-directional

0158	Thread
RFU 452	M5
RFU 482	G1/8"
RFU 483	G1/8"
RFU 444	G1/4"
RFU 446	G1/4"
RFU 429	G1/2"
Tech Sheet 10307	

### Bi-directional

0158	Thread
RFO 352	M5
RFO 382	G1/8"
RFO 383	G1/8"
RFO 344	G1/4"
RFO 346	G1/4"
Tech Sheet 10307	



For Air Brake Accessories C-Truck 9000 Series  
see pages 890-894

**° Working Temperature:**  
-5°C to +60°C

**Maximum Working Pressure:**  
10 bar

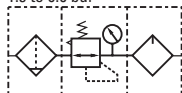
40 Micron fitted as standard  
Auto or semi-auto drain fitted as standard  
Guarded bowl protection on Series 300, 400 and 600

All FT Pro Regulators can now be adapted to use either a 40mm or 50mm round face gauge with the new FT Pro Gauge Adaptor. See page 646



## 200 Series Filter + Regulator + Lubricator Combination Units

Operating Pressure  
1.5 to 9.0 bar

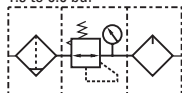


**Semi-auto Drain, supplied with Mounting Bracket & 10 bar Gauge, BSPP**

0338	Thread	LPM
KCS200-06-F-3	1/8"	3000
KCS200-08-F-3	1/4"	3000
Tech Sheet 3060		

## 300 Series Filter + Regulator + Lubricator Combination Units

Operating Pressure  
1.5 to 9.0 bar



**Auto Drain, supplied with Mounting Bracket & 10 bar Gauge, BSPP**

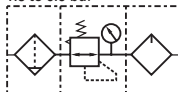
0338	Thread	LPM
KCS300-08-A-F-3	1/4"	4000
KCS300-10-A-F-3	3/8"	4000
KCS300-15-A-F-3	1/2"	4000
Tech Sheet 3060		

**Semi-auto Drain, supplied with Mounting Bracket & 10 bar Gauge, BSPP**

0338	Thread	LPM
KCS300-08-F-3	1/4"	4000
KCS300-10-F-3	3/8"	4000
KCS300-15-F-3	1/2"	4000
Tech Sheet 3060		

## 400 Series Filter + Regulator + Lubricator Combination Units

Operating Pressure  
1.5 to 9.0 bar



**Auto Drain, supplied with Mounting Bracket & 10 bar Gauge, BSPP**

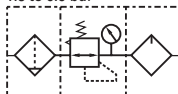
0338	Thread	LPM
KCS400-10-A-F-3	3/8"	6000
KCS400-15-A-F-3	1/2"	6000
Tech Sheet 3060		

**Semi-auto Drain, supplied with Mounting Bracket & 10 bar Gauge, BSPP**

0338	Thread	LPM
KCS400-10-F-3	3/8"	6000
KCS400-15-F-3	1/2"	6000
Tech Sheet 3060		

## 600 Series Filter + Regulator + Lubricator Combination Units

Operating Pressure  
1.5 to 9.0 bar



**Auto Drain, supplied with Mounting Bracket & 10 bar Gauge, BSPP**

0338	Thread	LPM
KCS600-20-A-F-3	3/4"	9000
KCS600-25-A-F-3	1"	9000
Tech Sheet 3060		

**Semi-auto Drain, supplied with Mounting Bracket & 10 bar Gauge, BSPP**

0338	Thread	LPM
KCS600-20-F-3	3/4"	9000
KCS600-25-F-3	1"	9000
Tech Sheet 3060		

# AIR PREPARATION



**Working Temperature:**  
-5°C to +60°C

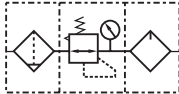
**Maximum Working Pressure:**  
10 bar

40 Micron fitted as standard  
Auto or semi-auto drain fitted as standard  
Guarded bowl protection on Series 300, 400 and 600



## 200 Series Filter/Regulator + Lubricator Combination Units

Operating Pressure  
1.5 to 9.0 bar

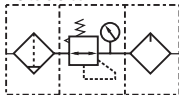


**Semi-auto Drain, supplied with Mounting Bracket & 10 bar Gauge, BSPP**

0338	Thread	LPM
KFCS200-06-F-3	1/8"	3000
KFCS200-08-F-3	1/4"	3000
Tech Sheet 3061		

## 300 Series Filter/Regulator + Lubricator Combination Units

Operating Pressure  
1.5 to 9.0 bar



**Auto Drain, supplied with Mounting Bracket & 10 bar Gauge, BSPP**

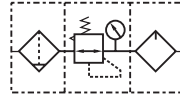
0338	Thread	LPM
KFCS300-08-A-F-3	1/4"	4000
KFCS300-10-A-F-3	3/8"	4000
KFCS300-15-A-F-3	1/2"	4000
Tech Sheet 3061		

**Semi-auto Drain, supplied with Mounting Bracket & 10 bar Gauge, BSPP**

0338	Thread	LPM
KFCS300-08-F-3	1/4"	4000
KFCS300-10-F-3	3/8"	4000
KFCS300-15-F-3	1/2"	4000
Tech Sheet 3061		

## 400 Series Filter/Regulator + Lubricator Combination Units

Operating Pressure  
1.5 to 9.0 bar



**Auto Drain, supplied with Mounting Bracket & 10 bar Gauge, BSPP**

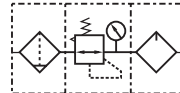
0338	Thread	LPM
KFCS400-10-A-F-3	3/8"	6000
KFCS400-15-A-F-3	1/2"	6000
Tech Sheet 3061		

**Semi-auto Drain, supplied with Mounting Bracket & 10 bar Gauge, BSPP**

0338	Thread	LPM
KFCS400-10-F-3	3/8"	6000
KFCS400-15-F-3	1/2"	6000
Tech Sheet 3061		

## 600 Series Filter/Regulator + Lubricator Combination Units

Operating Pressure  
1.5 to 9.0 bar



**Auto Drain, supplied with Mounting Bracket & 10 bar Gauge, BSPP**

0338	Thread	LPM
KFCS600-20-A-F-3	3/4"	9000
KFCS600-25-A-F-3	1"	9000
Tech Sheet 3061		

**Semi-auto Drain, supplied with Mounting Bracket & 10 bar Gauge, BSPP**

0338	Thread	LPM
KFCS600-20-F-3	3/4"	9000
KFCS600-25-F-3	1"	9000
Tech Sheet 3061		



**° Working Temperature:**  
-5°C to +60°C

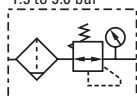
**Maximum Working Pressure:**  
10 bar

40 Micron fitted as standard  
Auto or semi-auto drain fitted as standard  
Guarded bowl protection on Series 300, 400 and 600



## 200 Series Filter/Regulators

Operating Pressure  
1.5 to 9.0 bar

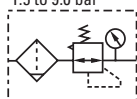


**Semi-auto Drain, supplied with Mounting Bracket & 10 bar Gauge, BSPP**

0338	Thread	LPM
KFRS200-06-F-3	1/8"	3000
KFRS200-08-F-3	1/4"	3000
Tech Sheet 3062		

## 300 Series Filter/Regulators

Operating Pressure  
1.5 to 9.0 bar



**Auto Drain, supplied with Mounting Bracket & 10 bar Gauge, BSPP**

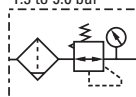
0338	Thread	LPM
KFRS300-08-A-F-3	1/4"	4000
KFRS300-10-A-F-3	3/8"	4000
KFRS300-15-A-F-3	1/2"	4000
Tech Sheet 3062		

**Semi-auto Drain, supplied with Mounting Bracket & 10 bar Gauge, BSPP**

0338	Thread	LPM
KFRS300-08-F-3	1/4"	4000
KFRS300-10-F-3	3/8"	4000
KFRS300-15-F-3	1/2"	4000
Tech Sheet 3062		

## 400 Series Filter/Regulators

Operating Pressure  
1.5 to 9.0 bar



**Auto Drain, supplied with Mounting Bracket & 10 bar Gauge, BSPP**

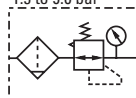
0338	Thread	LPM
KFRS400-10-A-F-3	3/8"	6000
KFRS400-15-A-F-3	1/2"	6000
Tech Sheet 3062		

**Semi-auto Drain, supplied with Mounting Bracket & 10 bar Gauge, BSPP**

0338	Thread	LPM
KFRS400-10-F-3	3/8"	6000
KFRS400-15-F-3	1/2"	6000
Tech Sheet 3062		

## 600 Series Filter/Regulators

Operating Pressure  
1.5 to 9.0 bar



**Auto Drain, supplied with Mounting Bracket & 10 bar Gauge, BSPP**

0338	Thread	LPM
KFRS600-20-A-F-3	3/4"	9000
KFRS600-25-A-F-3	1"	9000
Tech Sheet 3062		

**Semi-auto Drain, supplied with Mounting Bracket & 10 bar Gauge, BSPP**

0338	Thread	LPM
KFRS600-20-F-3	3/4"	9000
KFRS600-25-F-3	1"	9000
Tech Sheet 3062		

# AIR PREPARATION



**Working Temperature:**  
-5°C to +60°C

**Maximum Working Pressure:**  
10 bar

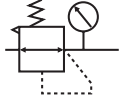
40 Micron fitted as standard  
Auto or semi-auto drain fitted as standard  
Guarded bowl protection on Series 300, 400 and 600

All FT Pro Regulators can now be adapted to use either a 40mm or 50mm round face gauge with the new FT Pro Gauge Adaptor. See page 646



## Mini Regulators

Max inlet pressure 10 bar  
Operating pressure 0.5 to 9.0 bar

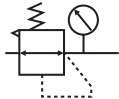


Supplied with Mounting Bracket & 10 bar Gauge, BSPP

0338	Thread
KRS200-06	1/8"
KRS200-08	1/4"
Tech Sheet 3066	

## 200 Series Regulators

Operating pressure 1.5 to 9.0 bar

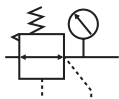


Supplied with Mounting Bracket & 10 bar Gauge, BSPP

0338	Thread	LPM
KRS200-06-F-3	1/8"	3000
KRS200-08-F-3	1/4"	3000
Tech Sheet 3064		

## 300 Series Regulators

Operating pressure 1.5 to 9.0 bar

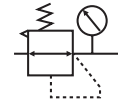


Supplied with Mounting Bracket & 10 bar Gauge, BSPP

0338	Thread	LPM
KRS300-08-F-3	1/4"	5000
KRS300-10-F-3	3/8"	5000
KRS300-15-F-3	1/2"	5000
Tech Sheet 3064		

## 400 Series Regulators

Operating pressure 1.5 to 9.0 bar

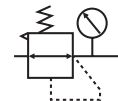


Supplied with Mounting Bracket & 10 bar Gauge, BSPP

0338	Thread	LPM
KRS400-10-F-3	3/8"	7500
KRS400-15-F-3	1/2"	7500
Tech Sheet 3064		

## 600 Series Regulators

Operating pressure 1.5 to 9.0 bar



Supplied with Mounting Bracket & 10 bar Gauge, BSPP

0338	Thread	LPM
KRS600-20-F-3	3/4"	9500
KRS600-25-F-3	1"	9500
Tech Sheet 3064		

**Working Temperature:**  
-5°C to +60°C

**Maximum Working Pressure:**  
10 bar

Guarded bowl protection on Series 300, 400 and 600



## 200 Series Lubricators



Supplied with Mounting Bracket, BSPP

0338	Thread	LPM
KLS200-06	1/8"	3000
KLS200-08	1/4"	3000

Tech Sheet 3065

## 400 Series Lubricators



Supplied with Mounting Bracket, BSPP

0338	Thread	LPM
KLS400-10	3/8"	7500
KLS400-15	1/2"	7500

Tech Sheet 3065

## 300 Series Lubricators



Supplied with Mounting Bracket, BSPP

0338	Thread	LPM
KLS300-08	1/4"	5000
KLS300-10	3/8"	5000
KLS300-15	1/2"	5000

Tech Sheet 3065

## 600 Series Lubricators



Supplied with Mounting Bracket, BSPP

0338	Thread	LPM
KLS600-20	3/4"	9000
KLS600-25	1"	9000

Tech Sheet 3065

# AIR PREPARATION



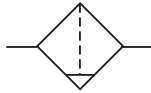
 **Working Temperature:**  
-5°C to +60°C

 **Maximum Working Pressure:**  
10 bar

40 Micron fitted as standard  
Auto or semi-auto drain fitted as standard  
Guarded bowl protection on Series 300, 400 and 600



## 200 Series Filters

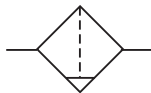


### Semi-auto Drain, supplied with Mounting Bracket, BSPP

0338	Thread	LPM
KFS200-06	1/8"	3000
KFS200-08	1/4"	3000

Tech Sheet 3063

## 300 Series Filters



### Auto Drain, supplied with Mounting Bracket, BSPP

0338	Thread	LPM
KFS300-08-A	1/4"	5000
KFS300-10-A	3/8"	5000
KFS300-15-A	1/2"	5000

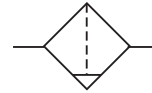
Tech Sheet 3063

### Semi-auto Drain, supplied with Mounting Bracket, BSPP

0338	Thread	LPM
KFS300-08	1/4"	5000
KFS300-10	3/8"	5000
KFS300-15	1/2"	5000

Tech Sheet 3063

## 400 Series Filters



### Auto Drain, supplied with Mounting Bracket, BSPP

0338	Thread	LPM
KFS400-10-A	3/8"	7500
KFS400-15-A	1/2"	7500

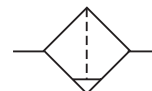
Tech Sheet 3063

### Semi-auto Drain, supplied with Mounting Bracket, BSPP

0338	Thread	LPM
KFS400-10	3/8"	7500
KFS400-15	1/2"	7500

Tech Sheet 3063

## 600 Series Filters



### Auto Drain, supplied with Mounting Bracket, BSPP

0338	Thread	LPM
KFS600-20-A	3/4"	10000
KFS600-25-A	1"	10000

Tech Sheet 3063

### Semi-auto Drain, supplied with Mounting Bracket, BSPP

0338	Thread	LPM
KFS600-20	3/4"	10000
KFS600-25	1"	10000

Tech Sheet 3063

**Working Temperature:**  
-5°C to +60°C

**Maximum Working Pressure:**  
10 bar

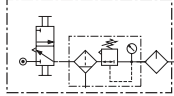
**FT Pro Air Service Units come complete with:**  
Filter/regulator, lubricator, 3/2 shut-off valve, mounting bracket and 10 bar pressure gauge.

Available in both auto drain and semi-auto drain. The units are also available on a floor stand for use with mobile compressors for use on site. All FT Pro Regulators can now be adapted to use either a 40mm or 50mm round face gauge with the new FT Pro Gauge Adaptor. See page 646



## 300 Series Air Service Unit, Wall Mount

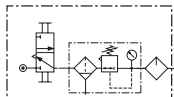
Operating Pressure  
1.5 to 9.0 bar



**Auto Drain, supplied with Shut Off Valve & 10 bar Gauge, BSPP**

0338	Thread	LPM
KCAS300-15-A-F-3	1/2"	4000
Tech Sheet 10286		

Operating Pressure  
1.5 to 9.0 bar

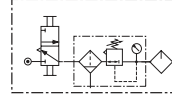


**Semi-auto Drain, supplied with Shut Off Valve & 10 bar Gauge, BSPP**

0338	Thread	LPM
KCAS300-15-F-3	1/2"	4000
Tech Sheet 10286		

## 400 Series Air Service Unit, Wall Mount

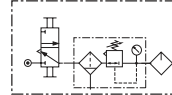
Operating Pressure  
1.5 to 9.0 bar



**Auto Drain, supplied with Shut Off Valve & 10 bar Gauge, BSPP**

0338	Thread	LPM
KCAS400-15-A-F-3	1/2"	6000
Tech Sheet 10286		

Operating Pressure  
1.5 to 9.0 bar



**Semi-auto Drain, supplied with Shut Off Valve & 10 bar Gauge, BSPP**

0338	Thread	LPM
KCAS400-15-F-3	1/2"	6000
Tech Sheet 10286		

# AIR PREPARATION



**Working Temperature:**  
-20°C to +70°C

**Maximum Working Pressure:** 9 bar

Soft Start Valves are increasingly being used where safety is key in the start up of systems and machines in helping protect the operators and the equipment.

The valves allow the pressure to gradually increase to the full flow required on start up of the system.

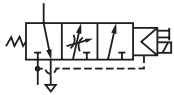
OSHA approved.

These units can be used in conjunction with FT Pro Air Preparation with the addition of brackets style 'U' or 'L', or as a stand alone in-line unit.

All FT Pro Regulators can now be adapted to use either a 40mm or 50mm round face gauge with the new FT Pro Gauge Adaptor. See page 646



## 200 Series Soft Start Valves, Solenoid

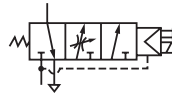


24V DC, supplied with Coil, DIN Plug, Mounting Bracket & 10 bar Gauge, BSPP

0338	Thread
KC200-06	1/8"
KC200-08	1/4"

Tech Sheet 3067

## 300 Series Soft Start Valves, Solenoid

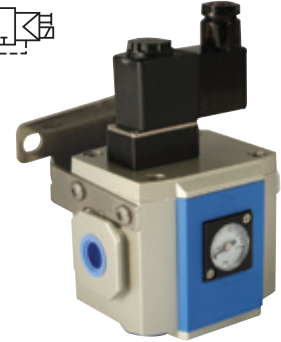
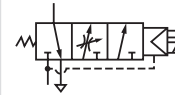


24V DC, supplied with Coil, DIN Plug, Mounting Bracket & 10 bar Gauge, BSPP

0338	Thread
KC300-08	1/4"
KC300-10	3/8"
KC300-15	1/2"

Tech Sheet 3067

## 400 Series Soft Start Valves, Solenoid



24V DC, supplied with Coil, DIN Plug, Mounting Bracket & 10 bar Gauge, BSPP

0338	Thread
KC400-10	3/8"
KC400-15	1/2"

Tech Sheet 3067

**Working Temperature:**  
-20°C to +70°C

**Maximum Working Pressure:** 9 bar

Lockable shut off valves prevent accidental start ups when maintenance or service work is being carried out on the machines.  
Padlock supplied.

These units can be used in conjunction with FT Pro Air Preparation with the addition of brackets style 'U' or 'L', or as a stand alone 3/2 exhausting ball valve.



## 200 Series 3/2 Shut Off Valves, Lockable

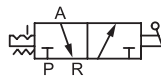


Supplied with Padlock & Mounting Bracket, BSPP

0338	Thread
KZ200-06	1/8"
KZ200-08	1/4"

Tech Sheet 3068

## 300 Series 3/2 Shut Off Valves, Lockable



Supplied with Padlock & Mounting Bracket, BSPP

0338	Thread
KZ300-08	1/4"
KZ300-10	3/8"
KZ300-15	1/2"

Tech Sheet 3068



Supplied with Padlock & Mounting Bracket, BSPP

0338	Thread
KZ400-10	3/8"
KZ400-15	1/2"

Tech Sheet 3068

**Working Temperature:**  
-5°C to +60°C

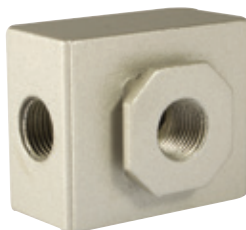
**Maximum Working Pressure:**  
10 bar

Can be fitted to any combination units, fitted before the lubricator it can be used to port off a non-lubricated air supply that might be required for your system.

These units are to be used in conjunction with FT Pro Air Preparation, or as a stand alone BSPP manifold block. When using with existing FT Pro Air Preparation, you will also require additional fixing brackets.



## 200 Series Porting Blocks



**BSPP**

0338	Thread
KA200-06	1/8"
KA200-08	1/4"
Tech Sheet 3069	

## 300 Series Porting Blocks



**BSPP**

0338	Thread
KA300-08	1/4"
KA300-10	3/8"
Tech Sheet 3069	

## Fixing Brackets



**U Style Brackets**

0338	To Suit Series
KA200U-P1	200
KA300U-P1	300
KA400U-P1	400
KA600U-P1	600
Tech Sheet 3069	

## 400 Series Porting Blocks



**BSPP**

0338	Thread
KA400-10	3/8"
KA400-15	1/2"
Tech Sheet 3069	

## 600 Series Porting Blocks



**BSPP**

0338	Thread
KA600-20	3/4"
KA600-25	1"
Tech Sheet 3069	

**L Style Brackets**

0338	To Suit Series
KA201-P1	200
KA301-P1	300
KA401-P1	400
KA601-P1	600
Tech Sheet 3069	

All FT Pro Regulators can now be adapted to use either a 40mm or 50mm round face gauge with the new FT Pro Gauge Adaptor. See below

## Accessories



### Drain Bowl & Auto Drain

0338	To Suit Series
KF300-P6	300
KF400-P10	400
KF600-P1	600
Tech Sheet 20382	



### Drain Bowl & Semi-auto Drain

0338	To Suit Series
KF200-P3	200
KF300-P5	300
KF400-P9	400
KF600-P2	600
Tech Sheet 20896	



### Drain Bowl & Manual Drain

0338	To Suit Series
KF200-P6	200
KF300-P4	300
KF400-P11	400
KF600-P3	600
Tech Sheet 20380	



### Filter Elements 40 Micron

0338	To Suit Series
KF200-004-1	200
KF300-004-1	300
KF400-004-1	400
KF600-004-1	600
Tech Sheet 20379	



### Micro Gauge

0338
K-PR010B-P1
Tech Sheet 20381

All FT Pro regulators can be fitted with a 40mm or 50mm round faced gauge, by using the FT Pro gauge adaptor

Complete with  
2 x screws.



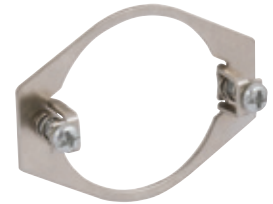
### Gauge Adaptor

0338	Thread	To Suit Series
KGA-1/8	1/8"	200 & 300
KGA-1/4	1/4"	400 & 600
Tech Sheet 20381		



### 1/8" BSPT, Steel Case Centre Back Connection

0338	Gauge Diameter mm	Pressure Range PSI	Pressure Range Bar
KG40-10R	40	0-160	0-10
KG50-10R	50	0-160	0-10



### Panel Mount Brackets, to suit Steel Dry Gauges

0338	To Suit mm
KPMB40R	40
KPMB50R	50



The manufacturers strive to maintain quality and are continually improving products to suit the industry.

Due to the success of the Professional FRL's, The Professional Range has been revamped with improved structure and sensitivity. 200 and 300 series now come with larger, stronger drip cups, extending the products in use life cycle.

Advancements to the construction of the regulators mechanism, has given extra sensitivity on the control this helps to ensure the system is working to the optimum pressure.

- Heavy-duty
- 20 micron filtration as standard
- Metal construction
- Modular compact design
- Semi-auto drain as standard
- Guard bowl protection only on FM3000, FM4000 and FM5000 units
- Micro gauge also available

Working Temperature:  
-10°C to +60°C

Maximum Working Pressure:  
10 bar

## Filter + Regulator + Lubricator

Operating Pressure:  
1.5 bar to 8.5 bar



Supplied with Mounting Bracket & Gauge, BSPP

0132	Thread	LPM
FM2-20-01-C	1/8"	500
FM2-30-02-C	1/4"	2000
FM2-40-03-C	3/8"	4000
FM2-40-04-C	1/2"	4000
FM2-50-06-C	3/4"	5000
FM2-50-10-C	1"	5000

Tech Sheet 60527

## Filter Regulator + Lubricator

Operating Pressure:  
1.5 bar to 8.5 bar



Supplied with Mounting Bracket & Gauge, BSPP

0132	Thread	LPM
FM2-21-01-C	1/8"	500
FM2-31-02-C	1/4"	2000
FM2-41-03-C	3/8"	4000
FM2-41-04-C	1/2"	4000
FM2-51-06-C	3/4"	5000
FM2-51-10-C	1"	5000

Tech Sheet 60528

## Filter Regulator

Operating Pressure:  
1.5 bar to 8.5 bar



Supplied with Mounting Bracket & Gauge, BSPP

0132	Thread	LPM
FM2-20-01-W	1/8"	500
FM2-30-02-W	1/4"	1700
FM2-40-03-W	3/8"	3000
FM2-40-04-W	1/2"	3000
FM2-50-06-W	3/4"	5000
FM2-50-10-W	1"	5000

Tech Sheet 60529

## Filter



BSPP

0132	Thread	LPM
FM2-20-01-F	1/8"	500
FM2-30-02-F	1/4"	1700
FM2-40-03-F	3/8"	3000
FM2-40-04-F	1/2"	3000
FM2-50-06-F	3/4"	5000
FM2-50-10-F	1"	5000

Tech Sheet 60530

## Regulator

Operating Pressure:  
1.5 bar to 8.5 bar



Supplied with Mounting Bracket & Gauge, BSPP

0132	Thread	LPM
FM2-20-01-R	1/8"	500
FM2-30-02-R	1/4"	1700
FM2-40-03-R	3/8"	3000
FM2-40-04-R	1/2"	3000
FM2-50-06-R	3/4"	5000
FM2-50-10-R	1"	5000

Tech Sheet 60531

## Lubricator



BSPP

0132	Thread	LPM
FM2-20-01-L	1/8"	500
FM2-30-02-L	1/4"	1700
FM2-40-03-L	3/8"	3000
FM2-40-04-L	1/2"	3000
FM2-50-06-L	3/4"	5000
FM2-50-10-L	1"	5000

Tech Sheet 60532

# AIR PREPARATION



As with the original Professional Range, the MKII air preparation range comes fully assembled.

We offer users the ability to assemble their own bespoke units with the use of connectors and wall mounting kits.

### Applications:

- Construction
- Agriculture
- Mining
- OEM machine building
- Automotive
- Rail
- Industrial

## Professional Range MKII Accessories



### Neck Brackets

0132	To Suit
FM2-20-N	1/8"
FM2-30-N	1/4"
FM2-40-N	3/8"-1"

Tech Sheet 60537



### Connector & Wall Brackets

0132	To Suit
FM2-20-MB	1/8"
FM2-30-MB	1/4"
FM2-40-MB	3/8"-1/2"
FM2-50-MB	3/4"-1"

Tech Sheet 60537



### Steel Case Centre Back Connection

0132	Thread	Gauge Diameter mm	Pressure Range PSI	Pressure Range Bar
GS-40	1/8"	40	0-145	0-10
GS-50	1/8"	50	0-145	0-10



### Filter Elements

0132	To Suit
FM2-20-20UM	200 Filter Series
FM2-30-20UM	300 Filter Series
FM2-40-20UM	400 Filter Series
FM2-50-20UM	500 Filter Series



### Micro Gauge

0132	To Suit
GM-27	All Series

### Drip Leg Drain



### BSPP

0132	To Suit
FM-402-04-S	1/2"

Tech Sheet 1998

## A Series Regulators



### AR2 Series Regulator 1/8" G - 1/4" G

0600	Port Size G	Gauge Thread G	Max Flow L/min
AR2000-01	1/8"	1/8"	550



### AR3 Series Regulator 1/4" G

0600	Port Size G	Gauge Thread G	Max Flow L/min
AR3000-02	1/4"	1/8"	2500



### AR4 Series Regulator 1/2" G - 3/4" G

0600	Port Size G	Gauge Thread G	Max Flow L/min
AR4000-04	1/2"	1/4"	6000
AR4000-06	3/4"	1/4"	6000



### AR5 Series Regulators 3/4" G - 1" G

0600	Port Size G	Gauge Thread G	Max Flow L/min
AR5000-06	3/4"	1/4"	8000
AR5000-10	1"	1/4"	8000

## A Series Filter Regulators



### AW2 Series Filter Regulator 1/8" G - 1/4" G

0600	Port Size G	Gauge Thread G	Max Flow L/min	Drain
AW2000-01	1/8"	1/8"	550	Manual
AW2000-02	1/4"	1/8"	550	Manual
AW2000-02D	1/4"	1/8"	550	Auto Drain



### AW3 Series Filter Regulator 1/4" G

0600	Port Size G	Gauge Thread G	Max Flow L/min	Drain
AW3000-02	1/4"	1/8"	2000	Manual
AW3000-02D	1/4"	1/8"	2000	Auto Drain



### AW4 Series Filter Regulator 1/2" G

0600	Port Size G	Gauge Thread G	Max Flow L/min	Drain
AW4000-04	1/2"	1/4"	4000-4500	Manual
AW4000-04D	1/2"	1/4"	4000-4500	Auto Drain



### AW5 Series Filter Regulators 3/4" G - 1" G

0600	Port Size G	Gauge Thread G	Max Flow L/min	Drain
AW5000-06D	3/4"	1/4"	5500	Auto Drain
AW5000-10D	1"	1/4"	5500	Auto Drain

## A SERIES AIR PREPARATION



## A Series Combi Sets



## AC2 Series Filter Regulator &amp; Lube Combi Sets 1/8" G - 1/4" G

0600	Port Size G	Gauge Thread G	Max Flow L/min	Drain
AC2010-01	1/8"	1/8"	500	Manual
AC2010-02	1/4"	1/8"	500	Manual
AC2010-02D	1/4"	1/8"	500	Auto Drain



## AC3 Series Filter Regulator &amp; Lube Combi Sets 1/4" G

0600	Port Size G	Gauge Thread G	Max Flow L/min	Drain
AC3010-02	1/4"	1/4"	1700	Manual
AC3010-02D	1/4"	1/4"	1700	Auto Drain



## AC4 Series Filter Regulator &amp; Lube Combi Sets 1/2" G

0600	Port Size G	Gauge Thread G	Max Flow L/min	Drain
AC4010-04	1/2"	1/4"	3000	Manual
AC4010-04D	1/2"	1/4"	3000	Auto Drain



## AC5 Series Filter Regulator &amp; Lube Combi Sets 3/4" G - 1" G

0600	Port Size G	Gauge Thread G	Max Flow L/min	Drain
AC5010-06D	3/4"	1/4"	4000	Auto Drain
AC5010-10D	1"	1/4"	4000	Auto Drain

## A Series Filters



## AF2 Series Filter 1/8" G - 1/4" G

0600	Port Size G	Max Flow L/min	Drain
AF2000-01	1/8"	750	Manual
AF2000-02	1/4"	750	Manual



## AF3 Series Filter 1/4" G

0600	Port Size G	Max Flow L/min	Drain
AF3000-02	1/4"	1500	Manual
AF3000-02D	1/4"	1500	Auto Drain



## AF4 Series Filter 1/2" G - 3/4" G

0600	Port Size G	Max Flow L/min	Drain
AF4000-04	1/2"	4000-6000	Manual
AF4000-04D	1/2"	4000-6000	Auto Drain
AF4000-06D	3/4"	4000-6000	Auto Drain



## AF5 Series Filter 3/4" G - 1" G

0600	Port Size G	Max Flow L/min	Drain
AF5000-06D	3/4"	7000	Auto Drain
AF5000-10D	1"	7000	Auto Drain

## A Series Lubricators



### AL2 Series Lubricator 1/8" G - 1/4" G

0600	Port Size G	Max Flow L/min
AL2000-02	1/4"	800



### AL3 Series Lubricator 1/4" G

0600	Port Size G	Max Flow L/min
AL3000-02	1/4"	1700



### AL4 Series Lubricator 1/2" G

0600	Port Size G	Max Flow L/min
AL4000-04	1/2"	5000-6300

## A Series Mounting Brackets



### A2 Series Mounting Bracket

0600	Description
A2000-BRKT	Mounting Bracket



### A3 Series Mounting Bracket

0600	Description
A3000-BRKT	Mounting Bracket



### A4 Series Mounting Bracket

0600	Description
A4000-BRKT	Mounting Bracket



### A5 Series Mounting Bracket

0600	Description
A5000-BRKT	Mounting Bracket



### A4 Series Mounting Bracket

0600	Description
A400T	Mounting Bracket

## D Series Regulators



### DR2 Series Regulator 1/8" G - 3/8" G

0600	Port Size G	Gauge Thread G	Max Flow L/min
DR200-01	1/8"	1/8"	1700
DR200-02	1/4"	1/8"	1700
DR200-03	3/8"	1/8"	1700



### DR4 Series Regulator 3/8" G - 1/2" G

0600	Port Size G	Gauge Thread G	Max Flow L/min
DR400-03	3/8"	1/4"	3500
DR400-04	1/2"	1/4"	3500



### DR6 Series Regulator 3/4" G - 1" G

0600	Port Size G	Gauge Thread G	Max Flow L/min
DR600-06	3/4"	1/4"	11500
DR600-08	1"	1/4"	11500

## D Series Filter Regulators



### DC2 Series Filter Regulator 1/8" G - 3/8" G

0600	Port Size G	Gauge Thread G	Max Flow L/min	Drain
DFR200-01	1/8"	1/8"	1700	Manual
DFR200-02	1/4"	1/8"	1700	Manual
DFR200-02D	1/4"	1/8"	1700	Auto Drain
DFR200-03D	3/8"	1/8"	1700	Auto Drain



### DC4 Series Filter Regulator 3/8" G - 3/4" G

0600	Port Size G	Gauge Thread G	Max Flow L/min	Drain
DFR400-03D	3/8"	1/4"	3500	Auto Drain
DFR400-04	1/2"	1/4"	3500	Manual
DFR400-04D	1/2"	1/4"	3500	Auto Drain
DFR400-06	3/4"	1/4"	3500	Manual
DFR400-06D	3/4"	1/4"	3500	Auto Drain



### DC6 Series Filter Regulator 3/4" G - 1" G

0600	Port Size G	Gauge Thread G	Max Flow L/min	Drain
DFR600-06	3/4"	1/4"	11500	Manual
DFR600-08D	1"	1/4"	11500	Auto Drain

## D Series Combi Sets



**DC2 Series Filter Regulator & Lube Combi Sets 1/8" G - 3/8" G**

0600	Port Size G	Gauge Thread G	Max Flow L/min	Drain
DC201-01	1/8"	1/8"	1700	Manual
DC201-02	1/4"	1/8"	1700	Manual
DC201-02D	1/4"	1/8"	1700	Auto Drain
DC201-03D	3/8"	1/8"	1700	Auto Drain



**DC4 Series Filter Regulator & Lube Combi Sets 3/8" G - 3/4" G**

0600	Port Size G	Gauge Thread G	Max Flow L/min	Drain
DC401-01	3/8"	1/4"	3500	Manual
DC401-02	1/2"	1/4"	3500	Manual
DC401-02D	1/2"	1/4"	3500	Auto Drain
DC401-03D	3/4"	1/4"	3500	Auto Drain



**DC6 Series Filter Regulator & Lube Combi Sets 3/4" G - 1" G**

0600	Port Size G	Gauge Thread G	Max Flow L/min	Drain
DC601-06	3/4"	1/4"	11500	Manual
DC601-08D	1"	1/4"	11500	Auto Drain

## D Series Filters



**DF2 Series Filter 1/8" G - 3/8" G**

0600	Port Size G	Max Flow L/min	Drain
DF200-02	1/4"	2000	Manual
DF200-02D	1/4"	2000	Auto Drain
DF200-03D	1/4"	2000	Auto Drain



**DF4 Series Filter 3/8" G - 3/4" G**

0600	Port Size G	Max Flow L/min	Drain
DF400-03D	3/8"	4000	Auto Drain
DF400-04	1/2"	4000	Manual
DF400-04D	1/2"	4000	Auto Drain
DF400-06	3/4"	4000	Manual



**DF6 Series Filter 3/4" G - 1" G**

0600	Port Size G	Max Flow L/min	Drain
DF600-06	3/4"	11500	Manual
DF600-08	1"	11500	Manual
DF600-08D	1"	11500	Auto Drain

## D Series Lubricators



### DL1 Series Lubricator M5 - 1/8" G

0600	Port Size G	Max Flow L/min
DL100-M5	M5	500



### DL2 Series Lubricator 1/8" G - 3/8" G

0600	Port Size G	Max Flow L/min
DL200-01	1/8"	2000
DL200-02	1/4"	2000
DL200-03	3/8"	2000



### DL4 Series Lubricator 3/8" G - 1/2" G

0600	Port Size G	Max Flow L/min
DL400-03	3/8"	4000
DL400-04	1/2"	4000

## D Series Accessories



### Port Block Sets

0600	Series	Size
D400LB-04	400	1/2"



### Filter to Regulator to Lube Joiner Kits

0600	Series
DC400JK	400



### Wall Mounting Brackets

0600	Series
MB-D200	200
MB-D400	400
MB-D600	600



## A9 Series Air Preparation

### AC9 Series Filter Regulator & Lube Combi Sets 1.1/2" - 2"

0600	Port Size G	Gauge Thread G	Max Flow L/min	Drain
AC901-15D	1.1/2"	1/4"	17500	Auto Drain
AC901-20D	2"	1/4"	17500	Auto Drain



### AFR9 Series Filter Regulators 1.1/2" - 2"

0600	Port Size G	Gauge Thread G	Max Flow L/min	Drain
AFR900-15D	1.1/2"	1/4"	17500	Auto Drain
AFR900-20D	2"	1/4"	17500	Auto Drain



### AR9 Series Regulators 1.1/2" - 2"

0600	Port Size G	Gauge Thread G	Max Flow L/min	Drain
AR900-15	1.1/2"	1/4"	17500	Auto Drain
AR900-20	2"	1/4"	17500	Auto Drain



### AF9 Series Filters 1.1/2" - 2"

0600	Port Size G	Max Flow L/min	Drain
AF900-15D	1.1/2"	17500	Auto Drain
AF900-20D	2"	17500	Auto Drain



### AF9 Series Lubricators 1.1/2" - 2"

0600	Port Size G	Max Flow L/min
AL900-15	1.1/2"	17500
AL900-20	2"	17500



## PR Series Air Preparation

### PR100 Series 1/8" Precision Regulators

0600	Range MPA	Max Flow L/min
PR101-01	0.01-0.4	4.4 (ANR)
PR102-01	0.01-0.8	4.4 (ANR)



### PR200 Series 1/4" Precision Regulators

0600	Range MPA	Max Flow L/min
PR200-02	0.005-0.2	4.4 (ANR)
PR201-02	0.01-0.4	4.4 (ANR)



### PR300 Series 1/2" Precision Regulator

0600	Range MPA	Max Flow L/min
PR302-04	0.01-0.8	11.5 (ANR)



### In-line Filter Aluminium

Prevents dirt entering the air line

 Working Temperature:  
0°C to +70°C

 Maximum Working Pressure:  
10 bar



#### Male x Female Thread, BSPP

0043	Thread
ILF-14	1/4"
ILF-38	3/8"
Tech Sheet 824	

Flow: 400 L/min

 Working Temperature:  
0°C to +45°C


 Maximum Working Pressure:  
9 bar



#### Male x Female Thread, BSPP

0043	Thread
IF-14	1/4"
Tech Sheet 20383	

### In-line Brass Flow Regulator

 Working Temperature:  
0°C to +70°C

 Maximum Working Pressure:  
10 bar



#### Male x Female Thread, BSPP

0043	Thread
ILR-14	1/4"
Tech Sheet 20384	

### Mini In-line Oiler

 Working Temperature:  
0°C to +45°C

 Maximum Working Pressure:  
9 bar



#### Male x Female Thread, BSPP

0043	Thread
MO-14	1/4"
Tech Sheet 20385	

# FESTO

new  
product



For **FESTO Flow Regulators**  
see pages **814-815**

# AIR PREPARATION

For the full range and more information, please contact one of our sales team.

## AIR PREPARATION MS SERIES

### Features

Robust design,  
perfect for harsh  
environments

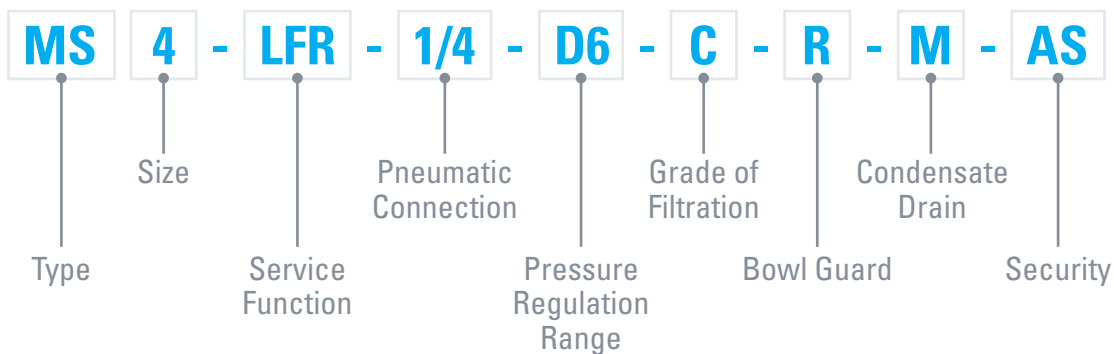


Good regulation  
characteristics with  
minimal pressure

High flow rate  
and highly efficient in  
removing contaminants

Available in both manual  
and auto-drain options

### Product Description



# AIR PREPARATION MS SERIES

# FESTO

## Filter Regulator, Manual Shut-off Valve & Pressure Gauge



**Ambient Temperature:**  
-10°C to +60°C

- For filtered and unlubricated compressed air
- Supply pressure can be opened and closed

- Output pressure is indefinitely adjustable within the pressure regulation range
- Manual rotary condensate drain



**Working Pressure:**  
0.8 to 14 bar



### Manual Drain Filter Regulator with Manual Shut-Off Valve

0009	Thread	LPM	Micron	Pressure Regulation Range Bar	Manufacturer's Code
8025354	1/4"	1700	40	0.5 to 12	MSB4-1/4.C3:J1-WP
8025355	1/2"	5100	40	0.5 to 12	MSB6-1/2.C3:J1-WP

Tech Sheet 71003



**Working Pressure:**  
0.8 to 10 bar



### Manual Drain Filter Regulator with Manual Shut-Off Valve, Solenoid Valve & Pressure Sensor

0009	Thread	LPM	Micron	Pressure Regulation Range Bar	Manufacturer's Code
8025358	1/4"	1400	40	0.5 to 10	MSB4-1/4.C3:J1:D14-WP
8025359	1/2"	4000	40	0.5 to 10	MSB6-1/2.C3:J1:D14-WP

Tech Sheet 71011



**Working Pressure:**  
0.8 to 14 bar



### Manual Drain Filter Regulator with Manual Shut-Off & Pressure Sensor

0009	Thread	LPM	Micron	Pressure Regulation Range Bar	Manufacturer's Code
8025356	1/4"	1600	40	0.5 to 10	MSB4-1/4.C3:J1:F12-WP
8025357	1/2"	4500	40	0.5 to 10	MSB6-1/2.C3:J1:F12-WP

Tech Sheet 71007



**Working Pressure:**  
1.5 to 20 bar



### Manual Rotary Filter Regulator with Pressure Gauge, Rotary Knob with Detent & Lubricator

0009	Thread	LPM	Micron	Bowl Type	Pressure Regulation Range Bar	Manufacturer's Code
530244	1/4"	850	40	Plastic	+0.5 to +12	MSB6-1/2-FRC5:J1M1
531117	1/2"	3700	40	Plastic	+0.5 to +12	MSB4-1/4-FRC5:J1M1

Tech Sheet 71014

# AIR PREPARATION MS SERIES



## Pressure Regulators

- Maintains a constant working pressure independent of pressure fluctuations and air consumption
- High flow rate with minimal pressure drop
- Connection G1/4, G1/2
- Selected types in accordance with ATEX directive for potentially explosive atmospheres
- Lockable via accessories

**Ambient Temperature:**  
-10°C to +60°C

**Working Pressure:**  
1/4 BSPP 0.8 to 14 bar  
1/2 BSPP 0.8 to 20 bar



## Integrated Pressure Gauge, BSPP

0009	Thread	LPM	Pressure Regulation Range Bar	Manufacturer's Code
529415	1/4"	2100	0.3 to 4	MS4-LR-1/4-D5-AS
529417	1/4"	1800	0.3 to 7	MS4-LR-1/4-D6-AS
529419	1/4"	1700	0.5 to 12	MS4-LR-1/4-D7-AS
529989	1/2"	7500	0.3 to 4	MS6-LR-1/2-D5-AS
529991	1/2"	6500	0.3 to 7	MS6-LR-1/2-D6-AS
529993	1/2"	5500	0.5 to 12	MS6-LR-1/2-D7-AS

Tech Sheet 71440

## Air Preparation Units MS-LFR-B Series

- Grid dimension 25, 40, 62mm
- Competitively priced basic component focused on the most important technical functions
- Lightweight and sturdy thanks to modern polymer materials
- Compatible with the MS series for the ideal combination of low-cost basic functionality and high-end functional requirements
- Stable control response
- With or without pressure gauge
- Rotary knob with latch
- MS2: Directly operated diaphragm regulator
- MS4, MS6: directly actuated piston regulator
- With integrated secondary exhausting and primary exhausting with return flow function



## Integrated Pressure Gauge, BSPP

0009	Thread	LPM	Micron	Bowl Type	Pressure Regulation Range Bar	Type
8098257	1/4"	1500	5	Polymer	1 bar to 10 bar	MS4-LFR-1/4-D6-C-P-M-AG-BAR-B
8098265	1/4"	1500	5	Polymer	1 bar to 10 bar	MS4-LFR-1/4-D6-C-P-M-AG-MPA-B
8098259	1/4"	1500	5	Polymer	2 bar to 10 bar	MS4-LFR-1/4-D6-C-P-VC-AG-BAR-B
8098266	1/4"	1500	5	Polymer	2 bar to 10 bar	MS4-LFR-1/4-D6-C-P-VC-AG-MPA-B
8098258	1/4"	1700	40	Polymer	1 bar to 10 bar	MS4-LFR-1/4-D6-E-P-M-AG-BAR-B
8098254	1/4"	1700	40	Polymer	1 bar to 10 bar	MS4-LFR-1/4-D6-E-P-M-AG-MPA-B
8098264	1/4"	1700	40	Polymer	2 bar to 10 bar	MS4-LFR-1/4-D6-E-P-VC-AG-BAR-B
8098256	1/4"	1700	40	Polymer	2 bar to 10 bar	MS4-LFR-1/4-D6-E-P-VC-AG-MPA-B
8098300	1/2"	4750	5	Polymer	1 bar to 10 bar	MS6-LFR-1/2-D6-C-P-M-AG-BAR-B
8098310	1/2"	4750	5	Polymer	1 bar to 10 bar	MS6-LFR-1/2-D6-C-P-M-AG-MPA-B
8098309	1/2"	4750	5	Polymer	2 bar to 10 bar	MS6-LFR-1/2-D6-C-P-VC-AG-BAR-B
8098302	1/2"	4750	5	Polymer	2 bar to 10 bar	MS6-LFR-1/2-D6-C-P-VC-AG-MPA-B
8098304	1/2"	5300	40	Polymer	1 bar to 10 bar	MS6-LFR-1/2-D6-E-P-M-AG-BAR-B
8098307	1/2"	5300	40	Polymer	1 bar to 10 bar	MS6-LFR-1/2-D6-E-P-M-AG-MPA-B
8098312	1/2"	5300	40	Polymer	2 bar to 10 bar	MS6-LFR-1/2-D6-E-P-VC-AG-BAR-B
8098305	1/2"	5300	40	Polymer	2 bar to 10 bar	MS6-LFR-1/2-D6-E-P-VC-AG-MPA-B

More variants available online

## Filter Regulators

- Filter and pressure regulator in a single unit
- Good regulation characteristics with minimal hysteresis and primary pressure compensation
- Good particle and condensate separation

**Ambient Temperature:**  
-10°C to +60°C

**Working Pressure:**  
1/4 BSPP 0.8 to 14 bar  
1/2 BSPP 0.8 to 20 bar



## Manual Drain, BSPP

0009	Thread	LPM	Micron	Bowl Type	Pressure Regulation Range Bar	Manufacturer's Code
529144	1/4"	1500	5	Plastic	0.3 to 7	MS4-LFR-1/4-D6-CRM-AS
529148	1/4"	1700	40	Plastic	0.3 to 7	MS4-LFR-1/4-D6-ERM-AS
529152	1/4"	1700	5	Plastic	0.5 to 12	MS4-LFR-1/4-D7-CRM-AS
529156	1/4"	1500	40	Plastic	0.5 to 12	MS4-LFR-1/4-D7-ERM-AS
535724	1/4"	1500	40	Metal	0.5 to 12	MS4-LFR-1/4-D7-EUM-AS
529176	1/2"	5600	5	Plastic	0.3 to 7	MS6-LFR-1/2-D6-CRM-AS
529180	1/2"	5600	40	Plastic	0.3 to 7	MS6-LFR-1/2-D6-ERM-AS
529184	1/2"	4000	5	Plastic	0.5 to 12	MS6-LFR-1/2-D7-CRM-AS
529188	1/2"	4500	40	Plastic	0.5 to 12	MS6-LFR-1/2-D7-ERM-AS
530338	1/2"	4000	5	Metal	0.5 to 12	MS6-LFR-1/2-D7-CUM-AS
529192	1/2"	4500	40	Metal	0.5 to 12	MS6-LFR-1/2-D7-EUM-AS

Tech Sheet 71120

**Working Pressure:**  
2 to 12 bar

## Automatic Drain, BSPP

0009	Thread	LPM	Micron	Bowl Type	Pressure Regulation Range Bar	Manufacturer's Code
529146	1/4"	1500	5	Plastic	0.3 to 7	MS4-LFR-1/4-D6-CRV-AS
529150	1/4"	1700	40	Plastic	0.3 to 7	MS4-LFR-1/4-D6-ERV-AS
529158	1/4"	1200	40	Plastic	0.5 to 12	MS4-LFR-1/4-D7-ERV-AS
535720	1/4"	1200	5	Metal	0.5 to 12	MS4-LFR-1/4-D7-CUV-AS
535722	1/4"	1200	40	Metal	0.5 to 12	MS4-LFR-1/4-D7-EUV-AS
529178	1/2"	5600	5	Plastic	0.3 to 7	MS6-LFR-1/2-D6-CRV-AS
529182	1/2"	6200	40	Plastic	0.3 to 7	MS6-LFR-1/2-D6-ERV-AS
529190	1/2"	4500	40	Plastic	0.5 to 12	MS6-LFR-1/2-D7-ERV-AS
530340	1/2"	4000	5	Metal	0.5 to 12	MS6-LFR-1/2-D7-CUV-AS
529194	1/2"	4500	40	Metal	0.5 to 12	MS6-LFR-1/2-D7-EUV-AS

Tech Sheet 71122



For FESTO Actuation  
see page 1020



# AIR PREPARATION MS SERIES

# FESTO

## Energy Efficiency Module MSE6-E2M

- MSE6-E2M constantly monitors the compressed air consumption, blocks the compressed air after waiting a specific period once production has stopped and reduces the system pressure to 0 bar. It can be integrated directly into PROFIBUS, PROFINET, EtherCAT or Ethernet/IP via fieldbus.
- Grid dimension 62mm
- Intelligent service unit component for optimising the use of compressed air as an energy medium in industrial automation technology
- Combination of stop valve, flow sensor, pressure sensor and fieldbus node
- Identification of production downtime and leakages
- User-controlled shut-off and pressurisation
- Equipped with measurement, control and diagnostic functions
- Fieldbus connection (PROFIBUS DP, PROFINET IO, EtherNet/IP or EtherCAT®) via integrated fieldbus nodes enables connection to a higher-level controller
- Sustainable operation with active air shut-off and pressure reduction



### Service Unit Combination MSE6-E2M

0009	Thread	Electrical Actuation	Type
2465321	1/2"	Fieldbus node for PROFIBUS DP	MSE6-E2M-5000-FB13-AGD
3990296	1/2"	Fieldbus node for Ethernet/IP	MSE6-E2M-5000-FB36-AGD
3992150	1/2"	Fieldbus node for EtherCAT®	MSE6-E2M-5000-FB37-AGD
8157910	1/2"	Bus node for PROFINET IO with M12 connection	MSE6-E2M-5000-FB43-AGD
8157911	1/2"	Bus node for PROFINET IO with RJ45 connection	MSE6-E2M-5000-FB44-AGD
More variants available online			

## Air Preparation Units MS-LFR-B Series

### Filter MS2-LF-B

- Very compact and extremely lightweight series for use close to the process directly in the machine
- Lightweight and sturdy thanks to modern polymer materials
- Compatible with the MS series for the ideal combination of low-cost basic functionality and high-end functional requirements
- With manual condensate drain, rotating
- Grid dimension 25mm
- Variants recommended for production systems for manufacturing lithium-ion batteries



### Filter Regulator MS-LFR-B

0009	Thread	LPM	Micron	Bowl Type	Pressure Regulation Range Bar	Type
8086643	M5	140	5	Polymer	0.5 bar to 7 bar	MS2-LFR-M5-D6-A8-C-M-B
8086641	M5	140	5	Polymer	0.5 bar to 7 bar	MS2-LFR-M5-D6-AR-BAR-C-M-B
8086642	M5	140	5	Polymer	0.5 bar to 7 bar	MS2-LFR-M5-D6-AR-MPA-C-M-B
8086646	QS-6	310	5	Polymer	0.5 bar to 7 bar	MS2-LFR-QS6-D6-A8-C-M-B
8086644	QS-6	310	5	Polymer	0.5 bar to 7 bar	MS2-LFR-QS6-D6-AR-BAR-C-M-B
8086645	QS-6	310	5	Polymer	0.5 bar to 7 bar	MS2-LFR-QS6-D6-AR-MPA-C-M-B
More variants available online						

# FESTO



For **FESTO QS Standard Push-in Fittings**  
see pages **808-811**

## Standard Modular Valves

**Ambient Temperature:** -10°C to +60°C • For pressurising and exhausting pneumatic systems

**Working Pressure:** 0 to 14 bar



### Manual On/Off Valve, BSPP

0009	Thread	Manufacturer's Code
541258	1/4"	MS4-EM1-1/4
541267	1/2"	MS6-EM1-1/2

Tech Sheet 71132

**Working Pressure:** 0 to 18 bar



### Manual On/Off Valve with Silencer, BSPP

0009	Thread	Manufacturer's Code
541259	1/4"	MS4-EM1-1/4-S
541272	1/4"	MS6-EM1-1/4-S
541268	1/2"	MS6-EM1-1/2-S

Tech Sheet 71133

**Working Pressure:** 3 to 10 bar



### Soft-start & Quick Exhaust Valves

0009	Thread	Manufacturer's Code
8001469	1/2"	MS6-SV-1/2-C-10V24-S

Tech Sheet 71587

**Working Pressure:** 4 to 18 bar



### Solenoid Actuated On/Off Valve with Silencer, BSPP

0009	Thread	Voltage	Manufacturer's Code
542598	1/4"	24V DC	MS4-EE-1/4-10V24-S
542602	1/2"	24V DC	MS6-EE-3/8-10V24-S

Tech Sheet 71137

**Working Pressure:** 4 to 18 bar



### Solenoid Actuated On/Off Valve, BSPP

0009	Thread	Voltage	Manufacturer's Code
542578	1/4"	24V DC	MS4-EE-1/4-10V24
542582	1/2"	24V DC	MS6-EE-1/2-10V24

Tech Sheet 71136

• For slowly pressurising and exhausting pneumatic installations (for use with on/off valves EM1 and EE)

**Working Pressure:** 4 to 18 bar



### Pneumatically Operated Soft-Start Valve, BSPP

0009	Thread	Manufacturer's Code
529531	1/4"	MS4-DL-1/4
529817	1/2"	MS6-DL-1/2

Tech Sheet 71145

# AIR PREPARATION MS SERIES

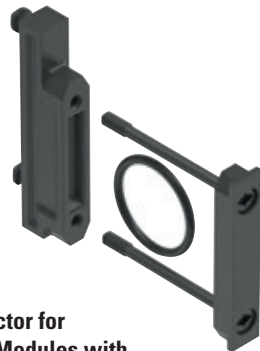
## Brackets & Connection Accessories



### Connector for MS module

0009	To Suit Series	Manufacturer's Code
8119201	MS4	MS4-MV1
8119204	MS6	MS6-MV1
552950	MS9	MS9-MV

Tech Sheet 71257



### Module Connector for Installation of Modules with Regulating Knob Pointing Downwards

0009	To Suit Series	Manufacturer's Code
532800	MS4	MS4-MVM
532801	MS6	MS6-MVM

Tech Sheet 71261



### Mounting Bracket with Distancing Piece

0009	To Suit Series	Manufacturer's Code
526073	M6	MS6-WPM-D

Tech Sheet 71268



### Wall Mounting Bracket

0009	To Suit Series	Manufacturer's Code
526064	MS4	MS4-WR
526075	MS6	MS6-WR

Tech Sheet 71270

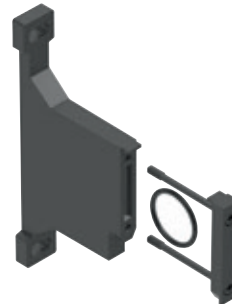
- Can be used as an intermediate distributor for varying air qualities
- Outlet at top and bottom



### Branching Module

0009	To Suit Series	Thread	Manufacturer's Code
529853	MS6	G1/2"	MS6-FRM-1/2

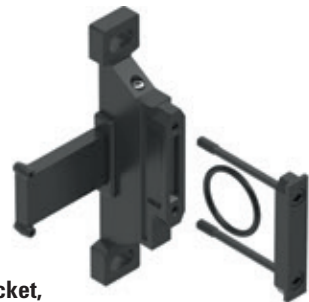
Tech Sheet 71267



### Wall Bracket

0009	To Suit Series	Manufacturer's Code
526063	MS4	MS4-WPB
526074	MS6	MS6-WPB

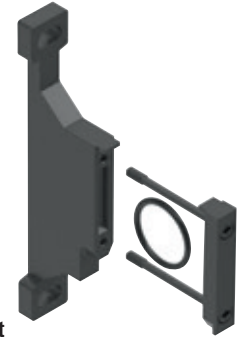
Tech Sheet 71266



### Wall Bracket, WPM with Distancing Piece

0009	To Suit Series	Manufacturer's Code
526060	MS4	MS4-WPM-D
532186	MS6	MS6-WPM-2D

Tech Sheet 71586



### Mounting Bracket

0009	To Suit Series	Manufacturer's Code
532184	MS4	MS4-WP
532195	MS6	MS6-WP

Tech Sheet 71269



### Wall Mounting Bracket

0009	To Suit Series	Manufacturer's Code
532185	MS4	MS4-WB
532196	MS6	MS6-WB

Tech Sheet 71585

- Adaptor for pneumatic connection



### Connecting Plate Set

0009	To Suit Series	Thread	Manufacturer's Code
526069	MS4	G1/4"	MS4-AGB
526082	MS6	G1/2"	MS6-AGD
526083	MS6	G3/4"	MS6-AGE

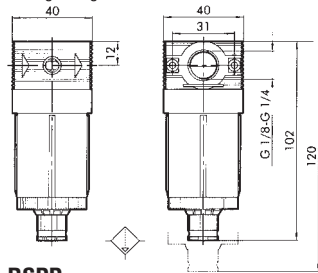
Tech Sheet 71271



# MINIATURE FRLS, 'BIT'

## Miniature Filter

- Flow rate at 6 bar ΔP 0.5 bar: 860 NI/min
- Fluid: compressed air
- Weight: 40g
- Mounting position: vertical
- Condensate drain: manual/semi-auto
- Bowl capacity: 16cm<sup>3</sup>



° Maximum Temperature at 10 bar: +50°C

⌚ Maximum Inlet Pressure: 13 bar

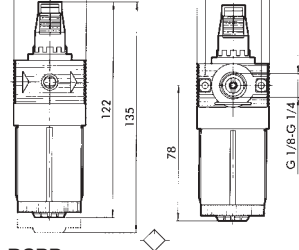


### BSPP

9154	Thread BSPP	Micron μm
5101002	1/8"	20
5101001	1/8"	5
5201002	1/4"	20
5201001	1/4"	5

## Miniature Lubricator

- Type of lubrication: oil mist
- Bowl capacity: 26.5cm<sup>3</sup>
- Flow rate at 6 bar ΔP 0.5 bar: 400 NI/min
- Fluid: compressed air
- Weight: 40g



° Maximum Temperature at 1MPa, 10 bar (145 psi): +50°C

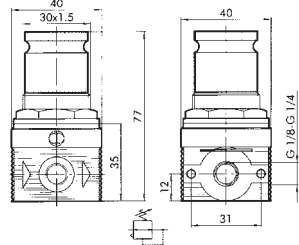


### BSPP

9154	Thread BSPP
5103001	1/8"
5203001	1/4"

## Miniature Pressure Regulator

- Flow rate at 6 bar ΔP 0.5 bar: 340 NI/min
- Fluid: filtered, lubricated or non-lubricated compressed air
- Weight: 80g
- Mounting position: any
- Gauge port: G1/8"



° Maximum Temperature at 10 bar: +50°C

⌚ Maximum Inlet Pressure: 13 bar



### BSPP

9154	Thread BSPP	Pressure Range bar
5107003	1/8"	0 to 8
5107004	1/8"	0 to 12
5207003	1/4"	0 to 8
5207004	1/4"	0 to 12

## Miniature Pressure Regulator, Padlockable

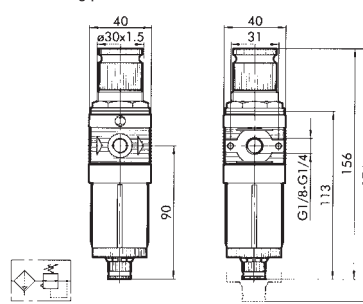
### BSPP

9154	Thread BSPP	Pressure Range bar
5110003	1/8"	0 to 8
5110004	1/8"	0 to 12
5210003	1/4"	0 to 8
5210004	1/4"	0 to 12



## Miniature Filter Regulator

- Flow rate at 6 bar ΔP 0.5 bar: 290 NI/min
- Fluid: compressed air
- Weight: 110g
- Mounting position: vertical
- Gauge port: G1/8"
- Bowl capacity: 16cm<sup>3</sup>
- Condensate drain: manual/semi-auto



° Maximum Temperature at 10 bar: +50°C

⌚ Maximum Inlet Pressure: 13 bar

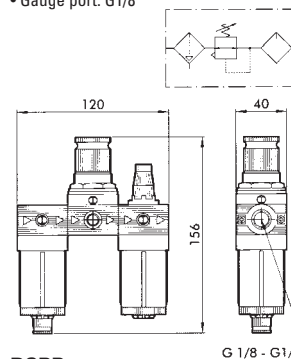


### BSPP

9154	Thread BSPP	Micron μm	Pressure Range bar
5105008	1/8"	20	0 to 8
5105011	1/8"	20	0 to 12
5205008	1/4"	20	0 to 8
5205011	1/4"	20	0 to 12

## Miniature Filter + Regulator + Lubricator Set

- Flow rate at 6 bar ΔP 0.5 bar: 150 NI/min
- Fluid: compressed air
- Weight: 160g
- Mounting position: any
- Gauge port: G1/8"
- Maximum Temperature at 1MPa, 10 bar (145 psi): +50°C
- Maximum Inlet Pressure: 13 bar



° Maximum Temperature at 1MPa, 10 bar (145 psi): +50°C

⌚ Maximum Inlet Pressure: 13 bar



### BSPP

9154	Thread BSPP	Micron μm	Pressure Range bar
5104008	1/8"	20	0 to 8
5104011	1/8"	20	0 to 12
5204008	1/4"	20	0 to 8

# MINIATURE FRLS, 'BIT'

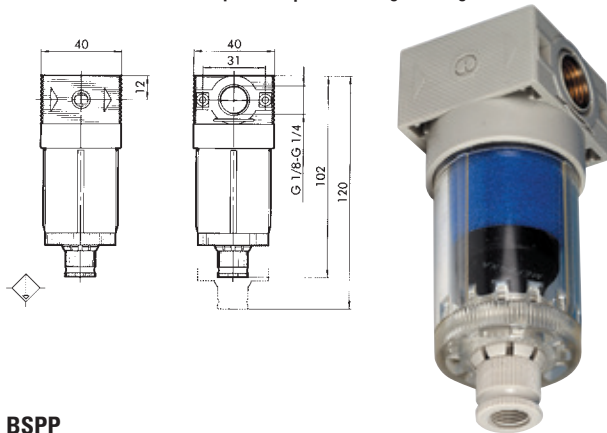
## Miniature Oil Removal Filter

- Degree of filtration: 99.97% 0.01µm
- Flow rate at 6 bar ΔP 0.5 bar: 700 NI/min
- Fluid: compressed air
- Weight: 65g
- Mounting position: vertical
- Condensate drain: manual/semi-auto
- Bowl capacity: 16cm<sup>3</sup>

**Maximum Temperature at 10 bar:**  
+50°C

**Maximum Inlet Pressure:**  
13 bar

**NB:** it is advisable to mount a 5µm filter upstream acting as a rough filter.



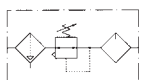
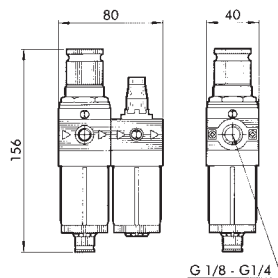
### BSPP

9154	Thread BSPP
5212001	1/4"

## Miniature Filter Regulator + Lubricator Set

- Flow rate at 6 bar ΔP 0.5 bar: 140 NI/min
- Flow rate at 6 bar ΔP 1 bar: 260 NI/min
- Fluid: compressed air
- Weight: 170g
- Mounting: vertical
- Gauge port: G 1/8"

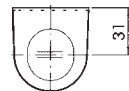
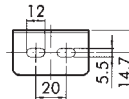
**Maximum Inlet Pressure:**  
13 bar



### BSPP

9154	Thread BSPP	Micron µm	Pressure Range bar
5106008	1/8"	20	0 to 8
5106011	1/8"	20	0 to 12
5206008	1/4"	20	0 to 8
5206011	1/4"	20	0 to 12

## Mounting Hardware



### Bit Regulator Bracket

9154	Description
9200701	Mounting Bracket
9170301	Wall Mounting Kit

## Automatic Drain



### To suit Miniature Filters

9154	Description
9000803	For Miniature Filters

## Filter Elements



### Spare

9154	Micron µm
9251708	5
9251709	20
9251712	For Coalescing Filter, 0.001



**For Gauges**  
see page 409

# FILTER REGULATOR FOR WATER, 'BIT' SERIES F

- Filtering and/or water pressure regulation units, characterised by the use of materials certified to specific standards on products for use in contact with foodstuff or drinking water.
- Declarations of conformity and release test reports are available on request for those who need them to certify our product incorporated in their own systems.
- The white colour surface finish of the body was chosen to enhance the highly hygienic properties of the product.
- If the pressure regulator works with incompressible fluids (water) and there is a valve leak, the downstream pressure could rise up to reach the inlet pressure and then it re-stabilises with water consumption.
- If necessary, consider the possibility of installing a safety valve that relieves any excess pressure.
- Fluid: water, air and fluids compatible with materials used

- Flow rate at 6.3 bar  $\Delta P$  1 bar: 6 up to 14.5 l/min dependant on model (refer to sales department)
- Gauge port: regulator, filter regulator, 1/8" BSPP
- Mounting: fixing plates 9170301, regulator bracket 9200701

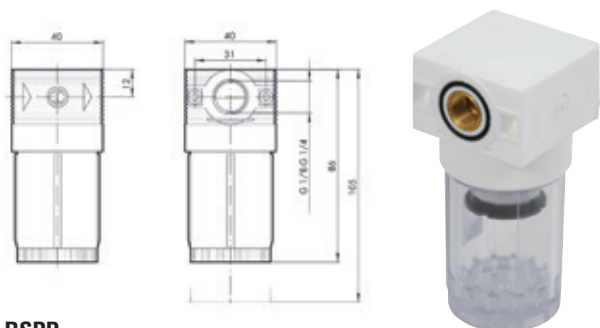


## Certifications

- European Regulation (EU) 10/2011, KTW, W270, WRAS, ACS, NSF61
- Approved for compliance with the UBA list, NSF/ANSI 372
- European Regulation (EU) 10/2011, KTW, W270, WRAS, NSF61, DM174/04, KTW, W270, WRAS, ACS, NSF61
- Approved for compliance with the UBA list, DM174/04, KTW, W270, WRAS, ACS, NSF61

**Maximum Temperature at 10 bar:** +50°C  
**Maximum Inlet Pressure:** 13 bar

## Filter for Water



### BSPP

9154	Thread BSPP	Micron $\mu m$
5101002F	1/8"	20
5201002F	1/4"	20

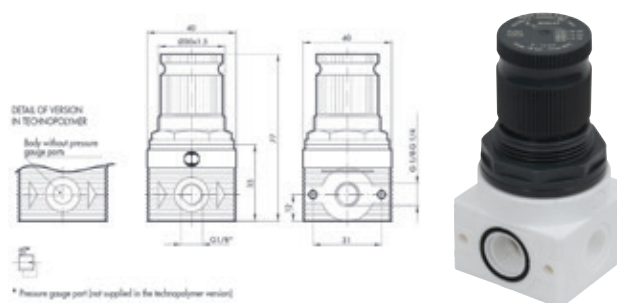
## Regulator for Water



### Brass Ports, BSPP

9154	Thread BSPP	Pressure Range bar
5108001F	1/8"	0 to 2
5108002F	1/8"	0 to 4
5108003F	1/8"	0 to 8
5108004F	1/8"	0 to 12
5208001F	1/4"	0 to 2
5208002F	1/4"	0 to 4
5208003F	1/4"	0 to 8
5208004F	1/4"	0 to 12

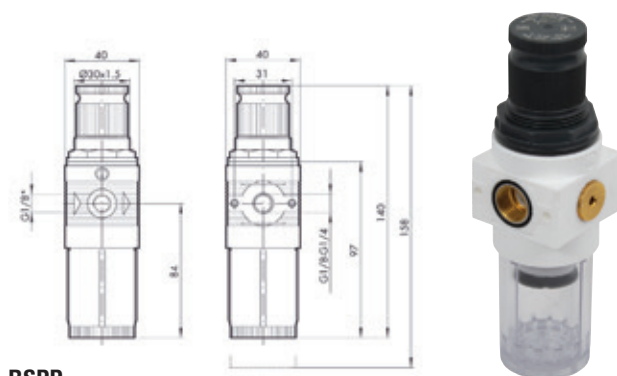
## Regulator for Water



### Technopolymer Ports (No Gauge Port), BSPP

9154	Thread BSPP	Pressure Range bar
5228001F	1/4"	0 to 2
5228002F	1/4"	0 to 4
5228003F	1/4"	0 to 8
5228004F	1/4"	0 to 12

## Filter Regulator for Water



### BSPP

9154	Thread BSPP	Micron $\mu m$	Pressure Range bar
5105111F	1/8"	20	0 to 12
5205102F	1/4"	20	0 to 2
5205105F	1/4"	20	0 to 4
5205111F	1/4"	20	0 to 12

# STANDARD SERIES FRLS, 'SYNTESI'

SYNTESI®


**METAL WORK**  
PNEUMATIC

Syntesi® is an important milestone achieved by Metal Work, the result of thirty years' experience producing air treatment units. Syntesi® obtains the best possible performance in a reduced space and with limited weight. The capacity is much higher than that of other units of the same size. These modular units feature a very simple yet effective system that requires no brackets, stay bolts or yoke for assembling the elements.

The basic version of Syntesi® incorporates numerous functions that are not provided or are only optional with traditional units:

- Padlockable knobs
- Additional pneumatic ports on the front and back
- Flow options from left to right or vice versa
- Regulators with compensation system which are accurate even when the upstream pressure changes, with rapid downstream pressure relief
- Full indelible marking
- Automatic condensate drain even in size 1
- 360° visual inspection of oil and condensate levels

The basic materials – technopolymer and nickel-plated brass – have excellent corrosion resistance. An anti-corrosion version is available with stainless steel components (screws and plates) or Geomet® related ones (regulator springs).

## Technical Specifications

- Padlockable knob: the knobs of the regulators, filter regulators and standard sectioning valves can all be padlocked
- Fluid: compressed air or other inert gases

Body Size	Threaded Port BSP	Maximum Input Pressure bar	Temperature Range at 1 MPa, 10 bar (145 psi)
1	1/8"	15	-10°C to +50°C
	1/4"		
	3/8"		
2	3/8"	13	-10°C to +50°C
	1/2"		
	3/4"		
	1"		

Technical Data	Body Size 1			Body Size 2		
Maximum Input Pressure bar	15			13		
Flow Rate NI/min at 6.3 bar (0.63 MPa, 91 psi) ΔP 1 bar (0.1 MPa, 14 psi)	1300	1650	1750	4500	5200	5200
Weight g	178	173	164	488	461	457
Condensate Bowl Capacity cm3	30			70		
Mounting Position	Vertical			Vertical		
Wall Fixing Screws	No. 2 M4 Screws			No. 2 M5 Screws		



## Standard Filter, Body Size 1

### Manual Drain, BSPP

9154	Thread BSPP	Micron μm
5611F201	1/8"	20
5612F202	1/4"	20
5613F203	3/8"	20

## Standard Filter, Body Size 2

### Manual Drain, BSPP

9154	Thread BSPP	Micron μm
5623F203	3/8"	20
5624F204	1/2"	20
5625F205	3/4"	20
5626F206	1"	20

## Standard Filter, Body Size 1

### Auto Drain, BSPP

9154	Thread BSPP	Micron μm
5611F501	1/8"	20
5612F502	1/4"	20
5613F503	3/8"	20

## Standard Filter, Body Size 2

### Auto Drain, BSPP

9154	Thread BSPP	Micron μm
5623F503	3/8"	20
5624F504	1/2"	20
5625F505	3/4"	20
5626F506	1"	20

# STANDARD SERIES FRLS, 'SYNTESI'

SYNTESI®

METAL WORK  
PNEUMATIC

5.10 Air Preparation

## Oil Removal Filter, Body Size 1

Technical Data	Body Size 1			Body Size 2			
	Maximum Input Pressure bar	15			13		
Suggested Flow Rate NI/min at 6.3 bar (0.63 MPa, 91 psi)	460			620			
Weight g	194	189	180	483	456	452	440
Bowl Capacity cm3	15			40			
Mounting Position	Vertical			Vertical			
Wall Fixing Screws	No. 2 M4 Screws			No. 2 M5 Screws			

## Oil Removal Filter, Body Size 2



### Manual Drain, BSPP

9154	Thread BSPP	Micron µm
5611D101	1/8"	0.01
5612D102	1/4"	0.01
5613D103	3/8"	0.01

### Manual Drain, BSPP

9154	Thread BSPP	Micron µm
5623D103	3/8"	0.01
5624D104	1/2"	0.01
5625D105	3/4"	0.01
5626D106	1"	0.01

## Active Carbon Filter, Body Size 1

Technical Data	Body Size 1			Body Size 2			
	Maximum Input Pressure bar	15			13		
Suggested Flow Rate NI/min at 6.3 bar (0.63 MPa, 91 psi)	350			800			
Weight g	195	190	181	483	456	452	440
Inlet Fluid	0.01 mm filtered and deperurated air			0.01 mm filtered and deperurated air			
Mounting Position	Any			Any			
Wall Fixing Screws	No. 2 M4 Screws			No. 2 M5 Screws			

## Active Carbon Filter, Body Size 2



### Manual Drain, BSPP

9154	Thread BSPP	Micron µm
5611C101	1/8"	0.003
5612C102	1/4"	0.003
5613C103	3/8"	0.003

### Manual Drain, BSPP

9154	Thread BSPP	Micron µm
5623C103	3/8"	0.003
5624C104	1/2"	0.003
5625C105	3/4"	0.003

airCom  
PIPING SYSTEM



For Piping Systems  
see pages 1068-1080

# STANDARD SERIES FRLS, 'SYNTESI'

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## Pressure Regulator

Technical Data	Body Size 1			Body Size 2			
Maximum Input Pressure bar	15			13			
Flow Rate NI/min at 6.3 bar (0.63 MPa, 91 psi) ΔP 1 bar (0.1 MPa, 14 psi)	570	1650	2900	3000	4300	4700	
Weight g	193	188	179	546	519	515	503
Mounting Position	Any			Any			
Wall Fixing Screws	No. 2 M4 Screws			No. 2 M5 Screws			
Gauge Port	1/8" BSP			1/4" BSP			

### Body Size 1, Relieving, BSPP

9185	Thread BSPP	Pressure Range bar
5611R141	1/8"	0 to 8
5611R161	1/8"	0 to 12
5612R142	1/4"	0 to 8
5612R162	1/4"	0 to 12
5613R143	3/8"	0 to 8
5613R163	3/8"	0 to 12

### Body Size 2, Relieving, BSPP

9185	Thread BSPP	Pressure Range bar
5623R143	3/8"	0 to 8
5623R163	3/8"	0 to 12
5624R144	1/2"	0 to 8
5624R164	1/2"	0 to 12
5625R145	3/4"	0 to 8
5625R165	3/4"	0 to 12
5626R146	1"	0 to 8
5626R166	1"	0 to 12



## In-series Regulator

The in-series regulator is used to take air at a set pressure from the ports on the front and back of the body, while the pneumatic inlet and outlet ports are connected directly. It is possible to assemble several regulators side by side, all supplied at the same pressure, and obtain different regulated pressures, regardless of the pressure of the previous module.

The in-series regulator uses the same construction principles as the standard regulator, so the advantages are the same, such as compensation for upstream pressure changes, relief valve, rapid relief of the downstream pressure and a padlockable push-lock knob.



Technical Data	Body Size 1			Body Size 2			
Maximum Input Pressure bar	15			13			
Flow Rate NI/min at 6.3 bar (0.63 MPa, 91 psi) ΔP 1 bar (0.1 MPa, 14 psi)	500			1000			
Weight g	193	188	179	546	519	515	503
Mounting Position	Any			Any			
Wall Fixing Screws	No. 2 M4 Screws			No. 2 M5 Screws			
Gauge Port	1/8" BSP			1/4" BSP			

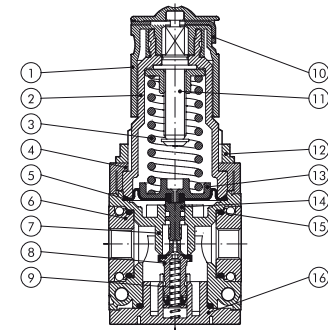
1. Technopolymer adjusting knob
2. Technopolymer bell
3. Steel adjusting spring (with Geomet. treatment for anti-corrosion version)
4. Technopolymer flang
5. Rolling diaphragm
6. IN/OUT bushing made of OT58 nickel-plated brass or passivated aluminium for 3/4" - 1"
7. Technopolymer body
8. OT58 brass valve, with NBR vulcanized gasket
9. Stainless steel valve spring
10. Galvanised steel plate for knob locking (stainless steel for anti-corrosion version)
11. OT58 brass adjusting ring
12. Technopolymer ring nut
13. Technopolymer plate
14. Technopolymer rod
15. NBR o-ring gaskets
16. Technopolymer plug

### Body Size 1, Relieving, BSPP

9185	Thread BSPP	Pressure Range bar
5611R241	1/8"	0 to 8
5611R261	1/8"	0 to 12
5612R242	1/4"	0 to 8
5612R262	1/4"	0 to 12
5613R243	3/8"	0 to 8
5613R263	3/8"	0 to 12

### Body Size 2, Relieving, BSPP

9185	Thread BSPP	Pressure Range bar
5623R243	3/8"	0 to 8
5623R263	3/8"	0 to 12
5624R244	1/2"	0 to 8
5624R264	1/2"	0 to 12
5625R245	3/4"	0 to 8
5625R265	3/4"	0 to 12
5626R246	1"	0 to 8
5626R266	1"	0 to 12



# STANDARD SERIES FRLS, 'SYNTESI'

SYNTESI®

METAL WORK  
PNEUMATIC

5.10 Air Preparation

## Standard Filter Regulator

Technical Data	Body Size 1			Body Size 2			
Maximum Input Pressure bar	15			13			
Flow Rate NI/min at 6.3 bar (0.63 MPa, 91 psi) ΔP 1 bar (0.1 MPa, 14 psi)	500	800	2200	3200	4300	5200	
Weight g	244	239	230	623	596	592	580
Bowl Capacity cm3	30			70			
Mounting Position	Vertical			Vertical			
Wall Fixing Screws	No. 2 M4 Screws			No. 2 M5 Screws			
Gauge Port	1/8" BSP			1/4" BSP			



### Standard Filter Regulator, Body Size 1, Relieving Manual Drain, BSPP

9185	Thread BSPP	Micron μm	Pressure Range bar
5611B241	1/8"	20	0 to 8
5611B261	1/8"	20	0 to 12
5612B242	1/4"	20	0 to 8
5612B262	1/4"	20	0 to 12
5613B243	3/8"	20	0 to 8
5613B263	3/8"	20	0 to 12

### Standard Filter Regulator, Body Size 1, Relieving Auto Drain, BSPP

9185	Thread BSPP	Micron μm	Pressure Range bar
5611B541	1/8"	20	0 to 8
5611B561	1/8"	20	0 to 12
5612B542	1/4"	20	0 to 8
5612B562	1/4"	20	0 to 12
5613B543	3/8"	20	0 to 8
5613B563	3/8"	20	0 to 12

### Standard Filter Regulator, Body Size 2, Relieving Manual Drain, BSPP

9185	Thread BSPP	Micron μm	Pressure Range bar
5623B243	3/8"	20	0 to 8
5623B263	3/8"	20	0 to 12
5624B244	1/2"	20	0 to 8
5624B264	1/2"	20	0 to 12
5625B245	3/4"	20	0 to 8
5625B265	3/4"	20	0 to 12
5626B246	1"	20	0 to 8
5626B266	1"	20	0 to 12

### Standard Filter Regulator, Body Size 2, Relieving Auto Drain, BSPP

9185	Thread BSPP	Micron μm	Pressure Range bar
5623B543	3/8"	20	0 to 8
5623B563	3/8"	20	0 to 12
5624B544	1/2"	20	0 to 8
5624B564	1/2"	20	0 to 12
5625B545	3/4"	20	0 to 8
5625B565	3/4"	20	0 to 12
5626B546	1"	20	0 to 8
5626B566	1"	20	0 to 12

## Standard Lubricator

Technical Data	Body Size 1			Body Size 2			
Maximum Input Pressure bar	15			13			
Flow Rate NI/min at 6.3 bar (0.63 MPa, 91 psi) ΔP 1 bar (0.1 MPa, 14 psi)	1300	1700	2200	2300	3900	3900	
Weight g	185	180	171	480	453	449	437
Quantity of Fitted Oil cm3	60			130			
Mounting Position	Vertical			Vertical			
Wall Fixing Screws	No. 2 M4 Screws			No. 2 M5 Screws			



### Body Size 1, BSPP

9154	Thread BSPP
5611L101	1/8"
5612L102	1/4"
5613L103	3/8"

### Body Size 2, BSPP

9185	Thread BSPP
5623L103	3/8"
5624L104	1/2"
5625L105	3/4"
5626L106	1"

# STANDARD SERIES FRLS, 'SYNTESI'

SYNTESI®



## Shut Off Valve

Technical Data	Body Size 1			Body Size 2			
	Maximum Input Pressure bar	15			13		
Flow Rate NI/min at 6.3 bar (0.63 MPa, 91 psi) ΔP 0.5 bar (0.05 MPa, 7 psi)	800	1000	1100	2800	3000	3000	
Weight g	197	192	183	476	449	445	433
Mounting Position	Any			Any			
Wall Fixing Screws	No. 2 M4 Screws			No. 2 M5 Screws			



### Body Size 1, Manual, BSPP

9185	Thread BSPP
5611V101	1/8"
5612V102	1/4"
5613V103	3/8"

### Body Size 1, Pneumatic, BSPP

9185	Thread BSPP
5611V201	1/8"
5612V202	1/4"
5613V203	3/8"

### S Body Size 1, Solenoid, BSPP

9185	Thread BSPP
5611V701	1/8"
5612V702	1/4"
5613V703	3/8"

### Body Size 2, Manual, BSPP

9185	Thread BSPP
5623V103	3/8"
5624V104	1/2"
5625V105	3/4"
5626V106	1"

### Body Size 2, Pneumatic, BSPP

9185	Thread BSPP
5623V203	3/8"
5624V204	1/2"
5625V205	3/4"
5626V206	1"

### Body Size 2, Solenoid, BSPP

9185	Thread BSPP
5623V703	3/8"
5624V704	1/2"
5625V705	3/4"
5626V706	1"



For FT Pro One Touch All Metal Push-in Fittings  
see pages **843-847**





# STANDARD SERIES FRLS, 'SYNTESI'

SYNTESI®

METAL WORK  
PNEUMATIC

5.10 Air Preparation

## Progressive Starter

Technical Data	Body Size 1			Body Size 2		
Input Pressure Range bar	3 to 10			3 to 10		
Flow Rate NI/min at 6.3 bar (0.63 MPa, 91 psi) ΔP 0.5 bar (0.05 MPa, 7 psi)	900	1000	1100	2800	3600	3600
Weight g	203	198	189	503	476	472
Mounting Position	Any			Any		
Wall Fixing Screws	No. 2 M4 Screws			No. 2 M5 Screws		



### Body Size 1, BSPP

9185	Thread BSPP
5611A701	G1/8"
5612A702	G1/4"
5613A703	G3/8"

### Body Size 2, BSPP

9185	Thread BSPP
5623A703	G3/8"
5624A704	G1/2"
5625A705	G3/4"
5626A706	G1"

## Pressure Switch

Technical Data	Body Size 1	Body Size 2
Maximum Pressure bar	15	13
Maximum Current A	2	2
Maximum Voltage V	250	250
Cable OD mm	4.9	4.9
Fluid	Filtered lubricated or non-lubricated compressed air. Lubrication, if used, must be continuous	
Mounting Position	Any	Any
Wall Fixing Screws	No. 2 M4 Screws	No. 2 M5 Screws



### Body Size 1, M8 Connector, BSPP

9185	Thread BSPP
5611S201	G1/8"
5612S202	G1/4"
5613S203	G3/8"

### Body Size 2, M8 Connector, BSPP

9185	Thread BSPP
5623S203	G3/8"
5624S204	G1/2"
5625S205	G3/4"
5626S206	G1"

## Filter Regulator + Lubricator Set

Technical Data	Body Size 1			Body Size 2			
Input Pressure bar	15			13			
Flow Rate NI/min at 6.3 bar (0.63 MPa, 91 psi) ΔP 0.5 bar (0.05 MPa, 7 psi)	350			1200			
Weight g	414	409	400	1074	1074	1043	1031
Mounting Position	Vertical			Vertical			
Wall Fixing Screws	No. 2 M4 Screws			No. 2 M5 Screws			
Gauge Port	1/8" BSP			1/4" BSP			



### Body Size 1, Manual Drain, BSPP

9185	Thread BSPP	Micron μm	Pressure Range bar
5611B24L101	G1/8"	20	0 to 8
5612B24L102	G1/4"	20	0 to 8
5613B24L103	G3/8"	20	0 to 8

### Body Size 2, Manual Drain, BSPP

9185	Thread BSPP	Micron μm	Pressure Range bar
5623B24L103	G3/8"	20	0 to 8
5624B24L104	G1/2"	20	0 to 8
5625B24L105	G3/4"	20	0 to 8
5626B24L106	G1"	20	0 to 8

### Body Size 1, Auto Drain, BSPP

9185	Thread BSPP	Micron μm	Pressure Range bar
5611B54L101	G1/8"	20	0 to 8
5612B54L102	G1/4"	20	0 to 8
5613B54L103	G3/8"	20	0 to 8

### Body Size 2, Auto Drain, BSPP

9185	Thread BSPP	Micron μm	Pressure Range bar
5623B54L103	G3/8"	20	0 to 8
5624B54L104	G1/2"	20	0 to 8
5625B54L105	G3/4"	20	0 to 8
5626B54L106	G1"	20	0 to 8

# ACCESSORIES, 'SYNTESI'

## Connecting Nipple Kit



### Body Size 1

9185	
9210000	

## Connecting Nipple Kit

### Body Size 2

9185	
9210010	

## Threaded Port Kit



### Body Size 1

9185	Thread BSPP
9210001	G1/8"
9210002	G1/4"
9210003	G3/8"

## Threaded Port Kit

### Body Size 2

9185	Thread BSPP
9210011	G3/8"
9210012	G1/2"
9210013	G3/4"
9210014	G1"

## Automatic Drain



Maximum Inlet Pressure: 10 bar



### To suit Body Sizes 1 & 2

9185	
9000802	

## Replacement Elements



### Spare, Body Size 1

9185	Micron µm
9210150	5
9210151	20

## Replacement Elements

### Spare, Body Size 2

9185	Micron µm
9210155	5
9210156	20

## Replacement Elements



### Oil Removal, Body Size 1

9185	
9210160	

## Replacement Elements

### Oil Removal, Body Size 2

9185	
9210165	

## Replacement Elements



### Active Carbon, Body Size 1

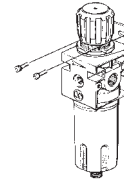
9185	
9210161	

## Replacement Elements

### Active Carbon, Body Size 2

9185	
9210166	

## Mountings

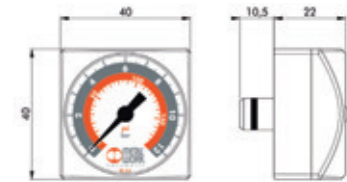


### Bracket for Regulators

9154	To	Sizes
9200701		Body size 1
9400701		Body size 2

## Square Dial Pressure Gauge

- A compact pressure gauge with a square dial suitable for air treatment units.
- Suitable for use with Metal Work Bit, Syntesi, New Deal and Skillair ranges.
- A PTFE ring seal mounted on the 1/8" thread of the fitting ensures a perfect pneumatic seal.
- To mount it, screw the gauge in as far as it will go, then loosen enough to align the dial. A sealant is not required.
- The pressure gauge has a neck to dampen pressure vibration and absorb water hammer. This improves overall reliability and guarantees longer life.



### G1/8" Thread

9154	Pressure Range (bar)
9700109	0 to 4
9700110	0 to 12

# STANDARD SERIES FRLS, 'NEW DEAL'

## Standard Filter

### Technical Specification

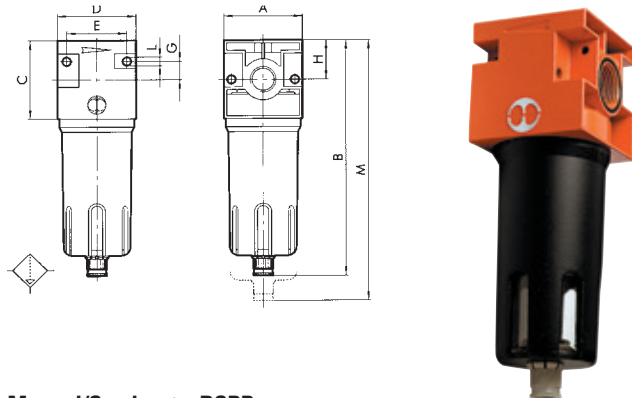
- Fluid: compressed air
- Mounting position: vertical
- Condensate drain: manual/semi-auto

Maximum Temperature at 10 bar: +50°C

Maximum Inlet Pressure: 18 bar

### Dimensions

Thread BSP	A	B	C	D	E	G	H	L (Hole)	M	kg
G1/4"	42	142	42	42	32	10	21	M4	185	0.4
G3/8"	60	180	60	60	46	14	30	M4	230	0.9
G1/2"	60	180	60	60	46	14	30	M4	230	0.9
G3/4"	80	235	80	80	66	22	40	M6	325	1.9
G1"	80	235	80	80	66	22	40	M6	325	1.9



## Manual/Semi-auto, BSPP

9154	Thread BSPP	Micron $\mu\text{m}$
1221006	G1/4"	20
1321006	G3/8"	20
1421006	G1/2"	20
1521006	G3/4"	20
1621006	G1"	20

### Technical Specification

- Fluid: filtered, lubricated or non-lubricated compressed air
- \*Lubrication, if used, must be continuous.

### Dimensions

Thread BSP	A	B	C	D	E	F	G	H	I	L (Hole)	M	N	kg
G1/4"	42	142	42	42	32	30 x 1.5	10	21	25	M4	185	G1/8"	0.3
G3/8"	60	180	60	60	46	38 x 2	14	30	35	M4	230	G1/8"	0.8
G1/2"	60	180	60	60	46	38 x 2	14	30	35	M4	230	G1/8"	0.8
G3/4"	80	235	80	80	66	55 x 2	22	40	47	M6	325	G1/4"	2.2
G1"	80	235	80	80	66	55 x 2	22	40	47	M6	325	G1/4"	2.2

## Security Knob

**NOTE:** pull outwards to remove the knob from the pressure switch on the unit. Insert the security knob and regulate the pressure switch. Then press the handle firmly to lock it in position. If the pressure switch needs to be reset, remove the security knob by forcing it laterally with a screwdriver.



To suit 9000401 & 9000402

9149  
9200703

## Oil Removal Filter

### Technical Specification

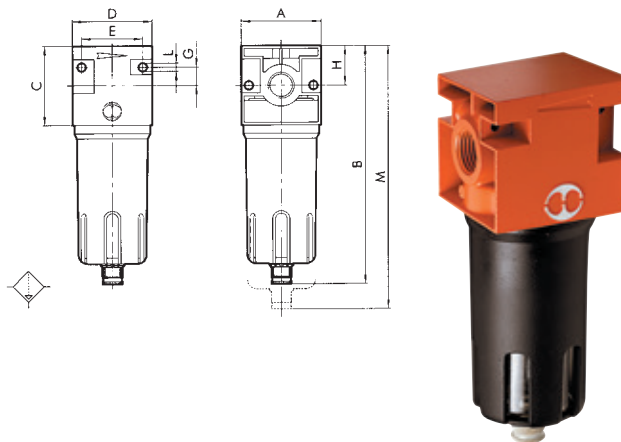
- Degree of filtration: 99.97% 0.01 $\mu$
- Flow rate at 6 bar  $\Delta P$  1 bar: 1600 NI/min
- Fluid: filtered 4 $\mu\text{m}$  compressed ai
- Weight: 0.9kg
- Mounting position: vertical
- Bowl capacity: 45cm<sup>3</sup>

Maximum Temperature at 10 bar: +50°C

Maximum Inlet Pressure: 18 bar

### Dimensions

Thread BSP	A	B	C	D	E	G	H	L (Hole)	M
G1/2"	60	180	60	60	46	14	30	M4	230



## BSPP

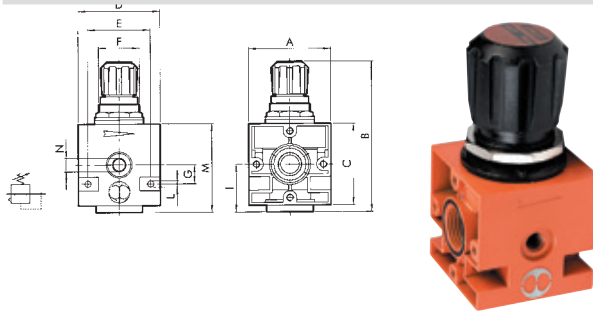
9154	Thread BSPP
1422002	G1/2"

Maximum Temperature at 10 bar: +50°C

Maximum Inlet Pressure: 18 bar

# STANDARD SERIES FRLS, 'NEW DEAL'

## Pressure Regulator



### BSPP

9154	Thread BSPP	Pressure Range bar
1202002	G1/4"	0 to 8
1202003	G1/4"	0 to 12
1302002	G3/8"	0 to 8
1302003	G3/8"	0 to 12
1402002	G1/2"	0 to 8
1402003	G1/2"	0 to 12
1502003	G3/4"	0 to 12
1602003	G1"	0 to 12

## Filter Regulator

### Technical Specification

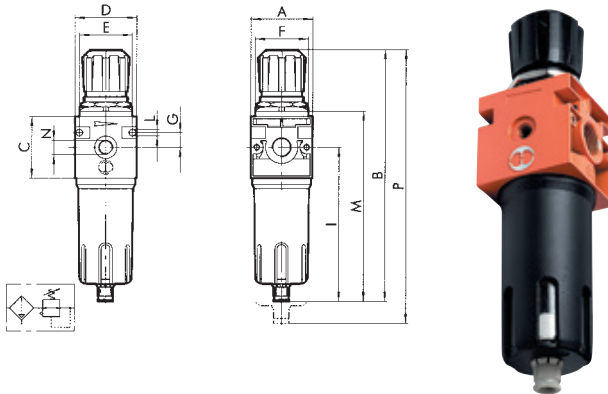
- Mounting position: vertical
- NB: the regulator pressure must always be set upwards.**

Maximum Temperature at 10 bar: +50°C

Maximum Inlet Pressure: 18 bar

### Dimensions

Thread BSP	A	B	C	D	E	F	G	I	L (Hole)	M	N	P	kg
G1/4"	42	190	42	42	36	30 x 1.5	10	121	M4	145	G1/8"	233	0.5
G3/8"	60	245	60	60	52	30 x 1.5	14	150	M4	185	G1/8"	295	1
G1/2"	60	245	60	60	52	30 x 1.5	14	150	M4	185	G1/8"	295	1



### BSPP

9185	Thread BSPP	Micron µm	Pressure Range bar
1225030	G1/4"	20	0 to 8
1225054	G1/4"	20	0 to 12
1325030	G3/8"	20	0 to 8
1325054	G3/8"	20	0 to 12
1425030	G1/2"	20	0 to 8
1425054	G1/2"	20	0 to 12

## Pressure Regulator, Padlockable



### BSPP

9154	Thread BSPP	Pressure Range bar
1210013	G1/4"	0 to 8
1210014	G1/4"	0 to 12
1310013	G3/8"	0 to 8
1310014	G3/8"	0 to 12
1410013	G1/2"	0 to 8
1410014	G1/2"	0 to 12

## Lubricator

### Technical Specification

- Fluid: filtered compressed air
- Mounting position: vertical

Maximum Temperature at 10 bar: +50°C

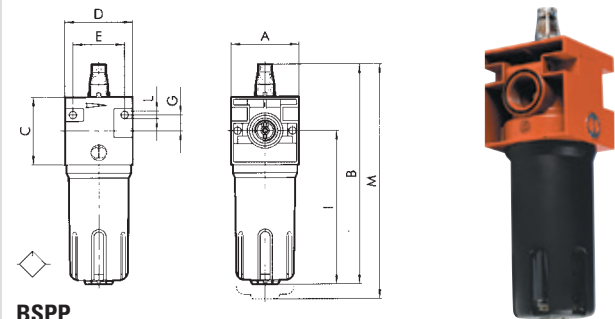
Maximum Inlet Pressure: 18 bar

### Notes

- Use the screw provided to set the drip rate to drop every 300-600ml.
- Fit the lubricator as close as possible to the point of use
- Fill the bowl with oil before pressurising the system
- Do not use cleaning oil, brake fluid or solvents in general
- Recommended lubricants: ISO and UNI FD22, e.g. Energol HLP 22(BP), Spinesso 22 (Esso), Mobil, Tellus Oil 22 (Shell)
- Automatic filling lubricator and minimum level lubricator

### Dimensions

Thread BSP	A	B	C	D	E	G	I	L (Hole)	M	kg
G1/4"	42	156	42	42	32	10	121	M4	176	0.4
G3/8"	60	195	60	60	46	14	136	M4	220	0.9
G1/2"	80	195	80	80	66	22	182	M4	290	0.9
G3/4"	80	260	80	80	66	22	182	M6	290	1.8
G1"	80	260	80	80	66	22	182	M6	290	1.8



### BSPP

9154	Thread BSPP
1223001	G1/4"
1323001	G3/8"
1423001	G1/2"
1523001	G3/4"
1623001	G1"

# STANDARD SERIES FRLS, 'NEW DEAL'

## Filter + Regulator + Lubricator Set

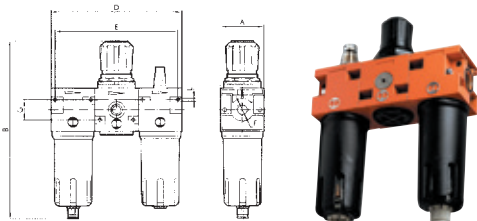
**Technical Specification**  
 • Fluid: compressed air  
 ° Maximum Temperature at 10 bar: +50°C  
 ⚙ Maximum Inlet Pressure: 18 bar

### Notes

- Highly reliable, heavy duty, piston operated
- FRL unit
- Stability of the set pressure as the upstream pressure varies
- Metal bowl with external sight glass
- Semi-automatic and automatic condensate drain
- Lubrication proportional to flow rate
- Micrometric lubrication regulation
- Activation guaranteed with low flow rate

### Dimensions

Thread BSPP	A	B	D	E	G	L (Hole)	kg
G1/4"	42	190	126	116	20	M4	1
G3/8"	60	245	180	166	28	M4	2.5
G1/2"	60	245	180	166	28	M4	2.5
G3/4"	80	332	240	226	44	M6	5.8
G1"	80	332	240	226	44	M6	5.8



### BSPP

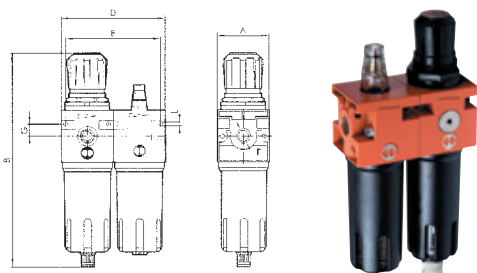
9185	Thread BSPP	Micron µm	Pressure Range bar
1224030	G1/4"	20	0 to 8
1224054	G1/4"	20	0 to 12
1324030	G3/8"	20	0 to 8
1324054	G3/8"	20	0 to 12
1424030	G1/2"	20	0 to 8
1424054	G1/2"	20	0 to 12
1524030	G3/4"	20	0 to 12
1624030	G1"	20	0 to 12

## Filter Regulator + Lubricator Sets

**Technical Specification**  
 • Fluid: compressed air  
 ° Maximum Temperature at 10 bar: +50°C  
 ⚙ Maximum Inlet Pressure: 18 bar

### Dimensions

Thread BSPP	A	B	D	E	G	L (Hole)	kg
G1/4"	42	190	84	76	10	M4	0.9
G3/8"	60	240	120	109	14	M4	2
G1/2"	60	240	120	109	14	M6	2



### BSPP

9185	Thread BSPP	Micro µm	Pressure Range bar
1226030	G1/4"	20	0 to 8
1226054	G1/4"	20	0 to 12
1326030	G3/8"	20	0 to 8
1326054	G3/8"	20	0 to 12
1426030	G1/2"	20	0 to 8
1426054	G1/2"	20	0 to 12

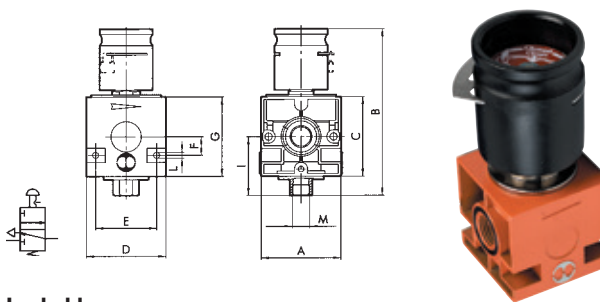
## Shut Off Valve

**Technical Specification**  
 • Fluid: filtered, lubricated or non lubricated compressed air\*  
 ° Maximum Temperature at 10 bar: +50°C  
 ⚙ Inlet Pressure: 18 bar

\* Lubrication, if used, must be continuous.

### Dimensions

Thread BSPP	A	B	C	D	E	F	G	I	L (Hole)	kg
G1/4"	42	105	42	42	32	10	42	32	M4	0.35
G3/8"	60	126	60	60	46	14	60	43	M4	0.8
G1/2"	60	126	60	60	46	14	60	43	M4	0.8



### Lockable

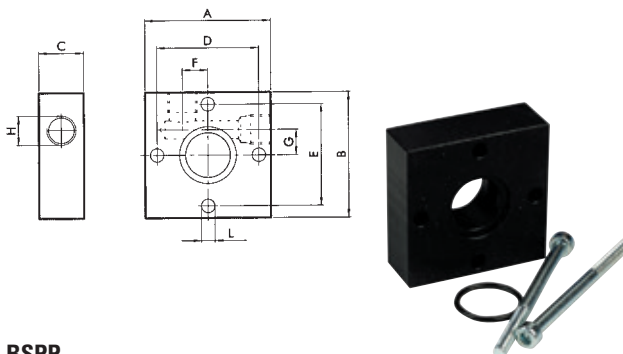
9154	Thread BSPP
1270001	G1/4"
1370001	G3/8"
1470001	G1/2"

## Distribution Block

° Maximum Working Temperature at 10 bar: +50°C  
 ⚙ Maximum admissible Pressure: 18 bar

### Dimensions

Thread BSPP	A	B	C	D	E	F	G	H (No2 pos)	L (Hole)
G1/4"	42	42	15	34	34	8.5	8.5	21	M4
G3/8"	60	60	20	49	49	14	14	30	M4
G1/2"	60	60	20	49	49	14	14	30	M4
G3/4"	80	80	30	64	64	16	16	40	M6
G1"	80	80	30	64	64	16	16	40	M6



### BSPP

9154	To Suit
9200401	G1/8" for G1/4
9400401	G1/4" for G3/8 to G1/2
9600401	G1/2" for G3/4 to G1

# STANDARD SERIES FRLS, 'NEW DEAL' ACCESSORIES



## Drip Leg Drain

### Technical Specifications

- Threaded port: G1/2"
- Wall fixing screws: M6 x 75

### System supply condensate drain:

- All-round condensate level viewing
- Automatic drain from inside the bowl
- Axial coupling

**Maximum Working Temperature at 10 bar:**  
+50°C

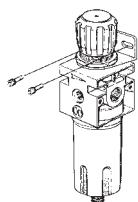
**Maximum admissible Pressure:**  
18 bar



## BSPP

9154	Thread BSPP
4589003	G1/2"

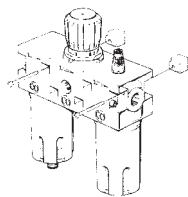
## Mountings



### Bracket for Regulators

9154	To Suit Sizes
9200701	G1/4"
9400701	G3/8" to G1/2"

## Mountings



### Spacers for Wall Mount FRLs

9154	To Suit Sizes
9200601	G1/4"
9400601	G3/8" to G1/2"
9600601	G3/4"

## Filter Element



### Spare

9154	To Suit Sizes	Micron µm
9250103	G1/4"	4
9250102	G1/4"	20
9450103	G3/8" to G1/2"	4
9450102	G3/8" to G1/2"	20
9650103	G3/4" to G1"	4
9650102	G3/4" to G1"	20
9450105	G3/8" to G1/2"	0.01

## Shut Off Valve Adaptor



### Brass

9154	To Suit Sizes
9201001	G1/4"
9401001	G3/8"
9401002	G1/2"

## Automatic Drains

**Maximum Inlet Pressure:** 10 bar



### Fully Automatic

9185	To Suit Sizes
9000802	G3/8" to G1"

## Automatic Drains



### Semi-automatic

9154	To Suit Sizes
9000803	G1/4" to G1/2"

## Automatic Drains

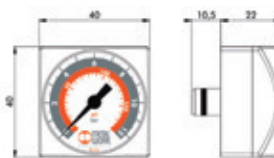


### Metal Bowl for use with Semi-auto & Auto Drains

9154	To Suit Sizes
9255201	G1/4"
9455201	G3/8" to G1/2"

## Square Dial Pressure Gauge

- A compact pressure gauge with a square dial suitable for air treatment units.
- Suitable for use with Metal Work Bit, Syntesi, New Deal and Skillair ranges.
- A PTFE ring seal mounted on the 1/8" thread of the fitting ensures a perfect pneumatic seal.
- To mount it, screw the gauge in as far as it will go, the loosen enough to align the dial. A sealant is not required.
- The pressure gauge has a neck to dampen pressure vibration and absorb water hammer. This improves overall reliability and guarantees longer life.



### G1/8" Thread

9154	Pressure Range (bar)
9700109	0 to 4
9700110	0 to 12

# STANDARD SERIES FRLS, 'NEW DEAL' BREATHE AIR SET

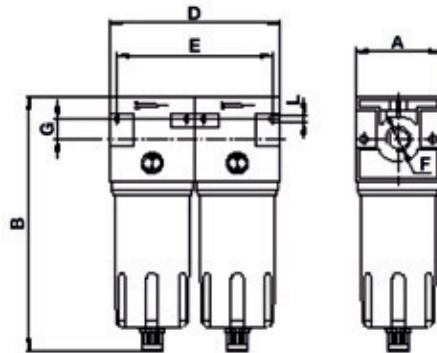
## Breathe Air Set

**Breathe** provides high quality, clean air, essential for paint spraying and breathing air applications. Designed for self-contained operations, it will filter compressed air directly from most types of compressor and ring main systems.

**Breathe** will supply sufficient breathable air for up to two men on constant demand and will provide breathing quality air to a higher standard than specified in BS4275: 1974

### Technical Specification

- Element grade: XA and AC
- Threaded port: 1/2" BSP
- Particle removal: 0.01 microns
- Maximum oil carry over @ +20°C: 0.005 mg/cu m
- Pressure loss, clean and dry: 150 mbar
- Pressure loss, saturated: 350 mbar
- Pressure loss, change element: 400 mbar



### Dimensions

A	60mm	E	121mm
B	180mm	G	14mm
D	135mm	L	4mm Hole



**Maximum Recommended Temperature:**  
+25°C

**Maximum Working Pressure:**  
16 bar

### BSP

9154	Element Grade	Thread Size BSP	Micron µm	Pressure Range Bar
Z29100BREATHE	XA & SC	1/2"	0.01	0 to 16



For FT Pro Pneumatic Hose  
see pages 895-904

# FRLS, 'SKILLAIR'

## Filter, 200 Series

### Technical Specification

- Degree of filtration: 20 $\mu$
- Flow rate at 6.3 bar: 2400 NI/min
- Fluid: compressed air
- Weight: 0.7kg

**Maximum Temperature at 10 bar:**  
+50°C

**Maximum Input Pressure:**  
13 bar



### BSPP

9193	Thread BSPP
3480002	1/4"
3580002	3/8"
3680002	1/2"

## Filter, 300 Series

### Technical Specification

- Degree of filtration: 20 $\mu$
- Flow rate at 6.3 bar: 3800 NI/min
- $\Delta P$  0.5 bar (0.005 MPa, 7 psi): 135 scfm
- Fluid: compressed air
- Weight: 1.4 kg

**Maximum Temperature at 10 bar:**  
+50°C

**Maximum Input Pressure:**  
13 bar



### BSPP

9193	Thread BSPP
4480002	1/2"
4580002	3/4"
4680002	1"

## Filter, 400 Series

### Technical Specification

- Degree of filtration: 20 $\mu$
- Flow rate at 6.3 bar:
  - 16500 (G1 1/2") NI/min, 20000 (G2") NI/min
- Fluid: compressed air
- Weight: 1.4kg

**Maximum Temperature at 10 bar:**  
+50°C

**Maximum Input Pressure:**  
13 bar



### BSPP

9193	Thread BSPP
6380002	1.1/2"
6480002	2"

## Regulator, 200 Series

### Technical Specification

- Setting range: 0 to 8 bar
- Flow rate at 6.3 bar: 25000 NI/min
- Weight: 0.7kg
- Mounting: any position
- Pressure gauge port: G1/8"

**Maximum Temperature at 10 bar:**  
+50°C

**Maximum Input Pressure:**  
13 bar



### BSPP

9193	Thread BSPP
3402003	1/4"
3502003	3/8"
3602003	1/2"

## Regulator, 300 Series

### Technical Specification

- Setting range: 0 to 8 bar
- Flow rate at 6.3 bar: 35000 NI/min
- Weight: 1.4kg

**Maximum Temperature at 10 bar:**  
+50°C

**Maximum Input Pressure:**  
13 bar



### BSPP

9193	Thread BSPP
4402002	1/2"
4502002	3/4"
4602002	1"

## Regulator, 400 Series

### Technical Specification

- Setting range: dependent on pilot operating regulator
- Flow rate at 6.3 bar:
  - 18000 (G1.1/2") NI/min, 20000 (G2") NI/min
- Weight: 4.8kg (G1.1/2"), 5.6kg (G2")
- Mounting: any position
- Pressure gauge port: G1/4"
- Requires pilot regulator

**Maximum Temperature at 10 bar:**  
+50°C

**Maximum Input Pressure:**  
13 bar



### BSPP

9193	Thread BSPP
6302001	1.1/2"
6402001	2"



# FRLS, 'SKILLAIR'

## Pilot Regulator, 400 Series

### Technical Specification

- Flow rate at 6.3 bar  $\Delta P$  0.5 bar: 120 NI/min
- Weight: 0.6kg
- Pressure gauge port: G1/8"

**Maximum Temperature at 10 bar:**  
+50°C

**Maximum Input Pressure:**  
13 bar



### BSPP

9193	Thread BSPP	Pressure Range bar
3206001	1/4"	2
3206002	1/4"	4
3206003	1/4"	8
3206004	1/4"	12

## Filter Regulator, 200 Series

### Technical Specification

- Setting range: 0 to 8 bar
- Degree of filtration: 20 $\mu$
- Flow rate at 6.3 bar  $\Delta P$  0.5 bar: 1600 NI/min
- Weight: 1kg
- Pressure gauge port: G1/8"

**Maximum Temperature:**  
+50°C

**Maximum Input Pressure:**  
13 bar



### BSPP

9193	Thread BSPP
3483008	1/4"
3583008	3/8"
3683008	1/2"

## Filter Regulator, 300 Series

### Technical Specification

- Setting range: 0 to 8 bar
- Degree of filtration: 20 $\mu$
- Flow rate at 6.3 bar: 3500 NI/min
- $\Delta P$  0.5 bar: 57 scfm
- Weight: 1.8kg
- Pressure gauge port: G1/8"

**Maximum Temperature:**  
+50°C

**Maximum Input Pressure:**  
13 bar



### BSPP

9193	Thread BSPP
4483005	1/2"
4583005	3/4"
4683005	1"

## Lubricator, 200 Series

### Technical Specification

- Bowl capacity: 95
- Flow rate at 6.3 bar: 2200 NI/min
- Weight: 0.7kg

**Maximum Temperature:**  
+50°C

**Maximum Input Pressure:**  
13 bar



### BSPP

9193	Thread BSPP
3481001	1/4"
3581001	3/8"
3681001	1/2"

## Lubricator, 300 Series

### Technical Specification

- Bowl capacity: 160
- Flow rate at 6.3 bar: 3500 NI/min
- Weight: 1.4kg

**Maximum Temperature:**  
+50°C

**Maximum Input Pressure:**  
13 bar



### BSPP

9193	Thread BSPP
4481001	1/2"
4581001	3/4"
4681001	1"

## Lubricator, 400 Series

### Technical Specification

- Type of lubrication: mist
- Bowl capacity: 800
- Flow rate at 6.3 bar:  
18,000 (G1.1/2") NI/min, 21,000 (G2") NI/min
- Weight: 4.9kg (G1.1/2"), 5.7kg (G2")

**Maximum Temperature:**  
+50°C

**Maximum Input Pressure:**  
13 bar



### BSPP

9193	Thread BSPP
6381001	1.1/2"
6481001	2"

# FRLS, 'SKILLAIR'

## Manual Shut Off Valve, 200 Series

### Technical Specification

- Flow rate at 6.3 bar: 24000 NI/min
- Weight: 0.8kg

**Maximum Temperature at 1 MPa, 10 bar (145 psi):**  
+50°C

**Maximum Inlet Pressure (solenoid version):**  
3 bar

**Maximum Inlet Pressure:**  
13 bar



### BSPP

9193	Thread BSPP
3470001	1/4"
3570001	3/8"
3670001	1/2"

## Manual Shut Off Valve, 300 Series

### Technical Specification

- Flow rate at 6.3 bar: 32000 NI/min
- Weight: 1.2kg

**Maximum Temperature at 1 MPa, 10 bar (145 psi):**  
+50°C

**Maximum Inlet Pressure (solenoid version):**  
2 bar

**Maximum Inlet Pressure:**  
13 bar



### BSPP

9193	Thread BSPP
4470001	1/2"
4570001	3/4"
4670001	1"

## Filter + Regulator + Lubricator, 200 Series

### Technical Specification

- Setting range: 0 to 8 bar
- Degree of filtration: 20μ
- Flow rate at 6.3 bar: 1300 NI/min
- Weight: 1.5kg

**Maximum Temperature:**  
+50°C

**Maximum Inlet Pressure:**  
13 bar



### BSPP

9193	Thread BSPP
3482008	1/4"
3582008	3/8"
3682008	1/2"

## Filter + Regulator + Lubricator, 300 Series

### Technical Specification

- Setting range: 0 to 8 bar
- Degree of filtration: 20μ
- Flow rate at 6.3 bar: 2500 NI/min
- Weight: 2.9kg

**Maximum Temperature:**  
+50°C

**Maximum Inlet Pressure:**  
13 bar



### BSPP

9193	Thread BSPP
4482005	1/2"
4582005	3/4"
4682005	1"

# FRLS, 'SKILLAIR'

## Filter Regulator + Lubricator, 200 Series

### Technical Specification

- Setting range: 0 to 8 bar
- Degree of filtration: 20µ
- Flow rate at 6.3 bar: 1200 NI/min
- Weight: 1.35kg

**Maximum Temperature:**  
+50°C

**Maximum Inlet Pressure:**  
13 bar



### BSPP

9193	Thread BSPP
3484008	1/4"
3584008	3/8"
3684008	1/2"

## Filter Regulator + Lubricator, 300 Series

### Technical Specification

- Setting range: 0 to 8 bar
- Degree of filtration: 20µ
- Flow rate at 6.3 bar: 2300 NI/min
- Weight: 2.7kg

**Maximum Temperature:**  
+50°C

**Maximum Inlet Pressure:**  
13 bar



### BSPP

9193	Thread BSPP
4484005	1/2"
4584005	3/4"
4684005	1"

## Solenoid Coil, 200 Series



### Form B/Industrial, 22mm Coil

9149	Voltage
W0215000101	24V DC 2W
W0215000111	24V AC
W0215000121	110V AC
W0215000131	230V AC

M1NS2000: Socket Connector, Form B.

## Solenoid Coil, 300 Series



### Form B/Industrial, 30mm Coil

9182	Voltage
W0210010100	24V DC 2W
W0210011100	24V AC
W0210012100	110V AC
W0210013100	230V AC

G1NU2000: Socket Connector, Form A.

## Mounting Bracket



### To suit 200 & 300 Series

9154	To Suit Series
9400701	200
9400702	300

# FRLS, 'ONE' AIR TREATMENT UNIT



## 'ONE' Integrated Compressed Air Treatment Unit

In the world of pneumatics, which is considered mature, it is rare to encounter completely new and different products.

**ONE** is a compressed air treatment unit with a high degree of integration, that encompassed numerous pneumatic functions.

In fact, it contains so many innovations that a single patent is not enough to safeguard it against imitation – three separate patent applications have been registered with a total of 39 claims.

This unit is so innovative that it won the international novelty award at Fluidtrons Compomac.

**ONE** has a single high-performance valve on the main row that handles all the functions from regulation to relief. It is controlled by a high-precision pilot regulator with controlled relief, in series with the manual on-off valve, the electric valve and the progressive actuator.

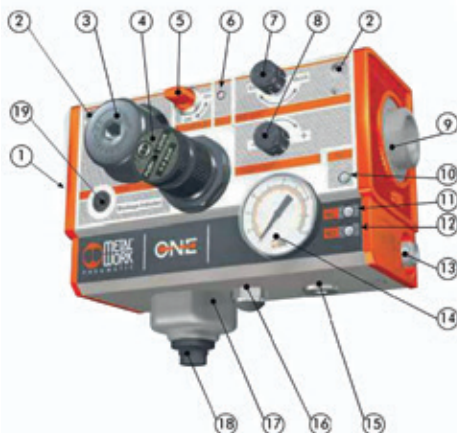
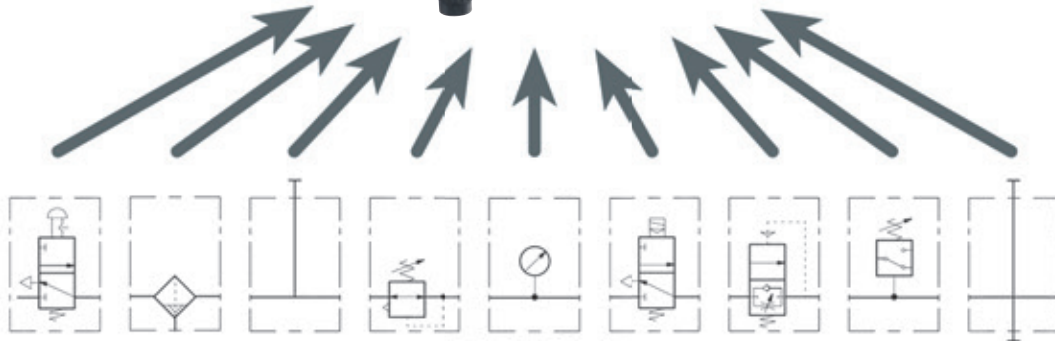
Unification of the valve has led to a significant reduction in overall dimensions, enhanced capacity, precision and response speed.

The **ONE** single unit houses the threaded ports, filter, condensate drain, pressure regulator, shut-off valve, soft start valve, pressure switch and three supplementary air intakes.

The single unit houses the threaded ports, filter, condensate drain, pressure regulator, shut-off valve, soft start valve, pressure switch and three supplementary air intakes.



Other versions and further technical information available on request



1. Air intake, with swivel threaded port
2. Fixing hole
3. Access to filter cartridge
4. Pressure regulation
5. Shut-off Valve (manual)
6. Manual override (shut-off valve, electrical)
7. Soft start valve regulation
8. Switching pressure regulation
9. Air outlet with swivel threaded port
10. LED signalling pressure, ON
11. LED signalling pressure below the value set on pressure switch
12. LED signalling pressure over the value set on pressure switch
13. 5-pin M12x1 electrical connector
14. Pressure gauge
15. 1/4" air intake; another regulated air intake and a filtered non-regulated air intake are situated on the top
16. Air exhaust with a G1/4" silencer
17. Condensate tank
18. Condensate drain
19. Clogged filter signal

### BSPP

9193	Version	Air Inlet/Outlet BSPP	Micron $\mu\text{m}$	Clogged Filter Signal	Condensate Drain	Pressure Range Bar	Valves	Pressure Switch
543211881300	Electric*	1/2"	20	Yes	Automatic	0.5 to 8	Padlock and APR	Yes

# OLYMPIAN PLUS PLUG-IN SYSTEM



Olympian Plus is the new generation FRL system from Norgren, world leaders in air line equipment. The unique Olympian plug-in design has been updated to set new standards for ease of use and system flexibility.

## 1. QUICK CONNECT YOKE SYSTEM

Simple, speedy assembly of accessories and combination units.

## 2. PLUG IN UNITS

Rapid installation and maintenance. Quarter turn clamp ring graphite impregnated for easy operation. Detent action prevents removal under pressure.

## 3. BAYONET BOWLS

Easy removal for routine maintenance. Detent action to prevent removal under pressure.

## 4. UNIQUE PRISMATIC SIGHT GLASS

High visibility of liquid level. Colour change service indication on filters and filter regulators.

- Complete air processing units pre-assembled, ready to install
- Filter-regulator and micro-fog lubricator combinations

## 5. CAPTIVE O-RINGS

Easy to assemble with no loose parts.

## 6. TAMPER RESISTANT COVER

Simple accessory to prevent unauthorised adjustment of regulated pressure.

## 7. PORTING BLOCK MOUNTED PRESSURE SWITCH

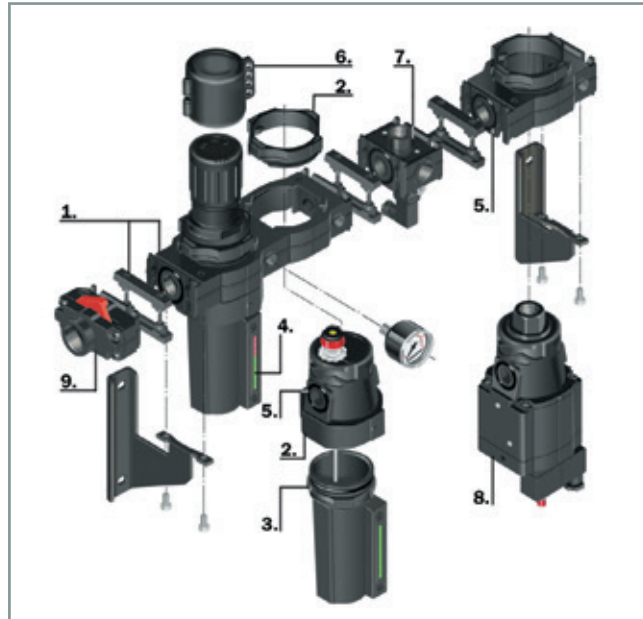
Adjustable pressure switch for feedback to monitoring systems.

## 8. SOFT START/DUMP VALVE

Provides controlled increase in pressure on system start-up. High exhaust flow capacity.

## 9. 3/2 SHUT OFF VALVE

- Slide valve with lockable blade. Threaded exhaust port.
- Filter and micro-fog lubricator combinations



### ° Working Temperature:

**Medium:** Compressed air only

**Element:** Sintered plastic

-20°C to +66°C

**Body and Yoke:** Zinc alloy

**Elastomers:** Synthetic rubber units assembled for left to right flow

### Inlet Pressure:

0-17 bar

**Bowl:** Aluminium

## Boxed Sets



### BSPP

0037	Thread	Micron	Bowl	Pressure Range Bar	Operation	Drain Type
<b>BL64-401</b>	1/2"	40	Metal	0.3-10	Relieving	Auto
<b>BL64-421</b>	1/2"	40	Metal	0.3-10	Relieving	Manual

Tech Sheet 20160

## Filter & Lubricator Combinations



### BSPP

0037	Thread	Micron	Bowl	Drain Type
<b>FL64-608</b>	3/4"	40	Metal	Auto
<b>FL64-628</b>	3/4"	40	Metal	Manual

Tech Sheet 20160

## Filter/Regulator & Lubricator Combinations



### BSPP

0037	Thread	Micron	Bowl	Pressure Range Bar	Operation	Drain Type
<b>BL64-408</b>	1/2"	40	Metal	0.3-10	Relieving	Auto
<b>BL64-428</b>	1/2"	40	Metal	0.3-10	Relieving	Manual
<b>BL64-608</b>	3/4"	40	Metal	0.3-10	Relieving	Manual

Tech Sheet 20160

## Gauge



### 50mm, Centre Back Connection

0037	Thread	Pressure Range Bar
<b>18-013-013</b>	1/8"	0-10

Tech Sheet 20160

# OLYMPIAN PLUS PLUG-IN SYSTEM



## General Purpose Filters

- Effective liquid removal and positive solid filtration
- Large filter element area for minimum pressure drop
- Standard options include element service indicator, manual drain and alternative filter element

### F64G Series:

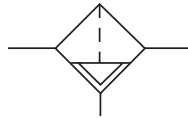
**Body:** Zinc alloy  
**Bowl:** Aluminium  
**Yoke:** Zinc alloy  
**Filter Element:** Sintered plastic  
**Elastomers:** Synthetic rubber

### F15 Series:

**Body:** Aluminium  
**Bowl:** Aluminium  
**Yoke:** Zinc alloy  
**Filter Element:** Sintered bronze  
**Elastomers:** Synthetic rubber  
**Medium:** Compressed air only

**Medium:** Compressed air only

**Working Pressure:**  
0-17 bar (Metal Bowl)



### F64G & F68G

0037	Flow dm <sup>3</sup> /s	Micron	Bowl	Drain Type
F64G-NNN-AD3	75	40	Metal	Auto
F64G-NNN-MD3	75	40	Metal	Manual
F68G-NNN-AR3	160	40	Metal	Auto
F68G-NNN-MR3	160	40	Metal	Manual

This unit is to be used in conjunction with a Ported Yoke

## Pressure Regulators

- Diaphragm and balanced valve design ensure good regulation characteristics
- Non-rising adjusting knob has snap-action lock
- Standard options include non-relieving models and alternative pressure ranges

### R64G Series:

**Body:** Zinc alloy  
**Bonnet:** Aluminium  
**Yoke:** Zinc alloy  
**Elastomers:** Synthetic rubber

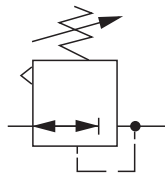
### R15 Series:

**Body, Bonnet and Yoke:** Aluminium  
**Adjusting Knob:** Acetal resin  
**Optional T-bar Adjusting Screw:** Steel  
**Elastomers:** Synthetic rubber

**Medium:** Compressed air only  
**Gauge Ports:** G1/8

**Working Temperature:**  
-20°C to +80°C

**Working Pressure:**  
0-17 bar (R64G)  
0-20 bar (R68G)



### R64G & R68G

0037	Thread	Flow dm <sup>3</sup> /s	Pressure Range Bar	Operation
R64G-NNK-RMN	-	120	0.3-10	Relieving
R64G-4GK-RMN	1/2"	120	0.3-10	Relieving
R68G-NNK-RLN	-	150	0.4-8	Relieving

Tech Sheet 20161

This unit is to be used in conjunction with a ported yoke

## Filter Regulators

- High efficiency water removal
- Good regulation characteristics
- Non-rising adjusting knob has snap-action lock
- Standard options include non-relieving models, manual drain and alternative pressure ranges

### B64G Series:

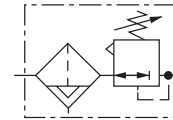
**Body:** Zinc alloy  
**Bonnet and Bowl:** Aluminium  
**Yoke:** Zinc alloy  
**Filter Element:** Sintered plastic  
**Elastomers:** Synthetic rubber

### B15 Series:

**Body:** Aluminium  
**Bonnet and Bowl:** Aluminium  
**Yoke:** Aluminium  
**Filter Element:** Sintered bronze  
**Elastomers:** Synthetic rubber  
**Adjusting Knob:** Acetal resin

**Medium:** Compressed air only  
**Gauge Ports:** G1/8  
**Operation:** Relieving

**Ambient Temperature:**  
-20°C to +80°C (Metal bowl)



### B64G & B68G

0037	Flow dm <sup>3</sup> /s	Micron	Bowl	Pressure Range Bar	Drain Type
B64G-NNK-AD3-RMN	106	40	Metal	0.3-10	Auto
B64G-NNK-MD3-RMN	106	40	Metal	0.3-10	Manual
B68G-NNK-AR3-RLN	230	40	Metal	0.4-8	Auto

Tech Sheet 20162

This unit is to be used in conjunction with a ported yoke

## High Efficiency Oil Removal Filter



### F64H & F68H

0037	Thread	Flow dm <sup>3</sup> /s	Bowl	Drain Type
F64H-3GD-MD0	3/8"	28	Metal	Auto
F64H-4GD-MD0	1/2"	28	Metal	Auto
F68H-8GD-MU0	1"	60	Metal	Auto

Tech Sheet 20163

This unit is to be used in conjunction with a ported yoke

## Lubricators



### L64M & L68M

0037	Thread	Bowl
L64M-2GP-EDN	1/4"	Metal
L64M-3GP-EDN	3/8"	Metal
L64M-4GP-EDN	1/2"	Metal
L64M-6GP-EDN	3/4"	Metal
L68M-NNP-ERN	-	Metal

Tech Sheet 20164

This unit is to be used in conjunction with a ported yoke

# OLYMPIAN PLUS PLUG-IN SYSTEM



## Relief & Soft Start Valves

Olympian relief valves protect compressed air systems from over-pressurisation. High relief capacity, sensitive and accurate. Yoke must be ordered separately.

**Medium:** Compressed air only

Gauge port: G1/8

**Relief Port:**

V64 Series - G1/2

V68 Series - G1

**Materials 64 Series:**

Body, bonnet: zinc alloy

**Bottom Plug:** Aluminium

**Adjusting Screw:** Steel

**Elastomers:** Synthetic rubber

**Materials 68 Series:**

Intermediate body, bonnet

and bottom plug: aluminium

**Adjusting Screw:** Steel

**Elastomers:** Synthetic rubber

**Working Temperature:**  
-20°C to +80°C



### V64H, V68H Pressure Relief Valves

0037	Port Size
V64H-NND-RMN	1/4"-3/4"
V68H-NND-RMN	3/4"-1.1/2"

Tech Sheet 20165

This unit is to be used in conjunction with a ported yoke

Assists machine designers in complying with the European Machinery Directive.

Can help existing machinery to comply with PUWER (Provision and Use of Work Equipment Regulations).

Controlled increase of downstream pressure on start up.

Solenoid, air pilot or manual operator.

High forward flow capacity.

High flow dump facility.

**Medium:** Compressed air

**Material:**

Body and yoke:

Zinc alloy (yoke sold separately)

**Intermediate Body and Top Plate:**

Aluminium

**Elastomers:** Synthetic materials

**Filter Discs:** Sintered plastic

**Internal Components:**

Brass and steel

**Working Temperature:**  
+5°C to +50°C



### P64F Soft Start/Dump Valve

0037	Port Size	Flow dm <sup>3</sup> /s	Pressure Range Bar
P64F-NNC-PZN	1/4"-3/4"	57	3-10

Tech Sheet 20165

This unit is to be used in conjunction with a ported yoke

## Yokes

- When installed, enables Olympian basic units to be 'plugged in' or removed without disturbing connecting pipework



### Single Unit

0037	Thread
Y64A-4GA-N1N	1/2"
Y68A-6GN-N1N	3/4"
Y68A-8GN-N1N	1"
Y68A-BGN-N1N	1.1/2"

Tech Sheet 20166



### Double Unit

0037	Thread
Y64A-4GA-N2N	1/2"
Y68A-6GN-N2N	3/4"
Y68A-BGN-N2N	1.1/2"

Tech Sheet 20166

## Shut Off Valves

- 3 port/2 position
- Easy to operate
- Lockable in the 'closed' position



### BSPP

0037	Thread
T64T-4GB-P1N	1/2"
T68C-6GB-B2N	3/4"

Tech Sheet 20166

## Coalescing Exhaust Silencers



### BSPP

0037	Thread
CS13-364-10GG	1/4"
CS13-664-10GG	1/2"

Tech Sheet 20166

# EXCELON® PLUS MODULAR AIR PREPARATION



## Filters/Regulators & Lubricators - Box Sets

- Unique Quikclamp connection system offers full modularity
- 40µm particle and high efficiency water removal
- Double safety lock on bowl
- Integrated gauge
- Shut off valve, regulator and filter regulator with tamper resistance feature
- Light weight polycarbonate bowl
- Easy to read flush mounted integrated pressure gauge as standard
- All round (360°) visibility of sightdome for ease of drip rate setting
- High corrosion resistance: Body and metal bowl with electrophoretic paint finish

**Working Temperature:**  
-10°C to +60°C

**Maximum Working Pressure:**  
10 bar

### Materials:

**Body:** Die cast aluminum

**Body covers:** ABS

**Transparent Bowl:** Polycarbonate with polypropylene guard

**Filter element:** Sintered PP

**Bowl 'O'-ring:** Chloroprene

**Elastomers:** NBR

**Port:** BSPP

**Element:** (µm) 40

**Lubricator:** Micro-fog®

**Bowl:** Guarded/Polycarbonate

**Medium:** Compressed air only

**Operation:** Relieving



### Boxed sets including shut-off valve, gauge and mounting bracket

0037	Thread	Drain Model
<b>BL82-201G</b>	1/4"	Auto
<b>BL82-221G</b>	1/4"	Manual
<b>BL84-301G</b>	3/8"	Auto
<b>BL84-321G</b>	3/8"	Manual
<b>BL84-401G</b>	1/2"	Auto
<b>BL84-421G</b>	1/2"	Manual

Tech Sheet 71736

## Filters/Regulators

- Excelon® Plus design allows in-line installation or modular installation with other Excelon® Plus products
- 5 or 40µm particle and high efficiency water removal
- Double safety lock bowl
- Push to lock adjusting knob with built in tamper resistant feature
- Light weight polycarbonate bowl with guard
- Easy to read flush mounted integrated pressure gauge
- Air purity classes in accordance to ISO8573-1:2010: 7:8:4 (40µm), 6:8:4 (5µm)
- High Corrosion resistance: Body and metal bowl with electrophoretic paint finish
- DoC in accordance with 2014/34/EU/ATEX

**Working Temperature:**  
-10°C to +60°C

**Maximum Working Pressure:**  
10 bar

### Materials:

**Body covers:** ABS

**Transparent Bowl:** Polycarbonate with Polypropylene Guard

**Filter Element:** Synthetic fibre & PE foam

**Bowl 'O'-ring:** Chloroprene

**Elastomers:** NBR

**Port:** BSPP

**Element:** (µm) 40

**Flow:** (dm<sup>3</sup>/s) 100

**Medium:** Compressed air only

**Operation:** Relieving



### B82G & B84G series

0037	Thread	Bar
<b>B82G-2GK-AP3-RMG</b>	1/4"	03 to 10
<b>B82G-2GK-OP3-RMG</b>	1/4"	03 to 10
<b>B84G-3GK-AP3-RMG</b>	3/8"	03 to 10
<b>B84G-3GK-OP3-RMG</b>	3/8"	03 to 10
<b>B84G-4GK-AP3-RMG</b>	1/2"	03 to 10
<b>B84G-4GK-OP3-RMG</b>	1/2"	03 to 10

Tech Sheet 71734

## Micro-Fog Lubricators

- Excelon® Plus design allows in-line installation or modular installation with other Excelon® Plus products
- Flow sensor provides a nearly constant oil/air ratio over a wide range of flow
- Double safety lock bowl
- Light weight polycarbonate bowl
- All round (360°) visibility of sightdome for ease of drip rate setting
- Choice of two oil delivery systems
- High Corrosion resistance: Body and metal bowl with electrophoretic paint finish

**Working Temperature:**  
-10°C to +60°C

**Maximum Working Pressure:**  
10 bar

### Materials:

**Transparent Bowl:** Polycarbonate with Polypropylene Guard

**Body:** Die cast zinc

**Body cover:** ABS

**Sightdome:** Transparent PA

**Bowl 'O'-ring:** Chloroprene

**Elastomers:** NBR

**Medium:** Compressed air only

**Operation:** Relieving



### L82C, L82M & L84C, L84M series

0037	Thread	Flow (dm <sup>3</sup> /s)
<b>L82M-2GP-EPN</b>	1/4"	22
<b>L84M-3GP-EPN</b>	3/8"	73
<b>L84M-4GP-EPN</b>	1/2"	73

Tech Sheet 71743



For Norgren Non-return Valves  
see page 864



## General Purpose Filters

- Excelon® Plus design allows in-line installation or modular installation with other Excelon® Plus products
- 5 or 40µm particle and high efficiency water removal (> 98%)
- Double safety lock bowl
- Light weight polycarbonate bowl

### Materials:

**Body:** Die cast aluminum

**Body covers:** ABS

**Bonnet:** Acetal Valve: PP

**Transparent Bowl:** Polycarbonate with polypropylene guard

**Filter element:** Sintered PP

**Bowl 'O'- ring:** Chloroprene

**Elastomers:** NBR

**Port:** BSPP

**Element:** (µm) 40

**Bowl:** Guarded/Polycarbonate

- Air purity classes in accordance to ISO8573-1:2010: 7:8:4 (40µm), 6:8:4 (5µm)
- High Corrosion resistance: Body and metal bowl with electrophoretic paint finish
- DoC in accordance with 2014/34/EU/ATEX

**Working Temperature:**  
-10°C to +60°C

**Maximum Working Pressure:**  
10 bar

**Medium:** Compressed air only  
**Operation:** Relieving



## F82G & F84G series

0037	Thread	Flow (dm³/s)
F82G-2GN-AP3	1/4"	23
F82G-2GN-QP3	1/4"	23
F84G-3GN-AP3	3/8"	78
F84G-3GN-QP3	3/8"	78
F84G-4GN-AP3	1/2"	78
F84G-4GN-QP3	1/2"	78

Tech Sheet 71741

## 'Puraire'® High Efficiency Oil Removal Filter

- Excelon® Plus design allows in-line installation or modular installation with other Excelon® Plus products
- High efficiency oil and particle removal
- Double safety lock bowl
- Light weight polycarbonate bowl
- Service indicator standard
- Air purity class in accordance with ISO8573-1:2010: 1:7:1\* \*Tested in

### Materials:

**Body:** Die cast aluminum

**Body covers:** ABS

**Bonnet:** Acetal Valve: PP

**Transparent Bowl:** Polycarbonate with polypropylene guard

**Filter element:** Synthetic fibre & PE foam

**Bowl 'O'- ring:** Chloroprene

**Elastomers:** NBR

**Port:** BSPP

**Element:** (µm) 40

**Bowl:** Guarded/Polycarbonate

- accordance with the methods laid out in ISO 12500-1 using an inlet oil aerosol concentration of 4mg/m³
- High Corrosion resistance: Body and metal bowl with electrophoretic paint finish
- DoC in accordance with 2014/34/EU/ATEX

**Working Temperature:**  
-10°C to +60°C

**Maximum Working Pressure:**  
10 bar

**Medium:** Compressed air only  
**Operation:** Relieving



## F82C & F84C series

0037	Thread	Flow (dm³/s)
F82C-2GD-AP0	1/4"	5.5
F82C-2GD-QP0	1/4"	5.5
F84C-3GD-AP0	3/8"	25
F84C-3GD-QP0	3/8"	25
F84C-4GD-AP0	1/2"	25
F84C-4GD-QP0	1/2"	25

Tech Sheet 71739

## Pressure Regulators

- Excelon® Plus design allows in-line installation or modular installation with other Excelon® Plus products
- Push to lock adjusting knob with built in tamper resistant feature
- Easy to read flush mounted integrated pressure gauge as standard

### Materials:

**Body:** Die cast aluminium

**Body covers:** ABS

**Bonnet:** POM/Aluminium

**Valve:** PP

**Elastomers:** NBR

**Port:** BSPP

**Bar:** 03 - 10

**Medium:** Compressed air only

**Operation:** Relieving

- High Corrosion resistance: Body bowl with electrophoretic paint finish
- EX DoC in accordance with 2014/34/EU/ATEX

**Working Temperature:**  
-10°C to +60°C

**Maximum Working Pressure:**  
10 bar



## R82G & R84G Series

0037	Thread	Flow (dm³/s)
R82G-2GK-RMG	1/4"	125
R84G-3GK-RMG	3/8"	125
R84G-4GK-RMG	1/2"	125

Tech Sheet 71745

## 3/2 Shut Off Valves

- Excelon® Plus design allows in-line installation or modular installation with other Excelon® Plus products
- 3/2 way function
- Threaded exhaust port
- Lockable in closed position with padlock



## T82T & T84T Series

0037	Port Size	Exhaust Port
T82T-2GA-B1N	1/4"	1/4"
T84T-3GA-B1N	3/8"	1/4"
T84T-4GA-B1N	1/2"	1/4"

Tech Sheet 71747

# EXCELON® PLUS MODULAR AIR PREPARATION



## Wall Mounting Bracket

- Provides secure wall mounting for individual Excelon® Plus products



0037	Series
820024-50KIT	82
840024-50KIT	84
Tech Sheet 71736	

## Quickclamp

- Allows easy connection of one Excelon® Plus unit to another
- Uniquely, connected products can be rotated in 90° increments



0037	Series
820014-51KIT	82
840014-51KIT	84
Tech Sheet 71736	

## Neck Mounting Bracket and Panel Nut

- Provides secure wall mounting for individual pressure regulators, filter-regulators and pressure relief valves
- Includes panel nut



0037	Series
820068-51KIT	82
840068-51KIT	84
Tech Sheet 71736	

## Quickclamps and Wall Brackets

- Allows easy connection of one Excelon® Plus unit to another
- Uniquely, connected products can be rotated in 90° increments
- Secure mounting to a wall, panel or machine surface



0037	Series
820014-52KIT	82
840014-52KIT	84
Tech Sheet 71736	

## Panel Mounting Ring

- Allows bonnets with panel mounting thread to be directly mounted



0037	Series
820048-89KIT	82
840048-01KIT	84
Tech Sheet 71736	



For **Norgren Pneufi® Push-In Fittings**  
see page **862**

# PORTED FILTERS & REGULATORS



## Filter Regulator & Lubricator Box Set

- Miniature boxed sets offer rapid set up and installation.
- Boxed sets are pre-assembled and ready to install.

**Medium:** Compressed air only

**Body:** Zinc alloy

**Bowls:** Polycarbonate

**Filter Element:** Polypropylene

**Elastomers:** Nitrile

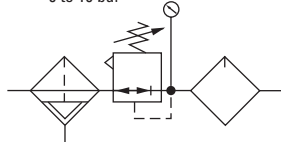
**Working Temperature:**

-20°C to +50°C

Consult our Technical Service for use below +2°C

**Inlet Pressure:**

0 to 10 bar



- Set consists of a filter/regulator, lubricator, shut-off valve, mounting bracket and pressure gauge.



### Box Set 07, BSPP

0037	Thread
<b>BL07-201</b>	1/4"

Tech Sheet 20746

## Ported Pureair Oil Removal Filters

- High efficiency coalescing oil-removal filter
- Air quality to ISO 8573-1: Class 1.7.2.

**Medium:** Compressed air only

**Remaining Oil content at +21°C:**

0,01 ppm maximum

0,5 ppm maximum (high flow units)

**Particle Removal:** 0,01 µm, 1 µm (high flow units)

**Bowl:** Polycarbonate to BS 6005, Zinc alloy (optional)

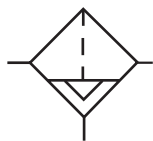
**Working Temperature:**

-20°C to +50°C

(Transparent Bowl)

**Inlet Pressure:**

0 to 10 bar (Transparent bowl)



- Maximum remaining oil content 0,01 ppm, particle removal to 0,01 µm
- Automatic drain fitted as standard

**Body:** Zinc alloy

**Filter Element:**

Synthetic fibre and polypropylene foam

**Elastomers:** Neoprene and nitrile

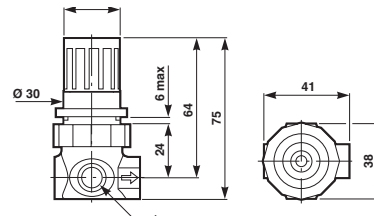


### F39, BSPP

0037	Thread	Flow dm³/s	Drain Type	Bowl
<b>F39-100-A0TG</b>	1/8"	2.8	Auto	Transparent
<b>F39-200-M0MG</b>	1/4"	3	Manual	Metal
<b>F39-200-M0TG</b>	1/4"	3	Manual	Transparent

Tech Sheet 20747

## Ported Pressure Regulators



### R07, BSPP

0037	Thread	Flow dm³/s	Pressure Range Bar	Operation
<b>R07-100-RNKG</b>	1/8"	7.5	0.3-7	Relieving
<b>R07-200-RNKG</b>	1/4"	7	0.3-7	Relieving

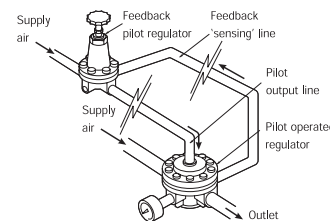
Tech Sheet 10637



### R18, Pilot Operated, BSPP

0037	Thread	Flow dm³/s	Pressure Range Bar
<b>R18-B00-RNXD</b>	1.1/2"	1000	0.16-17
<b>R18-C00-RNXD</b>	2"	1000	0.16-17

Tech Sheet 10636



### 11-808 & 11-204, Pilot Operated, BSPP

0037	Thread	Flow dm³/s	Pressure Range Bar	Operation
<b>11-808-960</b>	3/4"	180	0.16-17	Relieving
<b>11-204-004</b>	1/4"	N/A	0.16-17	Relieving
<b>11-204-006</b>	1/4"	N/A	4-17	Relieving

Tech Sheet 10636



### General Use, BSPP

0037	Thread	Flow dm³/s	Pressure Range Bar
<b>20AG-X4G-PH100</b>	1/2"	60	0.2-8
<b>20AG-X4G-PJ100</b>	1/2"	60	7-16

Tech Sheet 10637

# PORTED FILTERS & REGULATORS



## Drip Leg Drain

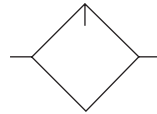


### 17-816, BSPP

0037	Thread	Bowl
17-816-999	G1/2"	Transparent
17-816-998	G1/2"	Metal
Tech Sheet 10635		

## Ported Lubricator

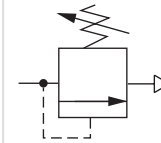
- Transparent bowl
- Bowl capacity 31ml



### L07, BSPP

0037	Thread	Flow dm <sup>3</sup> /s	Start Point dm <sup>3</sup> /s
L07-100-MPOG	G1/8"	5	0.24
Tech Sheet 10634			

## Ported Pressure Relief Valve



### V07, Diaphragm Type, BSPP

0037	Thread	Pressure Range Bar
V07-200-NNLG	G1/4"	0.3-9
Tech Sheet 10633		

## Ported Precision Pressure Regulators

- 11-818<sup>†</sup> compact, high precision regulators for air gauging, laboratory use and precise pilot control.
- † Not recommended for dead end use, consult our technical service for details.



#### Working Temperature:

-20°C to +80°C

Consult our Technical Service for use below +2°C



#### Inlet Pressure:

0 to 14 bar (11-818-110)

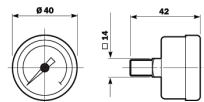
0 to 8 bar (11-818-999)



### 11-818, BSPP

0037	Thread	Accuracy Bar	Pressure Range Bar	Operation
11-818-999	G1/4"	0.01	0.02-0.5	Relieving
11-818-100	G1/4"	0.03	0.07-4	Relieving
11-818-110	G1/4"	0.05	0.4-10	Relieving
Tech Sheet 1362				

## Pressure Gauges



### 18-013, BSPT

0037	Thread	Pressure Range Bar	Gauge Diameter mm	Type
18-013-990	R1/8"	0-4	40	Centre Back
18-013-989	R1/8"	0-10	40	Centre Back

## General Purpose Filter

- High flow miniature uni
- Direct ported filters with high water removal efficiency
- Automatic drains supplied as standard

Medium: Compressed air only

Filter element: 40µm

#### Materials:

Body: Zinc alloy

Bowls: Plastic or zinc alloy

Filter Element: Polypropylene

Elastomers: Nitrile



#### Working Temperature:

-34°C to +50°C



#### Inlet Pressure:

0 to 10 bar



### F07 Series

0037	Manual Drain	Thread
F07-100-A3TG	F07-100-M3TG	G1/8"
F07-200-A3TG	F07-200-M3TG	G1/4"
Tech Sheet 71738		

## Pre-Set Regulator

- Factory pre-set and sealed to give a regulated pressure of 2 bar
- Tamper resistant
- Compact

Medium: Compressed air only

Filter element: 40µm



#### Working Temperature:

-20°C to +80°C



#### Inlet Pressure:

0 to 28 bar

#### Materials:

Body: Zinc alloy

Bonnet: Aluminium alloy

Valve: Brass

Seals: NBR

### R16 Series

0037	Thread
R16-200-R30G	G1/4"
Tech Sheet 71750	



**MX is the new series of air treatment components, characterised by a modern, linear and compact design. The perfect integration between metal alloys and technopolymers allows a reliable product that is light and strong at the same time.**

Series MX offers a multi-sector solution that guarantees saving in terms of installation time, space and cost.

**Other options available, please contact our Business Development Team.**



## Series MX, Filter Regulator Lubricator Kits

Complete filter regulator set with bracket and integrated gauge.

- Fully modular and compact
- Lightweight
- Durable
- Improved flow rate performance
- Locking cap



### Filter Regulator Kit MX2, Semi-auto Drain, 25 Micron, 0.5-10 bar

0158	Thread
FR-MX2-3/8-KIT	G3/8"
FR-MX2-1/2-KIT	G1/2"
FR-MX2-3/4-KIT	G3/4"

Tech Sheet 20120

### Filter Regulator Kit MX3, Semi-auto Drain, 25 Micron, 0.5-10 bar

0158	Thread
FR-MX3-3/4-KIT	G3/4"
FR-MX3-1-KIT	G1"

Tech Sheet 20120

### Filter Regulator Lubricator Kit MX2, Semi-auto Drain, 25 Micron, 0.5-10 bar

0158	Thread
FRL-MX2-3/8-KIT	G3/8"
FRL-MX2-1/2-KIT	G1/2"
FRL-MX2-3/4-KIT	G3/4"

Tech Sheet 20120

### Filter Regulator Lubricator Kit MX3, Semi-auto Drain, 25 Micron, 0.5-10 bar

0158	Thread
FRL-MX3-3/4-KIT	G3/4"
FRL-MX3-1-KIT	G1"

Tech Sheet 20120

## Series MX, Modular Pressure Regulators

 **Working Temperature:**  
-5°C to +50°C

 **Maximum Working Pressure:**  
16 bar



### Series MX2, Pressure Regulators, Self-relieving with Gauge

0158	Thread	Pressure Range Bar
MX2-3/8-R004	G3/8"	0.5-10
MX2-1/2-R004	G1/2"	0.5-10
MX2-3/4-R004	G3/4"	0.5-10

Tech Sheet 68728

### Series MX3, Pressure Regulators, Self-relieving with Gauge

0158	Thread	Pressure Range Bar
MX3-3/4-R004	G3/4"	0.5-10
MX3-1-R004	G1"	0.5-10

Tech Sheet 68728

### Series MX2, Pressure Regulators, Non-relieving with Gauge

0158	Thread	Pressure Range Bar
MX2-3/8-R014	G3/8"	0.5-10
MX2-1/2-R014	G1/2"	0.5-10
MX2-3/4-R014	G1"	0.5-10

Tech Sheet 68728

### Series MX3, Pressure Regulators, Non-relieving with Gauge

0158	Thread	Pressure Range Bar
MX3-3/4-R014	G3/4"	0.5-10
MX3-1-R014	G1"	0.5-10

Tech Sheet 68728

# AIR PREPARATION



**MX is the new series of air treatment components,** characterised by a modern, linear and compact design. The perfect integration between metal alloys and technopolymers allows a reliable product that is light and strong at the same time.

Series MX offers a multi-sector solution that guarantees saving in terms of installation time, space and cost.

**Other options available, please contact our Business Development Team.**



 **Working Temperature:**  
-5°C to +50°C

 **Maximum Working Pressure:**  
16 bar

## Series MX, Modular Filters



### Series MX2, Semi-auto Drain Filters, No Indicator

0158	Thread	Micron
<b>MX2-3/8-F00</b>	G3/8"	25
<b>MX2-1/2-F00</b>	G1/2"	25
<b>MX2-3/4-F00</b>	G3/4"	25
Tech Sheet 68728		

### Series MX3, Semi-auto Drain Filters, No Indicator

0158	Thread	Micron
<b>MX3-3/4-F00</b>	G3/4"	25
<b>MX3-1-F00</b>	G1"	25
Tech Sheet 68728		

### Series MX2, Auto Drain Filters, No Indicator

0158	Thread	Micron
<b>MX2-3/8-F03</b>	G3/8"	25
<b>MX2-1/2-F03</b>	G1/2"	25
<b>MX2-3/4-F03</b>	G3/4"	25
Tech Sheet 68728		

### Series MX3, Auto Drain Filters, No Indicator

0158	Thread	Micron
<b>MX3-3/4-F03</b>	G3/4"	25
<b>MX3-1-F03</b>	G1"	25
Tech Sheet 68728		



### Series MX2, Semi-auto Drain Coalescing Filters

0158	Thread	Micron
<b>MX2-3/8-FC00</b>	G3/8"	0.01
<b>MX2-1/2-FC00</b>	G1/2"	0.01
<b>MX2-3/4-FC00</b>	G3/4"	0.01
Tech Sheet 68728		

### Series MX3, Semi-auto Drain Coalescing Filters

0158	Thread	Micron
<b>MX3-3/4-FC00</b>	G3/4"	0.01
<b>MX3-1-FC00</b>	G1"	0.01
Tech Sheet 68728		

### Series MX2, Auto Drain Coalescing Filters

0158	Thread	Micron
<b>MX2-3/8-FC03</b>	G3/8"	0.01
<b>MX2-1/2-FC03</b>	G1/2"	0.01
<b>MX2-3/4-FC03</b>	G3/4"	0.01
Tech Sheet 68728		

### Series MX3, Auto Drain Coalescing Filters

0158	Thread	Micron
<b>MX3-3/4-FC03</b>	G3/4"	0.01
<b>MX3-1-FC03</b>	G1"	0.01
Tech Sheet 68728		

**MX is the new series of air treatment components,** characterised by a modern, linear and compact design. The perfect integration between metal alloys and technopolymers allows a reliable product that is light and strong at the same time.

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 Working Temperature:  
-5°C to +50°C

 Maximum Working Pressure:  
16 bar

## Series MX, Modular Filters

### Series MX2, Activated Carbon Filters, No Indicator

0158	Thread
MX2-3/8-FCA	G3/8"
MX2-1/2-FCA	G1/2"
MX2-3/4-FCA	G3/4"

Tech Sheet 68728



### Series MX3, Activated Carbon Filters, No Indicator

0158	Thread
MX3-3/4-FCA	G3/4"
MX3-1-FCA	G1"

Tech Sheet 68728

## Series MX, Modular Lubricators

### Series MX2, Lockable Manual Valves

0158	Thread
MX2-3/8-V01	G3/8"
MX2-1/2-V01	G1/2"
MX2-3/4-V01	G1"

Tech Sheet 68728



### Series MX3, Lockable Manual Valves

0158	Thread
MX3-3/4-V01	G3/4"
MX3-1-V01	G1"

Tech Sheet 68728

## Series MX, Modular Valves

### Series MX2, Lubricators

0158	Thread
MX2-3/8-L00	G3/8"
MX2-1/2-L00	G1/2"
MX2-3/4-L00	G3/4"

Tech Sheet 68728



### Series MX2, 3/2 Lockable Electro-pneumatic Isolation Valves

0158	Thread
MX2-3/8-V16	G3/8"
MX2-1/2-V16	G1/2"
MX2-3/4-V16	G3/4"

Tech Sheet 68728



### Series MX3, Lubricators

0158	Thread
MX3-3/4-L00	G3/4"
MX3-1-L00	G1"

Tech Sheet 68728

### Series MX3, 3/2 Lockable Electro-pneumatic Isolation Valves

0158	Thread
MX3-3/4-V16	G3/4"
MX3-1-V16	G1"

Tech Sheet 68728

# AIR PREPARATION

**MX is the new series of air treatment components,** characterised by a modern, linear and compact design. The perfect integration between metal alloys and technopolymers allows a reliable product that is light and strong at the same time.

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 **Working Temperature:**  
-5°C to +50°C

 **Maximum Working Pressure:**  
16 bar

## Series MX, Modular Valves

### Series MX2, 3/2 Lockable Pneumatic Isolation Valves

0158	Thread
MX2-3/8-V36	G3/8"
MX2-1/2-V36	G1/2"
MX2-3/4-V36	G3/4"
Tech Sheet 68728	

### Series MX3, 3/2 Lockable Pneumatic Isolation Valves

0158	Thread
MX3-3/4-V36	G3/4"
MX3-1-V36	G1"
Tech Sheet 68728	



### Series MX2, Soft Start Valves

0158	Thread
MX2-3/8-AV	G3/8"
MX2-1/2-AV	G1/2"
MX2-3/4-AV	G3/4"
Tech Sheet 68728	



### Series MX3, Soft Start Valves

0158	Thread
MX3-3/4-AV	G3/4"
MX3-1-AV	G1"
Tech Sheet 68728	

## Series MX, Modular Take-off Blocks



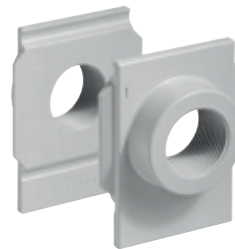
### Series MX2, Block, 4 Outlets, BSPP

0158	Outlet
MX2-1/2-B00	G1/2"
Tech Sheet 68728	

### Series MX3, Block, 4 Outlets, BSPP

0158	Outlet
MX3-1-B00	G1"
Tech Sheet 68728	

## Series MX, Accessories



### Series MX2, Terminal Flanges

0158	Thread
MX2-3/8-FL	G3/8"
MX2-1/2-FL	G1/2"
MX2-3/4-FL	G3/4"
Tech Sheet 68728	

### Series MX3, Terminal Flanges

0158	Thread
MX3-3/4-FL	G3/4"
MX3-1-FL	G1"
Tech Sheet 68728	



### Series MX2, Fixing Bracket for Regulators

0158	
MX2-S	
Tech Sheet 68728	

### Series MX3, Fixing Bracket for Regulators

0158	
MX3-S	
Tech Sheet 68728	



# AIR PREPARATION



**MX is the new series of air treatment components,** characterised by a modern, linear and compact design. The perfect integration between metal alloys and technopolymers allows a reliable product that is light and strong at the same time.

Series MX offers a multi-sector solution that guarantees saving in terms of installation time, space and cost.

**Other options available, please contact our Business Development Team.**



**° Working Temperature:**  
-5°C to +50°C

**Maximum Working Pressure:**  
16 bar

## Series MX, Accessories

### Series MX2, Rapid Clamp

0158  
MX2-X  
Tech Sheet 68728



### Series MX3, Rapid Clamp

0158  
MX3-X  
Tech Sheet 68728

### Series MX2, Rapid Clamp with Wall Bracket

0158  
MX2-Y  
Tech Sheet 68728



### Series MX3, Rapid Clamp with Wall Bracket

0158  
MX3-Y  
Tech Sheet 68728

## Precision Regulators

Series PR precision pressure regulators work on a three diaphragm force-balance principle which allows them to react even to the smallest changes in pressure that can occur during operation.

- High precision
- Triple diaphragm construction
- Compact dimensions
- Adjustable lock
- Removable adjustment knob
- Three ranges of pressure

**° Working Temperature:**  
0°C to +50°C



### Series PR, Manual Override

0158	Thread	Pressure Range Bar
PR104-M02	G1/4"	0.05 to 2
PR104-M04	G1/4"	0.05 to 4
PR104-M07	G1/4"	0.05 to 7

Tech Sheet 20464

## Digital Gauges

Series PG digital pressure gauges meet the needs of an even more precise pressure adjustment, above all in proportional control. Thanks to the IP65 protection class these pressure gauges are particularly suitable for applications where the highest environmental protection is required.



### Pressure, BSPP

0158	Thread	Pressure Range Bar
PG010-PB-1/8	G1/8"	0 to 10
PG010-PB-1/4	G1/4"	0 to 10

Tech Sheet 20465

### Vacuum, BSPP

0158	Thread	Pressure Range Bar
PG001-VB-1/8	G1/8"	0.01 to -1
PG001-VB-1/4	G1/4"	0.01 to -1

Tech Sheet 20465

# AIR PREPARATION



**Series MD air preparation product line** has been designed to meet the numerous demands of a market requiring light and compact modular products which are characterised by high performance, flexible connection and orientation.

The different functions are connected to each other by means of intermediate joining cartridges.

Thanks to the solution adopted for the pneumatic connection, it is possible to equip the same element with interchangeable cartridges that are available in different sizes and can either be threaded or integrated with a super rapid push-in fitting.



**Working Temperature:**  
-5°C to +50°C

**Maximum Working Pressure:**  
16 bar

## Series MD, Modular Filter + Regulator + Lubricator Combination Units



**Semi-auto Drain, 25 Micron, supplied with Mounting Bracket & Gauge, BSPP**

0158	Thread
MD1-000014-1/8	G1/8"
MD1-000014-1/4	G1/4"
MD1-000014-3/8	G3/8"

Tech Sheet 60158

## Series MD, Modular Filter/Regulator + Lubricator Combination Units



**Semi-auto Drain, 25 Micron, supplied with Mounting Bracket & Gauge, BSPP**

0158	Thread
MD1-000015-1/8	G1/8"
MD1-000015-1/4	G1/4"
MD1-000015-3/8	G3/8"

Tech Sheet 60160

## Series MD, Modular Lockable Isolation Filter/Regulator + Lubricator Combination Units



**Semi-auto Drain, 25 Micron, supplied with Mounting Bracket & Gauge, BSPP**

0158	Thread
MD1-000016-1/8	G1/8"
MD1-000016-1/4	G1/4"
MD1-000016-3/8	G3/8"

Tech Sheet 60162



**Semi-auto Drain, 25 Micron, supplied with Mounting Bracket & Gauge, Tube**

0158	OD mm
MD1-000014-6	6
MD1-000014-8	8
MD1-000014-10	10

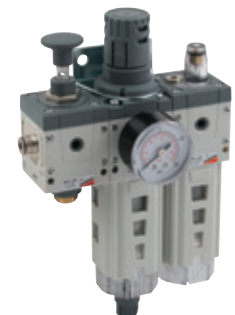
Tech Sheet 60159



**Semi-auto Drain, 25 Micron, supplied with Mounting Bracket & Gauge, Tube**

0158	OD mm
MD1-000015-6	6
MD1-000015-8	8
MD1-000015-10	10

Tech Sheet 60161



**Semi-auto Drain, 25 Micron, supplied with Mounting Bracket & Gauge, Tube**

0158	OD mm
MD1-000016-6	6
MD1-000016-8	8
MD1-000016-10	10

Tech Sheet 60163

# AIR PREPARATION



Working Temperature:  
-5°C to +50°C

Maximum Working Pressure:  
16 bar

## Series MD, Modular Pressure Regulators



### Pressure Regulators, Self-relieving

0158	Pressure Range Bar
MD1-R000	0.5-10
MD1-R200	0-2
MD1-R400	0-4
MD1-R700	0.5-7

Tech Sheet 60168



### Pressure Regulators, Non-relieving

0158	Pressure Range Bar
MD1-R010	0.5-10
MD1-R210	0-2
MD1-R410	0-4
MD1-R710	0.5-7

Tech Sheet 60168

## Series MD, Modular Filter Regulators



### 0.5-10 bar, 25 Micron

0158	Description
MD1-FR0000	Semi-auto Drain
MD1-FR0500	Auto Drain
MD1-FR0800	Without Drain

Tech Sheet 60170

Series MD modular products are listed with blank ports. This enables versatility with the product and can be fitted with either threaded or tube fitting cartridges.



## Series MD, Modular Filters

### Semi-auto Drain

0158	Description	Micron
MD1-F000	No Indicator	25
MD1-F100	No Indicator	5
MD1-F001	With Indicator	25
MD1-F101	With Indicator	5

Tech Sheet 60164



### Semi-auto Drain Coalescing Filters

0158	Description	Micron
MD1-FC000	No Indicator	0.01
MD1-FC100	No Indicator	1
MD1-FC001	With Indicator	0.01
MD1-FC101	With Indicator	1

Tech Sheet 60167



### Auto Drain Filters

0158	Description	Micron
MD1-F050	No Indicator	25
MD1-F150	No Indicator	5
MD1-F051	With Indicator	25
MD1-F151	With Indicator	5

Tech Sheet 60165



### Auto Drain Coalescing Filters

0158	Description	Micron
MD1-FC050	No Indicator	0.01
MD1-FC150	No Indicator	1
MD1-FC051	With Indicator	0.01
MD1-FC151	With Indicator	1

Tech Sheet 60167



### Activated Carbon Filters

0158	Description
MD1-FCA0	No Indicator
MD1-FCA1	With Indicator

Tech Sheet 60166



# AIR PREPARATION

## Series MD, Modular Lubricator

 **Working Temperature:**  
-5°C to +50°C

 **Maximum Working Pressure:**  
16 bar



### Lubricator

0158  
MD1-L00

Tech Sheet 60169

## Series MD, Modular Valves



### 3/2 Lockable Isolation Valves

0158	Description
MD1-V36	Pneumatic Control
MD1-V01	Lockable Manual Control

Tech Sheet 60171



### Soft Start Valve

0158  
MD1-AV

Tech Sheet 60172

**Series MD modular products** are listed with blank ports. This enables versatility with the product and can be fitted with either threaded or tube fitting cartridges.



## Series MD, Modular Take-off Blocks



### Block, 4 Outlets, BSPP

0158	Outlet
MD1-B00	1/8"

Tech Sheet 60173



### Cartridge, 2 Outlets, BSPP

0158	Outlet
MD1-B	1/8"

Tech Sheet 60174

## Series MD, Porting Cartridges

Porting cartridges can be used on all Series MD module equipment, offering versatility.



### Joining Cartridge

0158  
MD1-C

Tech Sheet 60175



### Threaded, BSPP

0158	Thread
MD1-A-1/8	1/8"
MD1-A-1/4	1/4"
MD1-A-3/8	3/8"

Tech Sheet 60175



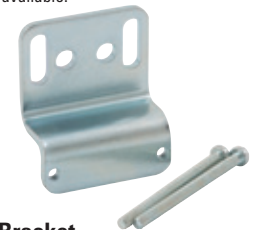
### Push Fit

0158	OD mm
MD1-A-6	6
MD1-A-8	8
MD1-A-10	10

Tech Sheet 60175

## Series MD, Mounting Bracket

Other mounting types available.



### Rear Mounting Bracket

0158  
MD1-ST/1

Tech Sheet 60176

# AIR PREPARATION EQUIPMENT



## Filter Regulator + Lubricator

Parker's P3L Lite combination kit is a configure two-piece unit consisting of a filter regulator and mist-style lubricator. The P3L combination kit provides accurate pressure regulation, high moisture removal efficiency, and proportional oil delivery over a wide range of air flows



**Working Temperature:**  
0°C to +50°C

**Maximum Working Pressure:** 10 bar

### P3L Lite FRL Combination Kit

0677	Thread	Drain Type
P3LCA12PESNGLNW	1/4"	Semi-auto
Tech Sheet 68749		

## Filter Regulator



### P3L Lite Particulate Filter Regulator

0677	Thread	Drain Type
P3LEA12EPSBNNP	1/4"	Semi-auto
Tech Sheet 68749		

## Regulator

Parker's P3LR is a lightweight pressure regulator with an unbalanced poppet design, offering good response and accurate pressure regulation. For low flow and space-restricted applications, this product can provide a solution that does not sacrifice performance. The P3LR can also be mounted using a modular connector, limited to two other P3L air preparation product units. The various options available, such as pressure gauge, relieving and non-relieving, pressure range, preset pressures and tamper-proof options, make this series easy to design to your application. Flow rates up to 12.8dm<sup>3</sup>/s.



### P3L Lite Regulator

0677	Thread	Material
P3LRA12BNNP	1/4"	Polymer
P3LRX12BNNP	1/4"	Brass
Tech Sheet 68748		

## Filter

Parker's P3LF is a lightweight particulate filter that delivers high moisture removal in a compact package. The P3LF is used for the removal of solid particle contaminants down to 5 micron and the separation of bulk liquids.

This type of filter is generally used in industrial applications where liquid water, oil, and harmful dirt particles must be removed from the compressed air system.

For specific flow and space restricted applications, this product can provide a solution that does not sacrifice performance

**Maximum Working Pressure:** 150 bar



### P3L Lite Particulate Filter

0677	Thread	Drain Type
P3LFA12EPSN	1/4"	Pulse
Tech Sheet 68750		

## Coalescing Filter

Parker's P3LF, a lightweight coalescing filter, is designed to remove liquid aerosols, water, oil and sub-micron particulate matter from your pneumatic system. These filters will provide oil-free air for several demanding applications.

The P3LF is specifically designed for the removal of solid particles, water and oil aerosols down to 0.01 micron.



### P3L Lite Coalescing Filter

0677	Thread	Drain Type
P3LFA12CPPN	1/4"	Manual
Tech Sheet 68751		

## Adsorber Filter



### P3L Lite Adsorber Filter

0677	Thread	Drain Type
P3LFA12APPN	1/4"	Manual
Tech Sheet 68752		

## Lubricator

The P3LL is a lightweight lubricator that injects a mist of oil into the flowing air stream to automatically provide the correct amount of internal lubrication for air tools and other pneumatic devices.

This type of lubricator can be precisely adjusted to every low oil flow rate because only a portion of the oil drops seen in the sight dome travels downstream. Proportional oil is delivered over a wide range of air flows and a precision needle valve assures repeatable oil delivery. A slight adjustment can provide a desired mist rate.

This unit is ideal for low and high flow applications that demand uniform lubrication in a robust package. ISO/ASTM VG32 oil is suggested for lubrication and will allow the product to perform at peak performance. Do not use oils with additives, compounded oils containing solvents, graphite, detergents or synthetic oils.



### P3L Lite Lubricator

0677	Thread
P3LLA12LPNN	1/4"
Tech Sheet 68753	

## Accessories

### P3L Lite Accessories

0677	Description
P3LKA00MR	Neck Mounting Bracket
P3LKA00MW	Mounting Bracket for P3LFA or P3LLA
P3LKA00MP	Plastic Panel Mount Nut
P3LKA00MM	Aluminium Panel Mount Nut
P3LMA12020C	Manifold Block
P3LKA00CB1	Connector Kit, FR or R to F or L
P3LKA00CB2	Connector Kit, FR or R to M to F or L
P3LKA00CB3	Connector Kit, FR or R to F to F
P3LKA00CB4	Connector Kit, F to F or L

# AIR PREPARATION



## Airplus Service Units

### Size 1 FRL Air Service Units, BSPP



0110	Thread	Range
GT171BHH	1/4"	0-12

### Size 3 FRL Air Service Units, BSPP



0110	Thread	Drain
GT173BHH	1/2"	Semi
GT173BHHS	1/2"	Auto

### Size 2 FRL Air Service Units, BSPP



0110	Thread	Drain
GN172AHHS	1/4"	Semi
GT172BHH	3/8"	Semi
GT172BHHS	3/8"	Auto

### Size 4 FRL Air Service Units, BSPP



0110	Thread	Drain
GN174BHHS	1"	Auto

## Airplus Filter/Regulators

### Size 1 Filter/Regulator, BSPP



0110	Thread	Pressure Range Bar
N171AEBD	1/8"	0-12
T171BEBD	1/4"	0-12

### Size 2 Filter/Regulator

0110	Thread	Pressure Range Bar
T172BEBD	3/8"	0-12

### Size 3 Filter/Regulator

0110	Thread	Pressure Range Bar
T173BEBD	1/2"	0-12

### Size 4 Filter/Regulator

0110	Thread	Pressure Range Bar
N174BEBD	1"	0-12

## Airplus Filter/Regulators Complete with Pressure Gauge



### Size 1 Filter/Regulator

0110	Thread	Pressure Range Bar
N171AEMBD	1/8"	0-12
T171BEMBD	1/4"	0-12

### Size 2 Filter/Regulator

0110	Thread	Pressure Range Bar
T172BEMBB	3/8"	0-4
T172BEMBD	3/8"	0-12

### Size 3 Filter/Regulator

0110	Thread	Pressure Range Bar
T173BEMBD	1/2"	0-12

### Size 4 Filter Regulator

0110	Thread	Pressure Range Bar
N174BEMBD	1"	0-12

# AIR PREPARATION

## Airplus Filter/Regulators Complete with Pressure Switch



### Size 1 Filter/Regulator

0110	Thread	Pressure Range Bar
N171AEPBDA	1/8"	0-12

### Size 2 Filter/Regulator

0110	Thread	Pressure Range Bar
T172BEPBDA	3/8"	0-12

### Size 3 Filter/Regulator

0110	Thread	Pressure Range Bar
T173BEPBDA	1/2"	0-12



### Size 4 Filter/Regulator

0110	Thread	Pressure Range Bar
N174BEPBDA	1"	0-12

## Accessories



### Pressure Switch Connecting Cables

0110	Description
MCH1	M8 Cable 3 Wires, 2.5 Metres

## Airplus Regulators Complete with Pressure Gauge



### Size 1 Regulator, BSPP

0110	Thread	Pressure Range Bar
T171BRMA	1/4"	0-2
T171BRMB	1/4"	0-4
T171BRMC	1/4"	0-8
T171BRMD	1/4"	0-12

### Size 2 Regulator, BSPP

0110	Thread	Pressure Range Bar
T172BRMA	3/8"	0-2
T172BRMB	3/8"	0-4
T172BRMC	3/8"	0-8
T172BRMD	3/8"	0-12

### Size 3 Regulator, BSPP

0110	Thread	Pressure Range Bar
T173BRMA	1/2"	0-2
T173BRMC	1/2"	0-8
T173BRMD	1/2"	0-12



### Size 4 Regulator, BSPP

0110	Thread	Pressure Range Bar
N174BRMA	1"	0-2
N174BRMD	1"	0-12

## Airplus Lubricators



### Size 1 Lubricator, BSPP

0110	Thread
T171BL	1/4"



### Size 2 Lubricator, BSPP

0110	Thread
T172BL	3/8"



### Size 3 Lubricator, BSPP

0110	Thread
T173BL	1/2"



### Size 4 Lubricator, BSPP

0110	Thread
N174BL	1"

# AIR PREPARATION

## Airplus Filters



### Size 1 Filter, BSPP

0110	Thread
T171BFB	1/4"



### Size 2 Filter, BSPP

0110	Thread
T172BFB	3/8"

### Size 3 Filter, BSPP

0110	Thread
T173BFB	1/2"

## Airplus Valves



### Manual Shut-off Valves, BSPP

0110	Thread	Size
T171BVL	1/4"	1
T172BVL	3/8"	2
T173BVL	1/2"	3

## High/Low Pressure Devices



### High/Low Solenoid Pressure Device - 1/8"

0110	Description
900.18.8E	Solenoid Hi-Lo Pressure Device

## Airplus Valves



### Electric Sol Shut Off Valves, BSPP

0110	Thread	Size
T171BVEB2	1/4"	1
T172BVEB2	3/8"	2
T173BVEB2	1/2"	3



### Soft Start Valves, BSPP

0110	Thread	Size
T172BAP	3/8"	2



### Manifolds, BSPP

0110	Thread	Size
T171BPA	1/4"	1



### Pressure Switches, BSPP

0110	Thread	Size
T171BPP	1/4"	1

## Airplus Accessories



### Airplus X Coupling Flange Size 1-4

0110	Size
T171X	1
T172X	2



### Airplus Y Coupling Flange Range Size 1-4

0110	Size
T171Y	1
T173Y	3



### Airplus Fixing Bracket Size 1-3

0110	Size
T17150	1
T17250	2 & 3



### MB Type 22mm Coils

0110	Voltage
MB4	12V DC
MB5	24V DC
MB9	24V DC (2 watt)
MB56	24V AC
MB57	110V AC
MB58	220V DC



### 305 22mm Coil Caps

0110	Voltage
305.11.00	No LED
305.11.01L	24V DC LED
305.11.02L	110V AC LED
305.11.03L	240V AC LED



## Filter/Regulator + Lubricator

PCL's FRL range includes combination units with 1/4" and 1/2" inlet ports. Adding a PCL Air Treatment unit into an air line efficiently filters to 10 microns. Products feature polycarbonate bowls, allowing the user to easily monitor the element's condition and the collected liquid's level. The bowl is surrounded with protective metal as a safety measure to protect the user in case of excessive pressures, temperatures, or aggressive chemicals.

### Features

- Selectable manual/semi-automatic drain
- Polycarbonate bowl
- Locking device
- 10 micron filter
- Complete with wall bracket and pressure gauge



### Regulators

7000	Port Thread (BSPP)	Regulating Pressure	Max Inlet (bar)	Flow @ 6 (bar)
<b>ATR6</b>	1/4"	0-10	12	1,700 l/min
<b>ATR12</b>	1/2"	0-12	16	6,000 l/min



### Filters

7000	Drain	Port Thread (BSPP)	Filtration Micron	Max Inlet (bar)	Flow @ 6 (bar)
<b>ATF6</b>	Manual/Semi-automatic	1/4"	10	12	2,100 l/min
<b>ATF12</b>	Manual/Semi-automatic	1/2"	10	16	6,000 l/min



### Lubricators

7000	Port Thread (BSPP)	Max Inlet (bar)	Flow @ 6 (bar)
<b>ATL6</b>	1/4"	12	2,200 l/min
<b>ATL12</b>	1/2"	16	6,000 l/min



### Filter/Regulator, BSPP

7000	Thread (BSPP)	Max Inlet (bar)	Flow @ 6 (bar)
<b>ATC6</b>	1/4"	12	1,800 l/min
<b>ATC12</b>	1/2"	16	5,000 l/min

Tech Sheet 60545



### Filter/Regulator + Lubricator, BSPP

7000	Thread (BSPP)	Max Inlet (bar)	Flow @ 6 (bar)
<b>ATCFRL6</b>	1/4"	12	1,800 l/min
<b>ATCFRL12</b>	1/2"	16	5,000 l/min

Tech Sheet 60545

# MINIATURE, HIGH PRECISION REGULATORS



## Universal Pressure Control Valves



### Relieving, BSPP

0113	Thread	Pressure Range Bar
48.250.00.10.00	1/8"	0-1
48.250.00.50.00	1/8"	0-5
Tech Sheet 172		

### Non Relieving, BSPP

0113	Thread	Pressure Range Bar
48.250.00.10.10	1/8"	0-1
48.250.00.50.10	1/8"	0-5
Tech Sheet 172		

## Panel Mount Pressure Regulators



### Relieving, BSPP

0113	Thread	Pressure Range Bar
50.780.00.10.00	1/8"	0-1
50.780.00.25.00	1/8"	0-2.5
50.780.00.80.00	1/8"	0-8
Tech Sheet 173		

### Non Relieving, BSPP

0113	Thread	Pressure Range Bar
50.780.00.10.10	1/8"	0-1
Tech Sheet 173		

## Miniature Pressure Regulators

- Panel mountable



### Relieving, Metric

0113	Thread	Pressure Range Bar
50.880.00.40.00	M5	0-4
Tech Sheet 174		

# REGULATORS



## SaveAir Regulator



### 1/4" BSPP

0093	Set Pressure Bar
231A0210	1
231A0220	2
231A0230	3
231A0240	4
231A0250	5
231A0260	6
231A0270	7
231A0280	8
Tech Sheet 1347	

## ToolReg

Male/Female



Female/Female

### 1/4" BSPP

0093	Inlet	Outlet	Set Pressure Bar
232A0220	Female	Female	2
232F0220	Male	Female	2
232A0230	Female	Female	3
232F0230	Male	Female	3
232A0240	Female	Female	4
232F0240	Male	Female	4
232A0260	Female	Female	6
232F0260	Male	Female	6
232A0270	Female	Female	7
232A0280	Female	Female	8
232F0280	Male	Female	8
Tech Sheet 1349			

### 3/8" BSPP

0093	Inlet	Outlet	Set Pressure Bar
232A0340	Female	Female	4
232A0360	Female	Female	6
232A0380	Female	Female	8
Tech Sheet 1349			

# PRESSURE BOOSTERS

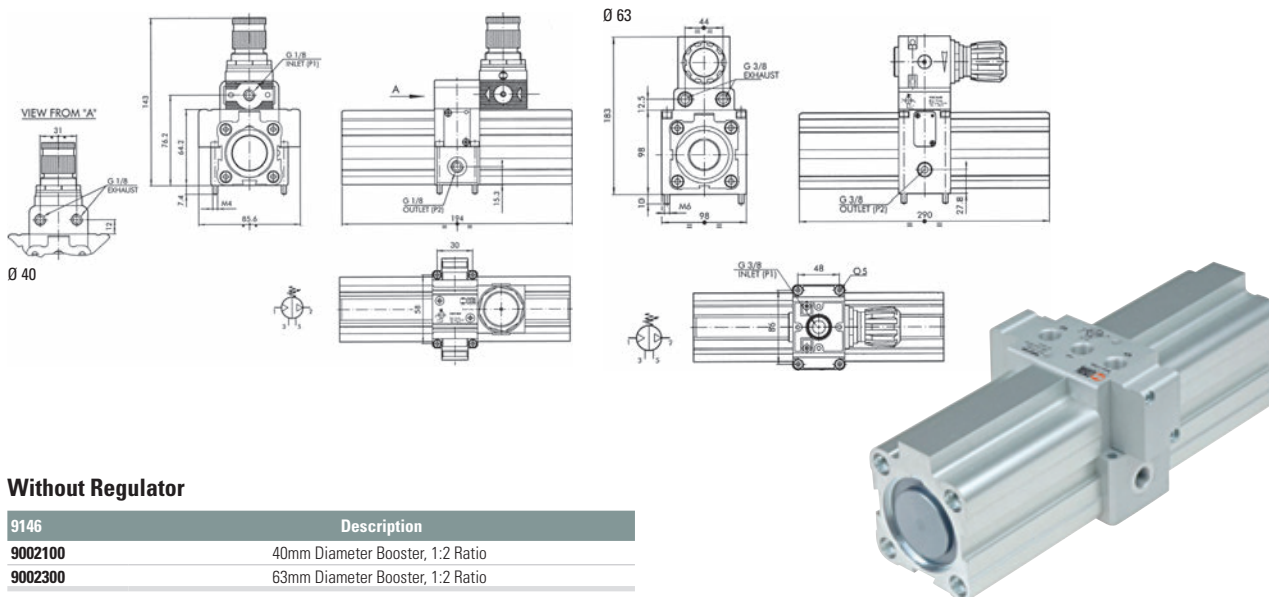
## Air Pressure Booster

The air-to-air pressure multiplier, or booster, is an automatic device that compresses air to give an outlet pressure that is double the inlet pressure. It is normally used to locally intensify the input pressure of one or more actuators. As it is entirely pneumatic it can be used when electric devices are not recommended. The booster can be supplied with or without a pressure regulator.

It is fitted with check valves that maintain the outlet pressure even when the supply of compressed air is switched off. This means it is necessary to interrupt the supply and relieve the circuit before intervening on the device in any way. It is advisable to install a tank after the booster to prevent fluctuations in outlet pressure.

### Technical Data

		Booster Ø40	Booster Ø40 with regulator	Booster Ø63	Booster Ø63 with regulator
<b>Bore</b>		Ø 40		Ø 63	
<b>Fluid</b>		Filtered unlubricated compressed air. Lubrication, if used, must be continuous.			
<b>Threaded port</b>		G1/8		G3/8	
<b>Inlet pressure</b>	<b>MPa</b>	0.2-1			
	<b>bar</b>	2-10			
	<b>psi</b>	29-145			
<b>Outlet pressure</b>	<b>MPa</b>	Maximum 2	Maximum 1.6 (regulated)	Maximum 2	Maximum 1.6 (regulated)
	<b>bar</b>	Maximum 20	Maximum 16 (regulated)	Maximum 20	Maximum 16 (regulated)
	<b>psi</b>	Maximum 290	Maximum 232 (regulated)	Maximum 290	Maximum 232 (regulated)
<b>Operating temperature</b>	<b>°C</b>	-10° to +60°		-10° to +60°	
	<b>°F</b>	+14° to +140°		+14° to +140°	
<b>Weight</b>	<b>gr</b>	1.380	1.600	4.240	5.350
<b>Mounting</b>		Wall or panel			
<b>Installation</b>		In any position			



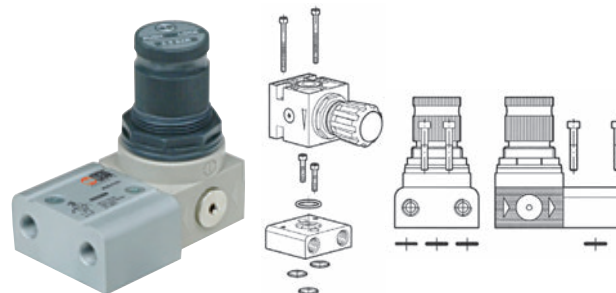
### Without Regulator

Code	Description
9146	
9002100	40mm Diameter Booster, 1:2 Ratio
9002300	63mm Diameter Booster, 1:2 Ratio

## Air Regulators

### To suit Air Pressure Multiplier (Booster)

Code	Description
9193	
9002180	40mm Regulator Unit
9002380	63mm Regulator Unit



# PRESSURE BOOSTERS



## Pressure Boosters



40mm complete with Regulator, BSPP

0110	Thread
1740.50.NR	1/8"



63mm complete with Regulator, BSPP

0110	Thread
1763.80.NR	3/8"



100mm complete with Regulator, BSPP

0110	Thread
17100.125.NR	1/2"



P+ Pressure Booster 40mm 0-20 bar complete with Gauges

0110	Thread
MDPT40.2R.A	1/4"



P+ Pressure Booster Mounting Bracket









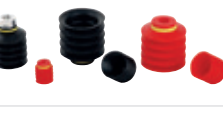


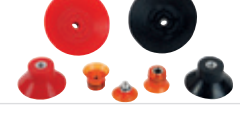


0110	Description
T1740.01	Mounting for P+ 40mm Booster



Mounting Bracket 40/63/100mm

0110	To Suit
1740.02	40mm
1763.03	63mm
17100.04	100mm

## Index

<p><b>VB Series - Single Bellows</b> <span style="float: right;">Page 708</span></p>  <ul style="list-style-type: none"> <li>• Single-bellows suction cup</li> <li>• Diameter range: Ø5 to 150</li> <li>• Material selection: NBR, silicone, conductive silicone, urethane, polyurethane</li> </ul>	<p><b>VOBL Series - Oval Bellow</b> <span style="float: right;">Page 728</span></p>  <ul style="list-style-type: none"> <li>• Long multi bellows and oval suction cup</li> <li>• Diameter range: Ø35 x 90</li> <li>• Material selection: NBR, silicone, conductive silicone</li> </ul>
<p><b>VB-M Series (Direct Fitting Bellows)</b> <span style="float: right;">Page 715</span></p>  <ul style="list-style-type: none"> <li>• Single-bellows suction cup for direct fitting</li> <li>• Diameter range: Ø20 to 50</li> <li>• Material selection: NBR, silicone, conductive silicone, urethane</li> </ul>	<p><b>VU Series - Universal</b> <span style="float: right;">Page 731</span></p>  <ul style="list-style-type: none"> <li>• Universal suction cup</li> <li>• Diameter range: Ø1.5 to 80</li> <li>• Material selection: NBR, silicone, conductive silicone, urethane</li> </ul>
<p><b>VBU Series - Double Bellow</b> <span style="float: right;">Page 718</span></p>  <ul style="list-style-type: none"> <li>• Bellows and universal suction cup</li> <li>• Diameter range: Ø35 to 55</li> <li>• Material selection: NBR, silicone, polyurethane</li> </ul>	<p><b>VF &amp; LF Series - Flat</b> <span style="float: right;">Page 736</span></p>  <ul style="list-style-type: none"> <li>• Flat suction cup</li> <li>• Diameter range: Ø15 to 300</li> <li>• Material selection: NBR, silicone, conductive silicone, urethane, polyurethane</li> </ul>
<p><b>VBX Series - Double Bellow</b> <span style="float: right;">Page 719</span></p>  <ul style="list-style-type: none"> <li>• Bellows and cross groove suction cup</li> <li>• Diameter range: Ø35 to 55</li> <li>• Material selection: polyurethane</li> </ul>	<p><b>VFC Series - Deep</b> <span style="float: right;">Page 737</span></p>  <ul style="list-style-type: none"> <li>• Flat curved suction cup</li> <li>• Diameter range: Ø50 to 100</li> <li>• Material selection: NBR, silicone, conductive silicone, urethane, polyurethane</li> </ul>
<p><b>VBL Series - Long Multi Bellow</b> <span style="float: right;">Page 723</span></p>  <ul style="list-style-type: none"> <li>• Long multi-bellow suction cup</li> <li>• Diameter range: Ø15 to 50</li> <li>• Material selection: NBR, silicone, conductive silicone, urethane</li> </ul>	<p><b>FF Series - Flat, Mark Free</b> <span style="float: right;">Page 740</span></p>  <ul style="list-style-type: none"> <li>• Mark free and flat suction cup</li> <li>• Diameter range: Ø10 to 30</li> <li>• Material selection: NBR, silicone, conductive silicone, urethane</li> </ul>
<p><b>BL5040 - Long Multi Bellow</b> <span style="float: right;">Page 724</span></p>  <ul style="list-style-type: none"> <li>• Dual lip structure suction cup</li> <li>• Diameter range: Ø50</li> <li>• Material selection: NBR, silicone</li> </ul>	<p><b>VD Series - Deep</b> <span style="float: right;">Page 742w</span></p>  <ul style="list-style-type: none"> <li>• Deep suction cup</li> <li>• Diameter range: Ø30 to 90</li> <li>• Material selection: NBR, silicone, conductive silicone, urethane, polyurethane</li> </ul>
<p><b>VOU Series - Oval Universal</b> <span style="float: right;">Page 727</span></p>  <ul style="list-style-type: none"> <li>• Oval universal suction cup</li> <li>• Diameter range: Ø4 x 10 to Ø20 x 60</li> <li>• Material selection: NBR, silicone, conductive silicone, urethane</li> </ul>	<p><b>Specials</b> <span style="float: right;">Available on request</span></p>  <ul style="list-style-type: none"> <li>• Bellows flat suction cup</li> <li>• Diameter range: Ø25 to 100</li> <li>• Material selection: NBR, silicone, polyurethane</li> <li>• Suction cups, foam rubber</li> <li>• Suction cups, special flat/bellow</li> </ul>

# SUCTION CUPS – SINGLE BELLOWS

## Features & Strengths

- Compensating for a difference in level
- Various materials for a wide range of applications

## Advantages

- Particularly good for use on curved surfaces and for separating thin sheets of material in stacks.
- The bellows cup is very good at compensating for a degree of difference in level and curvature of the work piece.

## Examples of Use

- Cardboards
- Packaging materials
- Thin film sheets
- Veneer sheets
- Plastic sheets

## VB Series

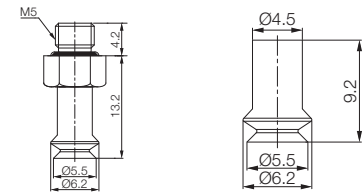
### 5mm, Cup Only

9205	Material	Colour	Temperature	Hardness
<b>VB5-N</b>	Nitrile	Black	-20°C-110°C	60
<b>VB5-S</b>	Silicone	Red	-70°C-200°C	55
<b>VB5-WS</b>	White Silicone	Translucent White	-70°C-200°C	55
<b>VB5-WS-FDA</b>	White Silicone (FDA)	Translucent White	-70°C-200°C	55
<b>VB5-CS</b>	Conductive Silicone	Smoky Black	-45°C-90°C	70
<b>VB5-U</b>	Urethane	Dark Green	0°C-100°C	60
<b>VB5-A</b>	Mark Free	Black	-10°C-100°C	75

Tech Sheet 71773



#### Dimensions



With M5M fitting

Cup only

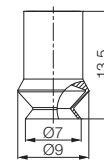
### 6mm, Cup Only

9205	Material	Colour	Temperature	Hardness
<b>VB6X-N</b>	Nitrile	Black	-20°C-110°C	60
<b>VB6X-S</b>	Silicone	Red	-70°C-200°C	55
<b>VB6X-WS</b>	White Silicone	Translucent White	-70°C-200°C	55
<b>VB6X-WS-FDA</b>	White Silicone (FDA)	Translucent White	-70°C-200°C	55
<b>VB6X-CS</b>	Conductive Silicone	Smoky Black	-45°C-90°C	70
<b>VB6X-U</b>	Urethane	Dark Green	0°C-100°C	60
<b>VB6X-A</b>	Mark Free	Black	-10°C-100°C	75

Tech Sheet 71773



#### Dimensions



Cup only

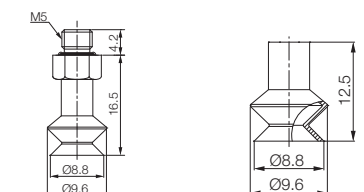
### 8mm, Cup Only

9205	Material	Colour	Temperature	Hardness
<b>VB8X-N</b>	Nitrile	Black	-20°C-110°C	60
<b>VB8X-S</b>	Silicone	Red	-70°C-200°C	55
<b>VB8X-WS</b>	White Silicone	Translucent White	-70°C-200°C	55
<b>VB8X-WS-FDA</b>	White Silicone (FDA)	Translucent White	-70°C-200°C	55
<b>VB8X-CS</b>	Conductive Silicone	Smoky Black	-45°C-90°C	70
<b>VB8X-U</b>	Urethane	Dark Green	0°C-100°C	60
<b>VB8X-A</b>	Mark Free	Black	-10°C-100°C	75

Tech Sheet 71773



#### Dimensions



With M5M fitting

Cup only

# SUCTION CUPS – SINGLE BELLOWS



## Features & Strengths

- Compensating for a difference in level
- Various materials for a wide range of applications

## Advantages

- Particularly good for use on curved surfaces and for separating thin sheets of material in stacks.
- The bellows cup is very good at compensating for a degree of difference in level and curvature of the work piece.

## Examples of Use

- Cardboards
- Packaging materials
- Thin film sheets
- Veneer sheets
- Plastic sheets

## VB Series

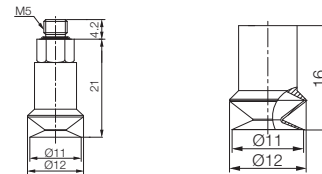
### 10mm, Cup Only

9204	Material	Colour	Temperature	Hardness
<b>VB10-N</b>	Nitrile	Black	-20°C-110°C	60
<b>VB10-S</b>	Silicone	Red	-70°C-200°C	55
<b>VB10-WS</b>	White Silicone	Translucent White	-70°C-200°C	55
<b>VB10-WS-FDA</b>	White Silicone (FDA)	Translucent White	-70°C-200°C	55
<b>VB10-CS</b>	Conductive Silicone	Smoky Black	-45°C-90°C	70
<b>VB10-U</b>	Urethane	Dark Green	0°C-100°C	60
<b>VB10-A</b>	Mark Free	Black	-10°C-100°C	75

Tech Sheet 71773



#### Dimensions



With M5M fitting

Cup only

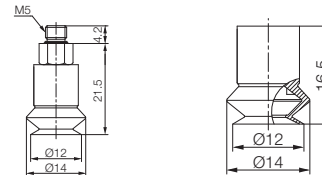
### 12mm, Cup Only

9204	Material	Colour	Temperature	Hardness
<b>VB12-N</b>	Nitrile	Black	-20°C-110°C	60
<b>VB12-S</b>	Silicone	Red	-70°C-200°C	55
<b>VB12-WS</b>	White Silicone	Translucent White	-70°C-200°C	55
<b>VB12-WS-FDA</b>	White Silicone (FDA)	Translucent White	-70°C-200°C	55
<b>VB12-CS</b>	Conductive Silicone	Smoky Black	-45°C-90°C	70
<b>VB12-U</b>	Urethane	Dark Green	0°C-100°C	60
<b>VB12-A</b>	Mark Free	Black	-10°C-100°C	75

Tech Sheet 71773



#### Dimensions



With M5M fitting

Cup only

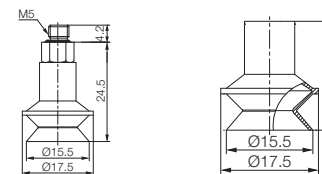
### 15mm, Cup Only

9204	Material	Colour	Temperature	Hardness
<b>VB15-N</b>	Nitrile	Black	-20°C-110°C	60
<b>VB15-S</b>	Silicone	Red	-70°C-200°C	55
<b>VB15-WS</b>	White Silicone	Translucent White	-70°C-200°C	55
<b>VB15-WS-FDA</b>	White Silicone (FDA)	Translucent White	-70°C-200°C	55
<b>VB15-CS</b>	Conductive Silicone	Smoky Black	-45°C-90°C	70
<b>VB15-U</b>	Urethane	Dark Green	0°C-100°C	60
<b>VB15-A</b>	Mark Free	Black	-10°C-100°C	75
<b>VB15-PU</b>	Polyurethane	Translucent Orange	0°C-60°C	60

Tech Sheet 71773



#### Dimensions



With M5M fitting

Cup only

# SUCTION CUPS – SINGLE BELLOWS



## Features & Strengths

- Compensating for a difference in level
- Various materials for a wide range of applications

## Advantages

- Particularly good for use on curved surfaces and for separating thin sheets of material in stacks.
- The bellows cup is very good at compensating for a degree of difference in level and curvature of the work piece.

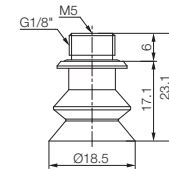
## Examples of Use

- Cardboards
- Packaging materials
- Thin film sheets
- Veneer sheets
- Plastic sheets

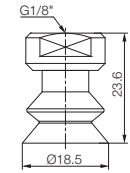
## VB Series



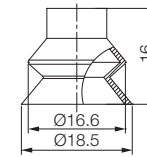
### Dimensions



With M518MF fitting



With 18F fitting



Cup only

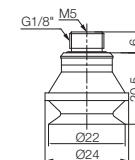
### 17mm, Cup Only

9205	Material	Colour	Temperature	Hardness
<b>VB17-N</b>	Nitrile	Black	-20°C-110°C	60
<b>VB17-S</b>	Silicone	Red	-70°C-200°C	55
<b>VB17-WS</b>	White Silicone	Translucent White	-70°C-200°C	55
<b>VB17-WS-FDA</b>	White Silicone (FDA)	Translucent White	-70°C-200°C	55
<b>VB17-CS</b>	Conductive Silicone	Smoky Black	-45°C-90°C	70
<b>VB17-U</b>	Urethane	Dark Green	0°C-100°C	60
<b>VB17-A</b>	Mark Free	Black	-10°C-100°C	75

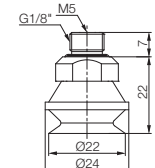
Tech Sheet 71773



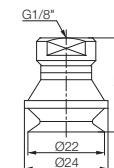
### Dimensions



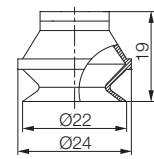
With M518MF fitting



With M518MFB fitting



With 18F fitting



Cup only

### 20mm, Cup Only

9205	Material	Colour	Temperature	Hardness
<b>VB20-N</b>	Nitrile	Black	-20°C-110°C	60
<b>VB20-S</b>	Silicone	Red	-70°C-200°C	55
<b>VB20-WS</b>	White Silicone	Translucent White	-70°C-200°C	55
<b>VB20-WS-FDA</b>	White Silicone (FDA)	Translucent White	-70°C-200°C	55
<b>VB20-CS</b>	Conductive Silicone	Smoky Black	-45°C-90°C	70
<b>VB20-U</b>	Urethane	Dark Green	0°C-100°C	60
<b>VB20-PU</b>	Polyurethane	Translucent Orange	0°C-60°C	60

Tech Sheet 71773



# SUCTION CUPS – SINGLE BELLOWS

## Features & Strengths

- Compensating for a difference in level
- Various materials for a wide range of applications

## Advantages

- Particularly good for use on curved surfaces and for separating thin sheets of material in stacks.
- The bellows cup is very good at compensating for a degree of difference in level and curvature of the work piece.

## Examples of Use

- Cardboards
- Packaging materials
- Thin film sheets
- Vener sheets
- Plastic sheets

## VB Series

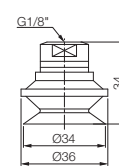


### 30mm, Cup Only

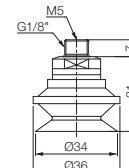
9204	Material	Colour	Temperature	Hardness
<b>VB30-N</b>	Nitrile	Black	-20°C-110°C	60
<b>VB30-S</b>	Silicone	Red	-70°C-200°C	55
<b>VB30-WS</b>	White Silicone	Translucent White	-70°C-200°C	55
<b>VB30-WS-FDA</b>	White Silicone (FDA)	Translucent White	-70°C-200°C	55
<b>VB30-CS</b>	Conductive Silicone	Smoky Black	-45°C-90°C	70
<b>VB30-U</b>	Urethane	Dark Green	0°C-100°C	60
<b>VB30-A</b>	Mark Free	Black	-10°C-100°C	75
<b>VB30-PU</b>	Polyurethane	Translucent Orange	0°C-60°C	60

Tech Sheet 71773

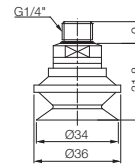
### Dimensions



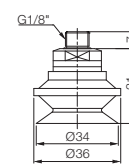
With 18F fitting



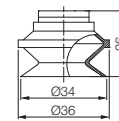
With M518MF fitting



With 14M fitting



With 18M fitting



Cup only

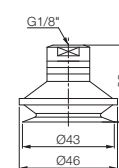


### 40mm, Cup Only

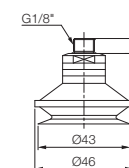
9204	Material	Colour	Temperature	Hardness
<b>VB40-N</b>	Nitrile	Black	-20°C-110°C	60
<b>VB40-S</b>	Silicone	Red	-70°C-200°C	55
<b>VB40-WS</b>	White Silicone	Translucent White	-70°C-200°C	55
<b>VB40-WS-FDA</b>	White Silicone (FDA)	Translucent White	-70°C-200°C	55
<b>VB40-CS</b>	Conductive Silicone	Smoky Black	-45°C-90°C	70
<b>VB40-U</b>	Urethane	Dark Green	0°C-100°C	60
<b>VB40-A</b>	Mark Free	Black	-10°C-100°C	75
<b>VB40-PU</b>	Polyurethane	Translucent Orange	0°C-60°C	60

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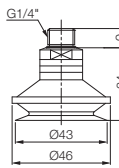
### Dimensions



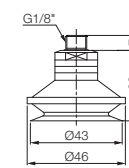
With 18F fitting



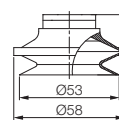
With 18M fitting



With 14M fitting



With 18M fitting



Cup only

# SUCTION CUPS – SINGLE BELLOWS



## Features & Strengths

- Compensating for a difference in level
- Various materials for a wide range of applications

## Advantages

- Particularly good for use on curved surfaces and for separating thin sheets of material in stacks.
- The bellows cup is very good at compensating for a degree of difference in level and curvature of the work piece.

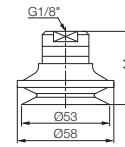
## Examples of Use

- Cardboards
- Veneer sheets
- Packaging materials
- Plastic sheets
- Thin film sheets

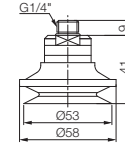
## VB Series



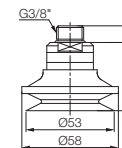
### Dimensions



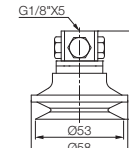
With 18F fitting



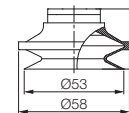
With 14M fitting



With 38M fitting



With 18x5F fitting



Cup only

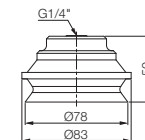
### 50mm, Cup Only

9204	Material	Colour	Temperature	Hardness
<b>VB50-N</b>	Nitrile	Black	-20°C-110°C	60
<b>VB50-S</b>	Silicone	Red	-70°C-200°C	55
<b>VB50-WS</b>	White Silicone	Translucent White	-70°C-200°C	55
<b>VB50-WS-FDA</b>	White Silicone FDA	Translucent White	-70°C-200°C	55
<b>VB50-CS</b>	Conductive Silicone	Smoky Black	-45°C-90°C	70
<b>VB50-U</b>	Urethane	Dark Green	0°C-100°C	60
<b>VB50-A</b>	Mark Free	Black	-10°C-100°C	75
<b>VB50-PU</b>	Polyurethane	Translucent Orange	0°C-60°C	60

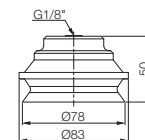
Tech Sheet 71773



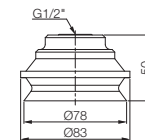
### Dimensions



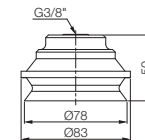
With 14F fitting



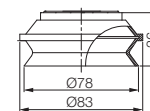
With 18F fitting



With 12F fitting



With 38F fitting



Cup only

### 75mm, Cup Only

9204	Material	Colour	Temperature	Hardness
<b>VB75-N</b>	Nitrile	Black	-20°C-110°C	60
<b>VB75-S</b>	Silicone	Red	-70°C-200°C	55
<b>VB75-WS</b>	White Silicone	Translucent White	-70°C-200°C	55
<b>VB75-WS-FDA</b>	White Silicone FDA	Translucent White	-70°C-200°C	55
<b>VB75-CS</b>	Conductive Silicone	Smoky Black	-45°C-90°C	70
<b>VB75-U</b>	Urethane	Dark Green	0°C-100°C	60
<b>VB75-A</b>	Mark Free	Black	-10°C-100°C	75
<b>VB75-PU</b>	Polyurethane	Translucent Orange	0°C-60°C	60

Tech Sheet 71773

# SUCTION CUPS – SINGLE BELLOWS



## Features & Strengths

- Compensating for a difference in level
- Various materials for a wide range of applications

## Advantages

- Particularly good for use on curved surfaces and for separating thin sheets of material in stacks.
- The bellows cup is very good at compensating for a degree of difference in level and curvature of the work piece.

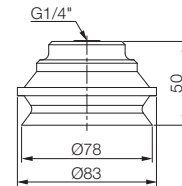
## Examples of Use

- Cardboards
- Packaging materials
- Thin film sheets
- Veneer sheets
- Plastic sheets

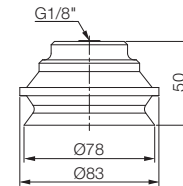
## VB Series



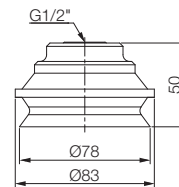
### Dimensions



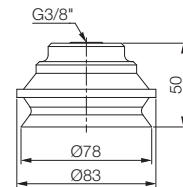
With 14F fitting



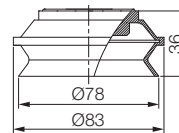
With 18F fitting



With 12F fitting



With 38F fitting



Cup only

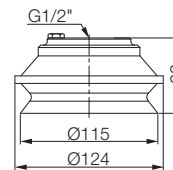
### 75mm with Large Cleats, Cup Only

9204	Material	Colour	Temperature	Hardness
<b>VB75B-N</b>	Nitrile	Black	-20°C-110°C	60
<b>VB75B-S</b>	Silicone	Red	-70°C-200°C	55
<b>VB75B-WS</b>	White Silicone	Translucent White	-70°C-200°C	55
<b>VB75B-WS-FDA</b>	White Silicone FDA	Translucent White	-70°C-200°C	55
<b>VB75B-CS</b>	Conductive Silicone	Smoky Black	-45°C-90°C	70
<b>VB75B-U</b>	Urethane	Dark Green	0°C-100°C	60
<b>VB75B-A</b>	Mark Free	Black	-10°C-100°C	75

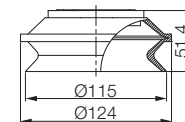
Tech Sheet 71773



### Dimensions



With 12F fitting



Cup only

### 110mm, Cup Only

9204	Material	Colour	Temperature	Hardness
<b>VB110-N</b>	Nitrile	Black	-20°C-110°C	60
<b>VB110-S</b>	Silicone	Red	-70°C-200°C	55
<b>VB110-WS</b>	White Silicone	Translucent White	-70°C-200°C	55
<b>VB110-WS-FDA</b>	White Silicone FDA	Translucent White	-70°C-200°C	55
<b>VB110-CS</b>	Conductive Silicone	Smoky Black	-45°C-90°C	70
<b>VB110-U</b>	Urethane	Dark Green	0°C-100°C	60
<b>VB110-A</b>	Mark Free	Black	-10°C-100°C	75

Tech Sheet 71773

# SUCTION CUPS – SINGLE BELLOWS

## Features & Strengths

- Compensating for a difference in level
- Various materials for a wide range of applications

## Advantages

- Particularly good for use on curved surfaces and for separating thin sheets of material in stacks.
- The bellows cup is very good at compensating for a degree of difference in level and curvature of the work piece.

## Examples of Use

- Cardboards
- Packaging materials
- Thin film sheets
- Veneer sheets
- Plastic sheets

## VB Series

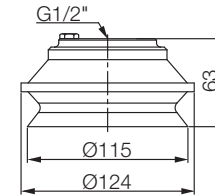


### 110mm with Large Cleats, Cup Only

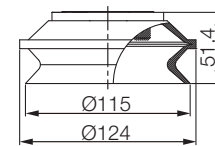
9204	Material	Colour	Temperature	Hardness
<b>VB110B-N</b>	Nitrile	Black	-20°C-110°C	60
<b>VB110B-S</b>	Silicone	Red	-70°C-200°C	55
<b>VB110B-WS</b>	White Silicone	Translucent White	-70°C-200°C	55
<b>VB110B-WS-FDA</b>	White Silicone FDA	Translucent White	-70°C-200°C	55
<b>VB110B-CS</b>	Conductive Silicone	Smoky Black	-45°C-90°C	70
<b>VB110B-U</b>	Urethane	Dark Green	0°C-100°C	60
<b>VB110B-A</b>	Mark Free	Black	-10°C-100°C	75

Tech Sheet 71773

### Dimensions



With 12F fitting



Cup only

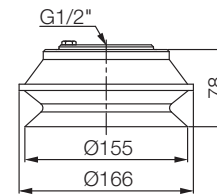


### 150mm, Cup Only

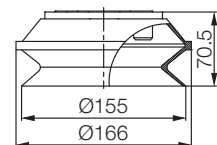
9204	Material	Colour	Temperature	Hardness
<b>VB150-N</b>	Nitrile	Black	-20°C-110°C	60
<b>VB150-S</b>	Silicone	Red	-70°C-200°C	55
<b>VB150-WS</b>	White Silicone	Translucent White	-70°C-200°C	55
<b>VB150-WS-FDA</b>	White Silicone FDA	Translucent White	-70°C-200°C	55
<b>VB150-CS</b>	Conductive Silicone	Smoky Black	-45°C-90°C	70
<b>VB150-U</b>	Urethane	Dark Green	0°C-100°C	60
<b>VB150-A</b>	Mark Free	Black	-10°C-100°C	75

Tech Sheet 71773

### Dimensions



With 12F fitting



Cup only

## Disc Filters

### To suit VB Series Cups

9204	Material	To Suit
<b>VTFE-B30</b>	Polyethylene	VB30/30M
<b>VTFE-B40</b>	Polyethylene	VB40
<b>VTFE-B50</b>	Polyethylene	VB50/50M
<b>VTFE-B75</b>	Polyethylene	VB75
<b>VTFE-B110</b>	Polyethylene	VB110

Tech Sheet 71773

# SUCTION CUPS – DIRECT MOUNT BELLOWS



## Features & Strengths

- Compensating for a difference in level
- Various materials for a wide range of applications

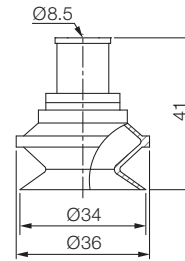
## Advantages

- Particularly good for use on curved surfaces and for separating thin sheets of material in stacks.
- The bellows cup is very good at compensating for a degree of difference in level and curvature of the work piece.
- Fitted directly onto a piece of pipe, making installation very simple and reducing cup cost

## Examples of Use

- Cardboards
- Veneer sheets
- Packaging materials
- Plastic sheets
- Thin film sheets

## VB-M Series

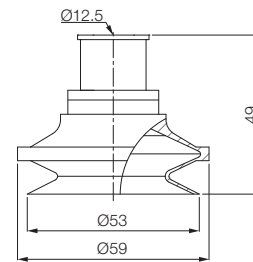


Cup only

### 30mm with Long Neck, Cup Only

9204	Material	Colour	Temperature	Hardness
<b>VB30M-N</b>	Nitrile	Black	-20°C-110°C	60
<b>VB30M-S</b>	Silicone	Red	-70°C-200°C	55
<b>VB30M-WS</b>	White Silicone	Translucent White	-70°C-200°C	55
<b>VB30M-WS-FDA</b>	White Silicone FDA	Translucent White	-70°C-200°C	55
<b>VB30M-CS</b>	Conductive Silicone	Smoky Black	-45°C-90°C	70
<b>VB30M-U</b>	Urethane	Dark Green	0°C-100°C	60
<b>VB30M-A</b>	Mark Free	Black	-10°C-100°C	75
<b>VB30M-PU</b>	Polyurethane	Translucent Orange	0°C-60°C	60

Tech Sheet 71774



Cup only

### 50mm with Long Neck, Cup Only

9204	Material	Colour	Temperature	Hardness
<b>VB50M-N</b>	Nitrile	Black	-20°C-110°C	60
<b>VB50M-S</b>	Silicone	Red	-70°C-200°C	55
<b>VB50M-WS</b>	White Silicone	Translucent White	-70°C-200°C	55
<b>VB50M-WS-FDA</b>	White Silicone FDA	Translucent White	-70°C-200°C	55
<b>VB50M-CS</b>	Conductive Silicone	Smoky Black	-45°C-90°C	70
<b>VB50M-U</b>	Urethane	Dark Green	0°C-100°C	60
<b>VB50M-A</b>	Mark Free	Black	-10°C-100°C	75
<b>VB50M-PU</b>	Polyurethane	Translucent Orange	0°C-60°C	60

Tech Sheet 71774

## Disc Filters

### To suit VB-M Series Cups

9204	Material	To Suit
<b>VTFE-B30</b>	Polyethylene	VB30/30M
<b>VTFE-B50</b>	Polyethylene	VB50/50M

Tech Sheet 71774

# SUCTION CUPS – DOUBLE BELLOWS

## Features & Strengths

- Wide cover for increased degree of height compensation
- Excellent for curved products and separating thin sheets in stocks

## Advantages

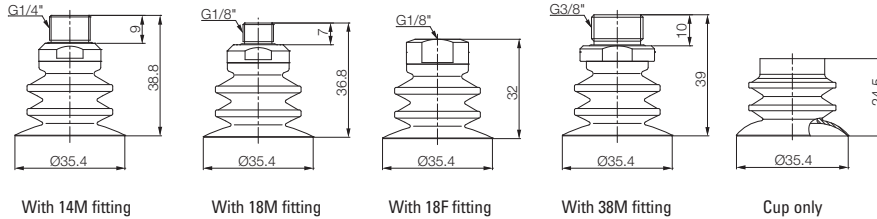
- Particularly good for use on curved surfaces and for separating thin sheets of materials in stacks with long bellows
- Can cope with an increased degree of height compensation and is particularly good for handling fragile objects

## Examples of Use

- Convex surface
- Plywood
- Plastic bag
- Carton box
- Metal sheets
- Cement sack

## VBU Series

### Dimensions



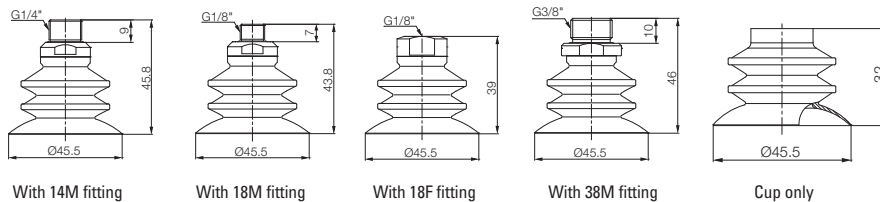
### 35mm, Cup Only

9204	Material	Colour	Temperature	Hardness
<b>VBU35-N</b>	Nitrile	Black	-20°C-110°C	60
<b>VBU35-S</b>	Silicone	Red	-70°C-200°C	55
<b>VBU35-WS</b>	White Silicone	Translucent White	-70°C-200°C	55
<b>VBU35-WS-FDA</b>	White Silicone (FDA)	Translucent White	-70°C-200°C	55
<b>VBU35-PU</b>	Polyurethane	Translucent Orange	0°C-60°C	60

Tech Sheet 71775



### Dimensions



### 45mm, Cup Only

9204	Material	Colour	Temperature	Hardness
<b>VBU45-N</b>	Nitrile	Black	-20°C-110°C	60
<b>VBU45-S</b>	Silicone	Red	-70°C-200°C	55
<b>VBU45-WS</b>	White Silicone	Translucent White	-70°C-200°C	55
<b>VBU45-WS-FDA</b>	White Silicone (FDA)	Translucent White	-70°C-200°C	55
<b>VBU45-PU</b>	Polyurethane	Translucent Orange	0°C-60°C	60

Tech Sheet 71775



# SUCTION CUPS – DOUBLE BELLOWS



## Features & Strengths

- Wide cover for increased degree of height compensation
- Excellent for curved products and separating thin sheets in stocks

## Advantages

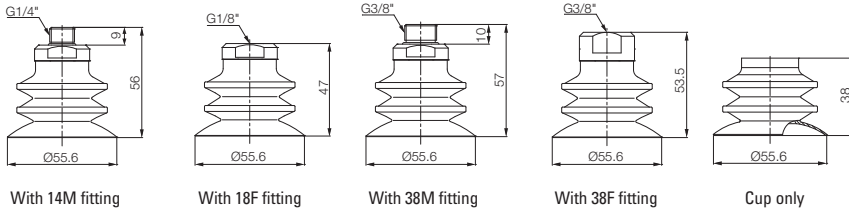
- Particularly good for use on curved surfaces and for separating thin sheets of materials in stacks with long bellows
- Can cope with an increased degree of height compensation and is particularly good for handling fragile objects

## Examples of Use

- Convex surface
- Plastic bag
- Metal sheets
- Plywood
- Carton box
- Cement sack

## VBU Series

### Dimensions



### 55mm, Cup Only

9205	Material	Colour	Temperature	Hardness
VBU55-N	Nitrile	Black	-20°C-110°C	60
VBU55-S	Silicone	Red	-70°C-200°C	55
VBU55-WS	White Silicone	Translucent White	-70°C-200°C	55
VBU55-WS-FDA	White Silicone (FDA)	Translucent White	-70°C-200°C	55
VBU55-PU	Polyurethane	Translucent Orange	0°C-60°C	60

Tech Sheet 71775

## Disc Filters

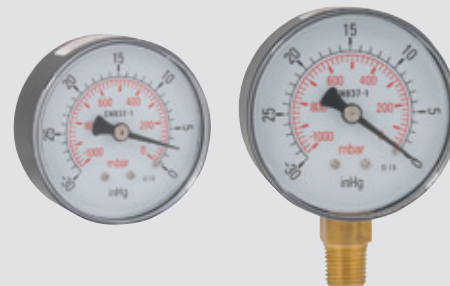
### To suit VBU Series Cups

9204	Material	To Suit
VTFE-BU35	Polyethylene	VBU35
VTFE-BU45	Polyethylene	VBU45
VTFE-BU55	Polyethylene	VBU55

Tech Sheet 71775



For FT Pro Vacuum Gauges  
see page 412

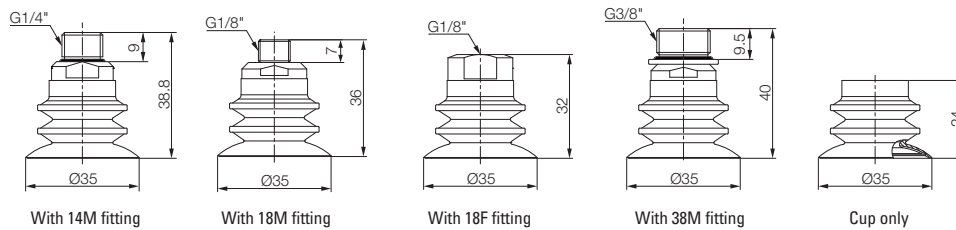


# SUCTION CUPS – BELLOWS & CROSS GROOVE



## VBX Series

### Dimensions

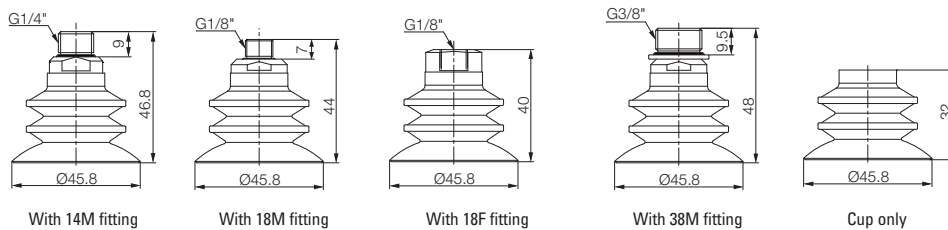


### 35mm, Cup Only

9204	Material	Colour	Temperature	Hardness
<b>VBX35-PU</b>	Polyurethane	Translucent Orange	0°C-60°C	60
Tech Sheet 71776				



### Dimensions

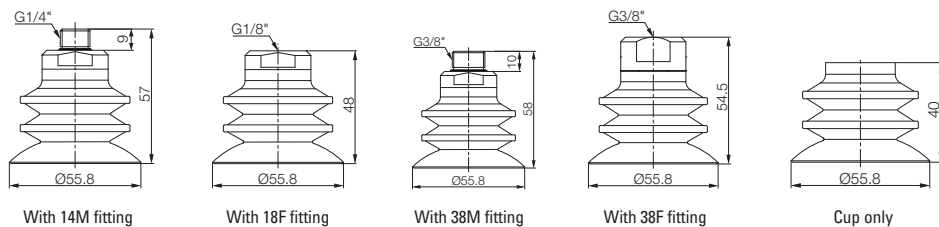


### 45mm, Cup Only

9204	Material	Colour	Temperature	Hardness
<b>VBX45-PU</b>	Polyurethane	Translucent Orange	0°C-60°C	60
Tech Sheet 71776				



### Dimensions



### 55mm, Cup Only

9204	Material	Colour	Temperature	Hardness
<b>VBX55-PU</b>	Polyurethane	Translucent Orange	0°C-60°C	60
Tech Sheet 71776				



## Disc Filters

### To suit VBX Series

9204	Material	To Suit
<b>VTFE-BX35</b>	Polyethylene	VBX35-PU
<b>VTFE-BX45</b>	Polyethylene	VBX45-PU
<b>VTFE-BX55</b>	Polyethylene	VBX55-PU
Tech Sheet 71776		



# SUCTION CUPS – LONG MULTI BELLOWS



## Features & Strengths

- Wide cover for increased degree of height compensation
- Excellent for fragile products

## Advantages

- Particularly good for use on curved surfaces and for separating thin sheets of material in stacks with long bellows
- The bellows cup is very good at compensating for a degree of difference in level and curvature of the work piece

## Examples of Use

- Fragile objects
- Glass
- Bread
- General food products
- Eggs

## VBL Series



### 10mm, Cup Only

9204	Material	Colour	Temperature	Hardness
<b>VBL10-N</b>	Nitrile	Black	-20°C-110°C	60
<b>VBL10-S</b>	Silicone	Red	-70°C-200°C	55
<b>VBL10-WS</b>	White Silicone	Translucent White	-70°C-200°C	55
<b>VBL10-WS-FDA</b>	White Silicone FDA	Translucent White	-70°C-200°C	55
<b>VBL10-CS</b>	Conductive Silicone	Smoky Black	-45°C-90°C	70
<b>VBL10-U</b>	Urethane	Dark Green	0°C-100°C	60
<b>VBL10-A</b>	Mark Free	Black	-10°C-100°C	75

Tech Sheet 71777

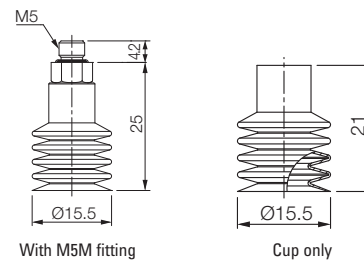


### 15mm, Cup Only

9204	Material	Colour	Temperature	Hardness
<b>VBL15-N</b>	Nitrile	Black	-20°C-110°C	60
<b>VBL15-S</b>	Silicone	Red	-70°C-200°C	55
<b>VBL15-WS</b>	White Silicone	Translucent White	-70°C-200°C	55
<b>VBL15-WS-FDA</b>	White Silicone FDA	Translucent White	-70°C-200°C	55
<b>VBL15-CS</b>	Conductive Silicone	Smoky Black	-45°C-90°C	70
<b>VBL15-U</b>	Urethane	Dark Green	0°C-100°C	60
<b>VBL15-A</b>	Mark Free	Black	-10°C-100°C	75

Tech Sheet 71777

## Dimensions



# SUCTION CUPS – LONG MULTI BELLOWS



## Features & Strengths

- Wide cover for increased degree of height compensation
- Excellent for fragile products

## Advantages

- Particularly good for use on curved surfaces and for separating thin sheets of material in stacks with long bellows
- The bellows cup is very good at compensating for a degree of difference in level and curvature of the work piece

## Examples of Use

- Fragile objects
- Glass
- Bread
- General food products
- Eggs

## VBL Series

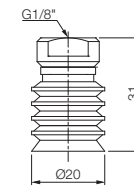


### 20mm, Cup Only

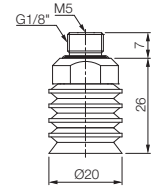
9204	Material	Colour	Temperature	Hardness
<b>VBL20-N</b>	Nitrile	Black	-20°C-110°C	60
<b>VBL20-S</b>	Silicone	Red	-70°C-200°C	55
<b>VBL20-WS</b>	White Silicone	Translucent White	-70°C-200°C	55
<b>VBL20-WS-FDA</b>	White Silicone FDA	Translucent White	-70°C-200°C	55
<b>VBL20-CS</b>	Conductive Silicone	Smoky Black	-45°C-90°C	70
<b>VBL20-U</b>	Urethane	Dark Green	0°C-100°C	60
<b>VBL20-A</b>	Mark Free	Black	-10°C-100°C	75

Tech Sheet 71777

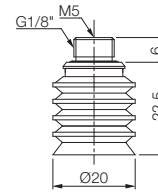
### Dimensions



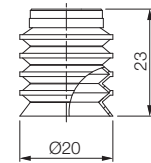
With 18F fitting



With M518MB fitting



With M518MF fitting



Cup only

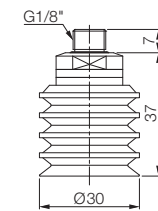


### 30mm, Cup Only

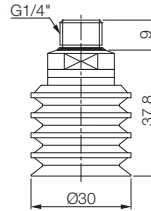
9204	Material	Colour	Temperature	Hardness
<b>VBL30-N</b>	Nitrile	Black	-20°C-110°C	60
<b>VBL30-S</b>	Silicone	Red	-70°C-200°C	55
<b>VBL30-WS</b>	White Silicone	Translucent White	-70°C-200°C	55
<b>VBL30-WS-FDA</b>	White Silicone FDA	Translucent White	-70°C-200°C	55
<b>VBL30-CS</b>	Conductive Silicone	Smoky Black	-45°C-90°C	70
<b>VBL30-U</b>	Urethane	Dark Green	0°C-100°C	60
<b>VBL30-A</b>	Mark Free	Black	-10°C-100°C	75

Tech Sheet 71777

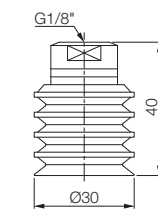
### Dimensions



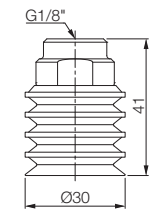
With 18M fitting



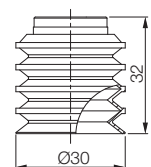
With 14M fitting



With 18F fitting



With 18FB fitting



Cup only

# SUCTION CUPS – LONG MULTI BELLOWS



## Features & Strengths

- Wide cover for increased degree of height compensation
- Excellent for fragile products

## Advantages

- Particularly good for use on curved surfaces and for separating thin sheets of material in stacks with long bellows
- The bellows cup is very good at compensating for a degree of difference in level and curvature of the work piece

## Examples of Use

- Fragile objects
- Glass
- Bread
- General food products
- Eggs

## VBL Series

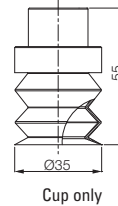


### 35mm, with Pipe Mount Neck, Cup Only

9204	Material	Colour	Temperature	Hardness
<b>VBL35M-N</b>	Nitrile	Black	-20°C-110°C	60
<b>VBL35M-S</b>	Silicone	Red	-70°C-200°C	55
<b>VBL35M-WS</b>	White Silicone	Translucent White	-70°C-200°C	55
<b>VBL35M-FDA-30</b>	White Silicone FDA	Translucent White	-70°C-200°C	55
<b>VBL35M-FDA-55</b>	White Silicone FDA	Translucent White	-70°C-200°C	55
<b>VBL35M-CS</b>	Conductive Silicone	Smoky Black	-45°C-90°C	70
<b>VBL35M-U</b>	Urethane	Dark Green	0°C-100°C	60
<b>VBL35M-A</b>	Mark Free	Black	-10°C-100°C	75

Tech Sheet 71777

## Dimensions



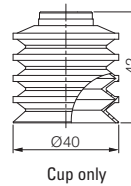
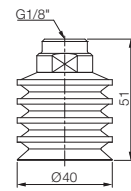
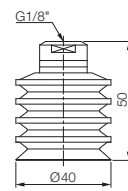
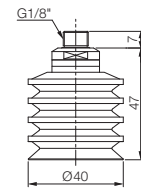
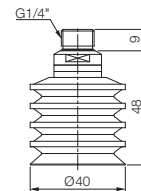
### 40mm, Cup Only

9204	Material	Colour	Temperature	Hardness
<b>VBL40-N</b>	Nitrile	Black	-20°C-110°C	60
<b>VBL40-S</b>	Silicone	Red	-70°C-200°C	55
<b>VBL40-WS</b>	White Silicone	Translucent White	-70°C-200°C	55
<b>VBL40-WS-FDA</b>	White Silicone FDA	Translucent White	-70°C-200°C	55
<b>VBL40-CS</b>	Conductive Silicone	Smoky Black	-45°C-90°C	70
<b>VBL40-U</b>	Urethane	Dark Green	0°C-100°C	60
<b>VBL40-A</b>	Mark Free	Black	-10°C-100°C	75

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## Dimensions



# SUCTION CUPS – LONG MULTI BELLOWS



## Features & Strengths

- Wide cover for increased degree of height compensation
- Excellent for fragile products

## Advantages

- Particularly good for use on curved surfaces and for separating thin sheets of material in stacks with long bellows
- The bellows cup is very good at compensating for a degree of difference in level and curvature of the work piece

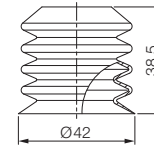
## Examples of Use

- Fragile objects
- Glass
- Bread
- General food products
- Eggs

## VBL Series



### Dimensions



Cup only

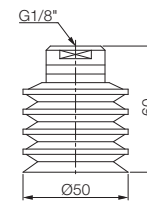
### 40mm, Alternate Design, Cup Only

9204	Material	Colour	Temperature	Hardness
<b>VBL40B-N</b>	Nitrile	Black	-20°C-110°C	60
<b>VBL40B-S</b>	Silicone	Red	-70°C-200°C	55
<b>VBL40B-WS</b>	White Silicone	Translucent White	-70°C-200°C	55
<b>VBL40B-FDA-30</b>	White Silicone FDA	Translucent White	-70°C-200°C	30
<b>VBL40B-FDA-55</b>	White Silicone FDA	Translucent White	-70°C-200°C	55
<b>VBL40B-CS</b>	Conductive Silicone	Smoky Black	-45°C-90°C	70
<b>VBL40B-U</b>	Urethane	Dark Green	0°C-100°C	60
<b>VBL40B-A</b>	Mark Free	Black	-10°C-100°C	75

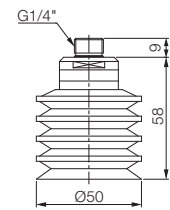
Tech Sheet 71777



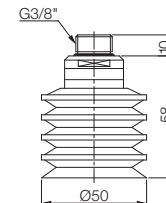
### Dimensions



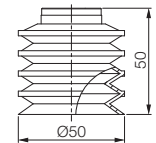
With 18F fitting



With 14M fitting



With 38M fitting



Cup only

### 50mm, Cup Only

9204	Material	Colour	Temperature	Hardness
<b>VBL50-N</b>	Nitrile	Black	-20°C-110°C	60
<b>VBL50-S</b>	Silicone	Red	-70°C-200°C	55
<b>VBL50-WS</b>	White Silicone	Translucent White	-70°C-200°C	55
<b>VBL50-WS-FDA</b>	White Silicone FDA	Translucent White	-70°C-200°C	55
<b>VBL50-CS</b>	Conductive Silicone	Smoky Black	-45°C-90°C	70
<b>VBL50-U</b>	Urethane	Dark Green	0°C-100°C	60
<b>VBL50-A</b>	Mark Free	Black	-10°C-100°C	75

Tech Sheet 71777

## Disc Filters

### To suit VBL Series

9204	Material	To Suit
<b>VTFE-BL20</b>	Polyethylene	VBL20
<b>VTFE-BL30</b>	Polyethylene	VBL30
<b>VTFE-BL40B</b>	Polyethylene	VBL40B
<b>VTFE-BL40</b>	Polyethylene	VBL40
<b>VTFE-BL50</b>	Polyethylene	VBL50

Tech Sheet 71777

# SUCTION CUPS – DUAL LIP STRUCTURE



## BL5040 Series

### Features & Strengths

- Excellent for irregular curved surfaces and rough surfaces and has a dual lip structure to increase safety

### Advantages

- Particularly good for use on curved surfaces and for separating thin sheets of materials in stacks with long bellows
- Can cope with an increased degree of heights compensation and is particularly good for handling fragile objects

### Examples of Use

- Round food types (such as apples & oranges)
- Convex surface

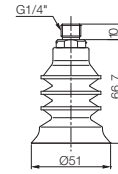


### 40mm Inner x 50mm Outer, Cup Only

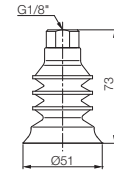
9205	Material	Colour	Temperature	Hardness
BL5040-N	Nitrile	Black	-20°C-110°C	60
BL5040-S3	Silicone - S3	Translucent Blue	-70°C-200°C	30
BL5040-S5	Silicone - S5	Red	-70°C-200°C	55
BL5040-WS3	White Silicone - WS3	Translucent White	-70°C-200°C	30
BL5040-WS5	White Silicone - WS5	Translucent White	-70°C-200°C	55
BL5040-WS3-FDA	White Silicone - WS3 (FDA)	Translucent White	-70°C-200°C	30
BL5040-WS5-FDA	White Silicone - WS5 (FDA)	Translucent White	-70°C-200°C	55

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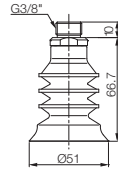
### Dimensions



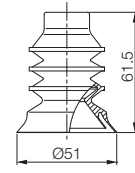
With 14M fitting



With 18F fitting



With 38M fitting



Cup Only



For All Metal Push-in Fittings Emergency Kit  
see page 844



# SUCTION CUPS - OVAL UNIVERSAL



## Features & Strengths

- Great performance for handling long objects with flat and curved surfaces

## Advantages

- Good lifting forces can be achieved with even the small sizes
- Conductive silicone material provides excellent handling of PCB boards or electronic components
- Easily mountable without having to detach a fitting from the machine (saving in maintenance time)

## Examples of Use

- Semiconductor chips
- PCB boards
- Electronic components
- Solar cells
- Small glass cases

## VOU Series

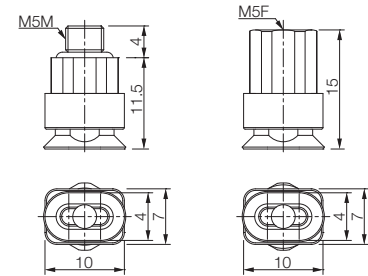
### 4 x 10mm, Cup Only

9204	Material	Colour	Temperature	Hardness
<b>VOU4X10-N</b>	Nitrile	Black	-20°C-110°C	60
<b>VOU4X10-S</b>	Silicone	Red	-70°C-200°C	55
<b>VOU4X10-WS</b>	White Silicone	Translucent White	-70°C-200°C	55
<b>VOU4X10-WS(FDA)</b>	White Silicone (FDA)	Translucent White	-70°C-200°C	55
<b>VOU4X10-CS</b>	Conductive Silicone	Smoky Black	-45°C-90°C	70
<b>VOU4X10-U</b>	Urethane	Dark Green	0-100°C	60

Tech Sheet 71779



### Dimensions



With M5M Fitting

With M5F Fitting

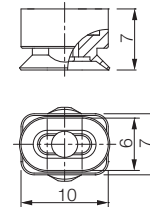
### 6 x 10mm, Cup Only

9204	Material	Colour	Temperature	Hardness
<b>VOU6X10-N</b>	Nitrile	Black	-20°C-110°C	60
<b>VOU6X10-S</b>	Silicone	Red	-70°C-200°C	55
<b>VOU6X10-WS</b>	White Silicone	Translucent White	-70°C-200°C	55
<b>VOU6X10-WS(FDA)</b>	White Silicone (FDA)	Translucent White	-70°C-200°C	55
<b>VOU6X10-CS</b>	Conductive Silicone	Smoky Black	-45°C-90°C	70
<b>VOU6X10-U</b>	Urethane	Dark Green	0-100°C	60

Tech Sheet 71779



### Dimensions



Cup only

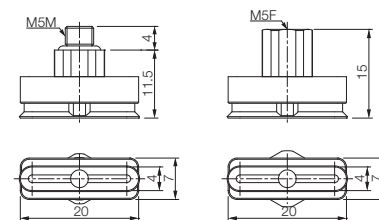
### 4 x 20mm, Cup Only

9204	Material	Colour	Temperature	Hardness
<b>VOU4X20-N</b>	Nitrile	Black	-20°C-110°C	60
<b>VOU4X20-S</b>	Silicone	Red	-70°C-200°C	55
<b>VOU4X20-WS</b>	White Silicone	Translucent White	-70°C-200°C	55
<b>VOU4X20-WS-FDA</b>	White Silicone (FDA)	Translucent White	-70°C-200°C	55
<b>VOU4X20-CS</b>	Conductive Silicone	Smoky Black	-45°C-90°C	70
<b>VOU4X20-U</b>	Urethane	Dark Green	0-100°C	60

Tech Sheet 71779



### Dimensions



With M5M Fitting

With M5F Fitting

# SUCTION CUPS - OVAL UNIVERSAL



## Features & Strengths

- Great performance for handling long objects with flat and curved surfaces

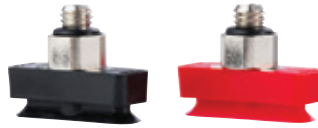
## Advantages

- Good lifting forces can be achieved with even the small sizes
- Conductive silicone material provides excellent handling of PCB boards or electronic components
- Easily mountable without having to detach a fitting from the machine (saving in maintenance time)

## Examples of Use

- Semiconductor chips
- PCB boards
- Electronic components
- Solar cells
- Small glass cases

## VOU Series

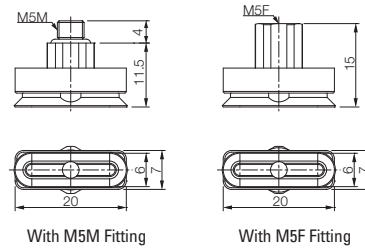


### 6 x 20mm, Cup Only

9204	Material	Colour	Temperature	Hardness
VOU6X20-N	Nitrile	Black	-20°C-110°C	60
VOU6X20-S	Silicone	Red	-70°C-200°C	55
VOU6X20-WS	White Silicone	Translucent White	-70°C-200°C	55
VOU6X20-WS-FDA	White Silicone (FDA)	Translucent White	-70°C-200°C	55
VOU6X20-CS	Conductive Silicone	Smoky Black	-45°C-90°C	70
VOU6X20-U	Urethane	Dark Green	0-100°C	60

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### Dimensions

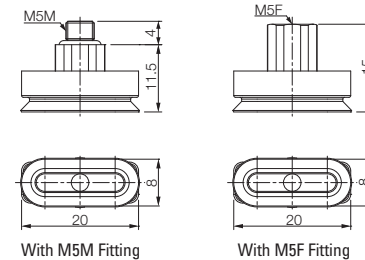


### 8 x 20mm, Cup Only

9204	Material	Colour	Temperature	Hardness
VOU8X20-N	Nitrile	Black	-20°C-110°C	60
VOU8X20-S	Silicone	Red	-70°C-200°C	55
VOU8X20-WS	White Silicone	Translucent White	-70°C-200°C	55
VOU8X20-WS-FDA	White Silicone (FDA)	Translucent White	-70°C-200°C	55
VOU8X20-CS	Conductive Silicone	Smoky Black	-45°C-90°C	70
VOU8X20-U	Urethane	Dark Green	0-100°C	60

Tech Sheet 71779

### Dimensions

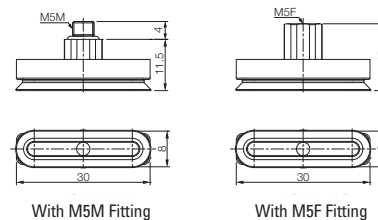


### 8 x 30mm, Cup Only

9204	Material	Colour	Temperature	Hardness
VOU8X30-N	Nitrile	Black	-20°C-110°C	60
VOU8X30-S	Silicone	Red	-70°C-200°C	55
VOU8X30-WS	White Silicone	Translucent White	-70°C-200°C	55
VOU8X30-WS-FDA	White Silicone (FDA)	Translucent White	-70°C-200°C	55
VOU8X30-CS	Conductive Silicone	Smoky Black	-45°C-90°C	70
VOU8X30-U	Urethane	Dark Green	0-100°C	60

Tech Sheet 71779

### Dimensions



# SUCTION CUPS - OVAL UNIVERSAL



## Features & Strengths

- Great performance for handling long objects with flat and curved surfaces

## Advantages

- Good lifting forces can be achieved with even the small sizes
- Conductive silicone material provides excellent handling of PCB boards or electronic components
- Easily mountable without having to detach a fitting from the machine (saving in maintenance time)

## Examples of Use

- Semiconductor chips
- PCB boards
- Electronic components
- Solar cells
- Small glass cases

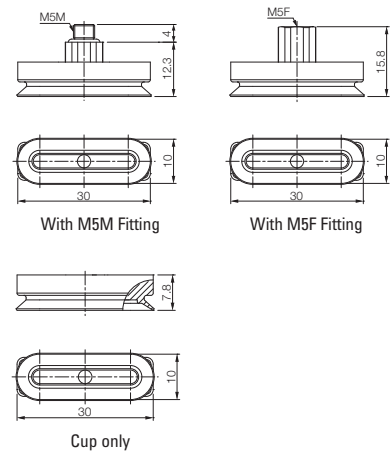
## VOU Series



### 10 x 30mm, Cup Only

9204	Material	Colour	Temperature	Hardness
<b>VOU10X30-N</b>	Nitrile	Black	-20°C-110°C	60
<b>VOU10X30-S</b>	Silicone	Red	-70°C-200°C	55
<b>VOU10X30-WS</b>	White Silicone	Translucent White	-70°C-200°C	55
<b>VOU10X30-WS-FDA</b>	White Silicone (FDA)	Translucent White	-70°C-200°C	55
<b>VOU10X30-CS</b>	Conductive Silicone	Smoky Black	-45°C-90°C	70
<b>VOU10X30-U</b>	Urethane	Dark Green	0-100°C	60
Tech Sheet 71779				

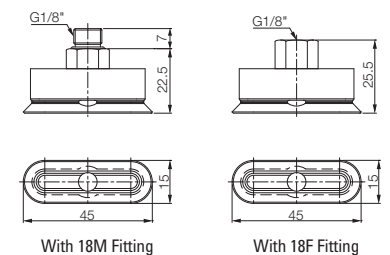
### Dimensions



### 15 x 45mm, Cup Only

9204	Material	Colour	Temperature	Hardness
<b>VOU15X45-N</b>	Nitrile	Black	-20°C-110°C	60
<b>VOU15X45-S</b>	Silicone	Red	-70°C-200°C	55
<b>VOU15X45-WS</b>	White Silicone	Translucent White	-70°C-200°C	55
<b>VOU15X45-WS(FDA)</b>	White Silicone (FDA)	Translucent White	-70°C-200°C	55
<b>VOU15X45-CS</b>	Conductive Silicone	Smoky Black	-45°C-90°C	70
<b>VOU15X45-U</b>	Urethane	Dark Green	0-100°C	60
Tech Sheet 71779				

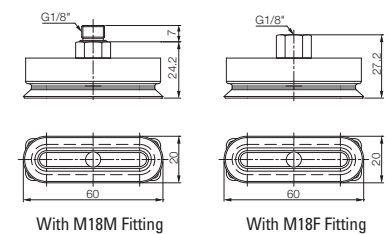
### Dimensions



### 20 x 60mm Cup Only

9204	Material	Colour	Temperature	Hardness
<b>VOU20X60-N</b>	Nitrile	Black	-20°C-110°C	60
<b>VOU20X60-S</b>	Silicone	Red	-70°C-200°C	55
<b>VOU20X60-WS</b>	White Silicone	Translucent White	-70°C-200°C	55
<b>VOU20X60-WS(FDA)</b>	White Silicone (FDA)	Translucent White	-70°C-200°C	55
<b>VOU20X60-CS</b>	Conductive Silicone	Smoky Black	-45°C-90°C	70
<b>VOU20X60-U</b>	Urethane	Dark Green	0-100°C	60
Tech Sheet 71779				

### Dimensions



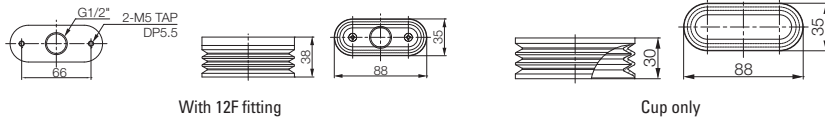


# SUCTION CUPS – LONG MULTI BELLOWS & OVAL TYPE



## VOBL Series

### Dimensions



With 12F fitting

Cup only



### 35 x 90mm, Cup Only

9204	Material	Colour	Temperature	Hardness
VOBL35X90-N	Nitrile	Black	-20°C-110°C	60
VOBL35X90-S	Silicone	Red	-70°C-200°C	55
VOBL35X90-WS	White Silicone	Translucent White	-70°C-200°C	55
VOBL35X90-FDA	White Silicone (FDA)	Translucent White	-70°C-200°C	55
VOBL35X90-CS	Conductive Silicone	Smoky Black	-45°C-90°C	70
VOBL35X90-U	Urethane	Dark Green	0-100°C	60
VOBL35X90-A	Mark Free	Black	-10°C-100°C	75

Tech Sheet 71780

## Disc Filters

### To suit VOBL Series

9204	Material
VTFE-OB35X90	Polyethylene

Tech Sheet 71780



For **Solenoid Valves**  
see pages **1031-1034**

# SUCTION CUPS - UNIVERSAL



## Features & Strengths

- Excellent performance for flat stable and slightly curved surfaces with direct fitting
- Suitable for concave surface

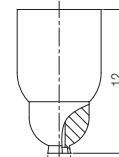
## Examples of Use

- Good lifting forces can be achieved with this cup; is best suited to flat stable surfaces, but can cope with a small degree of curvature
- Very small cups are available down to just 1.5mm diameter

## VU Series



### Dimensions



Cup only

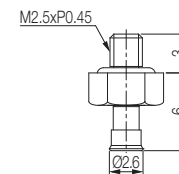
### 1.5mm to suit Level Compensator, Cup Only

9204	Material	Colour	Temperature	Hardness
<b>VU1.5X-N</b>	Nitrile	Black	-20°C-110°C	60
<b>VU1.5X-S</b>	Silicone	Red	-70°C-200°C	55
<b>VU1.5X-WS</b>	White Silicone	Translucent White	-70°C-200°C	55
<b>VU1.5X-WS(FDA)</b>	White Silicone (FDA)	Translucent White	-70°C-200°C	55
<b>VU1.5X-CS</b>	Conductive Silicone	Smoky Black	-45°C-90°C	70
<b>VU1.5X-U</b>	Urethane	Dark Green	0-100°C	60
<b>VU1.5X-A</b>	Mark Free	Black	-10°C-100°C	75

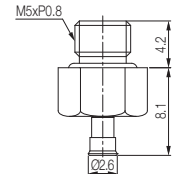
Tech Sheet 71781



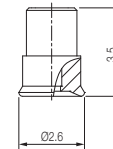
### Dimensions



With M2.5M fitting



With M5M fitting



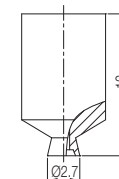
Cup only

### 2mm, Cup Only

9204	Material	Colour	Temperature	Hardness
<b>VU2-N</b>	Nitrile	Black	-20°C-110°C	60
<b>VU2-S</b>	Silicone	Red	-70°C-200°C	55
<b>VU2-WS</b>	White Silicone	Translucent White	-70°C-200°C	55
<b>VU2-WS(FDA)</b>	White Silicone (FDA)	Translucent White	-70°C-200°C	55
<b>VU2-CS</b>	Conductive Silicone	Smoky Black	-45°C-90°C	70
<b>VU2-U</b>	Urethane	Dark Green	0°C-100°C	60
<b>VU2-A</b>	Mark Free	Black	-10°C-100°C	75

Tech Sheet 71781

### Dimensions



Cup only

### 2mm to suit Level Compensator, Cup Only

9204	Material	Colour	Temperature	Hardness
<b>VU2X-N</b>	Nitrile	Black	-20°C-110°C	60
<b>VU2X-S</b>	Silicone	Red	-70°C-200°C	55
<b>VU2X-WS</b>	White Silicone	Translucent White	-70°C-200°C	55
<b>VU2X-WS(FDA)</b>	White Silicone (FDA)	Translucent White	-70°C-200°C	55
<b>VU2X-CS</b>	Conductive Silicone	Smoky Black	-45°C-90°C	70
<b>VU2X-U</b>	Urethane	Dark Green	0-100°C	60
<b>VU2X-A</b>	Mark Free	Black	-10°C-100°C	75

Tech Sheet 71781

# SUCTION CUPS - UNIVERSAL



## Features & Strengths

- Excellent performance for flat stable and slightly curved surfaces with direct fitting
- Suitable for concave surface

## Examples of Use

- Good lifting forces can be achieved with this cup; is best suited to flat stable surfaces, but can cope with a small degree of curvature
- Very small cups are available down to just 1.5mm diameter

## VU Series

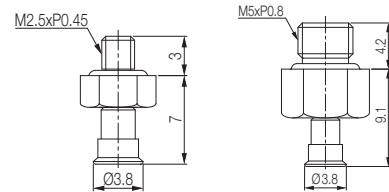


### 3mm, Cup Only

9204	Material	Colour	Temperature	Hardness
VU3-N	Nitrile	Black	-20°C-110°C	60
VU3-S	Silicone	Red	-70°C-200°C	55
VU3-WS	White Silicone	Translucent White	-70°C-200°C	55
VU3-WS(FDA)	White Silicone (FDA)	Translucent White	-70°C-200°C	55
VU3-CS	Conductive Silicone	Smoky Black	-45°C-90°C	70
VU3-U	Urethane	Dark Green	0-100°C	60
VU3-A	Mark Free	Black	-10°C-100°C	75

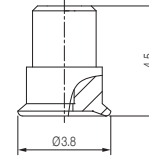
Tech Sheet 71781

### Dimensions



With M2.5M fitting

With M5M fitting



Cup only

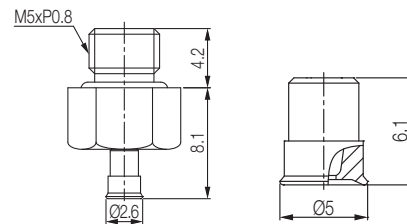


### 4mm, Cup Only

9204	Material	Colour	Temperature	Hardness
VU4-N	Nitrile	Black	-20°C-110°C	60
VU4-S	Silicone	Red	-70°C-200°C	55
VU4-WS	White Silicone	Translucent White	-70°C-200°C	55
VU4-WS-FDA	White Silicone (FDA)	Translucent White	-70°C-200°C	55
VU4-CS	Conductive Silicone	Smoky Black	-45°C-90°C	70
VU4-U	Urethane	Dark Green	0-100°C	60
VU4-A	Mark Free	Black	-10°C-100°C	75

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### Dimensions



With M5M fitting

Cup only

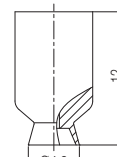


### 4mm to suit Level Compensators, Cup Only

9204	Material	Colour	Temperature	Hardness
VU4X-N	Nitrile	Black	-20°C-110°C	60
VU4X-S	Silicone	Red	-70°C-200°C	55
VU4X-WS	White Silicone	Translucent White	-70°C-200°C	55
VU4X-WS-FDA	White Silicone (FDA)	Translucent White	-70°C-200°C	55
VU4X-CS	Conductive Silicone	Smoky Black	-45°C-90°C	70
VU4X-U	Urethane	Dark Green	0-100°C	60
VU4X-A	Mark Free	Black	-10°C-100°C	75

Tech Sheet 71781

### Dimensions



Cup only

Specifications subject to change without notice

# SUCTION CUPS - UNIVERSAL



## Features & Strengths

- Excellent performance for flat stable and slightly curved surfaces with direct fitting
- Suitable for concave surface

## Examples of Use

- Good lifting forces can be achieved with this cup; is best suited to flat stable surfaces, but can cope with a small degree of curvature
- Very small cups are available down to just 1.5mm diameter

## VU Series

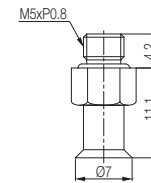


### 6mm, Cup Only

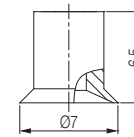
9204	Material	Colour	Temperature	Hardness
<b>VU6-N</b>	Nitrile	Black	-20°C-110°C	60
<b>VU6-S</b>	Silicone	Red	-70°C-200°C	55
<b>VU6-WS</b>	White Silicone	Translucent White	-70°C-200°C	55
<b>VU6-WS-FDA</b>	White Silicone (FDA)	Translucent White	-70°C-200°C	55
<b>VU6-CS</b>	Conductive Silicone	Smoky Black	-45°C-90°C	70
<b>VU6-U</b>	Urethane	Dark Green	0-100°C	60
<b>VU6-A</b>	Mark Free	Black	-10°C-100°C	75

Tech Sheet 71781

### Dimensions



With M5M fitting



Cup only

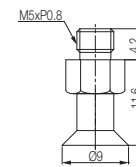


### 8mm, Cup Only

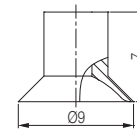
9204	Material	Colour	Temperature	Hardness
<b>VU8-N</b>	Nitrile	Black	-20°C-110°C	60
<b>VU8-S</b>	Silicone	Red	-70°C-200°C	55
<b>VU8-WS</b>	White Silicone	Translucent White	-70°C-200°C	55
<b>VU8-WS-FDA</b>	White Silicone (FDA)	Translucent White	-70°C-200°C	55
<b>VU8-CS</b>	Conductive Silicone	Smoky Black	-45°C-90°C	70
<b>VU8-U</b>	Urethane	Dark Green	0-100°C	60
<b>VU8-A</b>	Mark Free	Black	-10°C-100°C	75

Tech Sheet 71781

### Dimensions



With M5M fitting



Cup only

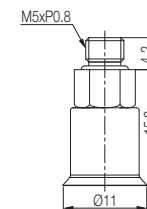


### 10mm, Cup Only

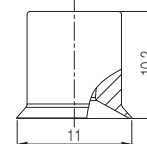
9204	Material	Colour	Temperature	Hardness
<b>VU10-N</b>	Nitrile	Black	-20°C-110°C	60
<b>VU10-S</b>	Silicone	Red	-70°C-200°C	55
<b>VU10-WS</b>	White Silicone	Translucent White	-70°C-200°C	55
<b>VU10-WS(FDA)</b>	White Silicone (FDA)	Translucent White	-70°C-200°C	55
<b>VU10-CS</b>	Conductive Silicone	Smoky Black	-45°C-90°C	70
<b>VU10-U</b>	Urethane	Dark Green	0-100°C	60
<b>VU10-A</b>	Mark Free	Black	-10°C-100°C	75

Tech Sheet 71781

### Dimensions



With M5M fitting



Cup only

# SUCTION CUPS - FLAT

## Features & Strengths

- Specifically designed for flat and curved surface
- Available to handle multiple objects with the same suction cup

## Examples of Use

- Metal sheet, veneer sheets, glass, electronic components

## VF Series

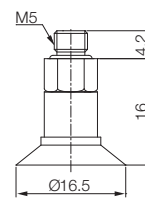


### 15mm, Cup Only

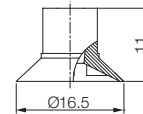
9204	Material	Colour	Temperature	Hardness
VF15-N	Nitrile	Black	-20°C-110°C	60
VF15-S	Silicone	Red	-70°C-200°C	55
VF15-WS	White Silicone	Translucent White	-70°C-200°C	55
VF15-WS-FDA	White Silicone (FDA)	Translucent White	-70°C-200°C	55
VF15-CS	Conductive Silicone	Smoky Black	-45°C-90°C	70
VF15-U	Urethane	Dark Green	0°C-100°C	60
VF15-A	Mark Free	Black	-10°C-100°C	75

Tech Sheet 71782

### Dimensions



With M5M fitting



Cup only

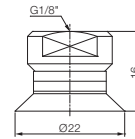


### 20mm, Cup Only

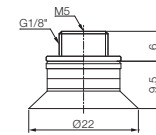
9204	Material	Colour	Temperature	Hardness
VF20-N	Nitrile	Black	-20°C-110°C	60
VF20-S	Silicone	Red	-70°C-200°C	55
VF20-WS	White Silicone	Translucent White	-70°C-200°C	55
VF20-WS-FDA	White Silicone (FDA)	Translucent White	-70°C-200°C	55
VF20-CS	Conductive Silicone	Smoky Black	-45°C-90°C	70
VF20-U	Urethane	Dark Green	0°C-100°C	60
VF20-A	Mark Free	Black	-10°C-100°C	75

Tech Sheet 71782

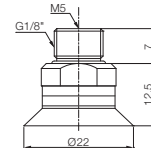
### Dimensions



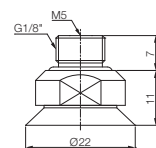
With 18F fitting



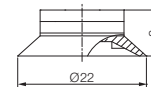
With M518MF fitting



With M518MFO fitting



With M518MFX fitting



Cup only

# SUCTION CUPS - FLAT

## Features & Strengths

- Specifically designed for flat and curved surface
- Available to handle multiple objects with the same suction cup

## Examples of Use

- Metal sheet, veneer sheets, glass, electronic components

## VF Series

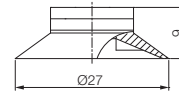
5

### 25mm, Cup Only

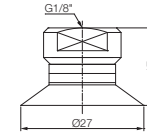
9204	Material	Colour	Temperature	Hardness
<b>VF25-N</b>	Nitrile	Black	-20°C-110°C	60
<b>VF25-S</b>	Silicone	Red	-70°C-20°C	55
<b>VF25-WS</b>	White Silicone	Translucent White	-70°C-200°C	55
<b>VF25-WS-FDA</b>	White Silicone (FDA)	Translucent White	-70°C-200°C	55
<b>VF25-CS</b>	Conductive Silicone	Smoky Black	-45°C-90°C	70
<b>VF25-U</b>	Urethane	Dark Green	0°C-100°C	60
<b>VF25-A</b>	Mark Free	Black	-10°C-100°C	75

Tech Sheet 71782

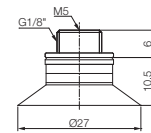
#### Dimensions



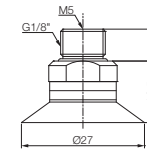
Cup only



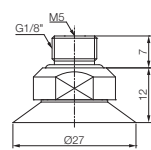
With 18F fitting



With M518MF fitting



With M518MFO fitting



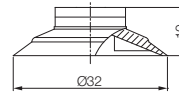
With M518MFX fitting

### 30mm, Cup Only

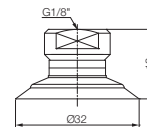
9204	Material	Colour	Temperature	Hardness
<b>VF30-N</b>	Nitrile	Black	-20°C-110°C	60
<b>VF30-S</b>	Silicone	Red	-70°C-200°C	55
<b>VF30-WS</b>	White Silicone	Translucent White	-70°C-200°C	55
<b>VF30-WS-FDA</b>	White Silicone (FDA)	Translucent White	-70°C-200°C	55
<b>VF30-CS</b>	Conductive Silicone	Smoky Black	-45°C-90°C	70
<b>VF30-U</b>	Urethane	Dark Green	0°C-100°C	60
<b>VF30-A</b>	Mark Free	Black	-10°C-100°C	75

Tech Sheet 71782

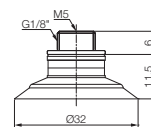
#### Dimensions



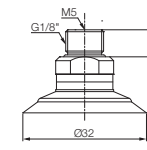
Cup only



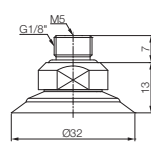
With 18F fitting



With M518MF fitting



With M518MFO fitting



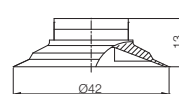
With M518MFX fitting

### 40mm, Cup Only

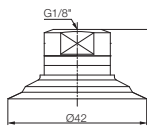
9204	Material	Colour	Temperature	Hardness
<b>VF40-N</b>	Nitrile	Black	-20°C-110°C	60
<b>VF40-S</b>	Silicone	Red	-70°C-200°C	55
<b>VF40-WS</b>	White Silicone	Translucent White	-70°C-200°C	55
<b>VF40-WS-FDA</b>	White Silicone (FDA)	Translucent White	-70°C-200°C	55
<b>VF40-CS</b>	Conductive Silicone	Smoky Black	-45°C-90°C	70
<b>VF40-U</b>	Urethane	Dark Green	0°C-100°C	60
<b>VF40-A</b>	Mark Free	Black	-10°C-100°C	75
<b>VF40-PU</b>	Polyurethane	Translucent Orange	0°C-60°C	60

Tech Sheet 71782

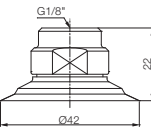
#### Dimensions



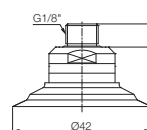
Cup only



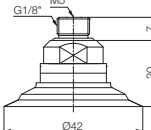
With 18F fitting



With 18FX fitting



With 18M fitting



With M518MFX fitting

# SUCTION CUPS - FLAT

## Features & Strengths

- Specifically designed for flat and curved surface
- Available to handle multiple objects with the same suction cup

## Examples of Use

- Metal sheet, veneer sheets, glass, electronic components

## VF Series

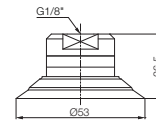


### 50mm, Cup Only

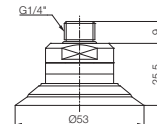
9204	Material	Colour	Temperature	Hardness
VF50-N	Nitrile	Black	-20°C-110°C	60
VF50-S	Silicone	Red	-70°C-200°C	55
VF50-WS	White Silicone	Translucent White	-70°C-200°C	55
VF50-WS-FDA	White Silicone (FDA)	Translucent White	-70°C-200°C	55
VF50-CS	Conductive Silicone	Smoky Black	-45°C-90°C	70
VF50-U	Urethane	Dark Green	0°C-100°C	60
VF50-A	Mark Free	Black	-10°C-100°C	75
VF50-PU	Polyurethane	Translucent Orange	0°C-60°C	60

Tech Sheet 71782

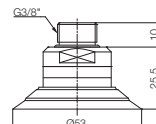
### Dimensions



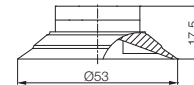
With 18F fitting



With 14M fitting



With 38M fitting



Cup only

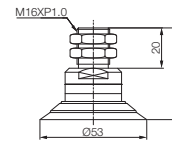


### 50mm with M16M Fitting

9204	Material	Colour	Temperature	Hardness
VF50X2-N	Nitrile	Black	-20°C-110°C	60
VF50X2-S	Silicone	Red	-70°C-200°C	55
VF50X2-WS	White Silicone	Translucent White	-70°C-200°C	55
VF50X2-WS-FDA	White Silicone (FDA)	Translucent White	-70°C-200°C	55
VF50X2-CS	Conductive Silicone	Smoky Black	-45°C-90°C	70
VF50X2-U	Urethane	Dark Green	0°C-100°C	60
VF50X2-A	Mark Free	Black	-10°C-100°C	75

Tech Sheet 71782

### Dimensions



With M16M fitting

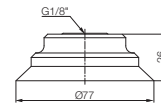


### 75mm, Cup Only

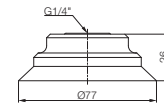
9204	Material	Colour	Temperature	Hardness
VF75-N	Nitrile	Black	-20°C-110°C	60
VF75-S	Silicone	Red	-70°C-200°C	55
VF75-WS	White Silicone	Translucent White	-70°C-200°C	55
VF75-WS-FDA	White Silicone (FDA)	Translucent White	-70°C-200°C	55
VF75-CS	Conductive Silicone	Smoky Black	-45°C-90°C	70
VF75-U	Urethane	Dark Green	0°C-100°C	60
VF75-A	Mark Free	Black	-10°C-100°C	75
VF75-PU	Polyurethane	Translucent Orange	0°C-60°C	60

Tech Sheet 71782

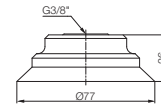
### Dimensions



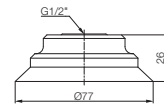
With 18F fitting



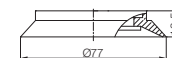
With 14F fitting



With 38F fitting



With 12F fitting



Cup only

# SUCTION CUPS - FLAT

## Features & Strengths

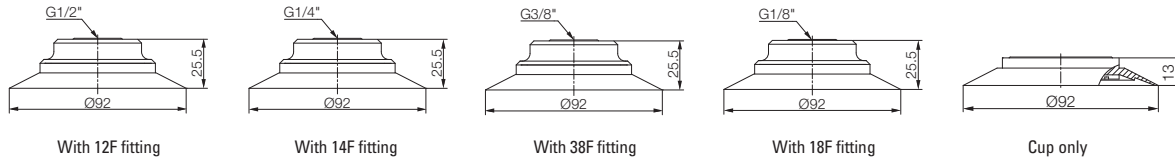
- Specifically designed for flat and curved surface
- Available to handle multiple objects with the same suction cup

## Examples of Use

- Metal sheet, veneer sheets, glass, electronic components

## VF Series

### Dimensions



### 90mm, Cup Only

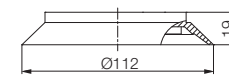
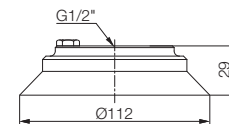
9204	Material	Colour	Temperature	Hardness
<b>VF90-PU</b>	Polyurethane	Translucent Orange	0°C-60°C	60
Tech Sheet 71782				



### 110mm, Cup Only

9204	Material	Colour	Temperature	Hardness
<b>VF110-N</b>	Nitrile	Black	-20°C-110°C	60
<b>VF110-S</b>	Silicone	Red	-70°C-200°C	55
<b>VF110-WS</b>	White Silicone	Translucent White	-70°C-200°C	55
<b>VF110-WS-FDA</b>	White Silicone (FDA)	Translucent White	-70°C-200°C	55
<b>VF110-CS</b>	Conductive Silicone	Smoky Black	-45°C-90°C	70
<b>VF110-U</b>	Urethane	Dark Green	0°C-100°C	60
<b>VF110-A</b>	Mark Free	Black	-10°C-100°C	75
Tech Sheet 71782				

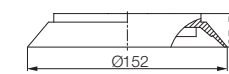
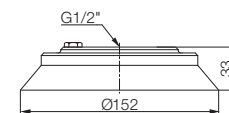
### Dimensions



### 150mm, Cup Only

9204	Material	Colour	Temperature	Hardness
<b>VF150-N</b>	Nitrile	Black	-20°C-110°C	60
<b>VF150-S</b>	Silicone	Red	-70°C-200°C	55
<b>VF150-WS</b>	White Silicone	Translucent White	-70°C-200°C	55
<b>VF150-WS-FDA</b>	White Silicone (FDA)	Translucent White	-70°C-200°C	55
<b>VF150-CS</b>	Conductive Silicone	Smoky Black	-45°C-90°C	70
<b>VF150-U</b>	Urethane	Dark Green	0°C-100°C	60
<b>VF150-A</b>	Mark Free	Black	-10°C-100°C	75
Tech Sheet 71782				

### Dimensions





# SUCTION CUPS - FLAT



## Features & Strengths

- Specifically designed for flat and curved surface
- Available to handle multiple objects with the same suction cup

## Examples of Use

- Metal sheet, veneer sheets, glass, electronic components

## VF Series

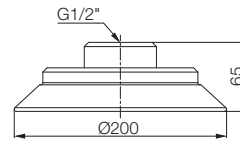


### 200mm, Cup Only

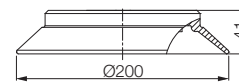
9204	Material	Colour	Temperature	Hardness
VF200-N	Nitrile	Black	-20°C-110°C	60
VF200-S	Silicone	Red	-70°C-200°C	55
VF200-WS	White Silicone	Translucent White	-70°C-200°C	55
VF200-WS-FDA	White Silicone (FDA)	Translucent White	-70°C-200°C	55
VF200-CS	Conductive Silicone	Smoky Black	-45°C-90°C	70
VF200-U	Urethane	Dark Green	0°C-100°C	60
VF200-A	Mark Free	Black	-10°C-100°C	75

Tech Sheet 71782

### Dimensions



With 12F fitting



Cup only

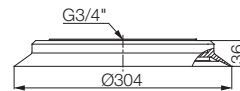


### 300mm Cups with Female Fitting

9204	Material	Female Thread	Colour	Temperature	Hardness
VF300-N-34F	Nitrile	G3/4"	Black	-20°C-110°C	60
VF300-S-34F	Silicone	G3/4"	Red	-70°C-200°C	55
VF300-WS-34F	White Silicone	G3/4"	Translucent White	-70°C-200°C	55
VF300-WS-FDA-34F	White Silicone (FDA)	G3/4"	Translucent White	-70°C-200°C	55
VF300-CS-34F	Conductive Silicone	G3/4"	Smoky Black	-45°C-90°C	70
VF300-U-34F	Urethane	G3/4"	Dark Green	0°C-100°C	60
VF300-A-34F	Mark Free	G3/4"	Black	-10°C-100°C	75

Tech Sheet 71782

### Dimensions



With 34F fitting



For **Portwest PPE & Safeguarding Equipment**  
see pages 1750-1760



# SUCTION CUPS - FLAT, DUAL LIP STRUCTURE



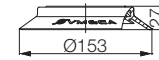
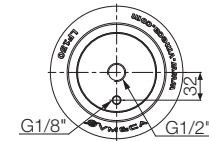
## LF Series

### 150mm, Cup Only



9204	Material	Female Thread	Colour	Temperature	Hardness
LF150-N-12F	Nitrile	G1/2"	Black	-20°C-110°C	60
LF150-S-12F	Silicone	G1/2"	Red	-70°C-200°C	55
LF150-WS-12F	White Silicone	G1/2"	Translucent White	-70°C-200°C	55
LF150-WS-12FDA	White Silicone FDA	G1/2"	Translucent White	-70°C-200°C	55
Tech Sheet 71783					

#### Dimensions



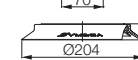
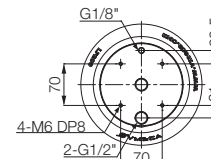
With 12F fitting

### 200mm, Cup Only



9204	Material	Female Thread	Colour	Temperature	Hardness
LF200-N-12F	Nitrile	G1/2"	Black	-20°C-110°C	60
LF200-S-12F	Silicone	G1/2"	Red	-70°C-200°C	55
LF200-WS-12F	White Silicone	G1/2"	Translucent White	-70°C-200°C	55
LF200-WS-12FDA	White Silicone FDA	G1/2"	Translucent White	-70°C-200°C	55
Tech Sheet 71783					

#### Dimensions



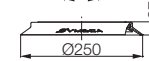
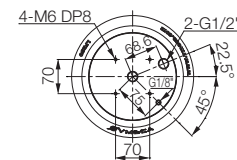
With 12F fitting

### 250mm, Cup Only



9204	Material	Female Thread	Colour	Temperature	Hardness
LF250-N-12F	Nitrile	G1/2"	Black	-20°C-110°C	60
LF250-S-12F	Silicone	G1/2"	Red	-70°C-200°C	55
LF250-WS-12F	White Silicone	G1/2"	Translucent White	-70°C-200°C	55
LF250-WS-12FDA	White Silicone FDA	G1/2"	Translucent White	-70°C-200°C	55
Tech Sheet 71783					

#### Dimensions



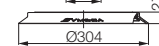
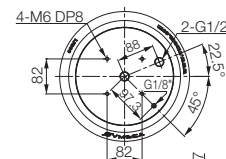
With 12F fitting

### 300mm, Cup Only



9204	Material	Female Thread	Colour	Temperature	Hardness
LF300-N-12F	Nitrile	G1/2"	Black	-20°C-110°C	60
LF300-S-12F	Silicone	G1/2"	Red	-70°C-200°C	55
LF300-WS-12F	White Silicone	G1/2"	Translucent White	-70°C-200°C	55
LF300-WS-12FDA	White Silicone FDA	G1/2"	Translucent White	-70°C-200°C	55
Tech Sheet 71783					

#### Dimensions



With 12F fitting

# SUCTION CUPS - FLAT & CURVE



## Features & Strengths

- Specifically designed for flat and curved surface
- Available to handle multiple objects with the same suction cup

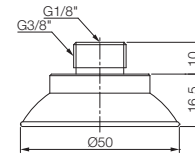
## Examples of Use

- Automobile windscreens, roof and door, metal sheet, shaped metal panel, TV cathode ray tube

## VFC Series



### Dimensions



With 1838MF fitting

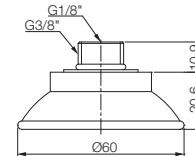
### 50mm Cup with Fitting

9204	Material	Connection		Colour	Temperature	Hardness
		Male	Female			
VFC50-N-1838MF	Nitrile	3/8"	1/8"	Black	-20°C-110°C	60
VFC50-S-1838MF	Silicone	3/8"	1/8"	Red	-70°C-200°C	55
VFC50-WS-1838MF	White Silicone	3/8"	1/8"	Translucent White	-70°C-200°C	55
VFC50-WS-FDA	White Silicone FDA	3/8"	1/8"	Translucent White	-70°C-200°C	55
VFC50-CS-1838MF	Conductive Silicone	3/8"	1/8"	Smoky Black	-45°C-90°C	70
VFC50-U-1838MF	Urethane	3/8"	1/8"	Dark Green	0°C-100°C	60
VFC50-A-1838MF	Mark Free	3/8"	1/8"	Black	-10°C-100°C	75
VFC50-PU-1838MF	Polyurethane	3/8"	1/8"	Translucent Orange	0°C-60°C	60

Tech Sheet 71784



### Dimensions



With 1838MF fitting

### 60mm Cup with Fitting

9204	Material	Connection		Colour	Temperature	Hardness
		Male	Female			
VFC60-N-1838MF	Nitrile	3/8"	1/8"	Black	-20°C-110°C	60
VFC60-S-1838MF	Silicone	3/8"	1/8"	Red	-70°C-200°C	55
VFC60-WS-1838MF	White Silicone	3/8"	1/8"	Translucent White	-70°C-200°C	55
VFC60-WS-FDA	White Silicone FDA	3/8"	1/8"	Translucent White	-70°C-200°C	55
VFC60-CS-1838MF	Conductive Silicone	3/8"	1/8"	Smoky Black	-45°C-90°C	70
VFC60-U-1838MF	Urethane	3/8"	1/8"	Dark Green	0°C-100°C	60
VFC60-A-1838MF	Mark Free	3/8"	1/8"	Black	-10°C-100°C	75
VFC60-PU-1838MF	Polyurethane	3/8"	1/8"	Translucent Orange	0°C-60°C	60
VFC60X1-N-M10M	Nitrile	M10	-	Black	-20°C-110°C	60
VFC60X1-S-M10M	Silicone	M10	-	Red	-70°C-200°C	55
VFC60X1-WS-M10M	White Silicone	M10	-	Translucent White	-70°C-200°C	55
VFC60X1-WSA-FDA	White Silicone FDA	M10	-	Translucent White	-70°C-200°C	55
VFC60X1-CS-M10M	Conductive Silicone	M10	-	Smoky Black	-45°C-90°C	70
VFC60X1-U-M10M	Urethane	M10	-	Dark Green	0°C-100°C	60
VFC60X1-A-M10M	Mark Free	M10	-	Black	-10°C-100°C	75
VFC60X1-PU-M10M	Polyurethane	M10	-	Translucent Orange	0°C-60°C	60

Tech Sheet 71784

# SUCTION CUPS - FLAT & CURVE



## Features & Strengths

- Specifically designed for flat and curved surface
- Available to handle multiple objects with the same suction cup

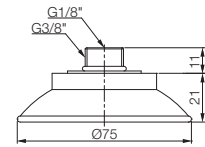
## Examples of Use

- Automobile windscreens, roof and door, metal sheet, shaped metal panel, TV cathode ray tube

## VFC Series



## Dimensions



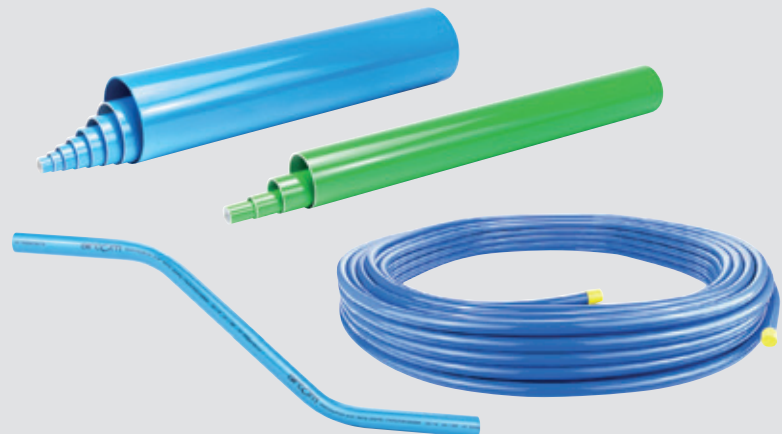
With 1838MF fitting

## 75mm Cup with Fitting

9204	Material	Connection		Colour	Temperature	Hardness
		Male	Female			
<b>VFC75-N-1838MF</b>	Nitrile	3/8"	1/8"	Black	-20°C-110°C	60
<b>VFC75-S-1838MF</b>	Silicone	3/8"	1/8"	Red	-70°C-200°C	55
<b>VFC75-WS-1838MF</b>	White Silicone	3/8"	1/8"	Translucent White	-70°C-200°C	55
<b>VFC75-WS-FDA</b>	White Silicone FDA	3/8"	1/8"	Translucent White	-70°C-200°C	55
<b>VFC75-CS-1838MF</b>	Conductive Silicone	3/8"	1/8"	Smoky Black	-45°C-90°C	70
<b>VFC75-U-1838MF</b>	Urethane	3/8"	1/8"	Dark Green	0°C-100°C	60
<b>VFC75-A-1838MF</b>	Mark Free	3/8"	1/8"	Black	-10°C-100°C	75
<b>VFC75-PU-1838MF</b>	Polyurethane	3/8"	1/8"	Translucent Orange	0°C-60°C	60
<b>VFC75X1-N-M10M</b>	Nitrile	M10	-	Black	-20°C-110°C	60
<b>VFC75X1-S-M10M</b>	Silicone	M10	-	Red	-70°C-200°C	55
<b>VFC75X1-WS-M10M</b>	White Silicone	M10	-	Translucent White	-70°C-200°C	55
<b>VFC75X1-WS-FDA</b>	White Silicone FDA	M10	-	Translucent White	-70°C-200°C	55
<b>VFC75X1-CS-M10M</b>	Conductive Silicone	M10	-	Smoky Black	-45°C-90°C	70
<b>VFC75X1-U-M10M</b>	Urethane	M10	-	Dark Green	0°C-100°C	60
<b>VFC75X1-A-M10M</b>	Mark Free	M10	-	Black	-10°C-100°C	75
<b>VFC75X2-N-M16M</b>	Nitrile	M16	-	Black	-20°C-110°C	60
<b>VFC75X2-S-M16M</b>	Silicone	M16	-	Red	-70°C-200°C	55
<b>VFC75X2-WS-M16M</b>	White Silicone	M16	-	Translucent White	-70°C-200°C	55
<b>VFC75X2-WS-FDA</b>	White Silicone FDA	M16	-	Translucent White	-70°C-200°C	55
<b>VFC75X2-CS-M16M</b>	Conductive Silicone	M16	-	Smoky Black	-45°C-90°C	70
<b>VFC75X2-U-M16M</b>	Urethane	M16	-	Dark Green	0°C-100°C	60
<b>VFC75X2-A-M16M</b>	Mark Free	M16	-	Black	-10°C-100°C	75

Tech Sheet 71784

aircom  
PIPING SYSTEM



For Aircom Ring Main System  
see pages 1068-1080

# SUCTION CUPS - FLAT & CURVE



## Features & Strengths

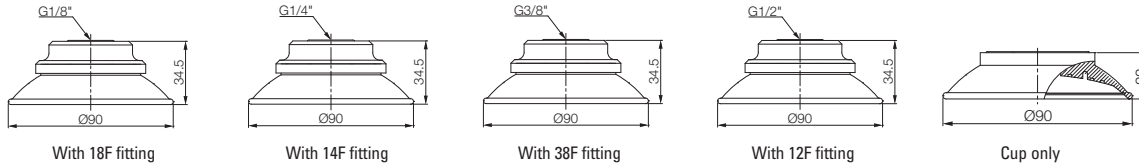
- Specifically designed for flat and curved surface
- Available to handle multiple objects with the same suction cup

## Examples of Use

- Automobile windscreens, roof and door, metal sheet, shaped metal panel, TV cathode ray tube

## VFC Series

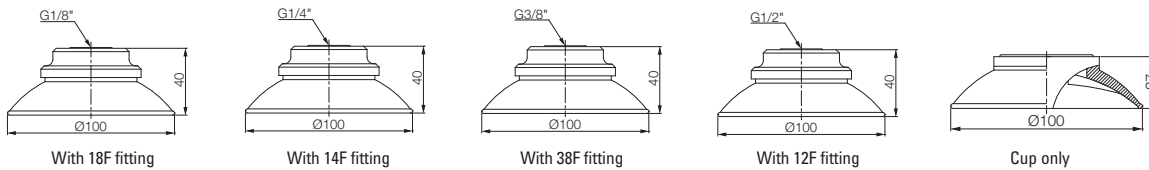
### Dimensions



### 90mm Cups, Cup Only

9204	Material	Colour	Temperature	Hardness
VFC90-PU	Polyurethane	Translucent Orange	0°C-60°C	60
Tech Sheet 71784				

### Dimensions



### 100mm Cups, Cup Only

9204	Material	Colour	Temperature	Hardness
VFC100-N	Nitrile	Black	-20°C-110°C	60
VFC100-S	Silicone	Red	-70°C-200°C	55
VFC100-WS	White Silicone	Translucent White	-70°C-200°C	55
VFC100-WS-FDA	White Silicone FDA	Translucent White	-70°C-200°C	55
VFC100-CS	Conductive Silicone	Smoky Black	-45°C-90°C	70
VFC100-U	Urethane	Dark Green	0°C-100°C	60
VFC100-A	Mark Free	Black	-10°C-100°C	75
VFC100-PU	Polyurethane	Translucent Orange	0°C-60°C	60
Tech Sheet 71784				

# SUCTION CUPS - MARK FREE, FLAT STRUCTURE



## Features & Strengths

- Excellent performance for very thin and light weight products
- Mark free

## Examples of Use

- Semiconductor, display, thin film

## FF Series

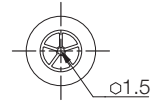
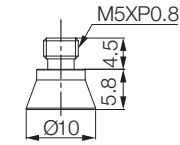


### 10mm Cups with M5 Male Fitting

9204	Material	Colour	Temperature	Hardness
<b>FF10-N-M5M</b>	Nitrile	Black	-20°C-110°C	60
<b>FF10-S-M5M</b>	Silicone	Red	-70°C-200°C	55
<b>FF10-WS-M5M</b>	White Silicone	Translucent White	-70°C-200°C	55
<b>FF10-WS-M5M-FDA</b>	White Silicone (FDA)	Translucent White	-70°C-200°C	55
<b>FF10-CS-M5M</b>	Conductive Silicone	Smoky Black	-45°C-90°C	70

Tech Sheet 71785

### Dimensions



With M5M fitting

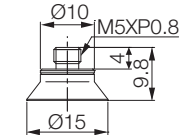


### 15mm, Cup Only

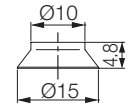
9204	Material	Colour	Temperature	Hardness
<b>FF15-N</b>	Nitrile	Black	-20°C-110°C	60
<b>FF15-S</b>	Silicone	Red	-70°C-200°C	55
<b>FF15-WS</b>	White Silicone	Translucent White	-70°C-200°C	55
<b>FF15-WS-FDA</b>	White Silicone (FDA)	Translucent White	-70°C-200°C	55
<b>FF15-CS</b>	Conductive Silicone	Smoky Black	-45°C-90°C	70

Tech Sheet 71785

### Dimensions



With M5M fitting



Cup only

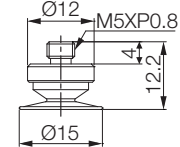


### 15mm with 7mm Neck, Cup Only

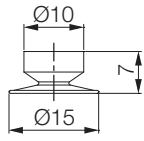
9204	Material	Colour	Temperature	Hardness
<b>FF15X-N</b>	Nitrile	Black	-20°C-110°C	60
<b>FF15X-S</b>	Silicone	Red	-70°C-200°C	55
<b>FF15X-WS</b>	White Silicone	Translucent White	-70°C-200°C	55
<b>FF15X-WS-FDA</b>	White Silicone (FDA)	Translucent White	-70°C-200°C	55
<b>FF15X-CS</b>	Conductive Silicone	Smoky Black	-45°C-90°C	70

Tech Sheet 71785

### Dimensions



With M5M fitting



Cup only

# SUCTION CUPS - MARK FREE, FLAT STRUCTURE



## Features & Strengths

- Excellent performance for very thin and light weight products
- Mark free

## Examples of Use

- Semiconductor, display, thin film

## FF Series

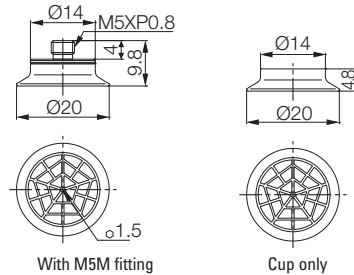


### 20mm, Cup Only

9204	Material	Colour	Temperature	Hardness
FF20-N	Nitrile	Black	-20°C-110°C	60
FF20-S	Silicone	Red	-70°C-200°C	55
FF20-WS	White Silicone	Translucent White	-70°C-200°C	55
FF20-WS-FDA	White Silicone (FDA)	Translucent White	-70°C-200°C	55
FF20-CS	Conductive Silicone	Smoky Black	-45°C-90°C	70

Tech Sheet 71785

### Dimensions

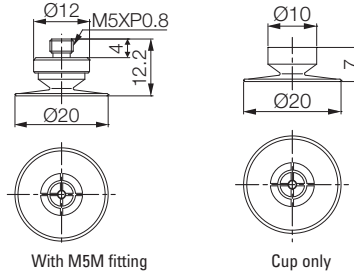


### 20mm with 7mm Neck, Cup Only

9204	Material	Colour	Temperature	Hardness
FF20X-N	Nitrile	Black	-20°C-110°C	60
FF20X-S	Silicone	Red	-70°C-200°C	55
FF20X-WS	White Silicone	Translucent White	-70°C-200°C	55
FF20X-WS-FDA	White Silicone (FDA)	Translucent White	-70°C-200°C	55
FF20X-CS	Conductive Silicone	Smoky Black	-45°C-90°C	70

Tech Sheet 71785

### Dimensions

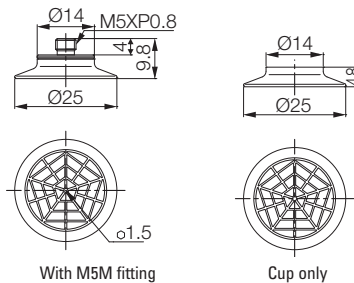


### 25mm, Cup Only

9204	Material	Colour	Temperature	Hardness
FF25-N	Nitrile	Black	-20°C-110°C	60
FF25-S	Silicone	Red	-70°C-200°C	55
FF25-WS	White Silicone	Translucent White	-70°C-200°C	55
FF25-WS-FDA	White Silicone (FDA)	Translucent White	-70°C-200°C	55
FF25-CS	Conductive Silicone	Smoky Black	-45°C-90°C	70

Tech Sheet 71785

### Dimensions

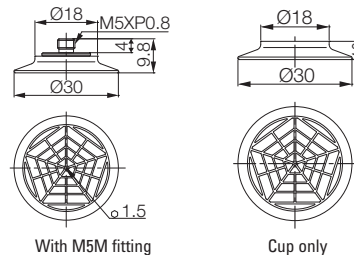


### 30mm, Cup Only

9204	Material	Colour	Temperature	Hardness
FF30-N	Nitrile	Black	-20°C-110°C	60
FF30-S	Silicone	Red	-70°C-200°C	55
FF30-WS	White Silicone	Translucent White	-70°C-200°C	55
FF30-WS-FDA	White Silicone (FDA)	Translucent White	-70°C-200°C	55
FF30-CS	Conductive Silicone	Smoky Black	-45°C-90°C	70

Tech Sheet 71785

### Dimensions



# SUCTION CUPS - DEEP



## Features & Strengths

- This cup is best suited to curved or irregular surfaces
- Excellent performance for round corners and edge

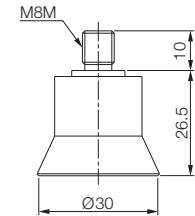
## Suitable for Handling

- Automotive roof and doors
- Shaped sheet metal
- Sheet metals, plastics and veneers
- Pre-mounted fitting

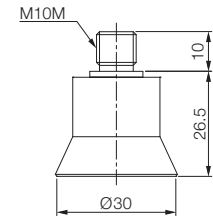
## VD Series



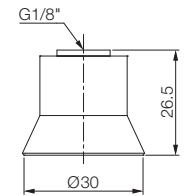
## Dimensions



With M8M fitting



With M10M fitting



With 18F fitting

## 30mm Cups with Fitting

9204	Material	Connection	Colour	Temperature	Hardness	Type
<b>VD30-N-M8M</b>	Nitrile	M8	Black	-20°C-110°C	60	Male
<b>VD30-S-M8M</b>	Silicone	M8	Red	-70°C-200°C	55	Male
<b>VD30-WS-M8M</b>	White Silicone	M8	Translucent White	-70°C-200°C	55	Male
<b>VD30-WS-FDA-M8M</b>	White Silicone (FDA)	M8	Translucent White	-70°C-200°C	55	Male
<b>VD30-CS-M8M</b>	Conductive Silicone	M8	Smoky Black	-45°C-90°C	70	Male
<b>VD30-U-M8M</b>	Urethane	M8	Dark Green	0°C-100°C	60	Male
<b>VD30-A-M8M</b>	Mark Free	M8	Black	-10°C-100°C	75	Male
<b>VD30-PU-M8M</b>	Polyurethane	M8	Translucent Orange	0°C-60°C	60	Male
<b>VD30-N-M10M</b>	Nitrile	M10	Black	-20°C-110°C	60	Male
<b>VD30-S-M10M</b>	Silicone	M10	Red	-70°C-200°C	55	Male
<b>VD30-WS-M10M</b>	White Silicone	M10	Translucent White	-70°C-200°C	55	Male
<b>VD30-WS-FDA-M10M</b>	White Silicone (FDA)	M10	Translucent White	-70°C-200°C	55	Male
<b>VD30-CS-M10M</b>	Conductive Silicone	M10	Smoky Black	-45°C-90°C	70	Male
<b>VD30-U-M10M</b>	Urethane	M10	Dark Green	0°C-100°C	60	Male
<b>VD30-A-M10M</b>	Mark Free	M10	Black	-10°C-100°C	75	Male
<b>VD30-PU-M10M</b>	Polyurethane	M10	Translucent Orange	0°C-60°C	60	Male
<b>VD30-N-18F</b>	Nitrile	G1/8"	Black	-20°C-110°C	60	Female
<b>VD30-S-18F</b>	Silicone	G1/8"	Red	-70°C-200°C	55	Female
<b>VD30-WS-18F</b>	White Silicone	G1/8"	Translucent White	-70°C-200°C	55	Female
<b>VD30-WS-FDA-18F</b>	White Silicone (FDA)	G1/8"	Translucent White	-70°C-200°C	55	Female
<b>VD30-CS-18F</b>	Conductive Silicone	G1/8"	Smoky Black	-45°C-90°C	70	Female
<b>VD30-U-18F</b>	Urethane	G1/8"	Dark Green	0°C-100°C	60	Female
<b>VD30-A-18F</b>	Mark Free	G1/8"	Black	-10°C-100°C	75	Female
<b>VD30-PU-18F</b>	Polyurethane	G1/8"	Translucent Orange	0°C-60°C	60	Female

Tech Sheet 71786

# RIDGID



For Ridgid Tools  
see pages 1742-1746



# SUCTION CUPS - DEEP

## Features & Strengths

- This cup is best suited to curved or irregular surfaces
- Excellent performance for round corners and edge

## Suitable for Handling

- Automotive roof and doors
- Sheet metals, plastics and veneers
- Shaped sheet metal
- Pre-mounted fitting

## VD Series

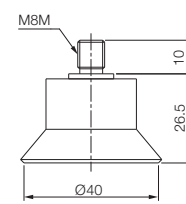


### 40mm Cups with Fitting

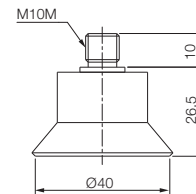
9204	Material	Connection	Colour	Temperature	Hardness	Type
<b>VD40-N-M8M</b>	Nitrile	M8	Black	-20°C-110°C	60	Male
<b>VD40-S-M8M</b>	Silicone	M8	Red	-70°C-200°C	55	Male
<b>VD40-WS-M8M</b>	White Silicone	M8	Translucent White	-70°C-200°C	55	Male
<b>VD40-WS-FDA-M8M</b>	White Silicone (FDA)	M8	Translucent White	-70°C-200°C	55	Male
<b>VD40-CS-M8M</b>	Conductive Silicone	M8	Smoky Black	-45°C-90°C	70	Male
<b>VD40-U-M8M</b>	Urethane	M8	Dark Green	0°C-100°C	60	Male
<b>VD40-A-M8M</b>	Mark Free	M8	Black	-10°C-100°C	75	Male
<b>VD40-PU-M8M</b>	Polyurethane	M8	Translucent Orange	0°C-60°C	60	Male
<b>VD40-N-M10M</b>	Nitrile	M10	Black	-20°C-110°C	60	Male
<b>VD40-S-M10M</b>	Silicone	M10	Red	-70°C-200°C	55	Male
<b>VD40-WS-M10M</b>	White Silicone	M10	Translucent White	-70°C-200°C	55	Male
<b>VD40-WS-FDA-M10M</b>	White Silicone (FDA)	M10	Translucent White	-70°C-200°C	55	Male
<b>VD40-CS-M10M</b>	Conductive Silicone	M10	Smoky Black	-45°C-90°C	70	Male
<b>VD40-U-M10M</b>	Urethane	M10	Dark Green	0°C-100°C	60	Male
<b>VD40-A-M10M</b>	Mark Free	M10	Black	-10°C-100°C	75	Male
<b>VD40-PU-M10M</b>	Polyurethane	M10	Translucent Orange	0°C-60°C	60	Male
<b>VD40-N-18F</b>	Nitrile	G1/8"	Black	-20°C-110°C	60	Female
<b>VD40-S-18F</b>	Silicone	G1/8"	Red	-70°C-200°C	55	Female
<b>VD40-WS-18F</b>	White Silicone	G1/8"	Translucent White	-70°C-200°C	55	Female
<b>VD40-WS-FDA-18F</b>	White Silicone (FDA)	G1/8"	Translucent White	-70°C-200°C	55	Female
<b>VD40-CS-18F</b>	Conductive Silicone	G1/8"	Smoky Black	-45°C-90°C	70	Female
<b>VD40-U-18F</b>	Urethane	G1/8"	Dark Green	0°C-100°C	60	Female
<b>VD40-A-18F</b>	Mark Free	G1/8"	Black	-10°C-100°C	75	Female
<b>VD40-PU-18F</b>	Polyurethane	G1/8"	Translucent Orange	0°C-60°C	60	Female

Tech Sheet 71786

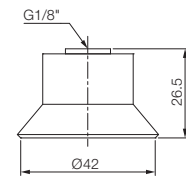
### Dimensions



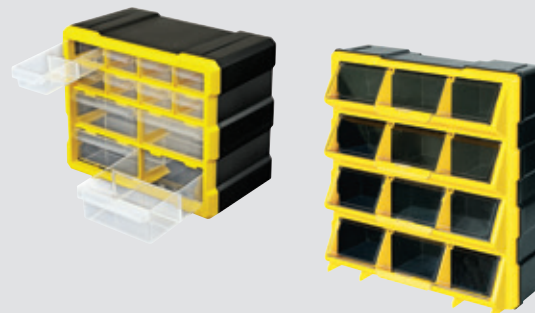
With M8M fitting



With M10M fitting



With 18F fitting



For Storage Range  
see page 1747

# SUCTION CUPS - DEEP



## Features & Strengths

- This cup is best suited to curved or irregular surfaces
- Excellent performance for round corners and edge

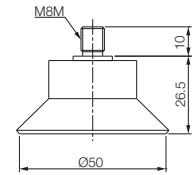
## Suitable for Handling

- Automotive roof and doors
- Sheet metals, plastics and veneers
- Shaped sheet metal
- Pre-mounted fitting

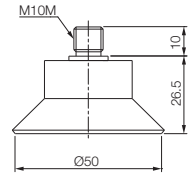
## VD Series



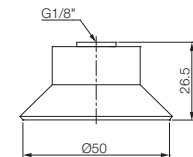
## Dimensions



With M8M fitting



With M10M fitting



With 18F fitting

## 50mm Cups with Fitting

9204	Material	Connection	Colour	Temperature	Hardness	Type
<b>VD50-N-M8M</b>	Nitrile	M8	Black	-20°C-110°C	60	Male
<b>VD50-S-M8M</b>	Silicone	M8	Red	-70°C-200°C	55	Male
<b>VD50-WS-M8M</b>	White Silicone	M8	Translucent White	-70°C-200°C	55	Male
<b>VD50-WS-FDA-M8M</b>	White Silicone (FDA)	M8	Translucent White	-70°C-200°C	55	Male
<b>VD50-CS-M8M</b>	Conductive Silicone	M8	Smoky Black	-45°C-90°C	70	Male
<b>VD50-U-M8M</b>	Urethane	M8	Dark Green	0°C-100°C	60	Male
<b>VD50-A-M8M</b>	Mark Free	M8	Black	-10°C-100°C	75	Male
<b>VD50-PU-M8M</b>	Polyurethane	M8	Translucent Orange	0°C-60°C	60	Male
<b>VD50-N-M10M</b>	Nitrile	M10	Black	-20°C-110°C	60	Male
<b>VD50-S-M10M</b>	Silicone	M10	Red	-70°C-200°C	55	Male
<b>VD50-WS-M10M</b>	White Silicone	M10	Translucent White	-70°C-200°C	55	Male
<b>VD50-WS-FDA-M10M</b>	White Silicone (FDA)	M10	Translucent White	-70°C-200°C	55	Male
<b>VD50-CS-M10M</b>	Conductive Silicone	M10	Smoky Black	-45°C-90°C	70	Male
<b>VD50-U-M10M</b>	Urethane	M10	Dark Green	0°C-100°C	60	Male
<b>VD50-A-M10M</b>	Mark Free	M10	Black	-10°C-100°C	75	Male
<b>VD50-PU-M10M</b>	Polyurethane	M10	Translucent Orange	0°C-60°C	60	Male
<b>VD50-N-18F</b>	Nitrile	G1/8"	Black	-20°C-110°C	60	Female
<b>VD50-S-18F</b>	Silicone	G1/8"	Red	-70°C-200°C	55	Female
<b>VD50-WS-18F</b>	White Silicone	G1/8"	Translucent White	-70°C-200°C	55	Female
<b>VD50-WS-FDA-18F</b>	White Silicone (FDA)	G1/8"	Translucent White	-70°C-200°C	55	Female
<b>VD50-CS-18F</b>	Conductive Silicone	G1/8"	Smoky Black	-45°C-90°C	70	Female
<b>VD50-U-18F</b>	Urethane	G1/8"	Dark Green	0°C-100°C	60	Female
<b>VD50-A-18F</b>	Mark Free	G1/8"	Black	-10°C-100°C	75	Female
<b>VD50-PU-18F</b>	Polyurethane	G1/8"	Translucent Orange	0°C-60°C	60	Female

Tech Sheet 71786



For Ring Main Parker Transair Tools  
see pages 1064-1067

# SUCTION CUPS - DEEP

## Features & Strengths

- This cup is best suited to curved or irregular surfaces
- Excellent performance for round corners and edge

## Suitable for Handling

- Automotive roof and doors
- Sheet metals, plastics and veneers
- Shaped sheet metal
- Pre-mounted fitting

## VD Series

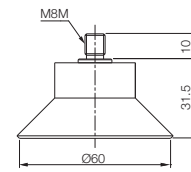


### 60mm Cups with Fitting

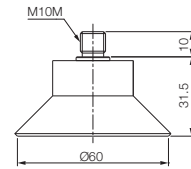
9204	Material	Connection	Colour	Temperature	Hardness	Type
<b>VD60-N-M8M</b>	Nitrile	M8	Black	-20°C-110°C	60	Male
<b>VD60-S-M8M</b>	Silicone	M8	Red	-70°C-200°C	55	Male
<b>VD60-WS-M8M</b>	White Silicone	M8	Translucent White	-70°C-200°C	55	Male
<b>VD60-WS-FDA-M8M</b>	White Silicone (FDA)	M8	Translucent White	-70°C-200°C	55	Male
<b>VD60-CS-M8M</b>	Conductive Silicone	M8	Smoky Black	-45°C-90°C	70	Male
<b>VD60-U-M8M</b>	Urethane	M8	Dark Green	0°C-100°C	60	Male
<b>VD60-A-M8M</b>	Mark Free	M8	Black	-10°C-100°C	75	Male
<b>VD60-PU-M8M</b>	Polyurethane	M8	Translucent Orange	0°C-60°C	60	Male
<b>VD60-N-M10M</b>	Nitrile	M10	Black	-20°C-110°C	60	Male
<b>VD60-S-M10M</b>	Silicone	M10	Red	-70°C-200°C	55	Male
<b>VD60-WS-M10M</b>	White Silicone	M10	Translucent White	-70°C-200°C	55	Male
<b>VD60-WS-FDA-M10M</b>	White Silicone (FDA)	M10	Translucent White	-70°C-200°C	55	Male
<b>VD60-CS-M10M</b>	Conductive Silicone	M10	Smoky Black	-45°C-90°C	70	Male
<b>VD60-U-M10M</b>	Urethane	M10	Dark Green	0°C-100°C	60	Male
<b>VD60-A-M10M</b>	Mark Free	M10	Black	-10°C-100°C	75	Male
<b>VD60-PU-M10M</b>	Polyurethane	M10	Translucent Orange	0°C-60°C	60	Male
<b>VD60-N-18F</b>	Nitrile	G1/8"	Black	-20°C-110°C	60	Female
<b>VD60-S-18F</b>	Silicone	G1/8"	Red	-70°C-200°C	55	Female
<b>VD60-WS-18F</b>	White Silicone	G1/8"	Translucent White	-70°C-200°C	55	Female
<b>VD60-WS-FDA-18F</b>	White Silicone (FDA)	G1/8"	Translucent White	-70°C-200°C	55	Female
<b>VD60-CS-18F</b>	Conductive Silicone	G1/8"	Smoky Black	-45°C-90°C	70	Female
<b>VD60-U-18F</b>	Urethane	G1/8"	Dark Green	0°C-100°C	60	Female
<b>VD60-A-18F</b>	Mark Free	G1/8"	Black	-10°C-100°C	75	Female
<b>VD60-PU-18F</b>	Polyurethane	G1/8"	Translucent Orange	0°C-60°C	60	Female

Tech Sheet 71786

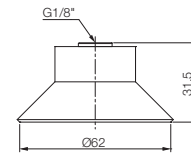
### Dimensions



With M8M fitting



With M10M fitting



With 18F fitting

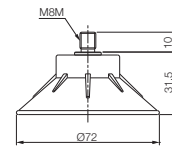
### 70mm Cups with Fitting

9204	Material	Connection	Colour	Temperature	Hardness	Type
<b>VD70-PU-M8M</b>	Polyurethane	M8	Translucent Orange	0°C-60°C	60	Male
<b>VD70-PU-M10M</b>	Polyurethane	M10	Translucent Orange	0°C-60°C	60	Male
<b>VD70-PU-18F</b>	Polyurethane	G1/8"	Translucent Orange	0°C-60°C	60	Female

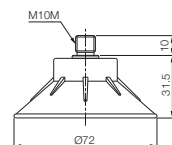
Tech Sheet 71786



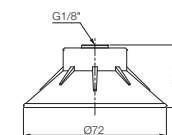
### Dimensions



With M8M fitting



With M10M fitting



With 18F fitting

# SUCTION CUPS - DEEP

## Features & Strengths

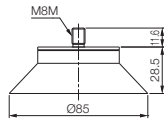
- This cup is best suited to curved or irregular surfaces
- Excellent performance for round corners and edge

## Suitable for Handling

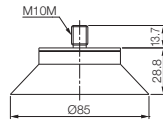
- Automotive roof and doors
- Shaped sheet metal
- Sheet metals, plastics and veneers
- Pre-mounted fitting

## VD Series

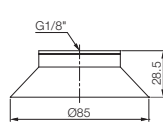
### Dimensions



With M8M fitting



With M10M fitting



With 18F fitting



### 85mm Cups with Fitting

9204	Material	Connection	Colour	Temperature	Hardness	Type
<b>VD85-N-M8M</b>	Nitrile	M8	Black	-20°C-110°C	60	Male
<b>VD85-S-M8M</b>	Silicone	M8	Red	-70°C-200°C	55	Male
<b>VD85-WS-M8M</b>	White Silicone	M8	Translucent White	-70°C-200°C	55	Male
<b>VD85-WS-FDA-M8M</b>	White Silicone (FDA)	M8	Translucent White	-70°C-200°C	55	Male
<b>VD85-CS-M8M</b>	Conductive Silicone	M8	Smoky Black	-45°C-90°C	70	Male
<b>VD85-U-M8M</b>	Urethane	M8	Dark Green	0°C-100°C	60	Male
<b>VD85-A-M8M</b>	Mark Free	M8	Black	-10°C-100°C	75	Male
<b>VD85-N-M10M</b>	Nitrile	M10	Black	-20°C-110°C	60	Male
<b>VD85-S-M10M</b>	Silicone	M10	Red	-70°C-200°C	55	Male
<b>VD85-WS-M10M</b>	White Silicone	M10	Translucent White	-70°C-200°C	55	Male
<b>VD85-WS-FDA-M10M</b>	White Silicone (FDA)	M10	Translucent White	-70°C-200°C	55	Male
<b>VD85-CS-M10M</b>	Conductive Silicone	M10	Smoky Black	-45°C-90°C	70	Male
<b>VD85-U-M10M</b>	Urethane	M10	Dark Green	0°C-100°C	60	Male
<b>VD85-A-M10M</b>	Mark Free	M10	Black	-10°C-100°C	75	Male
<b>VD85-N-18F</b>	Nitrile	G1/8"	Black	-20°C-110°C	60	Female
<b>VD85-S-18F</b>	Silicone	G1/8"	Red	-70°C-200°C	55	Female
<b>VD85-WS-18F</b>	White Silicone	G1/8"	Translucent White	-70°C-200°C	55	Female
<b>VD85-WS-FDA-18F</b>	White Silicone (FDA)	G1/8"	Translucent White	-70°C-200°C	55	Female
<b>VD85-CS-18F</b>	Conductive Silicone	G1/8"	Smoky Black	-45°C-90°C	70	Female
<b>VD85-U-18F</b>	Urethane	G1/8"	Dark Green	0°C-100°C	60	Female
<b>VD85-A-18F</b>	Mark Free	G1/8"	Black	-10°C-100°C	75	Female
<b>VD85-N-12F</b>	Nitrile	G1/2"	Black	-20°C-110°C	60	Female
<b>VD85-S-12F</b>	Silicone	G1/2"	Red	-70°C-200°C	55	Female
<b>VD85-WS-12F</b>	White Silicone	G1/2"	Translucent White	-70°C-200°C	55	Female
<b>VD85-WS-FDA-12F</b>	White Silicone (FDA)	G1/2"	Translucent White	-70°C-200°C	55	Female
<b>VD85-CS-12F</b>	Conductive Silicone	G1/2"	Smoky Black	-45°C-90°C	70	Female
<b>VD85-U-12F</b>	Urethane	G1/2"	Dark Green	0°C-100°C	60	Female
<b>VD85-A-12F</b>	Mark Free	G1/2"	Black	-10°C-100°C	75	Female

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# SUCTION CUPS - DEEP

## Features & Strengths

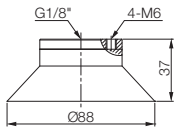
- This cup is best suited to curved or irregular surfaces
- Excellent performance for round corners and edge

## Suitable for Handling

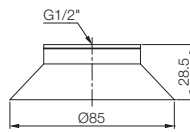
- Automotive roof and doors
- Sheet metals, plastics and veneers
- Shaped sheet metal
- Pre-mounted fitting

## VD Series

### Dimensions



With 18F fitting



With 12F fitting

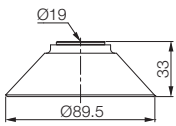


### 85mm Cups with Fitting (inc. 4 x M6)

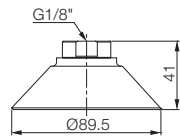
9204	Material	Connection	Colour	Temperature	Hardness	Type
VD85X-N-18F	Nitrile	G1/8"	Black	-20°C-110°C	60	Female
VD85X-S-18F	Silicone	G1/8"	Red	-70°C-200°C	55	Female
VD85X-WS-18F	White Silicone	G1/8"	Translucent White	-70°C-200°C	55	Female
VD85X-WS-FDA-18F	White Silicone (FDA)	G1/8"	Translucent White	-70°C-200°C	55	Female
VD85X-CS-18F	Conductive Silicone	G1/8"	Smoky Black	-45°C-90°C	70	Female
VD85X-U-18F	Urethane	G1/8"	Dark Green	0°C-100°C	60	Female
VD85X-A-18F	Mark Free	G1/8"	Black	-10°C-100°C	75	Female

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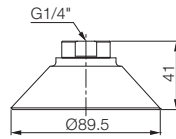
### Dimensions



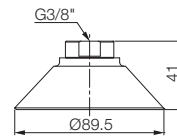
190 Hole



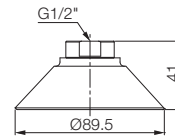
With 18F fitting



With 14F fitting



With 38F fitting



With 12F fitting



### 90mm Cups with Fitting

9204	Material	Connection	Colour	Temperature	Hardness	Type
VD90F-PU-M10M	Polyurethane	M10	Translucent Orange	0°C-60°C	60	Male
VD90F-PU-18F	Polyurethane	G1/8"	Translucent Orange	0°C-60°C	60	Female
VD90F-PU-14F	Polyurethane	G1/4"	Translucent Orange	0°C-60°C	60	Female
VD90F-PU-38F	Polyurethane	G3/8"	Translucent Orange	0°C-60°C	60	Female
VD90F-PU-12F	Polyurethane	G1/2"	Translucent Orange	0°C-60°C	60	Female
VD90F-PU-H19	Polyurethane	190 Hole	Translucent Orange	0°C-60°C	60	N/A

Tech Sheet 71786

# SUCTION CUPS, SPECIAL FLAT/BELLOWS

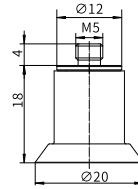


## 1900 Series

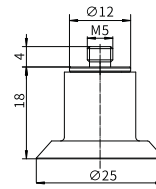
Specially designed for opening plastic bags. Suitable for handling thin and delicate objects, such as plastic films or paper. The thin and adaptable lip together with the internal plugs avoid damages to the film during the suction phase.

**Material:** Silicone

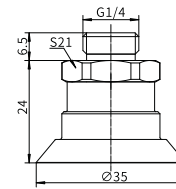
**Working Temperature:**  
-40°C to +200°C



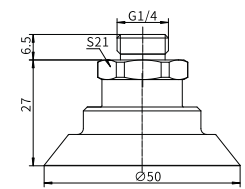
A



B



C



D

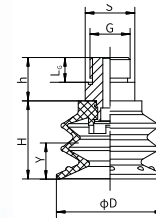
### VTF Flat Cups with Fittings

0256	Colour	Drawing	Hardness °Shore A	Lifting Force In Vertical Direction (N) -60kPa	Lifting Force In Parallel Direction (N) -60kPa	Stroke mm	Weight g
19VTF.S.05.02000	Blue	A	40	10	6	1.5	4.6
19VTF.S.05.02500	Blue	B	40	25	21	1.5	5.0
19VTF.S.14.03500	Blue	C	40	38	32.5	1.5	10.0
19VTF.S.14.05000	Blue	D	40	92	76	2	25.0

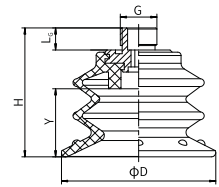
Round bellows suction cup made of polyurethane, suitable for movement of pieces of various size and shape and where level compensation is necessary, such as when withdrawing from loaders. The big advantage of this suction cup, is that the material it's made of, polyurethane, lasts longer than other materials, has optimum wear resistance, good flexibility and optimum tensile strength. Suitable for moving porous objects or ones with an irregular surface, such as cardboard. Polyurethane suction cups are mark resistant.

**Material:** PU

**Working Temperature:**  
+10°C to +50°C



A



B

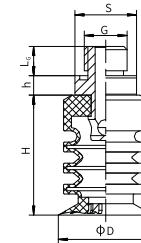
### VTS Round Bellows with Fittings

0256	Colour	Drawing	D	H	G	h	L <sub>c</sub>	Y	S	Hardness °Shore A	Lifting Force In Vertical Direction (N) -20kPa	-60kPa	-90kPa	Weight g
19VTS.P.18.03025	Green	A	30	21.3	G1/8	7.8	6	8	13	55	10	19	25	6.9
19VTS.P.14.04025	Green	A	40	28.4	G1/4	12	6	10.6	17	55	15	32	50	18.2
19VTS.P.38.05025	Green	A	50	35.5	G3/8	18	10	13.4	24	55	35	58	79	32.6
19VTS.P.38.07025	Green	B	70	58.5	G3/8	*	10	18.6	*	55	72	128	150	60.5

The long bellows suction cup is especially suited for the movement of bags, thanks to its very thin lip and internal notchings, which allow it to ensure secure gripping even with heavy bags that are difficult to lift.

**Material:** Silicone

**Working Temperature:**  
-40°C to +200°C



A

### VTS Extended Round Bellows with Fittings

0256	Colour	Drawing	D	H	h	L <sub>c</sub>	G	S	Hardness °Shore A	Lifting Force In Vertical Direction (N) -60kPa	Weight g
19VTS.S.14.03035	Red	A	30	36.5	6	9	G1/4	19	40	9	17.6
19VTS.S.38.04035	Red	A	40	40	6	10	G3/8	22	40	15	23.6
19VTS.S.12.05035	Red	A	50	55	6	10	G1/2	28	40	25	44.2

# SUCTION CUPS, FOAM RUBBER

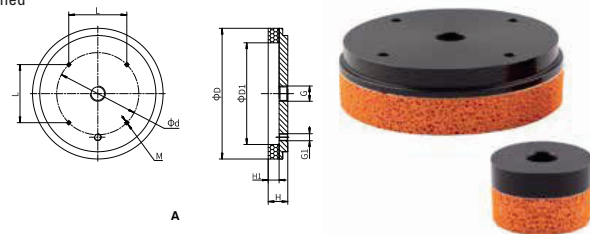


## 1900 Series

Foam rubber round suction cup is made from a special mixture called "NR", which has a density that allows for gripping even on very rough and irregular surfaces, and allows its elasticity to be maintained even after several working cycles. Especially suited for moving loads with coarse or very rough surfaces such as: sawn, bush-hammered or flamed marble, textured, non-slip or ribbed/corrugated sheets, brick, items made of rough concrete, garden walkway tiles, etc., and in general in all cases where traditional suction cups cannot be used. Recommended for handling loads with lifting force parallel to the surface and for the movement of loads with oiled surfaces.

**Material:** Foam Rubber (NR)

**Working Temperature:**  
-20°C to +80°C



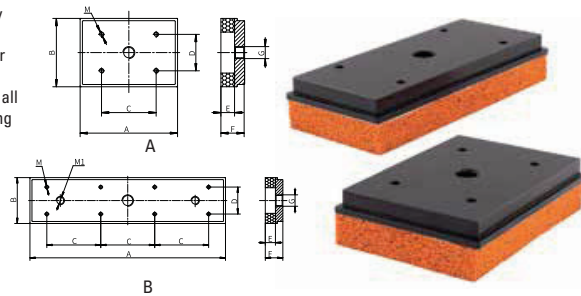
### VTN Foam Rubber Round Suction Cup

0256	Colour	Drawing	D	D1	H	H1	G1	L	M	d	G	Hardness °Shore A	Lifting Force In Vertical Direction (N)-60kPa	Weight g
19VTN.G.04000	Orange	A	40	20	25	15	-	-	-	-	G1/4	30	7.8	33.4
19VTN.G.06400	Orange	A	64	40	25	15	-	-	-	40	G1/4	30	35	82.4

Foam rubber rectangular suction cup is made from a special mixture called "NR", which has a density that allows for gripping even on very rough and irregular surfaces, and allows its elasticity to be maintained even after several working cycles. Especially suited for movement of loads with coarse or very rough surfaces such as: sawn, bush-hammered or flamed marble, textured, non-slip or ribbed/corrugated sheets, brick, items made of rough concrete, garden walkway tiles, etc. and in general in all cases where traditional suction cups cannot be used. Not recommended for handling loads with lifting force parallel to the surface or for the movement of loads with oiled surfaces.

**Material:** Foam Rubber (NR)

**Working Temperature:**  
-20°C to +80°C



### VTN Foam Rubber Rectangular Suction Cup

0256	Colour	Drawing	A	B	C	D	E	F	G	M	M1	Hardness °Shore A	Lifting Force In Vertical Direction (N)-60kPa	Weight g
19VRN.G.14.FXR00	Orange	A	135	60	80	40	15	26	G1/4	4-M5	-	30	80	231.7
19VRN.G.14.HXN00	Orange	A	107	75	60	40	15	26	G1/4	4-M5	-	30	90	236.7
19VRN.G.12.RXS00	Orange	B	290	140	80	100	15	26	G1/2	8-M5	2-M12	30	706	1175.1

# SUCTION CUPS



## Suction Cups

- Choice of cup designs and material type
- Flat cups ideal where minimal movement is required for pliable materials
- Bellows cups ideal where level compensation is required
- Wide variety of cup sizes



### Flat, M/58000

0036	OD mm	Thread
M/58301/01	6	M5
M/58303/01	10	M5
M/58304/01	15	M5
M/58305/01	20	G1/8
M/58306/01	25	G1/8
M/58307/01	30	G1/8

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**Medium:** Vacuum  
**Cups:** Nitrile  
**Connection Fittings:** Aluminium

**Working Temperature:**  
-10°C to +70°C for Aluminium nitrile rubber cups







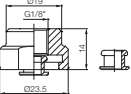
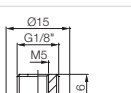
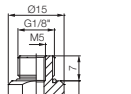
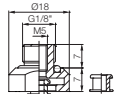
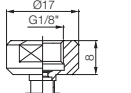
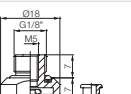
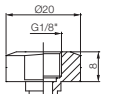
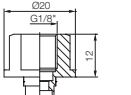
### Bellows, M/58000

0036	OD mm	Thread
M/58403/01	10	M5
M/58405/01	20	G1/8
M/58408/01	40	G1/8
M/58410/01	75	G1/8

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# FITTINGS

## VU/VB/VF/VBL/VBU/VBX/VFC Series

9205	Type	Description	Dimension	Available suction cups	Weight (g)
350 000 3000	M2.5M	Standard		VU2, VU3	0.47
350 000 3100	M5M	Standard		VU2, VU3	0.54
350 000 3101	M5M	Standard		VU4, VU6, VU8, VB5, VB8	1.84
350 000 3102	M5M	Standard		VU10, VU15, VF15, VB10, VB12, VB15, VBL15	2.52
350 010 3102		Built in efficiency valve			2.63
350 000 3321	18FX (For silicone material)	Standard		VU40, VF40	8.46
350 000 3209	M518MF	Standard		VU20, VU25, VU30, VF20, VF25, VF30, VB17, VB20, VBL20	1.82
350 000 5209		Built in mesh-filter			1.92
350 010 4209		Built in efficiency valve			1.94
350 020 4209		Built in button valve			2.21
350 000 1209	M518MFO	Standard		VU20, VU25, VU30, VF20, VF25, VF30, VB17, VB20, VBL20	2.88
350 000 1109		Built in mesh-filter			2.94
350 010 1209		Built in efficiency valve			2.87
350 000 3239	M518MFB (For silicone material)	Standard		VB17, VB20, VBL20	3.56
350 000 3310	18F	Standard		VU20, VU25, VU30, VF20, VF25, VF30, VB17, VB20, VBL20	3.23
350 000 4310		Built in mesh-filter			3.3
350 010 3310		Built in efficiency valve			3.43
350 020 3310		Built in button valve			
350 000 3229	M518MFX (For silicone material)	Standard		VU20, VU25, VU30, VF20, VF25, VF30	3.71
350 000 3311	18F	Standard		VU40, VF40, VB30, VB40, VBL30, VBL40, VBU35, VBU45, VBX35, VBX45	5.62
350 000 4311		Built in mesh-filter			5.72
350 010 3311		Built in efficiency valve			5.86
350 020 3311		Built in button valve			8.97
350 000 2311	18FO	Standard		VU40, VF40, VB30, VB40, VBL30, VBL40, VBU35, VBU45, VBX35, VBX45	8.24
350 000 4811		Built in mesh-filter			8.41



## VU/VB/VF/VBL/VBU/VBX/VFC Series







9205	Type	Description	Dimension	Available suction cups	Weight (g)
350 000 3331	18FB (For silicone material)	Standard		VB30, VB40, VBL30, VBL40, VBU35, VBU45	9.78
350 000 2304	18M	Standard		VU40, VF40, VB30, VB40, VBL30, VBL40, VBU35, VBU45, VBX35, VBX45	5.68
350 000 4304		Built in mesh-filter			5.73
350 010 2304		Built in efficiency valve			5.63
350 000 3404	14M	Standard		VU40, VF40, VB30, VB40, VBL30, VBL40, VBU35, VBU45, VBX35, VBX45	5.88
350 000 3804		Built in mesh-filter			5.92
350 010 3404		Built in efficiency valve			6.03
350 000 3504	38M	Standard		VBU35, VBU45, VBX35, VBX45	9.16
350 000 3904		Built in mesh-filter			9.56
350 010 3504		Built in efficiency valve			9.72
350 000 3312	18F	Standard		VU50, VF50 VB50, VBL50 VBU55, VBX55	14.47
350 000 4312		Built in mesh-filter			14.58
350 010 3312		Built in efficiency valve			15.81
350 000 1312	18FO	Standard		VU50, VF50, VB50, VBL50, VBU55, VBX55	10.12
350 000 4912		Built in mesh-filter			10.2
350 010 1312		Built in efficiency valve			10.22
350 000 3405	14M	Standard		VU50, VF50, VB50, VBL50, VBU55, VBX55	14.18
350 000 3805		Built in mesh-filter			14.42
350 010 3405		Built in efficiency valve			14.38
350 000 3505	38M	Standard		VU50, VF50, VB50, VBL50, VBU55, VBX55	18.14
350 000 3905		Built in mesh-filter			17.75
350 010 3505		Built in efficiency valve			17.53
350 000 3342	18FB2 (For silicone material)	Standard		VBU35, VBU45	5.4
350 000 3442		Built in mesh-filter			5.5
350 010 3342		Built in efficiency valve			5.64
350 000 3341	18MB2 (For silicone material)	Standard		VBU35, VBU45	5.44
350 000 4341		Built in mesh-filter			5.33
350 010 3341		Built in efficiency valve			5.47
350 010 3342	18FB2 (For silicone material)	Built in efficiency valve		VBU55, VBX55	15.95
350 000 3441	14MB2 (For silicone material)	Standard		VBU35, VBU45	5.88
350 000 3841		Built in mesh-filter			6
350 010 3441		Built in efficiency valve			6.14

# FITTINGS

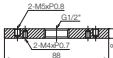
## VU/VB/VF/VBL/VBU/VBX/VFC Series

9205	Type	Description	Dimension	Available suction cups	Weight (g)
350 000 3443	14MB2 (For silicone material)	Standard		VBU55	16.69
350 000 3843		Built in mesh-filter			17.22
350 010 3441		Built in efficiency valve			17.26
350 000 3543	38MB2 (For silicone material)	Standard		VBU55	16.69
350 000 3943		Built in mesh-filter			17.05
350 010 3543		Built in efficiency valve			17.11
350 000 3323	18F	Standard		VB75, VB75B, VF75, VF90, VFC90, VFC100	59.36
350 000 4323		Built in mesh-filter		59.76	
350 020 3323		Built in button valve		VF75, VF90	83.56
350 000 3423	14F	Standard		VB75, VB75B, VF75, VF90, VFC90, VFC100	56.92
350 000 3823		Built in mesh-filter			57.32
350 000 3523	38F	Standard		VB75, VB75B, VF75, VF90, VFC90, VFC100	55.08
350 000 3923		Built in mesh-filter			55.48
350 000 3623	12F	Standard		VB75, VB75B, VF75, VF90, VFC90, VFC100	51.50
350 000 4023		Built in mesh-filter			51.90
350 000 3614	12F	Standard		VB110, VB110B, VF110	103.70
350 000 4014		Built in mesh-filter			10.50
350 020 3614		Built in button valve			VF110
350 000 3615	12F	Standard		VB150, VF150	198.93
350 000 4015		Built in mesh-filter			199.73
350 020 3615		Built in button valve			VF150
350 000 1405	M16M	Standard		VF50X2	52.23
350 000 3616	12F	Standard		VF200	555
350 000 4016		Built in mesh-filter			555.3







## BL5040 Series

9205	Type	Description	Dimension	Available suction cups	Weight (g)
350 005 0101	18F	Standard		BL5040	11.24
350 005 0103		Built in mesh-filter			11.27
350 005 0202	14M	Standard		BL5040	7.92
350 005 0204		Built in mesh-filter			8.96
350 005 0302	38M	Standard		BL5040	11.47
350 005 0304		Built in mesh-filter			11.51




## VOBL35x90 Series

9205	Type	Description	Dimension	Available suction cups	Weight (g)
350 000 3660	12F	Standard		VOBL35x90	18.7

## VOU Series

9205	Type	Description	Dimension	Available suction cups	Weight (g)
350 002 1012	M5M	Standard		VOU4x20, VOU6X20, VOU8X20, VOU8X30, VOU10X30	1.78
350 002 1112	M5F	Standard		VOU4x20, VOU6X20, VOU8X20, VOU8X30, VOU10X30	2.82
350 002 3021	18M	Standard		VOU15x45, VOU20X60	13.74
350 002 3022		Built in mesh-filter			13.84
350 002 3121	18F	Standard		VOU15x45, VOU20X60	10.32
350 002 3122		Built in mesh-filter			10.46

## FF Series

9205	Type	Description	Dimension	Available suction cups	Weight (g)
350 007 0101	M5M	Standard		FF15	1.41
350 007 0102	M5M	Standard		FF20, FF25, FF30	2.59
350 007 0103	M5M	Standard		FF15X, FF20X	2.41

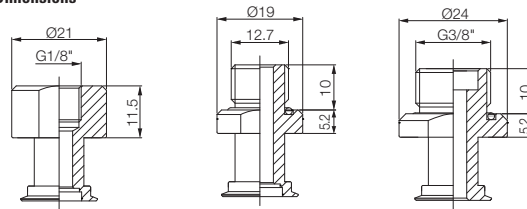
# SUCTION CUPS - FITTINGS



## BL5040 Series

9205
350 005 0101
350 005 0103
350 005 0202
350 005 0204
350 005 0302
350 005 0304

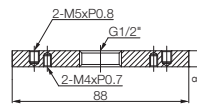
Dimensions



## VOBL 35 x 90 Series

9205
350 000 3660

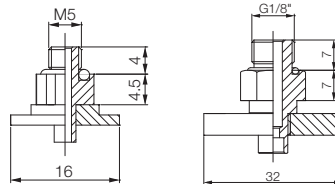
Dimensions



## VOU Series

9205
350 002 1012
350 002 1112
350 002 3021
350 002 3022
350 002 3121
350 002 3122

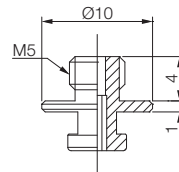
Dimensions



## FF Series

9205
350 007 0101
350 007 0102
350 007 0103

Dimensions



## Green Pumps

- VMECA vacuum cartridge technology integrated
- High polished clean surface (= for food, pharma industry)
- Vacuum filter self-cleaning system

### Features & Strengths

- Highly operational reliability despite fluctuating or low compressed-air pressure
- Integrated vacuum filter with high dirt capacity and auto-cleaning system
- High polished clean surface for food, pharma and chemical industry
- Easy to install in limited space due to compact size
- Quick response time

## GS Range

9205	Max. Vacuum level (- kPa)	Supply Air Pressure (bar)	Max. Vacuum Flow(Nl/m)	Air Consumption (Nl/m)	Noise level (dBA)	Min. hose inner Ø (within 2m)		
						Air supply	Vacuum	Exhaust
GS203	90	3 - 4	85.8	21 - 32	52 - 58	4 - 6	6	8
GS252	94	5 - 6	113	70.5 - 83.5	60 - 68	6 - 8	6	10
GS253	94	5 - 6	146	70.5 - 83.5		6 - 8	8	10
GS302	93	3 - 4	171	97 - 152		6 - 8	8	10
GSL302	75	4 - 6	200	70 - 104		6 - 8	8	10



- VMECA vacuum cartridge technology integrated
- High polished clean surface (= for food, pharma industry)
- Vacuum filter self-cleaning system

### Features & Strengths

- Dual vacuum cartridge structure
- Highly operational reliability despite fluctuating or low compressed-air pressure
- Integrated vacuum filter with high dirt capacity and auto-cleaning system
- High polished clean surface for food, pharma and chemical industry
- Easy to install in limited space due to compact size
- Quick response time

## GH Range

9205	Max. Vacuum level (-kPa)	Supply Air Pressure (bar)	Max. Vacuum Flow(Nl/m)	Air Consumption (Nl/m)	Noise level (dBA)	Min. hose inner Ø (within 2m)		
						Air supply	Vacuum	Exhaust
GH203	90	3 - 4	172	40 - 64	52 - 58	6 - 8	8	10
GH252	94	5 - 6	222	141 - 167	60 - 68	6 - 8	8	10
GH253	94	5 - 6	292	141 - 167		6 - 8	8	10
GH302	93	3 - 4	343	194 - 304		6 - 8	8	10
GHL302	75	4 - 6	400	140 - 208		6 - 8	8	10



## VSM Pumps

- VMECA vacuum cartridge technology integrated
- Various mounting options for easy installation
- Extremely low noise level

### Features & Strengths

- Efficient individual and independent point-of-use vacuum
- Highly operational reliability despite fluctuating or low compressed-air pressure
- Extremely quick response
- Available for multiple connection ports
- Extremely low noise level with VMECA twofold silencer

## VSM Range

9205	Vacuum Connection	Type	Max. Vacuum level (- kPa)	Supply Air Pressure (bar)	Max. Vacuum Flow(Nl/m)	Air Consumption (Nl/m)	Noise level (dBA)	Min. hose inner Ø (within 2m)		
								Air supply	Vacuum	Exhaust
VSM202	3/8" (x1), 1/8" (x3)	Holding Plug	90	3 - 4	44	22 - 40.5		8	8	8
VSM203	3/8" (x1), 1/8" (x3)	Silencer	90	3 - 4	84.5	21 - 40	55 - 65	8	8	10
VSM303	1/2" (x1), 1/4" (x3)	Silencer	92	4	341	82 - 152		8	12	14



Please contact our sales office for full technical information

# VACUUM PUMPS



## VCS Pumps

- VMECA vacuum cartridge technology integrated
- Level compensator and vacuum ejector in one body

### Features & Strengths

- Built in level compensator in one body
- Highly operational reliability despite fluctuating or low compressed air pressure

- Quick response time
- Compact size and light weight



### VCS Range

9205	Male Thread	Female Thread	Check Valve	Max. Vacuum level (- kPa)	Supply Air Pressure (bar)	Max. Vacuum Flow(Nl/m)	Air Consumption (Nl/m)	Noise level (dBA)	Min. hose inner Ø (within 2m)		
									Air supply	Vacuum	Exhaust
<b>VCS102</b>	M5	N/A	No	85	1.2 - 2.6	16.5	6.8 - 10.6	55 - 65	4 - 6	8	6
<b>VCS102C</b>	N/A	G1/8"	Yes	85	1.2 - 2.6	16.5	6.8 - 10.6	55 - 65	4 - 6	8	6

## Premium Pumps

- VMECA vacuum cartridge technology integrated
- High vacuum flow with durable aluminium body

### Features & Strengths

- Highly operational reliability despite fluctuating or low compressed air pressure
- Top and side vacuum connection ports available

- Optional air-saving kit available to minimise energy consumption
- Quick response time
- Strong aluminium body



### PM Range with Side Vacuum Port

9205	No. of Cartridges	Thread	Max. Vacuum level (- kPa)	Supply Air Pressure (bar)	Max. Vacuum Flow(Nl/m)	Air Consumption (Nl/m)	Noise level (dBA)	Min. hose inner Ø (within 2m)		
								Air supply	Vacuum	Exhaust
<b>PM303X1</b>	1	G1"	92	3 - 4	341	97 - 158	60 - 65	8	12	12
<b>PM303X2</b>	2	G1"	92	3 - 4	682	194 - 340		8	15	15
<b>PM303X3</b>	3	G1"	92	3 - 4	1023	291 - 456		10	19	22
<b>PM303X4</b>	4	G1"	92	3 - 4	1364	388 - 608		10	22	32

- VMECA vacuum cartridge technology integrated
- Large vacuum flow with up to 16 VMECA vacuum cartridge

### Features & Strengths

- Highly operational reliability despite fluctuating or low compressed-air pressure
- High vacuum flow with low energy consumption

- Available to replace 4kw(5Hp) electric motor pump
- Very low noise level
- Durable and light aluminium body



### MPM Range without Vacuum Filter

9205	No. of Cartridges	Thread	Max. Vacuum level (- kPa)	Supply Air Pressure (bar)	Max. Vacuum Flow(Nl/m)	Air Consumption (Nl/m)	Noise level (dBA)	Min. hose inner Ø (within 2m)		
								Air supply	Vacuum	Exhaust
<b>MPM303X6</b>	6	G2"	93	3 - 4	2048	804	55 - 62	11	35	40
<b>MPM303X8</b>	8	G2"	93	3 - 4	2728	1072	55 - 62	11	40	40
<b>MPM303X10</b>	10	G2"	93	3 - 4	3410	1340	55 - 62	11	40	45
<b>MPM303X12</b>	12	G2"	93	3 - 4	4092	1608	55 - 62	12	40	50
<b>MPM303X14</b>	14	G2"	93	3 - 4	4774	1876	55 - 62	13	45	50
<b>MPM303X16</b>	16	G2"	93	3 - 4	5456	2144	55 - 62	14	35	60

Please contact our sales office for full technical information

## Magic Pumps

- VMECA vacuum cartridge technology integrated
- Flexibly rotatable vacuum pump
- Easy to distribute vacuum connections with integrated distribution body module

### Features & Strengths

- Highly operational reliability despite fluctuating or low compressed-air pressure
- Integrated pleated filter with high dirt capacity and auto-cleaning system
- Flexible structure available to select various port options and port position/direction
- Easy to assemble and disassemble without any tools
- Quick response time
- Patented design



## M3000 Range

9205	No. of Cartridges	Thread	Stage	Max. Vacuum level (- kPa)	Supply Air Pressure (bar)	Max. Vacuum Flow(Nl/m)	Air Consumption (Nl/m)	Noise level (dBA)	Min. hose inner Ø (within 2m)		
									Air supply	Vacuum	Exhaust
M3122	2	G3/4"	2	92	3 - 4	342	194 - 304		8	15	15
M3123	3	G3/4"	2	92	3 - 4	513	291 - 456	50 - 60	10	19	22
M3124	4	G3/4"	2	92	3 - 4	684	388 - 608		10	22	32
M3132	2	G3/4"	3	92	3 - 4	682	194 - 304		8	15	15
M3133	3	G3/4"	3	92	3 - 4	1023	291 - 456	50 - 60	10	19	22
M3134	4	G3/4"	3	92	3 - 4	1364	388 - 608		10	22	32

## Turtle Pumps

- VMECA vacuum cartridge technology integrated
- Vacuum filter in one body with auto filter cleaning system

### Features & Strengths

- Highly operational reliability despite fluctuating or low compressed-air pressure
- Integrated pleated filter with high dirt capacity and auto-cleaning system
- Optional air-saving kit available to minimise energy consumption
- Quick response time
- Patented design



## VTC Range

9205	No. of Cartridges	Thread	Silencer	Stage	Max. Vacuum level (- kPa)	Supply Air Pressure (bar)	Max. Vacuum Flow(Nl/m)	Air Consumption (Nl/m)	Noise level (dBA)	Min. hose inner Ø (within 2m)		
										Air supply	Vacuum	Exhaust
VTC3021-2	1	G3/4"	-	2	92	3 - 4	171	97 - 152		6	8	10
VTC3031-2	1	G3/4"	Two Fold	3	92	3 - 4	341	97 - 152	50 - 60	6	8	10
VTC3122-2	2	G3/4"	Standard	2	92	3 - 4	342	194 - 304		8	15	15
VTC3032-2	2	G3/4"	Two Fold	3	92	3 - 4	682	194 - 304		8	12	18
VTC3022-2	2	G3/4"	-	3	92	3 - 4	342	194 - 304		8	12	18
VTC3132-2	2	G3/4"	Standard	3	92	3 - 4	682	194 - 304		8	15	15
VTC3123-2	3	G3/4"	Standard	2	92	3 - 4	513	291 - 456	60 - 65	10	19	22
VTC3133-2	3	G3/4"	Standard	3	92	3 - 4	1023	291 - 456		10	19	22
VTC3124-2	4	G3/4"	Standard	2	92	3 - 4	684	388 - 608		10	22	32
VTC3134-2	4	G3/4"	Standard	3	92	3 - 4	1364	388 - 608		10	22	32

Please contact our sales office for full technical information

# VACUUM GRIPPERS - MAGIC GRIPPERS



## Features & Strengths

- Reliable performance despite inconsistent compressed air pressure
- Extremely compact and light weight
- Low air consumption
- Various mounting options
- Excellent gripping power
- Various suction lips for different applications

## A-Type - Single Cartridge



### Micro Cartridge, 2-Stage

9205	Bellow Size mm	Material
MC10A1-20	20	Nitrile
MC10A2-20	20	Nitrile
MC10A1-40	40	Nitrile
MC10A2-40	40	Nitrile

### Mini Cartridge, 2-Stage

9205	Bellow Size mm	Material
MC20A1-40	40	Nitrile
MC20A2-40	40	Nitrile
MC20A1-60	60	Nitrile
MC20A2-60	60	Nitrile

### Mini Cartridge, 3-Stage

9205	Bellow Size mm	Material
MC23A1-40	40	Nitrile
MC23A2-40	40	Nitrile
MC23A1-60	60	Nitrile
MC23A2-60	60	Nitrile

### Mini Premium Cartridge, 2-Stage

9205	Bellow Size mm	Material
MC25A1-40	40	Nitrile
MC25A2-40	40	Nitrile
MC25A1-60	60	Nitrile
MC25A2-60	60	Nitrile

## B Type - Single Cartridge/Auto Vac Release



### Micro Cartridge, 2-Stage

9205	Bellow Size mm	Material
MC10B1-20	20	Nitrile
MC10B2-20	20	Nitrile
MC10B1-40	40	Nitrile
MC10B2-40	40	Nitrile

### Mini Cartridge, 2-Stage

9205	Bellow Size mm	Material
MC20B1-40	40	Nitrile
MC20B2-40	40	Nitrile
MC20B1-60	60	Nitrile
MC20B2-60	60	Nitrile

### Mini Cartridge, 3-Stage

9205	Bellow Size mm	Material
MC23B1-40	40	Nitrile
MC23B2-40	40	Nitrile
MC23B1-60	60	Nitrile
MC23B2-60	60	Nitrile

### Mini Premium Cartridge, 2-Stage

9205	Bellow Size mm	Material
MC25B1-40	40	Nitrile
MC25B2-40	40	Nitrile
MC25B1-60	60	Nitrile
MC25B2-60	60	Nitrile



# VACUUM GRIPPERS - MAGIC GRIPPERS



## Features & Strengths

- Reliable performance despite inconsistent compressed air pressure
- Extremely compact and light weight
- Low air consumption
- Various mounting options
- Excellent gripping power
- Various suction lips for different applications

## C Type – Single Cartridge/Check Valve



### Micro Cartridge, 2-Stage

9205	Bellow Size mm	Material
MC10C1-20	20	Nitrile
MC10C2-20	20	Nitrile
MC10C1-40	40	Nitrile
MC10C2-40	40	Nitrile

### Mini Cartridge, 2-Stage

9205	Bellow Size mm	Material
MC20C1-40	40	Nitrile
MC20C2-40	40	Nitrile
MC20C1-60	60	Nitrile
MC20C2-60	60	Nitrile

### Mini Cartridge, 3-Stage

9205	Bellow Size mm	Material
MC23C1-40	40	Nitrile
MC23C2-40	40	Nitrile
MC23C1-60	60	Nitrile
MC23C2-60	60	Nitrile

### Mini Premium Cartridge, 2-Stage

9205	Bellow Size mm	Material
MC25C1-40	40	Nitrile
MC25C2-40	40	Nitrile
MC25C1-60	60	Nitrile
MC25C2-60	60	Nitrile

## D-Type - Dual Cartridge



### Micro Cartridge, 2-Stage

9205	Bellow Size mm	Material
MC10D1-20	20	Nitrile
MC10D2-20	20	Nitrile
MC10D1-40	40	Nitrile
MC10D2-40	40	Nitrile

### Mini Cartridge, 2-Stage

9205	Bellow Size mm	Material
MC20D1-40	40	Nitrile
MC20D2-40	40	Nitrile
MC20D1-60	60	Nitrile
MC20D2-60	60	Nitrile

### Mini Cartridge, 3-Stage

9205	Bellow Size mm	Material
MC23D1-40	40	Nitrile
MC23D2-40	40	Nitrile
MC23D1-60	60	Nitrile
MC23D2-60	60	Nitrile



For Parker Leak Free Liquifit Push-in Fitting  
see pages 800-803



# VACUUM GRIPPERS - MAGIC GRIPPERS

## Suction Lips

- X type suction lips are excellent in handling thin and light plastic bag applications such as ice cream bags and aluminium foil.



### X Type

9205	Ø mm	Material
X25-N6	25	Nitrile
X30-N6	30	Nitrile
X45-N6	45	Nitrile
X55-N6	55	Nitrile
X65-N6	65	Nitrile
X75-N6	75	Nitrile
X25-S3	25	Silicone
X30-S3	30	Silicone
X45-S3	45	Silicone
X55-S3	55	Silicone
X65-S3	65	Silicone
X75-S3	75	Silicone
X25-W3	25	White Silicone
X30-W3	30	White Silicone
X45-W3	45	White Silicone
X55-W3	55	White Silicone
X65-W3	65	White Silicone
X75-W3	75	White Silicone

- P type suction lips are excellent in handling heavy or thick plastic bags containing liquid and powder substances.
- Various stopper and lip material options to cover a wide range of vacuum applications.



### P Type

9205	Ø mm	Material
P15-N6	15	Nitrile
P17-N6	17	Nitrile
P20-N6	20	Nitrile
P27-N6	27	Nitrile
P32-N6	32	Nitrile
P48-N6	48	Nitrile
P60-N6	60	Nitrile
P15-S3	15	Silicone
P17-S3	17	Silicone
P20-S3	20	Silicone
P27-S3	27	Silicone
P32-S3	32	Silicone
P48-S3	48	Silicone
P60-S3	60	Silicone
P85-S3	85	Silicone
P15-W3	15	White Silicone
P17-W3	17	White Silicone
P20-W3	20	White Silicone
P27-W3	27	White Silicone
P32-W3	32	White Silicone
P48-W3	48	White Silicone
P60-W3	60	White Silicone

- U type suction lips are excellent in handling flat or slightly curved objects such as carton boxes and tubes.



### U Type

9205	Ø mm	Material
U25-N6	25	Nitrile
U30-N6	30	Nitrile
U45-N6	45	Nitrile
U55-N6	55	Nitrile
U65-N6	65	Nitrile
U75-N6	75	Nitrile
U25-S3	25	Silicone
U30-S3	30	Silicone
U45-S3	45	Silicone
U55-S3	55	Silicone
U65-S3	65	Silicone
U75-S3	75	Silicone
U25-W3	25	White Silicone
U30-W3	30	White Silicone
U45-W3	45	White Silicone
U55-W3	55	White Silicone
U65-W3	65	White Silicone
U75-W3	75	White Silicone

## Stoppers - A-Type



### To Suit X Type Lips

9205	Stopper Size mm
MS20-A	20
MS40-A	40
MS60-A	60

## Stoppers - A-Type



### To Suit U & X Type Lips

9205	Stopper Size mm
MS20-B	20
MS40-B	40
MS60-B	60

## Stoppers - C-Type



### To Suit U & X Type Lips

9205	Stopper Size mm
MS20-C	20
MS40-C	40
MS60-C	60

## Stoppers - C-Type



### To Suit P, U & X Type Lips

9205	Stopper Size mm
MS20-D	20
MS40-D	40
MS60-D	60

NB: Other materials available on request

# IN-LINE VACUUM FILTER



These filters provide a cost effective in-line vacuum filtration method.

The 6mm push fit version is useful for individual lines particularly with the Oneline pump and multiple stack pumps. The 3/8" version can be screwed directly into the mini type vacuum pump as well as any other port using a 3/8" BSP connection. When used with the mini pumps and midi multiple pumps, it provides a very compact set up.

### Features & Strengths

- Simply pushing the tube into the LV-filter
- No other operation is required
- Excellent filtering - minimum particle : 20 micron
- Easy to check and replace filter element

Body Material: Polycarbonate (PC)



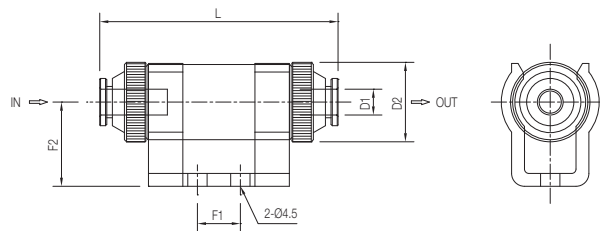
### Specification

Model	Tube size (mm) (Outer diameter)	Removal efficiency (µ)	Filter area (mm <sup>2</sup> )	Temperature (°C)	Weight (g)
VTF-0706	6	10	7.5	0 to +60	25.0
VTF-1208	8	10	12.5	0 to +60	39.5

### Dimensions

Model	L	D1	D2	F1	F2
VTF-0706	55.5	Ø6	Ø18.5	10	Unit: mm 20
VTF-1208	65.2	Ø8	Ø22.5	14	44

### Dimensions



### Square Parts - Filter Element

Model	Description	Weight (g)
VTFE0706	Filter Element for VTF-0706	0.74
VTFE1208	Filter Element for VTF-1208	1.2

### VTF Filters

9205	OD (mm)
VTF-0706	6
VTF-1208	8

### VTFB Filters

9205	Flow Rate (l/m)	Vacuum Connection
VTF38-96	660	G3/8"
VTF38-141	780	G3/8"
VTF12-96	900	G1/2"
VTF12-141	1080	G1/2"
VTF34-96	900	G3/4"
VTF34-141	1320	G3/4"
VTF01-118	2520	G1"
VTF01-154	3480	G1"
VTF02-118	2880	G1.1/2"
VTF02-154	5100	G1.1/2"

### VTF Replacement Elements - Polyester

9205	To Suit
VTFE27.5-39096	VTF38-96, 12-96, 34-96
VTFE27.5-39141	VTF38-141, 12-141, 34-141
VTFE47.4-62118	VTF01-118, 02-118
VTFE47.4-62154	VTF01-154, 02-154

# INTERCHANGE FILTER ELEMENTS



## Vacuum Pump Filters

### BSP

9156	d1	Male/ Female	d2 mm	h1 mm	h2 mm	Dh3 mm	h4 mm	Flow Rate m <sup>3</sup> /h	Element ref
SA6654	G3/8"	F	80	66	12	39	45	24	SA6715
SA6058	G3/4"	F	110	76	14	53	54	42	SA6091
SA6647	G1/2"	F	110	76	14	53	54	42	SA6091
SA6952	G1"	F	133	85	17	53	78	85	SA6120
SA6059	G1.1/4"	F	133	85	17	53	78	96	SA6120
SA6061	G1.1/4"	F	170	141	17	93	96	108	SA6122
SA6648	G1.1/2"	F	170	170	18	124	100	192	SA6651
SA6649	G2"	F	200	240	18	124	114	310	SA6096
SA6060	G2.1/2"	F	200	240	18	124	114	360	SA6096
SA6650	G3"	F	270	180	50	145	165	550	SA6095
SA6652	G4"	F	270	180	50	145	165	720	SA6095
SA6749	G3"	F	280	395	50	330	190	1080	SA6005
SA6750	G4"	F	360	590	50	400	230	1260	SA6005



Please request a technical data sheet.

## Vacuum Pump Spare Filter Elements

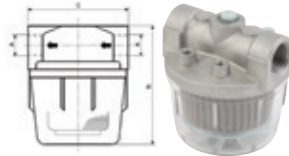
### BSP

9156	To Suit
SA6715	Element for SA6654
SA6091	Element for SA6647 & SA6058
SA6120	Element for SA6952 & SA6059
SA6122	Element for SA6061
SA6651	Element for SA6648
SA6096	Element for SA6649 & SA6060
SA6095	Element for SA6650 & SA6652
SA6005	Element for SA6749
SA6025	Element for SA6750



## In-line Vacuum Filter

- (1) Flow rates measured with 10 mbar pressure loss
- (2) C = paper
- R = stainless steel net
- (3) Metallic frame



### BSP

9032	Flow Rate m <sup>3</sup> /h	A inches	B mm	C mm	Element (2)	Weight kg
9001003	12	G1/4"	82	62	C	0.16
9001004	12	G1/4"	76	62	R	0.13
9001069	12	G1/4"	74	62	C	0.13
9001004/0	12	G3/8"	76	62	R	0.13
9001009	24	G3/8"	138	85	C	0.37
9001070	24	G3/8"	117	80	C	0.37
9001008	30	G1/2"	88	85	R	0.25
9001010	30	G1/2"	88	80	C	0.25
9001030	90	G1"	240	145	C	1.16
9001016	90	G1"	175	120	R	0.85

## In-line Vacuum Spare Filter Elements

- (2) C = paper
- R = stainless steel net

### Spare Filter Elements

9032	Element to Suit NI/min(1)	µm	Element (2)	Temperature Maximum °C
1801001	9001069, 9001003	30	C	80
1803002	9001004, 9001004/0	100	R	50
1802003	9001008	44	R	50
1801006	9001009, 9001010	30	C	50
1802011	9001016	60	R	50
1801047	9001070	15	C	80
1801021	9001030	25	C	50



## Blower Intake Filter

### Female

9033	Female Thread	A	D	H	S	L	M	Capacity m <sup>3</sup> /h
FL1	1/2"	75	21	62	23	100	15	25
FL2	3/4"	150	27	105	23	130	15	85
FL3	1"	150	33	105	23	130	15	85
FL4	1.1/4"	150	42	105	23	200	15	85
FL5	1.1/2"	180	48	155	23	200	15	250
FL6	2"	230	60	155	23	200	15	400
FL8	3"	280	89	180	35	200	15	700
FL9	4"	410	114	330	35	200	15	1400



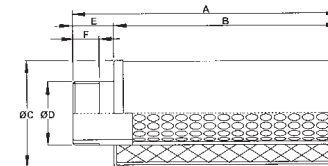
## Blower Intake Spare Filter Elements

### Spare Filter Elements

9033	Element For	A	D	H
CF1	FL1	55	25	50
CF4	FL2, FL3, FL4	110	55	83
CF5	FL5	150	80	135
CF6	FL6	180	80	135
CF8	FL8	225	100	150
CF9	FL9, FL10	300	215	300



## High Volume Muffler

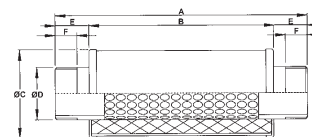


Type SS



## Pump Mounted, Male

9033	D	A	B	C	E
SS4	G1.1/4"	190	138	69	52
SS5	G1.1/2"	200	168	80	32
SS6	G2"	230	198	89	32
SS8	G3"	390	350	152	40



Type S1



## In-line, Male x Male

9033	D	A	B	C	E
SI4	G1.1/4"	242	138	69	52
SI5	G1.1/2"	232	168	80	32
SI6	G2"	262	198	89	32
SI8	G3"	430	350	152	40