

# **SECTION 4**

# Norgren





- Cylinders
- Cylinder Accessories
- Vacuum & Suction Cups
- Solenoid Valves
- Mechanical Valves
- Check Valves/ Non-return Valves
- Flow Control Valves
- Silencers
- Filters
- Regulators
- Lubricators

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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, Enots, Herion, Martonair, Buschjost, Lintra, Excelon, Olympian and Fleetfit.



#### 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.



#### **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.



#### VAIVES

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.



#### 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 comfunctions in a applications.

for more complex monitoring functions in air, water or hydraulic applications.



#### **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.

# **ISO 6432 CYLINDERS & MOUNTINGS**





## ISO 6432 Cylinders

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

· Nose mounting nut and piston rod locknut as standard

· Optional port arrangement for compact installation

Compressed air, filtered, lubricated or non-lubricated

Standard: ISO 6432

Buffer:

Polyurethane

Operation:

Single acting (sprung in), magnetic piston, buffer cushioning

Rarrel: Seals:

Piston Rod:

Nitrile rubber

**End Covers:** 

Clear anodised aluminium allov

#### 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:** 

Double Acting RM/8000/M

Bore

10

10

10

10

12

12

16

16

16

20

20

20

20

25

25

25

25

Tech Sheet 10316

-10°C to +80°C

**Working Pressure:** 

0036

RM/8010/M/25

RM/8010/M/50

RM/8010/M/80

RM/8010/M/100

RM/8012/M/25

RM/8012/M/50

RM/8016/M/25

RM/8016/M/50

RM/8020/M/25

RM/8020/M/50

RM/8020/M/80

RM/8020/M/100

RM/8025/M/25

RM/8025/M/50

RM/8025/M/80

RM/8025/M/100

RM/8016/M/100

Compressed air, filtered, lubricated or non-lubricated

**Thread** 

M5

M5

M5

M5

M5

М5

М5

M5

M5

G1/8

G1/8

G1/8

G1/8

G1/8

G1/8

G1/8

G1/8

Standard: ISO 6432

Buffer:

Stroke mm

25

50

R۸

100

25

50

25

50

100

25

50

80

100

25

50

80

100

Polyurethane

#### Operation:

Double acting, magnetic piston with buffer or adjustable cushioning

#### Barrel:

Stainless steel (austenitic)

Stainless steel

Nitrile rubber **End Covers:** Clear anodised aluminium alloy

Polyurethane

Wiper:

Seals:

#### Piston Rod:





**Working Temperature:** 

**Working Pressure:** 

- Corrosion resistant

-10°C to +80°C

2 to 10 bar

Stainless steel (austenitic)

Stainless steel (austenitic)

## **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

Current: 500 mA (max) Voltage: 10-30 AC 10-30 DC **Working Temperature:** -20°C to +80°C

## Magnetic Switch (QM45)

0036	Bore mm
QM/45/LAP/5V	16-25
	Tech Sheet 10316

# Nor

# **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

#### 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



· Non-lube operation

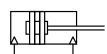
· Standard magnetic piston for full control system versatility

· Choice of porting option for compact installation

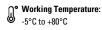
#### Single Acting:



#### Double Acting:











#### 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	

Current:1.5 A

Voltage: 10-240 AC10-240 DC

Working Temperature:
-20°C to +80°C





#### Switch Mounting Bracket (QM33)



0036	Bore mm	
QM/33/032/22	32	
QM/33/040/22	40	
	Tech Sheet 10315	

# **VDMA/ISO CYLINDERS & MOUNTINGS**





## VDMA/ISO 15552 Cylinders

- Conforms to ISO 6431, VDMA 24562 and NFE 49-003-1
- · Profile barrel with concealed tie rods
- High performance, stability and reliability
- 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:** PRA/8020/M: Magnetic piston, auto 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







#### **Double Acting, 8020 Series**



0036	Bore mm	Stroke mm	Thread
PRA/802032/M/25	32	25	G1/8"
PRA/802032/M/50	32	50	G1/8"
PRA/802032/M/80	32	80	G1/8"
PRA/802032/M/100	32	100	G1/8"
PRA/802032/M/125	32	125	G1/8"
PRA/802032/M/160	32	160	G1/8"
PRA/802032/M/200	32	200	G1/8"
PRA/802032/M/250	32	250	G1/8"
PRA/802032/M/320	32	320	G1/8"
PRA/802040/M/50	40	50	G1/4"
PRA/802040/M/80	40	80	G1/4"
PRA/802040/M/100	40	100	G1/4"
PRA/802040/M/160	40	160	G1/4"
PRA/802040/M/200	40	200	G1/4"
PRA/802050/M/25	50	25	G1/4"
PRA/802050/M/50	50	50	G1/4"
PRA/802050/M/80	50	80	G1/4"
PRA/802050/M/100	50	100	G1/4"
PRA/802050/M/125	50	125	G1/4"
PRA/802050/M/160	50	160	G1/4"
PRA/802050/M/200	50	200	G1/4"
PRA/802050/M/250	50	250	G1/4"
PRA/802050/M/320	50	320	G1/4"
PRA/802063/M/25	63	25	G3/8"
PRA/802063/M/50	63	50	G3/8"
PRA/802063/M/80	63	80	G3/8"
PRA/802063/M/100	63	100	G3/8"
PRA/802063/M/125	63	125	G3/8"
PRA/802063/M/160	63	160	G3/8"
PRA/802063/M/200	63	200	G3/8"
PRA/802063/M/250	63	250	G3/8"
PRA/802063/M/320	63	320	G3/8"
PRA/802080/M/25	80	25	G3/8"
PRA/802080/M/50	80	50	3/8"
PRA/802080/M/80	80	80	G3/8"
PRA/802080/M/160	80	160	G3/8"
PRA/802080/M/200	80	200	G3/8"
PRA/802080/M/250	80	250	G3/8"
PRA/802100/M/50	100	50	G1/2"
PRA/802100/M/100	100	100	G1/2"
PRA/802100/M/125	100	125	G1/2"
PRA/802100/M/160	100	160	G1/2"
PRA/802100/M/250	100	250	G1/2"
PRA/802100/M/320	100	320	G1/2"



0036	Bore mm	Stroke mm	Thread
RA/8032/M/25	32	25	G1/8
RA/8032/M/50	32	50	G1/8
RA/8032/M/80	32	80	G1/8
RA/8032/M/100	32	100	G1/8
RA/8032/M/125	32	125	G1/8
RA/8032/M/160	32	160	G1/8
RA/8032/M/200	32	200	G1/8
RA/8032/M/250	32	250	G1/8
RA/8032/M/320	32	320	G1/8
RA/8040/M/25	40	25	G1/4
RA/8040/M/50	40	50	G1/4
RA/8040/M/80	40	80	G1/4
RA/8040/M/100	40	100	G1/4
RA/8040/M/125	40	125	G1/4
RA/8040/M/160	40	160	G1/4
RA/8040/M/200	40	200	G1/4
RA/8040/M/250	40	250	G1/4
RA/8040/M/320	40	320	G1/4
RA/8050/M/25	50	25	G1/4
RA/8050/M/50	50	50	G1/4
RA/8050/M/80	50	80	G1/4
RA/8050/M/100	50	100	G1/4
RA/8050/M/125	50	125	G1/4
RA/8050/M/160	50	160	G1/4
RA/8050/M/200	50	200	G1/4
RA/8050/M/250	50	250	G1/4
RA/8050/M/320	50	320	G1/4
RA/8063/M/25	63	25	G3/8
RA/8063/M/50	63	50	G3/8
RA/8063/M/100	63	100	G3/8
RA/8063/M/250	63	250	G3/8
RA/8063/M/320	63	320	G3/8
RA/8080/M/25	80	25	G3/8
RA/8080/M/50	80	50	G3/8
RA/8080/M/80	80	80	G3/8
RA/8080/M/100	80	100	G3/8
RA/8080/M/125	80	125	G3/8
RA/8080/M/160	80	160	G3/8
RA/8080/M/200	80	200	G3/8
RA/8080/M/250	80	250	G3/8

# **VDMA/ISO 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

0041	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	



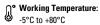
#### **Reed Switch**

0036	Length Metre
M/50/LSU/2V	2
M/50/LSU/5V	5
M/50/LSU/10V	10
	Took Choot 10217

# **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







Operation: Double acting, adjustable cushioning

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



**Piston and End Covers:** 

Aluminium



#### **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:



#### 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:

NORGREN

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/1525/160	2.1/2"	160
M/1525/200	2.1/2"	200
M/1525/320	2.1/2"	320
M/1540/75	4"	75
M/1540/125	4"	125
M/1540/200	4"	200
	Tech Sheet 10360	

# **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

#### Operation:

**Working Temperature:** -5°C to +80°C Working Pressure: 2 to 10 bar

RM/91000/M Single acting, non-cushioned, magnetic sprung in RM/92000/M

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)

Polyurethane and/or ni





#### 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
RM/92025/M/25	25	25	M5
RM/92025/M/30	25	30	M5
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
RM/92032/M/25	32	25	G1/8
RM/92032/M/30	32	30	G1/8
RM/92032/M/40	32	40	G1/8
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



or non-lubricated

Double acting, buffer cushioning

#### **Barrel and End Caps:**

#### **Morking Temperature**: -5°C to +80°C

## 1 to 10 bar

# **Compact Mountings**



#### **Female Piston Rod Clevis**

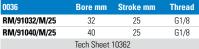
0036	Bore mm
QM/57063/25	80 & 100
	Tech Sheet 10361



#### 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	

Single Acting RM/91000/M



# **VACUUM & SUCTION CUPS**

# NORGREN

#### **Vacuum Generators**

- · Very high induced air canacity
- 14% lower air consumption than comparable single stage units
- · No wearing parts
- Compatible with a wide range of vacuum line contaminants
- Allows direct connection of suction cups and piped exhaust facility





Single Stage, M/58112

Compressed air, filtered and non-lubricated

Type: Single stage ejector Weight: 0,054 kg

#### Vacuum:

-0,85 bar maximum (M/58112/09) -0.90 bar maximum (M/58112/11)

#### Sound Level:

66/74 dB (A) vacuum port closed/open (M/58112/09) 71/82 dB (A) vacuum port closed/open (M/58112/11)

Housing: Anodised aluminium

**Max Vacuum Level Bar** 

-0.85

-0.9 Tech Sheet 10511

Nozzles: Brass

#### · Fast response

- Compact, lightweight
- Low sound level
- Compressed air driven
- Simple installation
- Standard and non-return valve types

#### Medium:

Compressed air, filtered and non-lubricated

Sub-base: Aluminium

#### Operation:

Multi ejector system

Vacuum: -0.87 bar maximum

**ABS Vacuum Chips:** With 30% glass filling Seals: Nitrile

\* Values given are theoretical and apply to an operating pressure of 6 bar.

#### **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

Medium: Vacuum Cups: Nitrile

**Connection Fittings:** Aluminium

#### **Working Temperature:**

-10°C to +70°C for Aluminium nitrile rubber cups



#### 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
	Tech Sheet 10356	6

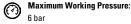


#### Bellows, M/58000

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
	Tech Sheet 10356	6

# Maximum Working Temperature:









#### Multi Stage, M/58102

0036	Induced Air Ni/Min	Air Consumption Ni/Min
M/58102/20	160	98
M/58102/30	240	144
	Tech Sheet 10359	

# **PROPORTIONAL VALVES**



· Excellent performance characteristics

• Medium: Oil free, dry air, filtered to 5µm

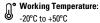
Output pressures up to 8 bar

#### **Valves**

M/58112/09

M/58112/11

- · Closed loop air pilot operated proportional pressure control valve
- Adjustable for a wide range of applications
- · Fast response
- · Low power consumption







pressure

High flow



Medium: Compressed air filtered to

Flow: Up to 1200 L/min at 11 bar supply

50um, non-lubricated

## **VP50 Series Proportional Valves**

0036	Control Signal	Output Bar
VP5010BJ111H00	010 V	010
VP5010BJ411H00	420 mA	010
VP5008BJ411H00	420 mA	08
VP5006BJ111H00	010 V	06
VP5006BJ411H00	420 mA	06
VP5002BJ111H00	010 V	02
VP5002BJ411H00	420 mA	02
	Tech Sheet 10357	

- · Proven low power technology
- · Reliable, rugged, open-loop device
- · Compact and flexible design
- ∩° Working Temperature:





## **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**



Note: the above valves are only available in 24V DC.



- · Extensive range of power and orifice size options
- . G1/8, G1/4 and 7mm interface
- · Compact installation
- · Removable coil
- · Standard exhaust diffuser
- · Choice of manual override

Compressed air, filtered, lubricated and non-lubricated

#### **V03 Series**

#### V03 2/2 NC 24V DC 0-10 bar 1mm Orifice

0036	Thread	
V03A286J-B613A	G1/8	
	Tech Sheet 10363	
	Tech Sheet 10363	

#### V03 3/2 NC 24V DC 0-10 bar 1mm Orifice

0036	Thread	
V03X486J-B613A	Interface	
V03A486J-B613A	G1/8	
Tech Sheet 10363		

#### **V04 Series**

#### V04 2/2 SOL NC 0-10 bar 2.5mm Orifice

0036	Thread	Voltage
V04X286M-B623A	Interface	24V DC
V04X286M-B628A	Interface	110/50-60
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 Orifice

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 Orifice

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	

#### Materials:

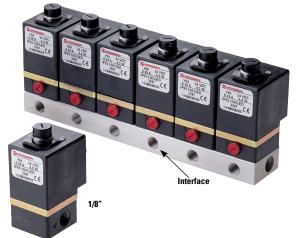
Coil: Glass reinforced nylon Armature: Stainless steel

Zinc alloy (G1/8), brass (G1/4), polyester (interface) Seals: Nitrile (viton top seat)

#### **Working Temperature:**

-20°C to +50°C





#### **V05 Series**

#### V05 2/2 SOL NC 0-16 bar 2.5mm Orifice

0036	Thread	Voltage
V05X286M-B633A	Interface	24V DC
V05X286M-B638A	Interface	110/50-60
V05A286M-B633A	G1/8	24V DC
V05A286M-B638A	G1/8	110/50-60
V05B286M-B433A	G1/4	24V DC
V05B286M-B438A	G1/4	110/50-60
	Tech Sheet 10363	

#### V05 3/2 SOL NC 0-10 bar 2.5mm Orifice

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	

#### V05 3/2 SOL NO 0-10 bar 2.5mm Orifice

0036	Thread	Voltage
V05X386M-B633A	Interface	24V DC
V05X386M-B639A	Interface	220/50-60
V05A386M-B633A	G1/8	24V DC
V05A386M-B638A	G1/8	110/50-60
V05A386M-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:**

**XF VALVES** 

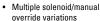
G1/8 - 750 L/min, G1/4 - 1,300 L/min, G3/8 - 2,600 L/min, G1/2 - 4,200 L/min available

Multifunctional: 3/2, 2x 3/2, 5/2, 5/3

Medium: Compressed air, filtered to 50micron, lubricated or non-lubricated



- · Proven sealing system
- · Small volumetric size







#### **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	

#### **XF Accessories**



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#### **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
	Took Shoot 20154



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#### **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	
M/P19063	
	Tech Sheet 20154

## **MECHANICALLY & MANUALLY ACTUATED**





#### M/1553 In-line

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

#### Medium:

Compressed air, filtered, lubricated and non-lubricated

#### **Panel Mounting:**

Hole size Ø 22 mm thickness 5 mm

Flow: 59 L/min







#### Body: Plastic Roller Operator: Plastic Plunger: Brass



#### Mechanical

0036	Thread	Function	Actuation		
M/1553/14	M5	3/2	Plunger/Spring		
M/1553/8	M5	3/2	Roller/Spring		
Tech Sheet 10530					

#### 3/2 Body Only

0036	Thread	Function	Actuation
QM/1553/B/21	M5	3/2	Body with Electrical Style Adaptor
		Tech Sheet 10530	

- · Fully isolates supply pressure
- Lockable
- · Rapid exhaust





Body

#### Manual Operating Heads (Electrical Style)

0036	Actuation	Туре	Colour
V11783-C01	Button/Spring	Momentary Action	Red
V11783-C02	Button/Spring	Momentary Action	Green
V11783-C03	Button/Spring	Momentary Action	Black
V11783-C05	Button (Shrouded)/Spring	Momentary Action	Green
V11783-C06	Button (Shrouded)/Spring	Momentary Action	Black
V11783-C07	Button (Palm)/Spring	Momentary Action	Red
V11783-C08	Button (Palm)/Spring	Momentary Action	Green
V11783-C10 Rotary Knob/Rotary Knob		Maintained Action	-
	Tech Sheet	10530	

#### **T-Lockouts**

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



#### CR14, BSPP

0036	BSPP Thread	
CR143A	1/4"	
CR143B	3/8"	
CR143C	1/2"	
CR144A	3/4" (1" body)	
	Tech Sheet 20742	

#### 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

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)

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

#### N/C: 197 L/min N/0: 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/0	Plunger/Spring
S/666/8	G1/8	3/2 N/C	Roller/Spring
S/667/8	G1/8	3/2 N/0	Roller/Spring
S/666/108	G1/8	3/2 N/C	Variable Roller/Spring
S/666/48	G1/8	3/2 N/C	One Way Trip/Spring
S/666/126	G1/8	3/2 N/C	Antenna Spring Rod/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/666/51/R	G1/8	3/2 N/C	Button (Shrouded)/Spring	Red
S/666/51/G	G1/8	3/2 N/C	Button (Shrouded)/Spring	Green
S/666/51/S	G1/8	3/2 N/C	Button (Shrouded)/Spring	Silver
S/666/83/R	G1/8	3/2 N/C	Button (Palm)/Spring	Red
S/666/83/G	G1/8	3/2 N/C	Button (Palm)/Spring	Green
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)	-
S/666/307	G1/8	3/2 N/C	Rotary Knob/Rotary Knob	-
S/666/49	G1/8	3/2 N/C	Key/Key	-
Tech Sheet 10531				

#### **Two-Hand Control Unit**

Working Temperature: +5°C to +40°C





#### M/2720

П	0030
	M/2720

Tech Sheet 1346

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# **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

Working Temperature:

0°C to +70°C



Compressed air, filtered, lubricated and non-lubricated

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

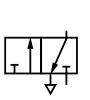
Body:

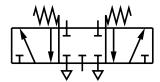
Die-cast aluminium alloy

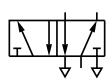
#### End Cover:

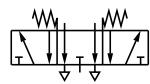
Aluminium or glass filled nylon

Seals: Nitrile rubber









#### Mechanical

0036	Thread	Function	Actuation
03040002	G1/8	3/2	Plunger/Spring
03040202	G1/8	3/2	Roller/Spring
03029302	G1/8	3/2	Roller Lever (Heavy-duty)/Spring
03029402	G1/8	3/2	One Way Trip (Heavy-duty)/Spring
03043202	G1/8	3/2	Antenna Valve
X3044002	G1/8	5/2	Plunger/Spring
X3045102	G1/8	5/2	Roller Lever/Spring
X3039302	G1/8	5/2	Roller Lever (Heavy-duty)/Spring
X3046302	G1/8	5/2	Sensitive Roller Lever/Spring
X3047202	G1/8	5/2	Antenna/Spring
03060002	G1/4	3/2	Plunger/Spring
03060202	G1/4	3/2	Roller/Spring
03061102	G1/4	3/2	Roller Lever/Spring
X3064002	G1/4	5/2	Plunger/Spring
X3064202	G1/4	5/2	Roller/Spring
X3065102	G1/4	5/2	Roller Lever/Spring
		Tech Sheet 1058	32



0036	Thread	Function	Actuation	Colour
03040402	G1/8	3/2	Button/Spring	Black
03040502	G1/8	3/2	Button/Spring	Green
03040602	G1/8	3/2	Button/Spring	Red
03036602	G1/8	3/2	Button Palm/Spring	Red
03036702	G1/8	3/2	Button Palm/Spring	Green
03036802	G1/8	3/2	Button Palm/Spring	Black
03041402	G1/8	3/2	Button (Shrouded)/Spring	Black
03041502	G1/8	3/2	Button (Shrouded)/Spring	Green
03041602	G1/8	3/2	Button (Shrouded)/Spring	Red
03040802	G1/8	3/2	Button/Pilot	Black
03043802	G1/8	3/2	Lever/Spring	Black
03042602	G1/8	3/2	Lever Knob/Spring	Black
03043702	G1/8	3/2	Lever/Lever	Black
03040302	G1/8	3/2	Toggle/Toggle	Black
03042502	G1/8	3/2	Knob/Knob	Black
X3045502	G1/8	5/2	Button (Shrouded)/Spring	Green
X3044802	G1/8	5/2	Button/Pilot	Black
X3046502	G1/8	5/2	Knob, Push/Knob, Pull	Black
X3047802	G1/8	5/2	Lever/Spring	Black
X3044302	G1/8	5/2	Toggle/Toggle	Black
X3047702	G1/8	5/2	Lever/Lever	Black
X3046402	G1/8	5/2	Knob/Knob or Pilot	Black
X3048202	G1/8	5/2	Pedal/Spring	Black
X3048402	G1/8	5/2	Pedal/Pedal	Black
X3343802	G1/8	5/3	Lever/Spring/Lever	Black
X3347802	G1/8	5/3	Level/Spring/Lever	Black
X3343702	G1/8	5/3	Lever/Lever/Lever	Black
03060402	G1/4	3/2	Button/Spring	Black
03063802	G1/4	3/2	Lever/Spring	Black
03063702	G1/4	3/2	Lever/Lever	Black
03062502	G1/4	3/2	Knob/Knob	Black
X3064402	G1/4	5/2	Button/Spring	Black
X3067802	G1/4	5/2	Lever/Spring	Black
X3067702	G1/4	5/2	Lever/Lever	Black
X3066502	G1/4	5/2	Knob/Knob	Black
X3068202	G1/4	5/2	Pedal/Spring	Black
X3068402	G1/4	5/2	Pedal/Pedal	Black
X3363802	G1/4	5/3	Lever/Spring/Lever	Black
X3367802	G1/4	5/3	Lever/Spring/Lever	Black
X3363702	G1/4	5/3	Lever/Lever/Lever	Black
		Tech She	et 10582	

# **V18-MONITORED DUMP VALVE ACCESSORIES**





#### V18 Accessories

- · Simple installation
- · Can be adjusted in situ



#### **Electrical Pressure Switch, Adjustable**

0036	Thread	
04015600	G1/8	
	Tech Sheet 20155	

 For use in many applications where an electrical signal is required in response to a pneumatic signal



#### **Electrical Pressure Switch, Non-adjustable**

0036	Thread	
M/1339	G1/8	
	Tech Sheet 20156	

Provides a short time delay between successive operations in a sequence

Automatic reset when input removed



#### **Time Delay Valves**

0036	Thread	
M/1430	G1/8	
	Took Choot 201E7	

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# **ADDITIONAL RANGES**



## **Herion 18D Type Pressure Switch**

Seal: Nitrile Body: Aluminium

Working Temperature:



#### (08800 Series), BSPP

0036	Thread	Max Bar Pressure
2041-8968	1/4"	-1 to 1
2041-8976	1/4"	0.2 to 2
2041-8984	1/4"	0.5 to 8
2041-8992	1/4"	1 to 16
	Tech Shee	t 20743

#### **Pilot Valve**

 Simple, rugged design, high flow. Ideal for hydro-pneumatic locking circuits

 Pilot chamber isolated from mains supply, with vent to atmosphere



#### **BSPP**

0036	Thread	Actuation
M1338	1/2"	Pilot (Pressure) Spring
	Toch Shoot 207///	

#### Heavy-duty Flow Regulators Uni-directional

- Heavy-duty general-purpose flow regulator, suitable for in line and wall mount
- · Additional port sizes available



0036	Thread	
M837	1/4"	
	Tech Sheet 20159	

#### **Pneumatic Counter**

 6 digit counter, up to 999999, with manual reset



#### **M**5

0036	
M616	
	Tech Sheet 20745

#### **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	

# **NON-RETURN VALVES & FITTINGS**

· Low weight

Mounting:

connection

**Tubing Types:** 

Nylon 11 or 12.

· Low cracking pressure

Line mounted, push-In

Polyurethane, and other

plasticised or unplasticised

tubing which conforms to

the tolerances specified in

BS 5409, part 1, 1976, light

DIN 74234, NFE 49100

and normal duty, DIN 73378,

· High operating pressure



#### **Non-return Valves**

- Allow free flow in one direction only
- · Simple reliable design

#### Medium:

Compressed air, filtered, lubricated and nonlubricated, vacuum

## **Body:** Anodised aluminium

Collet:

#### Nickel plated brass

Spring:

#### Stainless steel

Seals: Nitrile rubber

#### Valve and Insert:

Aluminium





#### Working Pressure:

-0.9 to 16 bar (dependent upon operating specification of tubing)



#### T50 Series, In-line Push-in

0038	OD mm	Cracking Pressure Bar	
T50P0004	4	0.03	
T50P0006	6	0.03	
T50P0008	8	0.03	
T50P0010	10	0.03	
T50P0012	12	0.03	
Tech Sheet 20749			

#### **Blocking, Pressure Reducing & Pneumatic Sensor Fittings**

· Positive tube anchorage

Simpler pneumatic

Sealing Washer: Plastic

Elastomeric: Nitrile and

· Male BSP parallel

systems

- · Very compact units
- Easy tube insertion for rapid assembly of pneumatic circuits

#### Medium:

Compressed air

# **Body:** Nickel plated brass or plastic

Collet: Nickel plated brass

# lated brass polyurethane Banjo Bolts: Dlated brass Zinc plated brass

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

Operating Pressures:
Blocking Fitting:

#### Supply pressure: 1-10 bar Pressure Reducing Fitting:

Primary pressure: 1-10 bar max. Secondary pressure: 1-8 bar max. Cylinder pressure (Pc): 10 bar max. Sensor supply pressure: 3-10 bar Sensor switch pressure: 0,6 bar type.



#### **Blocking Fitting, BSPP**

0038	OD mm	Thread
102GA0618	6	1/8"
102GA0628	6	1/4"
102GA0828	8	1/4"
102GA1248	12	1/2"
	Tech Sheet 10258	3

#### **Tubing Types:**

Nylon 11 or 12, polyurethane and other plasticised or unplasticised tubing which conforms to the tolerances specified in BS 5409, Part 1, 1976, light and normal duty, DIN 73378, DIN 74234, NFE 49-100



#### **Pressure Reducing Fitting, BSPP**

0038	OD mm	Thread	
102GB0418	4	1/8"	
102GB0628	6	1/4"	
102GB0838	8	3/8"	
102GB1038	10	3/8"	
	Tech Sheet 10258	}	



#### **Pneumatic Sensor Fitting, BSPP**

0038	OD mm	Thread
102GD0418	4	1/8"
102GD0428	4	1/4"
	Tech Sheet 10258	









# **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

Working Temperature:

**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

#### **Quick Exhaust Valves**

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

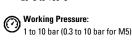
**Body and Cover:** Zinc (1/8"-1/4") or Aluminium alloy (3/8"-1/2")

Working Temperature:

Working Pressure: 0.5 to 10 bar

#### Seals: Nitril

 Allows higher cylinder speeds to be achieved





# T1000 Series, BSPP & Metric

0036	Thread	Function
T1000M0500	M5	Uni-directional
T1000C1800	1/8"	Uni-directional
T1000C2800	1/4″	Uni-directional
T1000C3800	3/8"	Uni-directional
T1000C4800	1/2"	Uni-directional
	Tech Sheet 10248	

#### T1100 Series, BSPP

0036	Thread	Function
T1100C1800	1/8"	Bi-directional
T1100C2800	1/4"	Bi-directional
	Tech Sheet 10249	



#### **T70 Series, BSPP**

0036	Thread	
T70C1800	1/8"	
T70C2800	1/4"	
T70C3800	3/8"	
T70C4800	1/2"	
	Tech Sheet 10250	









NORGREN

# **EXHAUST FLOW REGULATOR/ SILENCERS & AIR FUSES**

#### **Exhaust Flow Regulator/ Silencers**

- · Compact, integral flow regulator and silencer
- · Captive regulating needle will not blow out when unscrewed
- · Reduced dimensions

#### Medium:

Compressed air, filtered, lubricated or nonlubricated, inert gases

## 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

Mounting: In-line two way valve. To be inserted between fixed air supply and flexible hose air line. See guidelines for

Compressed air, filtered,

lubricated and non-

lubricated, inert gases

Air Fuses

· Tamper proof

Assists in complying with

safety regulations

· Low pressure drop

· Compact and safe design

#### Automatically resets after failure correction

- · High corrosion resistance
- · High air pressure rating

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

#### **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

# Working Temperature:

-20°C to +80°C

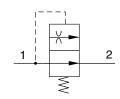
typical installation

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







#### **BSPP**

0036	Thread	Shut Off Flow Rate at 7 bar dm³/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
	Toch Shoot	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	



# **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:**

-20°C to +66°C

O Inlet Pressure: 0-17 bar

Medium: Compressed air only Body and Yoke: Zinc alloy Bowl: Aluminium

**Element:** Sintered plastic

Elastomers: Synthetic rubber units assembled for left to right flow

#### **Boxed Sets**



#### **BSPP**

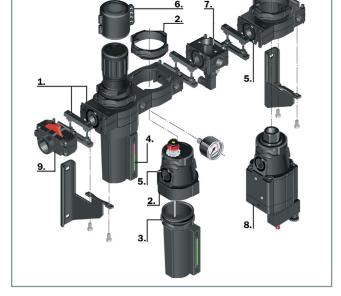
0037	Thread	Micron	Bowl	Pressure Range Bar	Operation	Drain Type
BL64-401	G1/2"	40	Metal	0.3-10	Relieving	Auto
BL64-421	G1/2"	40	Metal	0.3-10	Relieving	Manual
			Took Shoot S	0160		

#### **Filter & Lubricator Combinations**



#### **BSPP**

0037	Thread	Micron	Bowl	Drain Type	
FL64-608	G3/4"	40	Metal	Auto	
FL64-628	G3/4"	40	Metal	Manual	
Tech Sheet 20160					



#### Filter/Regulator & Lubricator Combinations



#### **BSPP**

0037	Thread	Micron	Bowl	Pressure Range Bar	Operation	Drain Type
BL64-408	G1/2"	40	Metal	0.3-10	Relieving	Auto
BL64-428	G1/2"	40	Metal	0.3-10	Relieving	Manual
BL64-608	G3/4"	40	Metal	0.3-10	Relieving	Manual
			Tech Sheet 2	0160		

#### Gauge



#### 50mm, Centre Back Connection

0037	Thread	Pressure Range Bar
18-013-013	R1/8"	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 elements

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





#### 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**

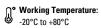
- · Diaphragm and balanced valve design ensure good regulation characteristics
- · Non-rising adjusting knob has snap-action lock
- · Standard options include non-relieving models and alternative pressure ranges

**R64G Series:** Body: Zinc alloy Bonnet: Aluminium Yoke: Zinc alloy Elastomers: Synthetic rubber

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







#### 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	G1/2"	120	0.3-10	Relieving
R68G-NNK-RLN	-	150	0.4-8	Relieving
		Tech Sheet 20	161	

#### **Filter Regulators**

- · High efficiency water removal
- · Good regulation characteristics
- · Non-rising adjusting knob has snap-action lock

· Standard options include nonrelieving 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

Bonnet and Bowl: Aluminium Yoke: Aluminium Filter Element: Sintered bronze Elastomers: Synthetic rubber Adjusting Knob: Acetal resin

**B15 Series**:

Body: Aluminium

Medium: Compressed air only Gauge Ports: G1/8 Operation: Relieving





#### 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
	To	ch Shoot 201	62		

This unit is to be used in conjunction with a ported yoke

## **High Efficiency Oil Removal Filters**



#### F64H & F68H

0037	Thread	Flow dm <sup>3</sup> /s	Bowl	Drain Type
F64H-3GD-MD0	G3/8"	28	Metal	Auto
F64H-4GD-MD0	G1/2"	28	Metal	Auto
F68H-8GD-MU0	G1"	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	G1/4"	Metal
L64M-3GP-EDN	G3/8"	Metal
L64M-4GP-EDN	G1/2"	Metal
L64M-6GP-EDN	G3/4"	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	G1/4"-G3/4"	
V68H-NND-RMN	G3/4"-G1.1/2"	
	Tech Sheet 20165	

#### This unit is to be used in conjunction with a ported yoke

Assists machine designers in complying with the European Machineries 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.

**Working Temperature:** +5°C to +50°C

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



#### **P64F Soft Start/Dump Valve**

	•		
0037	Port Size	Flow dm <sup>3</sup> /s	Pressure Range Bar
P64F-NNC-PZN	G1/4"-G3/4"	57	3-10
	Tech	Sheet 20165	

#### **Yokes**

· When installed, enables Olympian basic units to be 'plugged in' or removed without disturbing connecting pipework



#### Single Unit

0037	Thread	
Y64A-4GA-N1N	G1/2"	
Y68A-6GN-N1N	G3/4"	
Y68A-8GN-N1N	G1"	
Y68A-BGN-N1N	G1.1/2"	
	Tech Sheet 20166	



#### **Double Unit**

0037	Thread	
Y64A-4GA-N2N	G1/2"	
Y68A-6GN-N2N	G3/4"	
Y68A-BGN-N2N	G1.1/2"	
	Tech Sheet 20166	

#### Shut Off Valves

- · 3 port/2 position
- · Easy to operate
- · Lockable in the 'closed' position



#### **BSPP**

0037	Thread	
T64T-4GB-P1N	G1/2"	
T68C-6GB-B2N	G3/4"	
	Tech Sheet 20166	

## **Coalescing Exhaust Silencers**



#### **BSPP**

0037	Thread	
CS13-364-10GG	G1/4"	
CS13-664-10GG	G1/2"	
	Tech Sheet 20166	

**NORGREN** 

## **EXCELON MODULAR SYSTEM**

Excelon is a completely new air preparation system from Norgren.

Although direct ported, thanks to a patented Quikclamp connection system, Excelon can be used where both stand alone units or modular assemblies are required. Just another example of Norgren's adaptability.

#### 1. NEW PATENTED QUIKCLAMP **CONNECTION SYSTEM**

Simple, speedy assembly of accessories and combination units.

#### 2. NEW PATENTED QUARTER TURN MANUAL DRAIN

Simple 1/4 turn to operate. Features a threaded pipeaway outlet.

#### 3. NEW PATENTED SHUT-OFF VALVE

3/2 with a threaded exhaust and lockable blade for safe system isolation.

#### 4. NEW LUBRICATOR SIGHT FFFD DOME

Allows full 360° visibility and screwdriver adjustment for easy drip rate setting. Can be made tamper resistant.

#### **Working Temperature:** -20°C to +50°C

#### 5. BAYONET BOWLS

Easy removal for routine maintenance. Detent action prevents removal under

#### 6. PUSH TO LOCK ADJUSTING KNOB

Can be fitted with a tamper resistant cover

#### 7. CAPTIVE '0' RINGS

#### 8. BALANCED VALVE

For improved regulation characteristics.

#### 9. LUBRICATOR SENSOR

Helps to maintain constant oil density with varying flow.

#### PLUS

Many more NEW design features and accessories.

Fluid: Compressed air

## **Maximum Working Pressure:**

· Boxed sets include: filter/regulator and micro-fog lubricator complete with exhausting shut-off valve, pressure gauge and mounting brackets

- · High efficiency water and particle removal
- · Quick release bayonet bowls
- · Push to lock adjusting knob with tamper resistant option
- . All round (360°) visibility of lubricator sight feed dome for ease of drip rate setting
- · Micro-fog lubricator for most general purpose pneumatic applications

## Filters Regulators & Lubricators - Boxed Sets

#### BL72:

Polycarbonate bowl standard, zinc bowl optional. Zinc body. Neoprene, nitrile and Geolast elastomeric materials. Transparent nylon liquid level indicator lens for metal bowl

#### Filter/Regulator:

Acetal bonnet. Sintered polypropylene element. Brass valve

#### Lubricator:

Transparent nylon sight dome



#### Transparent, BSPP

0037	Thread	Micron	Pressure Range Bar	Operation	Drain Type
BL72-201G	G1/4"	40	0.3-10	Relieving	Semi-auto
BL72-221G	G1/4"	40	0.3-10	Relieving	Manual
		Tooh	Choot 10501		

#### BL74:

Aluminium bonnet, brass valve. Sintered plastic element. Aluminium body, transparent polycarbonate with steel bowl guard. Transparent nylon sight-feed dome, neoprene and nitrile elastomers

#### Filter/Regulator:



#### **Guarded Transparent, BSPP**

0037	Thread	Micron	Pressure Range Bar	Operation	Drain Type
BL74-401G	G1/2"	40	0.3-10	Relieving	Auto
		Tech	Sheet 10581		

# **PNEUMATICS**

## **EXCELON MODULAR SYSTEM**



## Filter/Regulators

- Excelon design allows in-line installation or modular installation with other Excelon products
- · High efficiency water and particle removal .

Medium: Compressed air Operation: Relieving Valve: Brass



-20°C to +50°C (Transparent Bowl)

-20°C to +65°C (F72G Metal Bowl)

-20°C to +50°C (F73G Transparent Bowl)

-20°C to +80°C (F73G Metal Bowl)

-20°C to +80°C (F74G Metal Bowl)



#### **Maximum Working Pressure:**

10 bar (Transparent bowl) 17 bar (Metal bowl)

10 bar (B72G with metal bowl and auto drain)



#### B72G, B73G & B74G, BSPP

0037	Thread	Flow dm³/s	Micron	Bowl	Drain Type
B72G-2GK-AL3-RMN	G1/4"	38	40	Transparent	Auto
B72G-2GK-QT3-RMN	G1/4"	38	40	Transparent	Manual
B73G-3GK-AT3-RMN	G3/8"	50	40	Transparent	Auto
B74G-4GK-AP3-RMN	G1/2"	100	40	Guarded Transparent	Auto
B74G-4GK-QP3-RMN	G1/2"	100	40	Guarded Transparent	Manual
		Tech She	eet 1359		

## **General Purpose Filters**

- Excelon design allows in-line installation or modular installation with other Excelon products
- · Quick release bayonet bowl

F73G and F74G Series:

Body: Aluminium

**Guarded Transparent Bowl:** Polycarbonate with steel quard

Metal Bowl: Aluminium

**Liquid Level Indicator Lens** 

(Metal Bowl): Transparent nylon **Element:** Sintered polypropylene

Elastomers: Neoprene and nitrile



-20°C to +50°C (Transparent bowl) -20°C to +65°C (F72G Metal bowl)

-20°C to +50°C (F73G Transparent bowl)

-20°C to +80°C (F73G Metal bowl) -20°C to +80°C (F74G Metal bowl)

Working Pressure: 0 to 10 bar (Transparent bowl)

0 to 17 bar (Metal bowl) 0 to 10 bar (F72G with metal bowl and auto drain)

#### F72G, F73G & F74G, BSPP

0037	Thread	Flow dm <sup>3</sup> /s	Micron	Bowl	Drain Type
F72G-2GN-AL3	G1/4"	30	40	Transparent	Auto
F72G-2GN-QT3	G1/4"	30	40	Transparent	Manual
F73G-3GN-AD3	G3/8"	35	40	Metal with Level Indicator	Auto
F74G-4GN-AP3	G1/2"	83	40	Guarded Transparent	Auto
F74G-4GN-QP3	G1/2"	83	40	Guarded Transparent	Manual
		Tooh 9	Shoot 2016	0	

- Push to lock adjusting knob with tamper resistant accessory
- Optional patented quarter turn manual drain

Optional service life indicator turns

from green to red when the filter

element needs to be replaced

Medium: Compressed air only

Transparent Bowl: Polycarbonate

**Optional Service Life Indicator:** 

parts, stainless steel spring,

Transparent nylon body, acetal internal

F72G Series:

Metal Bowl: Zinc

nitrile elastomers

Body: Zinc

Transparent Bowl: Polycarbonate Elastomers: Neoprene and nitrile

Quick release bayonet bowl





## L72M, L73M & L74M, BSPP

0037	Thread	Flow dm³/s	Bowl	Bowl Capacity Litres
L72M-2GP-ETN	G1/4"	24	Transparent	0.04
L72M-3GP-ETN	G3/8"	24	Transparent	0.04
L73M-3GP-ETN	G3/8"	64	Transparent	0.1
L74M-4GP-QPN	G1/2"	70	Guarded Transparent	0.2
		Tech Sheet	1360	

# **Micro-Fog Lubricators**

- · Excelon design allows in-line or modular installation
- · Quick release bayonet bowl
- · Flow sensor provides a nearly constant

oil/air ratio over a wide range of flows Medium: Compressed air

Transparent Bowl: Polycarbonate Sight-feed Dome: Transparent nylon

#### Working Temperature:

-20°C to +50°C (Transparent bowl) -20°C to +65°C (L72M Metal bowl) -20°C to +80°C (L74M Metal bowl)

**Maximum Working Pressure:** 

10 bar (Transparent bowl) 17 bar (Metal bowl)

- · Highly visible, prismatic liquid level indicator lens on metal bowls
- · All round (360°) visibility of sight-feed dome for ease of drip rate setting
- · Micro-fog and oil-fog

Typical flow with 6.3 bar inlet pressure and 0.5 bar pressure drop.





## · Push to lock adjusting knob with

- Excelon design allows in-line or modular installation
- · Full flow gauge ports
- · Balanced valve design for optimum pressure control

**Pressure Regulators** 

· Standard relieving models allow reduction of downstream pressure when the system is dead-ended

#### R72G Series:

Body: Zinc

Bonnet and Bottom Plug: Acetal

Medium: Compressed air only

Valve: Brass Elastomers: Nitrile



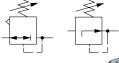
-20°C to +65°C (R72G) -20°C to +80°C (R74G)





- tamper resistant accessory
- · Manifold regulators can be banked together to provide numerous regulated pressures from a common primary pressure

R73G and R74G Series: Body and Bonnet: Aluminium Bottom Plug: Acetal





#### R72G, R73G & R74G, BSPP

0037	Thread	Flow dm³/s	Pressure Range Bar	Operation
R72G-2GK-RMN	G1/4"	33	0.3-10	Relieving
R73G-3GK-RMN	G3/8"	64	0.3-10	Relieving
R74G-4GK-RMN	G1/2"	105	0.3-10	Relieving
		Tech Sheet 10308		

# NORGREN

#### **Pressure Relief Valves**

Excelon design allows in-line installation or modular installation with other Excelon products.

Push to lock adjusting knob with tamper resistant accessory. Helps protect air operated equipment from over pressure by retarding excessive pressure build up.

Medium: Compressed air Gauge Port: G1/8 Relief Port: V72 Series -G1/4, V74 Series - G1/2 Materials 72 Series:

Body: Zinc Bonnet: Acetal Valve: Brass Elastomers: Neoprene

Bottom Plug: Acetal

**Materials 74 Series:** Valve: Aluminium and nitrile

**EXCELON MODULAR SYSTEM** 

Body: Aluminium Bonnet: Aluminium Elastomers: Nitrile Bottom Plug: Acetal

# **Working Temperature:** V72 Series: -34°C to +65°C V74 Series: -34°C to +80°C **V74**

#### V72 & V74

V72

0037	Thread
V72G-2GK-NMN	G1/4"
V74G-3GK-NMN	G3/8"
V74G-4GK-NMN	G1/2"
	Toch Shoot 20168

#### 3/2 Shut Off Valves

- · Ideal for isolating sub-systems not in use
- · Easy to operate
- · Lockable in the 'closed' position



#### V72 & V74

0037	Series	Thread
T72T-2GA-P1N	72	G1/4"
T74T-4GA-P1N	74	G1/2"
	Tech Sheet 20167	

## Quikclamps

- · Allows easy connection of one Excelon unit to another
- One piece no loose parts
- · Uniquely, connected products can be rotated in 90° increments



#### V72 & V74

0037	Series	
4214-51	72	
4314-51	73 & 74	
	Tech Sheet 20167	

## **Quikclamp & Wall Brackets**

- · Allows easy connection of one Excelon unit to another
- · One piece no loose parts
- Uniquely, connected products can be rotated in 90° increments
- Secure mounting to a wall, panel or machine surface



#### V72 & V74

0037	Series
4214-52	72
4314-52	73 & 74
	Tech Sheet 20167

#### **Wall Mounting Brackets**

· Provides secure wall mounting for individual Excelon products\*

\*Except P72, P74, T73 and T74 units.



#### V72 & V74

0037	Series
4224-50	72
4324-50	74
	Tech Sheet 20167

#### **Neck Mounting Brackets**

- · Provides secure wall mounting for individual pressure regulators, filter-regulators and pressure relief valves
- · Includes panel nut



#### V72 & V74

0037	Series	
74316-50	72	
4461-50	73	
4368-51	74	
	Tech Sheet 20167	

#### **Panel Nuts**

· Used to panel mount pressure regulators, filter-regulators and pressure relief valves



V72 & V74

0037	Series
4248-89	72
4348-89	74
	Tech Sheet 20167

# **PORTED FILTERS & REGULATORS**





## **Filter Regulator & Lubricator Box Set**

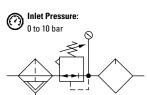
- Miniature boxed sets offer rapid set up and installation.
- Boxed sets are pre-assembled and ready to install.

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



· Set consists of a filter/regulator, lubricator, shut-off valve, mounting bracket and pressure gauge.



Maximum remaining oil content

· Automatic drain fitted as standard

Synthetic fibre and polypropylene foam

Elastomers: Neoprene and nitrile

Body: Zinc alloy

Filter Element:

0,01 ppm, particle removal to 0,01  $\mu m$ 

#### Box Set 07, BSPP

0037	Thread	
BL07-201	G1/4"	
	Tech Sheet 20746	

#### **Ported Pureaire Oil Removal Filters**

- · High efficiency coalescing oil-removal filters
- 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)

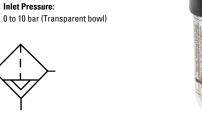


**Working Temperature:** 

-20°C to +50°C (Transparent Bowl)



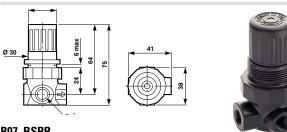




#### F39, BSPP

0037	Thread	Flow dm³/s	Drain Type	Bowl
F39-100-A0TG	G1/8"	2.8	Auto	Transparent
F39-200-M0MG	G1/4"	3	Manual	Metal
F39-200-M0TG	G1/4"	3	Manual	Transparent
		Tech Sheet 20747		

#### **Ported Pressure Regulators**



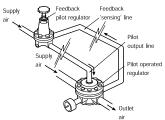
#### R07, BSPP

0037	Thread	Flow dm <sup>3</sup> /s	Pressure Range Bar	Operation
R07-100-RNKG	G1/8"	7.5	0.3-7	Relieving
R07-200-RNKG	G1/4"	7	0.3-7	Relieving
		Tech Sheet 10	0637	



#### R18, Pilot Operated, BSPP

0037	Thread	Flow dm <sup>3</sup> /s	Pressure Range Bar	
R18-B00-RNXD	G1.1/2"	1000	0.16-17	
R18-C00-RNXD	G2"	1000	0.16-17	
Tech Sheet 10636				





#### 11-808 & 11-204, Pilot Operated, BSPP

0037	Thread	Flow dm <sup>3</sup> /s	Pressure Range Bar	Operation
11-808-960	G3/4"	180	0.16-17	Relieving
11-204-004	G1/4"	N/A	0.16-17	Relieving
11-204-006	G1/4"	N/A	4-17	Relieving
		Tech Sheet 1	0636	



#### **General Use, BSPP**

0037	Thread	Flow dm³/s	Pressure Range Bar	
20AG-X4G-PH100	G1/2"	60	0.2-8	
20AG-X4G-PJ100	G1/2"	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 dm³/s	Start Point dm³/s
L07-100-MPQG	G1/8"	5	0.24
	Te	ch 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\* 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

0 to 8 bar (11-818-999)

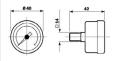
Inlet Pressure:
0 to 14 bar (11-818-110)



#### 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 13	362	

## **Pressure Gauges**





#### 18-013, BSPT

0037	Thread	Pressure Range Bar	Gauge Diameter mm	Туре
18-013-990	R1/8"	0-4	40	Centre Back
18-013-989	R1/8"	0-10	40	Centre Back

