

Closed-loop air piloted proportional pressure control valve

High flow

Excellent performance characteristics

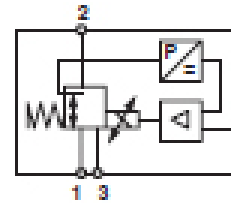
Fast response time

Adjustable gain and pressure range

Low power consumption

Feedback signal

Manifold mountable



Technical features

Medium:

Compressed dry air, oil free filtered to 5 µm.

Operation:

Air piloted spool valve with integrated electronic pressure control

Output (nominal) pressure:

Standard units:

0 ... 2 bar, (0 ... 30 psi);

0 ... 4 bar, (0 ... 60 psi);

0 ... 6 bar, (0 ... 90 psi);

0 ... 8 bar, (0 ... 120 psi);

0 ... 10 bar, (0 ... 150 psi)

Vacuum units:

-1 ... 1 bar (-15 ... 15 psi)

Supply pressure:

Minimum 2 bar above maximum output required.

Standard units: 12 bar max.

Vacuum units: 6 bar max.

Air supply sensitivity:

Better than 0,75% span output change per bar supply pressure change

Flow:

Standard units up to 1400 N l/min (see characteristic curves)

Vacuum units up to 300 N l/min

Air consumption:

< 5 N l/min

Fluid/Ambient temperature:

0 ... +50°C

Air supply must be dry enough to avoid ice formation at temperatures below +2°C.

Temperature sensitivity:

Typically better than 0,03% span/°C

Degree of protection:

IP65 in normal operation (exhaust and baffle protected from water ingress at temperatures <+5°C)

Linearity:

< 1%

Hysteresis and deadband:

< 1%

Response time:

< 80 ms (from 10 ... 90% of output pressure into a 0,1 litre load).

Vibration & shock immunity:

<3% span

0,75 m/s², 5 ... 150Hz,

1 m/s², 5 ... 150Hz

Weight:

0,55 kg

Materials

Body: Aluminium

Lid: Zinc die cast,

Front cover: Grivory

End cap: PA

Maintenance:

No maintenance required

Calibration:

Gain, Span, Zero

Electrical details

Electromagnetic compatibility	Conforms to EC requirements EN 60081-2 (1994) and EN 60082-2 (1995)
Electrical input signal	4 ... 20 mA or 0 ... 10V factory set
Electrical power input	24V d.c. ±25%, (power consumption < 1 W)
Output pressure feedback signal	0 ... 10V full range, ±1% Accuracy
Connectors	M12x1, 5-pin

Standard proportional valves

Option selector

Output pressure	Substitute
0 ... 2 bar/30 psi	02
0 ... 4 bar/60 psi	04
0 ... 6 bar/90 psi	06
0 ... 8 bar/120 psi	08
0 ... 10 bar/150 psi	10
Unit for pressure	Substitute
bar	B
psi	P

VP50*****11H00

Input signal	Substitute
0 ... 10V	1
4 ... 20 mA	4
Port size	Substitute
G 1/4	J
NPT 1/4	K
Manifold	X

For options not shown and any specific requirements please contact the Norgren technical department via: www.norgren.com/ws

Vacuum proportional valves

- 1 ... 1 bar (-15 ... 15 psi)

Option selector

Absolute pressure range	Substitute
0 ... 2 bar/30 psi	02
Unit for pressure	Substitute
bar	B
psi	P

VP50*****11HV1

Input signal	Substitute
0 ... 10V	1
4 ... 20 mA	4
Port size	Substitute
G 1/4	J
NPT 1/4	K
Manifold	X

Connecting plugs

Elbow connector M12x 1



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Manifold mount assembly to ISO 2 sub base

Single manifold



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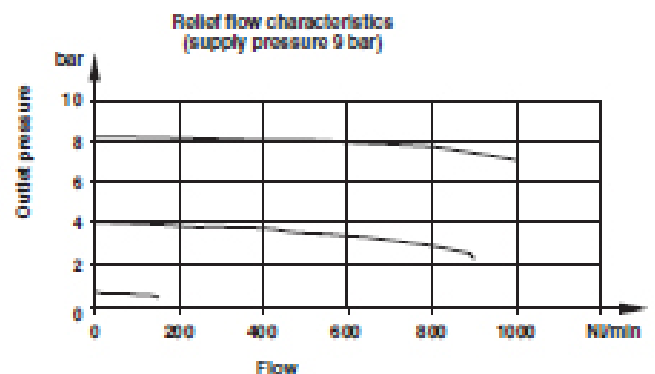
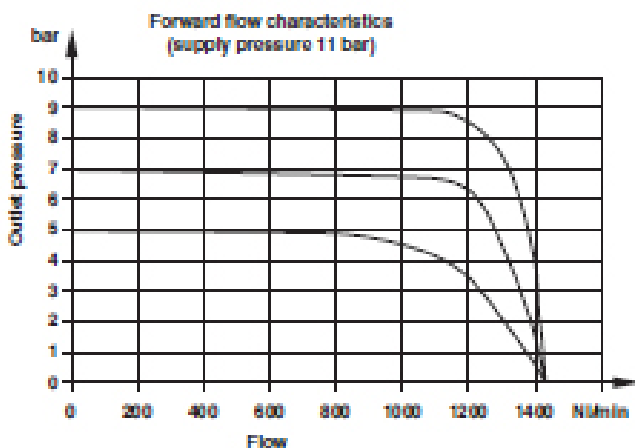
Z5H00

O-rings, flat seal and screws are included

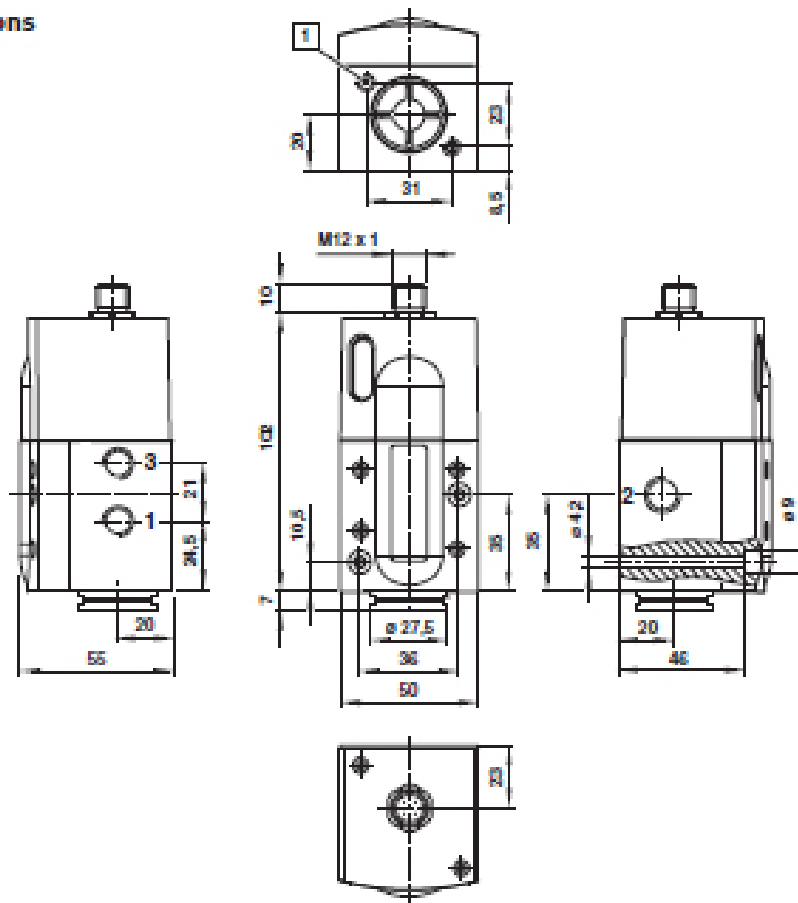
Electrical connector pin locking into the end of the instrument

Pin-No.	Function
1	+24 V d.c. supply
2	0 ... 10V feedback
3	Control signal (-VE)
4	Common (supply signal and feedback return)
5	Diode

Characteristic curves (standard units)

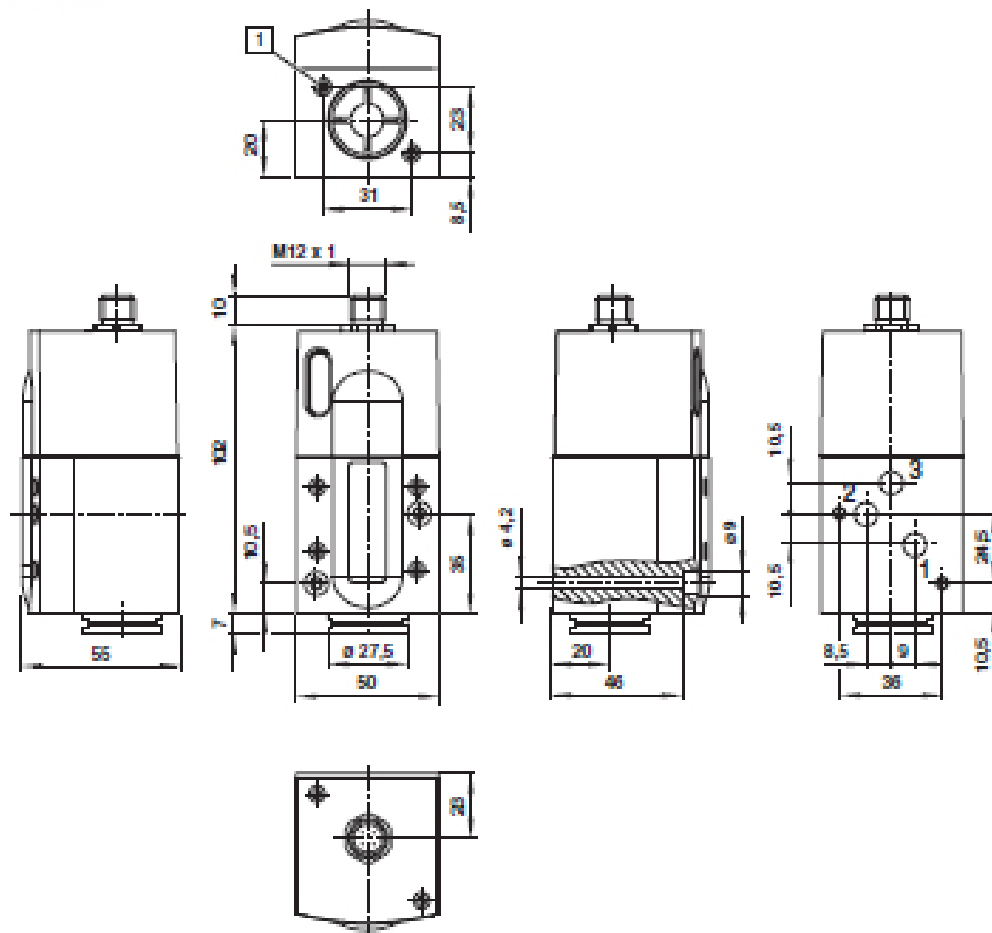


Basic dimensions



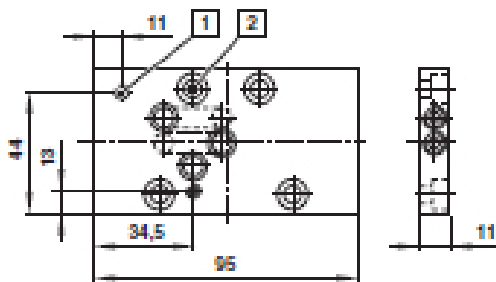
1 M5 x 8 mm deep

VP50 with manifold surface



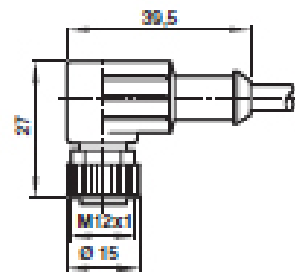
1 M5 x 8 mm deep

**Manifold mount assembly to ISO 2 sub base
included all seals and screws**



- 1 Two screws M6 x 50 mm deep to mount the VP50 onto the manifold
- 2 Four screws M6x16 mm deep to mount the manifold onto the Iso subbase

Connector



Connector, 90°
M12 x 1, 5 pin, female,
5 m cable length, A coded
Model: 0250081

Warning

These products are intended for use in industrial compressed air and rail transport systems only. Do not use these products where pressures and temperatures can exceed those listed under 'Technical features'.
Before using these products with fluids other than those specified, for non-industrial applications, life-support systems, or other applications not within published specifications, consult NORGREN.

Through misuse, age, or malfunction, components used in fluid power systems can fail in various modes.

The system designer is warned to consider the failure modes of all component parts used in fluid power systems and to provide adequate safeguards to prevent personal injury or damage to equipment in the event of such failure.
System designers must provide a warning to end users in the system instructional manual if protection against a failure mode cannot be adequately provided.
System designers and end users are cautioned to review specific warnings found in instruction sheets packed and shipped with these products.