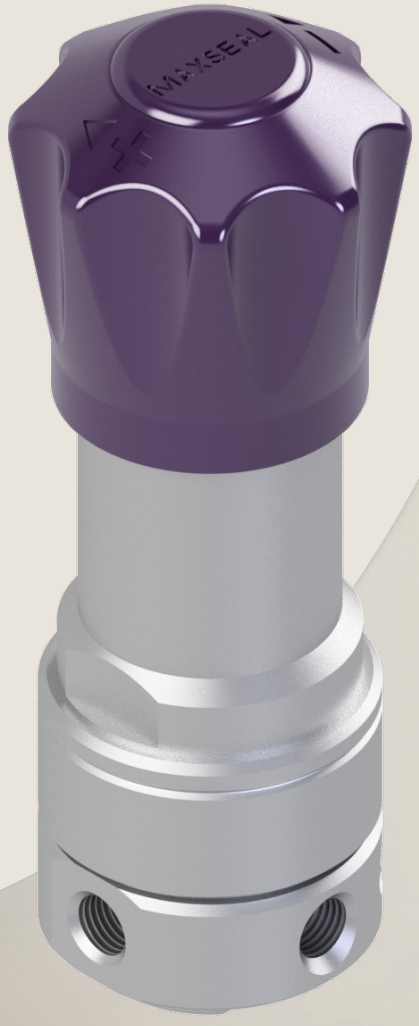
IMI

Process Automation

Our product brand:
IMI Maxseal

L70 Series 1/4" Back Pressure Regulator



Breakthrough engineering for a better world

L70 Series
1/4" Back Pressure Regulator

- Port size: 1/4" NPT
- High pressure regulation providing a wide range of back pressure control
- Up to 414 bar inlet pressure (standard pressure version) / up to 700 bar inlet pressure (high pressure version)
- Heavy duty construction, accurate and reliable, ideal for high and low pressure applications
- 2.2mm valve seat provides stable delivery pressure with varying outlet pressure
- Low friction piston for increased sensitivity and better control at lower pressure ranges
- Temperature rating down to -50°C
- Certifications: ATEX 94/9/EC, PED 2014/68/EU

Technical features

Medium:
Gas or Liquid

Flow:

Cv	Kv
0.15	0.13

Cv is USgpm for 1 psi Δp
Kv is l/min for 1 bar Δp

Leakage:
ANSI/FCI 70-3 Class VI and API 598

Envelope (LxWxH):
69 x 69 x 196

Port Size:
1/4" NPT

Gauge Port:
3 x 1/4" NPT - optional configurations

Pressure Range:

bar	psi
2 ... 20	29 ... 290
5 ... 50	72 ... 725
10 ... 100	145 ... 1450
20 ... 200	290 ... 2900
40 ... 414	600 ... 6000
70 ... 700*	1015 ... 10150*

*HP version only

Temperature Range:

	°C	°F
NBR	-10 ... +100	14 ... +212
FKM	-20 ... +100	-4 ... +212
EPDM	-30 ... +100	-22... +212
Low temp. NBR	-50 ... +100	-58... +212

Extended temperature ranges available - contact sales

Materials:
Valve body: SS 316L
Trim: SS 316L
Stem: SS 316L
Springs: SS 316
Seals: NBR, FKM, EPDM, HNBR

Features:
1/8" NPT Ported vent
Panel Mounting - optional kit

Options:
Tamper-proof stem cap
NACE MR0175/ISO 15156 compliant
Clean to ASTM G93 level C and/or CGA G-4.1
Limit stop for pressure control range

Technical data

Maximum Inlet Pressure bar (psig):	414 (6000) SP version 700 (10150) HP version
Maximum Outlet Control Pressure bar (psig):	414 (6000) SP version 700 (10150) HP version
Sensing Type:	Piston
Seat Diameter (mm/in.):	2.2
Connection Options:	1/4" NPT
Gauge / Vent Connections:	Gauge: 1/4" NPT Vent: 1/8" NPT
Weight kg (lbs):	1.8 (4)

Option selector

Build an L70 series regulator ordering number by combining the designators in the sequence shown below.

Example part number:

1	2	3	4	5	6	7	8	9	10	11	12	13
L70	A9	A1	S	W	N	N	A	H	0	0	P	0

1 Model

1/4" Spring Loaded Regulator	L70

2 Body Material

Stainless Steel	A9

3 Port Size

1/4" NPT	A1

4 Max Inlet Pressure

bar	psi	
414	6000	S
700	10150	H

5 Outlet Pressure Range

bar	psi	
2 ... 20	29 ... 290	R
5 ... 50	72 ... 725	W
10 ... 100	145 ... 1450	Y
20 ... 200	290 ... 2900	3
40 ... 414	600 ... 6000	6
70 ... 700*	1015 ... 10150*	9

6 Relieving

Non-relieving	N

7 Elastomers

NBR	N
FKM	V
EPDM	E
Low temp NBR	Q

8 Port Locations**

	A
	B
	C
	D

9 Handwheel

Standard	H
Handwheel with limit stop	L
Tamper proof	T

10 Filter

None	0

11 NACE

None	0
NACE (non-relieving)	N

12 Panel Mounting

None	0
With panel mounting	P

13 Cleanliness

Standard	0
Oxygen Service	C
Hydrogen	H

*HP version only
**See port configurations

Spares option selector

Example part number:

1	2	3	4	5	6	7	8	9	10
L70	S	S	W	N	N	H	0	0	0

1 Model

1/4" Spring Loaded Regulator	L70

2 Type

Spares	S

3 Max Inlet Pressure

bar	psi	
414	6000	S
700	10150	H

4 Outlet Pressure Range

bar	psi	
2 ... 20	29 ... 290	R
5 ... 50	72 ... 725	W
10 ... 100	145 ... 1450	Y
20 ... 200	290 ... 2900	3
40 ... 414	600 ... 6000	6
70 ... 700*	1015 ... 10150*	9

5 Relieving

Non-relieving	N

6 Elastomers

NBR	N
FKM	V
EPDM	E
Low temp NBR	Q

7 Handwheel

Standard	H
Handwheel with limit stop	L
Tamper proof	T

8 Filter

None	0

9 NACE

None	0
NACE (non-relieving)	N

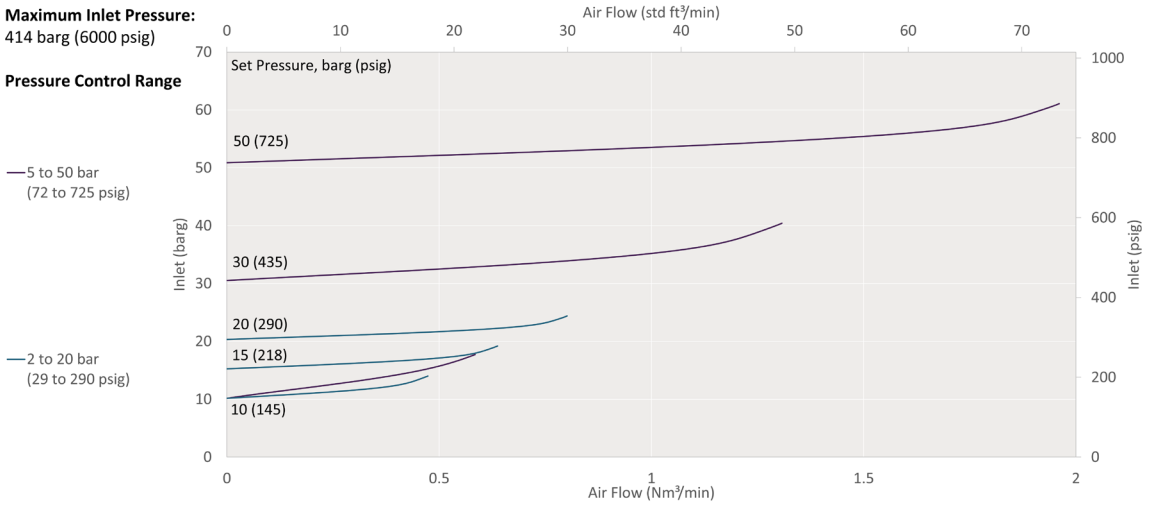
10 Cleanliness

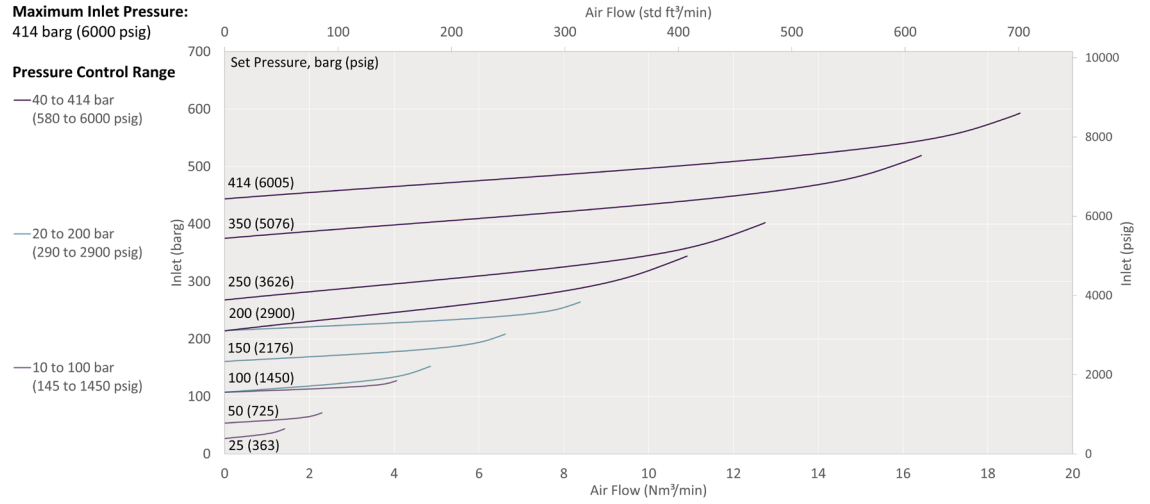
Standard	0
Oxygen Service	C
Hydrogen	H

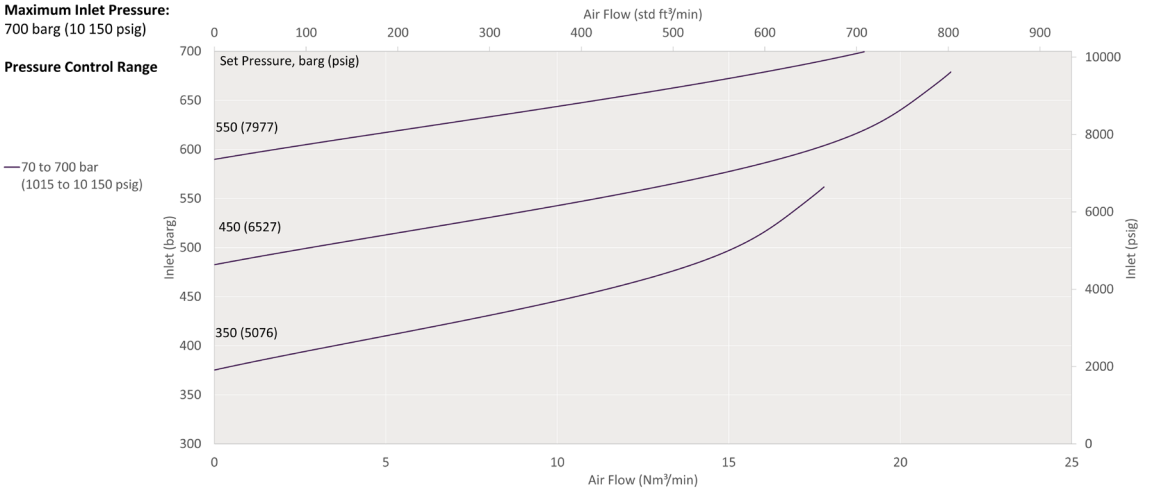
*HP version only

Flow data

The graphs illustrate the change or "accumulation" in inlet pressures as the flow rate increases. Accumulation refers to the increase in inlet pressure that arises from an increase in flow rate through the back pressure regulator.



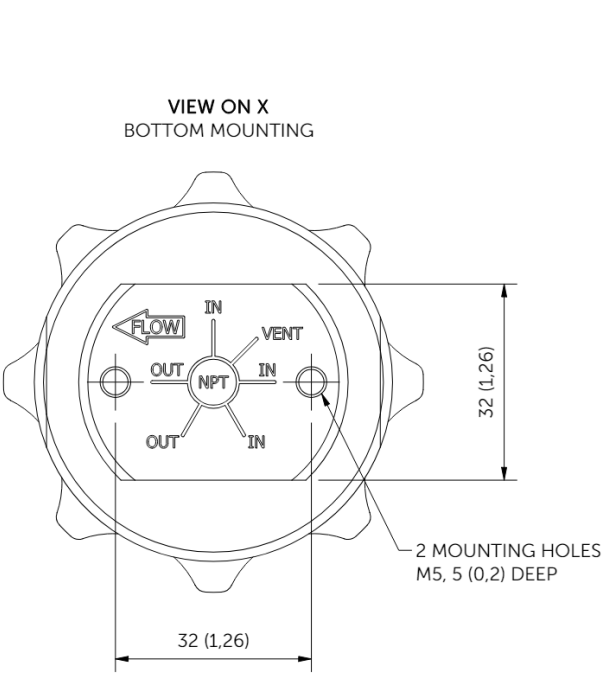


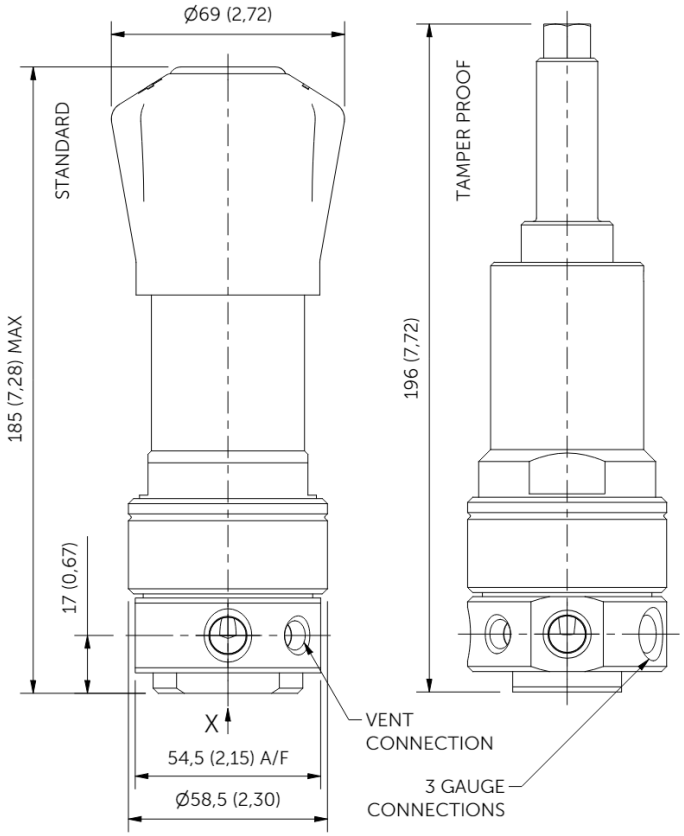


WARNING: Flow curves are generated from data collected under laboratory conditions which may not be fully representative of real-world applications. Real-world valve performance may vary from the curve presented. Tests are conducted using air at 20°C with an assumed fixed density of 1.2 kg/m³.

Dimensions

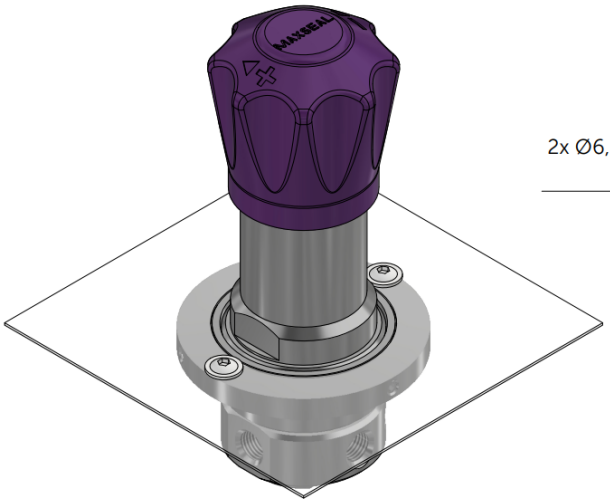
Dimensions in mm (inches)
projection/third angle

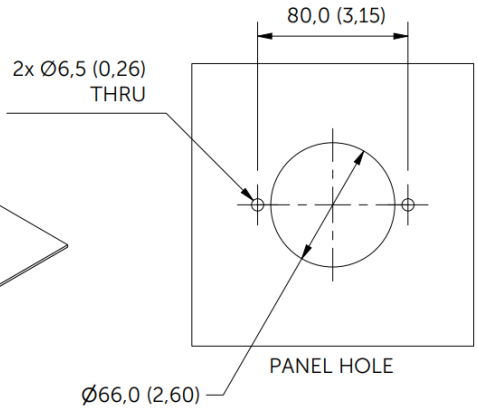


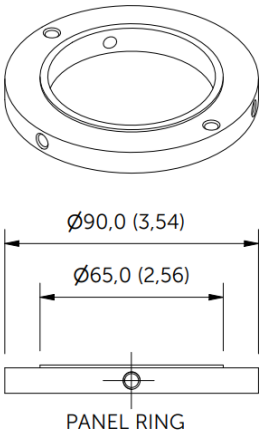


Dimensions are for reference only and are subject to change.

Panel mounting



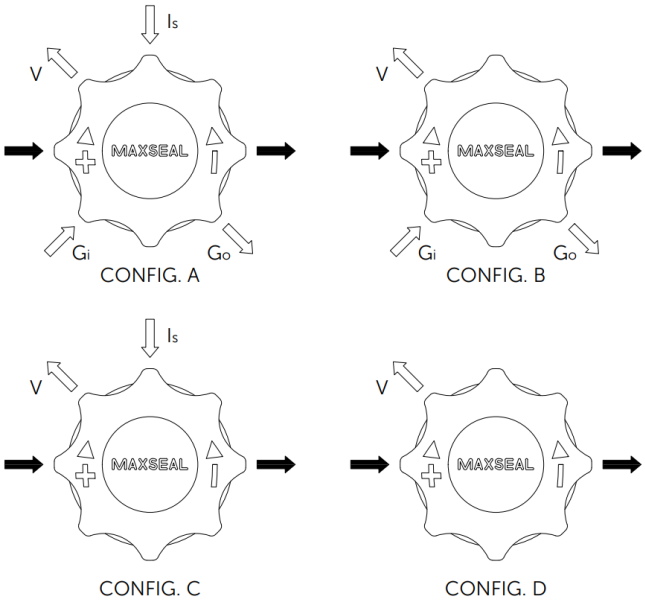




Port configurations

PORT CONFIGURATIONS

➡ - INLET/OUTLET
Is - SECOND INLET
Gi - INLET GAUGE CONN.
Go - OUTLET GAUGE CONN.
V - THREADED VENT CONN.



Warning

These products are intended for use in industrial compressed air systems only. Do not use these products where pressures and temperatures can exceed those listed under Technical Features and Technical Data.

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 Thompson Valves Ltd.

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.

For further information,scan the QR code or contact
sales.thompson@imi-critical.com

Process Automation

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