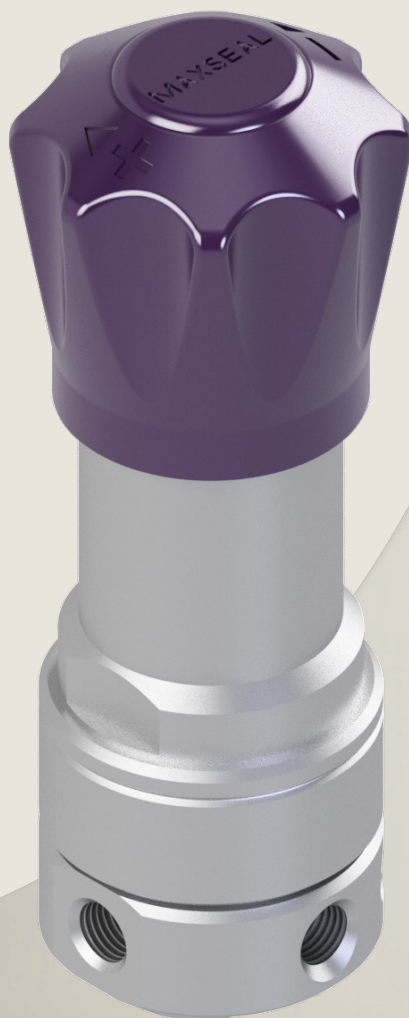




**Process  
Automation**

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

<b>1 Model</b>	<b>5 Outlet Pressure Range</b>	<b>7 Elastomers</b>	<b>9 Handwheel</b>	<b>11 NACE</b>
1/4" Spring Loaded Regulator L70	bar psi	NBR N	Standard H	None 0
	2 ... 20 29 ... 290 R	FKM V	Handwheel with limit stop L	NACE (non-relieving) N
<b>2 Body Material</b>	5 ... 50 72 ... 725 W	EPDM E	Tamper proof T	
Stainless Steel A9	10 ... 100 145 ... 1450 Y	Low temp NBR Q		<b>12 Panel Mounting</b>
	20 ... 200 290 ... 2900 3		<b>10 Filter</b>	None 0
<b>3 Port Size</b>	40 ... 414 600 ... 6000 6	<b>8 Port Locations**</b>	None 0	With panel mounting P
1/4" NPT A1	70 ... 700* 1015 ... 10150* 9	A		
		B		<b>13 Cleanliness</b>
<b>4 Max Inlet Pressure</b>	<b>6 Relieving</b>	C		Standard 0
bar psi	Non-relieving N	D		Oxygen Service C
414 6000 S				Hydrogen H
700 10150 H				

\*HP version only

\*\*See port configurations

## Spares option selector

Example part number:

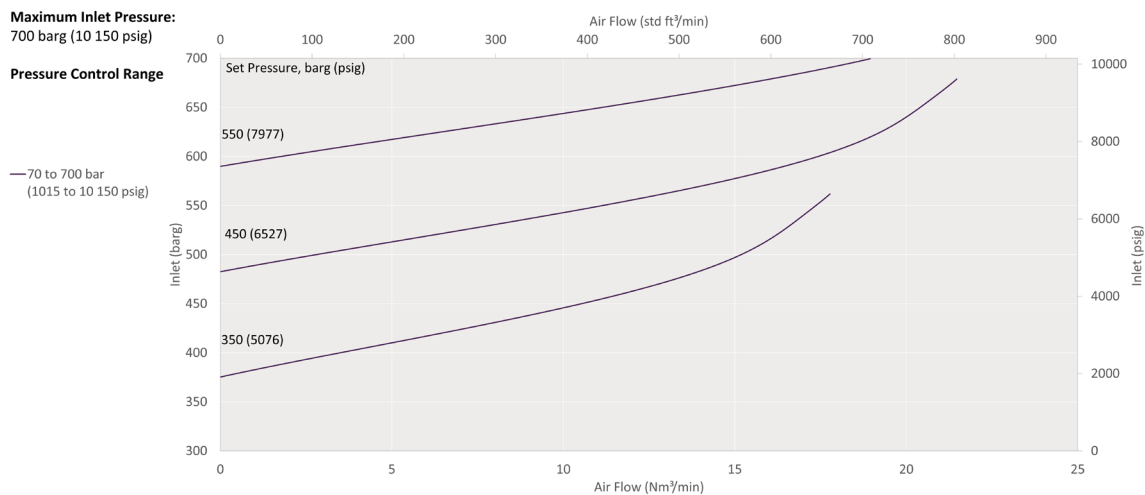
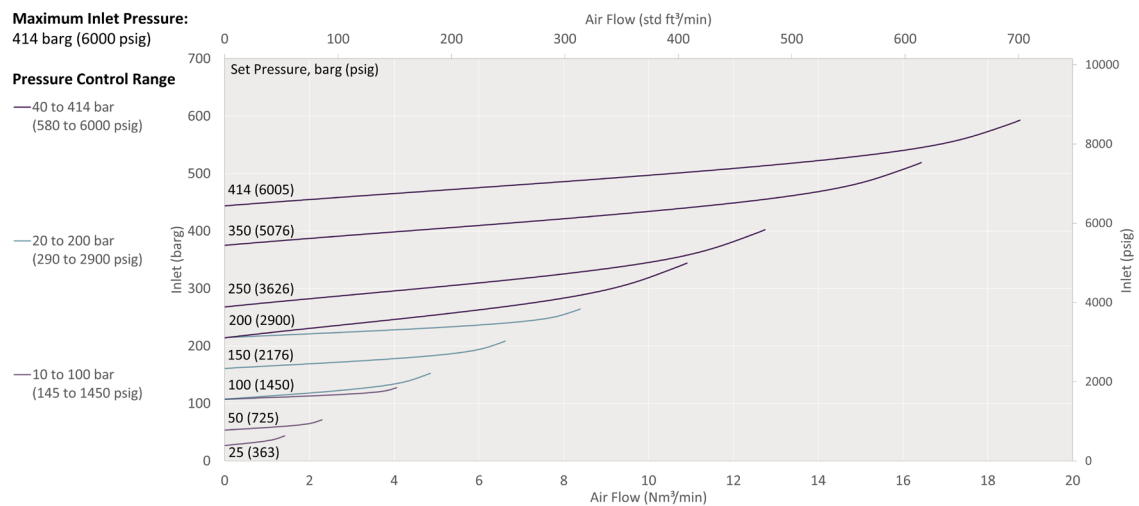
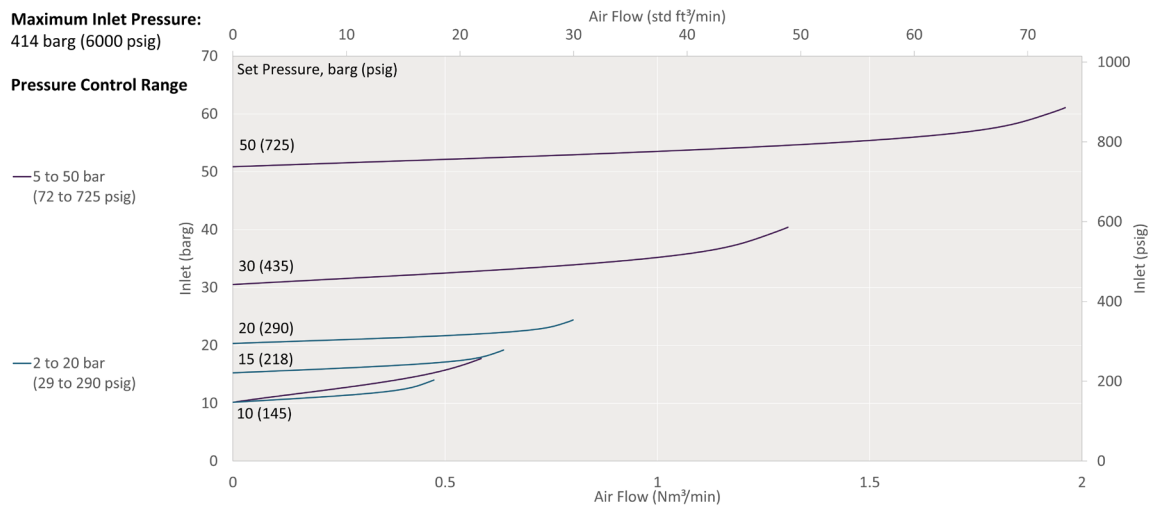
1	2	3	4	5	6	7	8	9	10
L70	S	S	W	N	N	H	0	0	0

<b>1 Model</b>	<b>4 Outlet Pressure Range</b>	<b>6 Elastomers</b>	<b>8 Filter</b>
1/4" Spring Loaded Regulator L70	bar psi	NBR N	None 0
	2 ... 20 29 ... 290 R	FKM V	
<b>2 Type</b>	5 ... 50 72 ... 725 W	EPDM E	<b>9 NACE</b>
Spares S	10 ... 100 145 ... 1450 Y	Low temp NBR Q	None 0
	20 ... 200 290 ... 2900 3		NACE (non-relieving) N
<b>3 Max Inlet Pressure</b>	40 ... 414 600 ... 6000 6	<b>7 Handwheel</b>	
bar psi	70 ... 700* 1015 ... 10150* 9	Standard H	<b>10 Cleanliness</b>
414 6000 S		Handwheel with limit stop L	Standard 0
700 10150 H	<b>5 Relieving</b>	Tamper proof T	Oxygen Service C
	Non-relieving N		Hydrogen H

\*HP version only


## Flow data

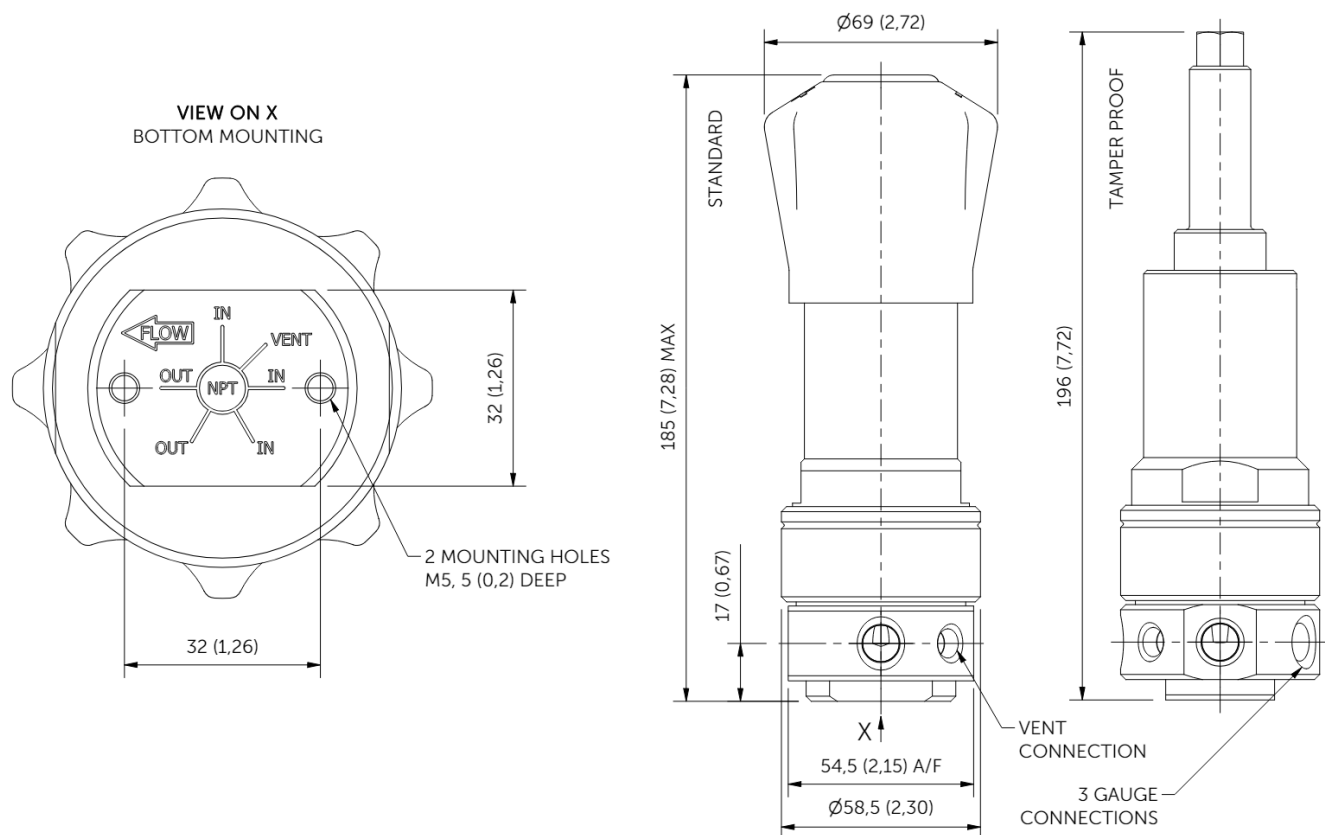
The graphs illustrate the change or “accumulation” in inlet pressures as the flow rate increases. Accumulation refers to the increase in inlet pressure that arises from an increase in flow rate through the back pressure regulator.



**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/m<sup>3</sup>.

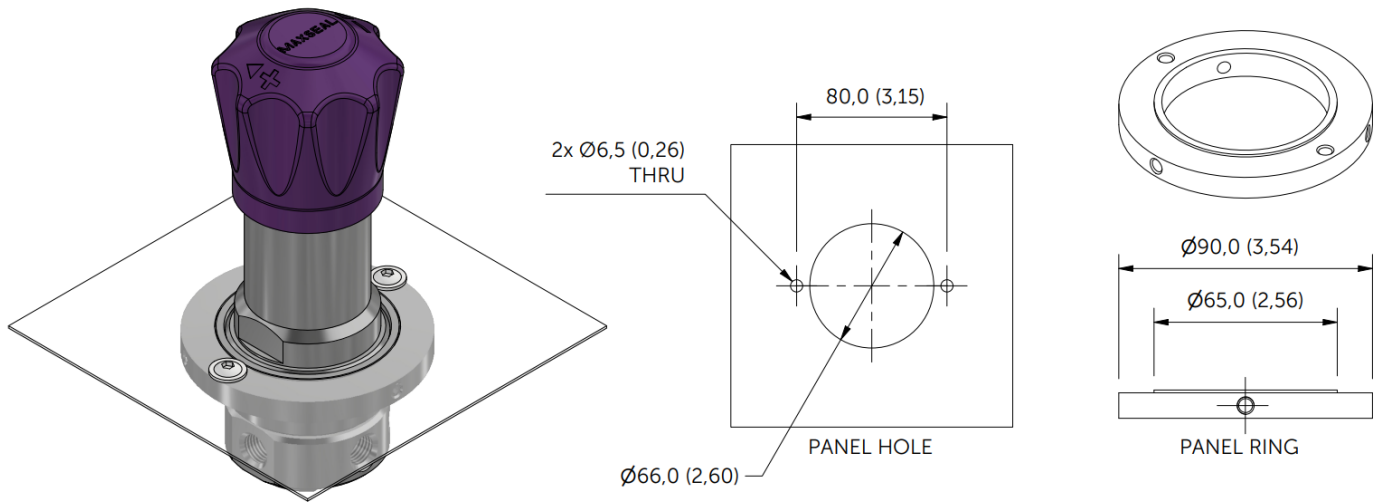
## Dimensions

Dimensions in mm (inches)  
projection/third angle 



Dimensions are for reference only and are subject to change.

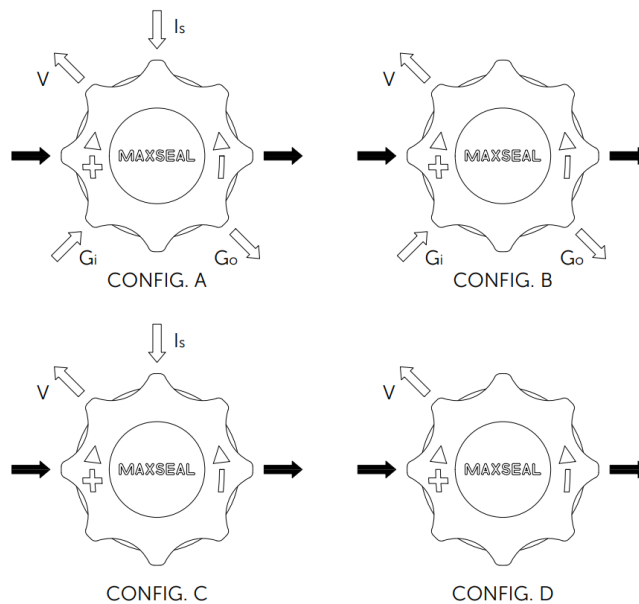
## Panel mounting



## Port configurations

### PORT CONFIGURATIONS

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



## Warning

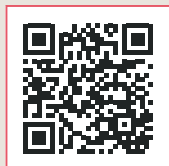
These products are intended for use in industrial compressed air systems only. Do not use these products where pressures and temperatures can exceed those listed under [Technical Features](#) and [Technical Data](#).

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.

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## Process Automation

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