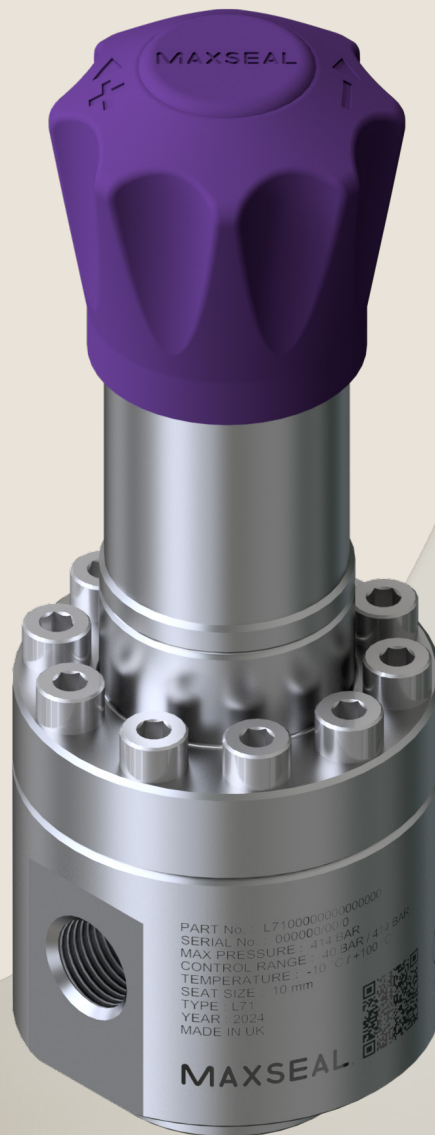




Process  
Automation

Our product brand:  
IMI Maxseal

# L71 Series 1/2" Back Pressure Regulator



Breakthrough  
engineering for  
a better world

# L71 Series 1/2" Back Pressure Regulator



- Port size: 1/2" NPT/BSPP
- High pressure regulation providing a wide range of back pressure control
- Up to 414 bar inlet pressure
- Heavy duty construction, accurate and reliable, ideal for high and low pressure applications
- 10 mm valve seat provides stable upstream pressure control
- Low friction piston for increased sensitivity at high pressure and diaphragm-sensed version for better performance at lower pressures
- Temperature rating down to -50 °C
- Certifications: ATEX 94/9/EC, PED 2014/68/EU

### Technical features

<b>Medium:</b> Gas or liquid (for liquid applications contact Sales)	<b>Port Size:</b> 1/2" NPT/BSPP	<b>Temperature Range:</b>	<b>Features:</b>															
<b>Flow:</b> Cv      Kv 2.2      1.9 Cv is USgpm for 1 psi Δp Kv is m <sup>3</sup> /hr for 1 bar Δp	<b>Gauge Port:</b> 1/4" NPT inlet & outlet gauge ports	<table border="0"> <tr> <td>NBR</td> <td>-10 ... +100</td> <td>+14 ... +212</td> </tr> <tr> <td>FKM</td> <td>-20 ... +100</td> <td>-4 ... +212</td> </tr> <tr> <td>EPDM</td> <td>-30 ... +100</td> <td>-22... +212</td> </tr> <tr> <td>Low temp. NBR</td> <td>-50 ... +100</td> <td>-58... +212</td> </tr> </table>	NBR	-10 ... +100	+14 ... +212	FKM	-20 ... +100	-4 ... +212	EPDM	-30 ... +100	-22... +212	Low temp. NBR	-50 ... +100	-58... +212	1/8" NPT vent to monitor seal integrity Panel mounting - optional kit			
NBR	-10 ... +100	+14 ... +212																
FKM	-20 ... +100	-4 ... +212																
EPDM	-30 ... +100	-22... +212																
Low temp. NBR	-50 ... +100	-58... +212																
<b>Leakage:</b> ANSI/FCI 70-3 Class VI and API 598	<b>Pressure Range:</b>	<b>Options:</b>																
	<table border="0"> <tr> <td>bar</td> <td>psi</td> </tr> <tr> <td>0.3 ... 3</td> <td>4 ... 44</td> </tr> <tr> <td>1 ... 10</td> <td>15 ... 145</td> </tr> <tr> <td>2 ... 20</td> <td>29 ... 290</td> </tr> <tr> <td>5 ... 50</td> <td>72 ... 725</td> </tr> <tr> <td>10 ... 100</td> <td>145 ... 1450</td> </tr> <tr> <td>20 ... 200</td> <td>290 ... 2900</td> </tr> <tr> <td>40 ... 414</td> <td>600 ... 6000</td> </tr> </table>	bar	psi	0.3 ... 3	4 ... 44	1 ... 10	15 ... 145	2 ... 20	29 ... 290	5 ... 50	72 ... 725	10 ... 100	145 ... 1450	20 ... 200	290 ... 2900	40 ... 414	600 ... 6000	<ul style="list-style-type: none"> <li>Tamper-proof stem cap</li> <li>NACE MR0175/ISO 15156 compliant</li> <li>Clean to ASTM G93 level C</li> <li>Limit stop for pressure control range</li> </ul>
bar	psi																	
0.3 ... 3	4 ... 44																	
1 ... 10	15 ... 145																	
2 ... 20	29 ... 290																	
5 ... 50	72 ... 725																	
10 ... 100	145 ... 1450																	
20 ... 200	290 ... 2900																	
40 ... 414	600 ... 6000																	
<b>Envelope (LxWxH):</b> 82 x 82 x 251		<b>Materials:</b>																
		<ul style="list-style-type: none"> <li>Valve body: SS 316L</li> <li>Trim: SS 316L</li> <li>Valve spring: SS 316</li> <li>Set spring: Powder coated chrome silicon</li> <li>Seals: NBR, FKM, EPDM, Low temperature NBR</li> <li>Seat: PEEK</li> </ul>																

### Technical data

<b>Maximum Inlet Pressure bar (psi):</b>	414 (6000) SP version 20 (290) LP version
<b>Maximum Outlet Control Pressure bar (psi):</b>	414 (6000) SP version 20 (290) LP version
<b>Sensing Type:</b>	Piston (SP version only) Diaphragm (LP version only)
<b>Seat Diameter mm (in):</b>	10 (13/32")
<b>Connection Options:</b>	1/2" NPT 1/2" BSPP
<b>Gauge / Vent Connections:</b>	Gauge: 1/4" NPT Vent: 1/8" NPT
<b>Weight kg (lb):</b>	3.8 (8.4)

### Option selector

Build an L71 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
L71	A9	A3	S	W	N	N	A	H	0	0	0	0

<b>1 Model</b>	1/2" Spring Loaded Regulator L71	<b>4 Max Inlet Pressure</b>	bar      psi	<b>6 Relieving</b>	Non-relieving N	<b>9 Handwheel</b>	Standard H	<b>11 NACE</b>	None 0
<b>2 Body Material</b>	Stainless Steel A9	414*      6000*      S	20**      290**      L	<b>7 Elastomers</b>	NBR N	Handwheel with limit stop L	NACE N	<b>12 Panel Mounting</b>	None 0
<b>3 Port Size</b>	1/2" NPT A3 1/2" BSPP E3	<b>5 Outlet Pressure Range</b>	bar      psi	<b>8 Port Locations***</b>	FKM V	<b>10 Filter</b>	None 0	<b>13 Cleanliness</b>	With panel mounting P
		0.3 ... 3**      0 ... 44**      K	1 ... 10**      15 ... 145**      P		EPDM E			Standard 0	ASTM G93 Level C' C
		2 ... 20**      29 ... 290**      R	5 ... 50*      72 ... 725*      W		Low temp NBR Q			Hydrogen <sup>†</sup> H	
		10 ... 100*      145 ... 1450*      Y	20 ... 200*      290 ... 2900*      3						
		40 ... 414*      600 ... 6000*      6							

\* SP version only

\*\* LP version only

\*\*\* See port configurations

<sup>†</sup> Operating range for certain applications may be limited by assembly chemicals - details on request

### Spares option selector

Example part number:

1	2	3	4	5	6	7	8	9	10
L71	S	S	W	N	N	H	0	0	0

<b>1 Model</b>	1/2" Spring Loaded Regulator L71	<b>4 Outlet Pressure Range</b>	bar      psi	<b>6 Elastomers</b>	NBR N	<b>8 Filter</b>	None 0
<b>2 Type</b>	Spares S	0.3 ... 3**      4 ... 44**      K	1 ... 10**      15 ... 145**      P	<b>7 Handwheel</b>	FKM V	<b>9 NACE</b>	None 0
<b>3 Max Inlet Pressure</b>	bar      psi	2 ... 20**      29 ... 290**      R	5 ... 50*      72 ... 725*      W		EPDM E		NACE N
	414*      6000*      S	10 ... 100*      145 ... 1450*      Y	20 ... 200*      290 ... 2900*      3		Low temp NBR Q		
	20**      290**      L	40 ... 414*      600 ... 6000*      6					
		<b>5 Relieving</b>					
		Non-relieving N					

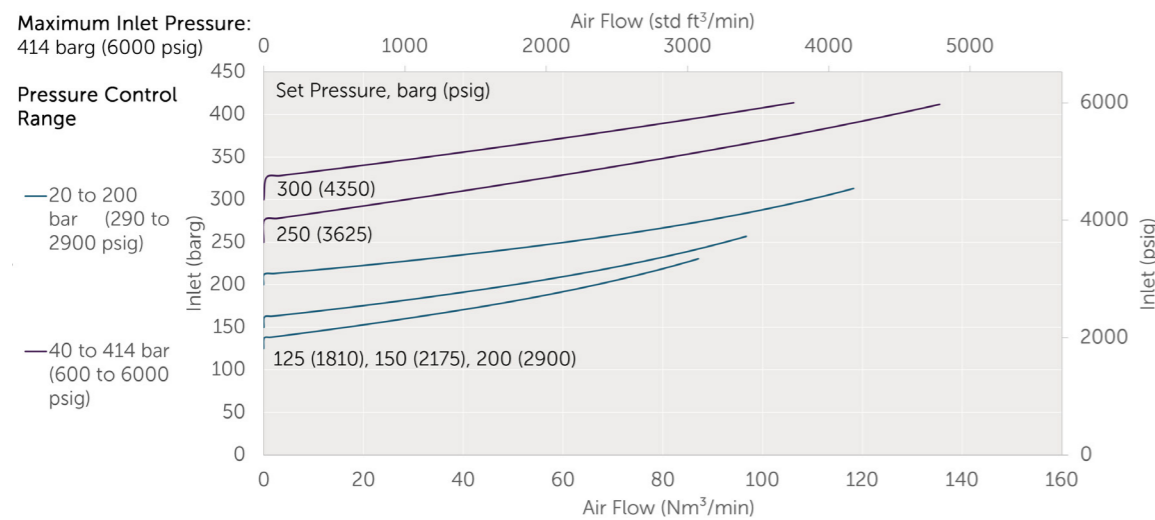
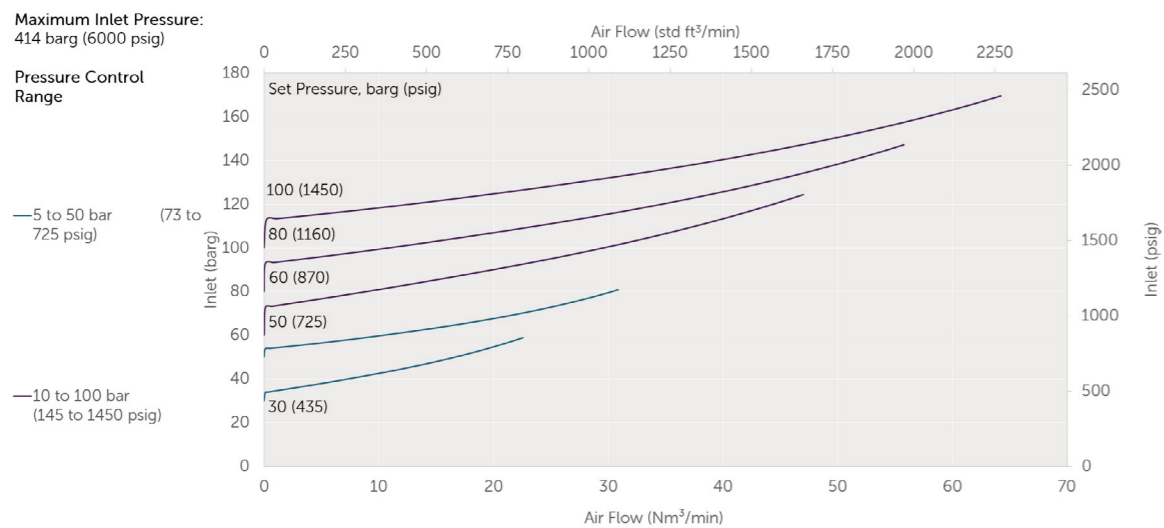
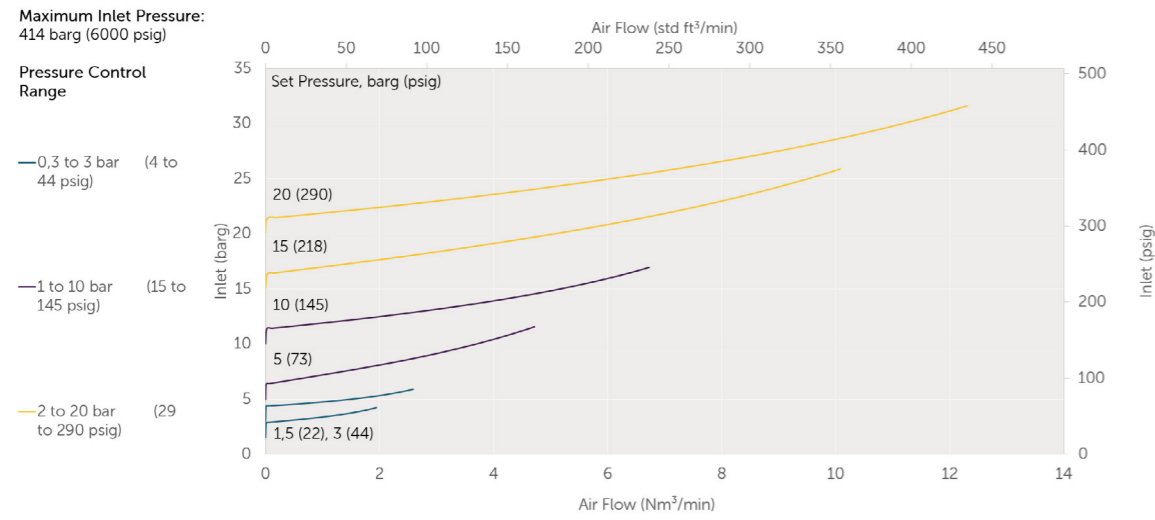
\* SP version only

\*\* LP version only

<sup>†</sup> Operating range for certain applications may be limited by assembly chemicals - details on request

### Flow data

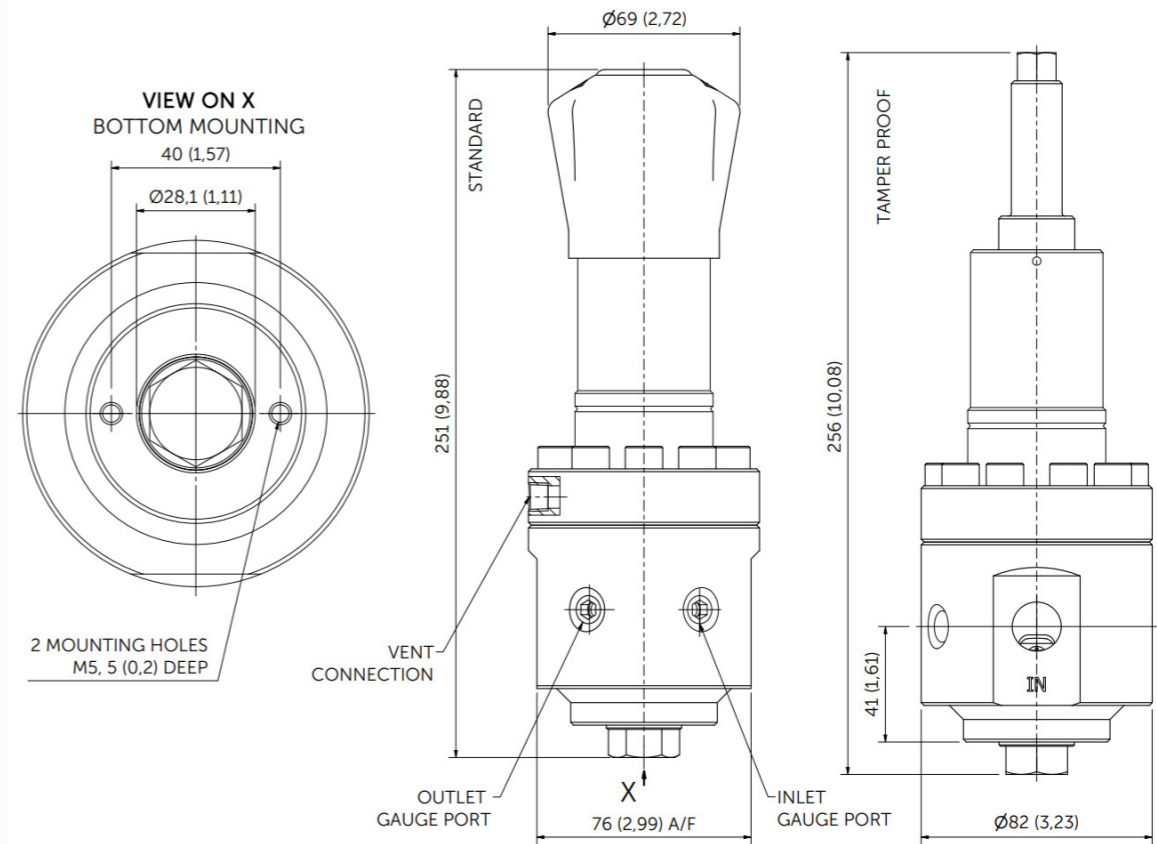
The graphs are representations of the change in inlet pressure as the flow rate increases.  
For more flow curves - see flow curve tool or contact sales.



**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>.

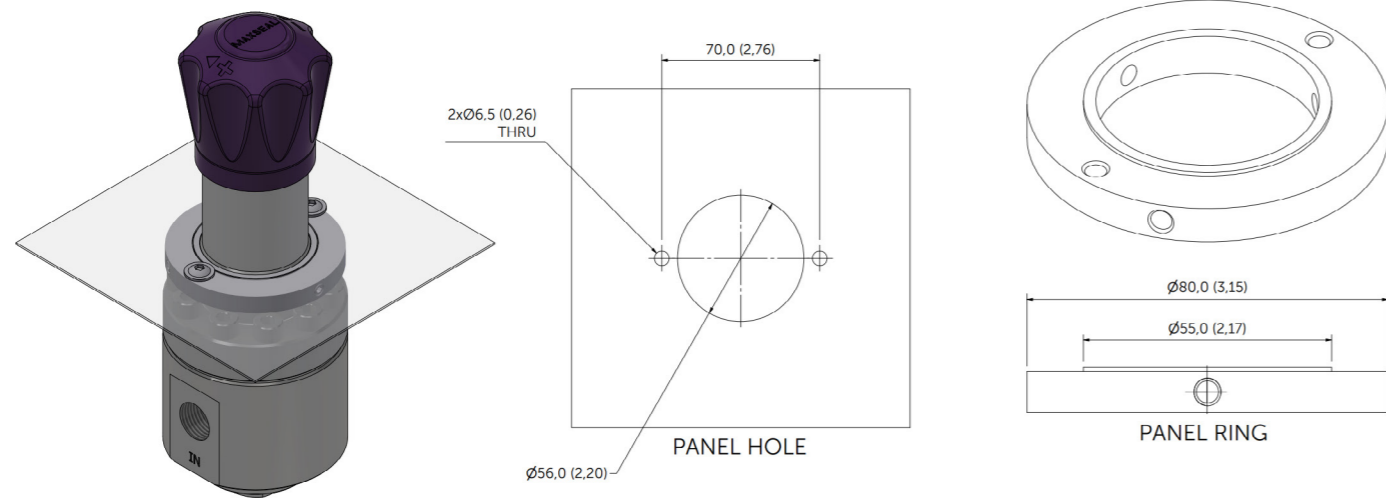
### Dimensions

Dimensions in mm (inches)  
projection/third angle



Dimensions are for reference only and are subject to change.

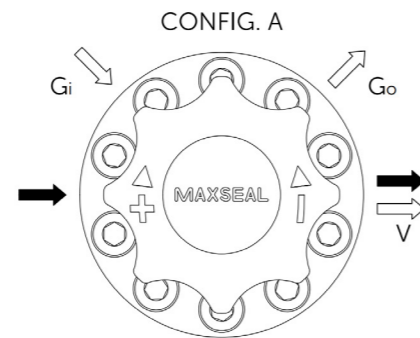
### Panel mounting



### Port configurations

#### PORT CONFIGURATIONS

- - INLET/OUTLET
- G<sub>i</sub> - INLET GAUGE CONN.
- G<sub>o</sub> - OUTLET GAUGE CONN.
- V - THREADED VENT CONN.



### Warning

Do not use these products where pressures and temperatures can exceed those listed under Technical Features and Technical Data.

The end user is responsible for ensuring media compatibility with the product. If in doubt, consult Thompson Valves Ltd.

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.

**IMI manufactures high-performance pneumatic and hydraulic technology for both valve automation and direct control of process media.**

Our range of actuators, instrumentation, and smart positioners are complimented by wireless IoT sensors and asset monitoring software. Renowned for faultless reliability in arduous conditions, our solutions are depended upon to deliver safe and efficient automation while delivering breakthrough engineering for a better world.

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