

# BP-LF691 Datasheet

## LOW-FLOW BACK PRESSURE REGULATOR



● Gas ● Liquid | ● Diaphragm ● Piston | Max Rating: 1,034 bar (15,000 psi) | Control Range: 900 bar (13,050 psi) | Cv 0.1



### INTRODUCING THE BP-LF691...

The BP-LF691 is a piston-sensed low-flow back pressure regulator for gas or liquid applications. As standard, the gas version includes a PEEK™ seat, whilst the liquid version features 316SS seating. Alternatively, other seats are available to suit your application including Titanium, Vespel® and Hastelloy®.

The BP-LF691 accurately controls inlet pressure and vents excess pressure back via the threaded 1/2" NPT/BSPP or 9/16" MP outlet port.

### SPECIFICATION

Max. Rating	1,034 bar (15,000 psi)
Control Range	Up to 900 bar (13,050 psi)
Design Proof Pressure	150% max. working pressure
Seat Leakage	In accordance with ANSI/FCI 70-3
Weight	2.9kg (6.4lbs)

*Note:* Pressure regulator rating may be limited by connection type, Cv and/or seat material. Contact the office for specific pressure requirements.

### STANDARD MATERIALS OF CONSTRUCTION

PART	MATERIALS
Body and Bonnet	ASTM A479 316/316L Stainless Steel (UNS S31600/S31603) <i>Approx. Temperatures: -196°C to 538°C</i>
	ASTM 17-4 Stainless Steel (UNS S17400) <i>Approx. Temperatures: -29°C to 350°C</i>
Main Valve Pin	Inconel® 718 (UNS N07718) <i>Approx. Temperatures: -196°C to 425°C</i>
Seat	PEEK™ (450G) <i>Approx. Temperatures: -50°C to 204°C</i>
	ASTM A479 316/316L Stainless Steel
Valve Spring	Phynox® (R30003)
Piston	ASTM A479 316/316L Stainless Steel
Handwheel	Nylon
O-Rings	NBR N70 (Nitrile Buna N) <i>Approx. Temperatures: -30°C to 120°C</i>
	FKM/FPM (Viton) <i>Approx. Temperatures: -20°C to 200°C</i>
Loading Spring	ASTM A240 301 Stainless Steel (UNS S30100) <i>Approx. Temperatures: -29°C to 370°C</i>

For the full list of material temperature ranges, please visit [www.pressure-tech.com](http://www.pressure-tech.com).

*Note:* Temperature details are provided as nominal values for guidance purposes only. No warranty is made, expressed or implied. Contact the office for specific temperature requirements.

### FEATURES AND BENEFITS

#### 1 PISTON SENSING ELEMENT

Perfect for use in challenging conditions.

#### 2 RANGE OF SEAT MATERIALS

Covers a wide range of applications.

#### 3 OPTIONAL AIR ACTUATOR

Fine remote adjustment.

#### 4 LOW CV (0.02)

Accurate control of process media.

Product availability and specifications contained herein are subject to change without notice. Consult local distributor or factory for potential revisions and/or service related issues. Pressure Tech Ltd support with product selection recommendations only - it is the users responsibility to ensure the product is suitable for their specific application requirements.



DESIGNED AND BUILT IN THE UK

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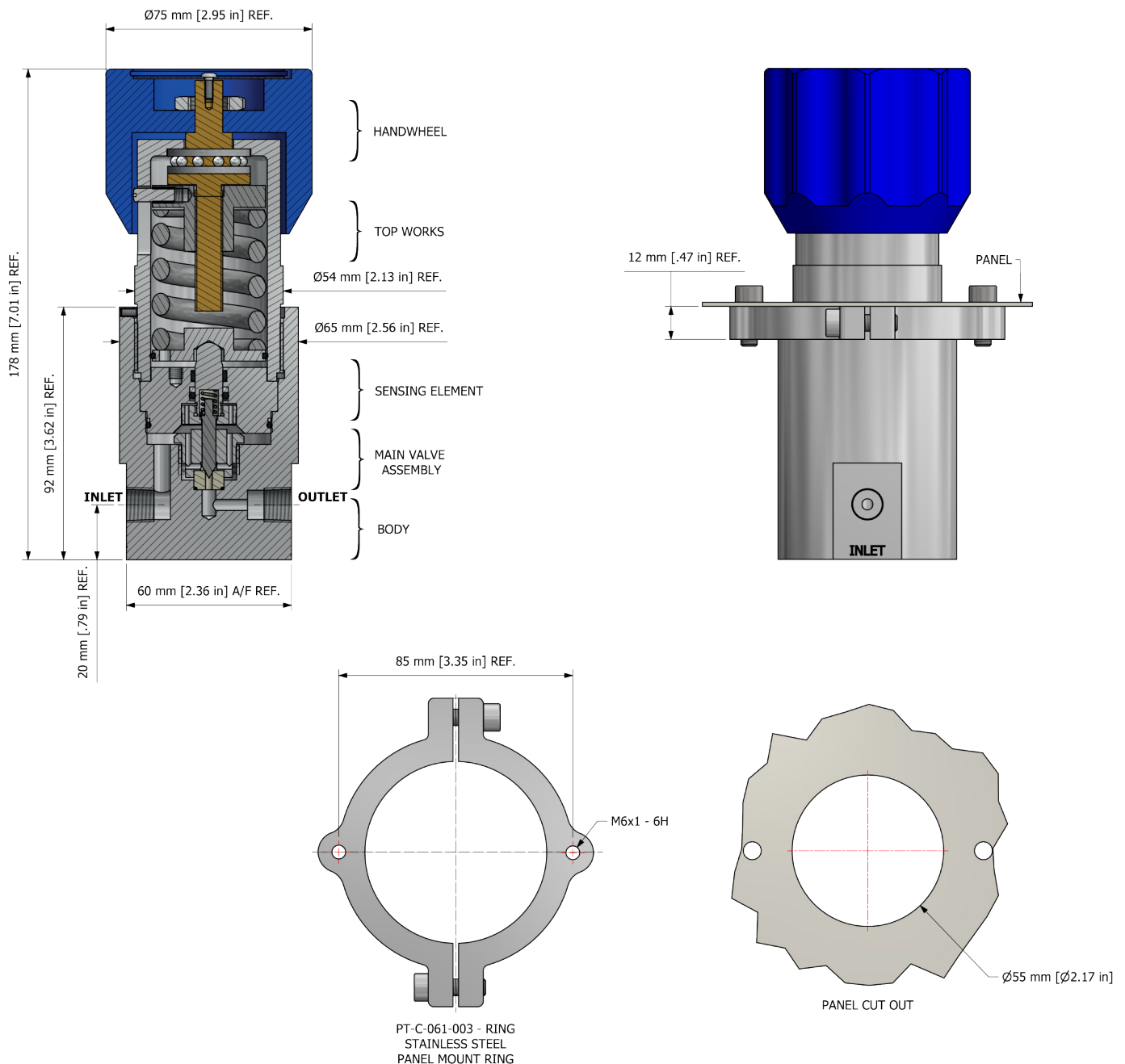
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### DRAWINGS AND INSTALLATION DIMENSIONS

Dimensions shown for 1/4" NPT option - please contact the office for additional connection options.



#### Note:

All gauge ports are 1/4" NPT as standard.

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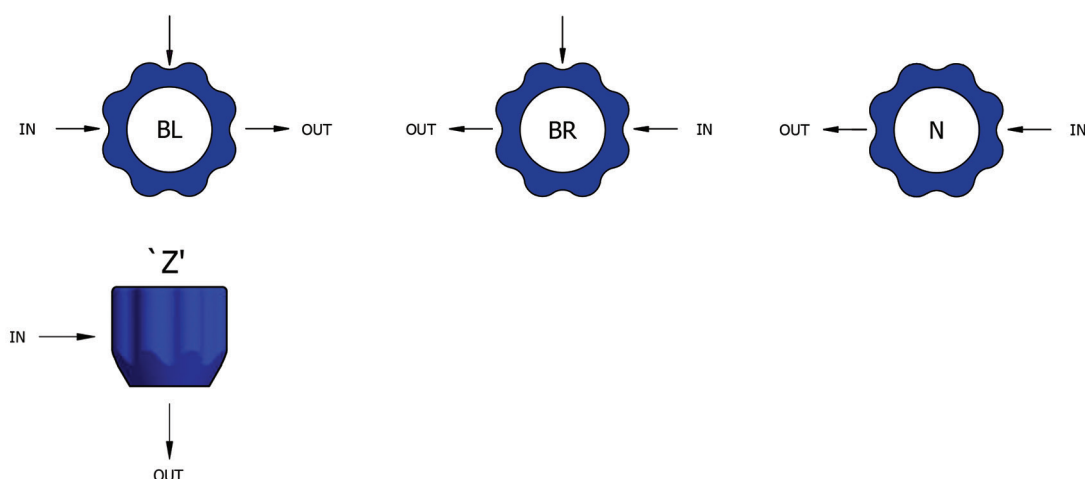


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## FLOW CURVE

Please contact the office for further information.

## PORTING CONFIGURATIONS



### Note:

Additional porting configurations are available - please contact the office for further information.

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## ORDERING INFORMATION

To build a Pressure Tech part number, simply combine the characters identified below in sequence:

BP-LF691G 02 S 690S N 03N N XXX						
<b>REGULATOR MODEL/SERIES</b> BP-LF691G – Low-Flow Back Pressure Regulator - Gas BP-LF691H – Low-Flow Back Pressure Regulator - Liquid						<b>MODIFICATIONS*</b> Please contact the office for further information.
<b>CV VALUE</b> 01 – 0.1 02 – 0.02						<b>PORTING CONFIGURATION</b> N - No gauge ports Refer to page 3 for options.
<b>BODY MATERIAL**</b> S – ASTM A479 316/316L Stainless Steel (UNS S31600/S31603) (max. 690 bar) R – ASTM 17-4 Stainless Steel (UNS S17400) - <i>not suitable for H2</i>						<b>INLET/OUTLET CONNECTION**</b> 02A – 1/4" MP 02N – 1/4" NPT (max. 690 bar on NPT) 03A – 3/8" MP 03N – 3/8" NPT (max. 690 bar on NPT) 04A – 9/16" MP 04N – 1/2" NPT (max. 690 bar on NPT)
<b>CONTROL PRESSURE</b> 600 – Up to 600 bar (8,700 psi)*** 690 – Up to 690 bar (10,000 psi) 900 – Up to 900 bar (13,025 psi)**** - 'R' body required						<b>O-RING MATERIAL**</b> N – NBR V – FKM/FPM
<b>LOADING MECHANISM</b> S – Spring-Loaded A – Air-Loaded						

## OPTIONAL EXTRAS

	PART NUMBER	DESCRIPTION
Service Kit	SRK-BP-LF691...	Various options available
Panel Mounting Ring	PT-C-061-003-RING	Stainless Steel panel mount ring

*Note:* Ancillary equipment also available

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Inconel® is a registered trademark of Inco Alloys International  
PEEK™ is a trademark of Victrex PLC  
Phynox® is a registered trademark of Imphy Uguine Precision  
Vespel® is a registered trademark of DuPont

\* Where applicable  
\*\* Other materials/connections may be available - please contact the office  
\*\*\* Air-loaded only  
\*\*\*\* T-Bar adjustment/long bonnet

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