

# MF101 Datasheet

## MEDIUM-FLOW PRESSURE REGULATOR



Gas  
  Liquid  
  Diaphragm  
  Piston  
  Self-Venting  
  Non-Venting  
 Max Inlet: 414 bar (6,000 psi)  
 Max Outlet: 40 bar (580 psi)  
 Cv 0.5



### INTRODUCING THE MF101...

The MF101 is a piston-sensed medium-flow pressure regulator. With an **unbalanced main valve** and non-venting design as standard, the MF101 controls outlet pressures up to 40 bar (580 psi) from a maximum 100 bar (1,450 psi) inlet pressure.

Alternatively, a balanced option can be offered with a non-venting or self-venting (non-captured) design and enables inlet pressures of up to 414 bar (6,000 psi) using a PEEK™ seat, controlling outlet pressures up to 35 bar (510 psi).

### SPECIFICATION

Seat Material	Maximum Inlet Pressure	
	Balanced	Unbalanced
PEEK™	414 bar (6,000 psi)	100 bar (1,450 psi)
PCTFE	300 bar (4,350 psi)	100 bar (1,450 psi)

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 & Bonnet	ASTM A479 316/316L Stainless Steel (UNS S31600/S31603) Approx. Temperatures: -196°C to 538°C
Main Valve Pin	ASTM A479 316/316L Stainless Steel
Soft Seat	PEEK™ (450G) Approx. Temperatures: -50°C to 204°C
	PCTFE (Kel-F) Approx. Temperatures: -196°C to 180°C
Valve Spring	UNBALANCED: ASTM A240 301 Stainless Steel (UNS S30100) Approx. Temperatures: -29°C to 370°C
	BALANCED: Inconel® X750 (UNS N07750) Approx. Temperatures: -196°C to 700°C
Piston	ASTM A479 316/316L Stainless Steel
Handwheel	Nylon
O-Rings	FKM/FPM (Viton) Approx. Temperatures: -20°C to 200°C
Loading Spring	ASTM A240 301 Stainless Steel (UNS S30100)

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.

Outlet Ranges	Up to 35 bar (510 psi)
Design Proof Pressure	150% max. working pressure
Seat Leakage	In accordance with ANSI/FCI 70-3
Weight	1.2kg (2.4lbs)

### FEATURES AND BENEFITS

#### 1 LARGE PRECISION-MACHINED SENSING ELEMENT

Accurate control of outlet pressures up to 40 bar (580 psi) on non-venting models.

#### 2 OPTIONAL BALANCED DESIGN

For inlet pressures of up to 414 bar (6,000 psi).

#### 3 LIGHTWEIGHT & COMPACT DESIGN

Perfect for when installation space is restricted.

#### 4 SELF-VENTING OR NON-VENTING

Versatile use for a range of applications.

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.



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PAGE:  
1 OF 4

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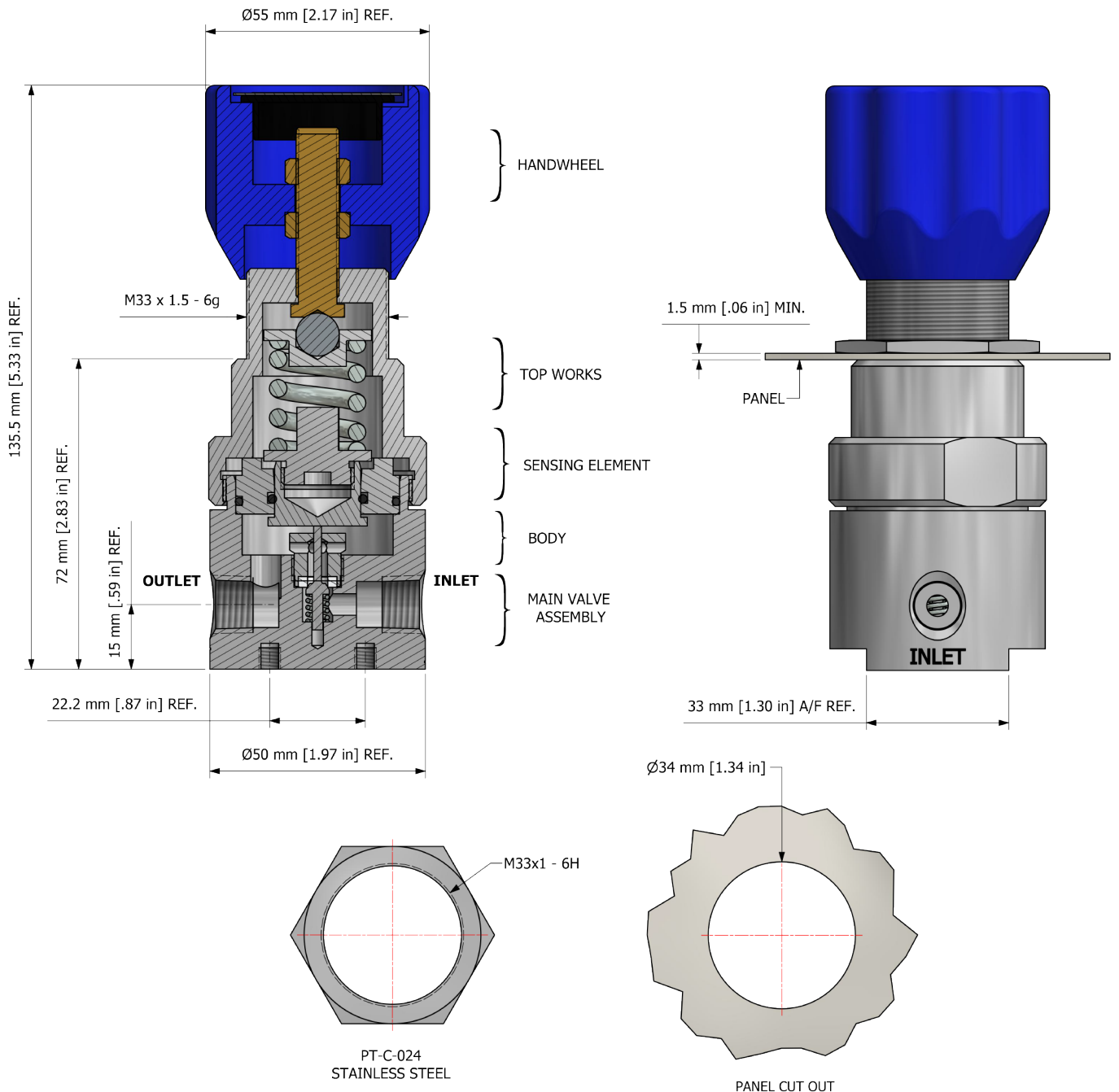
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## DRAWINGS AND INSTALLATION DIMENSIONS

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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PAGE:  
2 OF 4

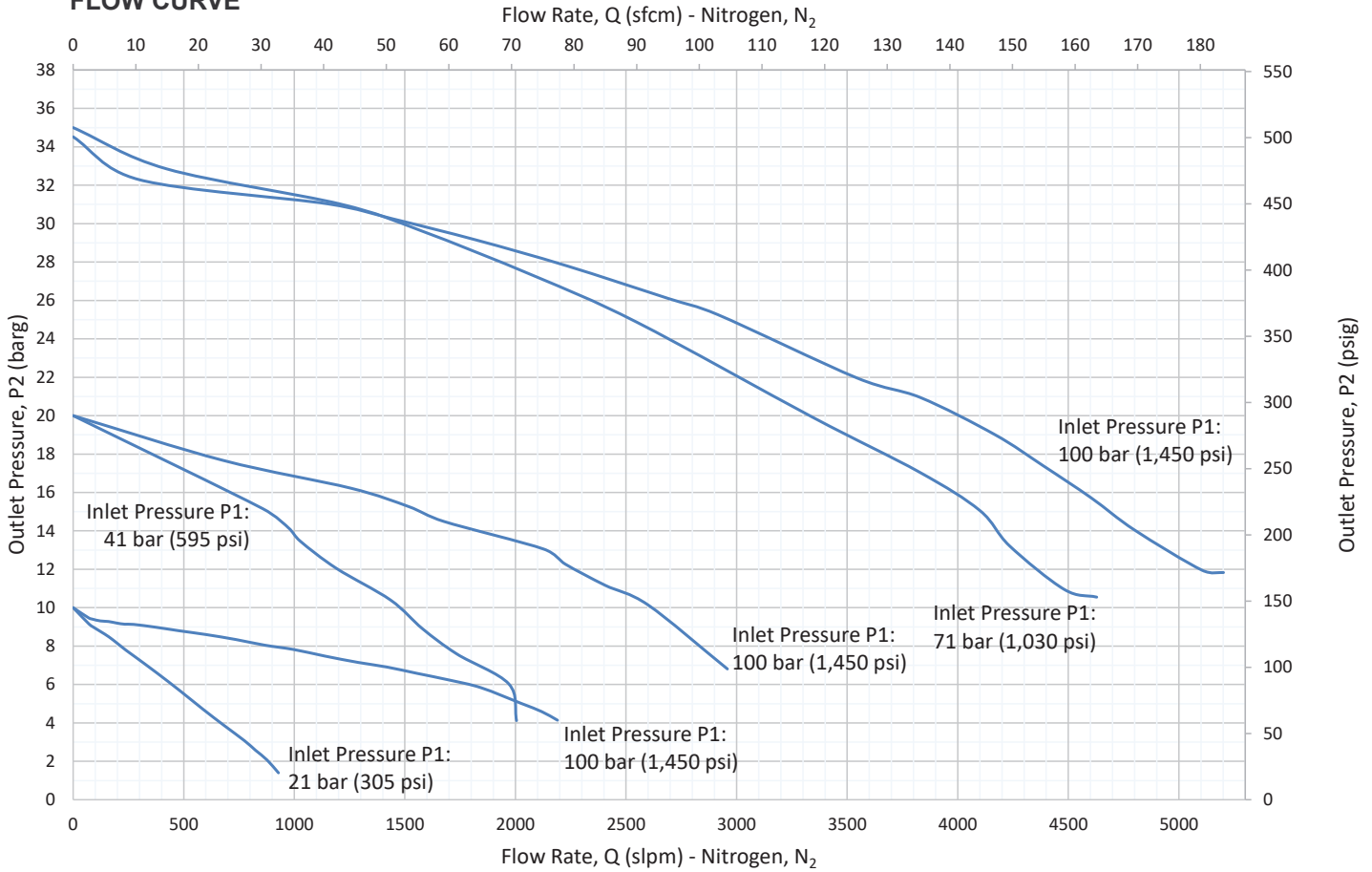
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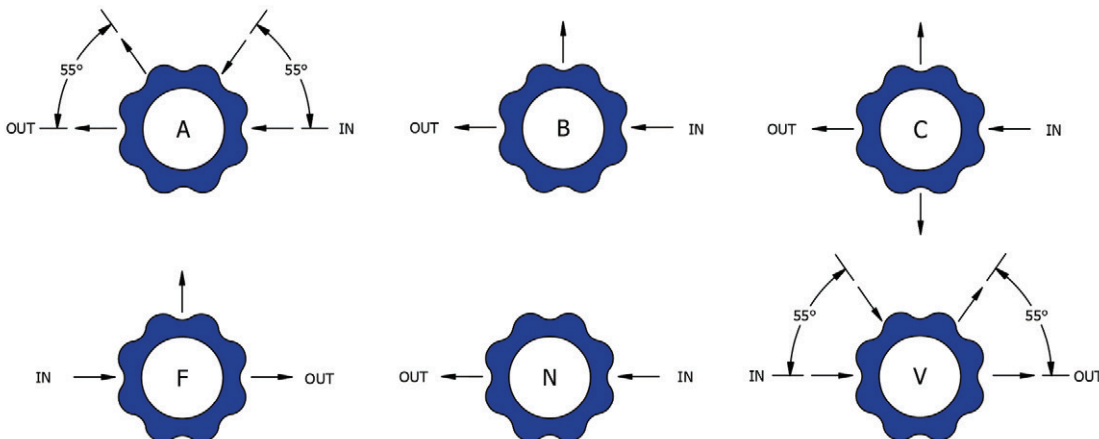


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## FLOW CURVE



## PORTING CONFIGURATIONS



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

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PAGE:  
3 OF 4

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### ORDERING INFORMATION

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

REGULATOR MODEL/SERIES	CV VALUE	BODY MATERIAL**	CONTROL PRESSURE	O-RING MATERIAL**	MODIFICATIONS*	PORTING CONFIGURATION	INLET/OUTLET CONNECTION**	SEAT MATERIAL**
MF101 – Medium-Flow Pressure Regulator - Piston-Sensed	5 – 0.5	S – ASTM 316/316L Stainless Steel (UNS S31600/S31603) B – HT Brass CZ114/CW721R (UNS C67500)	10 – Up to 10 bar (145 psi) 20 – Up to 20 bar (290 psi) 35 – Up to 35 bar (510 psi) 40 – Up to 40 bar (580 psi) - (Non-Venting only)	E – EPDM N – NBR V – FKM/FPM	Please contact the office for further information.	N - No gauge ports Please refer to page 3 for porting configuration options.	02N – 1/4" NPT 03N – 3/8" NPT 04N – 1/2" NPT	T – PTFE (max. inlet 20 bar/290 psi) F – FEP (max. inlet 50 bar/725 psi) K – PCTFE (max. inlet 100 bar/1,450 psi - unbalanced) K – PCTFE (max. inlet 300 bar/4,350 psi - balanced) P – PEEK™ (max. inlet 100 bar/1,450 psi - unbalanced) P – PEEK™ (max. inlet 414 bar/6,000 psi - balanced)

OPTIONAL EXTRAS		
	PART NUMBER	DESCRIPTION
Service Kit	SRK-MF101-05-B...	Various 'Balanced' options available
Service Kit	SRK-MF101-05-U...	Various 'Unbalanced' options available
Panel Mount Ring	PT-C-024	-

*Note:*  
Ancillary equipment also available

**TRADEMARKS:** PEEK™ is a trademark of Victrex PLC  
Inconel® is a registered trademark of Inco Alloys International

\* Where applicable  
\*\* Other materials/connections may be available - please contact the office

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PAGE:  
4 OF 4