

AUTO438 Datasheet

PRESSURE REGULATOR FOR
HYDROGEN FUEL CELL BUSES AND TRUCKS

● Gas ● Liquid | ● Diaphragm ● Piston | ● Self-Venting ● Non-Venting | Max Inlet: 438 bar (6,350 psi) | Max Outlet: 20 bar (290 psi) | Cv 0.5



INTRODUCING THE AUTO438...

The AUTO438 is a piston-sensed pressure regulator, designed specifically for hydrogen fuel cell buses and trucks. During the EC79 testing process, it has been put through over 100,000 cycles by external certification body, KIWA Nederland B.V. - equating to 10 years life time on a typical installation!

With a **balanced main valve** as standard, it offers stable control of outlet pressures up to 20 bar (290 psi) from a maximum 438 bar (6,350 psi) inlet pressure.

SPECIFICATION

Max. Rated Inlet Pressure	438 bar (6,350 psi)
Outlet Ranges	Up to 20 bar (290 psi)
Design Proof Pressure	150% max. working pressure
Seat Leakage	In accordance with ANSI/FCI 70-3
Weight	1.8kg (3.97lbs)

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

FEATURES AND BENEFITS

1 DOUBLE O-RING

Safety back-up in the event of primary o-ring failure during use.

2 EASY ACCESS TO SEAT CARTRIDGE

Simplified servicing through the base of the regulator.

3 THREE OPTIONAL MOUNTING ARRANGEMENTS

To suit users application/set-up.

4 IN-LINE LEAKAGE SENSE LINE

Easy to connect pipework to sense for H2 leakage, and makes set point anti-tamper proof.

STANDARD MATERIALS OF CONSTRUCTION

PART	MATERIALS
Body	Aluminium T6511 (UNS AW6082) <i>Approx. Temperatures: -196°C to 200°C</i>
Main Valve Pin	ASTM A479 316/316L Stainless Steel (UNS S31600/S31603) <i>Approx. Temperatures: -196°C to 538°C</i>
Seat	Devlon® (X100) <i>Approx. Temperatures: -50°C to 176°C</i>
Valve Spring	Elgiloy® (UNS R30003) <i>Approx. Temperatures: -196°C to 450°C</i>
Piston	ASTM A479 316/316L Stainless Steel
O-Rings	EPDM (Ethalyne) <i>Approx. Temperatures: -40°C to 150°C</i>
Loading Spring	ASTM A479 316/316L Stainless Steel
Filter	30 Microns

For the full list of material temperature ranges, please visit 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.

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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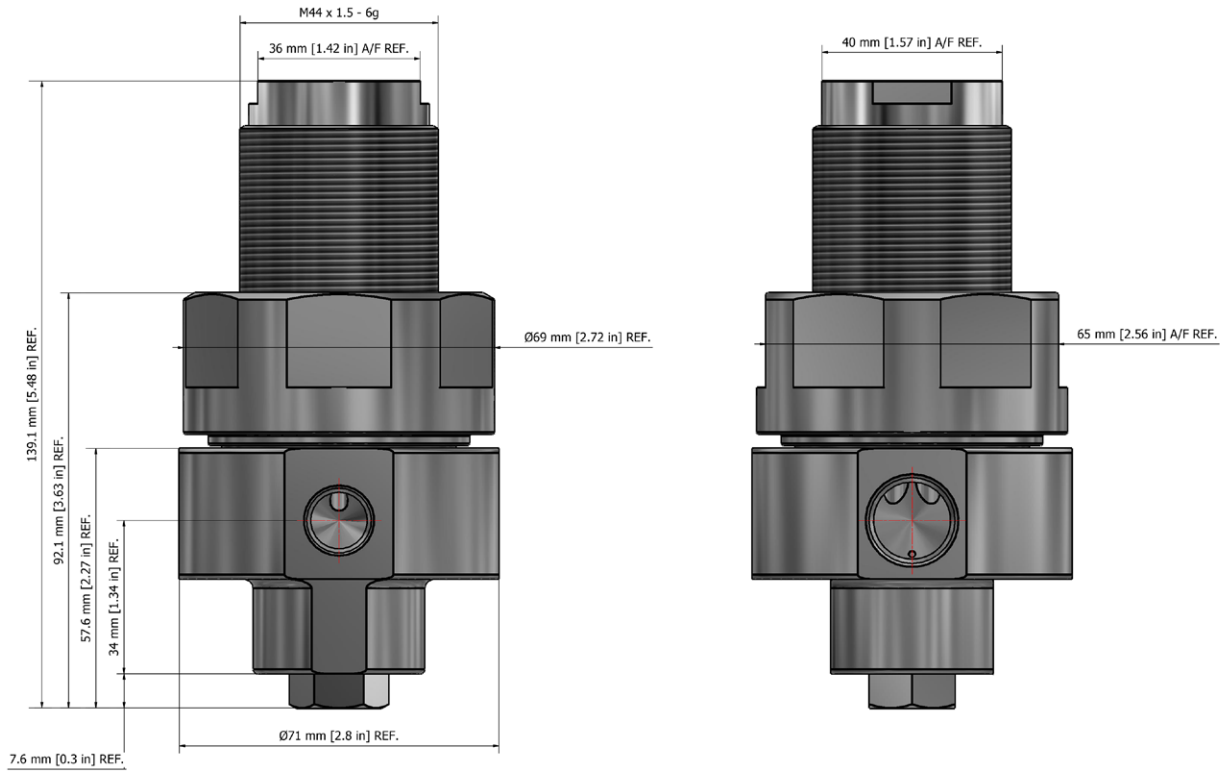
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DRAWINGS AND INSTALLATION DIMENSIONS



MOUNTING CONFIGURATION OPTIONS

1. Body Mounting

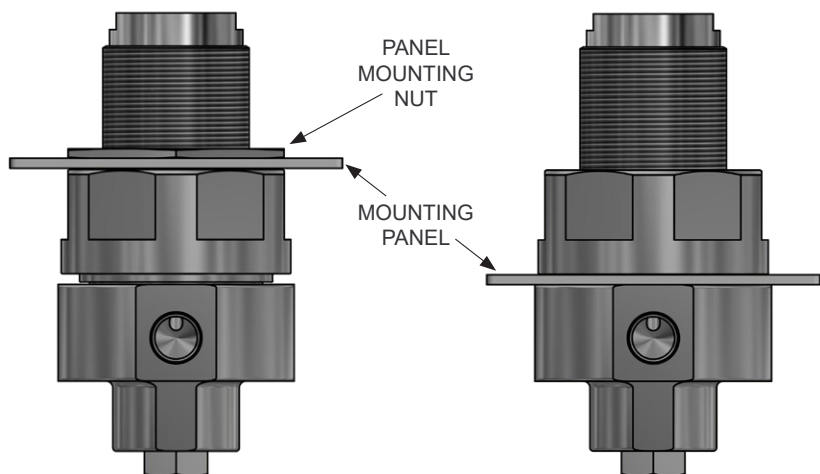
Contact the office for our body mounting options.

2. Bonnet Mounting

Mounting panel is secured between the body and bonnet with a panel mounting nut.

3. Head-Work Mounting

Mounting panel is secured between the body and head-work.



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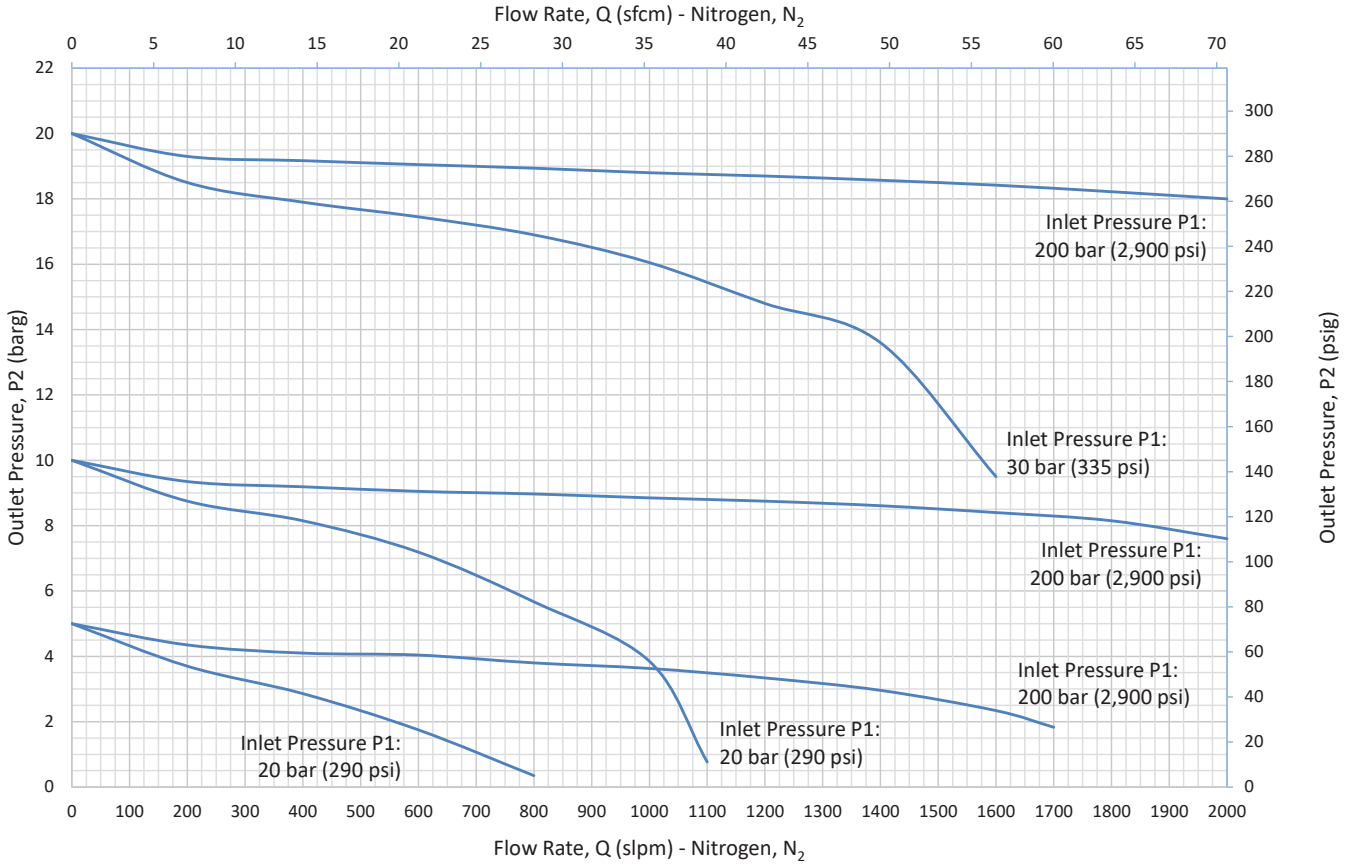
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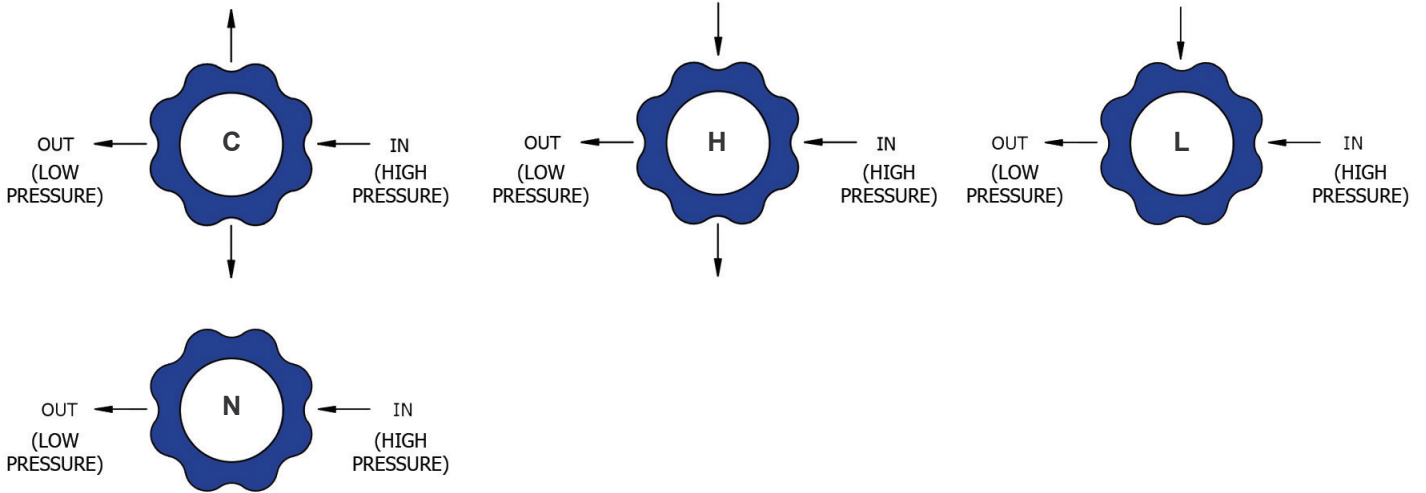
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FLOW CURVE



PORTING CONFIGURATIONS



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ORDERING INFORMATION

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

AUTO438 - 5 - A - 10 - V - AN - C - XXX	
<p>REGULATOR MODEL/SERIES</p> <p>AUTO438 – Pressure Regulator for Hydrogen Fuel Cell Buses and Trucks - Piston-Sensed</p>	<p>MODIFICATIONS*</p> <p>Please contact the office for further information.</p>
<p>CV VALUE</p> <p>5 – 0.5</p>	<p>PORTING CONFIGURATION</p> <p>N - No gauge ports Please refer to page 3 for porting configuration options.</p>
<p>BODY MATERIAL **</p> <p>A – Aluminium Alloy (AW6082)</p>	<p>CONNECTION SIZE**</p> <p>A – 1/4" inlet, 1/4" outlet & 1/4" gauges B – 3/8" inlet, 3/8" outlet & 1/4" gauges C – 3/8" inlet, 1/2" outlet & 1/4" gauges D – 1/2" inlet, 1/2" outlet & 1/4" gauges E – 3/8" inlet, 1/4" outlet & 1/4" gauges F – 1/4" inlet, 1/4" outlet & no gauge G – 3/8" inlet, 3/8" outlet & no gauge H – 3/8" inlet, 1/2" outlet & no gauge I – 1/2" inlet, 1/2" outlet & no gauge J – 3/8" inlet, 1/4" outlet & no gauge K – 1/2" inlet, 1/2" outlet & 1/2" gauges L – 3/8" inlet, 3/8" outlet & 3/8" gauges</p>
<p>SET PRESSURE</p> <p>10 – 10 bar (145 psi) 15 – 15 bar (215 psi) 20 – 20 bar (290 psi)</p>	<p>CONNECTION TYPE**</p> <p>N – NPT S – SAE Straight Thread Inlet</p>
<p>O-RINGS</p> <p>E – EPDM V – FKM/FPM</p>	

OPTIONAL EXTRAS		
	PART NUMBER	DESCRIPTION
Service Kit	SRK-MF101-05-B...	Various 'Balanced' options available

Note:
Ancillary equipment also available

TRADEMARKS: PEEK™ is a trademark of Victrex PLC
 Elgiloy® is a registered trademark of Elgiloy Specialty Metals

* Where applicable
 ** Other options may be available - please contact the office

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