

# LW438 Datasheet

PRESSURE REGULATOR FOR  
HYDROGEN FUEL CELL FORKLIFT TRUCK APPLICATIONS



● Gas ● Liquid | ● Diaphragm ● Piston | ● Self-Venting ● Non-Venting | Max Inlet: 438 bar (6,350 psi) | Max Outlet: 20 bar (290 psi) | Cv 0.06



## INTRODUCING THE LW438...

The LW438 is a lightweight, piston-sensed regulator, designed specifically for hydrogen fuel cell forklift truck applications. It's body is constructed from Aluminium Alloy, offering a lightweight design with a weight of just 425g.

With a balanced main valve as standard, the LW438 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
Operating Temperatures	-30°C to +70°C
Weight	0.43kg (0.9lbs)

## STANDARD MATERIALS OF CONSTRUCTION

PART	MATERIALS
Body and Bonnet	Aluminium Alloy (AW6082)
Main Valve Pin	AISI 316/316L Stainless Steel (UNS S31600/S31603)
Seat	Devlon® X100 / PCTFE
Valve Spring	Inconel® X750
Piston	AISI 316 / 316L Stainless Steel (UNS S31600 / S31603)
O-Rings	NBR
Loading Spring	Alloy Steel
Filter	20 Microns

### Notes:

- Pressure regulator rating may be limited by connection type, Cv and/or seat material
- Operating temperature range is provided as a guide only

## FEATURES AND BENEFITS

### 1 TARGETED DESIGN

The LW438 was designed specifically for H2 forklift truck applications.

### 2 LIGHTWEIGHT

Aluminium body provides users with a lightweight pressure control solution.

### 3 PISTON SENSING ELEMENT

Perfect for use in challenging conditions.

### 4 BALANCED MAIN VALVE DESIGN

Greater control across the pressure range.

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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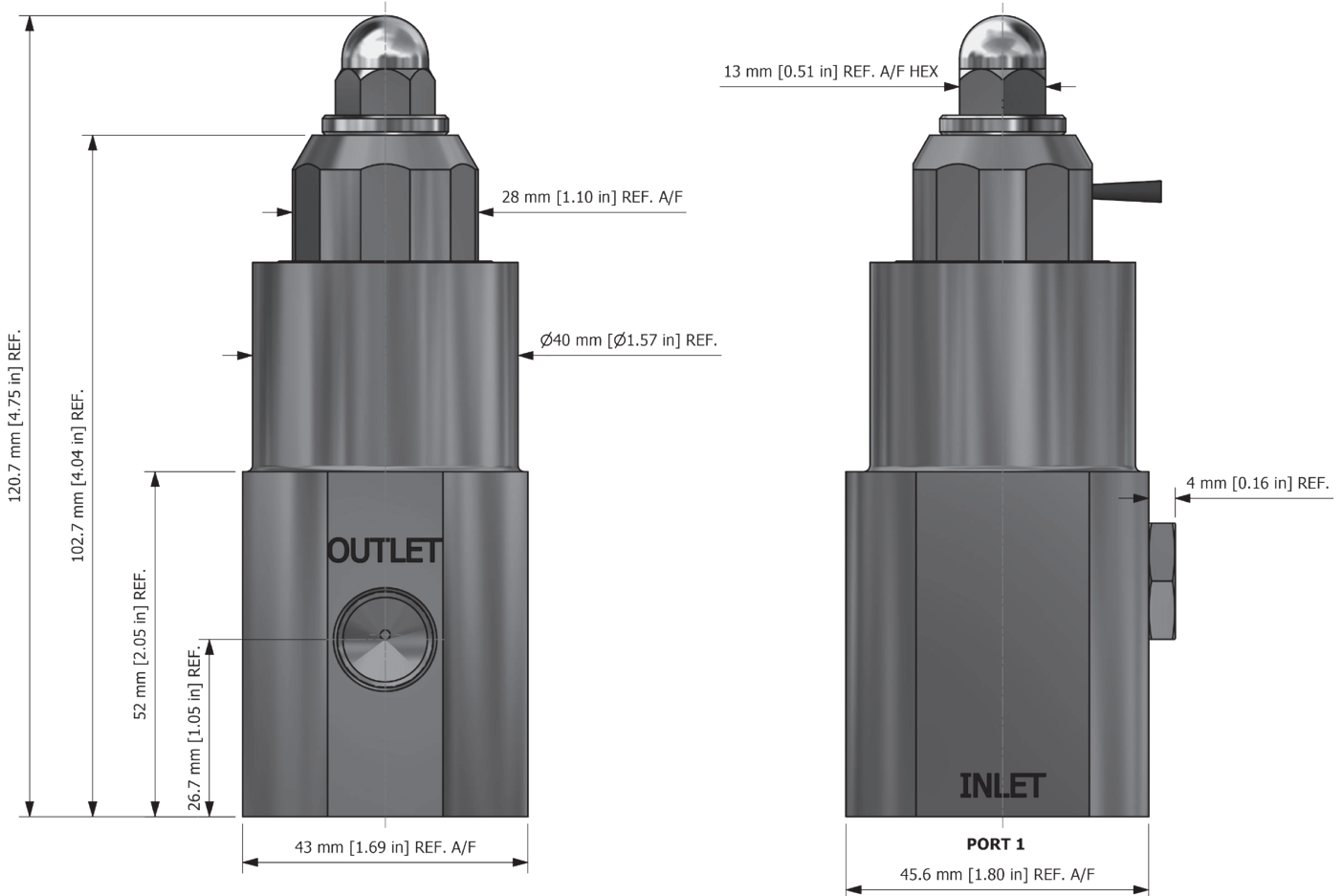
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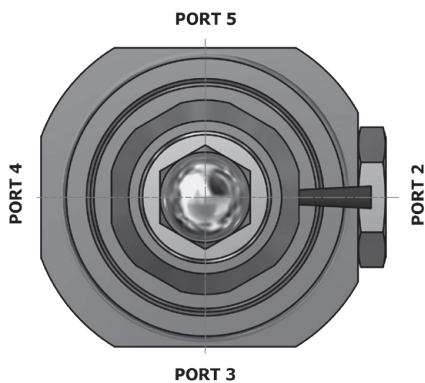
## DRAWINGS AND INSTALLATION DIMENSIONS

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



## PORT POSITIONS

Use 'ORDERING INFORMATION' on page 4 to select connection size and type for each port position (2 to 5):



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## FLOW CURVE

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:

REGULATOR MODEL/SERIES							PORTS 2 3 4 5			MODIFICATIONS*		
LW438	06	A	20	N	D	04S	X	X	X	X	X	X
<b>REGULATOR MODEL/SERIES</b> LW438 – Lightweight Pressure Regulator - Piston-Sensed							<b>MODIFICATIONS*</b> Please contact the office for further information.					
<b>CV VALUE</b> 06 – 0.06							<b>PORT CONNECTION SIZES/TYPES**</b> X – No port B – Inlet with 1/4" BSPP D – Inlet with 1/4" NPT L – Inlet with 1/4" SAE A – Inlet with 1/8" BSPP C – Inlet with 1/8" NPT E – Inlet with 3/8" 24 UNF (Burst Disc) S – Inlet with 1/2" BSPP K – Inlet with M8 x 1 (Transducer Port) P – Inlet with M10 x 1 (Transducer Port) N – Inlet with M11 x 0.75 (Burst Disc) F – Outlet with 1/8" BSPP H – Outlet with 1/8" NPT G – Outlet with 1/4" BSPP J – Outlet with 1/4" NPT M – Outlet with 1/4" SAE R – Outlet with 9/16" -18 #6 SAE T – Outlet with M8x1					
<b>BODY MATERIAL**</b> A – Aluminium Alloy (AW6082)							For reference, please see page 2 for position of ports '2', '3', '4' and '5'.					
<b>CONTROL PRESSURE</b> 05 – Up to 5 bar (75 psi) 10 – Up to 10 bar (145 psi) 15 – Up to 15 bar (215 psi) 20 – Up to 20 bar (290 psi)												
<b>O-RING MATERIAL**</b> N – NBR												
<b>SEAT MATERIAL**</b> D – Devlon® X100 K – PCTFE												
<b>INLET CONNECTION** (BASE OF REGULATOR)</b> 04S – 1/4" Tube OD SAE Dash Size 4												

## OPTIONAL EXTRAS

	PART NUMBER	DESCRIPTION
Service Kit	SRK-LW438-06-N-K	NBR seals and PCTFE seat
Service Kit	SRK-LW438-06-N-D	NBR seals and Devlon® X100 seat

Note: Ancillary equipment also available

**TRADEMARKS:** Inconel® is a registered trademark of Inco Alloys International  
Devlon® is a registered trademark of James Walker

\* Where applicable

\*\* Other options may be available - please contact the office

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