

# LW351 Datasheet

PRESSURE REGULATOR FOR  
LIGHTWEIGHT HYDROGEN FUEL CELL APPLICATIONS

● Gas ● Liquid ● Diaphragm ● Piston ● Self-Venting ● Non-Venting | Max Inlet: 350 bar (5,075 psi) | Max Outlet: 3 bar (45 psi) | Cv 0.06



## INTRODUCING THE LW351...

The LW351 is a piston-sensed pressure regulator, designed specifically to provide constant pressure supply to the hydrogen fuel cell for lightweight applications. With a low 0.15% decaying pressure effect, it offers accurate control in a single-stage pressure reduction.

When weight is a critical consideration for your application, the LW351 is the perfect solution. It's compact and lightweight (down to 0.2kg), and additionally offers direct mounting to the Hydrogen cylinder.

## SPECIFICATION

Max. Rated Inlet Pressure	350 bar (5,075 psi)
Outlet Ranges	Up to 3 bar (45 psi)
Design Proof Pressure	150% max. working pressure
Seat Leakage	In accordance with ANSI/FCI 70-3
Weight	0.2kg (min.)

## STANDARD MATERIALS OF CONSTRUCTION

PART	MATERIALS
Body and Bonnet	Aluminium T6511 (UNS AW6082)
Main Valve Pin	ASTM A479 316/316L Stainless Steel (UNS S31600/S31603)
Seat	Devlon X100
Valve Spring	Inconel® X750 (UNS N07750)
Piston	Aluminium T6511 (UNS AW6082)
O-Rings	FKM/FPM (Viton)
Loading Spring	ASTM 17-7 PH Stainless Steel (UNS S17700)
Filter	40 Microns

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

## FEATURES AND BENEFITS

### 1 LIGHTWEIGHT & COMPACT

Weighs as little as 200g - perfect if application would benefit from a lightweight solution.

### 2 PISTON SENSING ELEMENT

Perfect for use in challenging conditions.

### 3 0.15% DECAYING PRESSURE EFFECT

For stable pressure control, even under depleting gas supply conditions.

### 4 DIRECT MOUNTING TO CYLINDER

Quick and convenient design.

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.



#### PRESSURE TECH LTD

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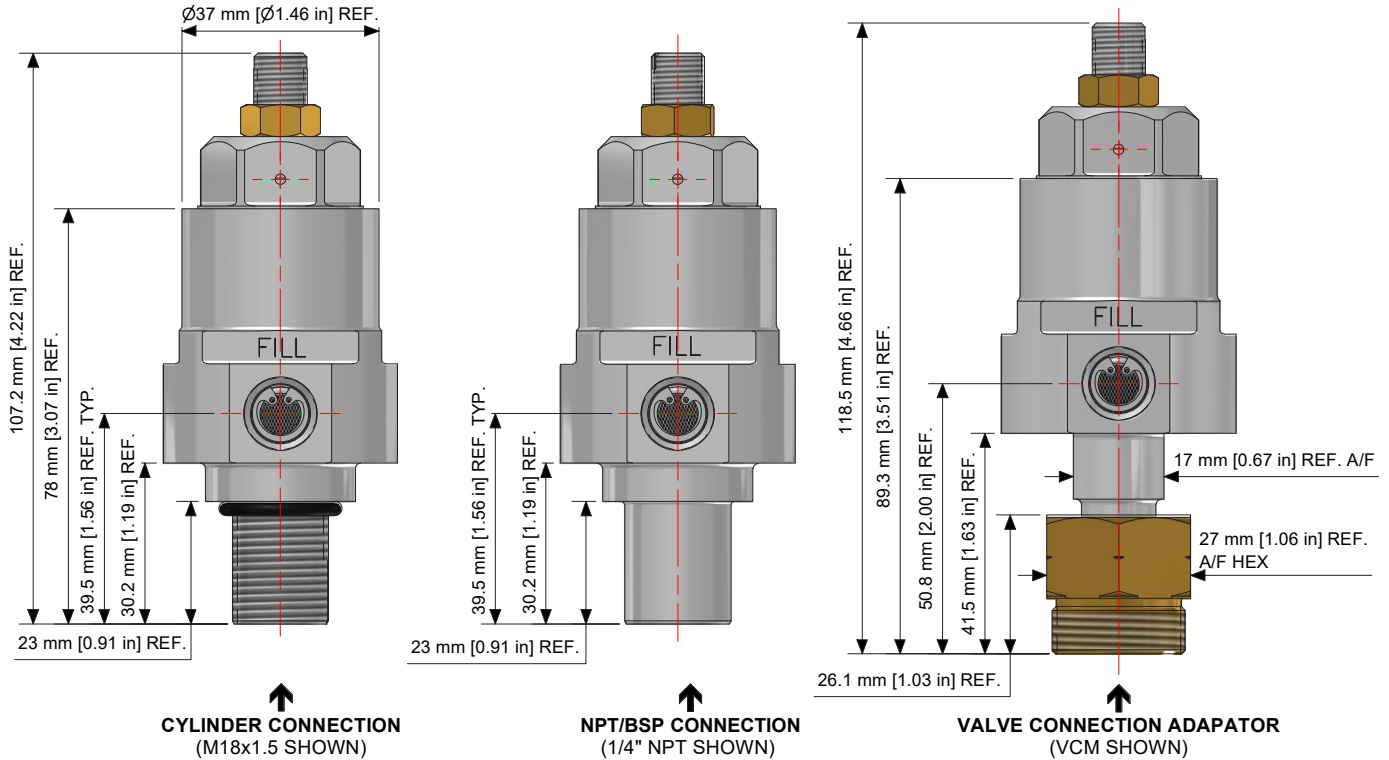
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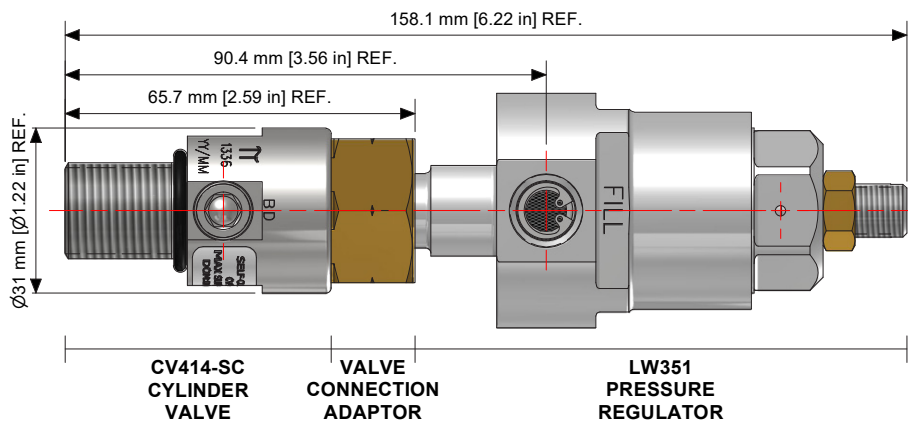
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## DRAWING AND INSTALLATION DIMENSIONS



## CV414 CYLINDER VALVE

Our LW351 regulator features an optional Valve Connection Adapter (VCA) inlet, offering connection to our CV414 cylinder valve (*sold separately*) - ask for details.



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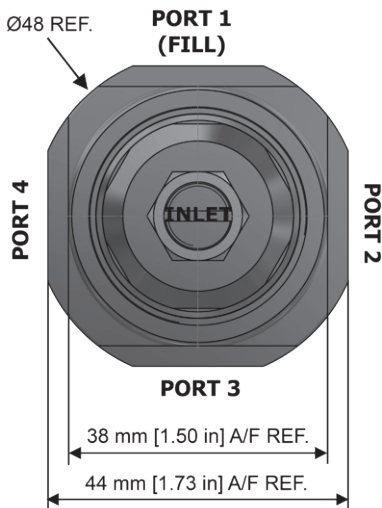
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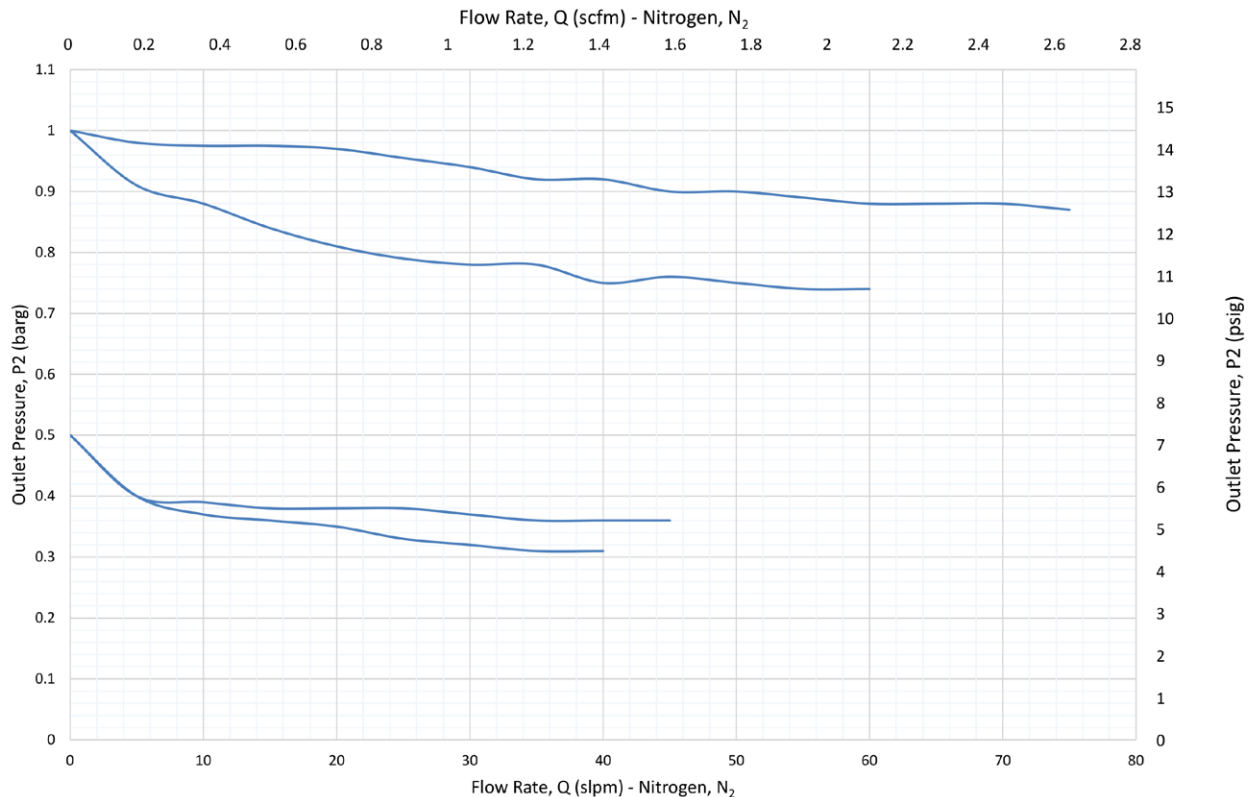
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## PORT POSITIONS

Use 'ORDERING INFORMATION' on page 4 to select connection size and type for each port position - port 1 is the fill port and includes a filter as standard.



## FLOW CURVES



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## ORDERING INFORMATION

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

PART NUMBER	
LW351	06 01 V D 01C AAAAXX XXX
<b>REGULATOR MODEL/SERIES</b>	<b>MODIFICATIONS*</b>
LW351 – For Lightweight Hydrogen Fuel Cell Applications - Piston-Sensed	Contact the office for further information.
<b>CV VALUE</b>	<b>PORT CONNECTION SIZES/TYPES**</b>
06 – 0.06	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) K – Inlet with M8x1 (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 S – Outlet Solenoid Valve T – Outlet with M8x1
<b>CONTROL PRESSURE</b>	<div style="border: 1px solid black; padding: 5px; background-color: #003366; color: white;">                     1. See page 3 for position of ports 1 to 4.                      2. DJDJ configuration available on short lead time.                 </div>
01 – Up to 1 bar (14.5 psi) 02 – Up to 2 bar (29 psi) 03 – Up to 3 bar (45 psi)	
<b>O-RING MATERIAL**</b>	
E – EPDM V – FKM/FPM	
<b>SEAT MATERIAL**</b>	
D – Devlon X100	
<b>INLET CONNECTION** (BASE OF REGULATOR)</b>	
01C – 5/8"-18 UNF Cylinder (Male) 02C – M18 x 1.5 Cylinder (Male) 02B – 1/4" BSPP (Female) 02N – 1/4" NPT (Female) VCA – Valve Connection Adapter (Female Thread) - CV414-SC required (sold separately) VCM - Valve Connection Adapter (Male Thread) - CV414-SC required (sold separately) X – No Inlet Connection	

**Important:** If supplied with an integrated Manual Isolation Valve or Solenoid Valve on the downstream of the regulator, please ensure a suitably sized pressure relief valve has been fitted to the additional downstream port of the LW351.

OPTIONAL EXTRAS		
	PART NUMBER	DESCRIPTION
Service Kit	SRK-LW351-06-A-01-V-K...	LW351 service kit.

Note: Ancillary equipment also available

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

\* Where applicable

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

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