

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.



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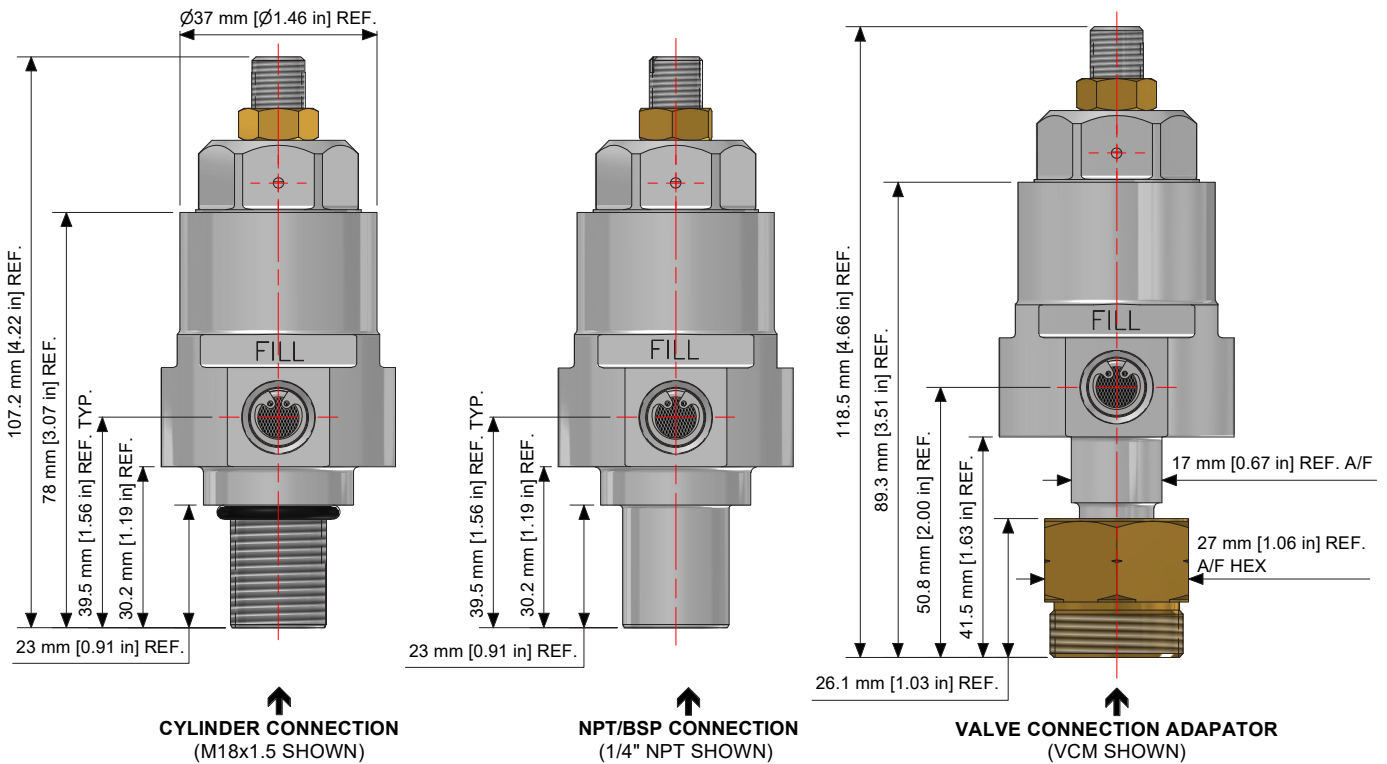
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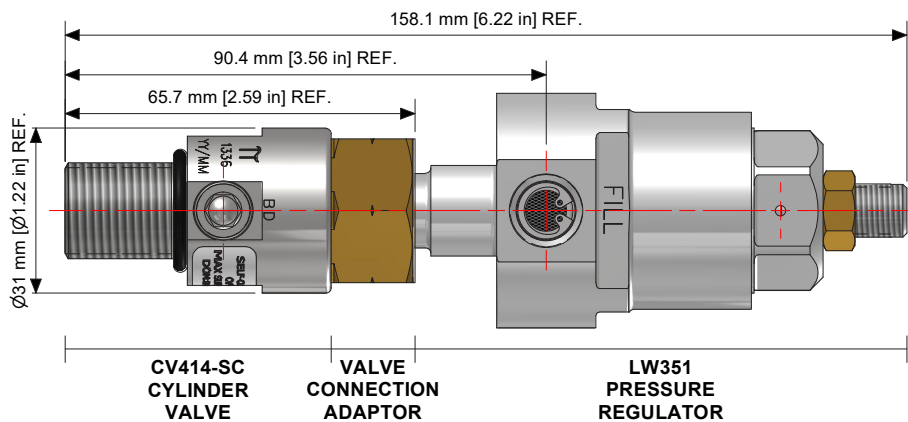
DRAWING AND INSTALLATION DIMENSIONS

Dimensions shown for standard configurations only - please contact the office for other options.



CV414 CYLINDER VALVE

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



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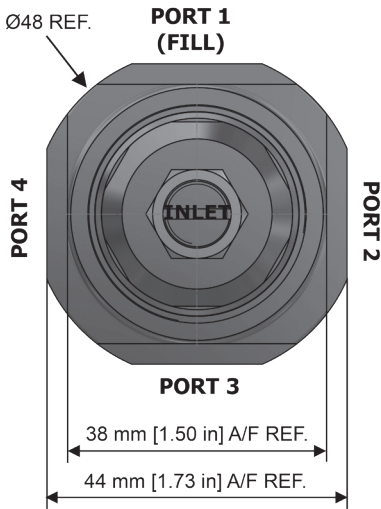
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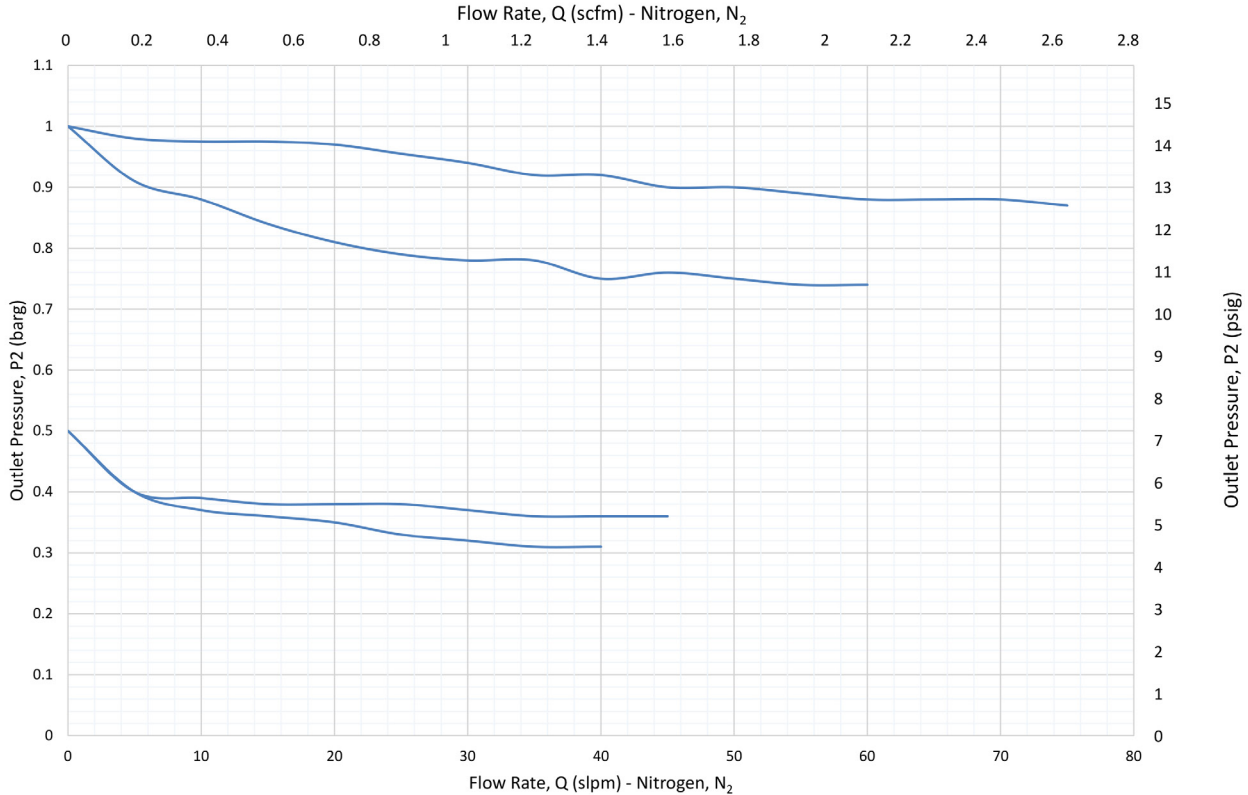
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PORT POSITIONS

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

REGULATOR
LW351

CV VALUE
06 – 0.06

CONTROL PRESSURE
01 – Up to 1 bar (14.5 psi)
02 – Up to 2 bar (29 psi)
03 – Up to 3 bar (45 psi)

O-RING MATERIAL**
E – EPDM
V – FKM/FPM

SEAT MATERIAL**
D – Devlon X100

INLET CONNECTION (BASE OF REGULATOR)**
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

MODIFICATIONS*
Contact the office for further information.

PORT CONNECTION SIZES/TYPES**
X – No port
B – Inlet with 1/4" BSPP
D – Inlet with 1/4" NPT
L – Inlet with SAE-4 (7/16-20 Thread)
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 SAE-4 (7/16-20 Thread)
S – Outlet Solenoid Valve
T – Outlet with M8x1

1. See page 3 for position of ports 1 to 4.
2. DJDJ configuration available on short lead time.

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

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