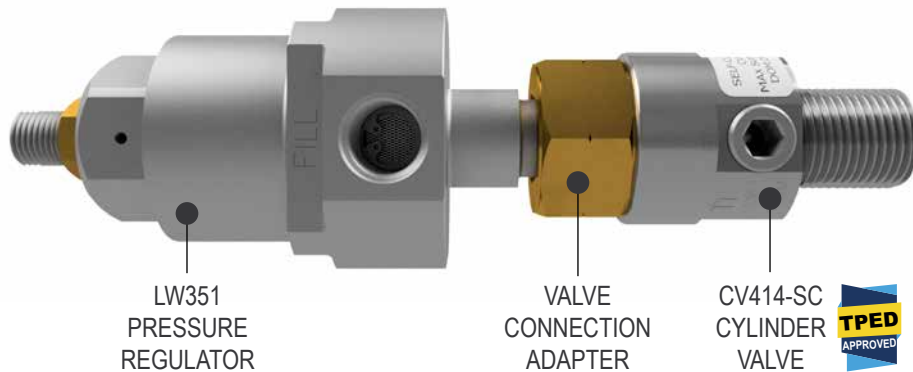


# LW351 & CV414-SC Datasheet

PRESSURE REGULATOR & CYLINDER VALVE 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 & CV414-SC...

The LW351 is a piston-sensed pressure regulator, designed specifically to provide constant pressure supply to the hydrogen fuel cell for lightweight applications. The CV414-SC is a TPED approved self-closing cylinder valve for high pressure gas systems.

Together, the LW351 and CV414-SC offer a quick and easy solution for connection to and disconnection from hydrogen gas cylinders.

## 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 (LW351) / 0.14kg (CV414)

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

## STANDARD MATERIALS OF CONSTRUCTION

LW351	MATERIALS
Body and Bonnet	Aluminium T6511 (UNS AW6082)
Main Valve Pin	ASTM A479 316/316L Stainless Steel (UNS S31600/S31603)
Seat	Acetal (POM)
Valve Spring	Inconel® X750 (UNS N07750)
Piston	Aluminium T6511 (UNS AW6082)
O-Rings	FPM/FKM Low Temp & AED (Viton)
Loading Spring	ASTM 17-7 PH Stainless Steel (UNS S17700)
Filter	40 Microns

CV414-SC	MATERIALS
Body	ASTM A479 316/316L Stainless Steel (UNS S31600/S31603)
Seat	PEEK™ (450G) PCTFE (Kel-F)
O-Rings	EPDM (Ethalyne)

## FEATURES AND BENEFITS

### 1 EASY DISCONNECT FEATURE

Offers a low torque, quick and easy disconnect when a cylinder refill is required.

### 2 CONTINUAL OPERATION

When connected, the CV414-SC offers a continual supply of gas from the cylinder.

### 3 CV414-SC: TPED APPROVED (UP TO 350 BAR)

For the transportation of pressure equipment including gas cylinders and their valves.

### 4 EASY FILLING

Quick cylinder filling connection provides a long life-span.

### 5 OPTIONAL BURST DISC

For extra gas cylinder protection.

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

Unit 24, Graphite Way, Hadfield, Glossop, Derbyshire, UK, SK13 1QH

+44 (0)1457 899 307 | [sales@pressure-tech.com](mailto:sales@pressure-tech.com) | [www.pressure-tech.com](http://www.pressure-tech.com)

DESIGNED, MANUFACTURED AND BUILT IN THE UK

© 2025 Pressure Tech Ltd. All Rights Reserved.

190325

PAGE:  
1 OF 5

# LW351 & CV414-SC Datasheet

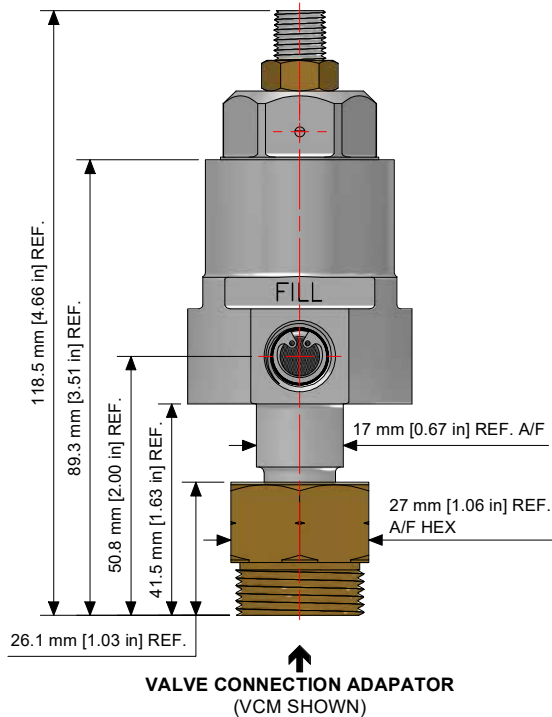
PRESSURE REGULATOR & CYLINDER VALVE FOR  
LIGHTWEIGHT HYDROGEN FUEL CELL APPLICATIONS

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

## DRAWING AND INSTALLATION DIMENSIONS

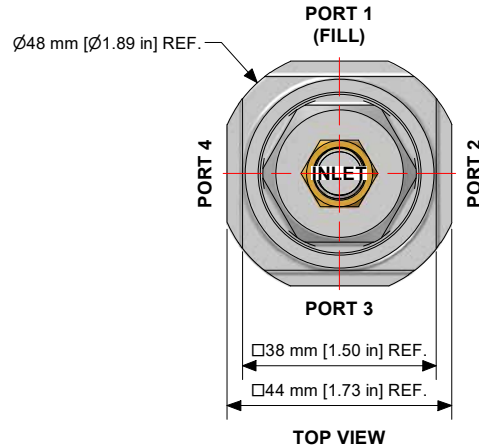
Dimensions shown for standard configurations only - please contact the office for other options.

### LW351:



## PORT POSITIONS: LW351

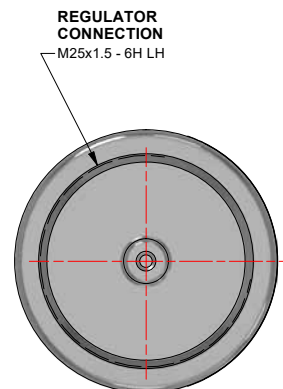
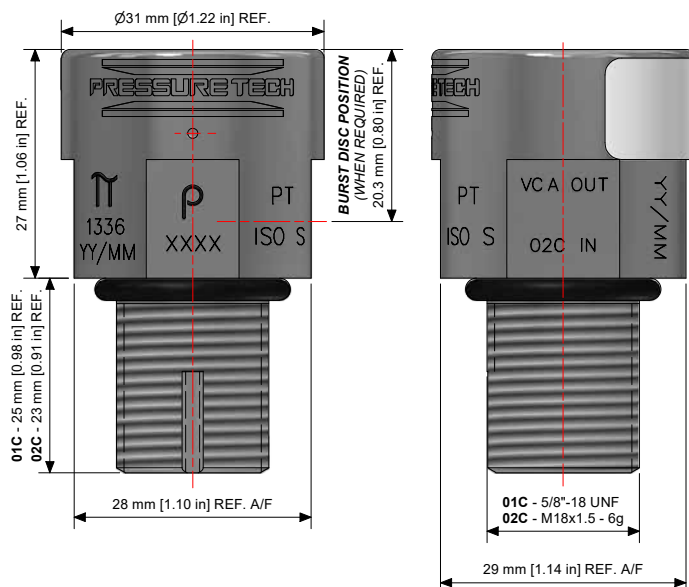
Use 'ORDERING INFORMATION' on page 4 to select connection size and type for each port position - port 1 is the fill port and includes a filter as standard.



## FLOW CURVES

For flow curve information, please see separate LW351 datasheet.

### CV414:



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

Unit 24, Graphite Way, Hadfield, Glossop, Derbyshire, UK, SK13 1QH

+44 (0)1457 899 307 | [sales@pressure-tech.com](mailto:sales@pressure-tech.com) | [www.pressure-tech.com](http://www.pressure-tech.com)

DESIGNED, MANUFACTURED AND BUILT IN THE UK

© 2025 Pressure Tech Ltd. All Rights Reserved.

190325

PAGE:  
2 OF 5

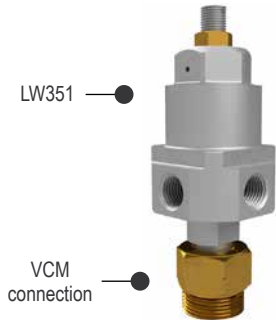
# LW351 & CV414-SC Datasheet

PRESSURE REGULATOR & CYLINDER VALVE 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

## HOW IT WORKS

- 1** The LW351 is ordered with a VCM connection specified as the inlet connection.



Example part number:  
LW351-06-01-V-K-**VCM**-DJDJ

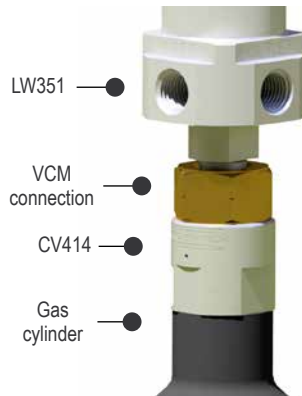
- 2** The CV414 is ordered with 5/8" or M18 threads to suit the cylinder's connection. A burst disc port is an optional extra.



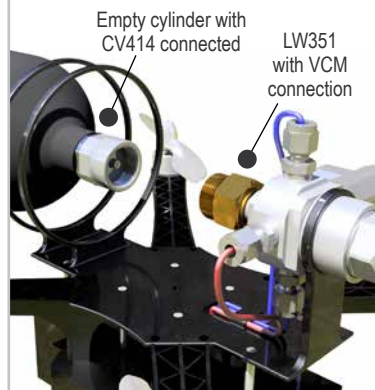
- 3** The CV414 is permanently connected to the cylinder.



- 4** The LW351 is wound onto the CV414, opening its main valve and allowing gas to flow through the regulator.



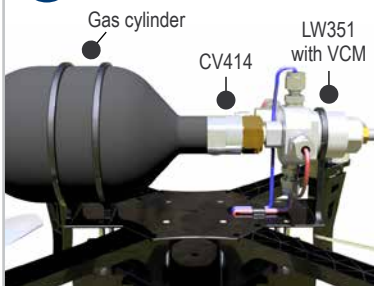
- 5** To refuel, the CV414's low torque disconnect makes it easy to remove the cylinder from the LW351.



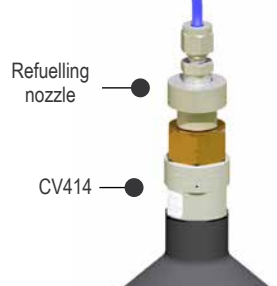
- 6** The LW351 stays connected to the application, e.g. drone.



- 7** A new cylinder with CV414 is connected to the LW351.



- 8** Empty cylinders are refilled via the CV414.



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

Unit 24, Graphite Way, Hadfield, Glossop, Derbyshire, UK, SK13 1QH

+44 (0)1457 899 307 | [sales@pressure-tech.com](mailto:sales@pressure-tech.com) | [www.pressure-tech.com](http://www.pressure-tech.com)

DESIGNED, MANUFACTURED AND BUILT IN THE UK

© 2025 Pressure Tech Ltd. All Rights Reserved.

190325

PAGE:  
3 OF 5

# LW351 & CV414-SC Datasheet

PRESSURE REGULATOR & CYLINDER VALVE 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

## ORDERING INFORMATION: LW351

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

PORTS 1 2 3 4							
LW351	06	01	V	D	VCA	A A A A X X	XXX
<b>REGULATOR</b> LW351						<b>MODIFICATIONS*</b> 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 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	
<b>CONTROL PRESSURE</b> 01 – Up to 1 bar (14.5 psi) 02 – Up to 2 bar (29 psi) 03 – Up to 3 bar (45 psi)						<div>1. See page 3 for position of ports 1 to 4.</div> <div>2. DJDJ configuration available on short lead time.</div>	
<b>O-RING MATERIAL**</b> E – EPDM W – FPM/FKM (Low Temp & AED)							
<b>SEAT MATERIAL**</b> A – Acetal (POM)							
<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

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

Unit 24, Graphite Way, Hadfield, Glossop, Derbyshire, UK, SK13 1QH

+44 (0)1457 899 307 | [sales@pressure-tech.com](mailto:sales@pressure-tech.com) | [www.pressure-tech.com](http://www.pressure-tech.com)

DESIGNED, MANUFACTURED AND BUILT IN THE UK

© 2025 Pressure Tech Ltd. All Rights Reserved.

190325

PAGE:  
4 OF 5

TURN FOR  
CV414 ORDER  
INFO

# LW351 & CV414-SC Datasheet

PRESSURE REGULATOR & CYLINDER VALVE 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

## ORDERING INFORMATION: CV414

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

	CV414	SC	S	K	02C	NBD	T2
<b>MODEL</b>	CV414						
<b>TYPE</b>		SC – Self-Closing					
<b>BODY MATERIAL</b>			S – ASTM A479 316/316L Stainless Steel				
<b>TPED CERTIFICATION</b>							NT2 – No TPED Certification T2 – TPED Certification (Up to 350 bar (5,075 psi) only)
<b>BURST DISC (SPECIFICATIONS BELOW)</b>							NBD – No Burst Disc Port BDE – Burst Disc Port with 3/8"-24 UNF Thread BDN – Burst Disc Port with M11 x 0.75 Thread BD0 – Burst Disc with M11 x 0.75 Thread BD1 – Burst Disc with M11 x 0.75 Thread BD2 – Burst Disc with M11 x 0.75 Thread BD3 – Burst Disc with M11 x 0.75 Thread BD4 – Burst Disc with 3/8"-24 UNF Thread
<b>CYLINDER CONNECTION</b>							01C – 5/8"-18 UNF Cylinder (Male) 02C – M18 x 1.5 Cylinder (Male)
<b>SEAT MATERIAL**</b>							K – PCTFE (max. inlet 350 bar/5,075 psi) P – PEEK™ (max. inlet 414 bar/6,000 psi)

EXAMPLES	
CV414-SC-S-X-XXX-NBD-X	Valve supplied with no burst disc port.
CV414-SC-S-X-XXX-BDE-X	Valve supplied with burst disc port, but no burst disc.
CV414-SC-S-X-XXX-BD0-X	Valve supplied with burst disc fitted in burst disc port.

## BURST DISC SPECIFICATIONS

Burst discs are also available to order separately, as spares - please contact the office to enquire or order:

	REF.	THREAD	CYLINDER RATED PRESSURE	MAX.	MIN.
Burst Discs	BD0*	M11 x 0.75	300 bar (4,350 psi)	450 bar (6,525 psi)	427 bar (6,195 psi)
	BD1*	M11 x 0.75	310 bar (4,500 psi)	517 bar (7,500 psi)	491 bar (7,120 psi)
	BD2*	M11 x 0.75	350 bar (5,075 psi)	525 bar (7,615 psi)	498 bar (7,225 psi)
	BD3*	M11 x 0.75	414 bar (6,000 psi)	621 bar (9,005 psi)	590 bar (8,555 psi)
	BD4	3/8"-24 UNF	310 bar (4,500 psi)	517 bar (7,500 psi)	491 bar (7,120 psi)

**Note 1:** Burst disc selection is the users' responsibility and the information displayed is for guidance only.

**Note 2:** The maximum and minimum pressures shown above represent bursting pressures at 20°C.

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

\* Burst disc meets the requirements of ASME UG-134 E and CGA S1.1 standards

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

Unit 24, Graphite Way, Hadfield, Glossop, Derbyshire, UK, SK13 1QH

+44 (0)1457 899 307 | [sales@pressure-tech.com](mailto:sales@pressure-tech.com) | [www.pressure-tech.com](http://www.pressure-tech.com)

DESIGNED, MANUFACTURED AND BUILT IN THE UK

© 2025 Pressure Tech Ltd. All Rights Reserved.

190325

PAGE:  
5 OF 5