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PLASTIC BACK PRESSURE REGULATOR LPS®W

wafer design
DN 50

Application

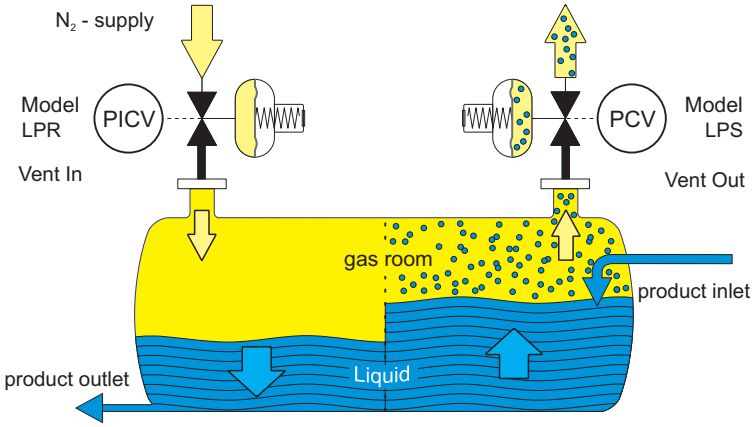
This pressure relief valve has been specially designed to limit the pressure of aggressive gases in chemical plant-engineering tanks. Together with our LPR pressure reducing valves, pressure blanketing/ventilation can be realised easily and reliably.

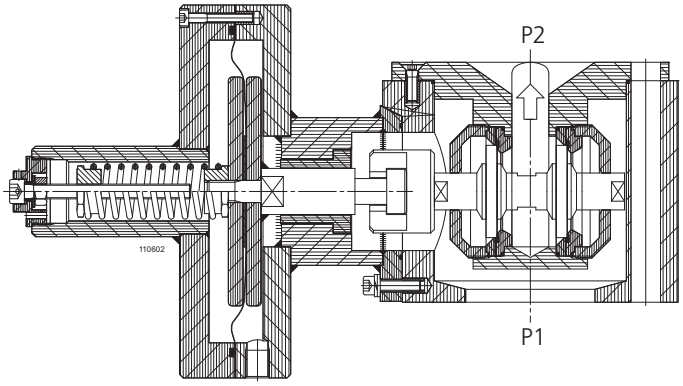
Design

The double-seat design results in full compensation of the acting forces, causing high sensitivity. The design, which is consistently aligned to chemical plant engineering, ensures reliability and easy maintenance.

Description

The components coming in contact with the product are manufactured from plastic PP/$PP_{el.}$, PVDF. The diaphragm and seals are made of PTFE and the regulator seat is made of perfluoroelastomer (FFKM: Isolast®, Chemraz®, Kalrez®) as standard.
These materials guarantee high corrosion resistance and excellent sealing, even at zero flow.

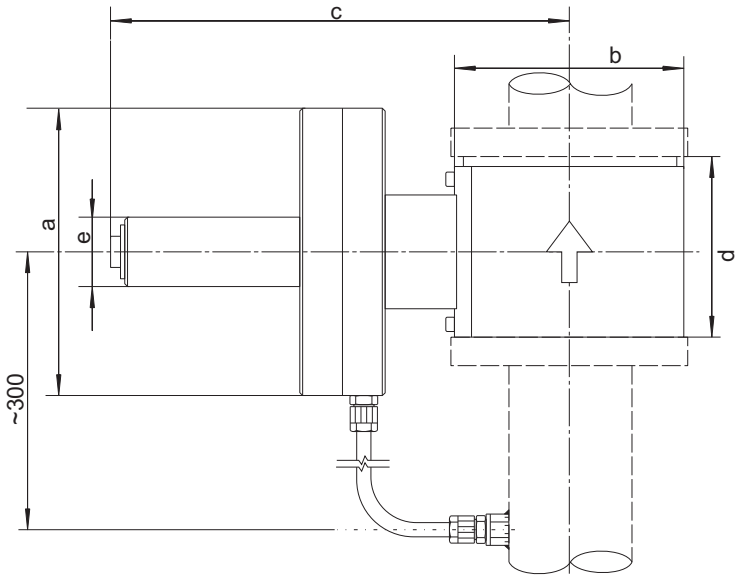




Technical data

Nominal diameter:	DN 50 / 2"	
Regulating range P1:	L..	to 500 mbar
Inlet pressure P1:	max. 500 mbar	
Vakuum proof		
Pressure connections:	Intermediate flange configuration (Special version available on request)	
Weight:	PP 3,9 kg PVDF 6,4 kg	
***Temperature:**	PP, $PP_{el.}$ PVDF	-20 ° to +80 °C -20 ° to +140 °C
Testing and inspection:	According to IEC 60534-4	
Pressure tightness:	Sealing category V	

*Dependent on pressure conditions



Model dimensions	pressure connection	a	b	c	g	d1 x d2	e
LPSW-050 in plastic	DN50 PN16	Ø 202	Ø160	~200	~300	Standard 100 x 140	Ø49

INSTRUM AG • Waldeckstrasse 100 • CH - 4127 Birsfelden / Basel
Tel: +41 61 3121136 • Fax: +41 61 3121126 • E-Mail: info@instrum.ch • Web: www.instrum.ch

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MODEL CODE LPS®W PLASTIC

wafer design
DN 50

1				2			3		4		5		6		7
Design				Nominal diameter DN/ pressure connection			Flow capacity		Regulating pressure range		Material		Options		Specials
LP	S	W	-	050	.	-	..	-	...	-	...	-	.	-	Xn

2 Nominal diameter DN/ Pressure connection

D	Flange:	DIN EN 1092-1, DN 25 PN 16
A	Flange:	ANSI B 16.5, 1" 150 lbs

3 Flow capacity

30	Seat	ø30 mm
40	Seat	ø42 mm

4 Regulating pressure range P1 (mbar)

L01	3 - 10	L10	16 - 100
L02	4 - 20	L20	30 - 200
L05	8 - 50	L50	on request

5 Material

Housing/ internal components/ upper section		Seat seal		Diaphragm/ Regulating range	
P	PP/PP/PP	K	FFKM	P	PTFE L..
Y	PP/PVDF/PP	V	FKM	E	EPDM L..
D	PVDF/PVDF/PP	C	FFKM kon-forms to FDA	V	FKM L..
V	PVDF/PVDF/PVDF				
E	PPel./PVDF/PPel.				

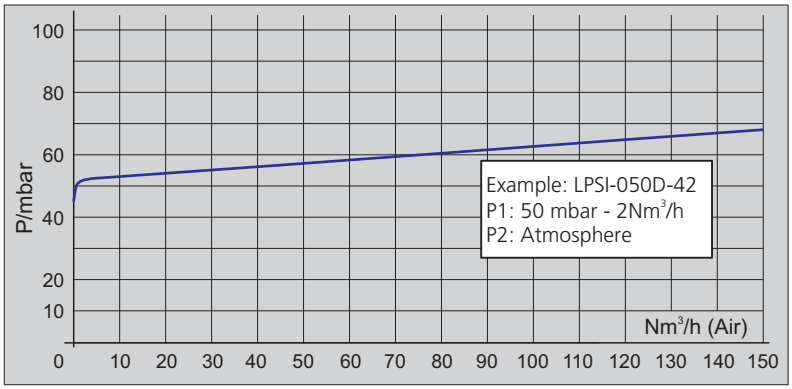
The housing/internal components/spring housing, seat and diaphragms can be combined in any order.

Flow table for seat 42 [flow quantities in Nm³/h]

P1 [mbar rel.]	2	5	10	16	25	40	50	80	100	160	250	400
P2 [mbar rel.] Atm.	18	28	40	51	64	81	90	114	128	161	202	255
-2	25	34	44	55	66	83	92	115	129	162	202	255
-5	34	40	49	58	70	85	94	117	130	163	203	255
-10	44	49	57	65	75	90	98	120	133	165	204	256

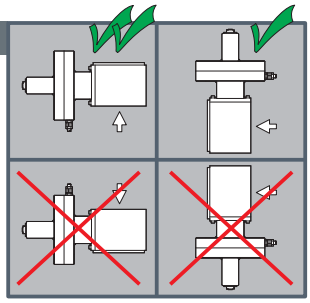
It is recommended to design for operation at a maximum of 70% of the flow values.
P1 = regulating pressure

Pressure / flow characteristic



Installation

The preferred installation position is with vertical diaphragm housing and horizontal input.
Pressure fixed unit is adjusted in this position.
The output pressure increases by approximately 4 mbar for installation with horizontal diaphragm housing.
The installation position must be specified.



6 Options

No options selectable.

7 Specials

X0 X1 X2 • • Xn	If you require, for example, PED, special connections, rain hood ..., please enter an X in this field with the number of desired Specials. Each of the specials must be described in writing. The analysis of materials 3.1 B and ATEX - certificates cannot be issued for plastic models. For special versions and certifications, please contact the manufacturer or the appropriate sales representative.

Mounting and start up

1 Before connecting the pressure regulator please make sure

1.1 to compare the plant data with the name plate

1.2 the values marked on the name plate are the values measured during our functional inspection

1.3 to check the corrosion resistance of the material

1.4 to blow out impurities in the pipes

1.5 to note the flow direction – it is marked with an arrow on the housing

1.6 to open inlet pipes slowly.

2 LPSW adjust overflow pressure: (Relative pressure)

2.1 set a light flow (2 Nm³ /h). Set the pressure +/- as required using a hexagonal wrench

2.2 the setting can be secured with a seal.