



inline design
DN 25

PLASTIC PRESSURE REDUCER LPR® I

Application

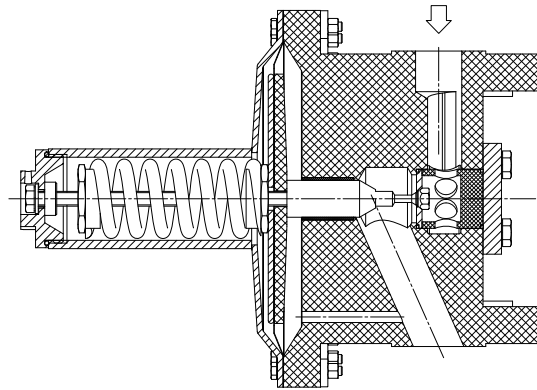
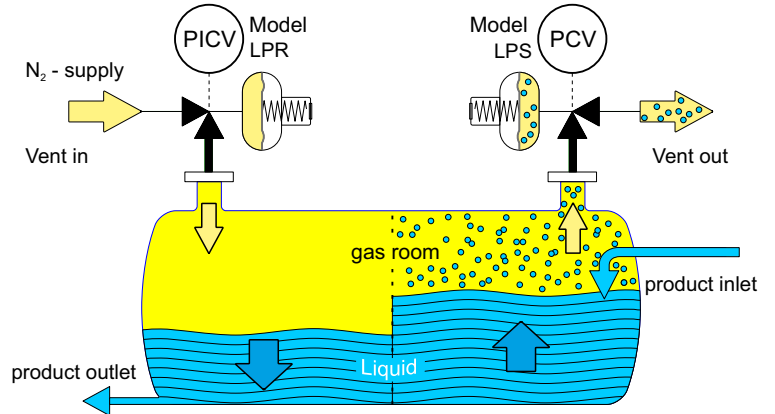
These plastic pressure reducers are used for reducing air and gas pressure in chemical plant construction. The regulator is specially designed for inert-gas blanketing and pressure blanketing agitating tubs, storage tanks and containers with an inert gas such as nitrogen.

Design

The large proportioned, spring-loaded diaphragm actuator with directly-controlled valve seat ensures precise control with low hysteresis. The regulators function without auxiliary power supply. High overpressure strength and safe regulator function is achieved by means of the supported diaphragm with long spindle guide. The regulator has a low degree of clearance volume.

Description

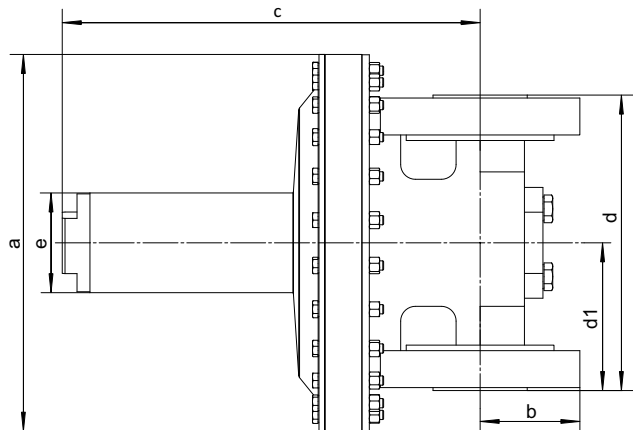
The components coming in contact with the product are manufactured from plastic PP/PP_{el.}, PVDF, ECTFE or Tantalum. The diaphragm and seals are made of PTFE and the regulator seat is made of perfluoroelastomer (FFKM – Isolast®, Chemraz®, Kalrez®) as standard. These materials guarantee high corrosion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



Technical data

Nominal diameter:	DN 25 / 1"	
Regulating range P2:	L..	to 500 mbar
Inlet pressure P1:	max. 10 bar	
Vakuum proof		
Pressure connections:	Flange	
Weight:	PP 4,8 kg PVDF 7,1 kg ECTFE 8,7 kg	
*Temperature:	PP, PP _{el.}	-20 ° to + 80 °C
	PVDF	-20 ° to +140 °C
	ECTFE	-20 ° to +160 °C
Testing and inspection:	According to IEC 60534-4	
Pressure tightness:	Bubble tight sealing category VI	

*Dependent on pressure conditions



Model dimensions	pressure connection	a	b	c	d	d1	e
LPRI-025-...-...-...-...-... in plastic design	DN25 PN10 ANSI 1" 150 lbs	Ø 204	58	235	160	80	Ø54





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DN 25

MODEL CODE LPR[®]I PLASTIC

1			2			3			4			5			6			7		
Design			Nominal diameter DN/ pressure connection			Flow capacity			Regulating pressure range			Material			Options			Specials		
LP	R	I	-	025	.	-	..	-	...	-	...	-	...	-	.	-	-	-	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

07	Seat	ø7 mm
12	Seat	ø12 mm
16	Seat	ø16 mm

4 Regulating pressure range P2 (mbar)

L01	2 to 10	L10	16 to 100
L02	4 to 20	L20	30 to 200
L05	8 to 50	L50	on request

5 Material

	Housing/ internal components/ upper section	Seat seal	Diaphragm/ Regulating range
P	PP/PP/SS	K FFKM	P PTFE/ L..
Y	PP/PVDF/SS	C FFKM kon- forms to FDA	F *PTFE/ L..
D	PVDF/PVDF/SS		
V	PVDF/PVDF/SS		
E	PPel./PVDF/SS		
T	ECTFE/Tantalum/SS		

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

*PTFE with FKM - Back-up - Diaphragm

6 Options

D	Differential pressure connection
E	BSP 1/4" external impulse connection

7 Specials

X0 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.
X1
X2
•
•
Xn For special versions and certifications, please contact the manufacturer or the appropriate sales representative.

Flow table [flow quantities in Nm³/h]

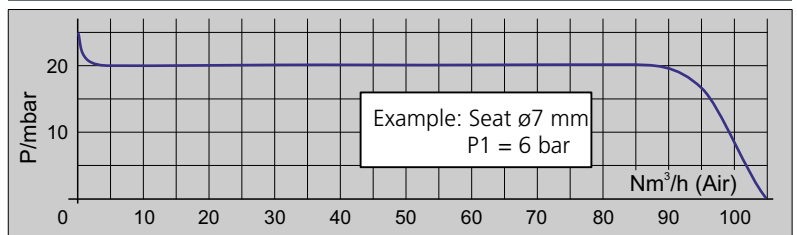
P1 [bar rel.]	0.15	0.25	0.40	0.65	1.0	1.5	2.0	4.0	6.0	10	Seat size
10	10	13	17	21	26	34	40	67	94	136	ø7 mm
	31	40	51	64	80	101	121	170	235	360	ø12 mm
	62	80	101	129	160	201	243	375	515	790	ø16 mm
100	7	10	14	19	24	34	41	67	85	136	ø7 mm
	17	30	42	57	72	101	122	183	236	362	ø12 mm
	34	60	83	113	145	201	243	326	489	791	ø16 mm
200	-	6	11	16	22	34	41	67	94	138	ø7 mm
	-	40	51	65	80	101	121	202	240	364	ø12 mm
	-	80	101	129	160	202	242	404	525	793	ø16 mm

The flow capacity is the same in the supercritical operating range (guide value: P2 < 0.5 x P1). It is recommended to design for operation at a maximum of 70% of the flow values.
P1 = supply pressure P2 = regulating pressure

Dependency on inlet pressure (per -1 bar / +1 bar change in P1)

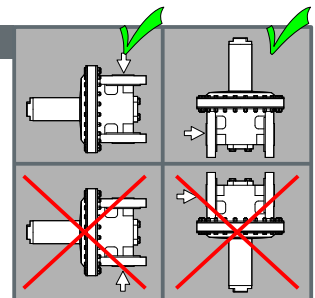
Seat ø7 mm	- 3 mbar / + 3 mbar	Seat ø16 mm	- 13 mbar / + 13 mbar
Seat ø12 mm	- 8 mbar / + 8 mbar		

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.



Mounting and start up

- Before connecting the pressure regulator please make sure
- LPRI adjust reduced pressure: (Relative pressure)
- 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.
- 2.1 set a light flow (1Nm³/h). Set the pressure +/- as required using a hexagonal wrench
- 2.2 the setting can be secured with a seal.
- 3 Adjust the LPRI differential pressure (-D) with the servo-regulator
- 3.1 if the D-connection is pressurised with the servo-pressure, the working pressure is added by the servo-pressure.