



REDLINE® R 545

In-line pressure regulator

Description R 545 is an in-line single stage diaphragm pressure regulator, especially suitable for non-corrosive gases up to 6.0 purity (99.9999%) as well as gas mixtures with a low concentration of corrosive components.

Product name	Material	mbar	psi	Art. Nr
Version with max. pressure 12 bar (174 psi):				
R 545	Chrome-plated brass	20 – 250	0.29 – 3.63	7410
R 545	Chrome-plated brass	200 – 1300	2.9 – 19	7412
R 545	Stainless steel	20 – 250	0.29 – 3.63	7411
R 545	Stainless steel	200 – 1300	2.9 – 19	7413
Version with max. pressure 40 bar (580 psi):				
R 545	Chrome-plated brass	20 – 450	0.29 – 6.5	7414
R 545	Chrome-plated brass	200 – 3000	2.9 – 43.5	7416
R 545	Stainless steel	20 – 450	0.29 – 6.5	7415
R 545	Stainless steel	200 – 3000	2.9 – 43.5	7417

Delivery and ordering information In-line pressure regulator with 6 mm compression fitting in the service gas outlet. In addition to the article number, please specify the type of gas. Other configurations on request.

Application For maximum operating pressures between 250 mbar and 3 bar. Used as a second pressure reducer stage in a central gas supply, for all applications in analysis, research, development and production, wherever high accuracy and reliability are required. The large housing diameter of this pressure regulator enables large metal diaphragms and thus a very fine adjustment of the downstream pressure with comparatively high flow rates down to 0.02 bar. The pressure regulator reduces the in-line pressure with a very small hysteresis to very low supply pressures.

Technical Data

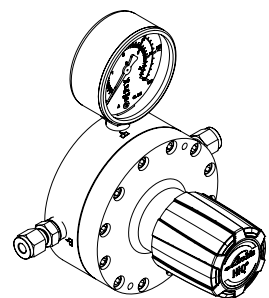
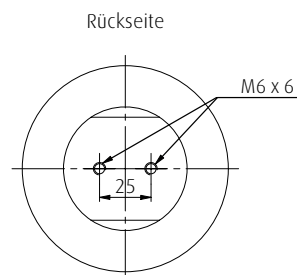
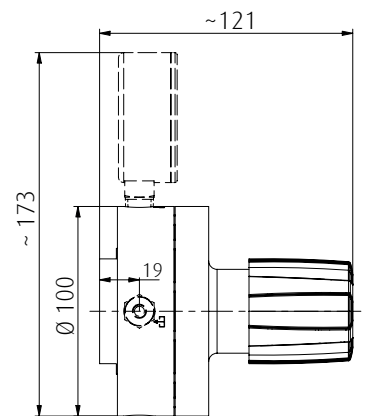
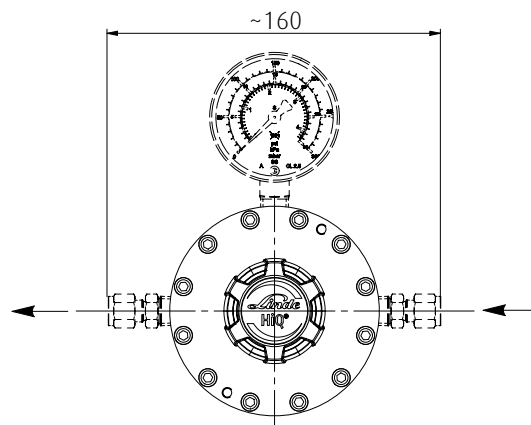
	bar	psi
Maximum primary pressure	12 40	174 580
Outlet pressure range	20 – 250 mbar 200 – 1300 mbar 20 – 450 mbar 200 – 3000 mbar	0.29 – 3.63 2.9 – 19 0.29 – 6.5 2.9 – 43.5
Outlet gauge range	-0 – 0.3 -1 – 1.6 0 – 0.6 -1 – 5 0 – 4	0 – 4.35 -15 – 23.2 0 – 8.7 -15 – 73 0 – 58
Gas purity	≤ 6.0 (99.9999%)	
Leak rate	≤10 ⁻⁹ mbar l/s He to the outside ≤5x10 ⁻⁶ mbar l/s He in the seat	
Connections		
- Pressure reducer body	4 x NPT 1/4" f	
- cylinder pressure regulator		
- Service gas outlet	NPT 1/4" f	
- High pressure inlet bottle	NPT 1/4" f	
Flow coefficient	Cv = 0.09	
Materials		
- Casing	Cr-plated brass	Stainless steel
- Housing seal	PCTFE	
- Membrane	Hastelloy®	
- Seat seal	FKM/EPDM	
Operating temperature	-20°C ... +60°C	-4°F ... +140°F
Weight	2.7 kg max.	5.6 lb max.



Other accessories Gas type-specific manual connection, brass or stainless-steel compression fittings from 3 to 12 mm or 1/8" to 1/2" for service gas and relief valve outlet.

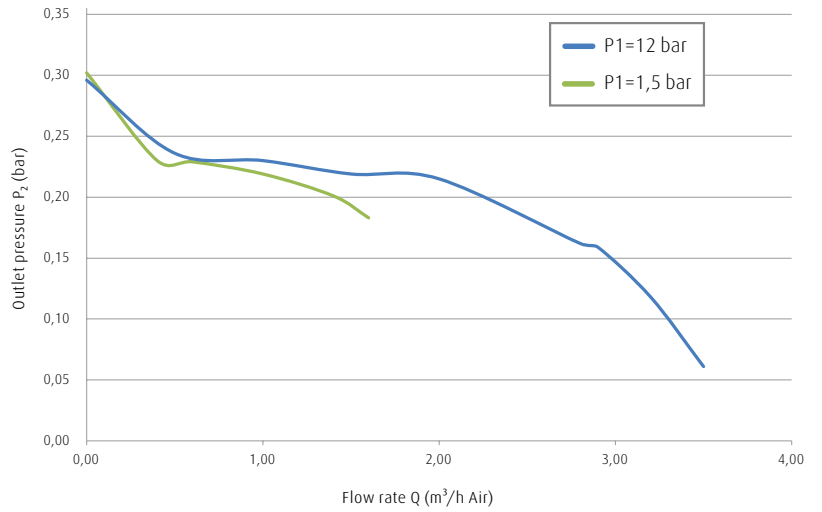
Quality Assurance The in-line pressure regulator R 545 is manufactured in accordance with the following international standards: ISO 9001, EN ISO 5171, EN ISO 7291 (including oxygen burnout test for brass-chrome-plated fittings). Every step, from design to final test, is subject to one Quality Management System.

R 545

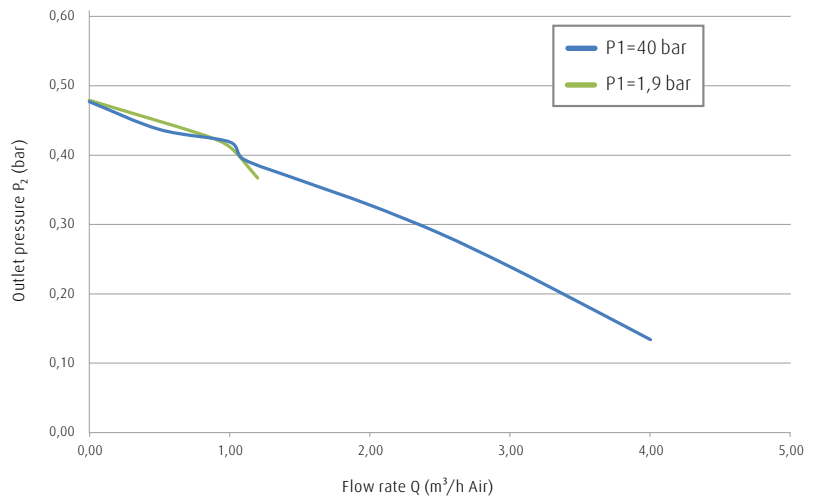


All dimensions in millimeters

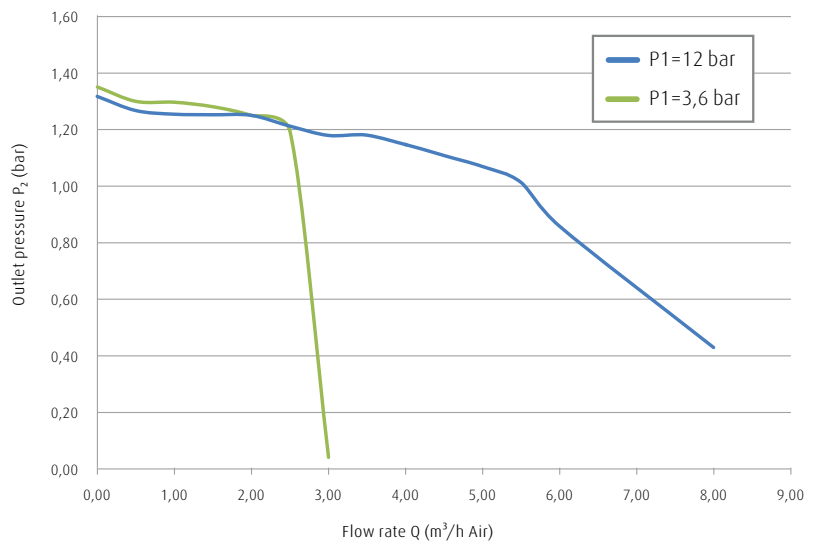
R 545 – 250 mbar



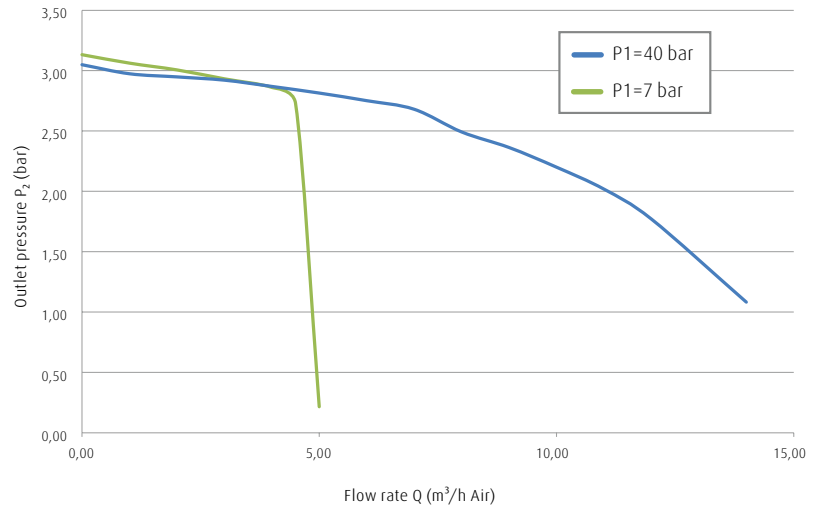
R 545 – 450 mbar



R 545 – 1300 mbar



R 545 – 3000 mbar



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