

Cylinder regulator R500 Series

↘ **Brass**

↘ **High inlet pressure**

↘ **Precise outlet pressure**

↘ **Two stage**



↘ This series of brass, two stage, high purity regulators is designed for non-corrosive analytical and process applications up to 310 bar.g, requiring precise contaminant free pressure control.

The two-stage design yields a delivery pressure change of less than 0.004 bar per 10 bar inlet change. The convoluted stainless steel diaphragms provide excellent regulating characteristics and allow for internal vacuum purging. The metal to metal seal prevents contamination by eliminating the need for a soft seal and provides a leak rate of less than 2×10^{-8} mbar.l/sec He.

Specifications

Material

Body: brass
 Bonnet: nickel plated brass
 Seat: Teflon®
 Inlet filter: bronze
 Diaphragm: 316L stainless steel
 Gauge: brass, 64 mm diameter
 Outlet valve: brass

Pressure/Temperature rating

Maximum inlet pressure: 310 bar.g
 Temperature range:
 -40 °C to +74 °C

Connections

Inlet: cylinder connection
 Outlet: 1/4 inch NPT male
 Relief valve: 1/4 inch NPT male

Flow

CV=0.05
 The flow coefficient expresses the flow capability of the regulator.
 CV is the flow of air in standard ft³/min for each psi of inlet pressure

Design leak rate

< 2 x 10⁻⁸ mbar.l/sec He equivalent

Weight

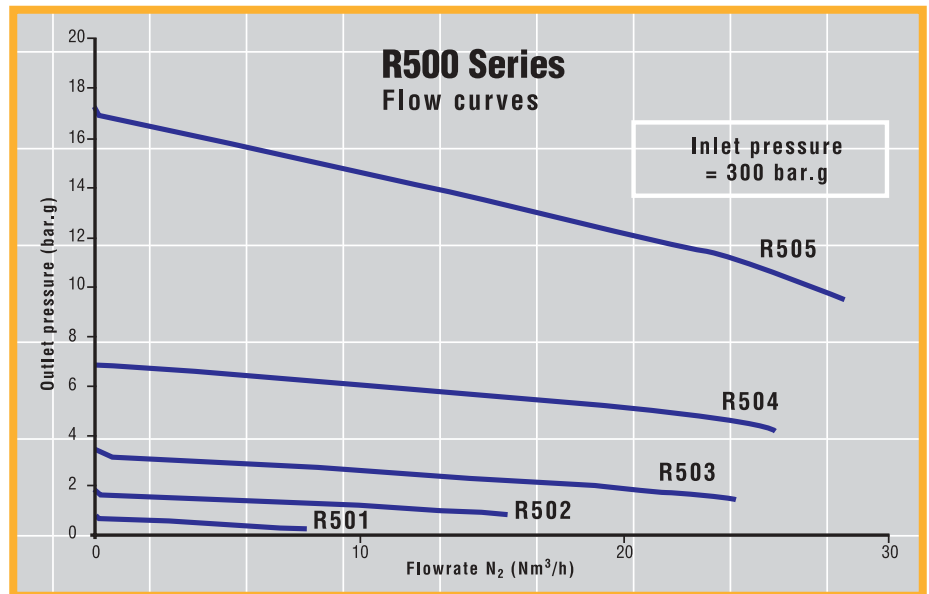
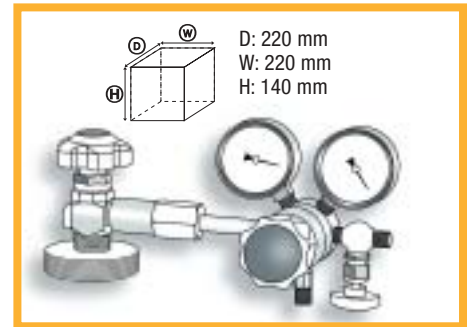
2.5 kg

Installation dimensions

WxHxD: 220 mm x 140 mm x 220 mm

Design features

- Two stage for maximum outlet pressure stability
- Inlet filter for maximum reliability
- Ultrasonically cleaned for high purity gas handling
- Relief valve fitted as standard for protection against over pressurisation
- Individually tested and certified to assure maximum leak-tightness and reliability
- High standard finish



Ordering Information

Order Code	Recommended outlet pressure range (bar.g)	Design capacity at maximum outlet pressure (*) (Nm³/h)	Inlet gauge range (bar.g)	Outlet gauge range (bar.g)
R501	0.1 to 0.7	7	0 to 315	-1.0 to +1.5
R502	0.2 to 1.7	15	0 to 315	-1.0 to +3.0
R503	0.5 to 3.5	24	0 to 315	-1.0 to +5.0
R504	1.0 to 7.0	26	0 to 315	-1.0 to +9.0
R505	5.0 to 17.0	28	0 to 315	0.0 to +25.0

(*) For outlet pressure drops, refer to the flow curves.

OPTIONS

- C Cleaning for oxygen service
- F Extra 5 micron inlet filter
- M Mounting on a back plate
- D Helium leak rate certification
- G Purge system (see datasheet)
- R No relief valve
- E Panel mounting kit, consists of 2 nuts
- H Compression fitting on outlet (available in various sizes)

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