



Precision pressure regulators

- High relieving capacity

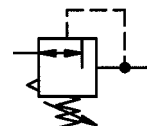
637.31 to 637.53

G 1/4 to G 3/8 to G 1/2

0.05 to 3.0 bar

0.05 to 5.0 bar

0.05 to 7.0 bar



Characteristics

Order No.	637.31		637.33
Port	1/4		
Order No.	637.41		637.43
Port	3/8		
Order No.	637.51	637.52	637.53
Port	1/2		
Control range p ₂	0.05 to 3.0 bar	0.05 to 5.0 bar	0.05 to 7.0 bar
Relief port	G 3/8		
Pressure gauge port	G 1/4		
Medium	Compressed air, filtered 0.01 µm, oil-free		
Type of construction	Diaphragm pressure regulator with self-relieving design		
Max. input pressure p ₁	16 bar		
Own air consumption at input pressure	< 1.5 l/min	< 2.0 l/min	
	p ₁ = 5 bar	p ₁ = 7 bar	
Own air consumption at input pressure	< 4.0 l/min	< 6.0 l/min	
	p ₁ = 10.0 bar	p ₁ = 12.0 bar	
Mounting position	Any / note direction of arrow		
Mounting type	Panel mounting, hole Ø20.5		
Medium temperature	-35 to 60 °C		
Ambient temperature	-35 to 60 °C		
Weight [g]	1500		

Description

- Double nipples (G1/4) required for block mounting with other devices
- Pressure setting can be locked with lock nut
- Flow direction indicated by arrows
- **Entry in direction of arrow**
- Pressure gauge **not** included, can be mounted at both ends
- Panel mounting with nut on cover
- Wall mounting with mounting bracket on body

Operation

- **The regulator is only allowed to be operated with micro-filtered air (filter rating 0.01 µm) (Section 1)**
- **Control range > 7 bar:**
p₁ must be continuously applied to the regulator.
The regulating spring must be relieved if the pressure supply fails (by unscrewing the adjusting screw)

Materials

Part	Material
Head piece (body)	Zinc - Z 410
Adjusting screw	Stainless steel
Control diaphragm	GKVX 5590 / Z 410
Pilot diaphragm	NBR-brass-stainless steel
Fixed restrictor	Stainless steel
Pressure spring	Galvanised steel
Valve cone, cmpl.	NBR-stainless steel-brass
Counter-pressure spring	Stainless steel
Bottom screw	Brass-NBR

Accessories

Designation	Order No.
Mounting bracket	H 822
Panel nut	252 R

Applications

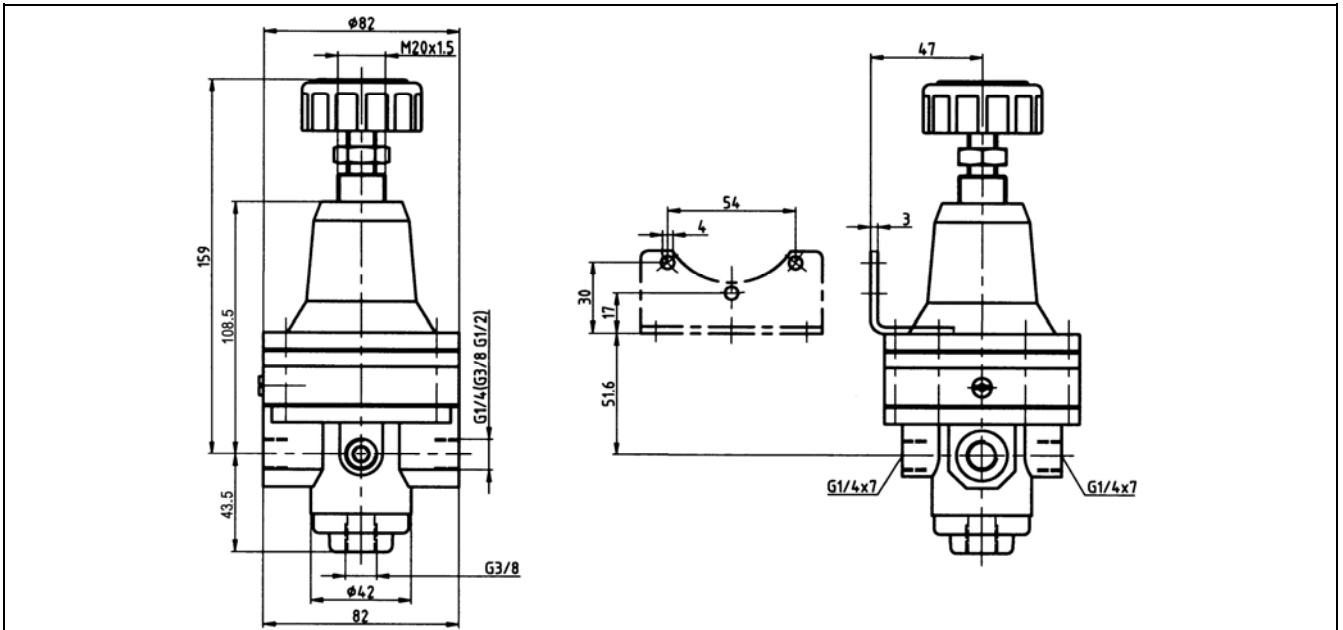
Precision regulator for use in open and closed-loop control systems in process engineering, the chemical industry, mineral oil production and refining, metallurgy, the paper industry, etc.

Main spare parts

No spare parts can be supplied.

Regulators 637.31 to 637.53 are only allowed to be opened and repaired in the factory.

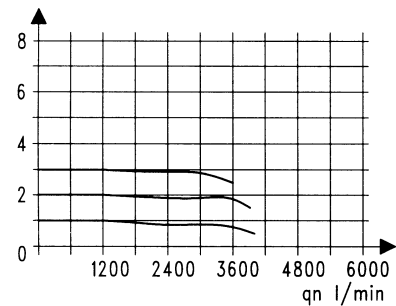
Dimensions [mm]



Flow characteristic

0,05 - 3 bar

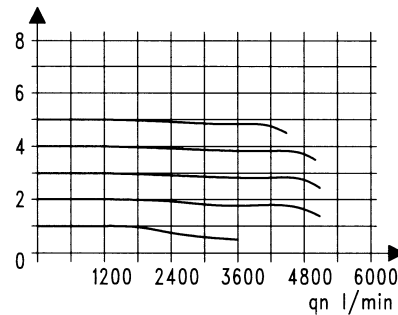
p_2 [bar] $p_1 = 5$ bar



Flow characteristic

0,05 - 5 bar

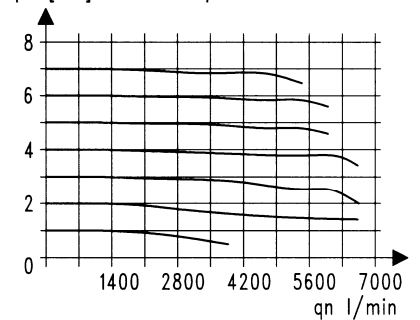
p_2 [bar] $p_1 = 7$ bar



Flow characteristic

0,05 - 7 bar

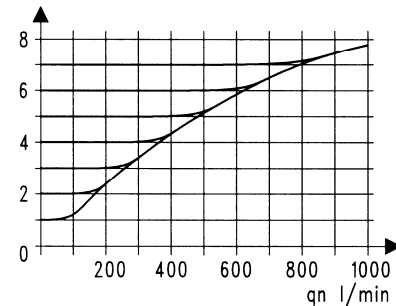
p_2 [bar] $p_1 = 10$ bar



Relief characteristic

0,05 - 7 bar

p_2 [bar] $p_1 = 10$ bar



Hysteresis

Hysteresis of p_2 as a function of rising (falling)

p_1 at a constant draw-off rate Q_N 20 l/min

Basic setting (starting point): p_1 : 7.0 bar

p_2 : 2.0 bar

$Q_n = 20$ l/min

