C31
Dome loaded pressure regulator

– Port size: G1

Technical features

The C31 is a balanced valve dome loaded pressure regulator and provides a flow of process fluid at controlled pressure. It is a heavy duty construction, ideally suited for arduous conditions and environments. The outlet prssure is set by adjusting the pressure in the dome. A flexible diaphragm separates the gas in the dome from the process fluid.
The valve in the regulator is balanced type. It is a fail safe to closed position. The dome must be charged with air or an inert gas such as nitrogen. The dome can be charged from an external source - this is known as »Mono Loading«. The outlet pressure is substantially unaffected by flow rate or changes in the inlet pressure.

Applications:
This pressure regulator for medium pressure range can be used on a wide outlet pressure range without changing components. For very low pressures a special low pressure version is available offering high accuracy also for this range.

Features:
Balanced Valve
Valve size: 12,7 mm
Kv-Value: 2,9 (m^3/h)
Gauge ports at inlet and outlet

Medium:
For all gases and liquids suitable with brass, especially for O_2 and CO_2

Inlet Pressures:
Max. 100 bar (1450 psi)
Low pressure version max. 25 bar (max. 362 psi)

Leakage:
Standard:
>10-^{3} mbar/l/sec.
On request up to 10-^{6} mbar/l/sec. is available with special test

Weight:
4,8 kg

Ambient/Media temperature:
–30 ... +130°C (–34 ... +54°F)

Note:
If used with CO_2 or O_2 only suitable lubricants may be used (e.g. Oxigeno Ex).

Material:
Body: Brass
Valve pad: NBR / FPM / EPDM
Diapgrahm: NBR / FPM / EPDM
O-ring: NBR / FPM / EPDM

Options:
Additional thread in dome center

Option selector

C31-R1★★★★★★

Outlet Pressure Range	Substitute
0,5 ... 70 bar max. inlet pressure 100 bar	S
0,1 ... 5 bar max. inlet pressure 25 bar	L
Elastomer	**Substitute**
NBR (–10 ... +80°C)	N
FPM (–20 ... +100°C)	V
EPDM (–30 ... +130°C)	E

Options	Substitute
Standard	no
Additional thread in dome center	DB
Oil and fat free	OF
Connection (optional)	**Substitute**
Standard G1"	00000

Further Options and Varainces

Remote Control

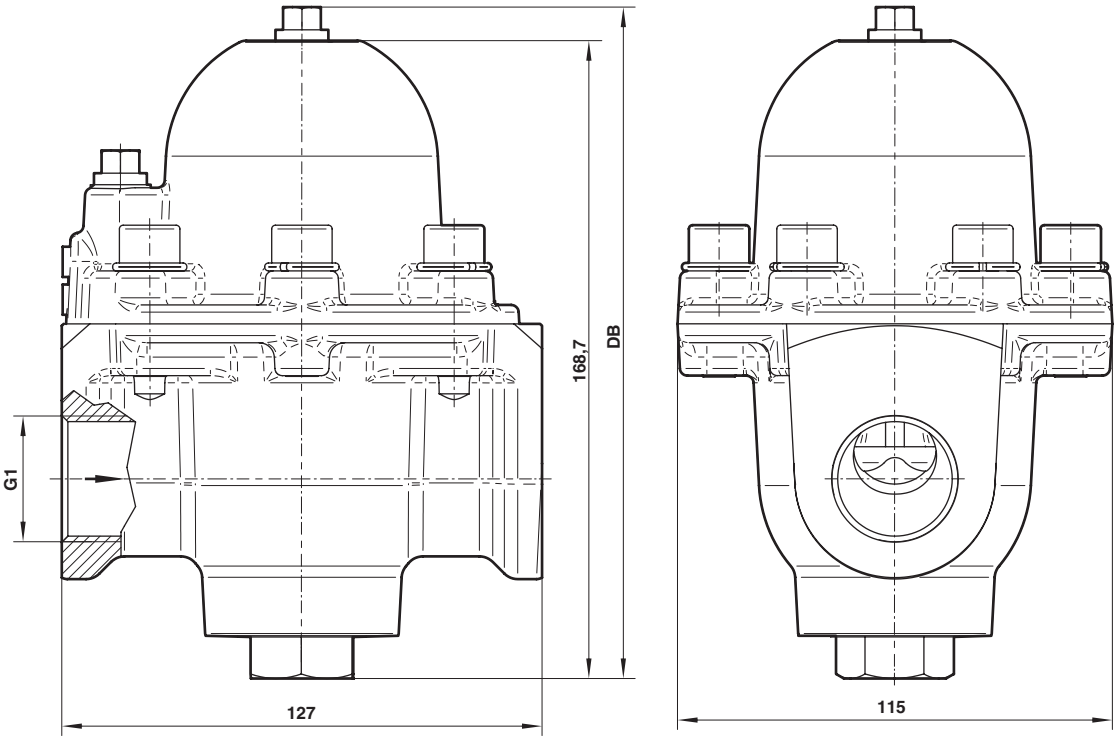
In case that the outlet pressure should be changed often we recommend the use of piloting valves which could be connected via the vent thread. As piloting regulator our small spring loaded pressure regulator type J20 or proportional valves may be used. Detailed information are available on request.

Self Piloting System

A variance of piloting for easy adjustment of outlet pressure and automatic re-adjustment of dome pressure the self piloting system may be used. Automatic re-adjustment of dome pressure may be necessary in case of varying flow rates or variance of dome pressure due to strong temperature changes, e.g. when installed outside.

Dimensions

Dimensions in mm
Projection/first angle



Option selector Service set

★C31-R1★★★★

Service set	Substitute
Complete repair and maintenance kit with valve cone	R
Only sealing rings	D

Options	Substitute
Standard	no
Additional thread in dome center	DB
Oil and fat free	OF
Elastomer	**Substitute**
NBR	N
FPM	V
EPDM	E
Output feed	**Substitute**
0,5 ... 70 bar	S
0,1 ... 5 bar	L

Warning:

Do not use these products where pressures and temperatures can exceed those listed under »Technical features/data«.

Before using these products with fluids other than those specified, for non-industrial applications, life-support systems or other applications not within published specifications, consult IMI, Buschjost GmbH.

Through misuse, age, or malfunction, components used in fluid power systems can fail in various modes.

The system designer is warned to consider the failure modes of all component parts used in fluid power systems and to provide adequate safeguards to prevent personal injury or damage to equipment in the event of such failure. System designers must provide a warning to end users in the system instructional manual if protection against a failure mode cannot be adequately provided.

System designers and end users are cautioned to review specific warnings found in instruction sheets packed and shipped with these products.