Port size: G1, DN 25

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 pressure 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 (m³/h)
Gauge ports at inlet and outlet
Medium:
For all gases and liquids suitable with brass, especially for O₂ and CO₂

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 CO₂ or O₂ only suitable lubricants may be used (e.g. Oxygeno Ex).

Materials:
Body: Brass
Valve pad: EPDM
Diaphragm: EPDM
O-ring: EPDM

Options:
Version with screwed-in flanges PN 40 or PN 63/PN 100
additional thread in dome center

Further Options and Variances
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.
Our policy is one of continued research and development. We therefore reserve the right to amend, without notice, the specifications given in this document. (2016 - 9143b) © 2015 Buschjost GmbH

### Section view

**No.** | **Description**
---|---
1 | Body
2 | Dome
3 | Nut
4 | Pressure spring
6 | O-Ring
7 | O-Ring
8 | Soft-sealing insert
9 | Valve seat
10 | O-Ring
11 | Push rod
12 | Plate
13 | Diaphragm
14 | Circlip
15 | Plate
16 | Diaphragm
17 | Gasket
18 | O-Ring
19 | Needle valve
20 | Seal
21 | O-Ring
22 | Screw
23 | Spring washer
24 | Screw
51 | Cone
52 | Screw
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