

Dome Loaded Regulator

The K16 is a balanced valve dome loaded pressure regulator and provides a flow of process fluid at controlled pressure. 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 outlet pressure is substantially unaffected by flow rate or by changes in the inlet pressure.



For an operational overview, please refer to pages 60 and 61.

Standard Features

Valve Size:

- 1/4" BALANCED

Materials of construction:

- BODY - STAINLESS STEEL - BS EN 10088 1.4541
- DOME - STAINLESS STEEL - BS EN 10088 1.4541
- SEAT - STAINLESS STEEL - BS EN 10088 1.4401
- TRIM - PCTFE
- ELASTOMERS - HIGH NITRILE

Connections:

- LINE 1/4" BSPP (INLET & OUTLET)

Maximum Inlet Pressure:

- 413 BAR (6000 PSI)

Outlet Pressure Range:

- 0.1 - 300 BAR (1.5 - 4350 PSI)

Dome Loading:

- INTERNAL OR EXTERNAL VIA 1/8" BSPP CONNECTION
- DOMES SHOULD BE LOADED WITH AIR OR INERT GAS

Media:

- LIQUIDS AND GASES

Weight:

- 1.6 Kg (3.5 lb)

Additional Features

- WELDED FLANGES ON REQUEST (STAINLESS STEEL BODIES ONLY)
- REMOTE DOME PILOTING

Options

Materials of construction:

- TRIM - PCTFE / NYLON / ACETAL
- ELASTOMERS - FLUOROCARBON / EPDM
- BASE MOUNTING HOLES

Connections:

- LINE 1/4" NPT (INLET & OUTLET)

Applications

- Marine industries
- Gas & Oil industries
- Off shore / aggressive environments
- Oxygen use approved
- Nitrogen Plants
- Gas Analyser / Instrumentation
- Pressure test rigs

Ordering Information

TYPE	VALVE SEAT SIZE	MATERIAL OPTION	CONNECTIONS	ELASTOMER
K16	C (1/4")	B9 (ST/STL) T0 (ALUMINIUM)	E1 (1/4" BSPP) A1 (1/4" NPT)	N (NITRILE) V (FLUOROCARBON) E (EPDM)

ORDERING INFORMATION EXAMPLE:

K16CT0E1N

Notes

Technical Specifications

Pressure

TEST (PROOF) PRESSURE	620 BAR (8990 PSI)
MAXIMUM INLET PRESSURE	413 BAR (6000 PSI)
REDUCED OUTLET PRESSURE RANGE	0.1 - 300 BAR (1.5 - 4350 PSI)

Leakage

STANDARD	BUBBLE TIGHT (TYPICALLY 10^{-6} atm.cm ³ /sec ⁻¹)
ON REQUEST	HELIUM LEAK TESTED TO 10^{-8} atm.cm ³ /sec ⁻¹

Temperature Range

	TEMPERATURE	BODY MATERIAL
STANDARD	-10°C TO +100°C	ALL
OPTION	-40°C TO +150°C	CONSULT IVP

Valve Size and flow area

NOMINAL SIZE	6.35mm (1/4")
ORIFICE AREA A1	24mm ² (0.037 in ²)
PORT AREA A2	49mm ² (0.076in ²)
FLOW COEFFICIENT	Kv = 0.72 (Cv = 0.84)

Spares Code

SPARES	VALVE SEAT SIZE	ELASTOMER
K16S	C (1/4")	N (NITRILE) V (FLUOROCARBON) E (EPDM)

Spares BOM

ITEM	DESCRIPTION	MATERIAL	QTY
1	'O' RING	Rubber	1
2	DIAPHRAGM	Rubber	2
3	'O' RING	Rubber	2
4	'O' RING	Rubber	2
5	SEAT	BS EN 10088 1.4401	1
6	VALVE ASSY	Various	1
7	'O' RING	Rubber	1
8	'O' RING	Rubber	1

Technical Specifications

