

- > **Port size: DN25, DN50, DN80**
- > **Internal and external dome loading**
Note: no pilot regulator needed for internal dome loading for gas service
- > **Balanced design ensures a stable delivery pressure, even with a varying inlet pressure**
- > **Design option offers optimised performance at very low delivery pressures (< 5 barg)**



Technical features

K40 Series Dome Loaded Pressure Regulators offer excellent pressure control at low to medium delivery pressures. Below 5 barg, the build standard is adjusted to increase sensitivity offering improved pressure control and flow performance. Its heavy duty construction makes the K40 Series ideal for arduous conditions and harsh environments.

Applications:

- Marine industries
- Gas & Oil industries
- Off shore / aggressive environments
- Nitrogen plants
- Brewery plants
- Pressure test rigs
- Mining Industries
- High flow purge systems
- Steel industries

Medium:

Liquid and gases

Maximum inlet pressure:

40 barg (580 psig)

Outlet pressure range:

0,5 ... 40 barg (7.3 ... 580 psig)

Low pressure version:

Inlet pressure:

25 barg (363 psig)

Outlet pressure:

0,1 ... 5 barg (1.4 ... 73 psig)

Flow:

See table below

Dome loading:

Internal or external via G1/4 connection

Domes should be loaded with air or inert gas

Leakage:

Bubble tight (standard,

typically 10⁻⁶ atm.cm³/sec⁻¹)

Helium leak tested to

10⁻⁸ atm.cm³/sec⁻¹ (on request)

Ambient/Media temperature:

NBR:

-10 ... +100°C (+14 ... +212°F)

FPM:

-20 ... +150°C (-4 ... +302°F)

EPDM:

-20 ... +115°C (-4 ... +239°F)

Nodular iron body

-20 ... +150°C (-4 ... +302°F)

Materials:

Body: cast nodular iron

BS EN 1563 EN-GJS-400-LT

Dome: cast nodular iron

BS EN 1563 EN-GJS-400-LT

Seat: stainless steel BS EN 10088

1.4401

Trim: Elastomer

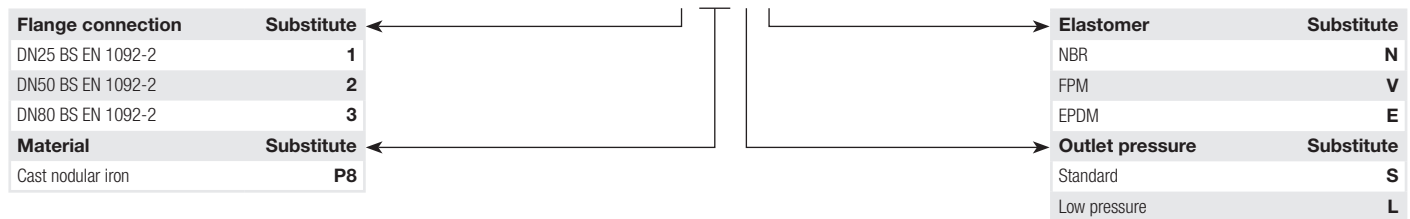
Elastomers: NBR, FPM, EPDM

Technical data

Symbol	Port size	Valve seat size (mm)	Valve seat size (inch)	Seat flow area (mm ²)	Seat flow area (inch ²)	Port flow area (mm ²)	Port flow area (inch ²)	Flow coefficient (Kv)	Flow coefficient (Cv)	Model
	DN25	12,7	0,5	97	0,15	387	0,60	2,9	3,4	K41
	DN50	25,4	1	323	0,50	1503	2,33	9,7	7,9	K42
	DN80	38,1	1,5	968	1,50	2858	4,43	29	34	K43

Option selector

K4★★★★★



Option selector spare kits

Flange size	Substitute
Ø 25	1
Ø 50	2
Ø 80	3

K4★S★★

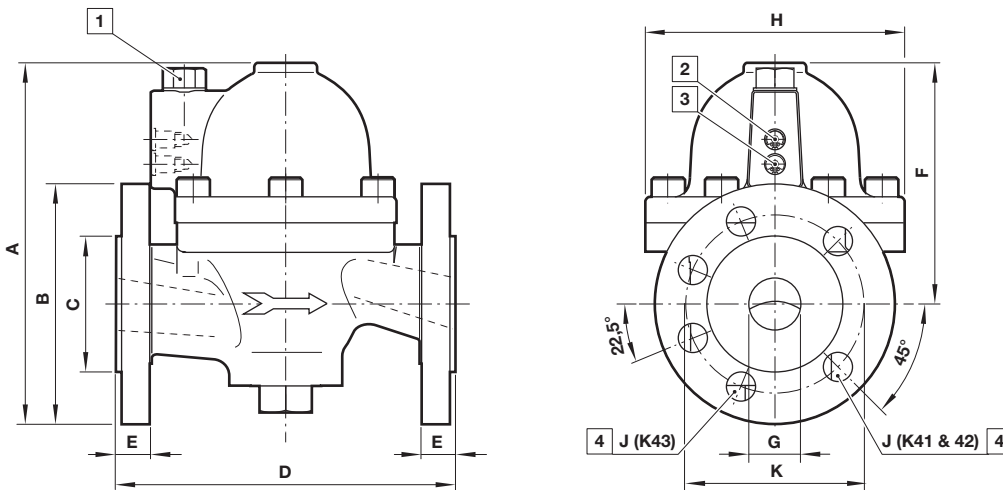
Elastomer	Substitute
NBR	N
FPM	V
EPDM	E
Outlet pressure	Substitute
Standard	S
Low pressure	L

Spares BOM

Description	Material	QTY	Required	
			Standard pressure	Low pressure
Bonded seal	Steel/ Rubber	1	X	X
Circlip	BS 5216-HD 3	2	X	X
Needle valve	BS 3S 145 (normalised)	2	X	X
'O'-Ring	Rubber	2	X	X
Standard diaphragm	Rubber	1	X	—
'O'-Ring	Rubber	1	X	X
Spring	Various	1	X	X
'O'-Ring	Rubber	1	X	X
Seat	BS EN 10088 1.4401	1	X	X
Valve assy (PAD only)	Various	1	X	X
'O'-Ring	Rubber	1	X	X
'O'-Ring	Rubber	1	X	X
Gasket	Rubber	1	—	X
Low pressure diaphragm	Rubber	1	—	X

Dimensions

Dimensions in mm
Projection/First angle



- 1 G1/4 dome vent and external load connection (plugged)
- 2 Load regulation screw for external or internal pressure
- 3 Load regulation screw for internal pressure only
- 4 8 holes (K43 only), 4 holes (K41 & K42)

A	B	C	D	E	F	G	H	ø J	ø K	Weight kg	Model
171	115	65	160	15	114	25	124	14	85	6.5	K41
276	165	102	230	20	194	50	165	19	125	18.5	K42
317	200	128.5	310	33	217	75	229	19	160	37	K43

Warning

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

Before using these products with fluids other than those specified within published specifications, consult IMI Precision Engineering, Thompson Valves Ltd.

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.