- **Port size: 1” ISO G/NPT**
- **Balanced valve design for stable delivery pressure with varying inlet pressure**
- **Differential set-up option for pressure tracking applications**
- **Large diaphragm for exceptional pressure control at low outlet pressure**

Technical features

J45 Series Spring Loaded Pressure Regulators offer excellent control of downstream pressure.
It’s balanced design copes well with varying inlet pressure conditions providing a constant delivery pressure. For low outlet pressure control, a diaphragm sensing element provides additional sensitivity.

Applications:
- Saturation Diving
- Breathing Air Systems
- Fire Suppression
- Gas distribution/mixing
- Test benches
- Marine industries
- Off shore/aggressive environments
- CO2 Blanketing
- Air Compressors

Medium:
Liquid and gases

Maximum inlet pressure:
210 bar (3046 psi) Standard
250 bar (3626 psi) PCTFE valve assy only

Outlet pressure range:
0,1 ... 1 bar (1.4 ... 15 psi)
0,5 ... 5 bar (7.3 ... 73 psi)
1 ... 11 bar (14 ... 160 psi)
2,8 ... 28 bar (41 ... 406 psi)
7 ... 70 bar (102 ... 1015 psi)

Leakage:
Bubble tight (standard, typically 10^{-6} atm.cm^3/sec^{-1})
Helium leak tested to 10^{-8} atm.cm^3/sec^{-1} (on request)
For -40°C special grade NBR option the leakage rate is BS ISO 5208-2015 Rate A-A.

Ambient/Media temperature:
NBR:
–10 ... +100°C (+14 ... +212°F)
FPM:
–20 ... +150°C (–4 ... +302°F)
EPDM:
–30 ... +115°C (–22 ... +239°F)
Nitrile (special grade):
–40 ... +90°C (-40 ... +194°F)
Carbon Steel:
–10 ... +100°C (+14 ... +212°F)
Stainless Steel:
–40 ... +150°C (–40 ... 302°F)

Materials:
Body:
Carbon steel BS970 230M07,
Stainless steel BS EN 10272 1.4401
Spring housing:
Carbon steel BS970 230M07,
Stainless steel BS3146/4 316
Seat:
Stainless steel BS EN 10088 1.4401
Elastomers:
NBR, FPM, EPDM

Options:
Welded flanges upon request

Differential version:
Maximum spring housing pressure 100 bar

Technical data

Symbol	Port size	Valve seat size (mm)	Valve seat size (inch)	Seat flow area (mm²)	Seat flow area (inch²)	Port flow area (mm²)	Port flow area (inch²)	Flow coefficient (Kv)	Flow coefficient (Cv)	Weight (kg)	Model
	1”	12,7	0.5	97	0.15	387	0.60	2,9	3.4	8	J45

Option selector

J45★★★★★★★★

Material	Substitute
Carbon steel	K3
Stainless steel	B9
Outlet Pressure	**Substitute**
0,1 ... 1 bar	F
0,5 ... 5 bar	M
1 ... 11 bar	P
2,8 ... 28 bar	S
7 ... 70 bar	X

Options	Substitute
Basic	None
Differential spring housing 100 bar maximum	D
PCTFE Valve - 250 bar inlet	P
Differential spring housing and PCTFE Valve - 250 bar inlet	DP
Port size	**Substitute**
BSP/G	None
NPT	01
Elastomer	**Substitute**
NBR	N
FPM	V
EPDM	E
Nitrile (special grade) (Stainless steel body & X outlet pressure range only)	Q

Option selector spare kits

J45S★★★

Outlet Pressure	Substitute
0,1 ... 1 bar	F
0,5 ... 5 bar	M
1 ... 11 bar	P
2,8 ... 28 bar	S
7 ... 70 bar	X

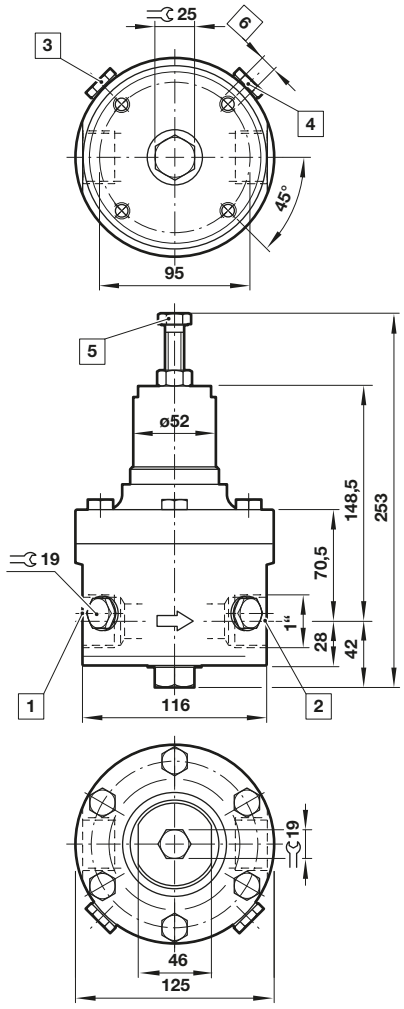
Valve assy	Substitute
PCTFE	P
Elastomer	**Substitute**
NBR	N
FPM	V
EPDM	E
Nitrile (special grade) (Stainless steel body & X outlet pressure range only)	Q

Spares BOM

Description	Material	QTY	Diaphragm option	Piston option
Diaphragm	Rubber	1	X	—
Push rod	BS 3S 145 (normalised)	1	X	X
'O'-Ring	Rubber	1	X	X
Valve assy	Various	1	X	X
'O'-Ring	Rubber	1	X	X
'O'-Ring	Rubber	1	X	X
'O'-Ring	Rubber	1	—	X
'O'-Ring	Rubber	1	—	X

Dimensions

Dimensions in mm
Projection/First angle



1 Inlet port
2 Outlet port
3 Optional gauge port G1/4 (inlet pressure)
4 Optional gauge port G1/4 (outlet pressure)
5 Adjustable screw
6 Mounting threads M8 x 10 deep

Dimensions in mm
Projection/First angle

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 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.