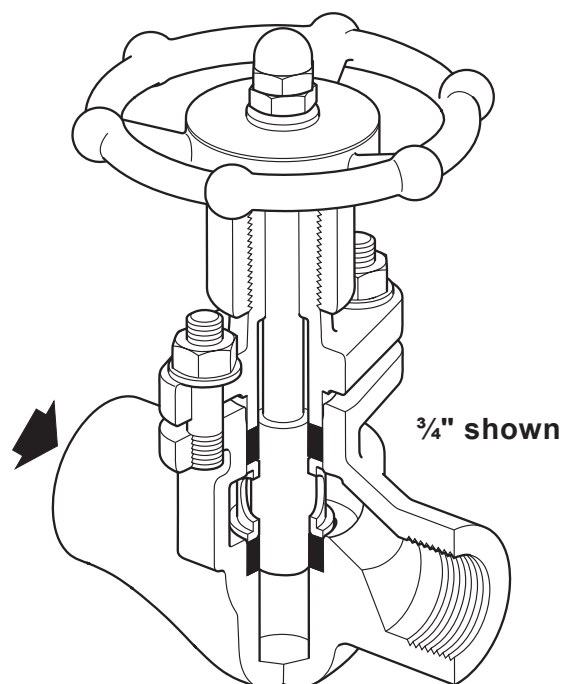




PV4 and PV6 Piston Valves

Description

The PV4 and PV6 are piston isolation valves that have been designed for use on steam, condensate and other liquid systems.



Available types:

Screwed, butt weld and socket weld connections	PV4	Carbon steel body/bonnet and stainless steel internals
	PV6	Stainless steel body/bonnet and stainless steel internals

Standards

This product fully complies with the requirements of the Pressure Equipment Directive (PED).

Certification

This product is available with certification to EN 10204 3.1.

Note: All certification/inspection requirements must be stated at the time of order placement.

Sizes and pipe connections

1/2", 3/4", 1", 1 1/4", 1 1/2" and 2"

Butt welded ends to EN 12627:1999BW - ASME B16.25

Screwed BSP (BS 21/DIN 2999) or NPT to (ASME B1.20.1)

Socket weld ends to ASME B 16.11

K_v values

	Size	1/2"	3/4"	1"	1 1/4"	1 1/2"	2"
Screwed, socket weld and butt weld	K_v	3	4.5	8.5	14	20.5	32

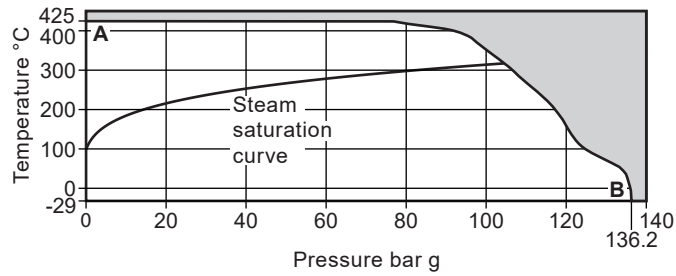
For conversion:

C_v (UK) = K_v x 0.963

C_v (US) = K_v x 1.156

Pressure/temperature limits

PV4

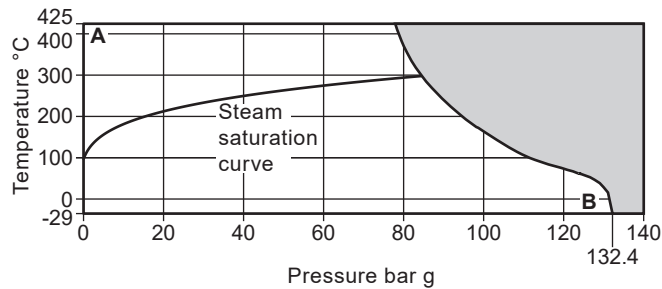


The product **must not** be used in this region.

A - B API Class 800

Body design conditions	API Class 800
PMA Maximum allowable pressure	136.2 bar g @ 38 °C
TMA Maximum allowable temperature	425 °C @ 76.7 bar g
Minimum allowable temperature	-29 °C
PMO Maximum operating pressure for saturated steam service	104 bar g
TMO Maximum operating temperature	425 °C @ 76.7 bar g
Minimum operating temperature	- 29 °C
Note: For lower operating temperatures consult Spirax Sarco.	
Designed for a maximum cold hydraulic test pressure of:	204.3 bar g

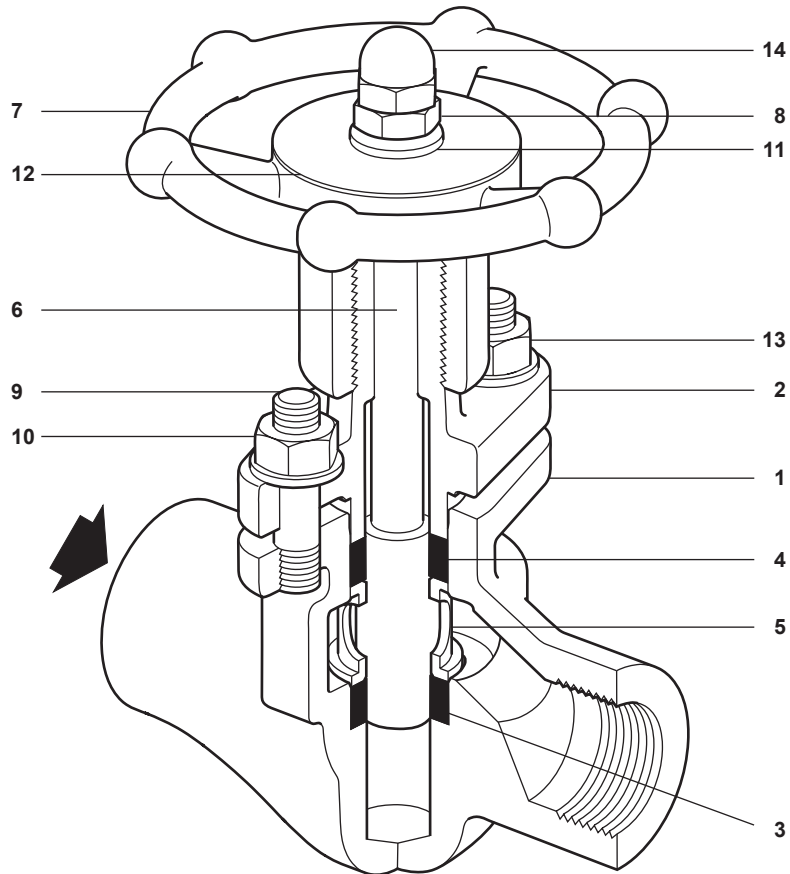
PV6



The product **must not** be used in this region.

A - B API Class 800

Body design conditions	API Class 800
PMA Maximum allowable pressure	132.4 bar g @ 38 °C
TMA Maximum allowable temperature	425 °C @ 77 bar g
Minimum allowable temperature	-29 °C
PMO Maximum operating pressure for saturated steam service	84 bar g
TMO Maximum operating temperature	425 °C @ 77 bar g
Minimum operating temperature	- 29 °C
Note: For lower operating temperatures consult Spirax Sarco.	
Designed for a maximum cold hydraulic test pressure of:	198.5 bar g



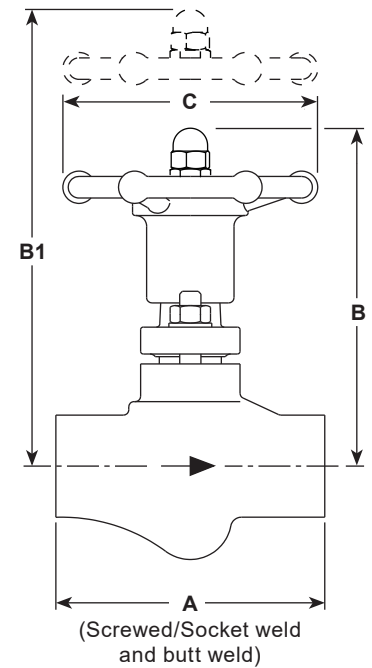
Materials

No. Part		Material	Connection	
1	Body	PV4	Carbon steel	Screwed (BSP/NPT/SW/BW) A105N/1.0460
		PV6	Stainless steel	Screwed (BSP/NPT/SW/BW) 316/1.4401
2	Bonnet	PV4	Carbon steel	Screwed (BSP/NPT/SW/BW) A105N/1.0460
		PV6	Stainless steel	Screwed (BSP/NPT/SW/BW) 316/1.4401
3	Lower sealing rings	DN15	Graphite laminate/Stainless steel	
		DN20 to DN50	Graphite laminate	
4	Upper sealing rings	DN15	Graphite laminate/Stainless steel	
		DN20 to DN50	Graphite laminate	
5	Lantern bush	PV4	Stainless steel	EN 1.4057/AISI 431
		PV6	Stainless steel	EN 1.4404/AISI 316L
6	Piston	PV4	Stainless steel	EN 1.4057/AISI 431
		PV6	Stainless steel	EN 1.4404/AISI 316L
7	Handwheel	Carbon steel		
8	Handwheel nut	Carbon steel		
9	Stud bolt	PV4	Carbon steel	ASTM A193 B7
		PV6	Stainless steel	ASTM A193 GrB8M2
10	Nut	PV4	Carbon steel	ASTM A194 2H
		PV6	Stainless steel	ASTM A193 GrB8M2
11	Washer	Stainless steel		
12	Name-plate	Stainless steel		
13	Belleville washer	Stainless steel		
14	Blind nut	Carbon steel		

Dimensions/weights (approximate) in mm and kg

Screwed, socket weld and butt weld

Size	A	B	B1	C	Weight
1/2"	85	102	118	95	1.2
3/4"	100	126	150	95	1.6
1"	120	150	180	115	2.8
1 1/4"	140	175	218	150	4.1
1 1/2"	160	195	236	150	6.0
2"	185	245	290	200	11.8



Safety information, installation and maintenance

For full details see the Installation and Maintenance Instructions (IM-P174-04-EN-ISS1) supplied with the product.

Caution: Valve keys should not be used to operate these valves.

Installation note:

Install the valve in the direction of flow given by the arrow on the body. The valve can be installed in any plane but not with the handwheel below the valve body.

Disposal

The product is recyclable. No ecological hazard is anticipated with the disposal of this product, providing due care is taken.

How to order

Example: 1 off Spirax Sarco 1/2" PV4 piston valve having screwed NPT connections. The valve is to be supplied with EN 10204 3.1 certification. The K_v is to be 3.0.

Spare parts

Spare parts are available as indicated. No other parts are supplied as spares.

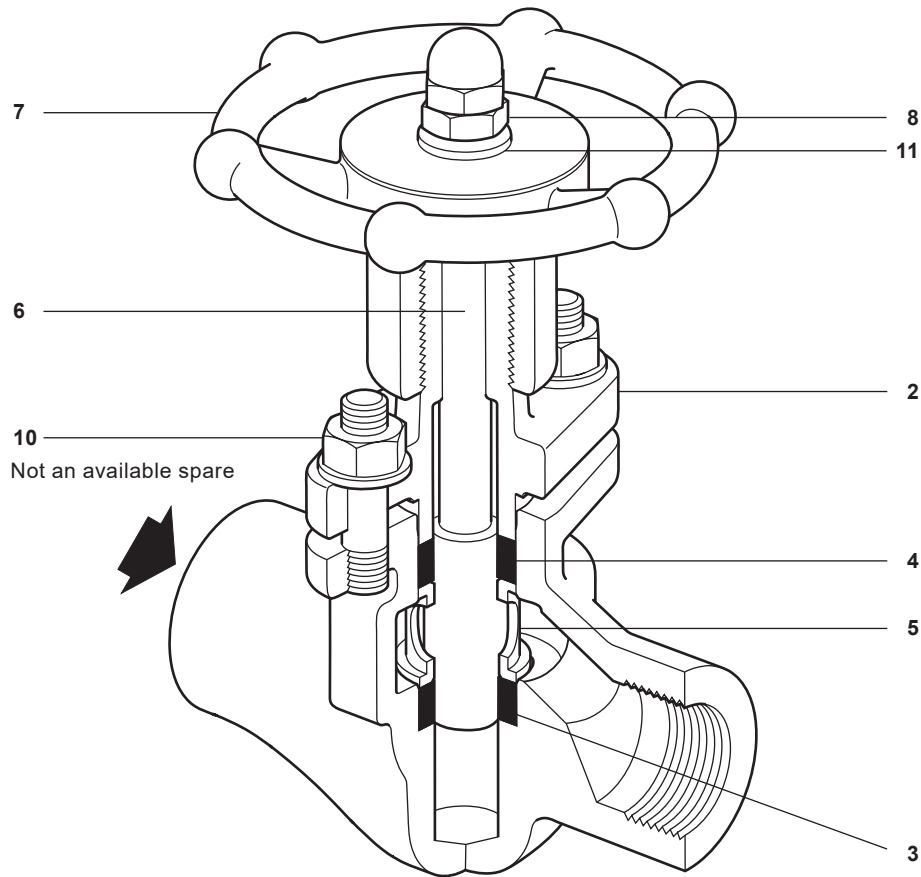
Available spares

Set of sealing rings	3 and 4
Bonnet assembly	2, 3, 4, 5, 6, 7, 8, and 11

How to order spares

Always order spares by using the description given above and state the size and type of valve.

Example: 1 - Bonnet assembly for a Spirax Sarco 1/2" PV4 piston valve.



Recommended tightening torques

Screwed, socket weld and butt weld

Item	Valve size	Bolting size		No. of bolts	Torque	
		Carbon steel body	Stainless steel body		Nm	lbs ft
10	1/2"	5/16"-18 UNC	M8 x 1.25	2	12	8.8
	3/4"	5/16"-18 UNC	M8 x 1.25	2	9	6.6
	1"	5/16"-18 UNC	M8 x 1.25	2	9	6.6
	1 1/4"	3/8"-16 UNC	3/8"-16 UNC	2	30	22.1
	1 1/2"	1/2"-13 UNC	1/2"-13 UNC	2	35	25.8
	2"	5/8"-11 UNC	5/8"-11 UNC	2	70	51.6

Caution: the torque of the studs is calculated to optimize the use of the product. An excessive torque can damage the valve internals (particularly if the product is open). The studs of valve can be retightened to extend the life of it, but only when it is closed and not more than the recommended torque.