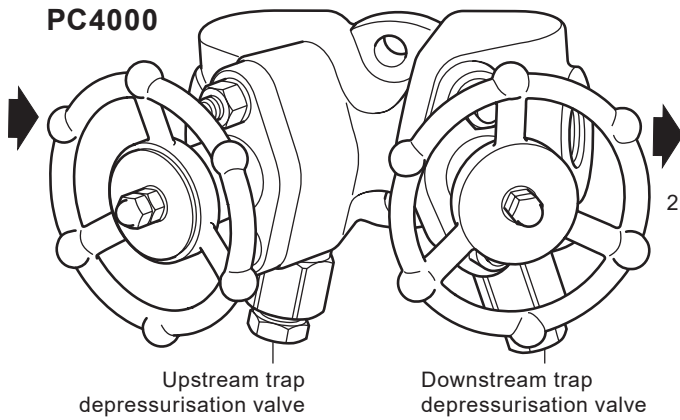
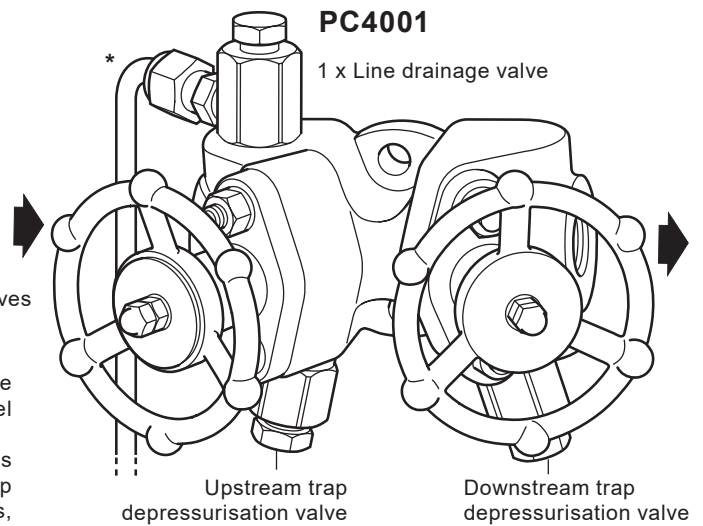




PC4000 and PC4001 Pipeline Connectors



* Please note that the line drain outlet is shown out of position for clarity and that the line drain pipework is to be supplied by the customer.



Description

The PC4000 range of pipeline connectors are a complete 'Trap valve station solution' developed for use with two bolt universal swivel connector steam traps.

As the unit has been designed with two integral piston stop valves, it is possible to isolate both upstream and downstream of the universal trap connection and through the use of the fitted depressurization valves, possible to depressurize, test and drain the pipeline. The trap depressurization port also incorporates a maintainable 40 mesh stainless steel strainer screen to provide trap protection from system dirt and debris, which can be cleared through the use of the line pressure.

Available types	left to right (shown) or right to left	PC4000	2 x Piston isolation valves with 1 x Upstream trap depressurization valve and 1 x Downstream trap depressurization valve	
		PC4001	2 x Piston isolation valves with 1 x Upstream trap depressurization valve and 1 x Downstream trap depressurization valve and 1 x Line drain valve	

For available options to the pipeline connections detailed within this Technical Information sheet please reference TI-F01-37.

Note: Units are also available without vent/drain ports. These are known as the PC40 - See Technical Information sheet TI-P128-03.

Standards

These products fully comply with the requirements of the European Pressure Equipment Directive 97/23/EC.

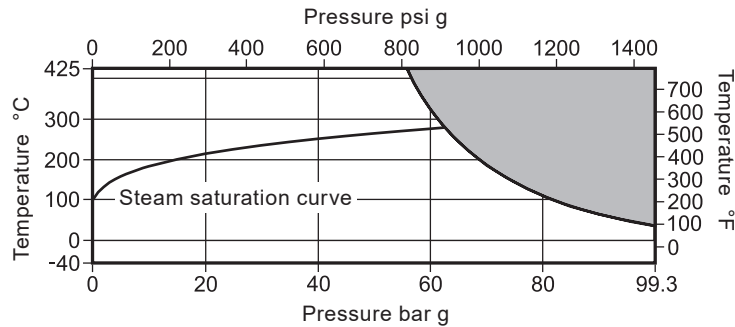
Certification


These products are available with certification to EN 10204 3.1. Note: All certification/inspection requirements must be stated at the time of order placement. For other certification contact Spirax Sarco.

Sizes and pipe connections

½" and ¾" condensate inlet/outlet connections are available with screwed NPT (or optional BSP) and as a socket weld connection to ASME B16.11 class 3000. Drainage and venting connections have an M18 thread as standard. Flanged versions are also available upon request. Please contact Spirax Sarco for further details.

Pressure/temperature limits (ISO 6552)



 The product **must not** be used in this region or beyond the parameter of the PMA or TMA of the relative end connection - See notes below.

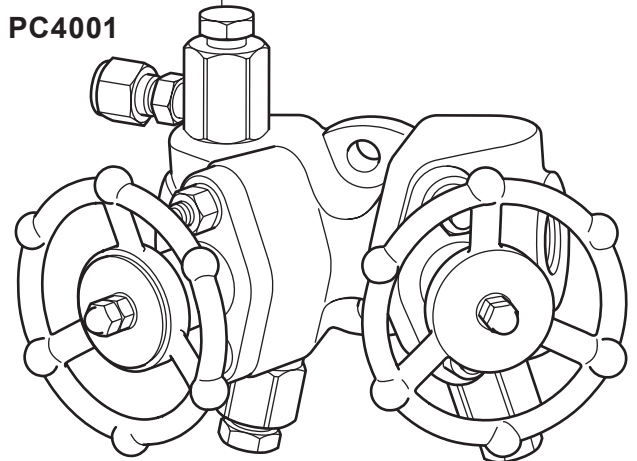
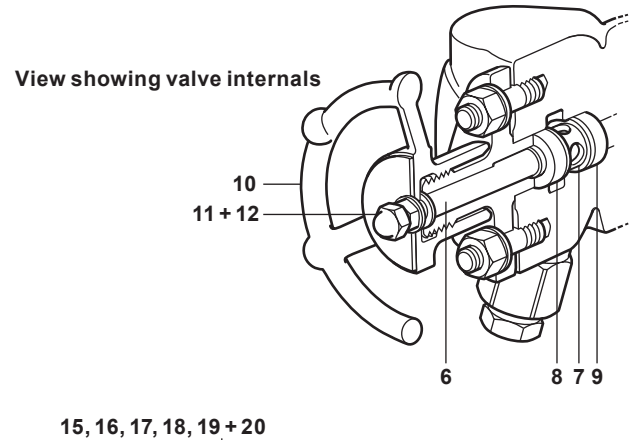
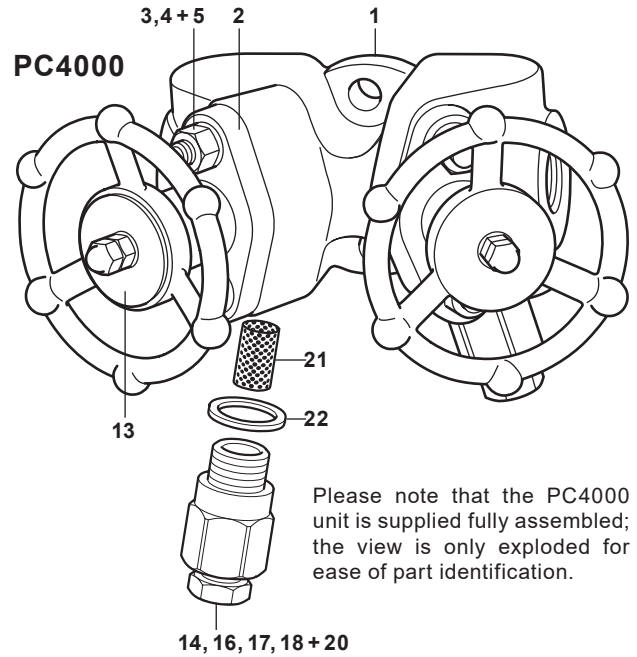
Body design condition	ASME 600	
PMA Maximum allowable pressure	99.3 bar g @ 38 °C	1440 psi g @ 100 °F
TMA Maximum allowable temperature	425 °C @ 56 bar g	797 °F @ 812 psi g
Minimum allowable temperature	-40 °C	-40 °F
PMO Maximum operating pressure for saturated steam service	62 bar g @ 279 °C	899 psi g @ 534 °F
TMO Maximum operating temperature	425 °C @ 56 bar g	797 °F @ 812 psi g
Minimum operating temperature	-40 °C	-40 °F
Designed for a maximum cold hydraulic test pressure of:	150 bar g	2175 psi g

Notes:

1. If flange connections are fitted then these will limit the maximum and minimum design conditions of the pipeline connector.
2. The maximum operating limits of the complete assembly will be dictated by the steam trap of choice. Reference the specific steam trap technical information sheet for its 'Pressure/temperature limits'.

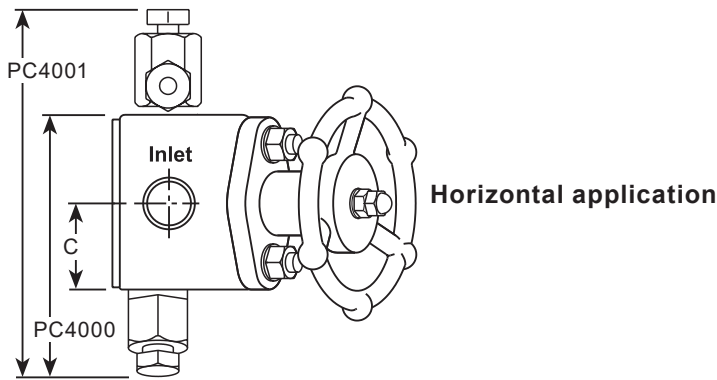
Materials

No.	Part	Material	
1	Pipeline connector body	Austenitic stainless steel	ASTM A182F : 304 / 304L
2	Bonnet	Carbon steel (Zinc plated)	ASTM A105N / LF2
3	Studs	Steel (plated)	ASTM A193 B7
4	Nuts	Steel (plated)	ASTM A194 2H
5	Washers	Stainless steel	
6	Piston	Stainless steel	AISI 410 : 1.4006
7	Lantern bush	Stainless steel	ASTM A276 : AISI 431
8	Upper ring	Graphite and stainless steel	
9	Lower ring	Graphite and stainless steel	
10	Handwheel	Carbon steel (Zinc plated)	EN 10213 : 1.0619N
11	Handwheel nuts	Stainless steel	
12	Washers	Steel	
13	Name-plate	Stainless steel	
14	Depressurization valve	Stainless steel	ASTM A182 : 304 / 304L
15	Line drain valve	Stainless steel	ASTM A182 : 304 / 304L
16	Valve screw	Stainless steel	ASTM A276 : AISI 431
17	Valve cone	Stainless steel	AISI 440 B
18	Retaining ring	Stainless steel	BS 2056 302 S26
19	Compression fitting for the line drain valve only	Carbon steel (Zinc plated)	
20	Valve gasket	Graphite and stainless steel	
21	Strainer screen	Stainless steel	
22	Depressurization valve gasket	Graphite	

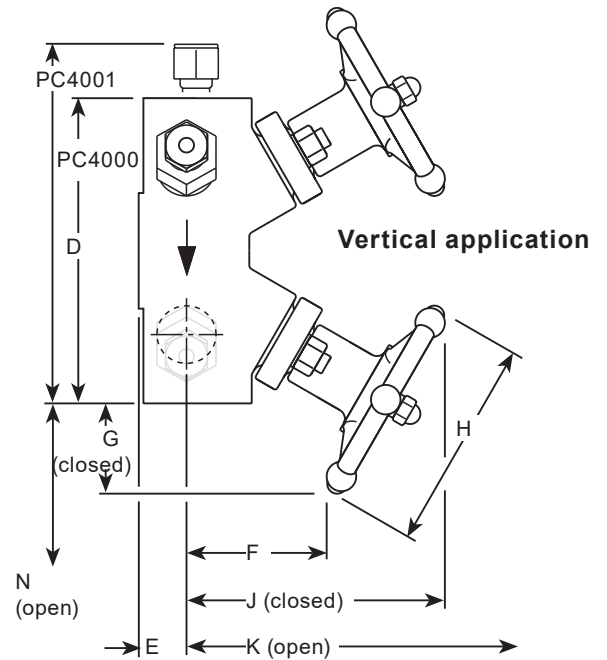


Dimensions/weights (approximate) in inches (mm) and lbs (kg)

Line drain valve = Dimension 'C'
1.5" (+40 mm) Closed or 1.75" (+44 mm) Open



Depressurization valve = Dimension 'C'
1.4" (+34 mm) Closed or 1.5" (+38 mm) Open



C	D	E	F	G	H	J	K	N	Weight
1.4 (36)	4.9 (125)	1 (25)	2 (50)	1.4 (35)	3.5 (90)	3.9 (99)	4.53 (115)	1.97 (50)	7.9 lbs (3.6 kg)

How to order

Example: 1 off ½" Spirax Sarco PC4000 pipeline connector having right to left flow and socket weld end connections to ASME B 16.11 Class 3000.

Safety information, installation and maintenance

For full details see the Installation and Maintenance Instructions (IM-P128-35) supplied with the product.

General information

There are two criteria which must be satisfied to ensure that the swivel connector trap will operate correctly and ensure effective condensate removal:

1. The PC4000 and PC4001 shall be installed with flow in the direction of the arrow. Flow can be horizontal (left to right or right to left), vertical or inclined.
2. The connection face for the swivel connector steam trap must be in the vertical plane unless stated on relevant steam trap Installation and Maintenance Instructions.

After installation it is recommended that the pipeline connector is insulated to minimize radiated heat losses and to protect personnel from burns risk.

Depressurization and line drainage

The overall assembly is supplied fitted with valves which allow depressurization and line drainage (PC4001 only) of the system to enable safe removal and maintenance of the steam trap. Consideration must be given to the position of the discharge which should be directed or piped to a safe place where it will not injure personnel or damage equipment.

Disposal

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

Spare parts

The spare parts available are shown in heavy outline. Parts drawn in broken line are not supplied as spares. For ease of replacement an extractor tool is available for removing the sealing rings.

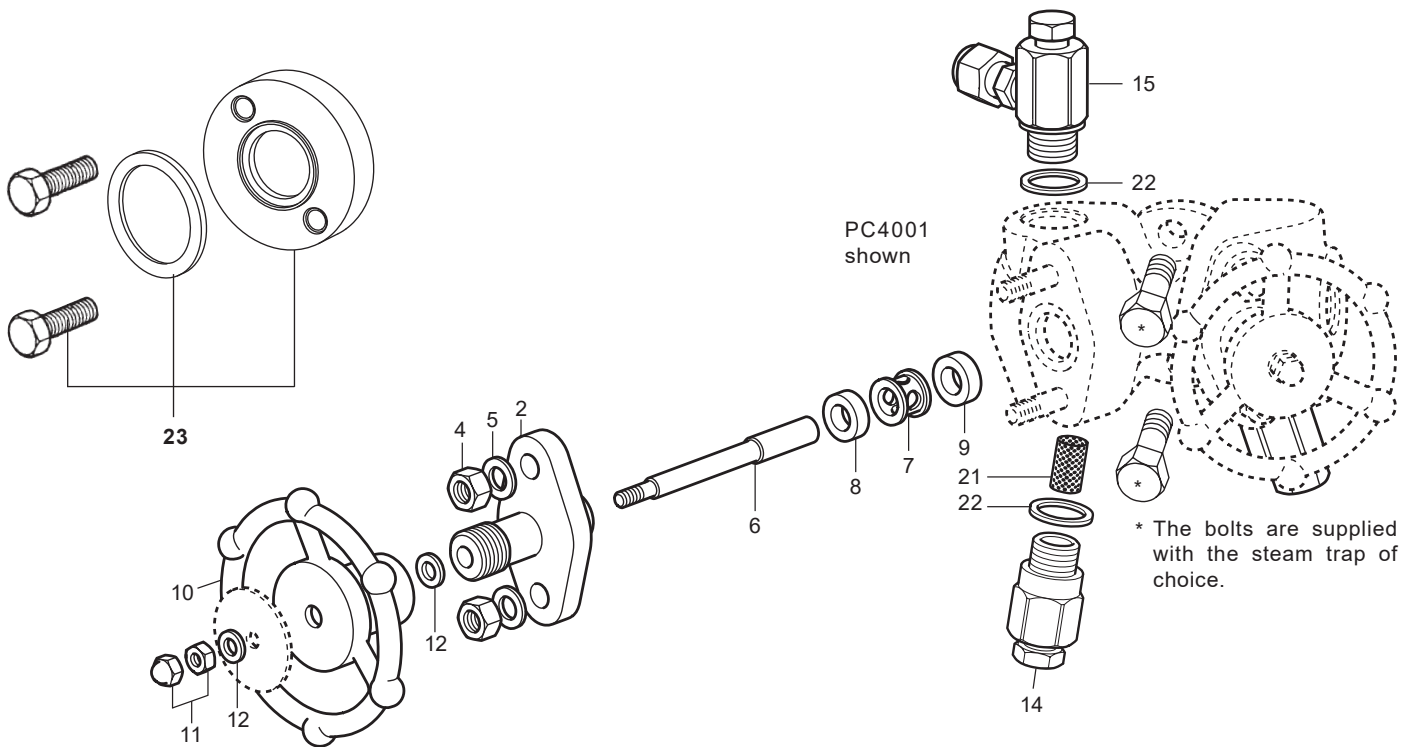
Available spares

Piston valve sealing ring	8 and 9
Piston valve assembly	2, 4, 5, 6, 7, 8, 9, 10, 11 and 12
Extractor tool	Not shown
Blowdown valve and gasket kit	14 and 21
Line drain and gasket kit	15
Blowdown valve, strainer screen and gasket kit	14, 21 and 22
Blowdown valve gasket kit (set of 10)	22
Strainer screen and gasket kit	21 and 22
Hydrostatic blind flange test kit	23



How to order spares

Always order spares by using the description given in the column headed 'Available spares' and state type and size of equipment.

Example: 1 off Sealing ring set for an integral piston valve on a PC4000 pipeline connector having DN15 socket weld connections.



Recommended tightening torques

Item	 or mm		lb-ft (N m)
4	14	5/16" x 18 UNC	7.4 (10.0)
11	10	M6	0.074 (0.1)
14 and 15	24	M18	55 - 58 (74 - 78)