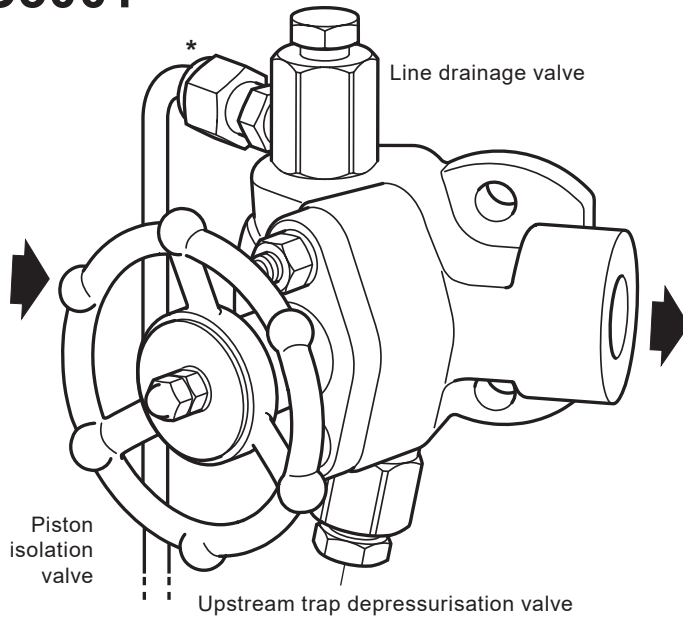




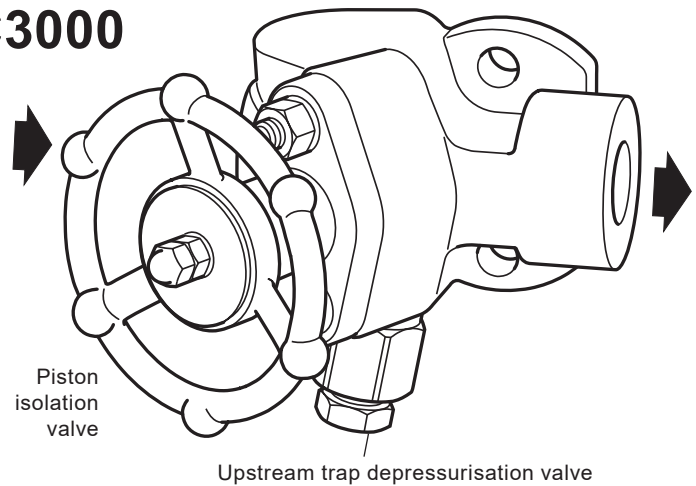
PC3001 and PC3000 Pipeline Connectors

PC3001



* **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.

PC3000



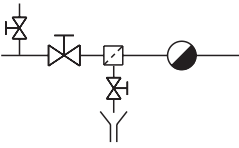


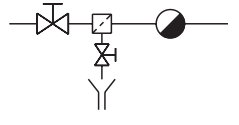
Description

The PC300 and PC3000 range of pipeline connectors are designed for use with two bolt universal swivel connector steam traps. Incorporating one integral piston stop valve it is possible to isolate upstream of the steam trap.

PC3001 and PC3000 models only

The trap depressurisation port also incorporates a maintainable 40 mesh stainless steel strainer screen to provide trap protection from system dirt and debris. The PC3001 is also fitted with a line drainage valve upstream of the isolation valve.

Available types

| Model | Valve connections | P and ID diagram | Flow direction |
|---------------|---|--|--|
| PC3001 | 1 x Piston isolation valves 1 x Upstream trap vent valve 1 x Line drain valve |  | Left to right  or  Right to left |
| PC3000 | 1 x Piston isolation valves 1 x Upstream trap vent valve |  | |

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

Standards - These products fully comply with the requirements of the Indian Boiler Regulations, 1950.

Note: All certification / inspection requirements must be stated at the time of order placement. For other certification contact Spirax Sarco.

Sizes and pipe connections

DN15 and DN20 condensate inlet / outlet connections are available with screwed BSP or NPT 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.

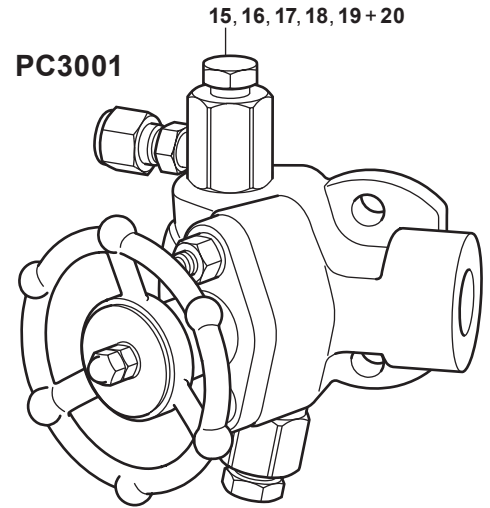
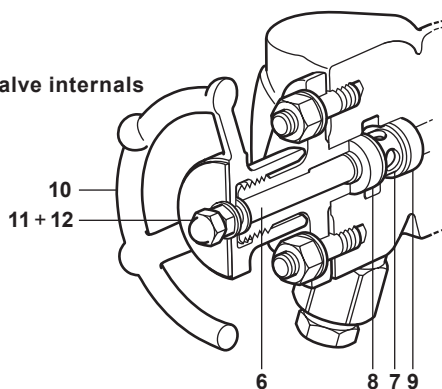
How to order

Example: 1 off ½" Spirax Sarco PC3001 pipeline connector having right to left flow and socket weld end connections to ASME B 16.11 Class 3000.

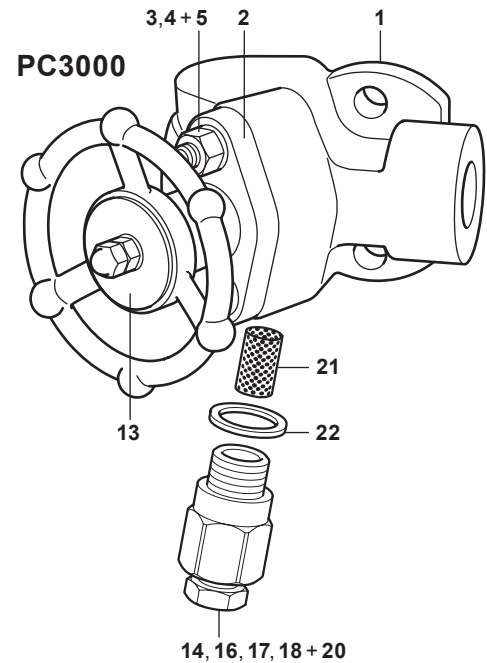
Materials

| 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 | Depressurisation 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 | Depressurisation valve gasket | Graphite | |

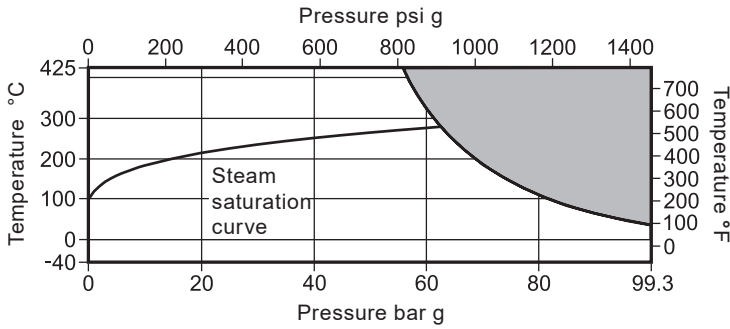
View showing valve internals



Please note The PC3001 and PC3000 unit is supplied fully assembled; the view is only exploded for ease of part identification.



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 | | -46 °C | -51 °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 | | -46 °C | -51 °F |
| Designed for a maximum cold hydraulic test pressure of: | | 149 bar g | 2161.06 psi g |

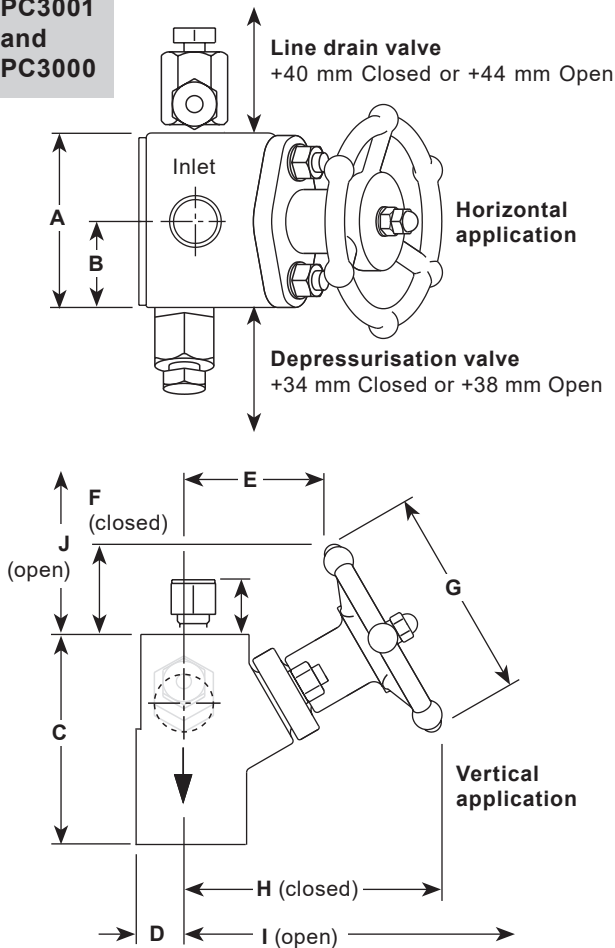
Notes:

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'.

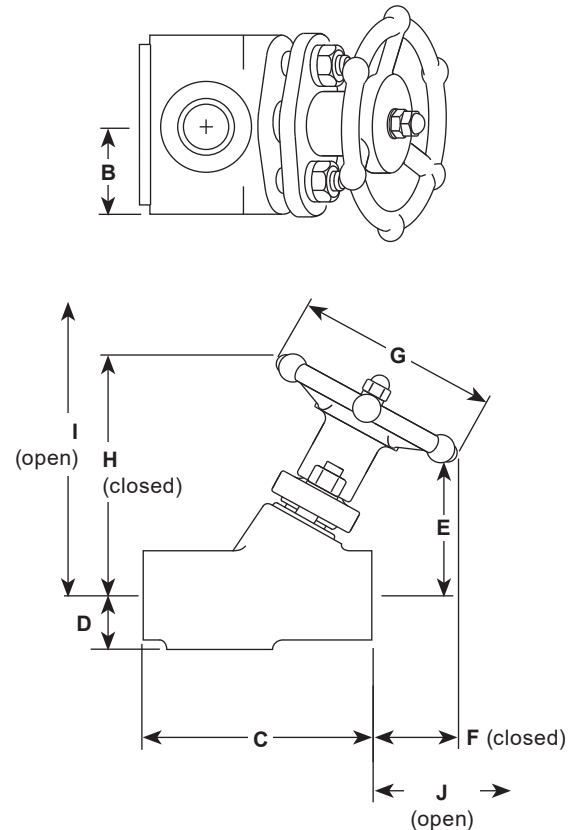
Dimensions / weight (approximate)

| Units | | A | B | C | D | E | F | G | H | I | J | Weight |
|----------|--------|------|------|------|----|----|------|------|------|-------|-------|---------|
| Metric | mm | 72 | 36 | 90 | 25 | 50 | 35 | 90 | 99 | 115 | 50 | 3.6 kgs |
| Imperial | inches | 2.8" | 1.4" | 3.5" | 1" | 2" | 1.4" | 3.5" | 3.9" | 4.53" | 1.97" | 7.9 lbs |

PC3001 and PC3000



PC30



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 PC3001, PC3000 and PC30 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 minimise radiated heat losses and to protect personnel from burns risk: Please note that some steam trap types should not be insulated.

Depressurisation and line drainage

The PC30001 and PC3000 assemblies are supplied fitted with valve(s) which allow depressurisation of the system to enable safe removal and maintenance of the steam trap. The PC3001 is also supplied with line drainage fitted, however 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.

PC30 only - Following isolation slightly loosen the trap bolts to ensure the full release of hot steam and condensate prior to commencing work. Safety equipment should be used and care taken to avoid potential injury.

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 grey line are not supplied as spares. For ease of replacement an extractor tool is available for removing the sealing rings.

Available spares

| | |
|--|------------------------------------|
| Sealing ring set | 8 and 9 |
| Piston valve assembly | 2, 4, 5, 6, 7, 8, 9, 10, 11 and 12 |
| Piston valve sub-assembly | 6, 7, 8 and 9 |
| Extractor tool | Not shown |
| PC depressurisation valve and gasket | 14 and 22 |
| PC line drain valve and gasket | 15 and 22 |
| Strainer screen and gasket (pack of 3) | 21 and 22 |
| Valve gasket set (pack of 10) | 22 |

Recommended tightening torques

| Item |  or  | N m |
|-----------|--|---------|
| 4 | 14 5/16" x 18 UNC | 12.0 |
| 11 | 10 M6 | 12.0 |
| 14 and 15 | 24 M18 | 74 - 78 |

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 PC3001 pipeline connector having DN15 socket weld connections.

