



Cert. No. LRQ 0963008

ISO 9001

PC4_ Pipeline Connectors

Description

The PC4_ range of pipeline connectors are designed for use with swivel connector steam traps. The PC4_ is a pipeline connector with two integral stop valves which isolate upstream and downstream of the steam trap. The stop valves are piston type. The PC4_ is available with optional connections for the draining of upstream pipework and trap venting upstream and trap testing downstream of the steam trap. These connections use DV1 and/or DV2 depressurisation valves which can be supplied separately. See TI-P600-01 for details.

Available types

Type	Description	Flow direction
PC40	Pipeline connector with 2 stop valves	Universal (both left to right and right to left)
PC43	Pipeline connector with 2 stop valves and upstream line drain and trap vent for DV1 or DV2 and downstream trap test connections for DV1 or DV2.	Left to right
PC44	Pipeline connector with 2 stop valves and upstream line drain and trap vent for DV1 or DV2 and downstream trap test connections for DV1 or DV2.	Right to left
PC45	Pipeline connector with 2 stop valves and upstream line drain connection either side of the body for DV1 or DV2. It is necessary to plug one connection. This must always be the top connection.	Universal (both left to right and right to left)
PC46	Pipeline connector with 2 stop valves and upstream line drain for DV1 or DV2 downstream trap test connections for DV1 or DV2.	Left to right
PC47	Pipeline connector with 2 stop valves and upstream line drain for DV1 or DV2 downstream trap test connections for DV1 or DV2.	Right to left

For pipeline installation diagrams see TI-F01-37.

Sizes and pipe connections

For condensate inlet/outlet:
DN15, DN20 screwed BSP or NPT with optional DN15 connection, screwed BSP or NPT (corresponding with inlet/outlet connection) for line drain/trap vent/trap test.
DN15, DN20 socket weld ends to ANSI B 16.11 Class 3000 with optional DN15 screwed NPT or socket weld connection for line drain/trap vent/trap test.

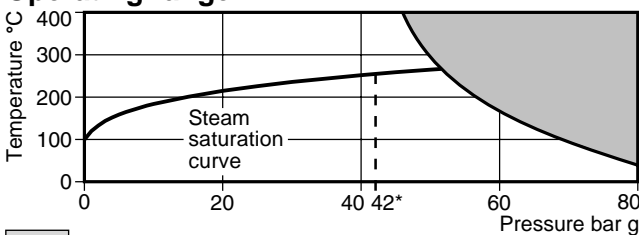
Optional equipment

Depressurisation valve type DV (see TI-P600-01).

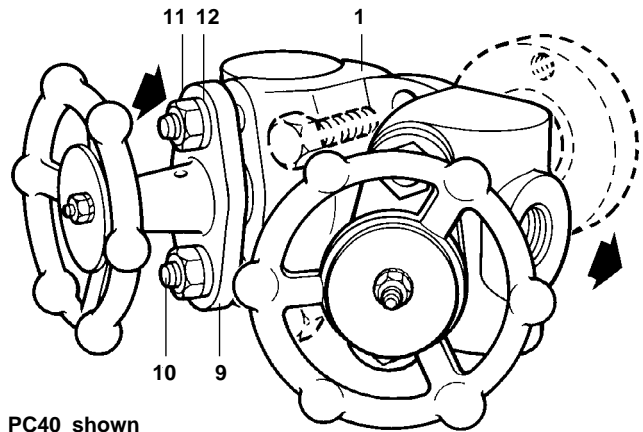
Limiting conditions

Body design conditions ANSI Class 600 (ISO PN100)
Designed for a maximum cold hydraulic test pressure of 150 bar g

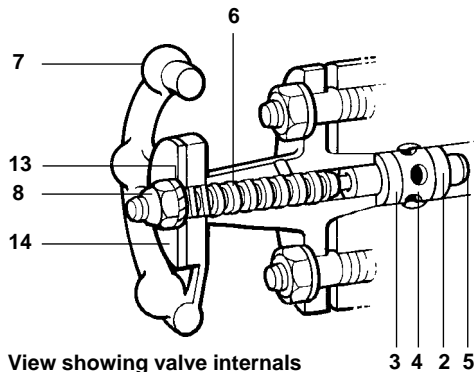
Operating range



* PMO Maximum operating pressure recommended for saturated steam.



PC40 shown



View showing valve internals

Materials

No.	Part	Material
1	Body	Austenitic stainless steel ASTM A182 F304L
2	Lower ring	Graphite and stainless steel
3	Upper ring	Graphite and stainless steel
4	Lantern bush	Steel UNI 4838 CF95 SmN Pb36
5	Piston	Stainless steel ASTM A479 F316
6	Spindle	Steel ASTM A479 F410
7	Handwheel	Carbon steel ASTM A105N
8	Handwheel nut	Stainless steel and nylon insert
9	Bonnet	Carbon steel ASTM A105N
10	Studs	Stainless steel BS 6105/ISO3506 A4 Class 80
11	Nuts	Stainless steel BS 6105/ISO3506 A4 Class 80
12	Washers	Steel
13	Washer	Steel
14	Name-plate	Stainless steel

Certification

The product is available with certification to EN 10204 3.1.B for body and bonnet as standard.

K_v values

Size	DN15	DN20
K _v	1.8	1.8
For conversion:	C _v (UK) = K _v x 0.963	C _v (US) = K _v x 1.156

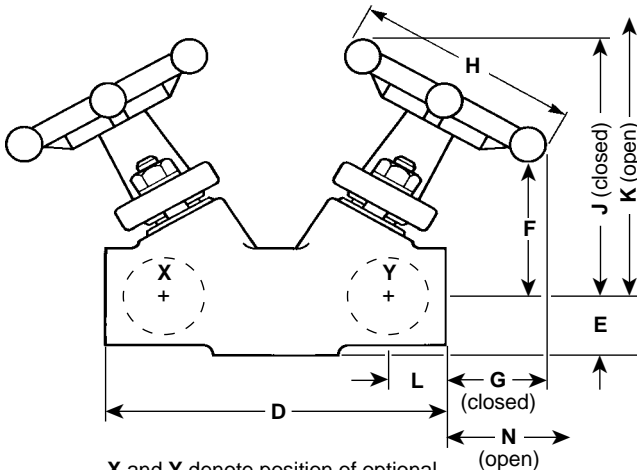
Local regulations may restrict the use of this product to below the conditions quoted.

In the interests of development and improvement of the product, we reserve the right to change the specification.

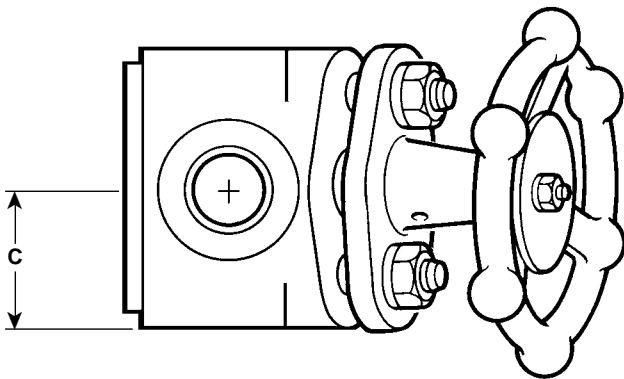
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Dimensions / weight (approximate) in mm and kg

C	D	E	F	G	H	J	K	L	N	Weight
36	125	25	50	35	90	99	115	22	50	3



X and Y denote position of optional DV1 or DV2 depressurisation valve connections.



Safety information

Pressure

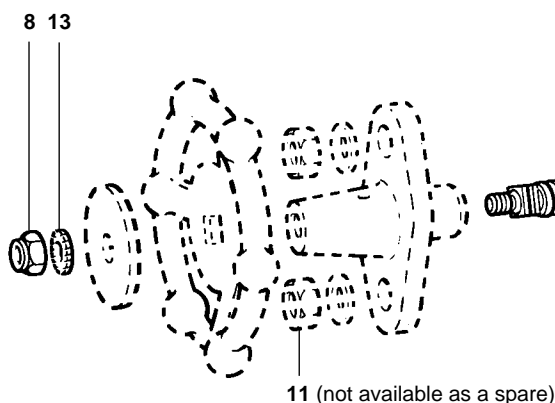
Before attempting any maintenance, consider what is or may have been in the pipeline. Ensure that any pressure is isolated and safely vented to atmospheric pressure before attempting to maintain the steam trap. This is easily achieved by fitting Spirax Sarco depressurisation valves type DV (see separate literature for details). Do not assume that the system is depressurised even when a pressure gauge indicates zero.

Temperature

Allow time for temperature to normalise after isolation to avoid the danger of burns and consider whether protective clothing (including safety glasses) is required.

Isolation

Consider whether closing isolating valves will put any other part of the system or personnel at risk. Dangers might include; isolation of vents, protective devices or alarms. Ensure isolation valves are turned off in a gradual way to avoid system shocks.



Installation

General

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 PC4_ 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.

Ensure that there is sufficient access to the handwheel to allow proper operation.

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 - some steam trap types should not be insulated.

Optional depressurisation valve (DV1/DV2 See TI-P600-01)

If fitting an optional depressurisation valve for line drain or trap vent or trap testing, the consideration must be given to the position of the discharge. The discharge must be directed or piped to a safe place where it will not injure personnel nor damage plant.

The DV1 provides straight through discharge, generally used as a line drain or trap test valve where discharge is directed to grade.

The DV2 provides a side connection discharge, generally used as a trap vent or to ensure discharge is piped to grade.

Maintenance

For detailed Installation and Maintenance Instructions see IMI-P128-06 which is supplied with the product.

Disposal

This 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 PC40 pipeline connector in forged austenitic stainless steel body with integral piston valve, DN15 socket weld to ANSI B 16.11 Class 3000.

Note: Where DV1 or DV2 valves are to be fitted these must be ordered separately.

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



Sealing ring set	2, 3
Valve internals set	2, 3, 4, 5, 6, 8, 13
Extractor tool	Not shown

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 the integral piston valve on a PC4_ pipeline connector having DN15 socket weld connections.

Recommended tightening torques

Item		or mm		N m
11	14		⁵ / ₁₆ x 18 UNC	10.0
8	10		M6	0.1