

FMPC60 Pipeline Connector

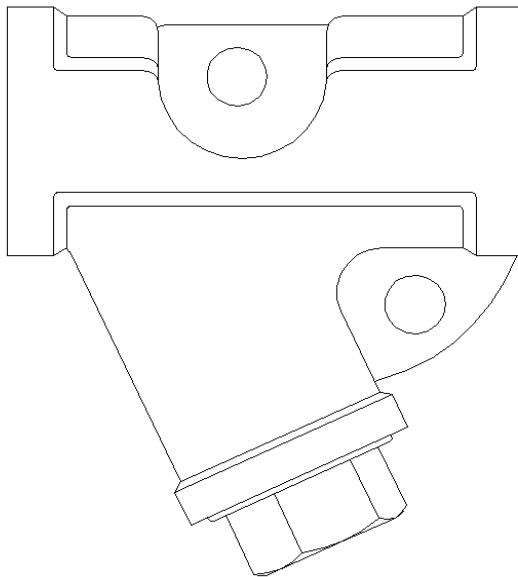


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PLEASE NOTE - Throughout this manual this cautionary symbol is used to describe a potential damage or injury that might occur if the safety considerations are overlooked. This symbol denotes CAUTION, WARNING or DANGER.



1. General Safety Instructions

Safe operation of the unit can only be assured if it is properly installed, commissioned and maintained by a qualified person in accordance with the operating instructions. General installation and safety instructions for pipeline and plant construction, as well as the proper use of tools and safety equipment must also be complied with.

Isolation

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

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 product. 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.

Product Disposal

It is necessary to dispose this product only in accordance with local regulations at the authorized, qualified collecting point specified for equipment's and its parts—Please refer the part details mentioned in the material table of this manual. Please follow all waste disposal guidelines (Management & Handling) as published by local governing authorities in India & abroad

2. Description

2.1 Description

The FMPC60 pipeline connector is designed for use with Universal Connector type steam traps. The Connector can be used on the pipeline both ways horizontally or vertically. Also Universal Connector provides 360 degree freedom of rotation that ensures that the trap is always exactly perpendicular to horizontal plane irrespective of errors in pipeline installation. Integral strainer screen ensures protection of the trap from dirt and other detrimental matter.

As an option, FMPC60 can also be supplied with blowdown valve.

Fig. 1 FM PC60

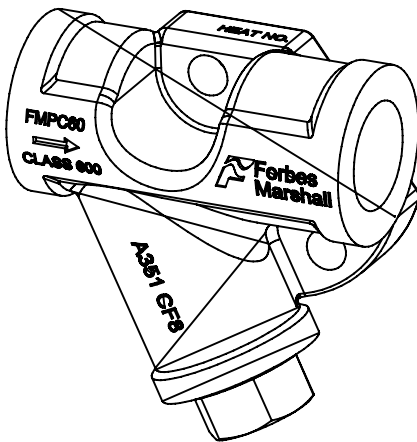
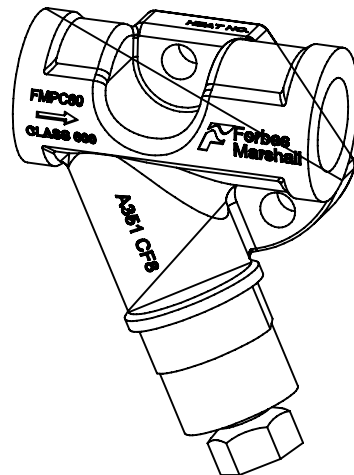


Fig. 2 FMPC60 with blowdown valve

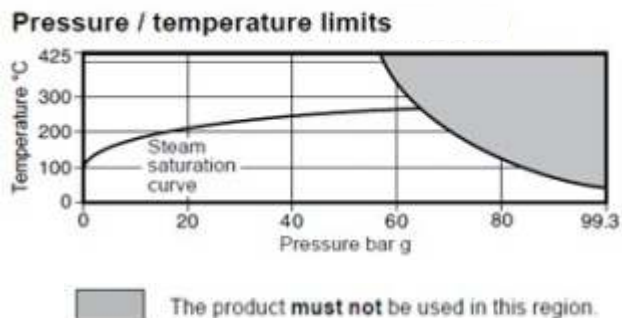


2.2 Limiting conditions

Body design conditions- CLASS 600	
PMA Maximum Allowable Pressure	99.3 bar g @ 38°C
TMA Maximum Allowable Temperature	425°C @ 56 bar g
Minimum Allowable Temperature	0°C

PMO Maximum operating pressure for saturated steam service	63 bar g
TMO Maximum Operating Temperature	425°C @ 56 bar g
Designed for a Maximum Cold Hydraulic Test Pressure of	126 bar g (IBR)

2.3 Operating range



3. Installation :

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

- The FMPC60 should be installed with flow in accordance with the direction of arrow.
- The connection face for the universal connector steam trap must always be in the vertical plane.

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

The Pipeline connector and trap are joined by a high integrity spirally wound gasketed joint. It is important that no damage is caused, e.g. by weld, weld splatter, knocks, etc. to the trap gasket face. Hence care must be taken when installing the Pipeline connector into the pipework. It is recommended that the trap is installed immediately the Pipeline connector is in the pipework. Alternatively, the trap can be joined to the Pipeline connector prior to installation.

4. Maintenance :

Note: Before actioning any maintenance programme observe the 'Safety instructions' in Section 1.

4.1 Introduction

All work must be carried out by a suitably competent person. Before starting work ensure that suitable tools are available. Use only Forbes Marshall replacement parts.

4.2 Maintenance

Maintenance can be completed with the connector in the pipeline, once the safety procedures have been observed. It is recommended that new gaskets and spares are used whenever maintenance is undertaken. Ensure that the correct tools and necessary protective equipment are used at all times. When maintenance is complete open isolation valves slowly and check for leaks.

How to replace the strainer screen

Before starting make sure the pipeline connector is isolated from mains pressure (both steam and condensate) and any residual pressure is vented to atmosphere. Allow to cool before commencing work.

Remove the strainer cap (or blowdown valve) and separate it from the strainer screen. Once the screen has been cleared or replaced, place it in the recess of the cap with the cap gasket in place and insert into the body. Loosely tighten to ensure the screen and gasket are placed correctly.

Tighten to the recommended tightening torque. Always use new gaskets

How to blowdown the strainer screen

Periodic blowdown will remove most debris within the strainer screen. Larger debris may require the whole screen to be removed. Loosen the blowdown valve screw slowly until condensate is discharged to remove the debris.

5. Available Spares

The spare parts available are detailed below. No other parts are supplied as spares.

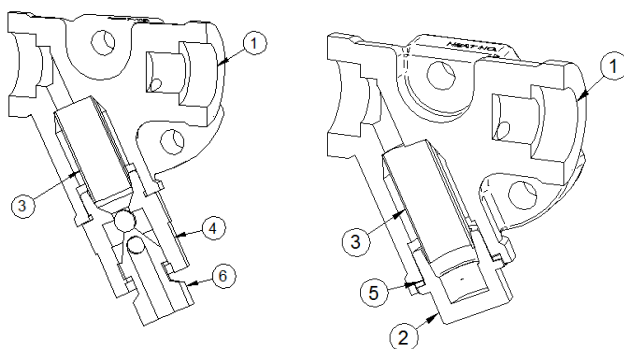
Available Spares

Strainer Screen	3
Strainer Gasket	5
Blowdown Valve Assembly	4,6

How to order spares

Always order spares by using the description given under 'Available Spares'

Example: 1 - Strainer screen and gasket for ½ " FMPC60 Pipeline Connector.



Recommended tightening torques

Item	Component	Torque Range
2	Strainer Cap	180-200 Nm
4	Blow down valve body	170-190 Nm
6	Blow down valve screw	68 Nm



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