



General Suppliers

Cast Iron Y – Strainer PN16

MV70 - 211

Installation & Maintenance Instructions

CE MARKING AND THE PRESSURE EQUIPMENT DIRECTIVE 97/23/EC

This has been implemented in United Kingdom law by the Pressure Equipment Regulations 1999 (SI 1999/2001).

The regulations apply to all valves with a maximum allowable pressure greater than 0.5 bar.

Valves with a maximum allowable pressure not exceeding 0.5 bar are outside the scope of the Directive.

Valves are categorized in accordance with the maximum working pressure, size and ascending level of hazard, which is dependent on the fluid being transported.

Fluids are classified as Group 1, dangerous fluids or Group 2, all other fluids including steam. Categories are SEP (sound engineering practice) and for ascending levels of hazard, I, II, III or IV. All valves designated as SEP do not bear the CE mark nor require a Declaration of Conformity.

Categories I, II, III or IV carry the CE mark and require a Declaration of Conformity

(Note- all valves up to and including 25mm (1”) having a maximum allowable pressure greater than 0.5 bar are designated SEP regardless of fluid group).

THE ATEX Directive 94/9/EC

These Y pattern strainers are excluded from the ATEX Directive since they have no source of ignition, should not be installed in potentially explosive atmospheres and should only transport Group 2 non-hazardous liquids.

PRODUCT LIFE CYCLE

The life of the valve is dependent on its application, frequency of use and freedom from misuse.

The properties of the fluid being transported such as pressure and temperature must be taken into account to avoid premature failure.

Other factors to be considered are the electrolytic interaction between dissimilar metal used in the system, dezincification and stress corrosion cracking occurring on chilled water service.

Before commissioning a system, it should be flushed to eliminate debris and chemically cleaned as appropriate to eliminate contamination, all of which will prolong the life of the strainer.



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LIMITS OF USE

These products are categorized as SEP for Group 2 Liquid, but are not necessarily suitable for all fluids in this group.

These valves shall not use on Group 2 Gases and Group 1 Liquids.

Operating pressures and temperatures

Maximum non shock pressure and temperature range:

16 bar from -10°C to 120°C

11.8 bar at 230°C

Water hammer and other shock conditions should be avoided. Not suitable for fatigue loading, creep conditions, fire testing, fire hazard environment, corrosive service or transporting abrasive solids.

Warning: The maximum surface temperatures are given above. Care should be taken when operating the valve at these temperatures, to avoid severe burns to the skin.

PRESSURE / TEMPERATURE RATING

These strainers must be installed in a piping system where the normal pressure and temperature do not exceed the above ratings.

If system testing will subject the strainer to pressures in excess of the working pressure rating, this should be within the test pressure for the body.

If the limits of use specified in these instructions are exceeded or if the valve is used on applications for which it was not designed, a potential hazard could result.

LAYOUT AND SITING

It should be considered at the design stage where strainer will be located to give access for routine inspection and cleaning the strainer element.

Isolation valves should be fitted immediately upstream and downstream to allow the strainer to be isolated, drained and the strainer element removed for cleaning.



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INSTALLATION

Prior to installation, a check of the identification plate and body marking must be made to ensure that the correct valve is being installed.

Strainers are precision manufactured items and as such, should not be subjected to misuse such as careless handling or allowing dirt to enter through the end ports.

Strainers and adjoining pipe work must be provided with adequate support to avoid inducing bending stresses into the strainer body, which will impair its performance.

Immediately prior to installation, the pipe work to which the strainer is to be fastened should be checked for cleanliness and freedom from debris. Strainer end protectors should be removed immediately prior to installation.

If strainers are installed in horizontal pipe work the part of the body housing the strainer element must hang below the pipe.

The direction arrow cast on the body must be coincident with the direction of flow in the pipeline.

For vertical pipe work the flow direction must be downwards.

For the purpose of cleaning the strainer element and removing debris the strainer must be installed with sufficient room so that the strainer element can be withdrawn from beneath in a downwards direction.

Strainers should be lifted using the correct slings.

The surface finish and condition of the gasket contact face on both the strainer and pipe work should be checked. Incorrect surface finish or damage can cause leakage and no attempt to assemble should be made until it has been rectified.

Gaskets should be suitable for the operating conditions including the maximum temperature and pressure.

Care should be taken to align the flanges being assembled.

During assembly bolts should initially be hand tightened sequentially to make the initial contact ensuring gaskets are concentric with the strainer ports and that the flanges are parallel.

Finally tighten the bolts gradually and uniformly in an opposing sequence to prevent bending one flange relative to the other, particularly on flanges with raised faces.



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Parallel alignment of flanges is especially important when assembling between exist flanges.

Flanged joints depend on compressive deformation of the gasket material to achieve a seal.

MAINTENANCE

Maplef 'Y' pattern strainers will provide a long service life provided the strainer element is cleaned regularly.

The strainer should be at zero pressure and ambient temperature before any maintenance is carried out and correctly fitting tools should be used.

A full risk assessment and methodology statement must be compiled prior to any maintenance.

The element will require cleaning after the flushing process and periodically thereafter.

Strainer Element Cleaning

If fitted close the isolating valves, unscrew the cover bolts, and remove the cover by inserting a screw driver or wedge between the cover and body then tap with a mallet to release adhesion.

Withdraw the strainer element and clean using a brush and or water jet. Eye protection or goggles should be worn during the cleaning process.

Once the strainer element and gasket face on the body and cover have been cleaned the strainer can be re-assembled.

The strainer element and sealing gasket should be renewed if damaged. Fit genuine Maplef replacement parts.

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