MAINTENANCE

The strainer should be at zero pressure and ambient temperature prior to any maintenance.

Maintenance Engineers & Operators are reminded to use correct fitting tools and equipment. A full risk assessment and methodology statement must be compiled prior to any maintenance.

The risk assessment must take into account the possibility of the limits of use being exceeded whereby a potential hazard could result.

A maintenance programme should therefore include checks on the development of unforeseen conditions, which could lead to failure.

In systems where corrosion could be a potential hazard, wall thickness checks on the body and cover should be made. This requires either the removal of the strainer from the pipeline or removal of the cover with the system at zero pressure. If the wall thickness has reduced by 25%, the strainer must be replaced.

Strainer Element Cleaning

1. Before commencing work, de-pressurize the system and drain.
2. The strainer has a screwed cap which is removed in an anti-clockwise direction to enable the withdrawal of the strainer element.
3. Clean the strainer element using a brush and or water jet. It is recommended that goggles should be worn during the cleaning process.
4. Once the strainer element has been cleaned the strainer can be re-assembled. The sealing gasket should be renewed if damage has occurred.

Optional Drain Plug

If fitted with a drain plug this may be removed to allow debris to be flushed from the strainer but will require isolation of the strainer from the system.

Prior to commissioning a drain cock may be fitted to replace the plug which will allow strainer flushing whilst under line pressure.

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FM311 ISO 9001

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H_FIG_807_907_817_Y_0212
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Fig 807, 907, 817 “Y” and 817.PF type Bronze Strainers

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


Fig. 817

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

The regulations apply to all piping with a maximum allowable pressure greater than 0.5 bar. Piping with a maximum allowable pressure not exceeding 0.5 bar is outside the scope of the Directive. Piping is categorised 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 piping 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 piping up to and including 25mm (1”) having a maximum allowable pressure greater than 0.5 bar are designated SEP regardless of fluid group.)

PRODUCT LIFE CYCLE

The life of the strainer is dependent on its application, frequency of use and freedom from misuse. Compatibility with the system into which it is installed must be considered. The properties of the fluid being transported such as pressure, temperature and the nature of the fluid must be taken into account to minimise or avoid premature failure or non-operability. A well-designed system will take into consideration all the factors considered in the strainer design, but additionally electrolytic interaction between dissimilar metals in the strainer and the system must be examined. 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.

LIMITS OF USE

The strainers to which these installation, operation and maintenance instructions apply have been categorised in accordance with the Pressure Equipment Directive.

The fluid to be transported is limited to Group 2 liquids i.e. non-hazardous and on no account must these valves be used on any Group 2 gases, Group 1 liquids or Group 1 gases.

FLUID FIG NO.	GROUP 2 LIQUIDS		
	PN	DN	CATEGORY
807	32	½" - 2"	SEP
817	16	½" - 2"	SEP
817.PF	16	15-54mm	SEP

The Fig 807C and 907C with compression ends, for use with copper pipe, and the Fig 907 and 907C, fitted with Fig 631 pressure test points, are also Group 2 Liquid and are categorised as SEP and do not require the CE mark.
All strainers referred to in this document are unsuitable for steam service.

OPERATING PRESSURES AND TEMPERATURES

SIZE	SIZE	PN	NON-SHOCK PRESSURE AT TEMPERATURE RANGE	NON-SHOCK PRESSURE AT MAX. TEMPERATURE
½" - 2"	807	32	32 bar from - 10˚C to 100˚C	4 bar at 198˚C
½" - 2"	907	32	32 bar from - 10˚C to 100˚C	28 bar at 120˚C
15mm - 54mm	807C	16	16 bar from - 10˚C to 30˚C	5 bar at 120˚C
15mm - 54mm	907C	16	16 bar from - 10˚C to 30˚C	5 bar at 120˚C
½" - 2"	817	16	16 bar from - 10˚C to 100˚C	7 bar at 170˚C
15mm - 54mm	817.PF	16	16 bar from - 10˚C to 100˚C	13.5 bar at 120˚C

Not suitable for fatigue loading, creep conditions, fire testing, fire hazard environment, corrosive or erosive service.

Strainers must be installed in a piping system whose normal pressure and temperature do not exceed these ratings.

The maximum allowable pressure in strainers as specified in the standards is for non-shock conditions. Water hammer and impact for example, should be avoided.

If the limits of use specified in these instructions are exceeded or if the strainer 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 strainers will be located to give access for operation, cleaning, maintenance and repair.

Strainers must be provided with adequate support. Adjoining pipework must be supported to avoid the imposition of pipeline strains on the strainer.

INSTALLATION

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

Strainers are precision manufactured items and as such, should not be subjected to misuse such as careless handling, allowing dirt to enter the strainer through the end ports, lack of cleaning both strainer and system before operation and excessive force during installation.

All special packaging material must be removed.

Fig 807, Fig 907 and 817 Threaded End Strainers

Confirm that the pipe threading length is correct to avoid excessive penetration of the pipe into the strainer, which would cause damage.

Thread sealing compound appropriate to the application must be used but excessive use should be avoided, since this increases thread interference and may cause overstressing of the body ends.

Ensure the threads are properly engaged and proceed to tighten the strainer onto the pipe. The wrench must only be located on the strainer end into which the pipe is being threaded to avoid distortion of the strainer body.

Immediately prior to installation, the pipework to which the strainer is to be fastened should be checked for cleanliness and freedom from debris.

Fig 807C and Fig 907C Compression End Strainers

These valves are fitted with compression adapters to BS EN 1254-2, which are suitable for installation into copper pipework to BS EN 1057: R250 (half hard) and are provided with olives and compression nuts.

Compression nuts must be tightened hand tight and then further tightened as per the following recommendation:

	15mm	22mm	28mm	35mm	42mm	54mm
FURTHER TIGHTENING	1 TURN	1 TURN	1 TURN	¾ TURN	¾ TURN	¾ TURN

Fig 817.PF Press-Fit Strainers

Please refer to the Geberit website www.geberit.co.uk where installation instructions for Press-Fit can be found.

Note: The strainer must be installed with the direction arrow on the body coincident with the direction of flow in the pipeline.

For vertical pipework the flow direction shall be downwards only.

If strainers are installed in horizontal pipework the strainer body, housing the element, must hang below the pipe.

For the purpose of maintenance the strainer shall be installed with sufficient room so that the strainer element can be withdrawn from beneath in a downwards direction. Also sufficient room is needed for the Fig 907 pressure tapped strainers to enable the connection of test probes.

The strainer interior should be inspected through the end ports to determine whether it is clean and free from foreign matter.

OPERATING

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

Fig 907 and Fig 907C Strainers

Test points can be supplied with strainers to assist with determining maintenance requirements. Each test point is fitted with a captive cap retained by a coloured strap:

Upstream (HP) - Red
Downstream (LP) - Blue

Note: For safety reasons all probe insertions/connections must be carried out with the system cold.

Measurements are taken by directly inserting the test probe into the test point, a silicone oil / grease should be lightly smeared onto the test probe prior to insertion.