

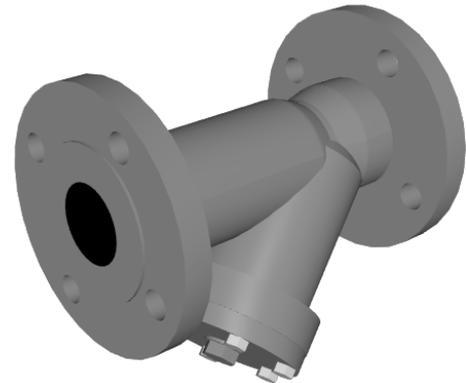


STRAINERS

How to use your RWV strainer. (Installation, Operation and Maintenance Instructions).

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Red-White Valve Corp. assumes no responsibility for any damages or injuries resulting from non-compliance with installation instructions or standard good practice when installing, operating or maintaining the valves, even if not explicitly mentioned in these installation instructions.

GENERAL INFORMATION

RWV strainers are produced in a wide range of ratings and connections. RWV portfolio includes models suitable for HVAC systems, water distribution and irrigation.

Instructions apply to the following RWV valve models:

380AB	382	92SSC	92SP	92SP-BY
380F	387AB	92STC	92ST	92ST-BY
381	387F	92SS	92SS-BY	92SEC

Please contact RWV for models not listed above.

CHOICE OF THE VALVE

RWV offers strainers made of different materials: lead free* brass, Dezincification Resistant (DZR) brass, bronze, and stainless steel. We recommend using valves made of a material suitable for the specific application. Stainless steel, bronze and DZR brasses are recommended to reduce risk of de-zincification and stress corrosion. Details of the materials used for each model are listed in the specific valve technical sheet. Please refer to your local water authority for compatibility with brass products. RWV cannot be held responsible for failures caused by the quality of the water in combination with an unsuitable material chosen for the valve.

* Federal Safe Drinking Water Act – SDWA 2011 standards have determined “lead free” as having less than 0.25% of wetted surface area.

PRESSURE AND TEMPERATURE RATINGS

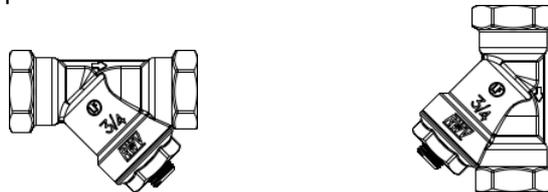
Specific information on pressure and temperature ratings of each valve model are provided in the RWV technical sheets, those can be obtained through RWV site or by contacting RWV. All contact information is provided in the last page of these instructions.

The operative conditions given in the tech sheets are intended for non-shock operating conditions: water hammer, impacts, stress loads, corrosive or erosive external environmental elements and the transport of fluids with abrasive properties should be avoided.

VALVE INSTALLATION

Prior to installation, verify the valve is suitable for the pressures, temperatures, operating fluids and environment in which it will be installed. It is the responsibility of the installer and/or of the facility designer to ensure that the application does not exceed the limits of pressure and temperature of the valve and is carried out in accordance with local current laws and regulations.

All models referred to in the above table can be installed in vertical or horizontal position with the cap pointing down (as in the pictures below). Strainers are not bi-directional hence flow must match the direction of the arrow marked on their body. The position chosen for the installation should allow for accessibility to the valve during operation, inspection and maintenance.



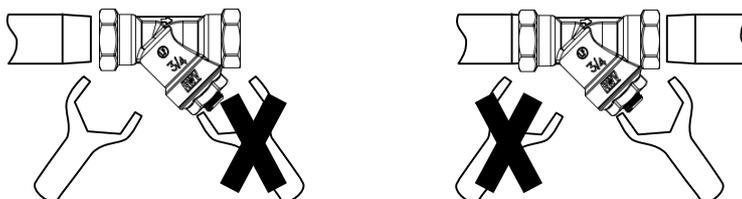
Pipe ends should be void of any burrs and not protrude inside the bore or obstruct any part of the flow (it's advisable to flush the line after installation or after performing maintenance on the system).

Do not subject the valve to any torsion, bending or tension. We recommend the use of pipe brackets. Pipe brackets should be installed at a distance suitable to properly support the valve. Do not to overload the valve with any unexpected additional stresses

Threaded connections

The valves shall be installed on pipes using, if necessary, a sealant suitable for the application and the expected type of fluid.

- The pipe threading shall be in accordance with the applicable standard requirements (please refer to the valve technical sheet). The pipe threading must be free of damage that could impair the correct coupling with the valve and the outward seal.
- Additional stresses on the body must be avoided during installation. A pipe clamp or key wrench must always grasp onto the hexagon/octagon portion of the threaded end that needs to be screwed to the pipe. In order to avoid additional stress on the valve be careful not to tighten the pipe at an excessive distance from the threaded area.
- Avoid screwing male threaded pipes too far into the valve. This could result in damage to the valve seats, resulting in leakage once the valve is operational.
- When installing a tailpiece, slide the union nut over the pipe before mounting to prevent interference between the tailpiece and union. Make sure all seals/o-rings are in place and not damaged.



Sweat connections

RWV sweat connections are designed to be soft soldered.

- Valves may contain polymer materials such as gaskets or seals. These seals can be damaged by excessive heat, therefore the use of heat sinks (for example a wet towel around the valve) is required. The flame must be directed away from the center of the valve body.
- Combo strainers must be placed in the closed position prior to soldering. After the installation wait for the valve to cool to room temperature before operating it.
- Make sure that the cut on the pipe is as square as possible and no burrs or rough edges are present. Clean both the valve socket and pipe end with a suitable tool until they are made bright.
- Coat both the valve socket and pipe with non-corrosive solder flux. In cold weather this should be done with the parts at ambient temperature. After applying the flux, slide the pipe to the shoulder of the socket then rotate a few times to insure flux properly covers the connection prior to soldering
- When soldering a union tailpiece remove it from the valve before the installation, this will avoid damage to the o-ring. Slide the union nut over the pipe before soldering the tailpiece.

EzPress connections

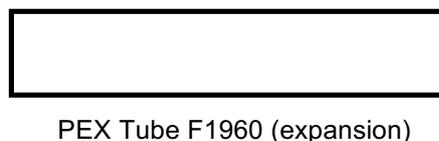
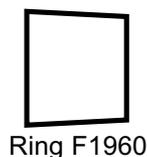
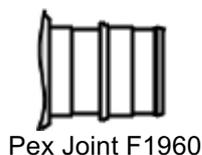
RWV EzPress connections are designed to be used with “K”, “L” & “M” grades of pipe/tubing.

- To ensure proper operation, a minimum distance of 5 pipe diameters is required between any solder connections and an EzPress joint. Extreme care should be taken to ensure that any heat applied to nearby fittings does not reach the EzPress joint. It’s preferable to perform all solder connections first, allowing the pipe to cool completely before installing any EzPress joint. A minimum of 2 pipe diameters spacing is recommended between any two press joints to ensure proper sealing of the copper pipe.
- Make sure that the cut on the pipe is as square as possible. Completely deburr both the inside and outside of the pipe, taking care to remove any raised chips or debris. If installing on existing pipe, it may be necessary to lightly sand the pipe ends to remove any scale or buildup.
- Ensure the valve ends are free from any foreign material or debris. Special care should be taken to also ensure that the o-ring in the valve end is seated correctly.
- While using a twisting motion, slide the valve onto the pipe. Do not use any lubricant or sealant.
- It may be necessary to mark the insertion depth of the pipe to ensure that the joint doesn’t move prior to the crimping process. RWV female EzPress connections have internal stops to limit the insertion depth of the pipe.
- Crimp using the appropriate crimping tool, follow the tool manufacturer’s instructions for proper calibration and use. Take care to ensure that the tool is in proper working condition and that the crimping jaws are clean and free from damage or defects.
- When installing an EzPress tailpiece, slide the union nut over the pipe before mounting it.

PEX F1960 connections

RWV PEX connections for strainers are manufactured in accordance with ASTM1960. To ensure proper installation of a valve with F1960 PEX ASTM1960 standards the following guidelines should be followed.

- Ensure that the tubing is cut square and is free from burrs and/or debris. The tubing should be seated completely on the valve and firmly engage all of the end barbs. An appropriate sized ring should be installed using a properly sized/adjusted tool.
- Make sure that the cut on the pipe is as square as possible (never more than 5° off) and without jagged edges. Check for longitudinal cracks on the pipe wall after each cut.
- To properly make the connection:
 - (a) Insert the ring onto PEX tube.
 - (b) If installing a tailpiece, mount the union nut over the tailpiece before connecting it to the pipe. After the installation the tailpiece will prevent the union nut to be properly placed.
 - (c) Insert the expander tool into the PEX tube and activate it.
 - (d) Carefully expand the PEX tubing and ring.
 - (e) Insert expanded ring/tubing onto PEX valve.



Flanged Connections

RWV flanged connections for strainers are manufactured in accordance with ANSI B16.5 FF (flat face). The flanges on the pipes should correspond to those on the valve, in particular valves must not be matched with raised face flanges. To ensure proper installation the following guidelines should be followed.

- Flanges should already be available on the pipes and should not be welded once the valve has been installed.
- To guarantee tightness, a gasket must be placed between each couple of flanges. It's up to the Installer to choose and mount a proper gasket.
- A proper place with the same length as the valve must be available on the pipeline. Do not use bolts to bring the pipes closer. Clamping bolts must be cross tightened.

USE AND MAINTENANCE

If methods are available to determine pressure at the inlet and outlet of the strainer, those can be used to determine if strainer needs to be cleaned. An abnormal rise in the pressure across the strainer usually indicated a clogging. Alternatively a cleaning routine of the screen, with frequency suitable for the characteristics of the medium used and dirt accumulation in the system, should be put in place.

Our strainers are either provided with drain caps or drain valves for easier cleaning. Fluid will flow out of the strainer once the cleaning operation starts, collect/drain this fluid with proper methods where required. Pressure in the line should be eventually reduced to a proper level for the operation to be performed safely. Workers performing the cleaning must be equipped with proper safety protection devices. Open the drain cap or drain valve and flush out until any sediment is removed.

All our strainers allow to disassemble the strainer screen. In addition to the indications given above, isolate the strainer from the line before proceeding. Beside we suggest to keep a spare body/bonnet gasket in case the one in the strainer gets damaged during the cleaning.

- Remove the bonnet either unscrewing it or acting on the bolts fixing it to the valve;
- Remove the strainer screen and clean it verifying no damages are visible (replace the screen if needed);
- Place back the screen and gasket (replacing it if needed) taking care they fit the seats placed in the body and in the bonnet, then fix back the bonnet to the valve.

Combo valves (92S series) include in one valve a strainer and a ball valve. The valves need to be operated on a regular basis (at least 6 times a year) with a complete open/close cycle. Beyond routine periodic cycling no additional maintenance is required

Valves must be replaced in case of leakages and/or damages. Combo valves have adjustable packing nuts, leakages through the stem may be stopped by tightening the packing nut. Rotate the nut clockwise taking care not to damage the valve body with excessive strength. Wear proper protection gear when performing any maintenance. For models without blow-out proof stems, depressurize the line before taking any action. If leakage doesn't stop, the valve may have to be replaced.

Combo valves have been designed and manufactured to be exclusively used as shut-off valves, therefore they shall be used in the fully open or fully closed position only. They must be operated only by acting on the lever (straight lever or wing lever) provided by RWV without any other additional device.

RWV declines any direct or indirect responsibility in case of improper use, tampering, modification or dismantling of the valves. The improper use, tampering and/or modification on any part of the valve, voids the warranty and liability for any failure or damage as well as any applicable Certification.

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