

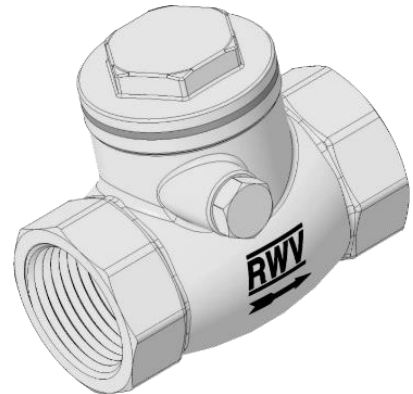


CHECK VALVES

How to use your RWV check valves. (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 check valves 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:

232	236AB	238	247AB	445
232AB	236B	244AB	250	452
233	236BT	246	360	462
233AB	236F	246AB	435	465
234AB	237AB	247	442	884

Please contact RWV for models not listed above.

CHOICE OF THE VALVE

RWV offers check valves made of different materials: brass, lead free* brass, Dezincification Resistant (DZR) brass, lead free DZR brass, bronze, cast iron and stainless steel. Alternatives are given also for the material of the shutter and the type of the sealing (soft sealing and metal sealing). 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.

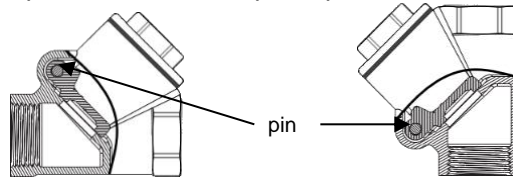
The operative conditions given in the tech sheets are intended for non-shock operating conditions: water hammer, impacts, stress loads, corrosive or erosive external environmental elements and the transport of fluids with abrasive properties should be avoided.

VALVE INSTALLATION

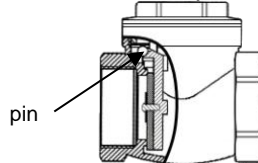
Prior to installation, verify the valve is suitable for the pressures, temperatures, operating fluids and environment in which it will be installed. It is the responsibility of the installer and/or of the facility designer to ensure that the application does not exceed the limits of pressure and temperature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

RWV offers many different check valve models operating through different principles, those may limit the possible installation position of the valves:

- Spring check valve (Fig. 232, 232AB, 233, 233AB, 234AB) can be installed in any position (vertical, horizontal, inclined) with flow going either downward or upward.
- Dual plate check valves (Fig. 442, 445, 452, 462, 465) can be installed in any position (vertical, horizontal, inclined) but with flow going upward only.
- Y-type swing check valves (Fig. 236AB, 236B, 236BT, 236F, 237AB, 238, 360) can be installed in any position (vertical, horizontal, inclined) but with flow going upward only. Care shall be taken so that the bonnet of the valve is pointing upward and that the pin is placed horizontally.



- T-type swing check valves (Fig. 244AB, 246, 246AB, 247, 247AB, 435, 884) can only be installed horizontally, with bonnet pointing upward and with the pin also placed horizontally.



Check valves 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.

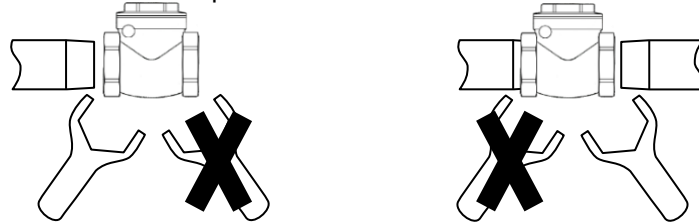
Pipe ends should be void of any burrs and not protrude inside the bore or obstruct any part of the flow (it's advisable to flush the line after installation or after performing maintenance on the system).

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.



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.
- 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

EzPress connections

RWV EzPress connections are designed to be used with “K”, “L” & “M” grades of pipe/tubing. If in doubt on which jaw to use please contact RWV.

- 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.

Flanged Connections

RWV flanged and Wafer connections for check valves are either manufactured in accordance to or compatible with ANSI B16.5 FF (flat face) flanges. 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

RWV check valves require no maintenance. Valves must be replaced in case of leakages and/or damages.

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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