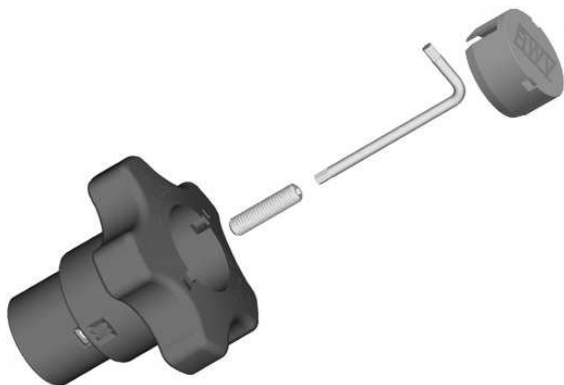


LOCKING THE REQUIRED VALVE SETTING



Once the required flow rate setting has been established, the 9510 series memory stop can be set as follows to provide a repeatable return to this setting:

- 1) With a small screwdriver or similar tool gently pry up the center handwheel cap using the available slots.
- 2) Insert the provided 3mm Allen wrench into the opening and while holding the Topset® handwheel in its desired position, tighten the inner Allen screw clockwise until it stops. Care should be taken not to over-torque this item.
- 3) Replace the plastic cap. This prevents any possible tampering by sealing the cap to the upper part of the handwheel by using the existing slots and the appropriate wire or nylon seals.

The valve may be fully closed at any time. However when re-opened it will stop exactly at the previously set point.

VALVE TAG

9510 series valves are supplied with a data tag on which are indicated:

- the Fig. number of the valve type: 9517, 9519, 9517AB or 9519AB
- the nominal size;
- the value of the flow coefficient C_{vs} ;

On the tag there is room to write the required initial setting of the valve, indicating either the Topset® setting figures, the desired flowrate or the pressure signal.

This tag can be fixed to the Topset® handwheel with the provided plastic zip tie.

The included plastic tie is long enough to be used with insulated piping systems and still provide a clear identification of the valve.

For more information, feel free to contact RED-WHITE VALVE CORP.

RED-WHITE VALVE CORP.

20600 Regency Lane
Lake Forest, CA 92630
www.redwhitevalvecorp.com
Tel. 949.859.1010
Fax 949.859.7200

RWV® 9510 series

How to use your 9510 series Balancing Valve (Installation, Operation and Maintenance Instructions).



GENERAL INFORMATION

Overview:

- RWV 9510 series are Fixed Orifice Double Regulating Valves that are capable of measuring flow over the Venturi insert (the fixed orifice) and regulate / isolate such as a standard Globe Valve.
- They are also a complete commissioning valve capable of balancing heating & cooling water systems and sanitary water systems.

Features:

- Easy evaluation of the flow rate passing through the valve using the same flow coefficient value for all of the Topset® handwheel settings (see graphs section below)
- Flow is precisely regulated by referring to position indicator on the Topset® handwheel (40 detailed positions).
- Integral memory stop allows you to close the valve and return to the previous setting when reopened.
- Fig. 9517 and 9517AB have female threaded NPT end connections as per ANSI/ASME B1.20.1
- Fig. 9519 and 9519AB have solder end connections as per ANSI B16.22
- The 9510 valve series is intended to be used for non hazardous liquids only.
- Fig. 9517AB and 9519AB are made in low lead brass compliant to California Assembly Bill 1953 (AB1953) and are NSF-61-G certified.

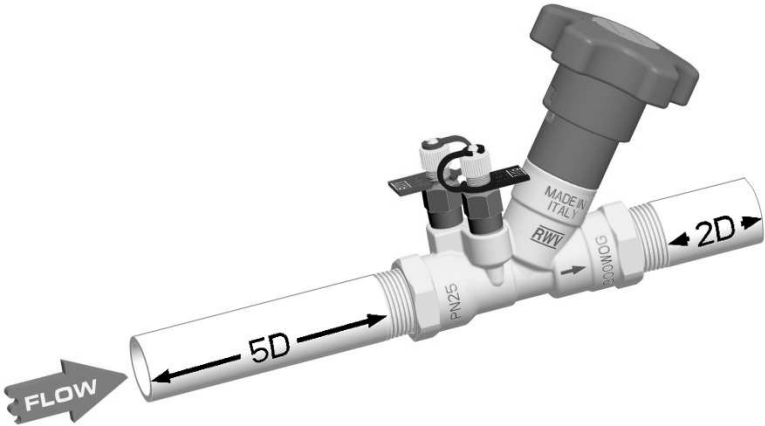
PRESSURE AND TEMPERATURE VALVE RATINGS

VALVE VERSION	Non shock pressure at temperature range	Non shock pressure at max. temperature
Threaded End (9517 and 9517AB)	300 psi from 15°F(*) to 160°F	150 psi at 260°F (**)
Solder End (9519 and 9519AB) (***)	300 psi from 15°F(*) to 160°F	150 psi at 260°F (**)

(*) = below freezing temperatures only for water with antifreeze additives.
(**) = over 212°F only for water with anti-boiling additives.
(***) = soldered connections have working rating limitations depending on the solder type.

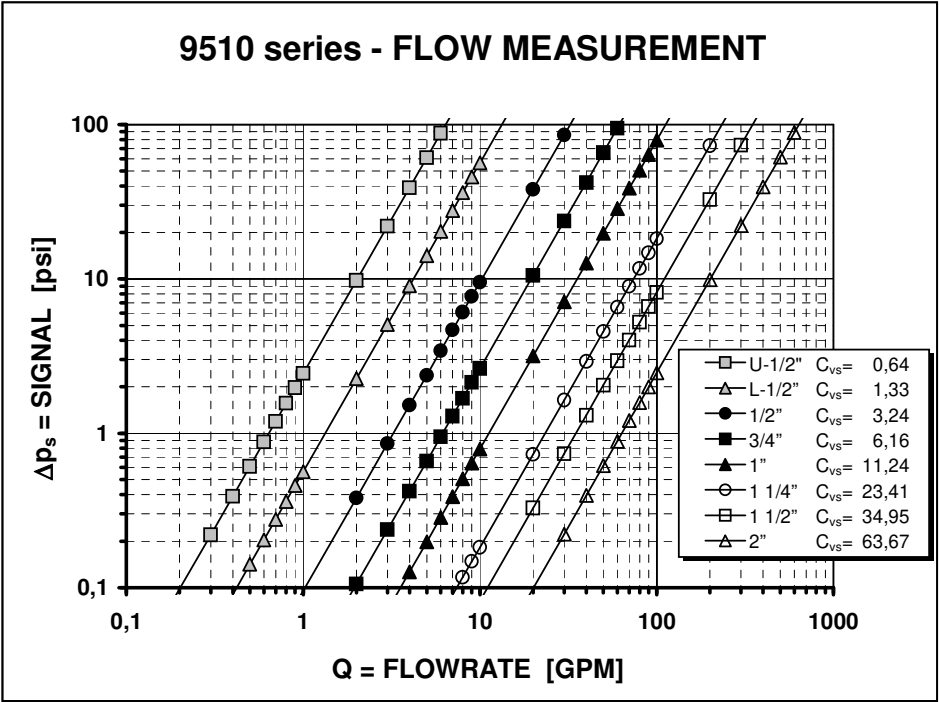
The operative conditions shown above are intended for non-shock operating conditions: water hammers, impacts, stress loads, corrosive or erosive external environmental elements and the transport of fluids with abrasive properties should be avoided.

INSTALLATION



- For optimum accuracy, valve should be installed under the following conditions when taking flow readings:
 - Piping
 - Have a minimum straight pipe length equivalent to 5 pipe diameters at the inlet and 2 diameters at the outlet.
 - Have a minimum straight pipe length equivalent to 10 pipe diameters at the inlet when installed on the outlet of a pump.
 - Have a minimum straight pipe length equivalent to 5 diameters at the inlet from any elbows, tees or other pipe junctions.
 - Verify that flow is in the direction of the arrow on the valve body.
 - Remove excess pipe dope / tape that protrude into the flow path.
 - Thoroughly deburr and/or ream pipes to remove any materials protruding into the flow path.
- Please note that the 9510 series valves should be installed in such a way as to allow access for the manometer probes into the pressure test points to prevent the accumulation of debris in these areas.
- Care should be taken when installing Fig. 9519 and 9519AB (solder end valve) to ensure that the flame is directed away from the center of the valve (valve seat and seals) and also from the metering points (seals). This will reduce the risk of damaging the valve seals due to over heating.

VALVE SETTING



Where:

$$Q = C_{vs} \cdot \sqrt{\Delta p_s}$$

Q = flowrate [GPM];
Δp_s = differential pressure (signal) through the pressure test points of the valve [psi];
C_{vs} = flow coefficient through the pressure test points of the valve [GPM/psi^{1/2}];

Regulate the flowrate by turning the Topset® handwheel. The required settings can be derived from the differential pressure signals measured from the metering test points (see 9510 series flow chart above) and the specific demands of the application.

“Low Flow” and “Ultra Low Flow” versions are identified by a letter marked on the body, next to the nominal diameter indication (L for “Low Flow”, U for “Ultra Low Flow”).

The current presetting of the valve can be read on the graded scale of the handwheel with an accuracy of one tenth of turn (double zero indicates that the valve is closed).