VERIFYING VALVE OPERATING CONDITIONS

RWV 9900V valve series can feature pressure test points in both upstream and downstream positions. These test points allow the use of a manometer to verify if the cartridge is working within the designed range of differential pressure (i.e. the range in which it automatically regulates the designated flow rate).

RWV valves Fig. 9902V and 9904V are supplied with female threaded ¼" ISO 7/1 caps. The caps can be removed and replaced by test points for testing and commissioning.

RWV valves Fig. 9907V and 9909V are supplied with RWV test points already mounted.

CARTRIDGE SELECTION

Operating performances of RWV 9900V valve series depends on the proper selection of the regulating cartridge. The installer can easily identify the most appropriate cartridge for the specific application based on three main data:

- Nominal size of the pipe line
- Desired flow rate
- Range of differential pressure within which the desired flow rate must be maintained

For more information, as well as for a list of available flow rates and differential pressure ranges at nominal fluid conditions (temperature and composition) see product selection guide or feel free to contact RED-WHITE VALVE CORP. for assistance.

RED-WHITE VALVE CORP.

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

RWV – RED-WHITE VALVE CORP. IOM

9900V series

Installation, Operation and Maintenance Instructions for 9900V Automatic Balancing Valve

GENERAL INFORMATION

Overview:

- RWV 9900V series of balancing valves are capable of automatically maintaining a designated flow rate on branches of a hydraulic system and within a wide range of differential pressures.
- The 9900V series is a complete commissioning valve capable of balancing heating & cooling systems as well as sanitary water systems.

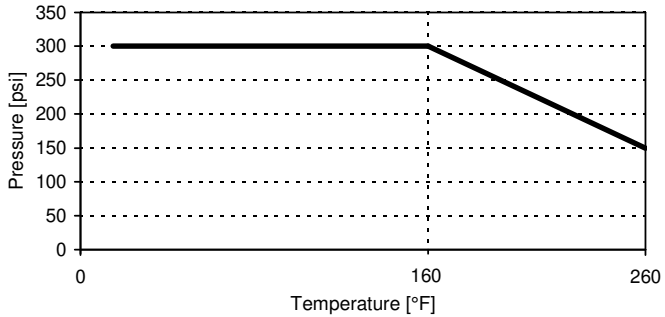
Features:

- Easy to assemble and disassemble by means of a union and a union-nut connection.
- Regulation is obtained by means of metallic cartridges specifically designed for each flow rate.
- The regulating cartridge is positioned in-line with the flow for minimal flow loss.
- Metallic parts in direct contact with fluids are either in DZR brass or stainless steel.
- Fig. 9902V and 9907V have female threaded NPT end connections per ANSI/ASME B1.20.1.
- Fig. 9904V and 9909V have solder end connections per ANSI B16.22.
- The 9900V valve series is intended to be used for non hazardous liquids only.

PRESSURE AND TEMPERATURE VALVE RATINGS

VALVE MODEL	Non shock pressure at temperature range	Non shock pressure at max. temperature
Threaded End (9902V and 9907V)	300 psi Max from 15°F(*) to 160°F	150 psi Max. at 260°F (**)
Solder End (9904V and 9909V) (***)	300 psi Max. from 15°F(*) to 160°F	150 psi Max. 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 operating conditions shown above are intended for non-shock operating conditions: water hammer, stress loads, corrosive or erosive external environmental elements and the transport of fluids with abrasive properties should be avoided. We recommend the use of at least one strainer for each installation.

INSTALLATION

- For optimum flow rate regulation valve should be installed under the following conditions:

- 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 clean and ream pipes to remove any material protruding into the flow path.

- Note that the 9900V series valves should be installed in a position to allow access of the manometer probes into the pressure test points for commissioning and to avoid contamination of the test points.

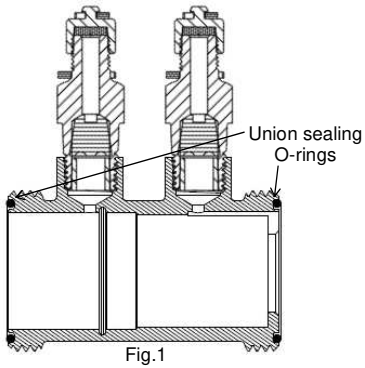


Fig.1
Empty Housing

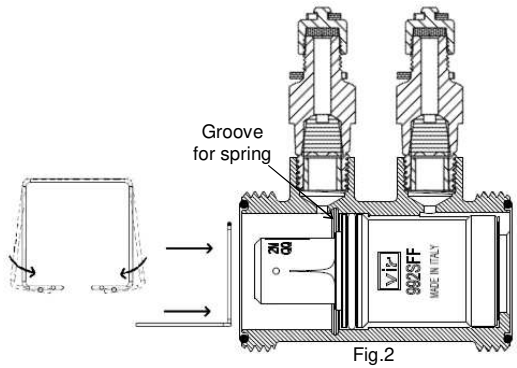


Fig.2
Spring insertion

Procedure for valve and cartridge installation is as follows :

1. Slip union nuts onto the pipe.

2. Screw or solder unions to the pipe. For Fig. 9904V and 9909V, solder end valve, solder unions while disassembled from the valve body to ensure the flame does not damage valve seals. Torch flame should always be pointed away from valve body.

3. Connect valve housing to the unions (empty housing without cartridge and spring) by tightly screwing the union nuts onto the housing male threads. Verify O-rings are present and properly positioned.

4. Perform proper flushing of the system to avoid contamination.

5. Remove valve housing from the unions and insert components in the following sequence:
   5a Insert the cartridge into the housing. Push the cartridge until its bottom reaches the seat in the housing (see fig.2);
   5b Secure cartridge in its place by inserting the spring into its groove (fig.2).

6. Reassemble unions onto the valve body.