



2514, 2516, & 2524 SERIES Y BALL AUTOMATIC FLOW CONTROL VALVES 2405, 2406 & 2407 SERIES Y BALL STRAINERS INSTALLATION, OPERATION & MAINTENANCE INSTRUCTIONS

GENERAL INFORMATION

1. Clean the lines of all foreign material, (welding slag, pipe scale, dirt, thread chips etc.). Upstream installation of a strainer may be necessary in dirty systems.
2. Air should be eliminated from the system prior to startup to assure quiet operation and freedom from water hammer.
3. Hays Automatic Flow Control Valves and Strainers may be installed in the pipe horizontally, vertically or any angle in between. Straight sections of pipe upstream or downstream of the Hays valve are unnecessary for proper operation. Standard reducing bushings or flanges may be directly connected to the Hays valve if required.
4. All Hays Automatic Flow Control Valves and Strainers are marked with direction of flow and rate of flow. **THE FLOW ARROW MUST POINT IN THE DIRECTION OF FLOW FOR PROPER OPERATION.**
5. Hays Flow Control Valves are factory assembled, and individually calibrated. The valves are warranted to be accurate within 10% of rated flow when properly installed.
6. The Hays 2514, 2516 and 2524 Automatic Flow Control Valves may be modified in 1/8 to 2GPM increments by using Hays Service Kit number DOFI for flow rates 0.5 to 8.0 GPM or Hays Service Kit number 11144 for flow rates 9.0 to 25 GPM. Contact Factory for details.

OPERATION

1. For optimum operation, air entrainment in the system must be eliminated. The flow control valve must remain filled with fluid. The system must be clean and free of foreign materials.
2. The Hays Y Ball Series Valves and Strainers must only be used with fluids that are compatible with, Brass, and EPDM materials. The temperature during operation must be limited to the range of 32 ° F to 225 ° F.
3. The use of fluids having a specific gravity different from that of water will require adjustment. Valves specified for fluids other than water will be so marked and the factory calibration will take the specific fluid's properties into consideration.
4. The use of fluids having a viscosity different from that of water will require adjustment.. Valves specified for fluids other than water will be so marked and the factory calibration will take the specific fluid's properties into consideration. Operation at a temperature other than the rated temperature may require a correction.

INSTALLATION

1. Threaded valves are provided with 1/2 to 1 1/2 Inch Dryseal NPT threads in accordance with ANSI STD B1.20.1 and are intended for use in Building Services Piping meeting the requirements of ASME B 31.9. Apply thread sealant to male pipe threads, starting with the second or third thread from the end, and torque the connection to 75 foot pounds per inch of pipe size minimum.
Example; (1/2", 0.5 X 75 = 38 ft lb. Min.) (1 1/2", 1.5 X 75= 113 ft lb Min.)

**INSTALLATION CONTINUED**

2. Sweat fitting valves have their end connections formed to ANSI STD B16.22 requirements and are intended for use in Building Services Piping meeting the requirements of ASME B 31.9. The Temperature/Pressure rating of the Solder Joint is dependent upon the type of solder used. ANSI STD B16.22 Pressure Ratings should be reviewed prior to selecting a solder and sweating. Union end pieces on the valves are shipped loose, and should be removed for sweating. The O'Ring must be removed and stored during the operation. The outside of the tubing, and the inside of the fitting are to be mechanically cleaned and then lightly coated with solder flux. The tube is then inserted one diameter into the fitting, and the

CENTRAL PORTION OF THE VALVE BODY WRAPPED WITH A WET RAG.

Heat may be applied, either to the tubing or to the end of the fitting so as to achieve solder flow. When the parts have achieved the necessary temperature, solder is to be added to the joint and the joint allowed to cool. The heat is to be applied for the shortest time possible. The internal parts of the Hays 2513 are capable of continuous use at 300 deg. F. but will be quickly damaged at higher temperatures. When soldering vertical assemblies care must be taken not to permit excess solder to drip into the valve.

Heat discoloration from the sweating operation should not extend to the major diameter of the valve body. If disassembled, the valve must be reassembled in the reverse order, with all of the parts returned to their original positions. The seal being the last item installed prior to tightening the Union Nut to 80 Ft Lbs. for the 2514/2405, and 130 Ft Lbs for the 2524/2407 products.

(The Union Nut is shipped loose on sweat fitting 2500 and 2400 Series Products.)

If chlorinated flux has been used, all parts are to be flushed thoroughly to avoid premature corrosion failure.

MAINTENANCE

1. General maintenance is not required for Hays Flow Control Valves, however if the system experiences large amounts of pipe scale due to poor water conditions, as sometimes is found in older or retrofit systems, some may be required. Provisions should be made to keep the system clean. Proper water treatment is also recommended.
2. Spare Cartridge Assemblies, factory calibrated may be ordered.
3. When assembling the 2514, 2516 & 2525 Mesurflo Valves after changing flow cartridges, always use new O'Rings, and tighten the Side Port Fitting to 60 Ft Lbs. using a 1 1/16" open wrench for the 2514, 11/16", 12 point socket for the 2516, and 7/8", 8 point socket for the 2524.

LIMITED WARRANTY

All goods sold hereunder are warranted to be free from defects in material and factory workmanship. We warrant the goods for a period of five years from the date of purchase and will repair or replace at no cost, goods that prove defective. Automatic flow control valves containing F-Size orifice and diaphragm are warranted for the life of the HVAC system in which it was originally installed. WE SHALL NOT BE RESPONSIBLE FOR ANY LABOR CHARGES OR ANY LOSS, INJURY OR DAMAGES WHATSOEVER, INCLUDING INCIDENTAL OR CONSEQUENTIAL DAMAGES. The sole exclusive remedy shall be limited to the replacement of defective goods, which must be returned to us with written notice before replacement is made. Before installation and use, the ultimate purchaser shall determine the suitability of the product for their intended use and ultimate purchaser assumes all risk and liability whatever in connection therewith. Where permitted by law, THE IMPLIED WARRANTY OF MERCHANTABILITY IS EXPRESSLY EXCLUDED See Hays Fluid Controls Div. of ROMAC Industries Inc. HVAC Catalogue, Terms and Conditions for specific information regarding the Hays Limited Warranty.