

## 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, freedom from water hammer and correct flow.

### INSTALLATION

1. Threaded hose ends are made with inch series 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.
2. Apply thread sealant to male pipe threads.  
(CAUTION, if factory applied thread sealant is present, DO NOT ADD ADDITIONAL SEALANT, DO NOT TWIST JOINTS WITH SEALANT ALREADY PRESENT AS THIS MAY CREATE A LEAKTHROUGH THE SEALANT). Torque the connection to 75 foot pounds per inch of pipe size minimum. Example: (1 ½", 1.5 X 75 = 113 ft lb. Min.) (¼", .25 X 75 = 19 ft lb. Min.)
3. Hoses ½" through 1-1/4" have a removable threaded adapter. There should be a fiber gasket inside of the female swivel end of the hose to prevent leaking when the adapter is connected to the female swivel end of the hose. This gasket MUST be in place to prevent leaking. DO NOT use any type of tape or compound on the adapter or female swivel connection. These are straight threads and require a gasket to form a proper seal. Use of any sealant material will not prevent leaking and will void any warranty that may be expressed or implied. See Hays Fluid Controls current Terms & Conditions.
4. Check application for proper; Hose Length, to prevent Kinks, Twists, Sharp Bends, Stretching and Chafing.

### OPERATION

1. For optimum operation, air entrainment in the system must be eliminated. The system must be clean and free of foreign materials.
2. Bypass Kits are fully compatible with Ethylene Glycol and Propylene Glycol with all concentrations.
3. ½" to 1" hoses are stainless steel braid over an EPDM liner. Temperature ranges meet or exceed Hays specification of 32°F to 225°F.
4. 1-1/2" to 2" hoses are stainless steel braid over corrugated 300 stainless steel tube, butt welded to carbon steel end fittings. Temperature ranges meet or exceed Hays specification of 32°F to 225°F.
5. Working pressure meets or exceeds Hays specification of 400 psig.

6. The Bypass Kits must only be used with fluids that are compatible with, Iron, Brass, Santoprene and EPDM materials. The temperature during operation must be limited to the range between -4°F – 230°F.

### **MAINTENANCE**

1. General maintenance is not required for Hays Flex Bypass Kits, however if the system experiences large amounts of pipe scale due to poor water conditions, some maintenance may be required.
2. Provisions should be made to keep the system clean. Proper water treatment is also recommended.

### **LIMITED WARRANTY**

See Hays Fluid Controls terms & conditions