



### **ChamFlex® Hose Kit # 6:**

ChamFlex® UI-94 VO rated hose with return and supply assemblies. Assemblies are male pipe with x male pipe swivel adapter. Supply has combination Y-strainer with shut-off valve, one test port and drain valve. Return with 600 WOG brass bodied ball valve with one test port and memory stop.

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## **Y-Strainer Combination Valve**

### **Installation Instructions:**

1. The valves must be installed on the supply side of the coil with filed end on the upstream side and other end on the downstream side.
2. When installing the Y-strainer valves. Space around the units must be provided to move the valve handle to the shutoff position and to move the strainer from the strainer body for cleaning.
3. The Y-strainer must be installed with the strainer chamber down to prevent air binding and also to allow accumulated dirt to be blown down from the strainer.

### **Operation Instructions:**

Y-strainer can be used to isolate hydronic equipment for repairs and/or drain the system. To close the Y-strainer ball valve move the handle a quarter of a turn until the handle is perpendicular to the valve and piping.

If Y-strainer pressure drop becomes excessive, accumulated dirt should be blown down through the blow-down line (if installed) to a drain. If a blow-down line is not installed see the service instructions for removing and cleaning the strainer. The Y-strainer have construction with an integrated ball valve will function as a service valve.

### **Service Instructions:**

If excessive pressure drop is measured across the Y-strainer the internal strainer has collected dirt/debris and needs to be cleaned. Install blow-down line (hose), then open blow-down valve. If blowing down the strainer has not solved the pressure drop problem, the Y-strainer must be disassembled and strainer cleaned.

**Warning: Failure to use proper hose connection to the blow-down valve may result in serious personal injury and property damage.**

To clean the strainer, isolated the Y-strainer by shutting off the ball valve on upstream and downstream of the Y-strainer. Allow the system to cool down to 100°F (38°C) or less.

**Warning: Hot fluid and/or fluids under pressure are a safety hazard. Do not service the strainer while it is hot or under pressure. Failure to follow these instructions could result in serious personal injury or death and property damage.**

Using the appropriate size wrench remove the brass cap on the Y portion of the strainer. Grab and remove the strainer. Clean the strainer in water to remove collected debris. Reinstall the strainer and the strainer cap. Pressurize the system and check for strainer cap leaks. If noted, slightly tighten nut until leakage stops.

Periodically inspect the Y-strainer for signs of corrosion or leakage. If corrosion or leakage is noted the Y-strainer must be replaced.

**Warning: Corrosion or leakage is indication that the Y-strainer Combination Valve must be replaced. Failure to follow these instructions could result in serious personal injury or death and property damage.**

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## **CR 1000 Series PT Port Brass Valve**

### **Installation Instructions:**

1. Ensure the pipeline is free of dirt or debris. Flush system if necessary. Foreign matter can damage valve or degrade performance.
2. Thoroughly clean pipe threads and apply thread dope to the male thread only. PTFE thread sealant is recommended for most applications. (Installer is responsible for selecting a sealant compatible with fluid).
3. Apply torque to the valve at wrenching flats nearest the end being assembled. Do not apply torque through the full length of the valve body as this may compromise the integrity of the body to end piece seal. Care should taken not to over tighten as this as this can cause distortion of the valve body and effect valve performance. Pipe wrenches should not be used on the valve as they can crush the body distorting the NPT thread.
4. A tight leak free joint can be obtained on valves 2" and under by rotating the valve 2 to 3 turns relative to the pipe, larger valves should be turned 1 1/2 to 2 turns. (Basic Dimensions, American National Standards Taper Pipe Threads, NPT ANSI B1.20.1-1983.)
5. After installation operate the valve through several full open to close cycles. Check tightness of stem packing.
6. For valves with NPT side taps assembly is the same as end connections. Tighten the mating part 2 to 3 turns past hand tight while holding the valve securely. The valve should be secured at the wrenching flats only. Applying a radical load on the main part of the body can distort it.

### **Operation Instructions:**

The valve is opened by turning counterclockwise one quarter turn and close by turning clockwise. Valve state is indicated by the lever. A closed valve's lever is at 90° to the valve axis. When the valve is open the lever lies along axis.

## ChamFlex® Fire Retardant Hose Assemblies Installation Instructions

- A) All applications should be checked to ensure that the proper hose assembly lengths are being installed:
- Hose assemblies should not be installed in a “stretched” (taut) fashion. Some expansion and contraction of the hose assembly can occur due to temperature variation, system pressures, and system cycling (see Figure #1).
  - All hose assemblies should be routed properly to avoid contact with other surfaces that could possibly cause “chafing” (abrasion of the wire braided reinforcement).
  - The use of elbows and adapters should be considered to relieve hose “strain” (see Figure #2). **Do not use any plastic fittings or adapters.**
  - Hose assemblies should not be “bent” past the minimum bend radius requirements listed in the chart below. Hose assemblies showing evidence of “kinking” (being bent beyond the recommended bend radius) should not be installed (see Figure #3).

Hose Size	Working Pressure	Minimum Burst (@ 72° F)	Temperature Range	Minimum Bend Radius
1/2”	400 PSI	1600 PSI	-40° to 200° F	2.5”
3/4”	300 PSI	1200 PSI	-40° to 200° F	4”
1”	500 PSI	2000 PSI	-40° to 200° F	5.5”
1 1/4”	400 PSI	1600 PSI	-40° to 200° F	10”

- B) All hose assemblies should be installed in the following fashion so that no “twisting” occurs:
- Solid male pipe thread (NPT) ends should be installed first unless they are being connected to a “swivel” female (NPT). *The entire hose assembly must rotate during the tightening of this connection in order to avoid hose tube damage.*
  - The flared adapter on the “union” (female swivel) end should be removed with the male pipe (NPT) end of the adapter connected to the appropriate port first.

CAUTION: Thread sealant or thread tape should not be used on “flared” connections. Additional thread sealant or thread tape should not be applied to male pipe thread (NPT) ends where factory installed thread sealant is already present.

- The last step is to reconnect the flared swivel female coupling to the flared end of the adapter in a manner that ensures that the hose assembly is not twisted (see Figure #4).

