

# Typical Specifications for HVAC PROJECTS

## I. Flanged Flexible Connectors – Rubber Expansion Joints: Heating/Ventilating/Air Conditioning

- A. Flexible Rubber Expansion Joints shall be used on all equipment as called out in drawings. Materials of construction will include Neoprene tube reinforced with multiple plies of Nylon tire cord with a Neoprene cover when used in chilled water systems. EPDM tube and cover will be used for hot water systems. There will be no metal reinforcement in the connector with the exception of a steel wire in the flange sealing bead to add support. Each connector will be a single sphere and furnished with a set of floating galvanized steel flanges recessed to lock the rubber connector's raised face flange bead.

The flexible rubber expansion joint shall be rated as follows:

I.D. SIZE	PRESSURE AT 170°F
1" to 12"	225 PSIG
14"	120 PSIG
16" to 20"	100 PSIG

All connectors must have a burst pressure of 4:1 over the above rated pressure.

## B. Control Rod Assemblies Must Be Used On:

1. All unanchored systems.
2. All systems with pump mounted on rubber vibration pads or spring vibration mounts.
3. All systems where pressures or movements may exceed the published limits of the connectors.

When control rods are used, they must be set so that axial extension movement of the connector shall not exceed the published limit of the connector.

### ***Products That Meet This Specification:***

- Proco Style 240-AV/NN (single sphere) for chilled water
- Proco Style 240-AV/EE (single sphere) for hot water

## II. Union Flexible Connectors – Rubber Expansion Joints

- A. For 3" or less, double sphere rubber connectors with threaded metal union ends can be used. Connectors must be supplied with cables to restrict axial extension. Neoprene connectors to be supplied for chilled water system; EPDM for hot water systems.

***Products That Meet This Specification:***

- Proco Style 315-A/NN pump connectors for chilled water
- Proco Style 315-A/EE for hot water

# HVAC Applications

## HVAC Specifications:

Typical HVAC applications where Proco expansion joints are specified.

### Chillers

- ▶ ¾" I.D. to 3" I.D. – Series 315, Style 315-A/NN  
Threaded metal union spherical rubber connectors.  
Neoprene (NN) elastomer recommended for service.

#### ACCEPTABLE ALTERNATIVES:

- ¾" I.D. to 3" I.D. – Series 6201, Style TTS-6201  
Threaded metal hose & braid connectors.  
321S/S hose & 304S/S braid.
- ¾" I.D. to 2" I.D. – Series 6201, Style SEB-6201  
Copper female sweat end hose & braid connectors  
Bronze hose & braid.
- ▶ 1" I.D. to 20" I.D. – Series 240/242, Style 240-AV/NN  
Molded spherical rubber expansion joints with beaded  
end flanges and rotating vanstone flange rings.  
Neoprene (NN) elastomer recommended for service.

#### ACCEPTABLE ALTERNATIVES:

- 1" I.D. to 20" I.D. – Series 251, Style 251/NN  
Molded wide arch rubber expansion joints with full-face  
rubber flanges and split retaining ring set.  
Neoprene (NN) elastomer recommended for service.

### Hot Water Lines

- ▶ ¾" I.D. to 3" I.D. – Series 315, Style 315-A/EE  
Threaded metal union spherical rubber connectors.  
EPDM (EE) elastomer recommended for service.

#### ACCEPTABLE ALTERNATIVES:

- ¾" I.D. to 3" I.D. – Series 6201, Style TTS-6201  
Threaded metal hose & braid 304S/S connectors.  
321S/S hose & braid.
- ¾" I.D. to 2" I.D. – Series 6201, SEB-6201  
Copper female sweat end hose & braid connectors  
Bronze hose & braid.

- ▶ 1" I.D. to 20" I.D. – Series 240/242, Style 240-AV/EE  
Molded spherical rubber expansion joints with beaded end flanges and rotating vanstone flange rings.  
EPDM (EE) elastomer recommended for service.

**ACCEPTABLE ALTERNATIVE:**

- 1" I.D. to 20" I.D. – Series 251, Style 251/EE  
Molded wide arch rubber expansion joints with full-face rubber flanges and split retaining ring set.  
EPDM (EE) elastomer recommended for service.