



Young Regulator Co.

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Submit 3092 – 1-10

Model 3092

Rectangular Bypass Damper

GENERAL INSTRUCTIONS FOR BYPASS DAMPER ASSEMBLY

HOW THE BYPASS SYSTEM WORKS

As the individual zone dampers open and close, the system static pressure will rise and fall. In order to maintain proper air flow and static pressure through the HVAC system, a bypass system incorporating a reversible type motorized damper and a static pressure control is used. The static pressure control is equipped with solid state switching and time delay to enhance its operation and improve its reliability.

INSTALLING THE BYPASS DAMPER AND STATIC PRESSURE CONTROL ASSEMBLY

The bypass damper should be installed with the bypass air being discharged into the return air plenum or above the ceiling if this area is used as a common return (see drawing). The bypass damper must be installed so that the diaphragm of the static pressure control is in the vertical position. The high-pressure side of the static pressure control should be connected to the sensing tube and inserted in the main supply plenum, downstream of the bypass damper and at least 2 to 3 feet from the air handling unit in a straight section of duct at the center line. The sensing tube furnished is a 7" (18cm) length of 1/4" (6mm) O.D. rigid tubing to be connected to the pressure control with 3/8" O.D. plastic tubing, inserted and sealed 6" (15cm) into the duct. The sensing tube, plastic tubing, and mounting fittings are furnished with damper assembly.

ADJUSTING THE STATIC PRESSURE CONTROL

Before adjusting the pressure control, the installer should confirm the following:

1. that the HVAC system has been properly balanced.
2. that all zone dampers are in the open position.

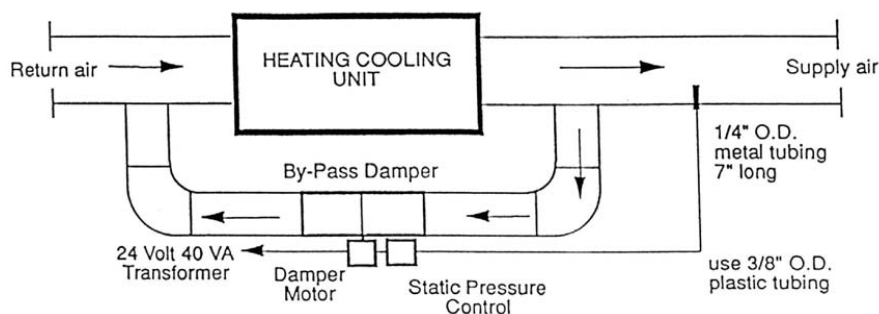
HOW TO PROCEED

With the air handler running and the bypass damper system powered, turn the static pressure adjusting screw clockwise until the bypass damper just starts to open (green light on) then turn the adjusting screw counter clockwise just enough so that the green light goes out and the damper is fully closed.

SPECIFICATIONS FOR BYPASS DAMPERS

- Pressure Set Point Range: .17" to 2" (4.3 to 50.8mm) W.C.
- Sensing Element: Neoprene diaphragm
- Electrical Connections: Two field connections.
- Pressure Connections: Barbed for 3/8" O.D. plastic tubing.
- Case: All metal with 1/2" conduit opening.
- Mounting: Damper to be installed with controller diaphragm in a vertical position.

BYPASS DAMPER AND STATIC PRESSURE CONTROL ASSEMBLY



Note: Bypass damper must be installed so that the diaphragm of the static pressure control is always in the vertical position.

This drawing of bypass damper, static pressure control and related duct work is intended to serve only as a guide. Your actual duct work layout may differ substantially.