

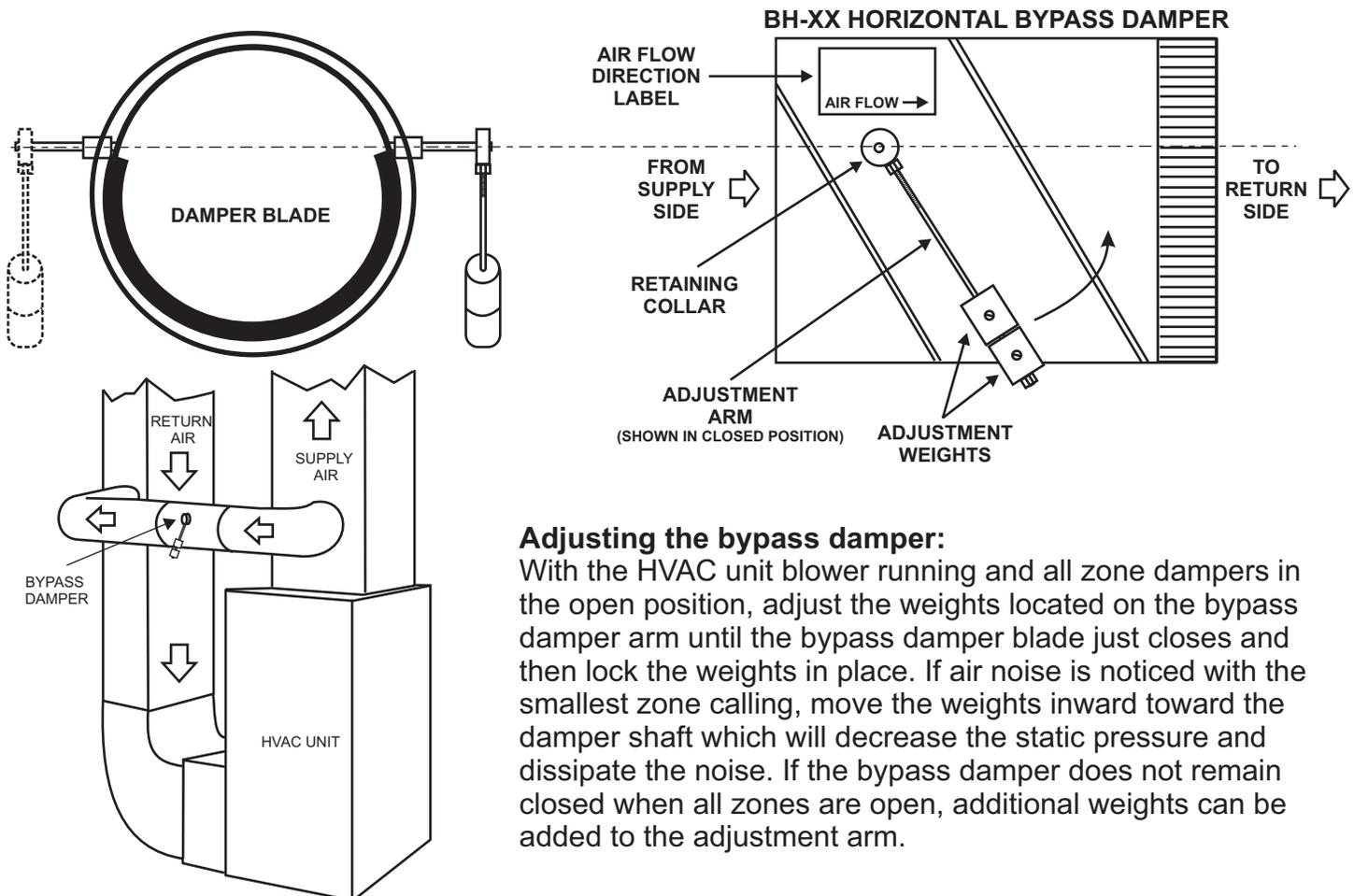
# Installation Instructions for BH-XX and BV-XX Barometric Bypass Dampers

## Principle of operation:

As individual zone dampers open and close, the HVAC system static pressure changes. In order to maintain design airflow and static pressure as well as prevent air noise, a barometric bypass damper is used to direct a portion of the air from the main supply duct back to the return. Barometric bypass dampers can be used with systems having static pressure ratings of up to 0.75" w.c.

## Installing the bypass damper:

Depending on the HVAC duct work configuration, the bypass damper should be ducted from the main supply air plenum to the return air duct using rigid pipe with spin-in or tabbed collars. Elbows may also be required to facilitate ease of installation. The bypass damper should always be installed in the supply air duct before any zone dampers. If using a BH-XX bypass, the damper can only be mounted in a horizontal position. A BV-XX bypass can be mounted in either the horizontal or vertical position (see other side for details). The return air side of the bypass damper duct should be installed on the return duct as far back as possible. Make sure that the air flow direction arrow located on the bypass damper label is facing towards the return air duct. In some cases, it may be necessary to mount the adjustment arm on the other side of the bypass damper for easier access. This will require removing the retaining collar which has a screw that threads into a pilot hole in the damper blade shaft for proper alignment of the adjustment arm.



## Adjusting the bypass damper:

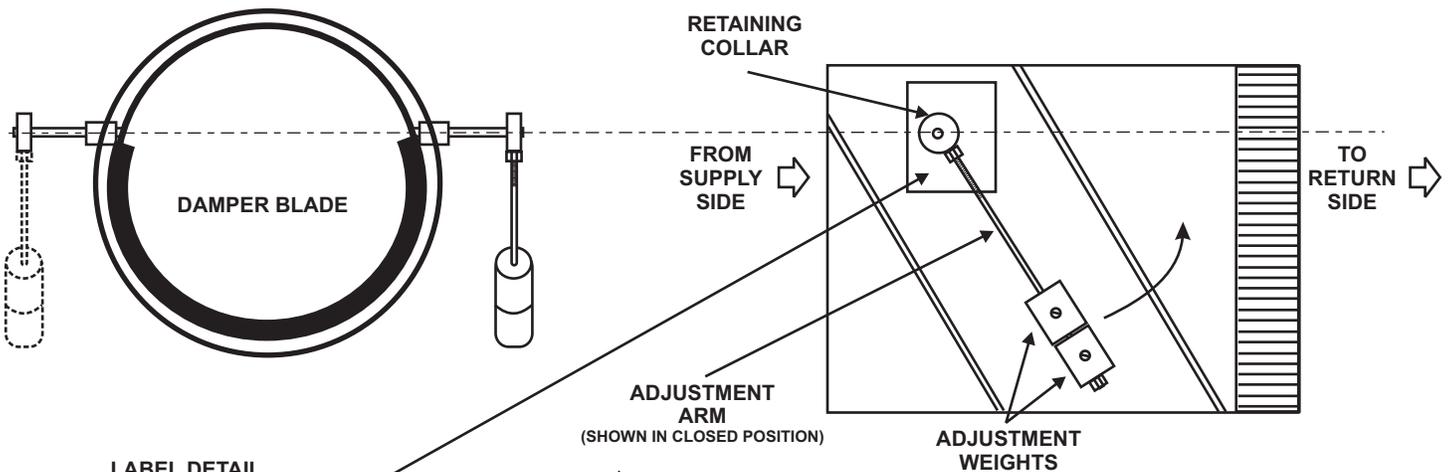
With the HVAC unit blower running and all zone dampers in the open position, adjust the weights located on the bypass damper arm until the bypass damper blade just closes and then lock the weights in place. If air noise is noticed with the smallest zone calling, move the weights inward toward the damper shaft which will decrease the static pressure and dissipate the noise. If the bypass damper does not remain closed when all zones are open, additional weights can be added to the adjustment arm.

TYPICAL HORIZONTAL BYPASS ARRANGEMENT

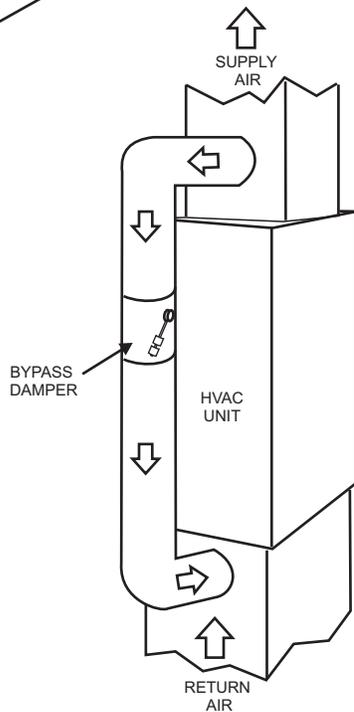
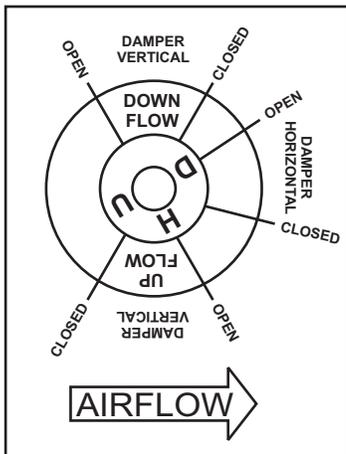
## BV-XX horizontal or vertical barometric bypass damper

The BV-XX bypass damper can be installed for horizontal or vertical air flow applications. Make sure the air flow direction arrow located on the bypass damper label is facing towards the return air duct. The retaining collar has specially marked threaded holes for attaching the adjustment arm depending on the position of the damper. If the damper is installed in the horizontal position, screw the threaded adjustment arm into the hole marked 'H' (Horizontal). If the damper is installed for a vertical down flow HVAC unit, screw the threaded adjustment arm into the hole marked 'U'. If the damper is installed for a vertical up flow HVAC unit, screw the threaded adjustment arm into the hole marked 'D'. Both weights included with the damper may or may not be required. In some cases, it may be necessary to mount the adjustment arm on the other side of the bypass damper for easier access. This only requires relocating the adjustment arm and screwing it into the properly marked retaining collar threaded hole.

### BV-XX HORIZONTAL OR VERTICAL BYPASS DAMPER



#### LABEL DETAIL



TYPICAL VERTICAL UP FLOW ARRANGEMENT

#### Bypass Damper Sizing Chart

Cooling Tonnage	Size
2.5	8"
3.0	10"
4 - 5	12"
7.5	14"