

ZONING TIPS from XCI

Barometric Bypass Damper Set-up

Bypass Damper adjustment is critical in order for any zone system to work properly. When the damper is removed from the box, the weighted arm will be attached to the shaft. **It must be adjusted to the 4 o'clock position on the side with the airflow label. If the damper arm is moved to the opposite side of the damper from the airflow “→” label, the damper arm must be placed in the 8 o'clock position.**

→ Horizontal AIRFLOW-left to right

This is the way the Bypass Damper is usually set up with the damper arm and arrow label on the same side. **Adjust the damper arm to the 4 o'clock position with the damper closed.**

← Horizontal AIRFLOW-right to left

Sometimes it is easier to access the damper arm by moving it to the opposite side of the Bypass Damper. If the damper arm is moved to the **opposite side** (side without arrow label), **adjust the damper arm to the 8 o'clock position with the damper closed.**

↑ Vertical AIRFLOW-Up

Adjust the damper arm to the 4 o'clock position with the damper closed.

↓ Vertical AIRFLOW-Down

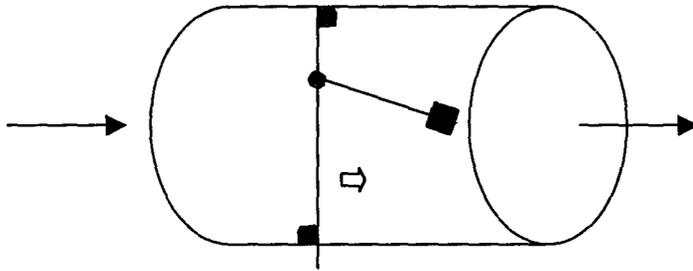
First, remove the damper arm from the bypass damper. For proper adjustment, place a weight on the short side of the blade near the shaft. Move the weight just enough toward the outside until the blade stays in the closed position and fasten the weight to the damper blade with a sheet metal screw or bolt. Re-attach the damper arm and adjust the damper arm to the **4 o'clock** position with the damper closed.

1. Make a call for heating or cooling in every zone. Verify that all zone dampers open.
2. Verify that the barometric bypass damper is fully closed with the damper arm in the 4 o'clock or 8 o'clock position. Sometimes, a duct system will have higher than normal static pressure and an additional weight may be required to keep the bypass damper closed with all zones open. Slowly move the weight toward the shaft in half-inch increments until the bypass damper starts to open slightly. Then move the weight in the opposite direction about a half inch or until the damper just barely stays closed.
3. Close one or more zones and the barometric bypass damper should open. Don't worry about how far the bypass damper opens as it will self-adjust.

Size the bypass damper for the maximum amount of bypass air flow through the bypass. Subtract the smallest zone CFM from the total CFM to determine bypass CFM. Select the bypass damper from the chart below:

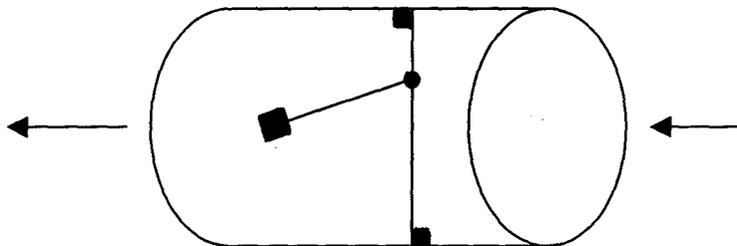
Bypass Damper Size	CFM
10"	800
12"	1200
14"	1600
16"	2000

Barometric Bypass Damper set-up



HORIZONTAL airflow (Left to Right)

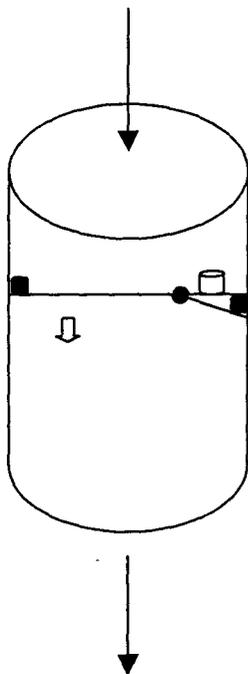
Adjust damper arm to
4 o'clock position with
damper closed.



HORIZONTAL airflow (Right to Left)

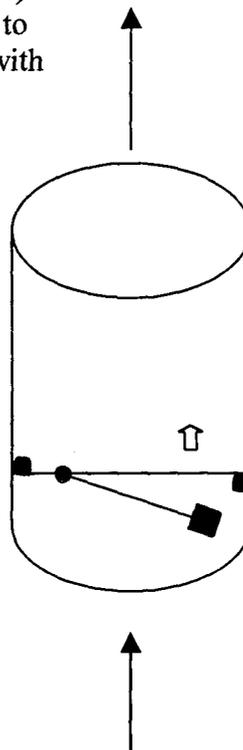
Damper arm moved to
Opposite shaft on opposite side
of damper.

Adjust damper arm to
8 o'clock position with
damper closed.



DOWNFLOW air (upflow air handler)

Adjust damper arm to
4 o'clock position with
damper closed.



UPFLOW air

(downflow air handler)

Adjust damper arm to
4 o'clock position with
damper closed.

NOTE: For upflow air handlers, if you need excessive weights to hold the damper closed, add weight(s) on the short side of the damper blade. Add just enough weights to hold the blade closed with the damper arm removed and the fan not running.