

Airflow Balancing Instructions

Instruction Sheet: BR-Series, GR-Series, EV-Series (EV90/P, EV130, EV200, EV240, & EV300 Only)

BALANCING

Balancing airflow is done by measuring both Outdoor Airflow and Return Airflow, and using a damper to reduce to the flow of the higher air stream.

Equipment required for testing airflows:

- A magnehelic gauge (or manometer) or other device capable of measuring 0–1.0 in. w.g. of differential pressure.
- 2 pieces of natural rubber latex tubing, 1/8" I.D., 1/16" wall thickness works best.

Manometers are relatively inexpensive devices that are readily available from online retailers. Accuracy within the range of 0–1.0 in. w.g. is the critical measure. Water manometers generally have graduations of 0.1" that are difficult to accurately determine. For all manometers, there are two plastic tubes that connect at the manometer and then the other ends go to pressure ports on the unit.

Individual differential static pressures (DP) are measured ACROSS the core, using the installed pressure ports located on the removable door.

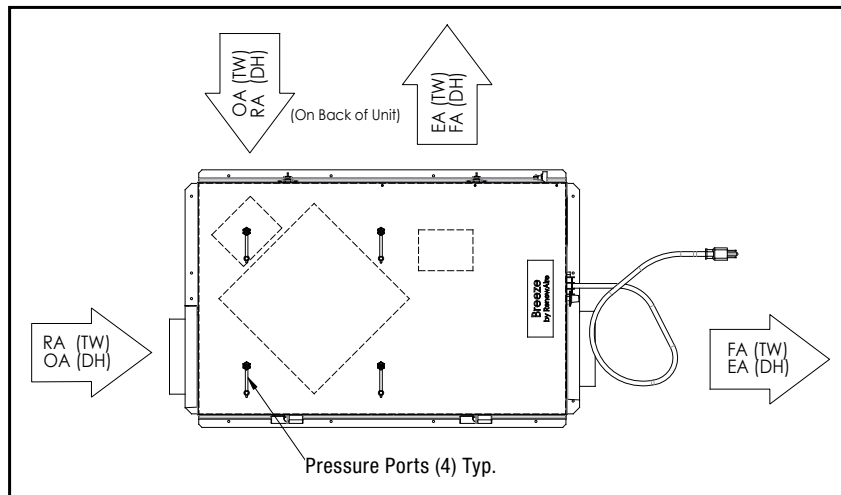


FIGURE 1.1 AIRFLOW DIAGRAM BR-SERIES

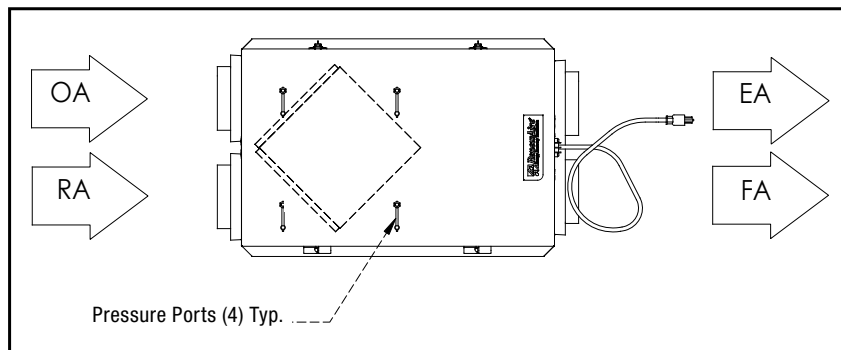


FIGURE 1.2 AIRFLOW DIAGRAM EV130, EV200, EV240, EV300

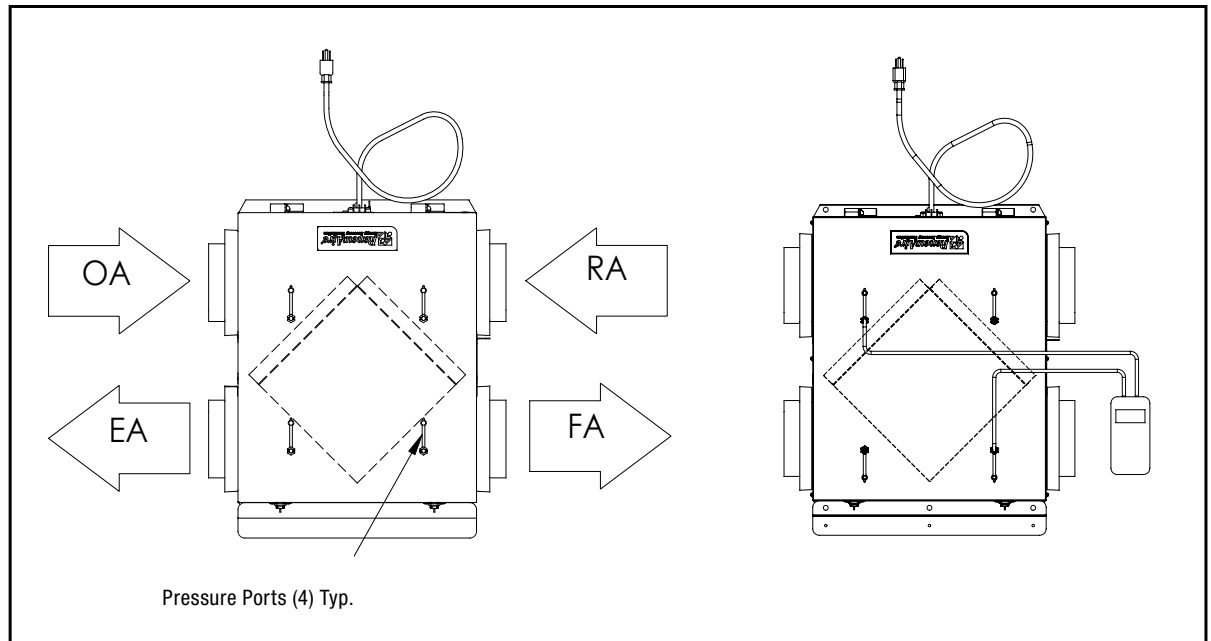


FIGURE 1.3 AIRFLOW DIAGRAM EV90/P AND MANOMETER USAGE

- Verify the unit has clean filters in place.
- Open the pressure port caps for the OA airstream and then insert the tubing into the openings about 1".
- Take a differential pressure reading for the OA airstream and compare the pressure drop to the chart on the unit or in the IOM to obtain the CFM. Record the CFM setting for future reference.
- Take a differential pressure reading on the RA airstream and compare the pressure drop to the chart on the unit to find the CFM of the RA airstream. Record the CFM setting for future reference.
- After measuring the airflow of the unit, the balancing damper may be used to balance airflow if desired. Place the damper between the duct collar and the unit for the inlet of the airstream recording higher flow.
- Slowly move the damper further into the duct until the desired airflow is recorded. Secure the damper in place using 1/8" tek screws (provided).
- After securing the damper, take additional readings as needed to verify that fan speed settings are correct.

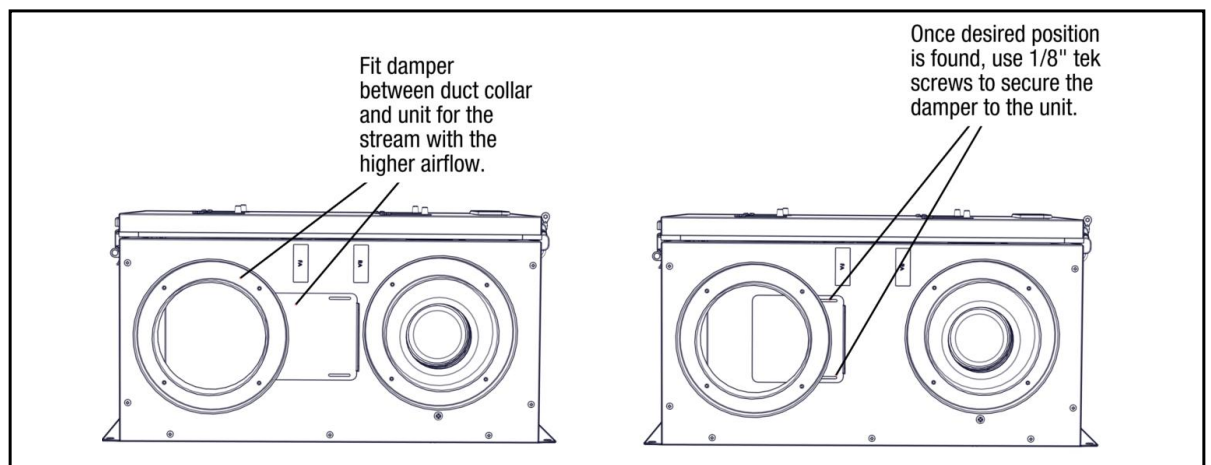


FIGURE 1.4 DAMPER INSTALLATION