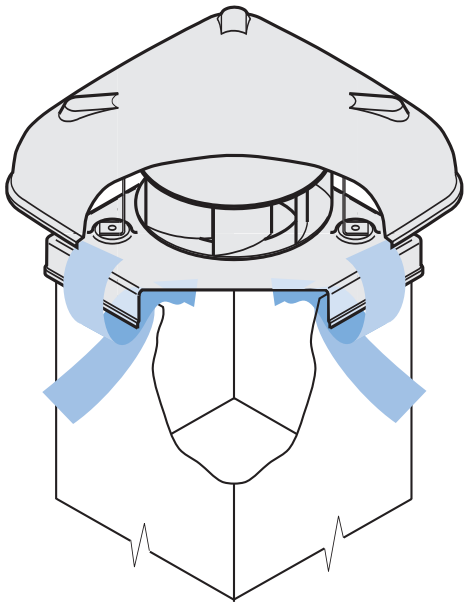
3.0 ROOF UNITS

Figure 3.1. - Roof ventilator short-circuiting of air

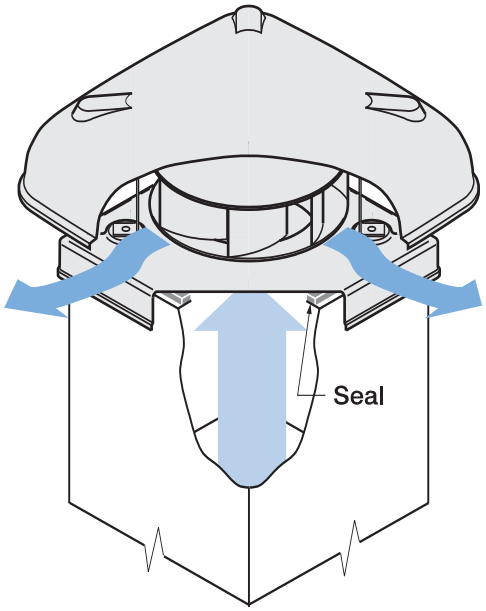
Ensure the roof ventilator base has an airtight seal.

✘ Don't



If the unit does not have an airtight seal between the base and the upstand, short-circuiting of outside air can occur thereby reducing the amount of air being exhausted from the building.

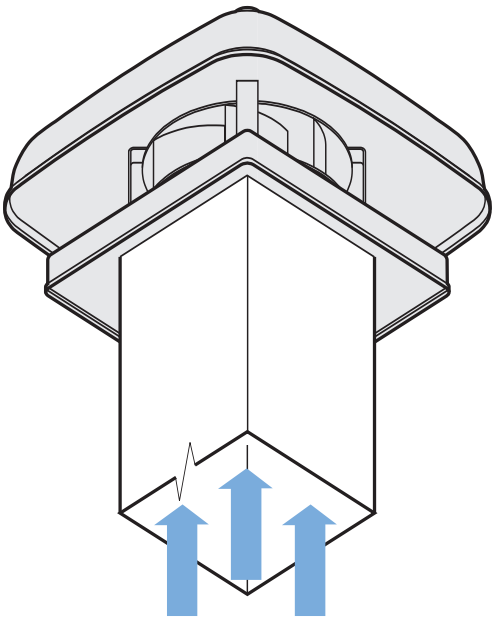
✔ Do



An airtight seal between the upstand and fan base prevents short-circuiting of outside air ensuring the fan is exhausting from the designated space.

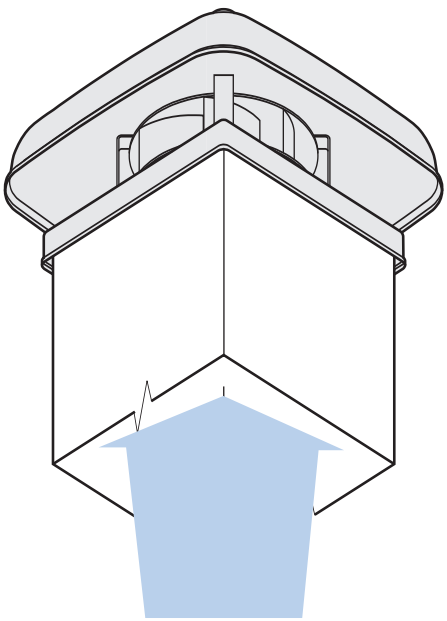
Figure 3.2. - Mounting of Roof Units to ductwork

✘ Don't



Don't connect to the 'eye' of the base as this increases pressure losses on the intake.

✔ Do

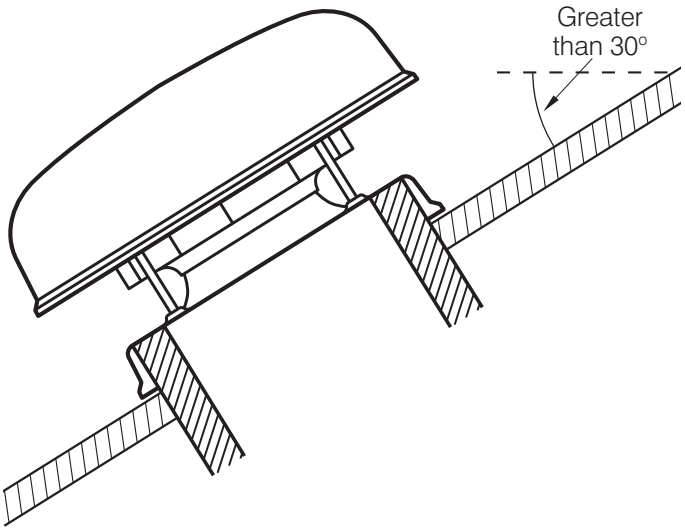


Size inlet duct to fit roof unit overflashing.

3.0 ROOF UNITS (Cont.)

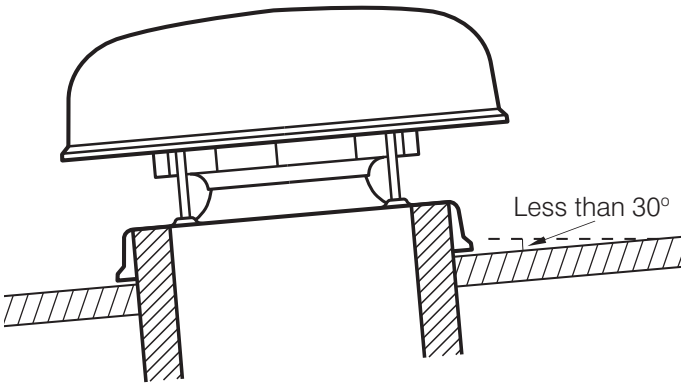
Figure 3.3. - Maximum Mounting Angle for Roof Units

✘ Don't



Don't mount the fan on an upstand or curb with an angle greater than 30°.

✔ Do



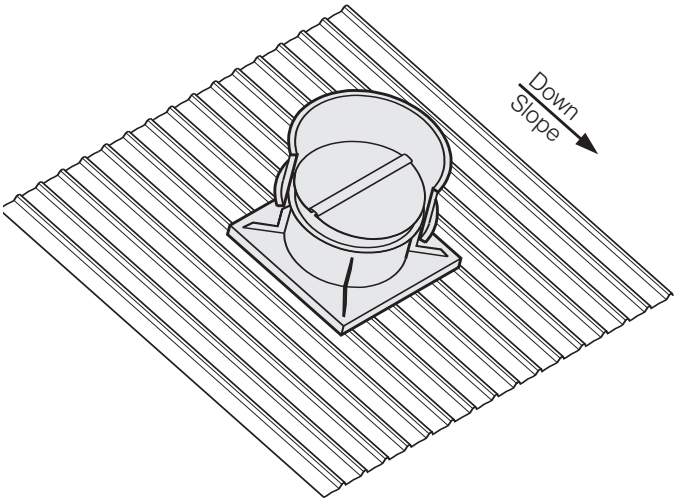
Do ensure the upstand, and therefore fan, is at an angle less than 30°.

Some fans may require an angle less than 30° or a completely horizontal upstand - refer to the relevant product page.

Figure 3.4. - Backdraft shutters

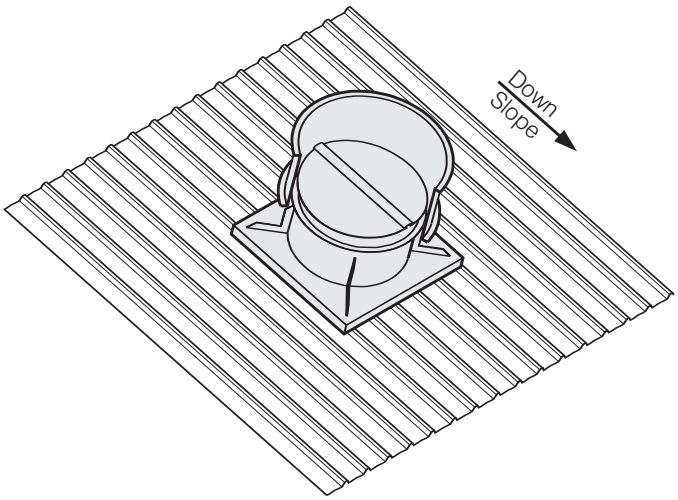
Butterfly back-draft shutters on a roof unit should be installed so gravitational effect on each leaf is the same.

✘ Don't



Don't have shutters at 90° to roof fall. The lower shutter must overcome a greater gravitational effect for even air flow. Also the top damper may go over top dead centre and not close.

✔ Do



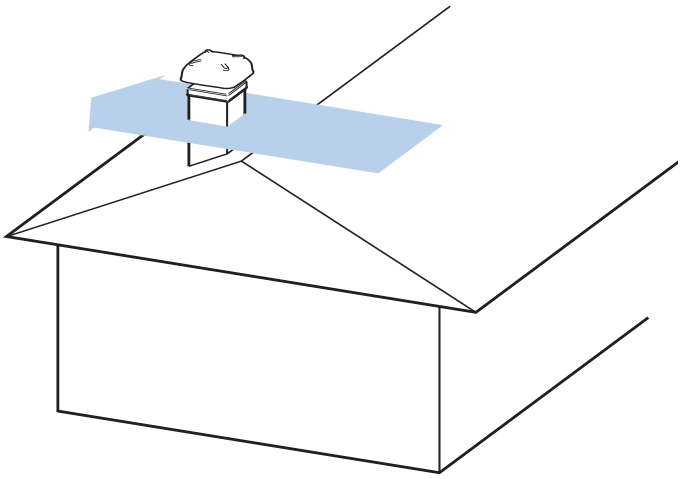
Each leaf has the same gravitational effect when shutters are parallel with roof fall.

3.0 ROOF UNITS (Cont.)

Figure 3.5. - Prevailing winds

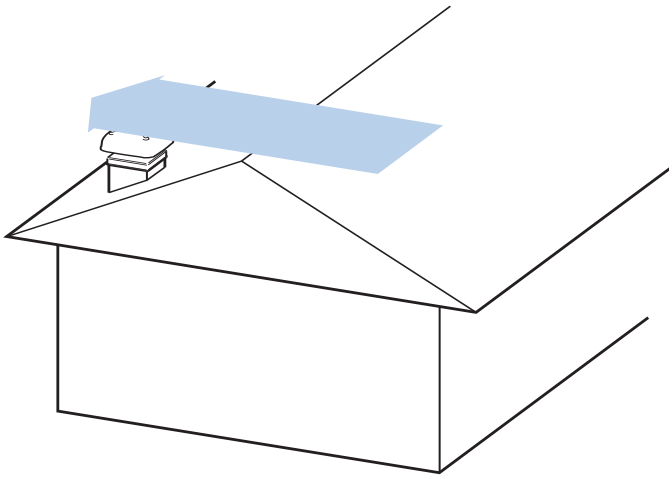
Mechanical roof ventilator units perform best if influence of prevailing wind is minimal.

✘ Don't



Unit above ridge is exposed to crosswinds. Exhaust capacity may be reduced due to back-pressure effects.

✔ Do



Roof unit relatively sheltered from prevailing winds suffers less from back-pressure effects.