Installation Guide

Recommended Installation Method

SPACE™ THOMOAIRE

Roof

Roof

Purlin

Purlin

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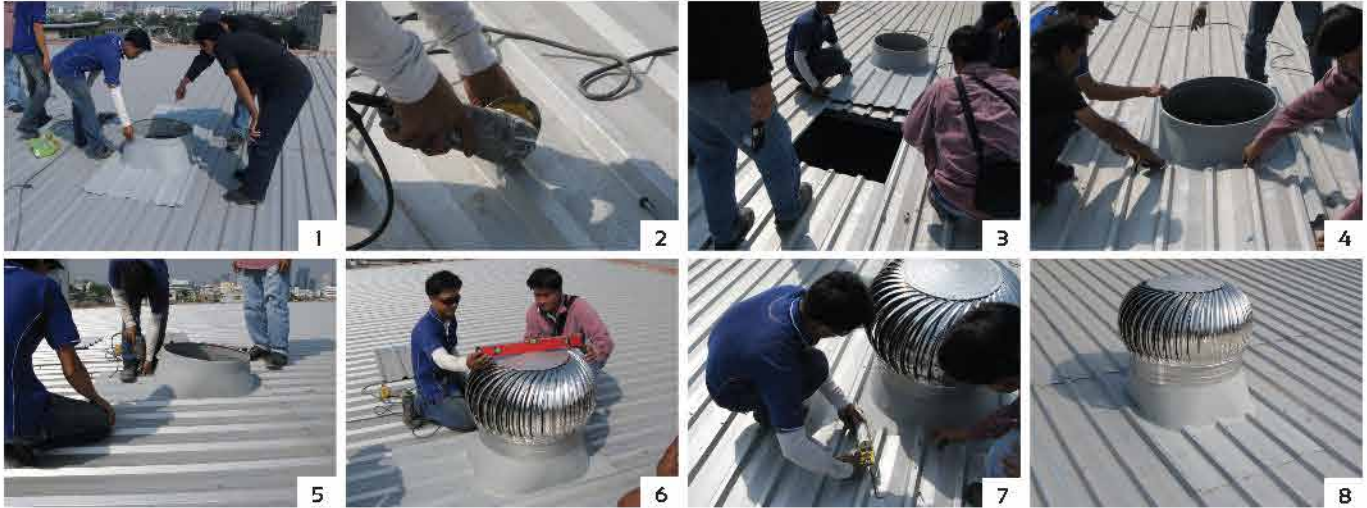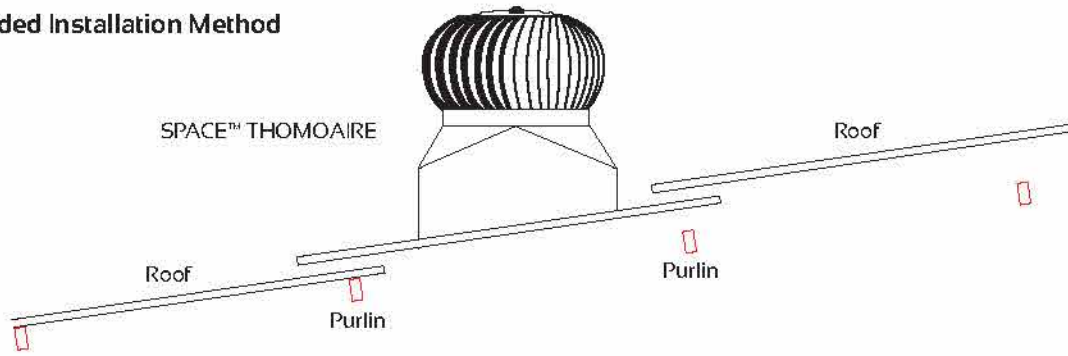
Method of Calculation for Numbers of Ventilators Needed

For efficient air circulation, the number of ventilators needed is calculated according to the size of the building. The air suction rate depends on spinning speed and size of the ventilator.

1. Measure the size of the building (V) in Cubic Meter (width x length x height)

2. Select "Air Circulation Rate (AC)" (see Table 1)

3. Refer to the wind speed "Air Circulation Ability Rate (EC)" (see Table 2)

4. Calculate base on the formula: $\dfrac{V \times AC}{EC}$ (refer to example on the right)

### Table 1 : Proper Air Circulation Rate per Hour for Various Building Types

Building Type	Proper Air Circulation per Hour (AC)
Warehouse	3 to 5
Factory & Maintenance Shop	3 to 8
Sports Buildings	3 to 8
Meeting/Activity Hall	6 to 12
Car Garage	6 to 12
Restroom	7 to 12
Laundry Room	7 to 15
Animal Farm	7 to 25

Table 2 : Air Circulation Ability Rate at Wind Speed & the Ventilator

Wind Velocity (km/hr)	Air Circulation Ability Rate (EC) (M³/hr)				
	14"	22"	24"	25"	27"
4	215	523	904	940	1018
6	263	572	944	984	1130
8	312	621	984	1029	1243
10	360	670	1024	1074	1355
12	408	719	1064	1118	1467
16	505	817	1143	1207	1692
20	601	915	1223	1297	1916

The Quantity of Ventilator $= \dfrac{V \times AC}{EC}$

Example of Area Calculation (factory)

2.3 M

2.7 M

40 M

80 M

Area 1 : 80 x 40 x 2.7 = 8,640 M³
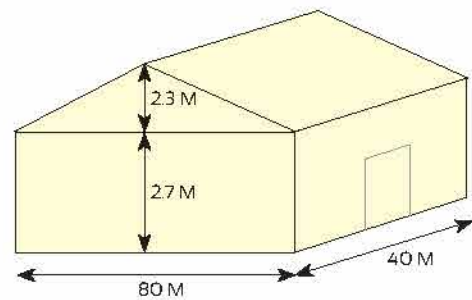
Area 2 : ½ x 80 x 40 x 2.3 = 3,680 M³

Total Area : 12,320 M³

Quantity of the Ventilator $= \dfrac{V \times AC}{EC}$

Put in the Figure $= \dfrac{12,320 \times 6}{984}$

Estimated 75 ventilators (25") are required

▲ Souce Factory, Pulau Indah, Selangor

Industrial

Commercial

Residential