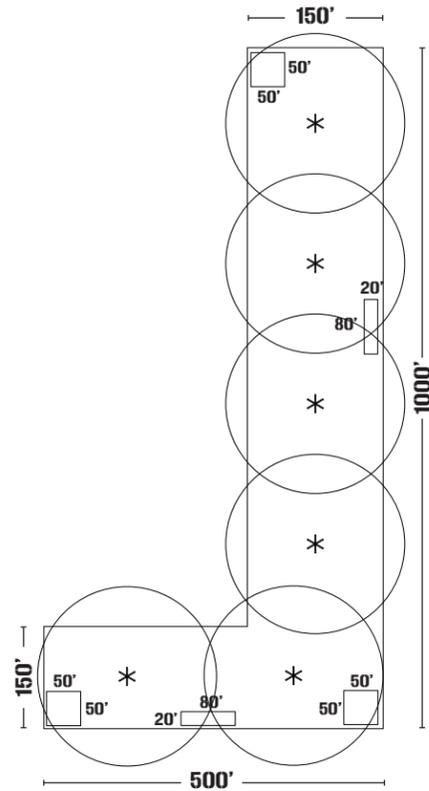


Calculating the Number of Fans Required for your Building

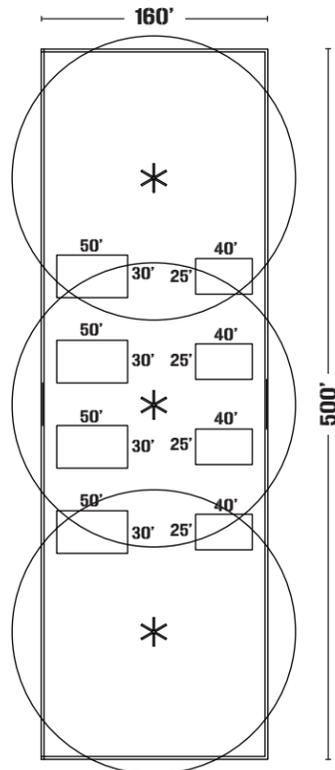
Sample Building 1

1. Calculate total building area.
 $(1000' \times 150') + (350' \times 150') = 202,500 \text{ sq. ft.}$
2. Locate suitable support member to hang the Skyblade Fan from.
3. Obstructions such as floor equipment and other fixtures must be calculated as these objects have direct impact on air circulation.
 Area of Building: $(1000' \times 150') + (350' \times 150') = 202,500 \text{ sq. ft.}$
 Equipment Area: $(50' \times 50')(3) + (20' \times 80')(2) = 10,700 \text{ sq. ft.}$
 Obstructed Space: $(10,700 \text{ sq. ft.}) / (202,500 \text{ sq. ft.}) = 5.28\%$
 Unobstructed Space: $100 - 5.28 = 94.72\%$
4. Check chart for maximum effective diameter based on the allowable fan size.
5. Calculate the number of fans required for the building size based on the percent age of unobstructed space.
 $(31,400 \text{ sq. ft.}) \times (.947) = 29,735 \text{ sq. ft.}$
 $(202,500 \text{ sq. ft.}) / (29,735 \text{ sq. ft.}) = 6.81 \text{ twenty foot fans required.}$



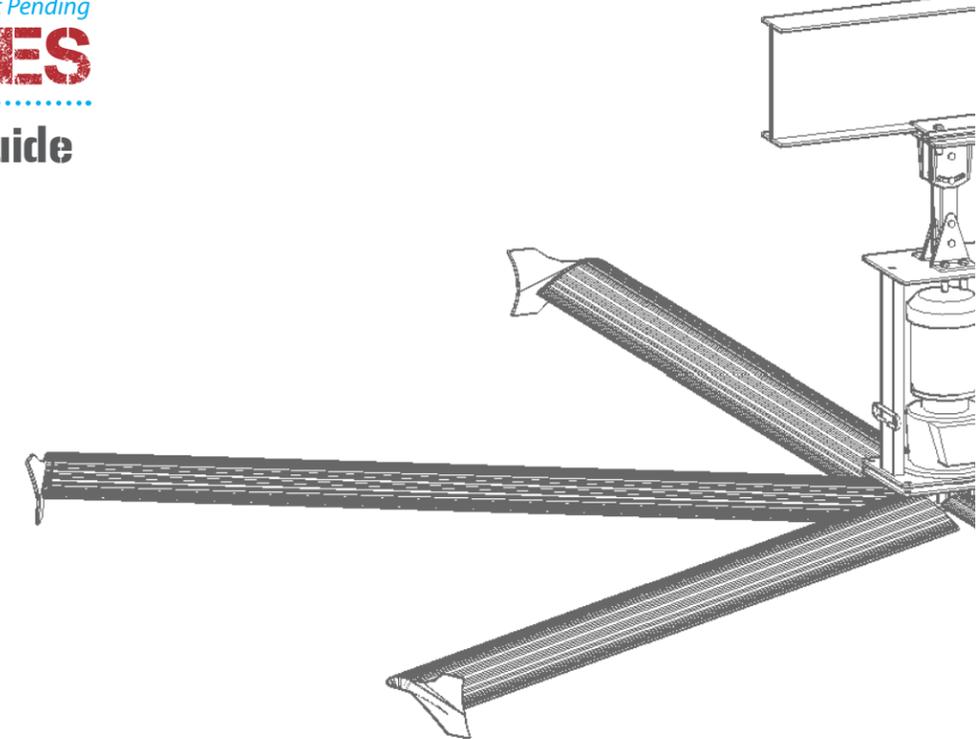
Sample Building 2

1. Calculate total building area.
 $500' \times 160' = 80,000' \text{ sq. ft.}$
2. Locate suitable support member to hang the Skyblade Fan from.
3. Obstructions such as floor equipment and other fixtures must be calculated as these objects have direct impact on air circulation.
 Area of Building: $500' \times 160' = 80,000' \text{ sq. ft.}$
 Equipment Area: $(50' \times 30')(4) + (25' \times 40')(4) = 10,000 \text{ sq. ft.}$
 Obstructed Space: $(10,000 \text{ sq. ft.}) / (80,000 \text{ sq. ft.}) = 12.5\%$
 Unobstructed Space: $100 - 12.5 = 87.5\%$
4. Check chart for maximum effective diameter based on the allowable fan size.
5. Calculate the number of fans required for the building size based on the percentage of unobstructed space.
 $(31,400 \text{ sq. ft.}) \times (.875) = 27,475 \text{ sq. ft.}$
 Divide this number into the total area of the building
 $(80,000 \text{ sq. ft.}) / (27,475 \text{ sq. ft.}) = 2.91 \text{ twenty foot fans required}$



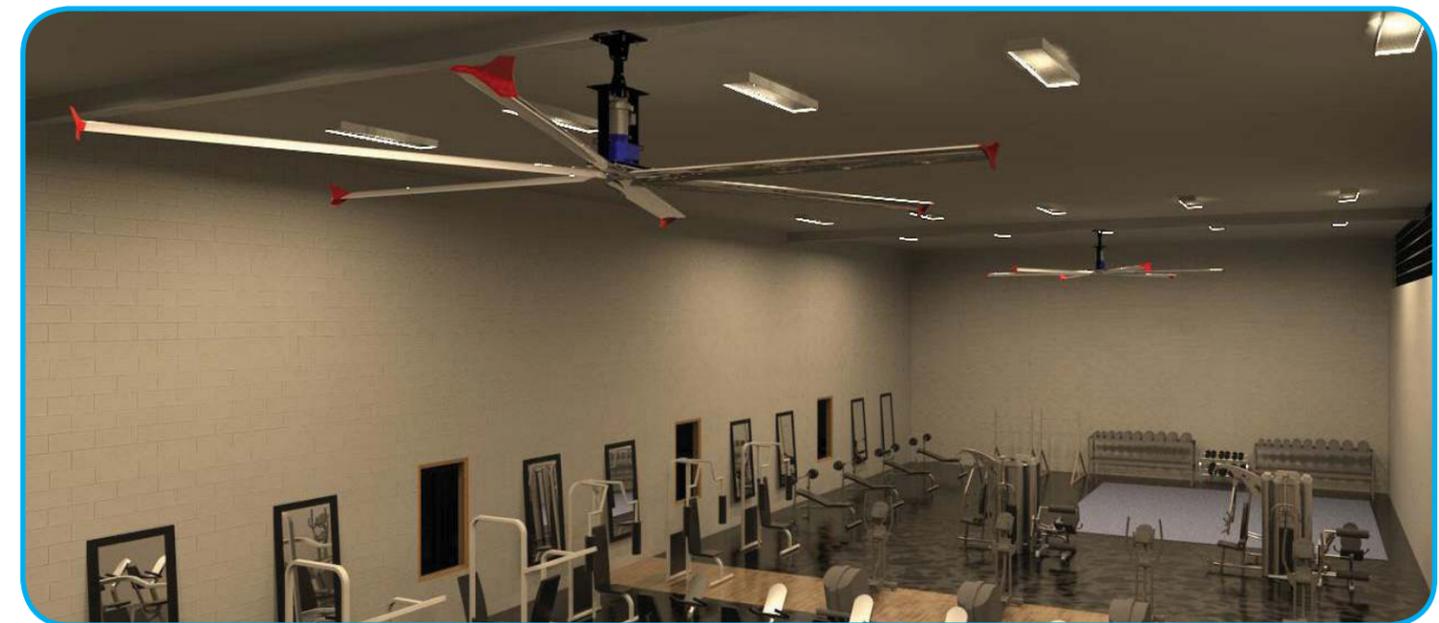
S.T.O.L. SERIES Patent Pending

Application Sizing Guide



This guide has been created to assist with the application of Skyblade STOL Series HVLS fans. It is the goal of this guide to offer practical assistance by outlining basic design criteria. When using this guide, you will find it helpful to refer to the Installation Manual for specific installation requirements.

The design criteria and application examples outlined represent general recommendations, based on experience, for that type of application. However, every application must be viewed on its own merit and address issues that are specific to that installation. Consult the STOL Skyblade Installation Manual for specific requirements and system guidelines.



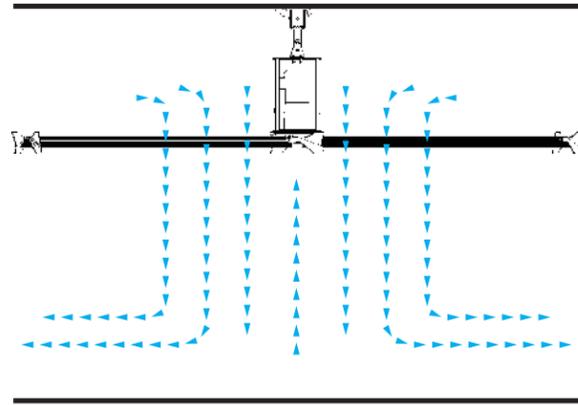
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Understanding Air Movement

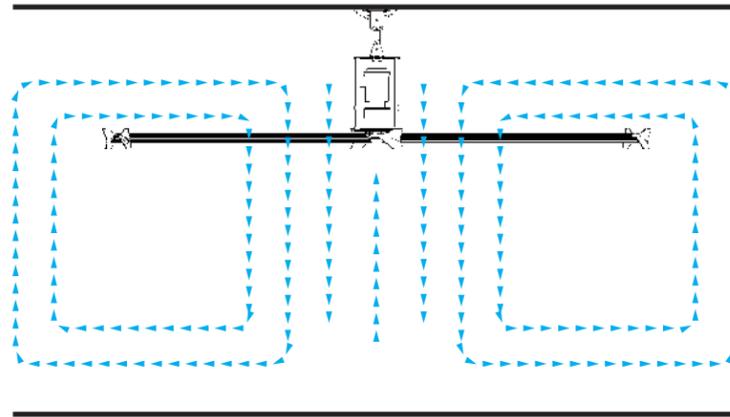
AIR MOVEMENT IN AN OPEN ROOM

As the fan rotates, it pushes air down toward the floor where it spreads out in all directions. The outward distance the air will move after hitting the floor is dependent on both the fan diameter and RPM. Refer to General Sizing Charts - Maximum Effective Diameter.



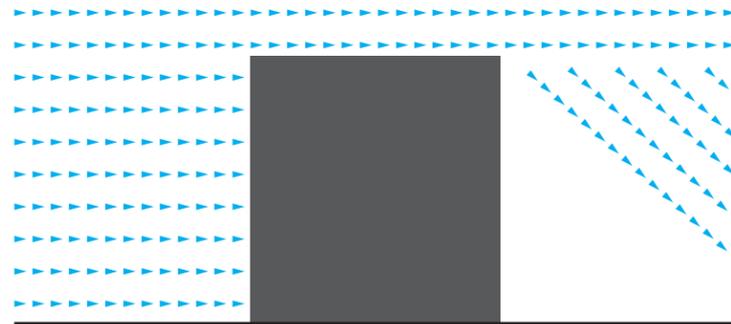
AIR MOVEMENT IN AN ENCLOSED ROOM

In an enclosed room, the airflow moves from the fan to the floor. Once the air from the fan strikes the walls, it is then directed upward and cycled back down towards the floor. This creates additional momentum and escalates air movement from the fan.



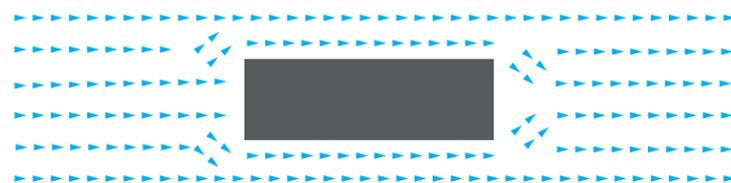
AIR MOVEMENT WITH VERTICAL FLOOR OBSTRUCTIONS

A tall floor obstruction will block a large amount of air movement and leave a stagnant area behind the object while a short obstruction will not block as much air movement.



AIR MOVEMENT WITH HORIZONTAL FLOOR OBSTRUCTIONS

Floor obstructions tend to block air movement. Thin objects do not block much air flow but wide flat objects will leave a stagnant area behind them.



General Sizing Charts

Patent Pending
STOL SKYBLADE
Product Line Offering

| Model Range | Area Covered | Maximum Effective Diameter |
|-------------|---|----------------------------|
| STOL-1236 | 11,304 Ft ² (1050.2 m ²) | 120 Ft. (36.5m) |
| STOL-1443 | 15,386 Ft ² (1429.4 m ²) | 140 Ft. (42.6m) |
| STOL-1649 | 20,096 Ft ² (1866.9 m ²) | 160 Ft. (48.7m) |
| STOL-1855 | 25,434 Ft ² (2362.8 m ²) | 180 Ft. (54.8m) |
| STOL-2061 | 31,400 Ft ² (2917.1 m ²) | 200 Ft. (60.9m) |
| STOL-2473 | 45,216 Ft ² (4200.7 m ²) | 240 Ft. (73.2m) |

APPLICATION DETAILS

General Sizing Chart

| Approx. Room Size | Ceiling Height | | | | Recommended Fan Diameter |
|--------------------------|----------------|---------------|---------------|---------------|--------------------------|
| | 15' | 25' | 35' | 45' | |
| 40' x 40' (12m x 12m) | 12' (3.6m) | 14' (4.3m) | 16' (4.9m) | 18' (5.5m) | |
| 50' x 50' (15m x 15m) | 14' (4.3m) | 16' (4.9m) | 18' (5.5m) | 20' (6.1m) | |
| 60' x 60' (18m x 18m) | 14' (4.3m) | 18' (5.5m) | 18' (5.5m) | 20' (6.1m) | |
| 70' x 70' (21m x 21m) | 16' (4.9m) | 18' (5.5m) | 18' (5.5m) | 20' (6.1m) | |
| 80' x 80' (24m x 24m) | 16' (4.9m) | 18' (5.5m) | 20' (6.1m) | 20' (6.1m) | |
| 90' x 90' (27m x 27m) | 18' (5.5m) | 24' (7.3m) | 24' (7.3m) | 24' (7.3m) | |

Application Sizing Calculations

- Calculate total building area.
Length x Width
- Locate suitable support member to hang the Skyblade Fan from.
 - See manual for sizing requirements
 - Measure the allowable distance between columns, walls, lights and other obstructions. This will give you the max allowable fan diameter possible that can be installed in the space.
- Obstructions such as floor equipment and other fixtures must be calculated as these objects have direct impact on air circulation.
 - Find the percentage of obstructions
 Area of building = Length x Width of building
 Equipment Area = Length x Width of equipment
 Obstructed Space = Equipment Area / Area of Building
 Unobstructed Space Percentage = 100% - Obstructed Space
- Check chart for maximum effective diameter based on the allowable fan size.
- Calculate the number of fans required for the building size based on the percent age of unobstructed space.
 - To determine how much square footage each fan will cover, refer to maximum effective diameter chart and multiply.
Fan Coverage Area x Percent of Unobstructed Space.
 - Divide this number into the total area of the building.
Total Building Area / Square footage of fan coverage = # of fans Sky Blade required.

MODEL NOMENCLATURE

| Series | STOL | STOL | STOL | STOL | STOL | STOL |
|----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|
| Diameter | 12'/3.6M | 14'/4.3M | 16'/4.9M | 18'/5.5M | 20'/6.1M | 24'/7.3M |
| Blades | 6 | 6 | 6 | 6 | 6 | 6 |
| Voltage Input* | 115 230 460 575 | 115 230 460 575 | 115 230 460 575 | 115 230 460 575 | 115 230 460 575 | 115 230 460 575 |

Model Number Ordering Format: SERIES - DIAMETER - BLADES - INPUT VOLTAGE - PHASE. Sample Model Number: STOL-1649-623-1
*Single phase available. 115V or 230V with both 50Hz. and 60Hz. *Three phase available. 230V, 460V or 575V with both 50Hz. and 60Hz.