

# FAN DISTANCE GUIDELINES

This document is intended for reference only. The fan and fan accessories must be installed according to the instructions provided in the installation guide. All safety guidelines must be followed. If fan installation does not meet these guidelines, contact Big Ass Fans to determine the most appropriate mounting option.

## General clearance guidelines

In addition to the specific requirements outlined in this document, adhere to the following general guidelines when installing a Big Ass Fan. *If a fan application does not meet these requirements, contact Engineering to discuss alternative installations or fan options.*

- Space the fans at a center-to-center distance that is at least 2.5x the fan diameter.
- The fan installation area must be free of obstructions such as lights, cables, sprinklers, or other building structure components.
- The minimum clearance from obstructions should be no less than 2 ft (610 mm) in all directions. Ceiling and wall clearance require specific consideration based on model and size of fan. See the tables on the following pages for minimum ceiling and wall clearance requirements.
- The fan must be installed so that the airfoils are at least 10 ft (3 m) above the finished floor (unless otherwise noted).
- The fan must be installed so that it is plumb to the ground (unless column-mounted).

## National Fire Protection Association compliance

In order to comply with the National Fire Protection Association (NFPA) guidelines for sprinkler systems (NFPA 13), all HVLS ceiling-mounted Big Ass Fans that are installed in the United States must incorporate a means of automatic shutdown upon detection of water flow in the sprinkler system. Big Ass Fans installed in buildings in the United States that are equipped with sprinkler systems, including Early Suppression Fast Response (ESFR) sprinklers, must comply with the following guidelines to adhere to the NFPA 13 standard:

- Each fan must be approximately centered between four (4) adjacent sprinklers.
- The vertical distance from the fan to the sprinkler deflector must be a minimum of 3 ft (914 mm).
- All fans must be interlocked to shut down immediately upon receiving a water flow signal from the alarm system.

Each fan subject to this standard is shipped with an ESFR interface to accommodate the requirements.

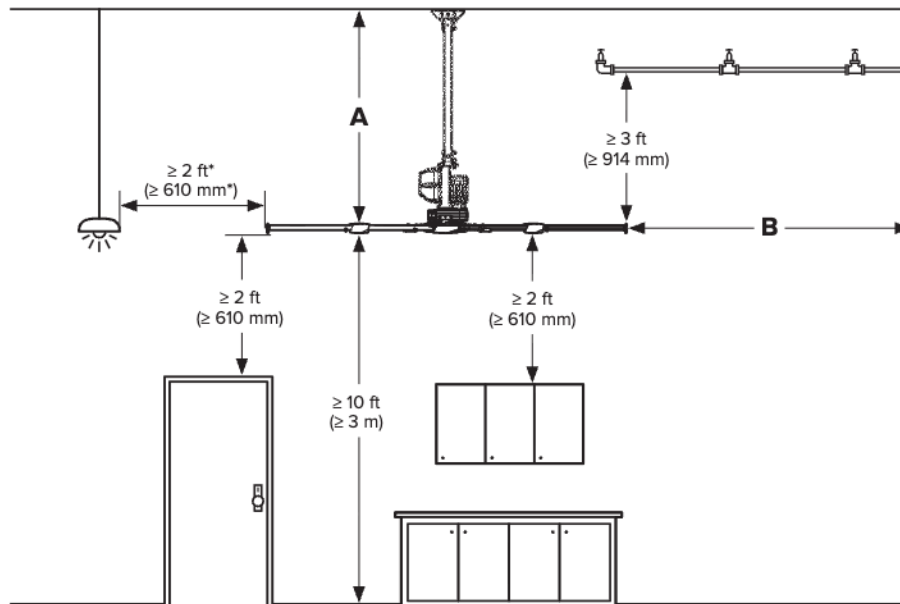
## Infrared and radiant heater clearances

If mounting a Big Ass Fan in the vicinity of an infrared or radiant heater, Big Ass Fans recommends that the fan be mounted according to the following guidelines:

- The fan should be mounted outside of the clearances recommended by the manufacturer of the heater and at a height equal to or above the shielding on the heating element.
- The controller must be mounted on the opposite side of the heater.
- If mounting the fan below the heater shielding, all fan elements must be located outside of the clearances recommended by the manufacturer of the heater and the controller must be remotely mounted.
- The installation manual for the specific model of heater will typically provide the minimum clearances to combustibles.

# HVLS fan clearances

Fans not specified in the tables below should maintain the general guidelines listed on the previous page.



\*When possible, lights should be level with the fan's airfoils. Big Ass Fans recommends turning lights off if located above the fan's rotating airfoils.

## Ceiling clearance (A)

Measure the distance from the top of the winglet to the ceiling deck or major obstruction to airflow.

|                       | Powerfoil® X4     | Powerfoil® X4 Plus | Powerfoil D®     | Powerfoil® 5<br>Powerfoil® 6 | ShopFan          | Essence®         |
|-----------------------|-------------------|--------------------|------------------|------------------------------|------------------|------------------|
| <b>30 ft (9.1 m)*</b> | ≥ 10 ft (≥ 3.0 m) | —                  | —                | —                            | —                | —                |
| <b>24 ft (7.3 m)</b>  | ≥ 7 ft (≥ 2.1 m)  | ≥ 8 ft (≥ 2.4 m)   | ≥ 7 ft (≥ 2.1 m) | ≥ 7 ft (≥ 2.1 m)             | —                | —                |
| <b>22 ft (6.7 m)</b>  | —                 | ≥ 8 ft (≥ 2.4 m)   | —                | —                            | —                | —                |
| <b>20 ft (6.1 m)</b>  | ≥ 7 ft (≥ 2.1 m)  | ≥ 7 ft (≥ 2.1 m)   | ≥ 7 ft (≥ 2.1 m) | ≥ 7 ft (≥ 2.1 m)             | —                | —                |
| <b>18 ft (5.5 m)</b>  | ≥ 6 ft (≥ 1.8 m)  | ≥ 7 ft (≥ 2.1 m)   | ≥ 6 ft (≥ 1.8 m) | ≥ 6 ft (≥ 1.8 m)             | —                | —                |
| <b>16 ft (4.9 m)</b>  | ≥ 6 ft (≥ 1.8 m)  | ≥ 6 ft (≥ 1.8 m)   | ≥ 6 ft (≥ 1.8 m) | ≥ 6 ft (≥ 1.8 m)             | —                | —                |
| <b>14 ft (4.3 m)</b>  | ≥ 5 ft (≥ 1.5 m)  | ≥ 6 ft (≥ 1.8 m)   | ≥ 5 ft (≥ 1.5 m) | ≥ 5 ft (≥ 1.5 m)             | ≥ 5 ft (≥ 1.5 m) | ≥ 2 ft (≥ 0.6 m) |
| <b>12 ft (3.7 m)</b>  | ≥ 5 ft (≥ 1.5 m)  | —                  | ≥ 5 ft (≥ 1.5 m) | ≥ 5 ft (≥ 1.5 m)             | —                | ≥ 2 ft (≥ 0.6 m) |
| <b>10 ft (3.0 m)</b>  | —                 | —                  | ≥ 4 ft (≥ 1.2 m) | ≥ 4 ft (≥ 1.2 m)             | —                | ≥ 2 ft (≥ 0.6 m) |
| <b>8 ft (2.4 m)</b>   | —                 | —                  | ≥ 4 ft (≥ 1.2 m) | ≥ 4 ft (≥ 1.2 m)             | —                | ≥ 2 ft (≥ 0.6 m) |

## Wall clearance (B)

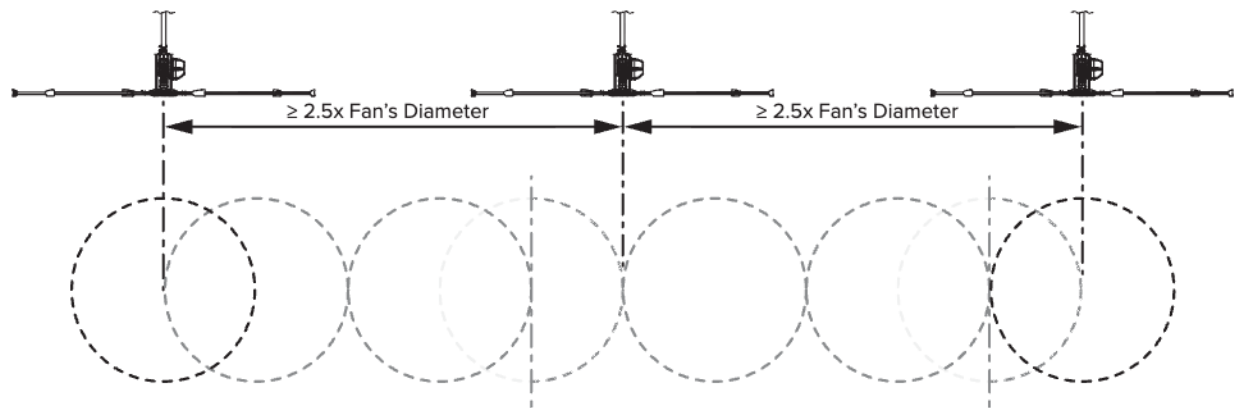
Measure the distance from the outer edge of the winglet to the wall.

|                       | Powerfoil® X4     | Powerfoil® X4 Plus | Powerfoil D®      | Powerfoil® 5<br>Powerfoil® 6 | ShopFan          | Essence®         |
|-----------------------|-------------------|--------------------|-------------------|------------------------------|------------------|------------------|
| <b>30 ft (9.1 m)*</b> | ≥ 15 ft (≥ 4.6 m) | —                  | —                 | —                            | —                | —                |
| <b>24 ft (7.3 m)</b>  | ≥ 12 ft (≥ 3.7 m) | ≥ 12 ft (≥ 3.7 m)  | ≥ 12 ft (≥ 3.7 m) | ≥ 12 ft (≥ 3.7 m)            | —                | —                |
| <b>22 ft (6.7 m)</b>  | —                 | ≥ 11 ft (≥ 3.4 m)  | —                 | —                            | —                | —                |
| <b>20 ft (6.1 m)</b>  | ≥ 10 ft (≥ 3.0 m) | ≥ 10 ft (≥ 3.0 m)  | ≥ 10 ft (≥ 3.0 m) | ≥ 10 ft (≥ 3.0 m)            | —                | —                |
| <b>18 ft (5.5 m)</b>  | ≥ 9 ft (≥ 2.7 m)  | ≥ 9 ft (≥ 2.7 m)   | ≥ 9 ft (≥ 2.7 m)  | ≥ 9 ft (≥ 2.7 m)             | —                | —                |
| <b>16 ft (4.9 m)</b>  | ≥ 8 ft (≥ 2.4 m)  | ≥ 8 ft (≥ 2.4 m)   | ≥ 8 ft (≥ 2.4 m)  | ≥ 8 ft (≥ 2.4 m)             | —                | —                |
| <b>14 ft (4.3 m)</b>  | ≥ 7 ft (≥ 2.1 m)  | ≥ 7 ft (≥ 2.1 m)   | ≥ 7 ft (≥ 2.1 m)  | ≥ 7 ft (≥ 2.1 m)             | ≥ 7 ft (≥ 2.1 m) | ≥ 7 ft (≥ 2.1 m) |
| <b>12 ft (3.7 m)</b>  | ≥ 6 ft (≥ 1.8 m)  | —                  | ≥ 6 ft (≥ 1.8 m)  | ≥ 6 ft (≥ 1.8 m)             | —                | ≥ 6 ft (≥ 1.8 m) |
| <b>10 ft (3.0 m)</b>  | —                 | —                  | ≥ 5 ft (≥ 1.5 m)  | ≥ 5 ft (≥ 1.5 m)             | —                | ≥ 5 ft (≥ 1.5 m) |
| <b>8 ft (2.4 m)</b>   | —                 | —                  | ≥ 4 ft (≥ 1.2 m)  | ≥ 4 ft (≥ 1.2 m)             | —                | ≥ 4 ft (≥ 1.2 m) |

\*The 30 ft (9.1 m) diameter option is NOT available for any buildings with an existing sprinkler system (including an ESFR system) or where such a system may be installed, in accordance with applicable NFPA standards.

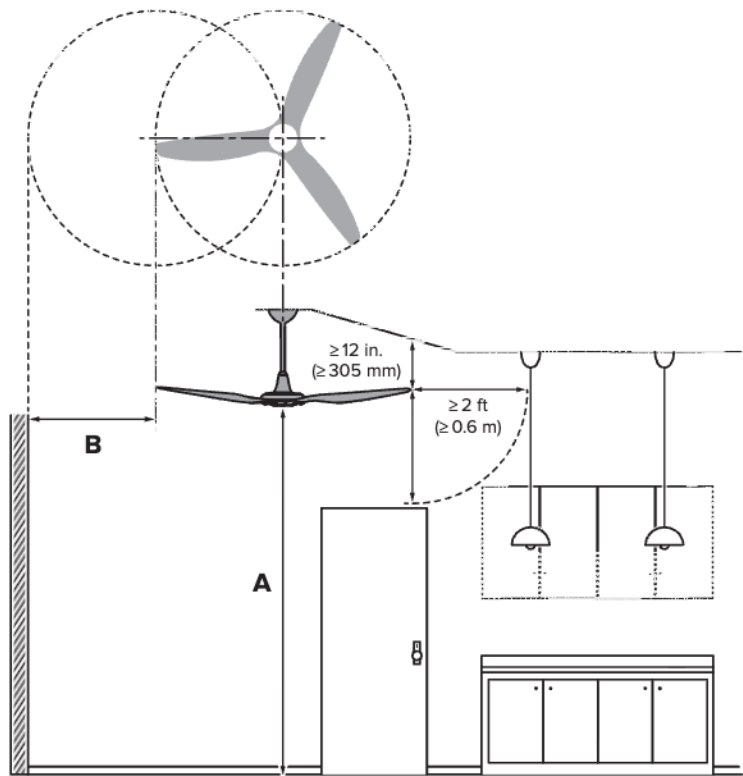
## Multiple fans

The center-to-center distance between each fan should be at least 2.5x the fan's diameter.



## Small overhead fan clearances

Measure the distance from the top of the airfoil to the ceiling deck or major obstruction to airflow. Measure the distance from the tip of the airfoil to the wall.



|                 | Clearance From Ceiling | Clearance From Obstructions | Distance From Floor (A) | Distance from Wall (B) |
|-----------------|------------------------|-----------------------------|-------------------------|------------------------|
| <b>Diameter</b> |                        |                             |                         |                        |
| 96 in. (244 cm) | ≥ 12 in. (≥ 305 mm)    | ≥ 2 ft (≥ 0.6 m)            | ≥ 7 ft (≥ 2.1 m)*       | ≥ 48 in. (≥ 1219 mm)   |
| 84 in. (213 cm) | ≥ 12 in. (≥ 305 mm)    | ≥ 2 ft (≥ 0.6 m)            | ≥ 7 ft (≥ 2.1 m)*       | ≥ 42 in. (≥ 1067 mm)   |
| 72 in. (183 cm) | ≥ 12 in. (≥ 305 mm)    | ≥ 2 ft (≥ 0.6 m)            | ≥ 7 ft (≥ 2.1 m)*       | ≥ 36 in. (≥ 914 mm)    |
| 60 in. (152 cm) | ≥ 12 in. (≥ 305 mm)    | ≥ 2 ft (≥ 0.6 m)            | ≥ 7 ft (≥ 2.1 m)*       | ≥ 30 in. (≥ 762 mm)    |
| 52 in. (132 cm) | ≥ 12 in. (≥ 305 mm)    | ≥ 2 ft (≥ 0.6 m)            | ≥ 7 ft (≥ 2.1 m)*       | ≥ 26 in. (≥ 660 mm)    |
| 44 in. (112 cm) | ≥ 12 in. (≥ 305 mm)    | ≥ 2 ft (≥ 0.6 m)            | ≥ 7 ft (≥ 2.1 m)*       | ≥ 24 in. (≥ 610 mm)**  |

\*United States, Canada, Australia. If installing the fan outside the United States, Canada, and Australia, the fan must be installed so that the blades are a minimum of 2.3 m above the floor. If installing the fan in Malaysia, the fan must be installed so that the blades are a minimum of 2.5 m above the floor.

\*\*The fan must be mounted a minimum of 2 ft (0.6 m) from the nearest wall.

# Mobile and column/wall fan clearances

Measure the distance from the highest/lowest part of the cage to the ceiling deck, floor, or major obstruction to airflow.

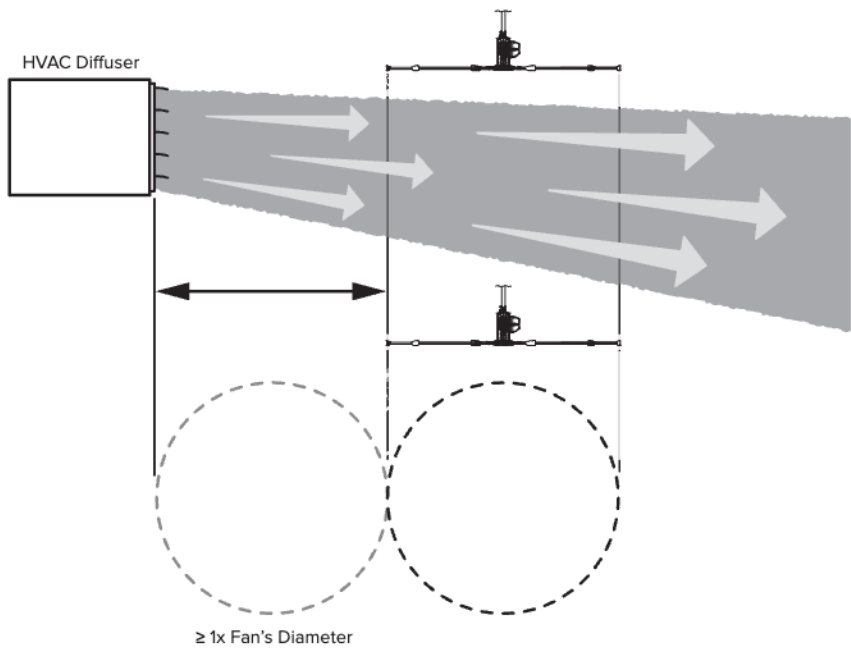
| Clearance From Ceiling                  | Clearance From Obstructions             | Distance From Floor                    |
|-----------------------------------------|-----------------------------------------|----------------------------------------|
| $\geq 2\text{ ft } (\geq 0.6\text{ m})$ | $\geq 2\text{ ft } (\geq 0.6\text{ m})$ | $\geq 10\text{ ft } (\geq 3\text{ m})$ |

## Heating, Ventilation, and Air Conditioning equipment clearances

To ensure HVAC equipment does not decrease fan performance and product life or cause a potentially unsafe situation, install the fan according to the following guidelines. HVAC equipment includes exhaust fans, air conditioning systems, heating systems, etc.

### Fans located above or below HVAC discharge or intake ✓

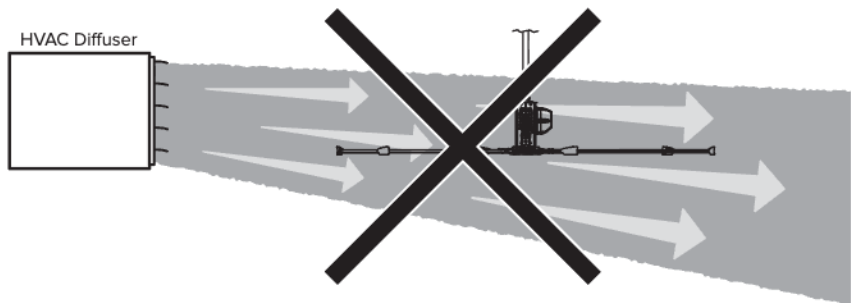
When the fan is located above or below the discharge or intake of HVAC equipment, the minimum distance between the fan and the HVAC equipment must be at least one times the fan's diameter.



The fan is located above or below the HVAC discharge or intake.

### Fans located inside HVAC discharge or intake ✗

**DO NOT** install the fan at the same level as the discharge or intake of HVAC equipment.



The fan **SHOULD NOT** be located inside the HVAC discharge or intake.