

FANTOM SERIES

SUBMITTAL DATA - HVLS CEILING FANS & ACCESSORIES

SUBMITTED BY: _____ DATE: _____

JOB TITLE: _____ CONTRACTOR: _____

ADDRESS: _____ PHONE #: _____

CITY: _____ ADDRESS: _____

STATE: _____ ZIP: _____ CITY: _____

STATE: _____ ZIP: _____

ENGINEER: _____

LOCAL REPRESENTATIVE: _____

QTY.	MODEL #	FAN DIA.	VOLTAGE	MOTOR FLA	PHASE	HP	AREA COVERED	MAX EFFECTIVE DIAMETER	MAX SPEED	INSTALLED WEIGHT
	FNTM-0618-623-3	6 Ft. (1.8 m)	180-480 VAC 50/60hz	5.2	3	1.35 HP (1.0 kW)	2827 Ft ² (263 m ²)	60 Ft. (18 m)	118 RPM	275 lbs (125 kg)
	FNTM-0618-646-3									
	FNTM-0824-623-3	8 Ft. (2.4 m)					5024 Ft ² (467 m ²)	80 Ft. (24 m)	107 RPM	285 lbs (129 kg)
	FNTM-0824-646-3									
	FNTM-1030-623-3	10 Ft. (3.0 m)					7850 Ft ² (730 m ²)	100 Ft. (30 m)	97 RPM	295 lbs (134 kg)
	FNTM-1030-646-3									
	FNTM-1236-623-3	12 Ft. (3.6 m)					11,304 Ft ² (1050.2 m ²)	120 Ft. (36 m)	88 RPM	305 lbs (138 kg)
	FNTM-1236-646-3									
	FNTM-1443-623-3	14 Ft. (4.3 m)					15,386 Ft ² (1429.4 m ²)	140 Ft. (43 m)	75 RPM	315 lbs (143 kg)
	FNTM-1443-646-3									
	FNTM-1649-623-3	16 Ft. (4.9 m)					20,096 Ft ² (1866.9 m ²)	160 Ft. (49 m)	64 RPM	325 lbs (147 kg)
	FNTM-1649-646-3									
	FNTM-1855-623-3	18 Ft. (5.5 m)	25,434 Ft ² (2362.8 m ²)	180 Ft. (55 m)	55 RPM	335 lbs (152 kg)				
	FNTM-1855-646-3									
	FNTM-2061-623-3	20 Ft. (6.1 m)	31,400 Ft ² (2917.1 m ²)	200 Ft. (61 m)	50 RPM	345 lbs (157 kg)				
	FNTM-2061-646-3									
	FNTM-2473-623-3	24 Ft. (7.3 m)	45,216 Ft ² (4200.7 m ²)	240 Ft. (73 m)	33 RPM	355 lbs (161 kg)				
	FNTM-2473-646-3									

FANTOM SPECIFICATIONS

AIRFOILS

- Equipped with 6 airfoils
- Extruded anodized aluminum
- High performance E420 design with STOL technology

CONSTRUCTION

- Mounting is to be 1/4" powder-coated steel and anodized aluminum
- All construction is to be protected from the elements
- Stainless steel safety brackets

VFD

- Onboard, IP65 rating
- Factory assembled & programmed
- Minimum start/stop torque loads

WINGTIP FENCE

- Equipped with 6 wingtip fences
- Constructed of nylon 66
- Redirect outward airflow into downward airflow

MOTOR

- Direct drive ECM motor
- Totally enclosed
- IP65 rating
- Class F insulation
- 1.35HP (1.0 kW) nominal horsepower

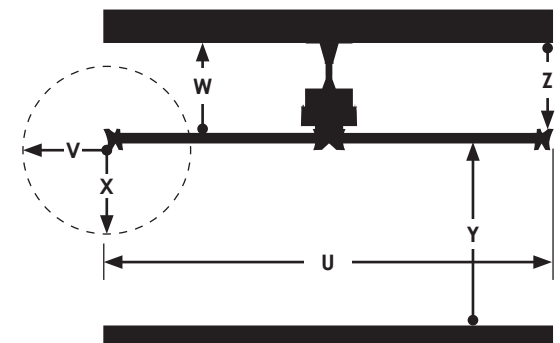
STANDARD LIMITED WARRANTY

- 3 year: Motor
- 1 year: Electronics
- Lifetime: Airfoil
- Extended warranties available

FANTOM SERIES SAFETY CLEARANCES AND DROP HEIGHT¹

MODEL #	DIAMETER [U]	SIDE [V]	ABOVE [W]	BELOW [X]	MIN. AIRFOIL HEIGHT [Y]	AIRFOIL DROP HEIGHT [Z]
FNTM-0618	6 Ft (1.8 m)	12"	33"	12"	10'	38"
FNTM-0824	8 Ft (2.4 m)	15"	33"	15"	10'	38"
FNTM-1030	10 Ft (3.0 m)	18"	33"	18"	10'	38"
FNTM-1236	12 Ft (3.6 m)	22"	33"	22"	10'	38"
FNTM-1443	14 Ft (4.3 m)	26"	33"	26"	10'	38"
FNTM-1649	16 Ft (4.9 m)	30"	33"	30"	10'	40"
FNTM-1855	18 Ft (5.5 m)	33"	33"	33"	10'	43"
FNTM-2061	20 Ft (6.1 m)	36"	33"	36"	10'	45"
FNTM-2473	24 Ft (7.3 m)	44"	33"	44"	10'	49"

Safety Clearances & Drop Height

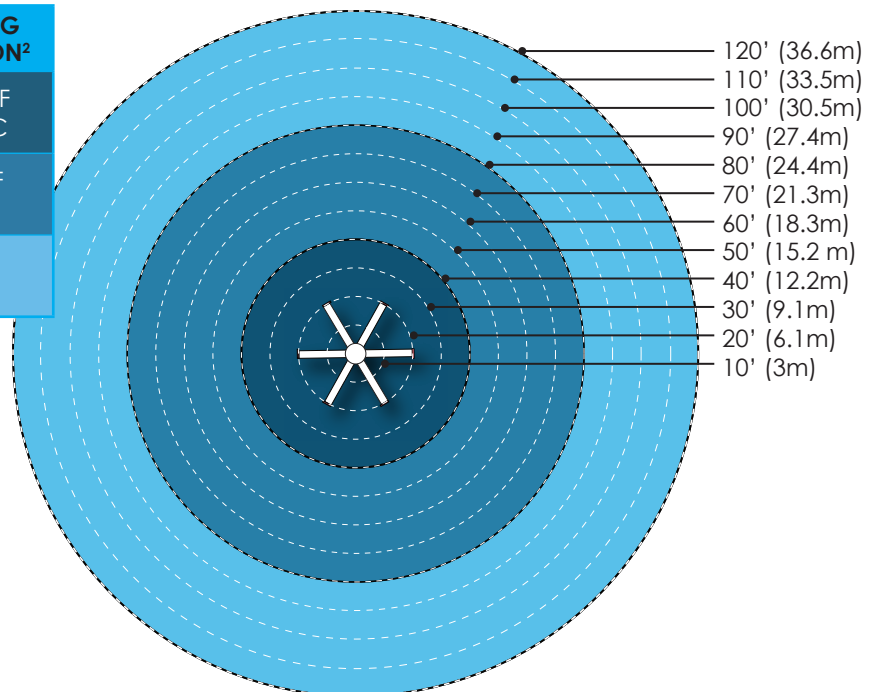


¹ All dimensions are based on a standard 1 ft. extension bar.

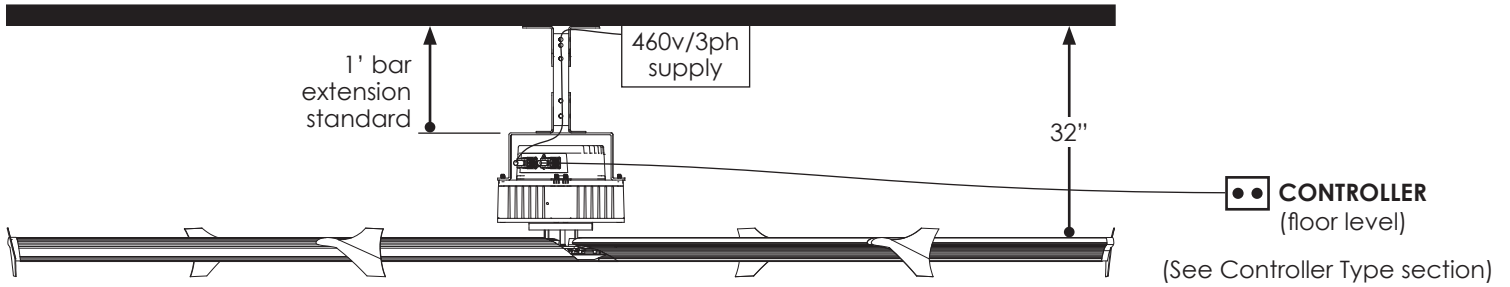
FANTOM SERIES MAX EFFECTIVE DIAMETER

DISTANCE FROM CENTER	AIR VELOCITY ²	COOLING SENSATION ²
0' - 40' (0 - 12.2m)	620 - 900 fpm 3 - 4.5 m/s	14 - 15°F 8 - 10°C
40' - 80' (12.2 - 24.4m)	340 - 620 fpm 1.7 - 3 m/s	9 - 15°F 5 - 8°C
80' - 120' (24.4-36.6m)	0 - 340 fpm 0 - 1.7 m/s	0 - 9°F 0 - 5°C

² Stated values are estimations based on standard installation at maximum power. Values such as building layout, obstructions, ceiling height, and drop ceiling height may effect these numbers.



FANTOM SERIES INSTALLATION



FANTOM SERIES OPTIONAL ACCESSORIES & UPGRADES

QTY.	PART #	DESCRIPTION	NOTES							
EXTENSION BARS										
	1002-X	Extension Bar	Lowens assembly in 1 ft increments. All models come standard with a 1 ft. extension. Custom lengths up to 10 ft. are available.							
QTY.	1'	2'	3'	4'	5'	6'	7'	8'	9'	10'
CONTROLLER TYPES										
	1034-1	Single Yoke Controller	Includes Fwd/Rev switch and 0-10 speed pot to control fan speed. NEMA 4x enclosure. (qty. 1) 100 Ft. wire factory supplied. One per fan required.							
	1034-2	Double Yoke Controller	Includes Fwd/Rev switch and 0-10 speed pot to control fan speed. NEMA 4x enclosure. (qty 2) 100 Ft. wire factory supplied. One per two fans required.							
	1034-3	Triple Yoke Controller	Includes Fwd/Rev switch and 0-10 speed pot to control fan speed. NEMA 4x enclosure. (qty 3) 100 Ft. wire factory supplied. One per three fans required.							
	1067	UltraLite Controller	Control each fan individually in the forward direction. Allows operation of the fan for cooling & destratification. Wire to be field supplied One per fan required.							
	1069	VLD Controller	Control each fan individually via an economic digital interface. Wire to be field supplied.							
OPTIONAL ACCESSORIES										
	1044	Purlin Mounting System	Mounting system for hanging SkyBlade Fans along purlin ceiling braces (hardware included).							
	1050	230v Line Reactor	Cleans dirty voltage by reducing harmonic current and transient voltages. Includes one Nema 1 enclosure.							
	1051	460v Line Reactor								
	1054	Lockable Controller Shroud	Add-on for the yoke controller to allow them to be padlocked. Includes two (2) shrouds (Lock not included).							
OPTIONAL UPGRADES										
	1015	Black Wing Tips	Optional upgrade to black wingtips to compliment your space.							
LIMITED WARRANTY UPGRADES										
	1061	Standard Level Warranty	Standard limited warranty 3 years-motor/1 year-electronic controls/lifetime-airfoils, chassis & hub.							
	1062	Bronze Level Warranty	Upgrade warranty to 3 years-motor/3 years-electronic controls/lifetime-airfoils, chassis & hub.							
	1063	Silver Level Warranty	Upgrade warranty to 5 years-motor/3 years-electronic controls/lifetime-airfoils, chassis & hub.							
	1064	Gold Level Warranty	Upgrade warranty to 7 years-motor/7 years-electronic controls/lifetime-airfoils, chassis & hub.							
	1076	Platinum Level Warranty	Upgrade warranty to 12 years-motor/12 years-electronic controls/lifetime-airfoils, chassis & hub.							

NOTE: Refer to the Accessory List for detailed specifications and limitations on any of the above options.

FANTOM SERIES WRITTEN SPECIFICATIONS

HIGH VOLUME LOW SPEED FANS

- A. Basis-of-design product: Subject to compliance with requirements, provide WD Industries, dba SkyBlade Fan Company; **Fantom Series** high volume low speed ceiling fans.
- B. Complete Unit: The fan shall be designed to move an effective amount of air for cooling and Destratification in large industrial/commercial applications over an extended life. The fan and components shall be designed specifically for high volume, low speed fans to ensure lower noise operation. The sound levels from the fan operating at maximum speed shall not exceed 35 dBA (measured 20' or 6.1 m below the blades and 20' or 6.1 m horizontally from the center of the fan).
- C. Airfoils: The fan shall be equipped with six (6) high volume, low speed airfoils of precision 6005-T5 extruded anodized aluminum alloy. Each airfoil shall be of the high performance E420 (Short Take-Off and Landing) design. The airfoils shall be connected by means of two (2) locking bolts per airfoil. The airfoils shall be connected to "H-Strut" which is connected to the hub and interlocked with two sets of six stainless steel retainers.
- D. Wingtip Fence: The fan shall be equipped with six (6) FNTM wingtip fences designed to redirect outward airflow into downward airflow, thereby enhancing the efficiency and effectiveness of the fan. The wingtips shall be molded of Nylon 66 and nominally measure 10"x6-3/8" (25.4 cm x 16.2 cm). The wingtips shall be attached at the tip of each airfoil by means of a single screw. The standard color of the winglets shall be "SkyBlade Red," but may also be offered in black.
- E. Motor: The fan motor shall be an ECM (Electronically Commutated Motor), BLDC (Brushless DC), gearless direct drive 230V, 3 Ph and 460V, 3 Ph. The motor shall be totally enclosed with an IP65 NEMA classification. The motor shall be manufactured with Class F insulation. The output shaft of the motor shall be no less than a 3" keyless shaft with bearings that are lubed for life.
- F. Extension Bar: The fan shall be equipped with an extension bar that provides a structural connection between the fan assembly and upper mounting system. The extension bar shall be aluminum 2" x 2" (5.08 cm x 5.08 cm) square tubing and powder-coated for corrosion resistance and appearance. Standard length of extension bar is 1 FT available in 1 FT increments up to 10 FT as specified by the architect or owner.
- G. Hub: The fan hub shall be minimum 1/4" precision press broken stainless steel for high strength and rigidity. The hub shall be secured to the output shaft of the motor by means of a precision cut stainless steel cylinder & interlocking bushing system. Both hub and steel bushing shall be precision machined to achieve a factory balanced and solid rotating assembly. The hub shall incorporate six (6) safety retaining brackets no less than 1/8" made of stainless steel that shall restrain the hub/airfoil assembly in case of motor output shaft failure.
- H. Mounting System: The fan mounting system shall be designed for quick and secure installation from a structural support beam. All components in the mounting system shall be of welded construction using 1/4" powder-coated steel. All mounting bolts shall be Grade 5 or Grade 8 SAE.
- I. Guy Wire: The fan shall be equipped with a safety cable that provides an additional means of securing the fan assembly to the building structure. The safety cable shall be a four point restraint 3/16" (.47 cm) diameter and fabricated out of 7 x 19 stranded galvanized steel with each cable having a breaking strength of 2,475 lbs. The cable is to be secured with supplied wire rope clips or fasteners. Field construction of safety cables is not permitted.
- J. Safety Cable: The fan shall be equipped with a safety cable that provides an additional means of securing the fan assembly to the building structure. The safety cable shall be 3/16" (.47 cm) diameter and fabricated out of 7 x 19 stranded galvanized steel a break strength of 2,475 lbs. The cable is to be secured with supplied wire rope clips or fasteners. Field construction of safety cables is not permitted.
- K. VFD Enclosure: The fan controller shall be constructed using a Variable Frequency Drive (VFD) that is pre-assembled and factory programmed to communicate a 60 second ramp up/down to the fan, to minimize the starting and braking torques and for smooth and efficient operation. The VFD enclosure shall be pre-assembled and internally wired for ease of installation. The controller shall be onboard with IP65 rating.
- L. Warranty: The Manufacturer shall replace any products or components defective in material or workmanship, free of charge to the customer (including transportation charges within the USA, F.O.B. Warren, MI), pursuant to the complete terms and conditions of the SkyBlade Fan Company Non-Prorated Warranty in accordance to the following schedule:
- Airfoils - Lifetime (Parts)
 - Hub - Lifetime (Parts)
 - Motor - 3 years (Parts)*
 - Controller - 1 years (Parts)*
- *If factory supplied installation methods are shown not to be valid, SkyBlade Fan Company has right to void warranty. Further Information on the terms and conditions of the standard & purchased warranties can be found in Warranty Card.