

ST3 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 ¹	MOTOR FLA	PHASE	HP	AREA COVERED	MAX EFFECTIVE DIAMETER ²	MAX SPEED	INSTALLED WEIGHT
	ST3-1236-312-1	12 Ft. (3.6 m)	99-126V	3.38	1	1.0HP (0.75 kW)	11,304 Ft ² (1,050 m ²)	120 Ft. (36.6 m)	105 RPM	198 lb (90 kg)
	ST3-1236-323-1		198-264V	3.38	1					
	ST3-1236-323-3		198-264V	3.38	3					
	ST3-1236-346-3		400-480V	1.69	3					
	ST3-1236-357-3		450-660V	1.69	3					
	ST3-1443-312-1	14 Ft. (4.3 m)	99-126V	3.38	1	1.0HP (0.75 kW)	15,386 Ft ² (1,429 m ²)	140 Ft. (42.7 m)	86 RPM	205 lb (93 kg)
	ST3-1443-323-1		198-264V	3.38	1					
	ST3-1443-323-3		198-264V	3.38	3					
	ST3-1443-346-3		400-480V	1.69	3					
	ST3-1443-357-3		450-660V	1.69	3					
	ST3-1649-312-1	16 Ft. (4.9 m)	99-126V	3.38	1	1.0HP (0.75 kW)	20,096 Ft ² (1,867 m ²)	160 Ft. (48.8m)	73 RPM	211 lb (96 kg)
	ST3-1649-323-1		198-264V	3.38	1					
	ST3-1649-323-3		198-264V	3.38	3					
	ST3-1649-346-3		400-480V	1.69	3					
	ST3-1649-357-3		450-660V	1.69	3					
	ST3-1855-312-1	18 Ft. (5.5 m)	99-126V	3.38	1	1.0HP (0.75 kW)	25,434 Ft ² (2,363 m ²)	180 Ft. (54.9 m)	55 RPM	218 lb (99 kg)
	ST3-1855-323-1		198-264V	3.38	1					
	ST3-1855-323-3		198-264V	3.38	3					
	ST3-1855-346-3		400-480V	1.69	3					
	ST3-1855-357-3		450-660V	1.69	3					
	ST3-2061-312-1	20 Ft. (6.1 m)	99-126V	3.38	1	1.0HP (0.75 kW)	31,400 Ft ² (2,917 m ²)	200 Ft. (61 m)	49 RPM	224 lb (102 kg)
	ST3-2061-323-1		198-264V	3.38	1					
	ST3-2061-323-3		198-264V	3.38	3					
	ST3-2061-346-3		400-480V	1.69	3					
	ST3-2061-357-3		450-660V	1.69	3					
	ST3-2473-312-1	24 Ft. (7.3 m)	99-126V	3.38	1	1.0HP (0.75 kW)	45,216 Ft ² (4,201 m ²)	240 Ft. (73.2 m)	42 RPM	237 lb (108 kg)
	ST3-2473-323-1		198-264V	3.38	1					
	ST3-2473-323-3		198-264V	3.38	3					
	ST3-2473-346-3		400-480V	1.69	3					
	ST3-2473-357-3		450-660V	1.69	3					

¹277V power source is not accepted. ²Estimated values based on typical conditions.

ST3 SPECIFICATIONS

APPROVALS

- ETL
- CE
- C-Tick

BLADES

- Equipped with 3 blades
- Extruded aluminum
- High performance STOL design

GEARBOX

- Precision finished gears for low noise & long service life
- Sealed with lifetime synthetic oil
- Robust 3" output shaft for strength
- Nylon bushing on input

CONSTRUCTION

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

VFD

- NEMA 4x, IP 66 metal enclosure with hinged door.
- Factory assembled & programmed
- Minimum start/stop torque loads

WINGTIP FENCE

- Equipped with 3 wingtip fences
- Constructed of nylon 66
- Redirect outward airflow into downward airflow

MOTOR

- Totally enclosed, fan cooled (TEFC)
- IP55 rating
- Class F insulation
- 1.0HP (0.75 kW) nominal horsepower

STANDARD LIMITED WARRANTY

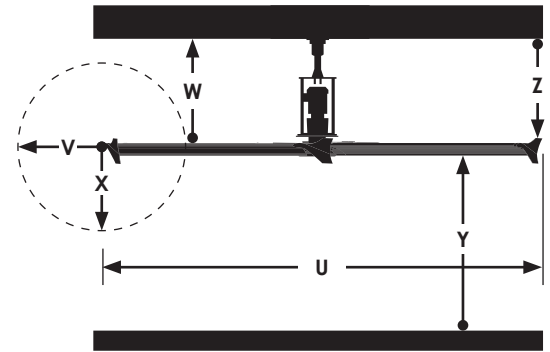
- 1 year: Motor and Reducer
- 1 year: Electronic Controls
- 10 years: Blades, Chassis, and Hub
- Extended warranties available

ST3 SERIES SAFETY CLEARANCES & DROP HEIGHT¹

MODEL #	DIAMETER [U]	SIDE [V]	ABOVE [W]	BELOW [X]	MIN. BLADE HEIGHT [Y]	BLADE DROP HEIGHT [Z]
ST3-1236	12 Ft (3.6 m)	22"	39"	22"	10'	44"
ST3-1443	14 Ft (4.3 m)	26"	39"	26"	10'	44"
ST3-1649	16 Ft (4.9 m)	30"	39"	30"	10'	46"
ST3-1855	18 Ft (5.5 m)	33"	39"	33"	10'	49"
ST3-2061	20 Ft (6.1 m)	36"	39"	36"	10'	51"
ST3-2473	24 Ft (7.3 m)	44"	39"	44"	10'	55"

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

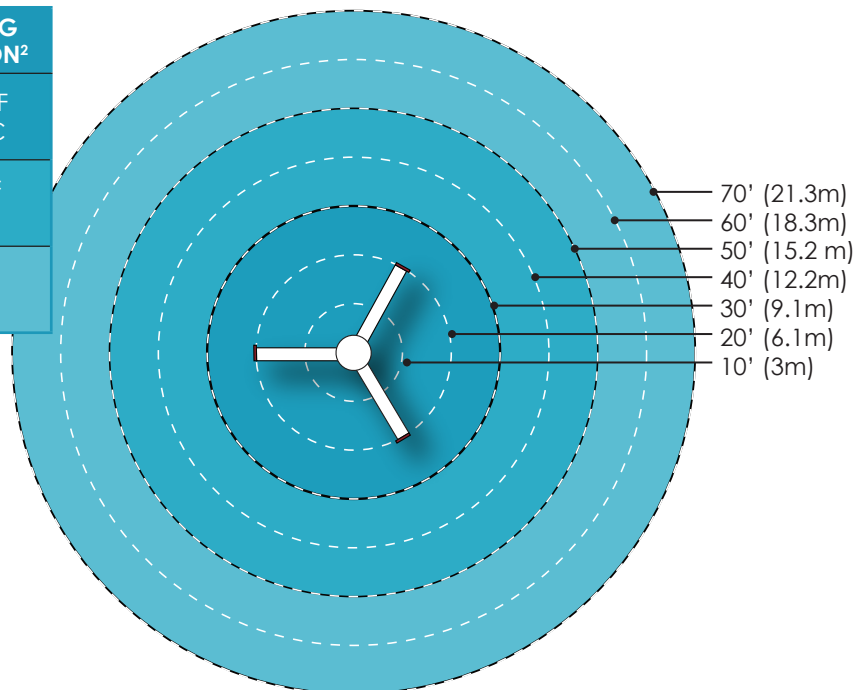
SAFETY CLEARANCES & DROP HEIGHT



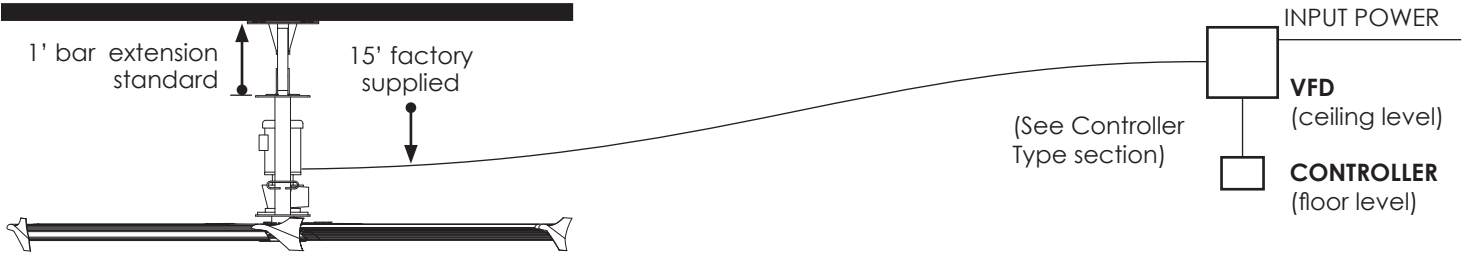
ST3 SERIES MAX EFFECTIVE DIAMETER

DISTANCE FROM CENTER	AIR VELOCITY ²	COOLING SENSATION ²
0' - 30' (0 - 9.1m)	620 - 900 fpm 3 - 4.5 m/s	14 - 15°F 8 - 10°C
30' - 50' (9.1 - 15.2m)	340 - 620 fpm 1.7 - 3 m/s	9 - 15°F 5 - 8°C
50' - 70' (15.2 - 21.3m)	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.



ST3 SERIES INSTALLATION



ST3 SERIES OPTIONAL ACCESSORIES & UPGRADES

QTY.	PART #	DESCRIPTION	NOTES							
EXTENSION BARS										
	1002-X	Extension Bar	Lowest 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										
	BP-777	Single Yoke	Includes Fwd/Off/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.							
	BP-781	Double Yoke	Includes Fwd/Off/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.							
	BP-783	Triple Yoke	Includes Fwd/Off/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.							
	BP-260	AutoPilot 1.0	Wall mounted controller with 7" LCD touchscreen interface. Web based controller supports up to 24 fans. Wire to be field supplied.							
	BP-773-XX	Touch 'N' Go Premier Multi-Fan Controller	Operate 1-10 fans in forward/reverse with 0-100% speed control. Mounts to wall or electric gang box. Fully digital interface with password lockout capability. [XX] = 1 fan [01], 2 fans [02], 3-4 fans [04], 5-6 fans [06], 7-8 fans [08], 9-10 fans [10]							
	BP-789	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.							
	BP-775	VLD Controller	Control each fan individually via an economic digital interface. Wire to be field supplied.							
	BP-771	Radar Controller	Digital interface controls all fan functions including programming, fault viewing, and more. Control up to 63 fans individually or as a group. Operate fans for cooling or destratification.							
	BP-791	IDFC	Easily mounts to electrical box for controlling each fan individually. Allows operation of the fans in either forward (cooling) or reverse (destratification). Manually control each fan's speed.							
OPTIONAL ACCESSORIES										
	BP-909	Motor Cover	The Motor Cover creates an aesthetic shield encasing the motor and gearbox. It provides the clean & sleek appearance of polished stainless steel.							
	BP-913	Purlin Mounting System	Mounting system for hanging SkyBlade Fans along purlin ceiling braces (hardware included).							
	BP-979	Temperature Probe (AutoPilot)	Two temperature probes required per fan. Required for use with "Automatic" mode on the AutoPilot. For AutoPilot only.							
	BP-901	230v Line Reactor	Cleans dirty voltage by reducing harmonic current and transient voltages.							
	BP-902	460v Line Reactor	Includes one Nema 1 enclosure.							
	BP-907	230v EMC Filter	Reduce the transfer of electromagnetic noise between the drive and main power supply. Mountable inside VFD enclosure. One required per fan.							
	BP-908	460v EMC Filter	Reduce the transfer of electromagnetic noise between the drive and main power supply. Mountable inside VFD enclosure. One required per fan.							
	BP-326	Single Yoke Control Cover	Add-on for the yoke controller to allow them to be padlocked. Includes two (2) shrouds (Lock not included).							
	BP-795	Lift Buster	All VFD controls are at floor level allowing service of the fan without the need for a lift or ladder. Control panel with LCD display with inline CAT5 surge suppression, network protection, and RS485 protocol language. Can be ran up to 100 ft. distances. Wire to be field supplied.							
	BP-294	VFD Diagnostic Tool	VFD mounted user interface. Required for non- factory programming, troubleshooting, and integration to existing systems.							
	BP-328	RJ45 Splitter	Easily and accurately split your RJ45 communication wire. For AutoPilot only.							
OPTIONAL UPGRADES										
	BP-929	Black or Blue Wing Tips	Optional upgrade to black or blue wingtips to compliment your space.							
	BP-919	Nema 4x VFD Enclosure	Nema 4x variable frequency drive enclosure offers weather and washdown resistant properties.							
	BP-921	Stainless Steel Hub	Stainless steel, 304 grade, hub plate and hub cylinder provides excellent corrosion and degradation resistant properties. Perfect for those harsh, salty and humid climates.							
	BP-933	Nylon66 Wingtip	Upgrade to Nylon66 wingtips for combating harsh conditions in your space. Red & black color options.							
	BP-917	BACnet Integration Package	Upgrade to VFD capable of BACnet protocol. Available for 200v-600v 1p/3p only.							
	BP-925	Explosion Proof Motor	Optional upgrade to Class 1 Division 1 explosion proof 1.0HP motor.							
LIMITED WARRANTY UPGRADES										
	1061	Standard Level Warranty	Standard limited warranty 1 year-motor & reducer/1 year-electronic controls/10 years-blades, chassis & hub.							
	1062	Bronze Level Warranty	Upgrade warranty to 3 years-motor & reducer/3 years-electronic controls/lifetime-blades, chassis & hub.							
	1063	Silver Level Warranty	Upgrade warranty to 5 years-motor & reducer/3 years-electronic controls/lifetime-blades, chassis & hub.							
	1064	Gold Level Warranty	Upgrade warranty to 7 years-motor & reducer/7 years-electronic controls/lifetime-blades, chassis & hub.							
	1076	Platinum Level Warranty	Upgrade warranty to 12 years-motor & reducer/12 years-electronic controls/lifetime-blades, chassis & hub.							

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

ST3 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; **ST3 Series** high volume low speed ceiling fans.
- B. Complete Unit: The fan shall be UL (Canada & USA), CE & CTICK certified and built pursuant to construction guidelines set forth by UL standard 507 and CSA standard 22.2. The fan shall be designed to move an effective amount of air for cooling and Destratification in large industrial 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 55 dBA.
- C. Blades: The fan shall be equipped with three (3) high volume, low speed blades of precision 6005-T5 extruded aluminum alloy. Each blade shall be of the high performance STOL (Short Take-Off and Landing) design. The blades shall be connected by means of two (2) locking bolts per blade. The blades shall be connected to "H-Strut" which is connected to the hub and interlocked with two sets of three stainless steel retainers.
- D. Wingtips: The fan shall be equipped with three (3) STOL wingtips 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. The wingtips shall be attached at the tip of each blade 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 AC induction type inverter rated at 1750 RPM, 230/460 VAC. The motor shall be totally enclosed, fan cooled (TEFC) with an IP55 NEMA classification. NEMA standard frame 56C shall be provided for ease of service. The motor shall be manufactured with Class F insulation. The motor shall include a nylon bushing on its output shaft to allow for reduced noise, vibration and ease of maintenance with gearbox.
- F. Gearbox: The gearbox shall incorporate a cast iron housing with 56C faced double reduction (or equivalent). The gearbox will utilize a precision finish for low noise & long service life standard with premium viton double lip output seals. Gearbox shall be sealed for ease of service with lifetime synthetic oil to exclude contaminants. The output shaft of the gearbox shall be no less than a 3" keyless shaft with bearings that are lubed for life. The gearbox input shall utilize a nylon bushing to allow for reduced noise, vibration and ease of maintenance with motor.
- G. 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 2" x 2" (5.08 cm x 5.08 cm) square tubing and black 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.
- H. Hub: The fan hub shall be minimum 1/4" steel for high strength and rigidity. The hub shall be secured to the output shaft of the gearbox by means of a precision cut 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/blade assembly in case of gearbox output shaft failure.
- I. 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" thick low carbon steel and be powder coated for appearance and resistance to corrosion. All mounting bolts shall be Grade 5 or Grade 8 SAE.
- J. 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 1/8" (0.32 cm) diameter and fabricated out of 7 x 7 stranded galvanized steel with each cable having a breaking strength of 1,000 lbs. The cable is to be secured with supplied wire rope clips or fasteners. Field construction of safety cables is not permitted.
- K. 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 1/8" (0.32 cm) diameter and fabricated out of 7 x 7 stranded galvanized steel a break strength of 1,000 lbs. The cable is to be secured with supplied wire rope clips or fasteners. Field construction of safety cables is not permitted.
- L. 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 with inline fuses and disconnect switch for ease of installation. The controller shall be contained within a NEMA 1 metal enclosure with hinged door.
- M. 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:
- Motor and Reducer - 1 year (Parts)*
 - Electronic Controls - 1 year (Parts)*
 - Blades, Chassis, and Hub - 10 years (Parts)*
 - Gearbox - 1 year (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.

Gearboxes contain oil and while unlikely, may be subject to non-critical oil leaks.



SKYBLADE FAN COMPANY

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