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Catalog Number:

Notes:

Type of Fan:

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FEATURES & SPECIFICATIONS

Z-Tech3™ Intended Use: Industrial high-volume, low-speed fan that is ideal for spaces in need of an energy efficient air movement solution. Applications include automotive dealerships, transportation maintenance, aviation hangars, agriculture, education, commercial and retail spaces, government, manufacturing, recreational, warehousing and other indoor spaces where comfort and energy are required with minimum 14' ceiling height.

NUMBER & TYPE OF BLADES: (3) patented Z-Tech™ blades with 20° plus pitch.

BLADE CONSTRUCTION: Two-piece extruded anodized aluminum blade with ABS leading edge and end caps with UV inhibitors. Frame is powder coated steel with a cast aluminum hub. Leading edge blade is riveted to the primary blade with stainless steel rivets.

ELECTRICAL (MOTOR): IP 55; Built specifically for GFY fan applications

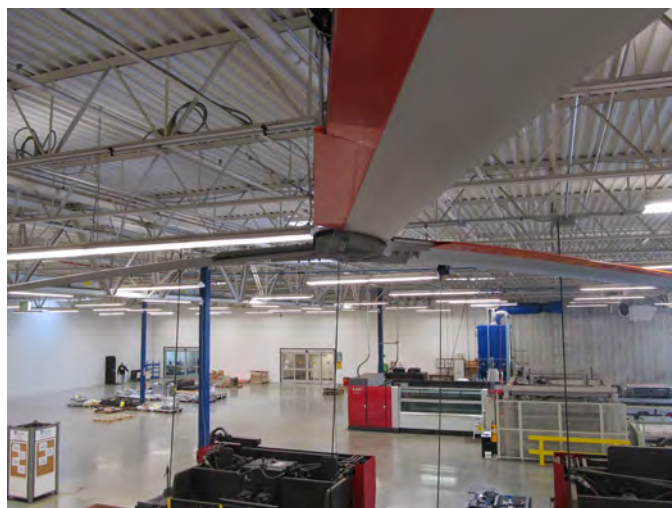
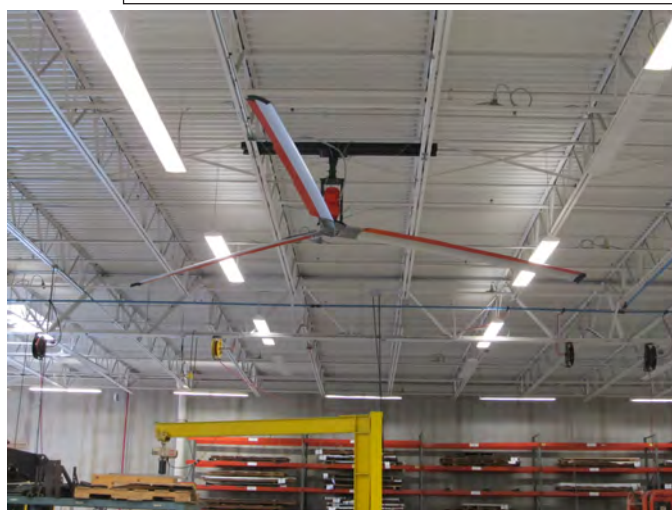
ELECTRICAL (CONTROLLER): Premium control with hardware flexibility, programmability, and scalability for an optimal solution. ABB™ Variable Frequency Drive – Nema 4X, IP66. ESFR relay ready to connect to existing fire suppression systems, integral lock out, tag out (LOTO) disconnect ships standard. ROHS compliant. Available voltages:
 100-120V and 200-240V 1 phase
 200-240V and 380-480C 3 phase

INSTALLATION: Suitable for mounting by I-Beam, Top Chord angle iron, Bottom Chord angle iron, L-Bracket, Z-Purlin and Wood Beam. Standard mount is used for 6"-10" I-beams, XL mount is used for 12"-15" I-beams. 1 foot down tube is standard.

SAFETY: Z-Tech™SS safety system includes (4) straps with a break strength of 16,000lbs each easily exceeding the industry standard steel cable, Safety ring (1/4" powder coated steel)

OPERATING TEMPERATURES: Motor & Gearbox (20°F to 122°F); Controller (20°F to 122°F).

WARRANTY: Lifetime warranty on blades, hub and mounting system. 12-year warranty on motor, gearbox and controller with GFY certified installation.



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Z-Tech3™ Example Part Number: GFY - Z - 3 - 24 - 460 - 3 - 1 - STD - T

Family	Style	Blades	Diameter	Voltage	Phase	DownTube	Mount	Mounting Kit	Options
GFY	Z	3	8 12 16 20 24	120 ¹ 230 ¹ 460 ¹	1 (Single) 3 (Three)	1 (1FT) ^{2,12} 2 (2FT) ¹² 3 (3FT) 4 (4FT) X (XFT) ³	STD (6"-10" Beam) ⁴ XL (12"-15" Beam) ⁵	T (Truss/I-Beam) ⁶ Z (Z-Purlin) ^{6,9} WB (Wood Beam) ¹⁰ (Concrete Beam) ¹⁰	WM ⁷ (Wall Mount Keypad) CP ⁸ (Custom Programming) FM ¹¹ (VFD Field Mounted to Fan Frame)

FOOTNOTES

- Available Voltages: 3 Phase: 200-240VAC | 380-480VAC | 1 Phase: 200-240VAC - 100-120VAC (8FT-12FT only)
- 1 FT down tube is standard with Z-Tech3™ fan.
- Consult the factory for down tubes longer than 4 FT.
- Use STD mount (6-10" beams) for optional Truss Mount, Z-Purlin Mount and Wood/Concrete Beam Mounts.
- XL Mount is only used for 12"-15" I-beam applications.
- Truss Mount and Z-Purlin Mounts require contractor supplied 3"x3"x1/4" steel angles cut to size. See **Installation and Technical Operations Guide**.
- Allows the control keypad to be mounted up to 24 FT from the ABB controller. Keypad mounts inside a Go Fan Yourself custom mounting bracket. Kit ships complete with 25 FT CAT6 data cable. Maximum cable length is 300 FT. Longer CAT6 data cables to be supplied by installing contractor.
- Consult the factory. ABB communication protocol compatibility adapts to the customers existing building management software. Not all programming options may be available on every control.
- Z-Purlin applications require a 2 FT down tube for all Z-Tech3™ fans 20 FT and larger to provide the fan the required 5 FT of clearance above the blades.
- Contact a local structural engineer for all concrete and wood beam applications to verify the beam will support the fan with the prescribed mounting system.
- Optional fan mounted VFD. ABB VFD control mounting bracket and hardware ships with fan to be field installed by the contractor. Contractor needs only run power to the fan location, mount the bracket to the fan, mount the controller to the bracket and make the motor and power connections inside the controller. Remote Keypad Kit ships automatically with a 150 FT CAT 6 data cable. Longer cable supplied by the installing contractor.
- A 2 FT down tube is required for 24 FT and 20 FT fans when Top Chord truss mounted to provide the 5 FT of clearance for the fan. 2 FT down tubes are also required when mounting with the optional Z-Purlin Kit.

Nominal Fan Diameter	8 FT	12 FT	16 FT	20 FT	24 FT
Fan Weight	200 lbs	215 lbs	230 lbs	285 lbs	305 lbs
Nominal Motor	1 hp	1 hp	1.0 hp	1.5 hp	1.5 hp
Nominal RPM	90	90	63	51	51
Max. De-stratification Coverage	65 FT	95 FT	125 FT	155 FT	185 FT
Max. Cooling Diameter	50 FT	75 FT	100 FT	120 FT	140 FT
Nominal Amperage (208v 3 Ph)	4.38a	4.38a	4.8a	4.5a	4.5a
Nominal Amperage (230v 3 Ph)	3.88a	3.88a	4.3a	4.0a	4.0a
Nominal Amperage (460v 3 Ph)	1.94a	1.94a	2.15a	2.0a	2.0a

Number & Type of Blades: 3 patented Z-Tech™ blades with 20° plus pitch

Blade Construction: Extruded anodized aluminum blade with ABS leading edge and end caps with UV inhibitors

Standard or Optional XL Mount: Universal I-beam clamps; Down tubes from 1-10FT in length

ABB VFD Controller: NEMA 4X, IP66. Premium motor control w/ hardware flexibility, programmability & scalability for an optional solution. ROHS compliant, ESFR relay ready, integral LOTO disconnect

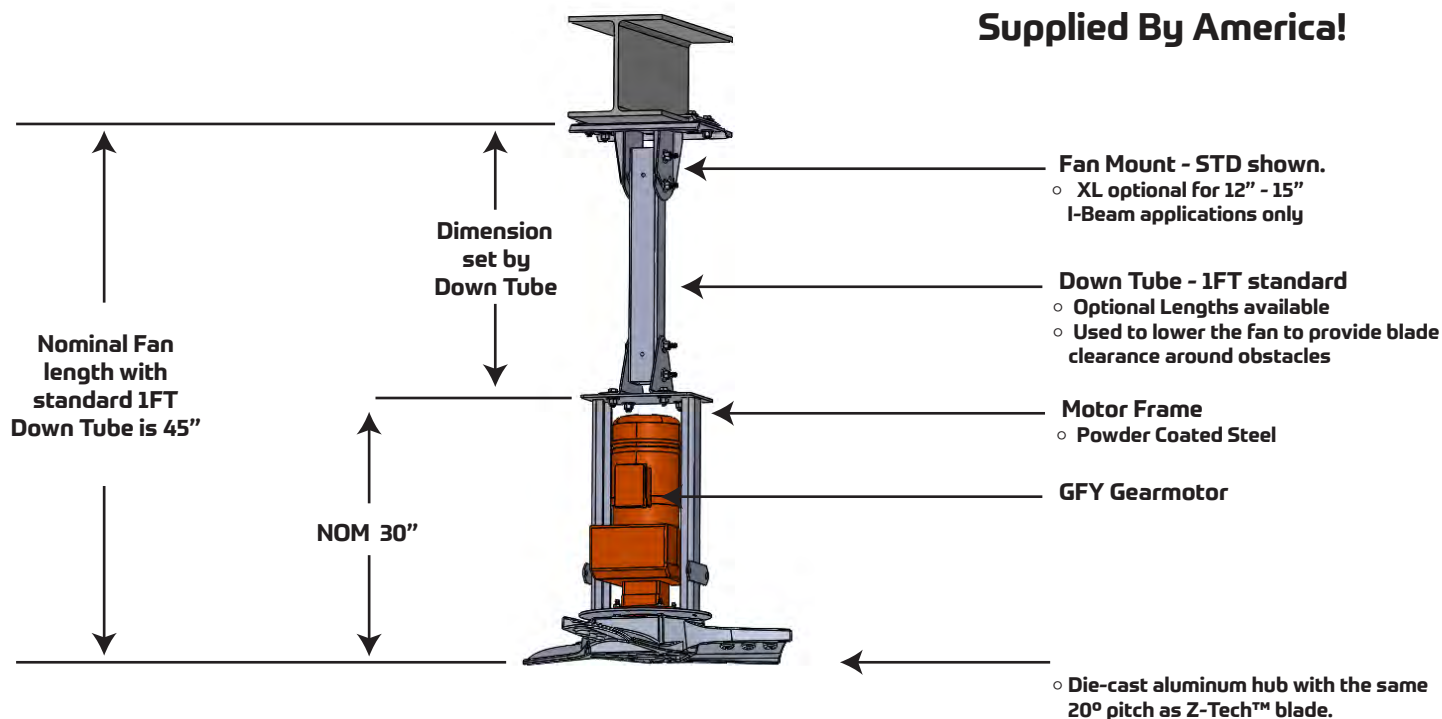
Safety Features: Z-Tech™ SS safety system includes (4) straps with a break strength of 16,000lbs each, Safety ring (1/4" powder coated steel)

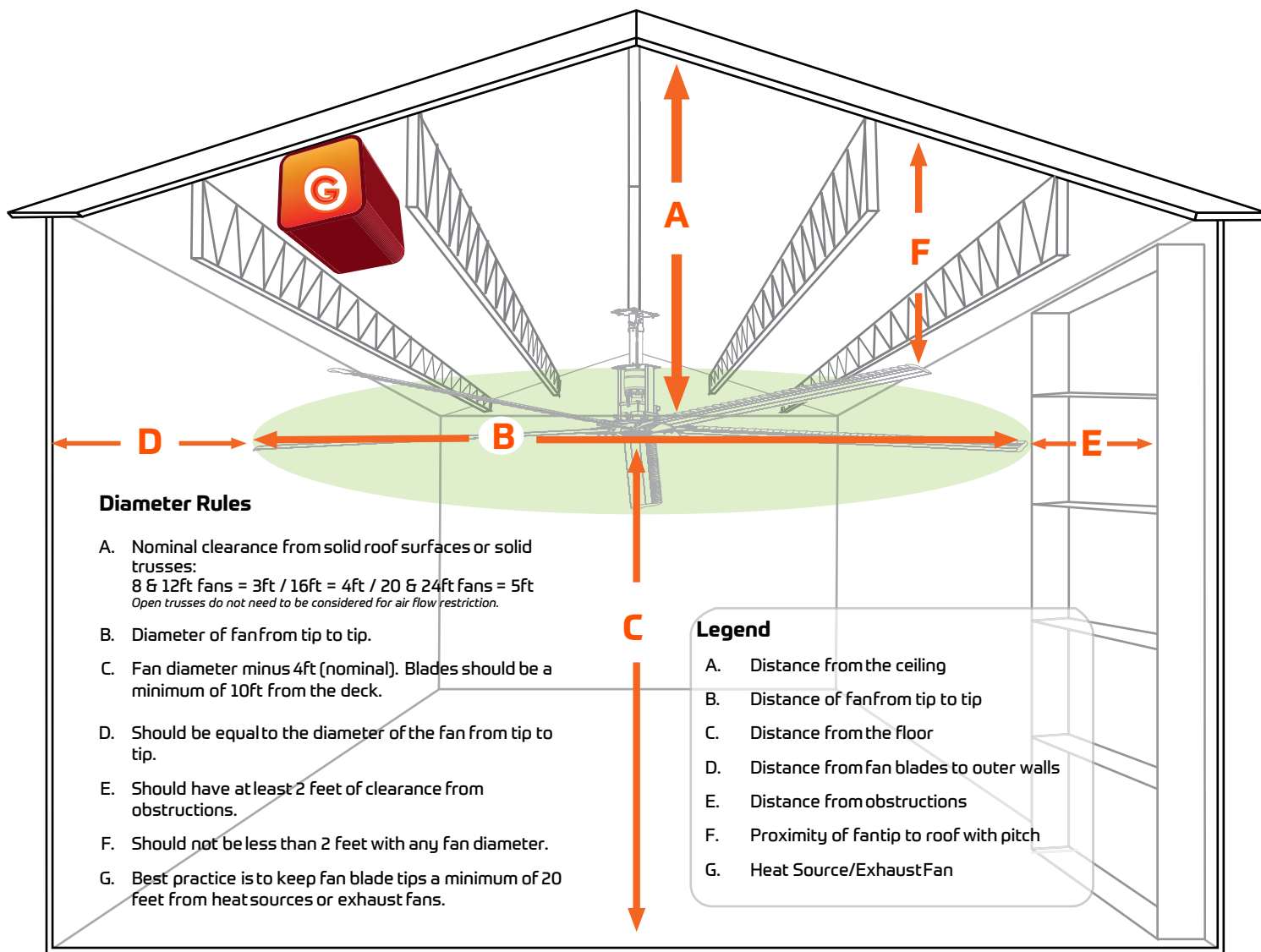
Warranty: 12-year: motor, gearbox, and control panel
Lifetime: blades, hub, and mounting system

Refer to **Installation & Technical Operations Guide** for warranty specifications/exclusion

**COMPONENT DESCRIPTIONS
 NOMINAL DIMENSIONS
 MOUNTING/MOTOR DETAILS**

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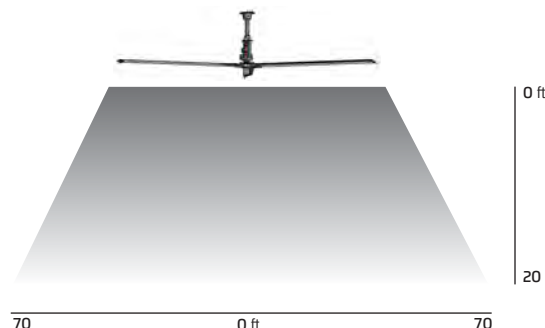


HOW TO SIZE A Z-TECH3™ FAN FOR YOUR FACILITY

NOM Fan Diameter	Max Coverage Area (Cooling)	Max Coverage Area (Destratification)	Max Spacing Between Fans	Minimum Spacing From Wall	NOM Clearance Needed From Ceiling	Minimum Blade Height
8 FOOT	50 FT	65 FT	40 FT	8 FT	3 FT	10 FT
12 FOOT	75 FT	95 FT	65 FT	12 FT	3 FT	10 FT
16 FOOT	100 FT	125 FT	90 FT	16 FT	4 FT	12 FT
20 FOOT	120 FT	155 FT	110 FT	20 FT	5 FT	16 FT
24 FOOT	140 FT	185 FT	130 FT	24 FT	5 FT	20 FT

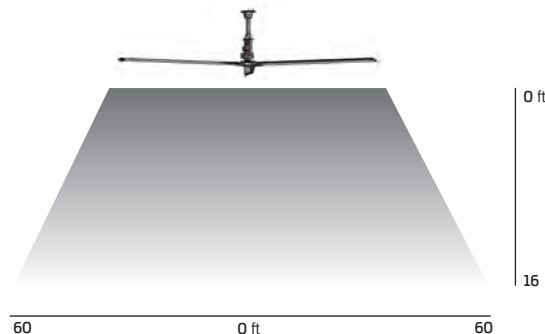
24' Diameter Fan

Number of Blades:	3 patented Z-Tech™
Blade Pitch:	20° plus
Minimum Blade Height:	20 FT (blade from floor)
Maximum Cooling Diameter:	140 FT
Maximum Destratification Coverage:	185 FT
Nominal Blade Rotations Per Minute:	51
Nominal Motor:	1.5 hp
Nominal Amps:	2.0
System Weight:	305 lbs
Maximum Spacing Between Fans:	130 FT
Nominal Clearance Above Fan:	5 FT



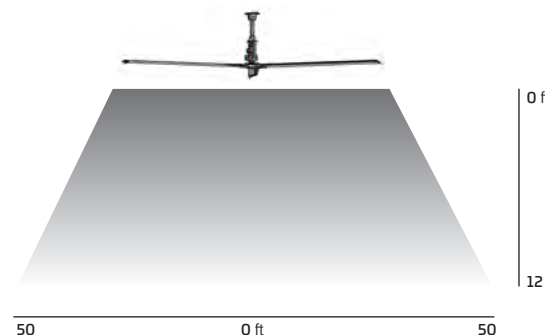
20' Diameter Fan

Number of Blades:	3 patented Z-Tech™
Blade Pitch:	20° plus
Minimum Blade Height:	16 FT (blade from floor)
Maximum Cooling Diameter:	120 FT
Maximum Destratification Coverage:	155 FT
Nominal Blade Rotations Per Minute:	51
Nominal Motor:	1.5 hp
Nominal Amps:	2.0a
System Weight:	285 lbs
Maximum Spacing Between Fans:	110 FT
Nominal Clearance Above Fan:	5 FT



16' Diameter Fan

Number of Blades:	3 patented Z-Tech™
Blade Pitch:	20° plus
Minimum Blade Height:	12 FT (blade from floor)
Maximum Cooling Diameter:	100 FT
Maximum Destratification Coverage:	125 FT
Nominal Blade Rotations Per Minute:	63
Nominal Motor:	1.5 hp
Nominal Amps:	2.15a
System Weight:	235 lbs
Maximum Spacing Between Fans:	90 FT
Nominal Clearance Above Fan:	4 FT



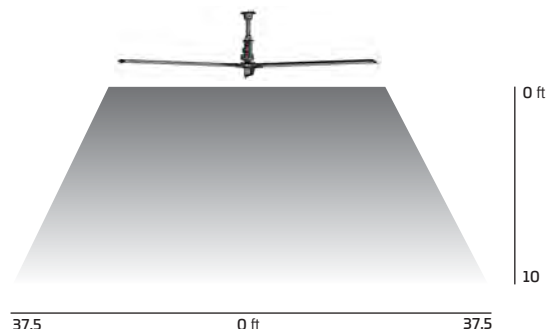
FOOTNOTE:

1.) Actual amps will vary depending on building power

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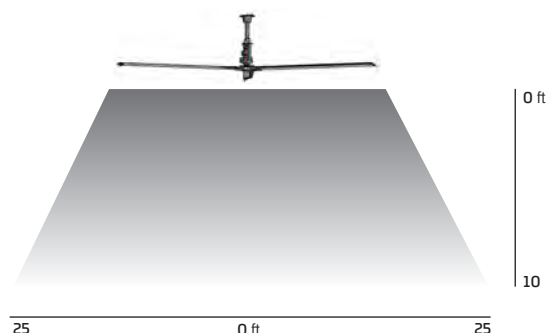
12' Diameter Fan

Number of Blades:	3 patented Z-Tech™ blades
Blade Pitch:	20° plus
Minimum Blade Height:	10 FT (blade from floor)
Maximum Cooling Diameter:	75 FT
Maximum Destratification Coverage:	95 FT
Nominal Blade Rotations Per Minute:	90
Nominal Motor:	1 hp
Nominal Amps:	1.94a
System Weight:	215 lbs
Maximum Spacing Between Fans:	65 FT
Nominal Clearance Above Fan:	3 FT



8' Diameter Fan

Number of Blades:	3 patented Z-Tech™ blades
Blade Pitch:	20° plus
Minimum Blade Height:	10 FT (blade from floor)
Maximum Cooling Diameter:	50 FT
Maximum Destratification Coverage:	65 FT
Nominal Blade Rotations Per Minute:	90
Nominal Motor:	1 hp
Nominal Amps:	1.94a
System Weight:	200 lbs
Maximum Spacing Between Fans:	40 FT
Nominal Clearance Above Fan:	3 FT



ADDITIONAL SPECIFICATION NOTES: See GFY FAN LOCATION GUIDELINES in this spec sheet for additional details.

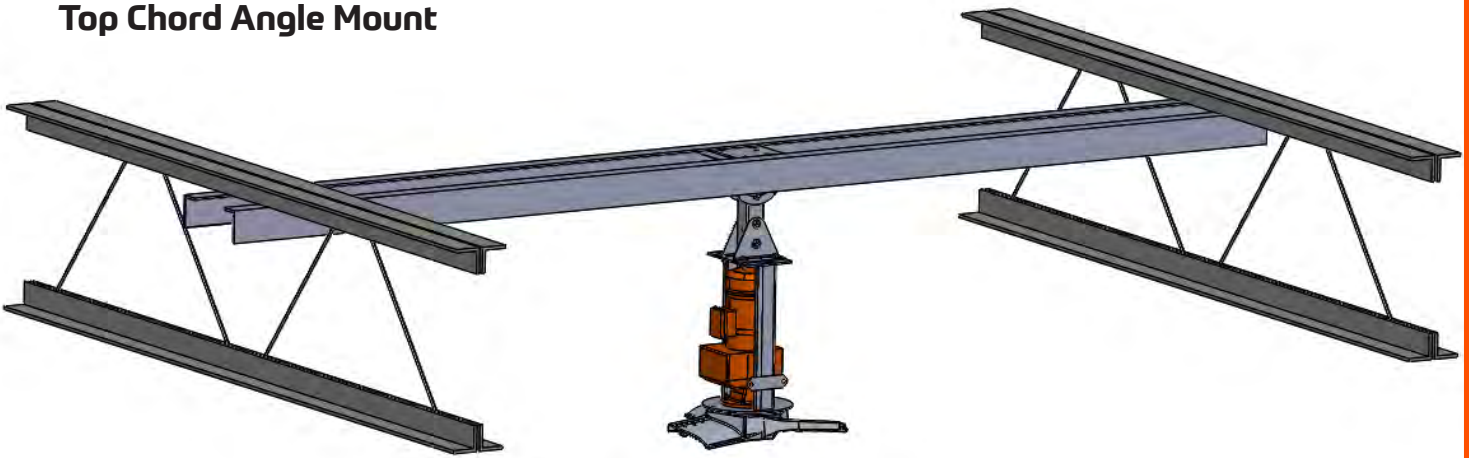
1. Minimum 2 FT of clearance from obstructions.
2. Minimum 2 FT below truss with any fan diameter.
3. Should be at least one fan diameter away from a heat source.
4. Should be at least one fan diameter away from any exhaust fan(s).
5. Should be at least one fan diameter away from any wall.
6. Fan should be no closer than 3ft to sprinkler heads (observe local codes).
7. Lights may need to be spaced 2 FT or greater away from the tip of the fan blade to prevent shadowing.

FOOTNOTE:

- 1.) Actual amps will vary depending on building power

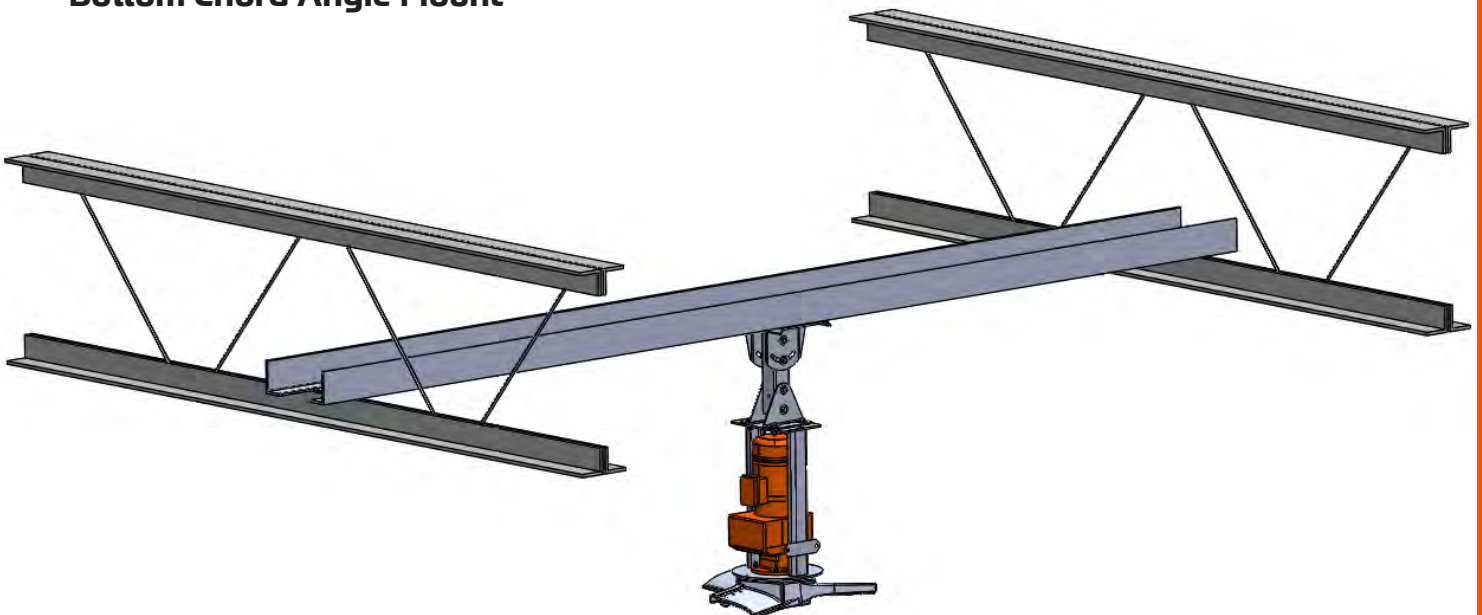
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Top Chord Angle Mount

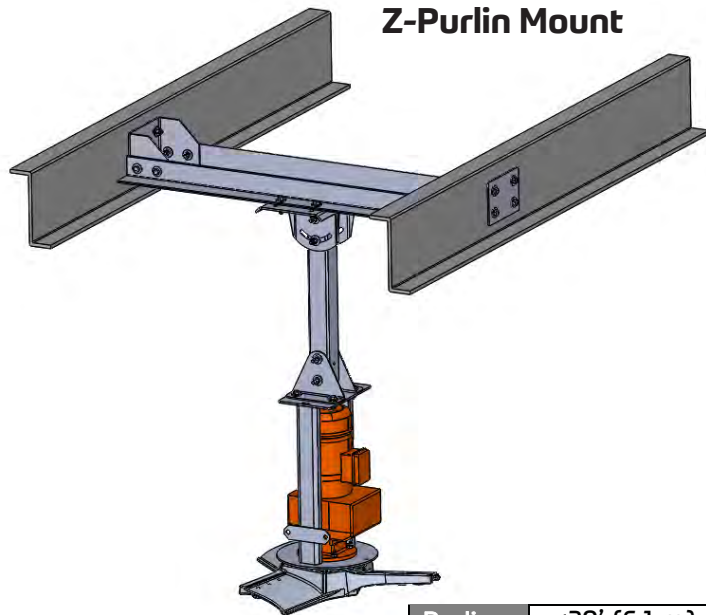


- The 3" x 3" x 1/4" steel angles must be supplied by the installing contractor. Hardware used to secure the angles to the mounting structure is not included
- 2 FT Down Tube is required for 20 FT and 24 FT fans to achieve the 5 FT of space required above the fan.
- Required Guy Wire Kit is not shown in this drawing
- If the truss span is wider than 8 FT, four steel angles are required. Reference the **Installation & Technical Operations Guide** or contact Go Fan Yourself for additional instructions

Bottom Chord Angle Mount



- The 3" x 3" x 1/4" steel angles must be supplied by the installing contractor. Hardware used to secure the angles to the mounting structure is not included
- Required Guy Wire Kit is not shown in this drawing
- If the truss span is wider than 8 FT, four steel angles are required. Reference the **Installation & Technical Operations Guide** or contact Go Fan Yourself for additional instructions



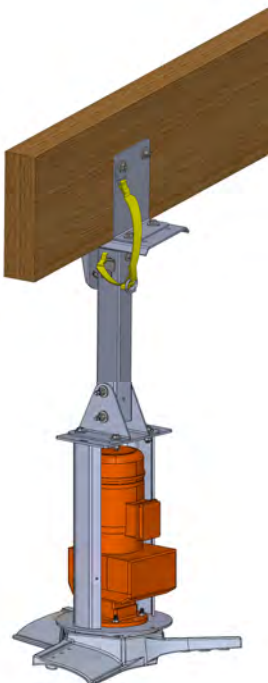
Z-Purlin Mount

Z-Purlin Requirements

- The 3" x 3" x 1/4" steel angles must be supplied by the installing contractor
- Maximum unsupported length (see chart below)
- Spacing between Z-Purlins must be 5 FT or less
- Z-Purlins must be a minimum of 14 gauge steel
- Required Guy Wire Kit is not shown in this drawing.
- This mounting system may also be required to span concrete beams. Consult a local structural engineer for any concrete beam applications.

		Purlin Height		
		8" (20.3 cm)	9" (22.9 cm)	10" (25.4 cm)
Purlin Length	<20' (6.1 m)	Intended Use	Intended Use	Intended Use
	<25' (7.6 m)	N/A	Intended Use	Intended Use
	<30' (9.1 m)	N/A	N/A	Intended Use

Wood Beam Mount



Wood or Beam Requirements

- Installing contractor must supply L-bracket anchor hardware as described below:
 - (2) 1/2" - 13 x 1 1/2" longer than the support structure Grade 8 Hex Cap Screw
 - (4) 1/2" ASTM F436 Type 1 Grade 8 Mechanical Galvanized Steel Structural Flat Washer
 - (2) 1/2" - 13 Grade 8 Steel Nylock Nut
- Contact a local structural engineer for all concrete or wood beam applications.
- Required Guy Wire Kit is not shown in this drawing.

ABB ASC255 VFD Controller

100-120V 1 Phase
 200-240V 1 Phase



ABB ASC355 VFD Controller

200-240V 3 Phase
 380-480V 3 Phase



ASC355 Fan Control

- ABB™ Variable Frequency Drive Enclosure - solid aluminum powder coated frame with a plastic IP66 cover and membrane covered touchscreen.
- Advanced multi function keypad with a display keypad that allows for quick on demand program changes
- NEMA 4X, IP66, ROHS compliant; 50/60 HZ operation
- Run up to 26 fans from a single keypad (additional wiring required)
- Deepest heat sink in the industry extends the life of drive and controller
- Install up to 200 feet from fan; disconnect per NECA code within eyesight
- 5 digital inputs, all programmable. 1 digital NO/NC and 1 Relay (AC/DC)
- 0(4) - 20mA analog output. This allows the speed reference control from drive to drive without the need to use resistors on the circuit.
- Ethernet compatible with expansion module
- Highly customizable programming
- Capable of linking to building automation systems
- Controls ship standard with an Early Suppression Fast Response input ready to connect to existing fire suppression systems and an integral lock out, tag out disconnect.

ASC255 Fan Control

- 100-120VAC | 200-240VAC single phase
- Cannot be utilized to control multiple fans with a single controller

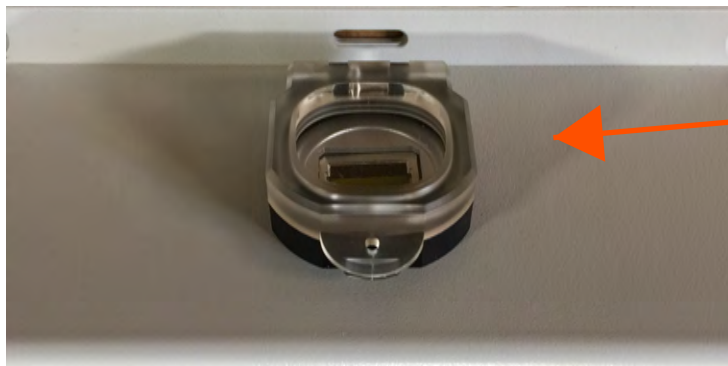
Custom Programming

There will be a minimum charge placed on any order (this is a per order charge, not per fan) when custom programming is involved. Lead time will be increased.

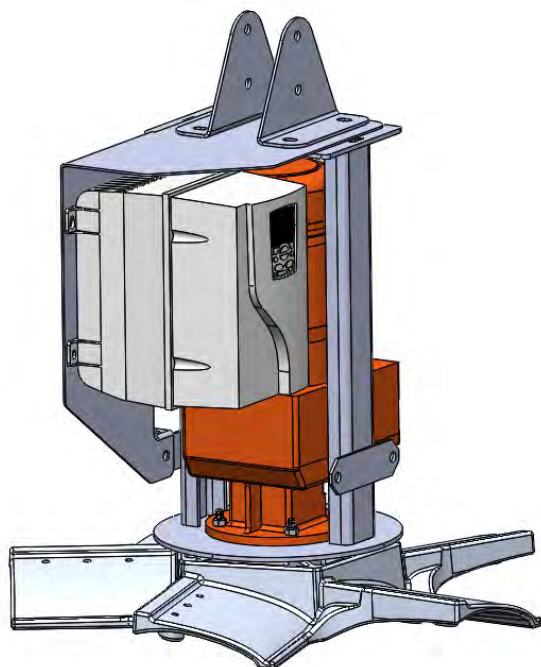
Custom Programming includes:

- Controlling multiple fans from a single keypad
- Connecting to building management systems or other software/hardware packages
- Any customer requests beyond the standard one drive controls one fan

The wallmount keypad option is not considered custom programming.



- Optional Wall Mount Keypad provides far greater flexibility for your GFY fan installation.
- Mount the VFD Controller in the ceiling or high on the column for safety and security and drop the keypad down to a user friendly mounting height.
- Wall Mount Keypad option ships from GFY with a 25 FT CAT6 data cable allowing the keypad to be mounted approximately 24 FT below the VFD Controller.
- Max CAT6 data cable length is 300 FT.
- Box size is 9" x 6" x 2 3/4"



- Fan Mounted Control option locates the VFD Controller on a bracket mounting directly to the fan frame.
 - GFY - Access to the VFD is available without fan disassembly.
 - 8-10 airfoil fans - One airfoil must be removed to access the VFD for service work.
- The Wall Mount Keypad option is included in the cost of this option.
- GFY provides a 100 FT data cable to connect the Wall Mount Keypad option. Longer cables are supplied by the installing contractor.