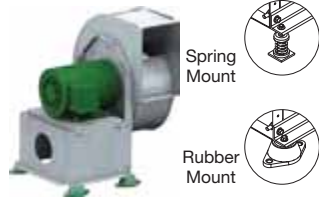


Accessories

Mounting Options - Utility and Centrifugal and Industrial Fans

The mounting options shown here (type A and B) relate to the Selection Guide For Vibration Isolation as published in the latest ASHRAE applications handbook, HVAC Applications-Sound and Vibration Control.

Direct Mount, Type A - No base required. Isolators are attached directly to equipment. Direct isolation can be used if equipment is unitary and rigid without the use of additional support. Direct isolation is not recommended for equipment having large overhung loads (e.g. motors on Arrg. 9 fans). If there is any doubt that equipment can be supported directly on isolators, use rails, bases or consult the factory.



Isolation Bases, Type B2 - Isolation bases consist of steel members welded into a rigid one piece base. Motor slide rails are included where applicable. Bases are required for fans with independently mounted motors. Isolation bases are available without isolators, with rubber mounts or with spring mounts.

Quick Build bases are standard dimensions with factory-supplied motor and drives.



Arrg.	Model	Mounting Selection	
		Direct Mount, Type A	Isolation Base, Type B2
3	AFDW, BIDW		✓
4	SFD, SWD, CSW	✓	
9	CSW	✓	✓
10	SFB, SWB	✓	
	USF	✓	
	CSW	✓	✓

Rubber Mounts



Neoprene mountings consist of a steel top plate and base plate completely embedded in colored (oil-resistant) neoprene for easy identification of capacity. Neoprene mountings are furnished with a tapped hole in the center. This enables the equipment to be bolted securely to the rubber mount.

Free-Standing Open Spring Mounts



Free-standing spring isolators are unhoused laterally stable steel springs. They provide a minimum horizontal stiffness of 0.8 times the rated vertical stiffness and provide an additional 50% overload capacity. These isolators are equipped with a top mounted adjusting bolt and an acoustical nonskid base. Springs are color coded or identified to indicate load capacity.

Restrained Spring Mounts



Restrained spring isolators consist of laterally stable, free-standing springs assembled into a steel housing. These assemblies are designed for vertical and horizontal motion restraint. Restrained spring isolators can be used for blocking during equipment installation and are provided with leveling bolts. Springs provide 50% overload capacity and are color coded or identified to indicate load capacity. Restrained spring mounts are recommended for equipment subject to wind loading or large torquing forces.

Mounting Options - Horizontal Inline Centrifugal Fans

For ease of installation, knockouts are provided at each location where mounting brackets are shown. Universally adjustable brackets are available to mount the fan in hanging or base mounted positions.

Hanging Isolators - Complete hanging isolator kits are available with either spring, rubber, or neoprene isolators. The isolators are sized to match the weight of the fan. (Hanging rods supplied by others).

Base Isolators - Complete base isolator kits are available with either neoprene or spring isolators and are sized to match the weight of the fan.



Hanging Spring



Hanging Rubber



Hanging Neoprene



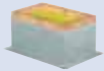

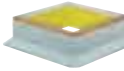
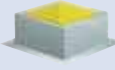
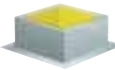
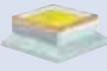



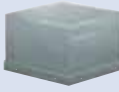


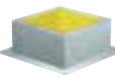
Standing Neoprene



Standing Spring

Roof Curbs, Extensions and Equipment Supports

A wide variety of roof curbs are available including flanged, straight-sided, canted, pitched, ridged, vented, and sound-absorbing. Extensions raise the fan discharge and can provide an accessible mouting location for dampers.

Product Type	Model	Description	Best Available
 Flat, insulated or non-insulated roof decks	GPI - Galvanized 12-inch high, with or without damper tray, square sizes	Welded, straight-sided construction with rigid fiberglass insulation and 2-inch mounting flange	In Stock
 Flat, pitched or ridged, insulated or non-insulated roof decks	GPI - Aluminum or galvanized, other heights, non-stock square and rectangular sizes		In Stock
 Flat, non-insulated roof decks	GPS - All types, sized to meet your requirements	Welded, canted construction with rigid fiberglass insulation	1 Day
 Flat, pitched or ridged, non-insulated roof decks	GPF - All types, sized to meet your requirements	Welded, straight-sided construction with rigid fiberglass insulation and 5-inch mounting flange	In Stock
 Flat, insulated roof decks	GPFHL - All types, galvanized and aluminum	Welded, straight-sided construction with single roof flashing flange 5-inch width. One inch thick insulation.	10 Days
	GPFHD - All types, galvanized	Welded, straight-sided construction with double-thick roof flashing flange 5-inch width. One inch thick insulation.	10 Days
 Flat, insulated roof decks	GPR - All types, sized to meet your requirements	Welded, raised cant construction with rigid fiberglass insulation	1 Day
 Adaptors/Reducers	Curb Adaptors and Reducers	Used to match new fans to existing roof curbs. Welded galvanized steel or aluminum.	1 Day
 Flat roof decks in kitchen applications	GPFV - Galvanized, square sizes	Welded, vented straight-sided curb designed for use with our model CUBE fan to provide the 40 inch minimum discharge height above the roof line (per NFPA 96)	1 Day
	GPFV - Aluminum or galvanized, other heights, nonstock square sizes		1 Day
 Curb extensions in kitchen systems	VCE - Galvanized, square sizes	Welded, vented curb extension designed for use with an 8-inch high roof curb and our model CUBE fan to provide the 40 inch minimum discharge height above the roof line (per NFPA 96)	In Stock <i>(size 22 only)</i>
	VCE - Aluminum or galvanized, other heights, non-stock square sizes		1 Day
 Curb extensions	GPE, GPEX	Welded, with access door for easy access to the damper and damper actuator as well as fulfilling additional height requirements	1 Day
 Equipment supports	GESS, GESR	Welded aluminum or galvanized canted construction	1 Day
 Insulated and non-insulated flat roof decks, pitched roofs, curb extensions	ATS, ATR, ATE, ATI Sound attenuating curbs	Welded aluminum or galvanized canted construction for curbs, straight-sided for extensions with rigid fiberglass insulation	10 Days
 Laboratory Exhaust Fans and Make-Up Air Units	GPFHL, GPFHD	Welded, straight-sided, insulated, 5-inch flashing flange	5 Days

Sizing: Curb with wood nailer should be 1-1/2 inches undersized from curb cap dimension.
Curb without wood nailer should be 1 inch undersized from curb cap dimension.

Options and Accessories		
<ul style="list-style-type: none"> • Damper trays 	<ul style="list-style-type: none"> • Step for insulation - GPR only - up to 6 inches 	<ul style="list-style-type: none"> • Ridge mount - GPI, GPF and ATS
<ul style="list-style-type: none"> • Insulation - all except GPE, VCE and GPFV 	<ul style="list-style-type: none"> • Single pitch - GPI, GPF and ATS 	<ul style="list-style-type: none"> • Double-shell construction - all except AT and GPE

Electrical Accessories

Call our parts department toll free at 800-355-5354—for parts orders only—with fan model and the serial number located on the fan nameplate.

Description	Part Number	Rated up to: HP/AMPS	Voltage	Phase	Notes	
Disconnect, Standard or Weatherproof 	NEMA-1	N1TS-1	1/2 hp	115	1	2x4 j-box included
		N1TS-2	1 hp	115	1	2x4 j-box included
		N1TS-3	2 hp	115	1	2x4 j-box included
		N1TS-4	2 hp	200/277	1	2x4 j-box included
	NEMA-3R	N1TS-6	7-1/2 hp	200/600	3	2x4 j-box included
		N3RTS-1	1/2 hp	115	1	Weatherproof enclosure
Motor Starters 	NEMA-1, 4, 4X	MS1P	1 hp	110/240	1	Mounts in 2x4 j-box
	NEMA-1, 3R	MSSC	25 hp	200/600	3	
	NEMA-1, 3R, 4X	MSAC	25 hp	200/600	3	
Manual Switch 	NEMA-1	MS-15	1/6 hp	115	1	Three speed
		MS-1	1/2 hp	115	1	Single speed
		MS-16	1/2 hp	115	1	Single speed with pilot light
		381977	2 hp	200/277	1	Single speed
		383786	2 hp	200/600	3	Single speed
Speed Control 	385031	6 amps	115/127	1	2x4 j-box required	
	385205	10 amps	115/127	1	2x4 j-box required	
	385206	15 amps	115/127	1	2x4 j-box required	
	380896	5 amps	220/240	1	2x4 j-box required	
	385032	8 amps	220/240	1	2x4 j-box required	
	382136	5 amps	277	1	2x4 j-box required	
Switches 	872243	15 amps	115	1	1 function	
	872242	15 amps	115	1	1 function with pilot light	
	872244	15 amps	115	1	2 function, two single pole combination switch assembly	
Motion Detector 	385246	12.5 amps	115	1	Time Delay Adjustment: 30 seconds to 30 minutes in 5 minute increments 2x4 j-box required	
Time Delay 	874214	7.5 amps	115	1	Time Delay Adjustment: 10 to 60 minutes in 10 minute intervals 2x4 j-box required	
Dehumidistat 	385364	1/6, 3 amps	115	1		
Minimum Ventilation Control 	876265	2.5 amps	115	1	Provide the perfect amount of ventilation to your space per ASHRAE 62.2 requirements.	
Transformer 	383167	2.0 amps	230/277 to 115	1		
	383168	4.3 amps	230/277 to 115	1		
	383169	6.5 amps	230/277 to 115	1		
	383170	8.6 amps	230/277 to 115	1		
Fire Stat 	380028	8.0/4.0 amps	115/220	1	Type II Limit control temperature Auto reset	
	383668	8.0/4.0 amps	115/220	1	Type III Adjustable Air Stat Closed circuit - 120°F to 200°F Open circuit - 100°F	
Thermostat 	380044	16 amps	115	1	Reverse Acting Thermostat Contacts close on temperature rise Adjustable range 30° to 110°F	

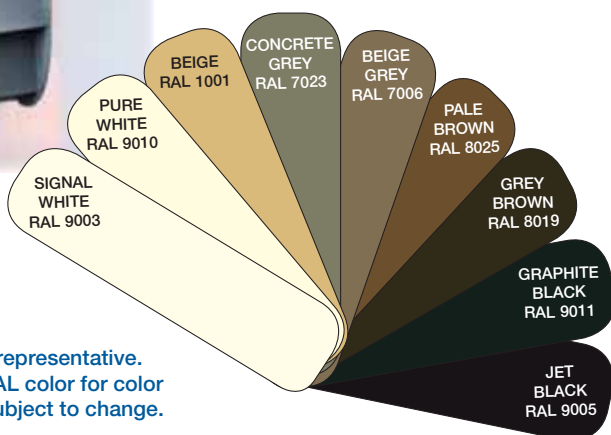


Coatings

Greenheck offers protective powder coatings for many of the Quick Build products.

Decorative coatings are ideal for projects where the fan exterior appearance is important and additional chemical resistance is not required. Customers can choose from nine standard RAL colors.

RAL is an independent organization providing a global color language. Referencing an RAL color ensures color uniformity worldwide.



Colors shown are only representative. Reference a specific RAL color for color matching. Colors are subject to change.



Protective coatings are available in a choice of four electrostatically applied powders. Powders available range from polyester urethanes to high performance epoxy providing an available selection for most environments.

Powder coatings offer a number of advantages over most wet coatings. Electrostatic painting involves applying a dry, charged particle to a grounded sheet metal. The results are uniform coverage and thickness with heavier coverage in the high charge areas (edges, corners, and pockets), that are difficult to reach with wet paint. Another advantage is environmental friendliness.

The following is a brief description of the protective coatings offered. For more information consult your local representative.

Permatector™

Permatector™

Permatector™ is the standard coating applied to all steel fans. Typical applications include corrosion resistance in indoor and outdoor environments.

**RAL 7023 concrete grey (standard)*

Hi-Pro Polyester

Hi-Pro Polyester (used in lieu of Air Dry Phenolic)

This coating is resistant to salt water, chemical fumes, and moisture in more corrosive atmospheres. It has superior chemical resistance, excellent abrasion and outdoor UV protection. This coating has protective qualities that exceed Air Dry Heresite. **RAL 7023 concrete grey (standard)*

Epoxy

Epoxy

Epoxy has excellent moisture resistance and moderate to good chemical resistance. Greenheck's epoxy is light tan in color so it will resist fading and chalking when exposed to sunlight.

Industrial Epoxy

Industrial Epoxy

Industrial Epoxy is a high performance epoxy with excellent chemical resistance in interior applications to a wide variety of chemicals including acids, caustics, solvents, and high moisture.

Two Coat System

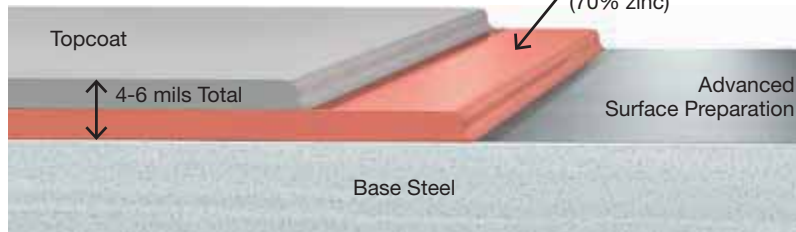
When compared to a traditional single coat application, the benefits of the two coat system include:

- An automatic powder coat application produces uniform coverage and unmatched paint quality.
- The double coat thickness provides superior durability and protection from air and water.
- The zinc-rich primer includes an epoxy component that provides additional corrosion protection.
- The zinc-rich primer provides chemical protection of exposed steel to prevent corrosion.

One Coat Process



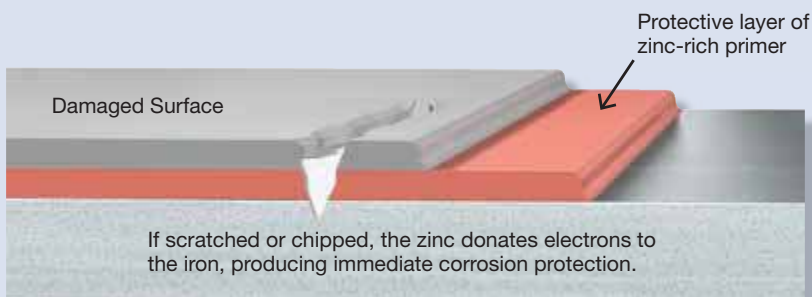
Two Coat Process



The Zinc Advantage

The zinc-rich primer *actively* and *passively* protects the base steel if the coating becomes damaged and the steel is exposed to air and water.

The zinc-rich primer has a lower electrochemical potential than the base steel. As a result, the steel is *actively* held in a neutral state when exposed to a corrosive environment—the driving force of corrosion is halted. A protective layer forms over the damaged surface as a by-product of the chemical reaction and *passively* protects the exposed steel from further corrosion due to air and water.



Salt Spray ASTM B117					Durability		*Chemical Resistance Ratings					
Hours	1000	2000	3000	4000	Pencil Hardness ASTM D3363	Cross-Hatch Adhesion ASTM D3359-B	Bleach	Sulfuric Acid (10%)	HCl (10%)	MEK	Chlorine (0.1%)	NaOH (20%)
Permatector™	█				3H	No Failure	0	0	0	1	0	1
Hi-Pro Polyester	█				2H	No Failure	0 - No effect 1 - Slight change in gloss or color 2 - Surface etching, severe staining, but film integrity remains 3 - Significant pitting, cratering, swelling, or erosion with obvious surface deterioration					
Perma-Z	█	█			3H	No Failure						
LabCoat™	█	█	█		2H	No Failure						

*For additional chemical resistance of Hi-Pro Polyester, see Greenheck's Product Application Guide FA/110-04R5, Performance Coatings for Ventilation Products

Salt Spray ASTM B117 is a comparative test that indicates the corrosion resistance of powder paint coatings.

Pencil Hardness and Cross-Hatch Adhesion tests determine the durability of coating to withstand scratches, nicks and chips.

Chemical Resistance Ratings provide information on how each coating option will hold-up in certain chemical environments.