

Fume and Laboratory Exhaust Systems



UL/cUL 705 Power Ventilators
E40001 - FJC, FJI



Model FJC sizes 6-8 are AMCA Licensed for Air Performance

Model FJC sizes 12-15 and FJI are AMCA Licensed for Sound and Air Performance

54

Model	Best Available Program
FJC	5 Days
FJI	10 Days

Model FJC (Commercial) Belt Drive and FJI (Industrial) Belt Drive and Direct Drive

Greenheck's FumeJet® line of exhaust fans with integral stacks are designed to safely remove and disperse fumes and odors. FumeJet systems replace utility set fans with field-supplied intake ducts and exhaust stacks to ensure a safe roof deck area and aid in preventing re-entrainment of contaminated air into air intake systems. The fan and stack have been designed and factory tested to withstand a force of 92 mph (22 PSF) without the need for guy wires.

Quick Build Performance

Capacities range from 250 to 18,000 cfm and up to 9 in. wg of static pressure.

Standard Construction	FJC-200	FJC-300	FJI
Housing construction, Permalock™	■	■	■
Housing construction, welded			■
Material type - galvanized steel	■		
Material type - coated steel		■	■
Temperature limit	250°F (121°C)	400°F (204°C)	500 (204°C)
Arrangement 4			■
Arrangement 10	■	■	
Wheel, backward inclined	■	■	
Minimum bearing life of L ₁₀ 80,000 hours (Average life - L ₅₀ 400,000 hours)	■	■	■
Weatherhood	■	■	■
Slip-fit collar for inlet connection	■	■	
Drain connection	■	■	■
Options and Accessories	200	300	FJI
Shaft seal - felt, neoprene	■	■	■
Spark B or C resistant construction		■	■
NEMA-3R disconnect	■	■	■
Mounting - equipment supports	■	■	■
Access door, bolted	■	■	■
Access door, hinged		■	■
Certified for seismic applications	■	■	

Discharge Options



Straight Stack

Clean design with uniform straight discharge stack. Most economical discharge option.



Fixed Nozzle

Tapered nozzle discharge increases outlet velocity sending exhaust fumes higher above the roof deck area. Does not negatively impact fan performance.



Adjustable Nozzle

Allows the user to adjust the discharge area based on installed conditions. Four blade positions available.

Features include:

- 7 foot (2.1m) discharge height
- No guy wires (92 mph wind speed)
- Quick installation

Applications include:

- Grease/Smoke
- Food Processing
- Wastewater/Odor
- Diesel Generator Exhaust
- Industrial Process
- Hospital Clinic
- Sterilization

FumeJet with restrained isolators and GESS equipment supports



*FumeJet with curb cap inlet box and GPFHL roof curb



Exploded views reflect shipping splits and minimal on-site assembly required for FumeJet systems.

*Unit shown with inlet box on roof curb is not available on QB program.



UL/cUL 705 Power Ventilators
E40001 - Vektor-H



UL 762 Power Ventilators for Restaurant
Exhaust Appliances - MH11745 - Vektor-H



Model Vektor-H is AMCA Licensed for Sound and Air Performance

**Best
Available
Program**

15 Days

Model Vektor®-H

Vektor-H models use a conical outlet nozzle to accelerate the exhaust to a high velocity. This provides the exhaust with additional momentum for displacement high above the roof. The Vektor-H is a curb-mounted, self-contained unit, so installation time is reduced by eliminating costly field fabricated inlet and outlet duct. The optional bypass air plenum and damper accommodates constant and variable volume laboratories.

Quick Build Performance

Housing Style	Inline Centrifugal
Stack Style	High Plume Nozzle
Minimum Flow	270 cfm (459 m ³ /hr)
Maximum Flow	24,000 cfm (40,776 m ³ /hr)
Maximum ESP	Up to 3.5 in. wg (875 Pa)

Standard Construction

Steel construction
LabCoat™ - a two-part electrostatically applied coating
Belt drive configuration
Designed and guaranteed to withstand 125 mph wind load ratings
Constant speed drives
Premium efficient, totally enclosed fan cooled motors, Class F insulation, VFD compatible
Spark B resistant construction
Minimum bearing life of L ₁₀ 100,000 hours
Aluminum wheel and shaft seal
Options and Accessories
NEMA-3R disconnect
Roof curb (12-, 18-, or 24-inch high)
Bypass air plenum - bottom or side inlet
Factory mounted actuators - manual, electric
Isolation dampers
Bypass dampers
Certified for high wind applications
UL/cUL Listed Power Ventilators
UL Listed Power Ventilators for Restaurant Exhaust Appliances

Performance for Vektor-H

Model Size	9	10	12	13	16	18	22	24	30	36
Minimum CFM	270	450	600	810	1050	1320	1650	2760	3690	5310
Maximum CFM	1750	1800	2640	3160	7080	7880	10560	14760	19640	24000
Plume Rise at 3000 (ft./min.)	Minimum (ft.)	14	15	16	17	18	19	20	22	26
	Maximum (ft.)	19	19	20	21	25	26	30	33	42

Performance certified is for installation type A: Free Inlet, Free outlet. Performance ratings do not include the effects of appurtenances (accessories). Power rating (Bhp) does not include transmission losses. Plume rise calculated assuming a 10 mph crosswind. 3,000 ft./min. is the minimum recommended outlet velocity per ANSI Z9.5. The AMCA Certified Ratings Seal does not apply to plume rise.

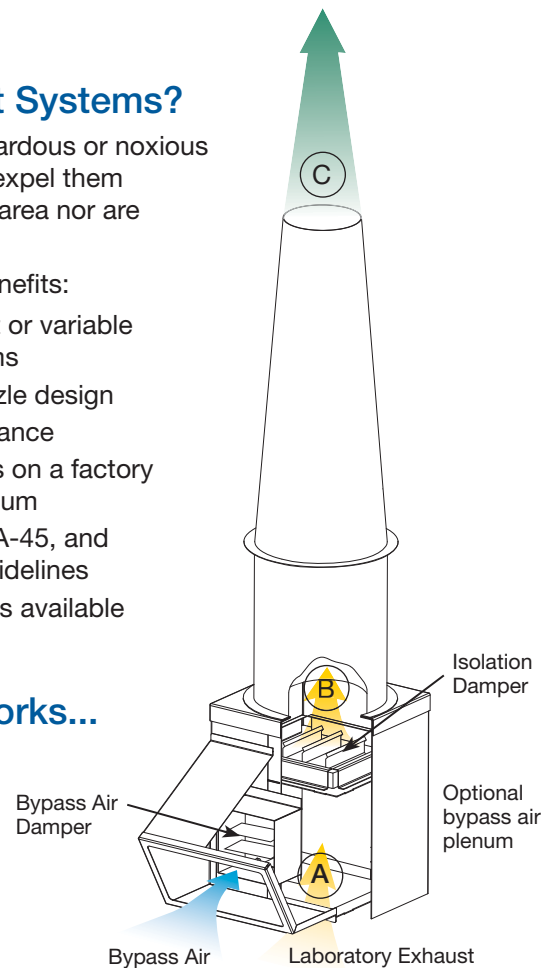
For a full range of fan performance, consult the Laboratory Exhaust Systems, Vektor-H Performance Supplement. (00.LAB.NB002 R3 4-2017)

Why use Greenheck Vektor Laboratory Exhaust Systems?

The main objective of a laboratory exhaust system is to remove hazardous or noxious fumes from a laboratory, dilute the fumes as much as possible and expel them from the lab building so that the fumes do not contaminate the roof area nor are re-entrained into the building makeup air system.

Greenheck Vektor laboratory exhaust systems offer the following benefits:

- Significant plume rise without unsightly exhaust stacks that detract from the buildings aesthetics
- Significant dilution of laboratory exhaust effluent, reducing contaminant concentration
- Inline or side inlet centrifugal arrangements
- Reliable drive systems
- Efficient and quiet blower technology
- Application to constant or variable volume exhaust systems
- Efficient discharge nozzle design
- Safe and easy maintenance
- Multiple fan assemblies on a factory provided common plenum
- Meets ANSI Z9.5, NFPA-45, and ASHRAE lab design guidelines
- Energy recovery options available



How Vektor High Plume Dilution Technology Works...

Laboratory exhaust is drawn into the Vektor fan (A).

The exhaust is discharged into the Vektor multistage induction nozzle and ambient dilution air is induced into the Vektor windband (B).

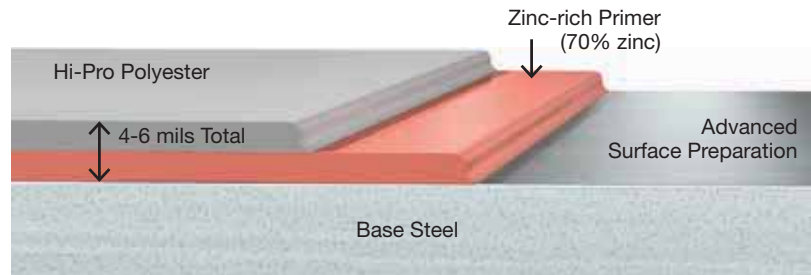
The laboratory exhaust plus induced dilution air is discharged at a high velocity into the atmosphere (C).

LabCoat™ for Laboratory Exhaust Applications

LabCoat™ corrosion-resistant coating is electrostatically applied uniformly in two steps after an advanced surface preparation involving a multistage chemical wash. This cleaner surface results in better coating adhesion and durability.

Step 1: A zinc-rich epoxy primer is applied and partially cured

Step 2: The finish coat of polyester resin (Hi-Pro Polyester) is applied and then fully cured at 400°F (204°C)



LabCoat™ is not affected by the UV component of sunlight (does not chalk) and has superior corrosion resistance to acid, alkali, solvents, and harsh environments (high humidity, coastal applications). The LabCoat™ system exceeds 4000 hour ASTM B117 Salt Spray Resistance—several times that of other corrosion-resistant coatings commonly offered.

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%)
							0	0	0	1	0	1
Permatector™	[Progressive bar chart]				3H	No Failure	0 - No effect					
Hi-Pro Polyester	[Progressive bar chart]				2H	No Failure	1 - Slight change in gloss or color					
Perma-Z	[Progressive bar chart]				3H	No Failure	2 - Surface etching, severe staining, but film integrity remains					
LabCoat™	[Progressive bar chart]				2H	No Failure	3 - Significant pitting, cratering, swelling, or erosion with obvious surface deterioration					

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