



Your Ventilation
Company



V-1

Product Catalog

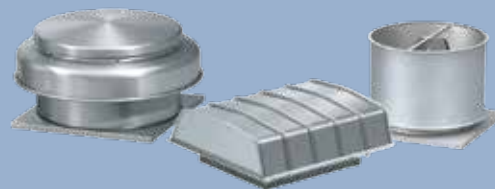


FANS



Pages 4 - 37

GRAVITY VENTILATORS



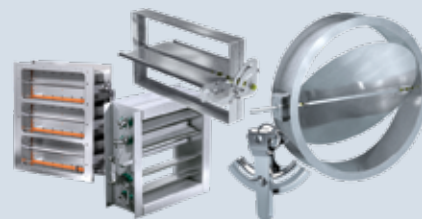
Page 38

MOTOR STARTERS



Page 40

DAMPERS



Pages 41 - 43

LOUVERS



Pages 44 - 45

WELCOME TO VENCO



INTRODUCTION

ABOUT US

Venco is a North American ventilation manufacturer with a dedicated focus on developing and producing rugged, high quality products. Our engineers continuously improve existing, and introduce new solutions based on the input they receive from our Venco manufacturer representatives around the globe and customers like you.

Venco offers a comprehensive line of air movement and control products that specifying engineers and contractors throughout the world have come to rely on. Every product we manufacture is thoroughly tested to ensure top performance and incomparable dependability.

In addition to reliable ventilation solutions, we offer best-in-class customer service to ensure you're taken care of before, during and after a project is completed.



LICENSES AND CERTIFICATIONS



Venco Products certifies that the models VECD, VECB, VUCD, VUCB, VWCD, VWCB, VUSG, VLCD, VLPD, VLCB, VLPB, VAXE, VAXS, VRDU, VRBU, VRBUO, VSAF, VRDE, VRDS, VRDE3, VRDS3, VRBE, VRBS, VRBF, VRBCE, VRBCS, VRBCF, VQ, VQID, VICD, VICB, VTC, VMQB, VQEID, VQEI, VTIF, VWE, VWS, VWCE, VWCS, VWBE, VWBS, VWBCE, VWBCS, VUSFD-100, VUSF-212 thru 222, VUSF-312 thru 324, VUSF-407-BI thru VUSF-449-BI, VUSF-418-AF thru VUSF-449-AF, VCSW, VJC sizes 12 thru 15, VJI, and VJHP shown here are licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 211 and Publication 311 and comply with the requirements of the AMCA Certified Ratings Program.



Venco Products certifies that the models VSF, VSFP, VQI, VQIB, VTIC Level 3, VAX, VUSF-206 thru 210, VUSF-306 thru 310, VUSF-327 thru 349, and VJC sizes 6 thru 8 shown here are licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 211 and comply with the requirements of the AMCA Certified Ratings Program.



UL/cUL 507
E33599

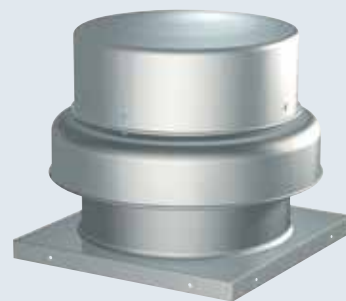
UL/cUL 705
E40001

UL/cUL 762
MH11745

UL/cUL Power Ventilators for Smoke Control MH17511

FANS

Roof & Sidewall Mounted



MODEL VECD/VECB

CENTRIFUGAL DOWNBLAST FANS are designed for clean air exhaust applications requiring roof mounting.

PERFORMANCE

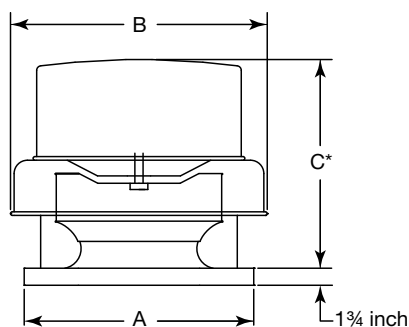
- VECD capacities range from 50 to 6,300 cfm and 1.75 in. wg of static pressure.
- VECB capacities range from 70 to 44,700 cfm and 3.25 in. wg of static pressure.

Standard Construction	VECD	VECB
Housing - aluminum	▼	▼
Wheel - backward-inclined, aluminum	▼	▼
Birdscreen - galvanized	▼	▼
Corrosion-resistant fasteners	▼	▼
NEMA-1 disconnect switch	▼	▼
Ball bearing motor - 1/4 hp and larger	▼	▼
Double-studded vibration isolators	▼	▼
Three speed motor - sizes 060 through 095	▼	
Lifting lugs		▼
Adjustable motor pulley		▼
Options and Accessories	VECD	VECB
EC motor - 80% turndown, 85% efficient Available as standard on select sizes	▼	
Damper	▼	▼
Hinged curb cap with cables	▼	▼
Roof curb	▼	▼
Roof curb accessories - seals, adaptors, extensions	▼	▼
Speed control	▼	
Birdscreen - aluminum, stainless steel	▼	▼
Tie-down points	▼	▼
NEMA rated disconnect switch	▼	▼
Dual drives		▼
Relubricatable bearings		▼
Decorative or protective powder coating	▼	▼
UL/cUL Listed Power Ventilators	▼	▼
UL/cUL Listed Power Ventilators for Smoke Control Systems		▼
AMCA Licensed for Sound and Air Performance	▼	▼

DIMENSIONS - In Inches

Model Size VECD/VECB	A	B	C*	Nominal Sq. Sizes		
				Damper	Roof Curb	Roof Opening
060, 070	17	19 ³ / ₈	12 ¹ / ₈	8	17	10 ¹ / ₂
080, 090, 095	17	21 ³ / ₄	14 ³ / ₈	10	17	12 ¹ / ₂
071, 081, 091, 097, 098, 099, 101, 103, 121, 123	19	24 ³ / ₈	23 ³ / ₄	12	19	14 ¹ / ₂
131, 133	19	28 ³ / ₈	23 ³ / ₄	12	19	14 ¹ / ₂
141, 143, 161, 163	22	28 ³ / ₈	23 ³ / ₄	16	22	18 ¹ / ₂
180, 183, 200, 203	30	35 ¹ / ₂	28	18	30	20 ¹ / ₂
220, 240	34	42 ³ / ₄	31 ¹ / ₂	24	34	26 ¹ / ₂
260, 300	40	50	36	30	40	32 ¹ / ₂
330, 360	46	58 ³ / ₄	38 ¹ / ₂	36	46	38 ¹ / ₂
420	52	65 ¹ / ₄	44	42	52	44 ¹ / ₂
480	58	73 ³ / ₄	47 ¹ / ₄	48	58	50 ¹ / ₂
500, 540	64	83	50 ³ / ₄	54	64	56 ¹ / ₂

Dimension A given is the inside dimension of the curb cap. *May be greater depending on motor.



FANS

Roof & Sidewall Mounted



MODEL VUCD/VUCB VWCD/VWCB

CENTRIFUGAL UPBLAST OR SIDEWALL FANS are designed for clean or contaminated air exhaust applications requiring roof or wall mounting.

PERFORMANCE

- VUCD capacities range from 60 to 6,400 cfm and 3 in. wg of static pressure.
- VUCB capacities range from 180 to 30,000 cfm and 5 in. wg of static pressure.
- VWCD capacities range from 65 to 6,400 cfm and 3 in. wg of static pressure.
- VWCB capacities range from 375 to 12,450 cfm and 2.75 in. wg of static pressure.

Standard Construction	VUCD	VWCD	VUCB	VWCB
Housing fully-welded to curb cap with drain trough	▼		▼	
Wheel - backward-inclined, aluminum	▼	▼	▼	▼
One piece windband - aluminum	▼	▼	▼	▼
Birdscreen - galvanized		▼		▼
Corrosion-resistant fasteners	▼	▼	▼	▼
NEMA-1 disconnect switch	▼	▼	▼	▼
Ball bearing motor - 1/4 hp and larger	▼	▼	▼	▼
Double-studded vibration isolators	▼	▼	▼	▼
Mounting plate		▼		▼
Three speed motor - sizes 060 through 095	▼	▼		
Lifting lugs			▼	▼
Adjustable motor pulley			▼	▼
Options and Accessories	VUCD	VWCD	VUCB	VWCB
EC motor - 80% turndown, 85% efficient Available as standard on select sizes	▼	▼		
Damper - not for use in grease applications	▼	▼	▼	▼
Hinged kit - NFPA required	▼		▼	
Roof curb - NFPA requires vented roof curb	▼		▼	
Roof curb accessories - seals, adaptors, extensions	▼		▼	
Grease trap - NFPA required	▼		▼	
Speed control	▼	▼		
Wall grille		▼		▼
Birdscreen - aluminum	▼	▼	▼	▼
Clean-out port - NFPA required	▼		▼	
Windband extension	▼		▼	
Tie-down points	▼		▼	
NEMA rated disconnect switch	▼	▼	▼	▼
Non-stick coating on wheel	▼	▼	▼	▼
Heat baffle			▼	▼
Dual drives			▼	▼
Relubricatable bearings			▼	▼
Decorative or protective powder coating	▼	▼	▼	▼
UL/cUL Listed Power Ventilators	▼	▼	▼	▼
UL/cUL Listed Power Ventilators for Restaurant Exhaust Appliances	▼	▼	▼	▼
UL/cUL Listed Power Ventilators for Smoke Control Systems			▼	
AMCA Licensed for Sound and Air Performance	▼	▼	▼	▼

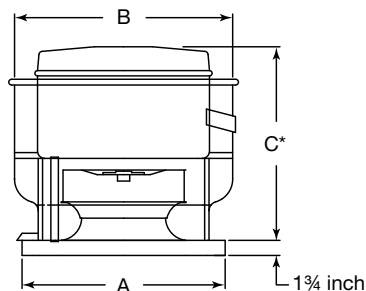
FANS

Roof & Sidewall Mounted



MODEL VUCD/VUCB VWCD/VWCB

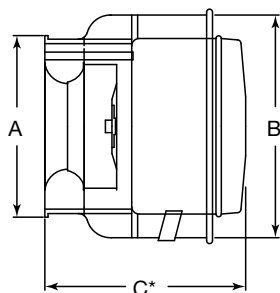
VUCD/VUCB



DIMENSIONS - In Inches

Model Size VUCD/VUCB	A	B	C*	Nominal Sq. Sizes		
				Damper [^]	Roof Curb	Roof Opening
060, 070	17	18 ³ / ₈	13 ¹ / ₂	8	17	10 ¹ / ₂
080, 090	19	21	13 ³ / ₈	10	19	12 ¹ / ₂
095	19	21	15 ¹ / ₄	10	19	12 ¹ / ₂
099, 101, 121, 131	19	24 ⁷ / ₈	28 ¹ / ₄	12	19	14 ¹ / ₂
141, 161	22	28 ⁷ / ₈	29 ³ / ₄	16	22	18 ¹ / ₂
180, 200	30	35 ³ / ₈	28 ⁵ / ₈	18	30	20 ¹ / ₂
220, 240	34	42 ³ / ₄	33 ⁷ / ₈	24	34	26 ¹ / ₂
300	40	50	36	30	40	32 ¹ / ₂
360	46	56 ¹ / ₁₆	39 ¹ / ₈	36	46	38 ¹ / ₂
420	52	65 ³ / ₈	44 ³ / ₄	42	52	44 ¹ / ₂
480	58	74 ³ / ₁₆	48 ¹ / ₈	48	58	50 ¹ / ₂

VWCD/VWCB



DIMENSIONS - In Inches

Model Size VWCD/VWCB	A	B	C*	Nominal Sq. Sizes	
				Damper [^]	Wall Opening
060, 070	14 ³ / ₄	18 ³ / ₈	13 ¹ / ₂	8	8 ¹ / ₂
080, 090	17 ⁷ / ₈	21	13 ³ / ₈	10	10 ¹ / ₂
095	17 ⁷ / ₈	21	15 ¹ / ₄	10	10 ¹ / ₂
099, 101, 121, 131	19 ³ / ₄	24 ⁷ / ₈	28 ¹ / ₄	12	12 ¹ / ₂
141, 161	22 ¹ / ₈	28 ⁷ / ₈	29 ³ / ₄	15	15 ¹ / ₂
180, 200	27 ³ / ₄	35 ³ / ₈	28 ⁵ / ₈	17	17 ¹ / ₂
220, 240	31 ¹ / ₄	42 ²⁵ / ₃₂	33 ⁷ / ₈	20	20 ¹ / ₂
300	38 ³ / ₈	50	36	25	25 ¹ / ₂

Dimension A given is the inside dimension of the curb cap.

*May be greater depending on motor. [^]Dampers should not be used in grease applications.

FANS

Roof & Sidewall Mounted



SEVERE DUTY CENTRIFUGAL UPBLAST FANS are designed for exhausting highly contaminated air in roof mounted applications.

PERFORMANCE

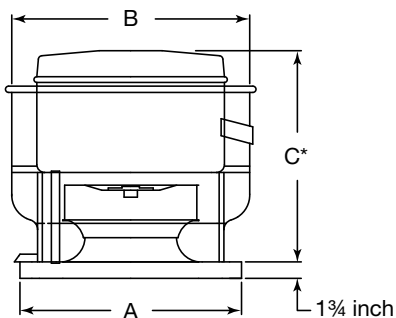
- VUSG capacities range from 330 to 6,800 cfm and 3.25 in. wg of static pressure.

Standard Construction

Housing - heavy-gauge steel
 Housing fully welded to curb cap with drain trough
 Wheel - backward-inclined, heavy-gauge steel
 Non-stick coating on wheel
 One piece windband - steel
 Corrosion-resistant fasteners
 NEMA-3R disconnect switch
 Assembled hinged base - NFPA required
 Clean-out port - NFPA required
 Ball bearing motor - 1/4 hp and larger
 Dual drives
 Relubricatable bearings
 Heat baffle
 Double-studded vibration isolators
 Lifting lugs
 Adjustable motor pulley
 Polyester urethane protective powder coating
 UL/cUL Listed 762 is standard

Options and Accessories

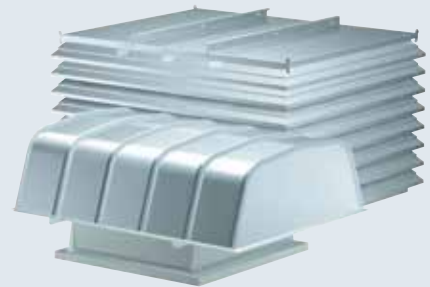
Damper - not for use in kitchen applications
 Roof curb - NFPA requires vented roof curb
 Roof curb accessories - seals, adaptors, extensions
 Grease trap and drain connection - NFPA required
 Windband extension
 Tie-down points
 NEMA rated disconnect switch
 Decorative or protective powder coating
 UL/cUL Listed Power Ventilators for Smoke Control Systems
 AMCA Licensed for Sound and Air Performance



DIMENSIONS - In Inches

Model Size VUSG	A	B	C*	Nominal Sq. Sizes	
				Roof Curb	Roof Opening
140, 160	26	28 ⁷ / ₈	29 ³ / ₄	26	18 ¹ / ₂
180, 200	30	35 ³ / ₈	28 ⁵ / ₈	30	20 ¹ / ₂

Dimension A given is the inside dimension of the curb cap.
 *May be greater depending on motor.



MODEL VLCD/VLPD VLCB/VLPB

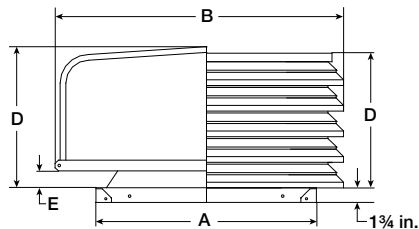
CENTRIFUGAL DOWNBLAST FANS are designed for clean air exhaust applications requiring roof mounting.

PERFORMANCE

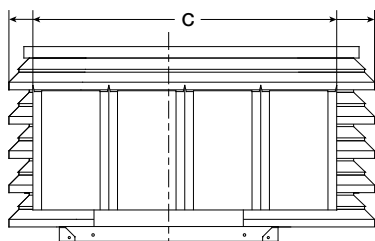
- VLCD, VLPD capacities range from 130 to 1,850 cfm and 0.9 in. wg of static pressure.
- VLCB, VLPB capacities range from 620 to 37,500 cfm and 2.125 in. wg of static pressure.

Standard Construction	VLCD	VLPD	VLCB	VLPB
Housings with hinged hoods - Fabra hood style, galvanized	▼		▼	
Housings with hinged cover - Louvered penthouse, extruded aluminum		▼		▼
Wheel - backward-inclined, aluminum	▼	▼	▼	▼
Birdscreen - galvanized	▼	▼	▼	▼
Corrosion-resistant fasteners	▼	▼	▼	▼
NEMA-1 disconnect switch	▼	▼	▼	▼
Ball bearing motor - 1/4 hp and larger	▼	▼	▼	▼
Double-studded vibration isolators	▼	▼	▼	▼
Three speed motor - sizes 60 through 95	▼	▼		
Adjustable motor pulley			▼	▼
Options and Accessories	VLCD	VLPD	VLCB	VLPB
EC motor - 80% turndown, 85% efficient Available on select sizes and models.	▼	▼		
Damper	▼	▼	▼	▼
Roof curb	▼	▼	▼	▼
Roof curb accessories - seals, adaptors, extensions	▼		▼	▼
Birdscreen - aluminum	▼	▼	▼	▼
Fabra hood - aluminum	▼		▼	
Stainless steel fasteners	▼	▼	▼	▼
Tie-down points	▼	▼	▼	▼
NEMA rated disconnect switch	▼	▼	▼	▼
Dual drives			▼	▼
Hood insulation - 1 inch	▼	▼	▼	▼
Relubricatable bearings			▼	▼
Decorative or protective powder coating	▼	▼	▼	▼
UL/cUL Listed Power Ventilators	▼	▼		▼
AMCA Licensed for Sound and Air Performance	▼	▼	▼	▼

VLCD/VLCB, VLPD/VLPB



Side view



DIMENSIONS - In Inches

Model Size VLCD, VLPD, VLCB, VLPB	A Sq.	Fabra Hood Style VLCD, VLCB				Louver Style VLPD, VLPB			Nominal Sq. Sizes	
		B	C	D	E	B	C	D	Damper	Roof Opening
70	17	23	27	13 ³ / ₈	2	23	23	14	8	10 ¹ / ₂
80, 90, 95	19	28	27	16	4	25	25	17	10	12 ¹ / ₂
100, 120	22	30	27	23 ¹ / ₄	4	28	28	19 ¹ / ₄	12	14 ¹ / ₂
14	26	35	39	18	4	32	40	17	16	18 ¹ / ₂
18	30	40	39	21	4 ¹ / ₂	36	46	24 ¹ / ₂	18	20 ¹ / ₂
21	30	43	51 ¹ / ₂	23	6	36	46	24 ¹ / ₂	18	20 ¹ / ₂
24	34	45 ¹ / ₂	51 ¹ / ₂	23 ³ / ₄	6 ³ / ₄	40	49 ¹ / ₂	23 ¹ / ₂	24	26 ¹ / ₂
30	40	50	63	26 ³ / ₈	8 ¹ / ₂	46	58	26 ¹ / ₂	30	32 ¹ / ₂
36	46	60	63	32 ³ / ₈	9 ³ / ₄	51 ³ / ₄	63	34 ³ / ₈	36	38 ¹ / ₂
42	52	70 ³ / ₈	75	37 ³ / ₈	11 ¹ / ₂	58	70 ¹ / ₂	38 ¹ / ₄	42	44 ¹ / ₂
48	58	70 ³ / ₈	87	41 ¹ / ₂	11 ³ / ₈	64	76 ¹ / ₂	40 ³ / ₈	48	50 ¹ / ₂
54	64	79 ³ / ₈	87	45 ³ / ₈	12 ¹ / ₂	70	83 ¹ / ₂	43 ³ / ₈	54	56 ¹ / ₂

Dimension A given is the inside dimension of the curb cap.

FANS

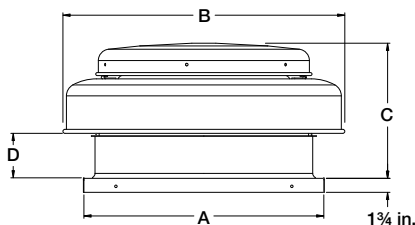
Roof & Sidewall Mounted



DIRECT DRIVE AXIAL DOWNBLAST FANS are designed for clean air exhaust or supply applications requiring roof mounting. The propeller provides efficient airflow at low static pressures.

PERFORMANCE

- VAXE capacities range from 250 to 6,000 cfm and 1 in. wg of static pressure.
- VAXS capacities range from 200 to 6,000 cfm and 1 in. wg of static pressure.



Standard Construction

Housing - aluminum
 Propeller - aluminum
 Birdscreen - galvanized
 Corrosion-resistant fasteners
 NEMA-1 disconnect switch
 Ball bearing motor - 1/4 hp and larger

Options and Accessories

Damper
 Roof curb
 Roof curb accessories - adaptors, extensions
 Birdscreen - aluminum
 NEMA rated disconnect switch
 Decorative or protective powder coating
 AMCA Licensed for Sound and Air Performance

DIMENSIONS - In Inches

Model Size VAXE/VAXS	A	B	C	D	Nominal Sq. Sizes
					Recommended Roof Opening
10	19	24 ⁵ / ₈	15 ¹ / ₂	5 ¹ / ₂	14 ¹ / ₂
12	22	28 ⁵ / ₈	16 ¹ / ₂	6 ¹ / ₄	14 ¹ / ₂
14	22	28 ⁵ / ₈	16 ¹ / ₂	6 ¹ / ₄	16 ¹ / ₂
16	26	35 ¹ / ₄	17 ¹ / ₄	6 ¹ / ₄	18 ¹ / ₂
18	30	35 ¹ / ₄	17 ¹ / ₄	6 ¹ / ₄	20 ¹ / ₂
20	34	42	17 ¹ / ₂	6 ¹ / ₄	26 ¹ / ₂
24					

FANS

Roof & Sidewall Mounted



MODEL VRDU/VRBU/ VRBUO

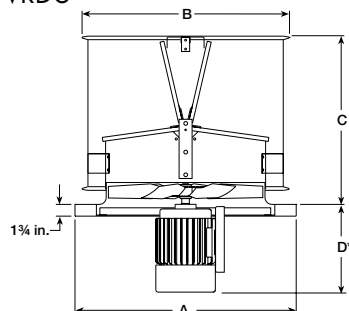
AXIAL UPBLAST FANS are designed to discharge high volumes of clean or contaminated air up and away from the building.

PERFORMANCE

- VRDU capacities range from 4,000 to 43,400 cfm and 0.75 in. wg of static pressure.
- VRBU capacities range from 4,050 to 64,300 cfm and 1 in. wg of static pressure.
- VRBUO capacities range from 4,000 to 61,800 cfm and 1 in. wg of static pressure.

Standard Construction	VRDU	VRBU	VRBUO
Housing - galvanized steel with fully-assembled butterfly dampers and damper stops	▼	▼	▼
Curb cap and drive assembly <ul style="list-style-type: none"> • sizes 18 through 48 - galvanized steel • sizes 54 and 60 - painted steel 	▼	▼	▼
Propeller - aluminum	▼		
Propeller - fabricated steel		▼	▼
Corrosion-resistant fasteners	▼	▼	▼
Ball bearing motor - 1/4 hp and larger	▼	▼	▼
Relubricatable bearings		▼	▼
Variable pitched motor pulley		▼	▼
Options and Accessories	VRDU	VRBU	VRBUO
Roof curb	▼	▼	▼
Roof curb accessories - seals, adaptors, extensions	▼	▼	▼
Guards - inlet, outlet	▼	▼	▼
Propeller - aluminum		▼	▼
Butterfly dampers - aluminum	▼	▼	▼
Magnetic damper latches	▼	▼	▼
Motorized damper lifters	▼	▼	▼
Fusible link damper lifters	▼	▼	▼
Tie-down points	▼	▼	▼
NEMA rated disconnect switch	▼	▼	▼
Lube lines		▼	▼
Dual drives		▼	▼
Belt tube			▼
Decorative or protective powder coating	▼	▼	▼
High temperature option			▼
UL/cUL Listed Power Ventilators	▼	▼	▼
UL/cUL Listed Power Ventilators for Smoke Control Systems			▼
AMCA Licensed for Sound and Air Performance	▼	▼	▼

VRDU



DIMENSIONS - In Inches

Model Size VRDU	A Curb Cap ID	B	C	D*	Recommended Roof Opening
24	34	31 1/8	26	13 1/2	30 1/2
30	40	37 3/8	30	13 1/8	36 1/2
36	46	43 1/2	33	12 15/16	42 1/2
42	52	49 5/8	38	18 1/2	48 1/2
48	58	56	40	18	54 1/2

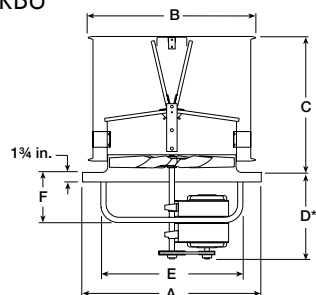
*Dimension may vary depending on motor.

FANS | Roof & Sidewall Mounted



MODEL VRDU/VRBU/VRBUO

VRBU

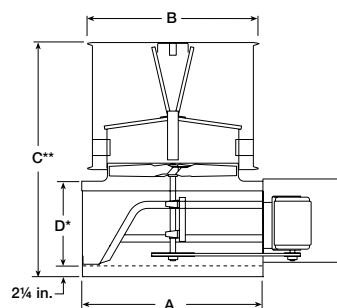


DIMENSIONS - In Inches

Model Size VRBU	A Curb Cap ID	B	C	D*		E	F	Nominal Sq. Sizes
				Level				Recommended Roof Opening
				1, 2	3			
24	34	31 ¹ / ₈	26	15 ¹ / ₂	16 ³ / ₄	27 ³ / ₈	9 ⁷ / ₁₆	30 ¹ / ₂
30	40	37 ³ / ₈	30	15 ¹ / ₂	16 ³ / ₄	34 ³ / ₄	9 ⁷ / ₈	36 ¹ / ₂
36	46	43 ¹ / ₂	33	16 ³ / ₄	16 ³ / ₄	40 ⁷ / ₈	9 ⁷ / ₈	42 ¹ / ₂
42	52	49 ⁵ / ₈	38	19 ³ / ₈	23 ⁷ / ₈	46 ³ / ₄	11 ³ / ₄	48 ¹ / ₂
48	58	56	40	19 ³ / ₈	23 ⁷ / ₈	52 ³ / ₄	11 ³ / ₄	54 ¹ / ₂
54	66 ¹ / ₂	62 ⁵ / ₈	45	19 ¹ / ₄	26 ⁷ / ₈	61 ¹ / ₄	11 ¹ / ₂	63
60	72 ¹ / ₂	68 ³ / ₄	48	21 ¹ / ₄	27	66 ¹ / ₄	15	69

*Dimension may vary depending on motor.

VRBUO



DIMENSIONS - In Inches

Model Size VRBUO	A	B	C**	D*	Nominal Sq. Sizes
					Recommended Roof Opening
24	33 1/2	31 1/8	45 5/8	17 1/2	30
30	39 1/2	37 3/8	51 3/4	19 1/2	36
36	45 1/2	43 1/2	55	19 1/2	42
42	51 1/2	49 5/8	59 5/8	19 5/8	48
48	57 1/2	56	63 5/8	21 3/4	54
54	66	62 5/8	70 5/8	22 3/4	62 1/2
60	72	68 3/4	75	23	68 1/2

*Dimension may vary depending on motor.

**Sizes 42 through 60 with High Temperature Option will be 5 inches larger.

FANS

Roof & Sidewall Mounted



CENTRIFUGAL SUPPLY FANS are designed to draw filtered, untempered air from one side of the housing.

PERFORMANCE

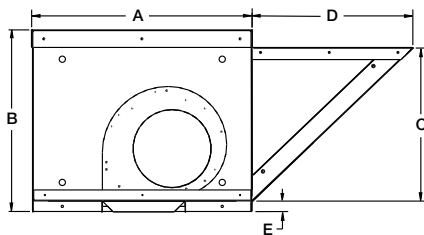
- VSAF capacities range from 800 to 14,000 cfm and 3.5 in. wg of static pressure.

Standard Construction

Housing - galvanized steel
 Wheel - forward-curved, galvanized steel, double-width
 Housing cover and side access panels - removable
 Corrosion-resistant fasteners
 Filters - one-inch aluminum, washable
 Ball bearing motor - 1/4 hp and larger
 Double-studded vibration isolators
 Lifting lugs
 Adjustable motor pulley

Options and Accessories

Damper
 Roof curb
 Roof curb accessories - adaptors, extensions
 Duct adaptor
 NEMA rated disconnect switch
 Dual drives
 UL/cUL Listed Power Ventilators
 AMCA Licensed for Sound and Air Performance



DIMENSIONS - In Inches

Model Size VSAF	A	B	C	D	E	Nominal Sq. Sizes
						Recommended Roof Opening
110	30	25	21 ¹ / ₁₆	22	1 ¹ / ₂	16 ¹ / ₂
112	35	32	27 ³ / ₈	29 ¹ / ₄	2	20 ¹ / ₂
115	34	32 ¹ / ₁₆	27 ³ / ₈	29 ¹ / ₄	2	26 ¹ / ₂
118	42	36 ¹ / ₁₆	31 ¹ / ₁₆	32	2	32 ¹ / ₂
120	45 ¹ / ₂	48 ¹ / ₁₆	44 ¹ / ₁₆	35 ¹³ / ₁₆	2 ¹ / ₈	38 ¹ / ₂

FANS

Roof & Sidewall Mounted



MODEL VSF/VSP

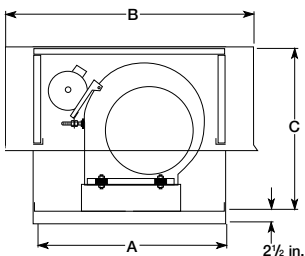
CENTRIFUGAL SUPPLY FANS are designed to draw filtered, untempered air from all four sides of the housing.

PERFORMANCE

- VSF, VSFP capacities range from 600 to 14,300 cfm and 2 in. wg of static pressure.

Standard Construction	VSF	VSFP
Housing - galvanized steel	▼	
Housing - louvered penthouse, extruded aluminum		▼
Wheel - forward-curved, steel, double-width	▼	▼
Insulated removable cover with quick release latches	▼	▼
Corrosion-resistant fasteners	▼	▼
Filters - one-inch aluminum, washable	▼	▼
Ball bearing motor - 1/4 hp and larger	▼	▼
Double-studded vibration isolators	▼	▼
Adjustable motor pulley	▼	▼
Options and Accessories	VSF	VSFP
Damper	▼	▼
Roof curb	▼	▼
Roof curb accessories - seals, adaptors, extensions	▼	▼
Duct adaptor	▼	▼
Tie-down points	▼	▼
NEMA rated disconnect switch	▼	▼
Dual drives	▼	▼
Decorative or protective powder coating	▼	▼
UL/cUL Listed Power Ventilators	▼	▼
AMCA Licensed for Air Performance	▼	▼

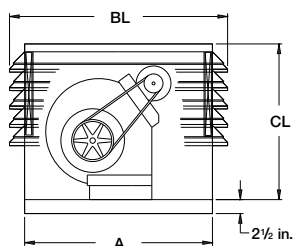
VSF



DIMENSIONS - In Inches

Model Size VSF	A sq.	B sq.	C	Nominal Sq. Sizes	
				Recommended Roof Opening	Damper Size
90	26	35 ¹ / ₈	23 ¹ / ₄	15	12
100	30	41 ¹ / ₈	23 ¹ / ₄	17	14
120	34	47 ¹ / ₈	27 ¹ / ₄	21	18
150	40	53 ¹ / ₈	31 ¹ / ₄	23	20
180	46	61 ¹ / ₈	34 ¹ / ₄	29	26
200	52	73 ¹ / ₈	39 ¹ / ₄	33	30

VSFP



DIMENSIONS - In Inches

Model Size VSFP	A sq.	BL sq.	CL	Nominal Sq. Sizes	
				Recommended Roof Opening	Damper Size
90	26	31 ⁷ / ₈	25 ³ / ₈	15	12
100	30	35 ⁷ / ₈	25 ³ / ₈	17	14
120	34	39 ⁷ / ₈	29 ³ / ₈	21	18
150	40	45 ⁷ / ₈	33 ³ / ₈	23	20
180	46	51 ⁷ / ₈	35 ³ / ₈	29	26
200	52	58 ³ / ₁₆	40 ³ / ₈	33	30

FANS

Roof & Sidewall Mounted

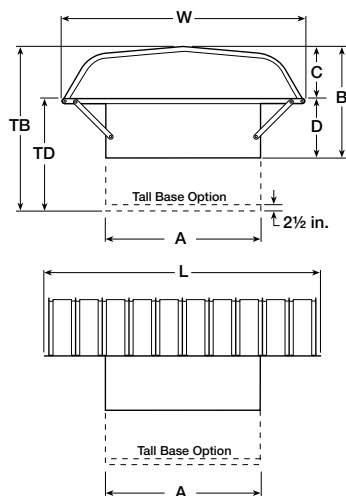


MODEL
VRDE/VRDS
VRDE3/VRDS3
VRBE/VRBS/VRBF
VRBCE/VRBCS/VRBCF
Reversible:
VRDP/VRBP
Reversible Filtered:
VRPDF/VRPBF

HOODED ROOF FANS are designed to exhaust or supply high volumes of air from commercial and industrial buildings. Interlocking fabra hood design consists of four material thicknesses at each rib location ensuring strength in severe conditions. Some models are available as filtered or reversible.

PERFORMANCE

- Capacities range from 580 to 86,500 cfm and 1.5 in. wg of static pressure.



Standard Construction	Direct Drive			Belt Drive		
	VRDE VRDS	VRDE3 VRDS3	VRDP VRPDF	VRBE VRBS VRBF	VRBCE VRBCS VRBCF	VRBP VRPBF
Hood and base - galvanized steel	▼	▼	▼	▼	▼	▼
Propeller - cast aluminum		▼	▼		▼	▼
Propeller - fabricated steel	▼			▼		
Birdscreen - galvanized (non-filtered units only)	▼	▼	▼	▼	▼	▼
Corrosion-resistant fasteners	▼	▼	▼	▼	▼	▼
Filters - two-inch aluminum, washable (VRBF, VRBCF, VRPDF, VRPBF)			▼	▼	▼	▼
Ball bearing motor - 1/4 hp and larger	▼	▼	▼	▼	▼	▼
Relubricatable bearings				▼	▼	▼
Adjustable motor pulley				▼	▼	▼
Options and Accessories	VRDE VRDS	VRDE3 VRDS3	VRDP VRPDF	VRBE VRBS VRBF	VRBCE VRBCS VRBCF	VRBP VRPBF
Damper	▼	▼	▼	▼	▼	▼
Roof curb	▼	▼	▼	▼	▼	▼
Roof curb accessories - seals, adaptors, extensions	▼	▼	▼	▼	▼	▼
Tall base with access door	▼	▼	▼	▼	▼	▼
Hood and base - aluminum	▼	▼	▼	▼	▼	▼
Hood insulation	▼	▼	▼	▼	▼	▼
Safety guards	▼	▼	▼	▼	▼	▼
Wiring - pigtails	▼	▼	▼	▼	▼	▼
Lube lines				▼	▼	▼
Tie-down points and lifting lugs	▼	▼	▼	▼	▼	▼
NEMA rated disconnect switch	▼	▼	▼	▼	▼	▼
Dual drives				▼	▼	▼
Decorative or protective powder coating	▼	▼	▼	▼	▼	▼
UL/cUL Listed Power Ventilators	▼	▼	▼	▼	▼	▼
AMCA Licensed for Sound and Air Performance	▼	▼		▼	▼	

DIMENSIONS - In Inches

• Direct Drive Sizes 18-54 • Belt Drive Sizes 20-72

Model Size	Fan Panel Sq. Size		Standard Base		Tall Base		Standard Hood	Filtered Hood	Damper Sq. Size	Roof Opening Sq. Size
	A	C	B	D	TB	TD	W x L	W x L		
18	28	13	23	10	40 1/4	27 1/4	48 x 51	—	18	20 1/2
20	30	16	27	11	44 1/4	28 1/4	54 x 51	54 x 51	20	22 1/2
24	34	18	29	11	46 1/4	28 1/4	66 x 63	66 x 63	24	26 1/2
30	40	20	34	14	51 1/4	31 1/4	75 x 75	78 x 87	30	32 1/2
36	46	21	38 1/2	17 1/2	56 3/4	34 3/4	88 x 87	94 x 87	36	38 1/2
42	52	24	42 1/2	18 1/2	59 3/4	35 3/4	86 x 99	93 x 99	42	44 1/2
48	58	24	43 1/2	19 1/2	60 3/4	36 3/4	93 x 111	112 x 111	48	50 1/2
54	64	26 1/2	49	22 1/2	66 1/4	39 3/4	112 x 111	124 x 123	54	56 1/2
60	70	26 1/2	50	23 1/2	67 1/4	40 3/4	124 x 123	136 x 135	60	62 1/2
72	83	29	53	24	70 1/4	41 1/4	136 x 135	136 x 147	72	74 1/2

FANS

Roof & Sidewall Mounted



MODEL VESRMD/ VESRMDF/VERD

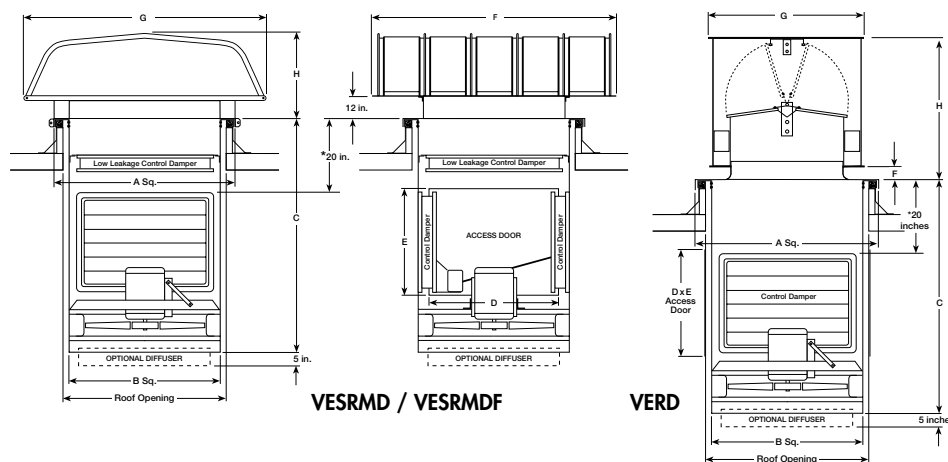
VENCO FOUR-WAY FAN, models VESRMD and VESRMDF offer the flexibility to meet changing needs and to maintain comfortable temperatures in factories, warehouses and other facilities with high ceilings. When temperatures change with production processes or seasonal shifts, the four-way fan can exhaust, supply, recirculate or mix air as required.

MODEL VERD UPBLAST FAN is available for applications that require exhaust and recirculation and do not require supply or mixed air. The VERD has an upblast windband and butterfly dampers in lieu of the four-way fan hood.

PERFORMANCE

- VERD capacities range from 2,800 to 42,700 cfm and up to 0.5 in. wg of static pressure.

Standard Construction	VESRMD	VESRMDF	VERD
Galvanized steel housing	▼	▼	▼
Galvanized steel plenum	▼	▼	▼
Aluminum butterfly damper			▼
Wire mesh birdscreen	▼	▼	
Propeller - cast aluminum	▼		▼
Washable 2 inch aluminum filters		▼	
Low leakage control damper	▼	▼	▼
Heavy-duty ball bearing motor	▼	▼	▼
Options and Accessories	VESRMD	VESRMDF	VERD
Damper	▼	▼	▼
Roof curb	▼	▼	▼
NEMA rated disconnect switch	▼	▼	▼
Hood insulation	▼	▼	
Tie-down points			▼
Discharge diffuser	▼	▼	▼
Decorative or protective powder coating	▼	▼	▼
Control center	▼	▼	▼



DIMENSIONS - In Inches

Model Size	A	B	C*	Access Doors		Roof Opening
				D	E	
24	40	32	58½	21	20	34½
30	46	38	63	27	20	40½
36	52	44	71⅝	33	22	46½
42	58	50	75¾	38	36	52½
48	64	56	82⅝	44	36	58½
54	70	62	91	50	36	64½

Important: Plenum height can be increased in 12 inch increments to clear solid ceiling obstructions, etc. Increases will affect dimension C.

Model Size	Non-Filtered Hood			Filtered Hood			Upblast Hood			Approximate Unit Weights (lbs.)					
	VESRMD Hood Size			VESRMDF Hood Size			VERD Hood Size			VESRDM		VESRMDF		VERD	
	F	G	H	F	G	H	F	G	H	Alum	Galv	Alum	Galv	Alum	Galv
24	63	66	30	63	66	30	2½	31⅝	26¼	570	650	670	750	400	480
30	75	74	32	75	78	32	3½	37⅝	30⅝	760	900	860	1000	490	630
36	87	76	33	87	94	33	4½	43¾	33¾	1040	1200	1170	1330	715	875
42	99	86	36½	99	100	36½	4½	50	38½	1200	1400	1330	1530	850	1050
48	111	100	36½	111	112	36½	5½	56¼	41	1470	1700	1620	1850	1110	1340
54	111	112	39	112	124	39	5½	63⅝	45	1770	2000	1920	2150	1405	1635

For complete dimensional information, refer to the applicable submittals for this product. Note: Dimensions are subject to change without notice.

ROOF CURBS

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 mounting location for dampers.

Options and Accessories

Damper trays


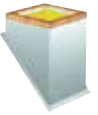
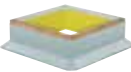








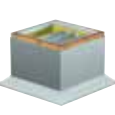

Insulation - all except GPE, VCE and GPFV

Step for insulation - GPR only - up to 6 inches

Single pitch - GPI, GPF and ATS

Ridge mount - GPI, GPF and ATS

Double-shell construction - all except AT models and GPE

Product Type	Model	Description
 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
 Flat, pitched or ridged, insulated or non-insulated roof decks	GPI - Aluminum or galvanized, other heights, non-stock square and rectangular sizes	
 Flat, non-insulated roof decks	GPS - All types, sized to meet your requirements	Welded, canted construction with rigid fiberglass insulation
 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
 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.
	GPFHD - All types, galvanized	Welded, straight-sided construction with double-thick roof flashing flange 5-inch width. One inch thick insulation.
 Flat, insulated roof decks	GPR - All types, sized to meet your requirements	Welded, raised cant construction with rigid fiberglass insulation
 Adaptors/Reducers	Curb Adaptors and Reducers	Used to match new fans to existing roof curbs. Welded galvanized steel or aluminum.
 Flat roof decks in kitchen applications	GPFV - Galvanized, square sizes	Welded, vented straight-sided curb designed for use with our model VUCB fan to provide the 40 inch minimum discharge height above the roof line (per NFPA 96)
	GPFV - Aluminum or galvanized, other heights, non-stock square sizes	
 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 VUCB fan to provide the 40 inch minimum discharge height above the roof line (per NFPA 96)
	VCE - Aluminum or galvanized, other heights, non-stock square sizes	
 Curb extensions	GPE, GPEX	Welded, with access door for easy access to the damper and damper actuator as well as fulfilling additional height requirements
 Equipment supports	GESS, GESR	Welded aluminum or galvanized canted construction
 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
 Laboratory Exhaust Fans	GPFHL, GPFHD	Welded, straight-sided, insulated, 5-inch flashing flange

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.

FANS

Bath and Inline



CENTRIFUGAL CEILING AND INLINE FANS are designed for clean air applications where low sound levels are desired.

PERFORMANCE

- VQ Ceiling capacities range from 50 to 1,600 cfm and 1 in. wg of static pressure.
- VQ Wall capacities range from 50 to 80 cfm and 0.625 in. wg of static pressure.
- VQI Inline capacities range from 70 to 3,800 cfm and 1 in. wg of static pressure.

Standard Construction	VQ Ceiling		VQ Wall	VQI Inline	
	A	B	L	A	B
Housing - galvanized steel	▼	▼	▼	▼	▼
Housing - low profile		▼	▼		▼
Housing - insulated	▼			▼	
Wheel - forward-curved	▼	▼	▼	▼	▼
Access panel	▼	▼	▼	▼	▼
Electrical disconnect	▼	▼	▼	▼	▼
Electrical knockouts	▼	▼	▼	▼	▼
Electrical junction box	▼	▼	▼	▼	▼
Mounting brackets	▼	▼	▼	▼	▼
Backdraft damper	▼	▼	▼	▼	▼
Flanges - inlet and outlet				▼	▼
Designer grille - up through size 390	▼	▼	▼		
Aluminum grille - sizes 410 and larger	▼	▼			
Options and Accessories	VQ Ceiling		VQ Wall	VQI Inline	
	A	B	L	A	B
Discharge accessory - transitions <i>Available as standard on select sizes</i>	▼	▼	▼	▼	▼
Discharge accessories - roof, wall	▼	▼	▼	▼	▼
Electrical accessories - speed control, motion detector, time delay	▼	▼	▼	▼	▼
Transformer	▼	▼	▼	▼	▼
Switches - 1 or 2 function	▼	▼	▼	▼	▼
Minimum ventilation controller	▼	▼	▼	▼	▼
Firestat	▼	▼		▼	▼
Dehumidistat	▼	▼	▼	▼	▼
Isolators - hanging	▼	▼	▼	▼	▼
Grille - decorative, stainless steel, aluminum	▼	▼	▼		
Lighted grille - VQ-A, sizes 50 thru 390 VQ-B, sizes 50 thru 200	▼	▼			
- Bulbs - compact fluorescent or LED					
- Lens - frosted, prismatic					
Filters	▼	▼	▼		
Ceiling radiation damper	▼	▼			
Contractor 4 Packs - housing and motor packs separate		▼			
Motor: <ul style="list-style-type: none"> • 50 or 60 Hz (<i>select sizes</i>) • 115 or 277 volt (<i>select sizes</i>) • EC motor - 80% turndown, 85% efficient <i>Available on select sizes and models.</i>	▼	▼	▼	▼	▼
AMCA Licensed for Air Performance				▼	▼
AMCA Licensed for Sound and Air Performance	▼	▼	▼		
UL/cUL Listed 507	▼	▼	▼	▼	▼

FANS Bath and Inline

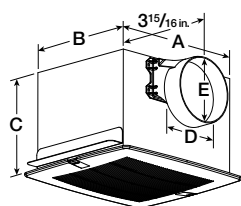


DIMENSIONS - In Inches

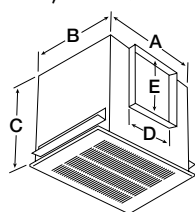
VQ Size	A	B	C	Outlet		Grille Size*
				D	E	
B50, B70, B80, B90, B110, B150, B200	13 $\frac{7}{8}$	11 $\frac{1}{2}$	7	6	1 $\frac{1}{4}$	14 $\frac{7}{8}$ x 13 $\frac{1}{4}$
A50, A70, A90	13 $\frac{1}{4}$	10 $\frac{5}{8}$	9	6	6	14 $\frac{7}{8}$ x 13 $\frac{1}{4}$
A110, A125, A190	13 $\frac{1}{4}$	10 $\frac{5}{8}$	9	8	6	14 $\frac{7}{8}$ x 13 $\frac{1}{4}$
A200, A250, A290, A390	14	11 $\frac{7}{8}$	11 $\frac{1}{4}$	8	8	14 $\frac{7}{8}$ x 13 $\frac{1}{4}$
A410, A510, A510-VG	18	14 $\frac{3}{8}$	14 $\frac{1}{2}$	8	8	19 $\frac{3}{8}$ x 16 $\frac{3}{8}$
A700	23 $\frac{5}{8}$	11 $\frac{5}{8}$	11 $\frac{5}{8}$	19 $\frac{1}{2}$	8	25 $\frac{1}{8}$ x 13 $\frac{3}{8}$
A710, A710-VG, A780	18	14 $\frac{3}{8}$	14 $\frac{1}{2}$	10	8	19 $\frac{3}{8}$ x 16 $\frac{3}{8}$
A900, A1050, A1410, A1550	23 $\frac{3}{4}$	14 $\frac{3}{8}$	14 $\frac{1}{2}$	18 $\frac{7}{8}$	8	25 x 16 $\frac{3}{8}$
L50, L80	13 $\frac{7}{8}$	11 $\frac{1}{2}$	3 $\frac{5}{8}$	2 $\frac{5}{8}$	4 $\frac{7}{8}$	14 $\frac{7}{8}$ x 13 $\frac{1}{4}$

*Grille dimensions are for the designer grille

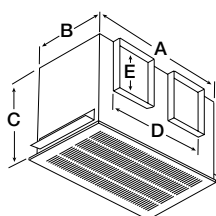
VQ-A50-90



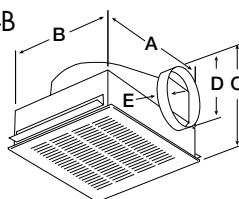
VQ-A110 thru 510, 510-VG
VQ-A710, 710-VG & 780



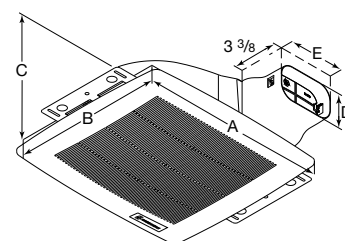
VQ-A700,
VQ-A900 thru 1550



VQ-B



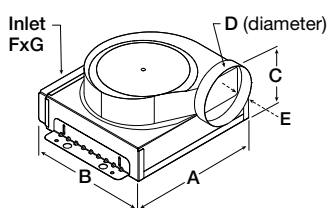
VQ-L 50 & 80



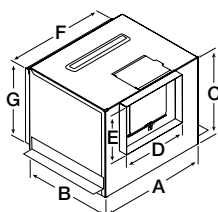
DIMENSIONS - In Inches

VQI Size	A	B	C	D	E	F	G
B110, B150, B200	13 $\frac{7}{8}$	11 $\frac{1}{2}$	7	6	1 $\frac{1}{4}$	13 $\frac{1}{2}$	3 $\frac{1}{4}$
A110, A125, A190	13 $\frac{1}{4}$	10 $\frac{5}{8}$	9	8	6	12	7 $\frac{3}{4}$
A200, A250, A290, A390	14	11 $\frac{7}{8}$	11 $\frac{1}{4}$	8	8	12 $\frac{7}{8}$	10
A410, A510, A510-VG	18	14 $\frac{3}{8}$	14 $\frac{1}{2}$	8	8	16 $\frac{7}{8}$	13 $\frac{1}{4}$
A700	23 $\frac{5}{8}$	11 $\frac{5}{8}$	11 $\frac{5}{8}$	19 $\frac{1}{2}$	8	22 $\frac{5}{8}$	10 $\frac{1}{2}$
A710, A710-VG, A780	18	14 $\frac{3}{8}$	14 $\frac{1}{2}$	10	8	16 $\frac{7}{8}$	13 $\frac{1}{4}$
A900, A1050, A1410, A1550	23 $\frac{3}{4}$	14 $\frac{3}{8}$	14 $\frac{1}{2}$	18 $\frac{7}{8}$	8	22 $\frac{5}{8}$	13 $\frac{1}{4}$
A1750, A2150	35	14 $\frac{3}{4}$	14 $\frac{3}{4}$	28	6	32 $\frac{3}{4}$	13
A3600	45 $\frac{1}{2}$	16 $\frac{1}{2}$	16 $\frac{1}{2}$	40	11	43 $\frac{1}{4}$	14 $\frac{3}{8}$

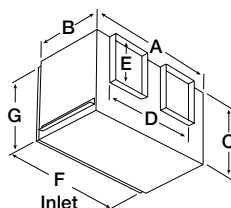
VQI-B110-200



VQI-A110 thru 510
VQI-A510-VG



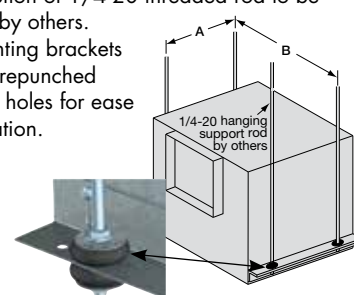
VQI-A700 thru 3600
VQI-A710-VG



HANGING VIBRATION ISOLATORS

Vibration isolator kits are available for suspended installations. Kits include all hardware necessary to mount one unit, with the exception of 1/4-20 threaded rod to be supplied by others.

Fan mounting brackets include prepunched mounting holes for ease of installation.



Model Size	A	B
B50 - B200	4 $\frac{1}{2}$	15 $\frac{5}{8}$
A50 - A190	5 $\frac{1}{2}$	14 $\frac{5}{8}$
A200 - A390	6 $\frac{3}{4}$	15 $\frac{1}{2}$
A410 - A510, A510-VG, A710, A710-VG & A780	9 $\frac{1}{4}$	19 $\frac{5}{8}$
A700	5 $\frac{1}{2}$	25 $\frac{1}{8}$
A900 - A1050, A1410 - A1550	9 $\frac{1}{4}$	25 $\frac{3}{8}$
A1750, A2150	9 $\frac{1}{4}$	36 $\frac{3}{4}$
A3600	9 $\frac{1}{4}$	48 $\frac{5}{8}$

FANS | Inline & Sidewall Exhaust



MODEL VQID/VQIB

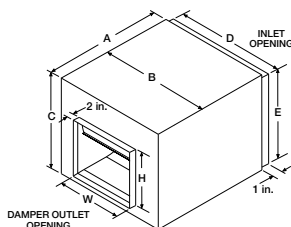
CENTRIFUGAL DUCT FANS are designed for clean air inline exhaust or supply applications.

PERFORMANCE

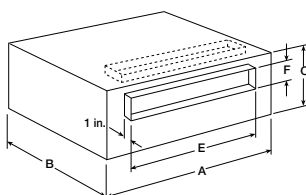
- VQID capacities range from 300 to 15,000 cfm and 3 in. wg of static pressure.
- VQIB capacities range from 200 to 6,000 cfm and 1.5 in. wg of static pressure.

Standard Construction	VQID	VQIB
Housing - galvanized steel	▼	▼
Housing - low profile		▼
Housing - square	▼	
Drive frame secured to housing	▼	▼
Wheel - forward-curved, galvanized steel	▼	▼
Motor and scroll - mounted to drive frame	▼	▼
Access door - bolted, removable (VQIB-108/208 and larger, all VQID)	▼	▼
Access door - hinged (VQIB-106, 107, 206 and 207)	▼	▼
Corrosion-resistant fasteners	▼	▼
NEMA-1 disconnect switch	▼	▼
Ball bearing motor - 1/4 hp and larger	▼	▼
Double-studded vibration isolators	▼	▼
Flanges - inlet and outlet	▼	▼
Adjustable motor pulley	▼	▼
Options and Accessories	VQID	VQIB
Damper	▼	▼
Isolators	▼	▼
Insulation	▼	▼
Filter box - filters are throwaway (pleated) or permanent (aluminum mesh)	▼	▼
Mixing box		▼
NEMA rated disconnect switch	▼	▼
Dual drives	▼	▼
Multiple discharge positions	▼	▼
Decorative or protective powder coating	▼	▼
UL/cUL Listed Power Ventilators	▼	▼
AMCA Licensed for Air Performance		▼
AMCA Licensed for Sound and Air Performance	▼	

VQID



VQIB



DIMENSIONS - In Inches

Bottom horizontal discharge

VQID Size	A	B	C	Damper Outlet Opening (W x H)	Inlet Opening (D x E)
80	23 1/4	18 1/2	15 7/8	9 3/4 x 8 7/8	15 3/16 x 12 1/16
90	24 1/4	21 1/4	18 3/4	12 1/4 x 10 1/2	18 1/4 x 15 7/8
100	26 1/4	22 3/4	20 3/4	13 3/4 x 11 7/8	19 3/4 x 17 7/8
120	33	27 1/4	22 3/4	16 x 13 3/8	24 1/8 x 19 7/8
150	34 3/4	32 5/8	27 3/4	19 1/8 x 16 3/8	28 5/8 x 23 7/8
180	40 1/4	41 3/4	31 3/4	22 1/2 x 18 7/8	37 1/2 x 27 7/8
200	50 1/4	49 1/4	39 3/4	23 1/2 x 25 1/4	45 1/8 x 36

DIMENSIONS - In Inches

Top horizontal discharge

VQIB Size	A	B	C	E	F
106	20	23 1/4	11	12	6
107	23	29	13	15	8
108	26	32	16	18	10
110	32	36	19	24	12
112	36	42	23	28	14
206	34	23 1/4	11	26	6
207	38	29	13	30	8
208	44	32	16	36	10
210	48	36	19	40	12
212	58	42	23	50	14

FANS

Inline & Sidewall Exhaust



MODEL VICD/VICB

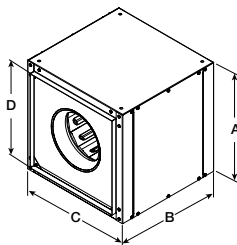
CENTRIFUGAL INLINE FANS are designed for clean air exhaust or supply applications.

PERFORMANCE

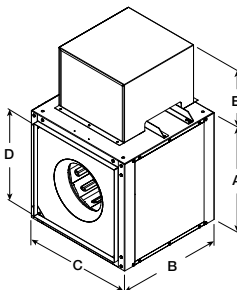
- VICD capacities range from 30 to 5,025 cfm and 2 in. wg of static pressure.
- VICB capacities range from 60 to 27,000 cfm and 4 in. wg of static pressure.

Standard Construction	VICD	VICB
Housing - galvanized	▼	▼
Wheel - backward-inclined, aluminum	▼	▼
Access panel - bolted, removable	▼	▼
Corrosion-resistant fasteners	▼	▼
NEMA-1 disconnect switch	▼	▼
Ball bearing motor - 1/4 hp and larger	▼	▼
Three speed motor - sizes 60 through 95	▼	
Adjustable motor plate		▼
Flanges - inlet and outlet	▼	▼
Adjustable motor pulley		▼
Options and Accessories	VICD	VICB
EC motor - 80% turndown, 85% efficient Available as standard on select sizes	▼	
Damper	▼	▼
Aluminum housing	▼	▼
Motor cover	▼	▼
Guards - inlet, outlet	▼	▼
Speed control	▼	
Isolators - external	▼	▼
Insulation - housing and motor cover	▼	▼
NEMA rated disconnect switch	▼	▼
Dual drives		▼
Relubricatable bearings		▼
Decorative or protective powder coating	▼	▼
UL/cUL Listed Power Ventilators	▼	▼
AMCA Licensed for Sound and Air Performance	▼	▼

VICD



VICB



DIMENSIONS - In Inches

VICD Size	A & C	B	D
60, 70	12	13	8 $\frac{7}{8}$
80, 90, 95	15	16	11 $\frac{7}{8}$
97, 98, 99	15	21	11 $\frac{7}{8}$
100	17	21	13 $\frac{3}{8}$
120	19	21	15 $\frac{5}{8}$
130, 130 HP	21	21	17 $\frac{7}{8}$
140, 140 HP	23	22	19 $\frac{7}{8}$
160, 160 HP	26	26	22 $\frac{7}{8}$

DIMENSIONS - In Inches

VICB Size	A & C	B	D	H*
70, 80, 90	17 $\frac{7}{8}$	21	11 $\frac{7}{8}$	13 $\frac{1}{4}$
100	17 $\frac{7}{8}$	21	13 $\frac{3}{8}$	13 $\frac{1}{4}$
120	19 $\frac{7}{8}$	21	15 $\frac{5}{8}$	13 $\frac{1}{4}$
130, 130 HP	21 $\frac{7}{8}$	21	17 $\frac{7}{8}$	13 $\frac{1}{4}$
140, 140 HP	23 $\frac{7}{8}$	22	19 $\frac{7}{8}$	13 $\frac{1}{4}$
160, 160 HP	26 $\frac{7}{8}$	26	22 $\frac{7}{8}$	13 $\frac{1}{4}$
180, 180 HP	27 $\frac{7}{8}$	28	23 $\frac{7}{8}$	13 $\frac{1}{4}$
200, 200 HP	31 $\frac{7}{8}$	32	27 $\frac{7}{8}$	16
240, 240 HP	38 $\frac{7}{8}$	34	34 $\frac{7}{8}$	16
300, 300 HP	46	38	41 $\frac{7}{8}$	18
360, 360 HP	52	42	47 $\frac{7}{8}$	18
420	58	50	53 $\frac{7}{8}$	18

*Dimension may be greater depending on motor

FANS

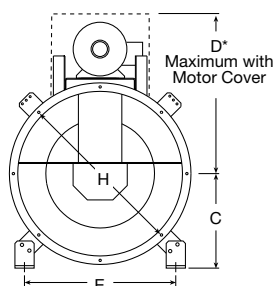
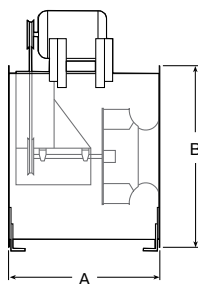
Inline & Sidewall Exhaust



TUBULAR CENTRIFUGAL INLINE FANS are the ideal choice for installations with straight-through airflow in ducted systems. The centrifugal wheels used in this design provide higher efficiencies and lower sound levels than axial type inline fans when used in medium pressure ducted systems. These fans can be mounted in any position from horizontal to vertical, allowing installation in the smallest possible space at the lowest installation cost.

PERFORMANCE

- VTC capacities range from 300 to 26,000 cfm and up to 4 in. wg of static pressure.



Standard Construction

Housing - continuously welded, steel

Wheel - backward-inclined, aluminum

Flanges - inlet and outlet with mounting holes

Universal mounting system

Aluminum rub ring

Spark B resistant construction

Extended lube lines

Minimum bearing life of L₁₀ 80,000 hours
(Average life - L₅₀ 400,000 hours)

Polyester urethane protective powder coating

Options and Accessories

All aluminum construction

Motor cover

Belt guard

Guards - inlet, outlet

Companion flanges - inlet, outlet

Isolators - base, hanging

NEMA rated disconnect switch

Easy access construction - bolted

Inspection door - bolted, hinged

Inspection section with removable access panel

Dual drives

Mounting rails

Decorative or protective powder coating

UL/cUL Listed Power Ventilators

UL Listed Power Ventilators for Restaurant Exhaust Appliances

AMCA Licensed for Sound and Air Performance

DIMENSIONS - In Inches

VTC Size	A	B	C	D*	E	H
9	23	21 $\frac{5}{8}$	13 $\frac{1}{4}$	21 $\frac{3}{4}$	17 $\frac{5}{8}$	18 $\frac{3}{8}$
10	23	21 $\frac{5}{8}$	13 $\frac{1}{4}$	21 $\frac{3}{4}$	17 $\frac{5}{8}$	18 $\frac{3}{8}$
12	23	21 $\frac{5}{8}$	13 $\frac{1}{4}$	21 $\frac{3}{4}$	17 $\frac{5}{8}$	18 $\frac{3}{8}$
13	24 $\frac{1}{2}$	23 $\frac{5}{8}$	13 $\frac{3}{8}$	23 $\frac{1}{4}$	19	20 $\frac{5}{8}$
16	28 $\frac{1}{2}$	27 $\frac{5}{8}$	16 $\frac{1}{8}$	26	21 $\frac{1}{8}$	24 $\frac{3}{8}$
18	31	33 $\frac{5}{8}$	18 $\frac{3}{8}$	29 $\frac{1}{4}$	26 $\frac{1}{8}$	30 $\frac{3}{8}$
22	35 $\frac{1}{2}$	39 $\frac{5}{8}$	22 $\frac{1}{2}$	33 $\frac{3}{4}$	30 $\frac{1}{2}$	36 $\frac{3}{8}$
24	42	45 $\frac{3}{4}$	24 $\frac{3}{8}$	37 $\frac{1}{4}$	34 $\frac{3}{4}$	42 $\frac{1}{2}$
30	48 $\frac{1}{2}$	52 $\frac{3}{4}$	29 $\frac{1}{2}$	42 $\frac{3}{4}$	42	48 $\frac{1}{2}$
36	54	59 $\frac{1}{4}$	31 $\frac{3}{4}$	47 $\frac{1}{4}$	46 $\frac{3}{4}$	55

*Dimension may vary depending on motor.

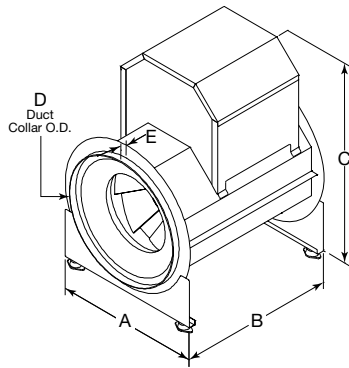


MODEL VMQB

MODEL VMQB is ideal when clean air, quiet and economical operation is required. The unique octagonal housing of formed galvanized steel panels provides for exceptional strength at significantly lower cost.

PERFORMANCE

- Capacities range from 660 to 26,500 cfm and up to 3 in. wg of static pressure.



Standard Construction

Octagonal galvanized housing
Aluminum mixed flow wheel
EZ Tension System for belt adjustment
NEMA-1 disconnect switch

Options and Accessories

Motor cover
Inlet and outlet guards
Vibration isolators
Access doors
Extended wiring pigtail
Thrust restraints
UL/cUL Listed Power Ventilators
AMCA Licensed for Sound and Air Performance

DIMENSIONS - In Inches

Size	A	B	C*	D	E
9	19 ³ / ₈	22	28 ³ / ₄	14 ¹ / ₄	1 ³ / ₈
12	22 ⁵ / ₈	26 ⁵ / ₈	32 ³ / ₄	17 ¹ / ₂	1 ¹ / ₂
15	26 ³ / ₈	29 ¹ / ₈	38	21 ¹ / ₈	1 ¹ / ₂
16	28 ¹ / ₄	31 ¹ / ₈	32 ³ / ₄	17 ¹ / ₂	1 ¹ / ₂
18	30 ⁷ / ₈	33 ¹ / ₈	42 ⁵ / ₈	25 ⁵ / ₈	1 ¹ / ₂
20	32 ⁷ / ₈	35 ³ / ₄	47	28	1 ³ / ₈
22	36 ³ / ₈	39 ¹ / ₄	49 ⁷ / ₈	31 ¹ / ₄	1 ³ / ₈
24	40	42 ⁵ / ₈	53 ¹ / ₄	34 ¹ / ₄	1 ³ / ₈
27	42 ⁷ / ₈	45 ¹ / ₈	58	37 ³ / ₄	1 ³ / ₈
30	48	52 ¹ / ₄	63 ⁷ / ₈	42	1 ⁷ / ₈
33	52 ¹ / ₂	56 ⁵ / ₈	68 ¹ / ₂	46 ¹ / ₈	1 ⁷ / ₈

*Motor cover is optional. Size may be greater depending on motor.

FANS

Inline & Sidewall Exhaust

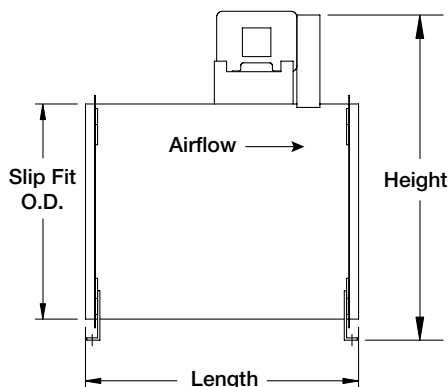


MODEL VQEID/VQEI

MIXED FLOW FANS are for use in commercial and industrial applications that demand quiet, efficient and reliable air movement. Typical applications include office buildings, concert halls, libraries, parking garages, educational facilities and dormitories. Models can be used in exhaust, supply, and return-air; clean or contaminated air ventilation installations with continuous airstream temperatures up to 200°F. Units may be ceiling hung or floor mounted.

PERFORMANCE

- VQEID DIRECT DRIVE capacities range from 700 to 88,000 cfm and up to 10 in. wg of static pressure.
- VQEI-II BELT DRIVE capacities range from 500 to 116,000 cfm and up to 8 in. wg of static pressure.



Standard Construction	VQEID	VQEI
Housing - continuously welded, steel	▼	▼
Impeller - mixed flow with steel blades	▼	▼
Straightening vanes	▼	▼
Access door - bolted	▼	▼
Slip-fit collar for duct connection	▼	▼
Belt guard		▼
Minimum bearing life of L ₁₀ 80,000 hours (Average life - L ₅₀ 400,000 hours)		▼
Universal mounting system (sizes 9 - 27)		▼
Final assembly vibration analysis	▼	▼
Extended lube lines		
Polyester urethane protective powder coating	▼	▼
Options and Accessories	VQEID	VQEI
Totally enclosed belt guard		▼
Motor cover		▼
Guards - inlet, outlet	▼	▼
Flanges - inlet, outlet	▼	▼
Isolators - base, hanging	▼	▼
Belt tube		▼
NEMA rated disconnect switch	▼	▼
Copper lube lines		▼
Mounting rails - horizontal and all vertical applications		▼
Decorative or protective powder coating	▼	▼
UL/cUL Listed Power Ventilators	▼	▼
UL/cUL Listed Power Ventilators for Restaurant Exhaust Appliances		▼
UL/cUL Listed Power Ventilators for Smoke Control Systems	▼	▼
AMCA Licensed for Sound and Air Performance	▼	▼

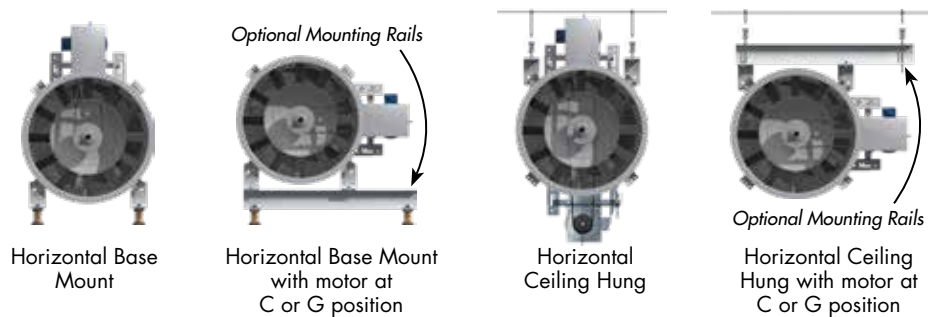
DIMENSIONS - In Inches

Size	Slip-Fit O.D.	VQEID	VQEI Class I		VQEI Class II	
		Length (Max)	Length	Height	Length	Height
9	17 1/8	NA	NA	NA	28 1/2	36 1/2
12	17 1/8	25	28 1/2	36 1/2	30 1/2	36 1/2
15	20 7/8	25	31	41	34	41
16	23	23	33	44	34	44
18	25 3/8	29	35	46 1/2	39 1/2	47 1/2
20	27 13/16	34	37 1/2	50 1/2	41 1/2	50 1/2
22	30 7/8	35 1/2	41	53 1/2	44	53 1/2
24	34	41 1/2	44 1/2	57 1/2	49	59 1/2
27	37 7/16	45	47	61	53	63
30	41 3/8	50	54	65	60 1/2	72
33	45 3/4	54	58 1/2	69	65	76 1/2
36	50 1/16	58	64	75	69	82 1/2
40	55 3/4	61	68 1/2	83	75 1/2	90 1/2
44	61 5/8	70	74	89 1/2	80 1/2	97
49	67 3/4	80 1/2	80 1/2	96 1/2	86 1/2	104
54	75	83	87	105	93 1/2	111
60	82 7/8	NA	91 1/2	113	102 1/2	119



HORIZONTAL MOUNTING Sizes 9–27

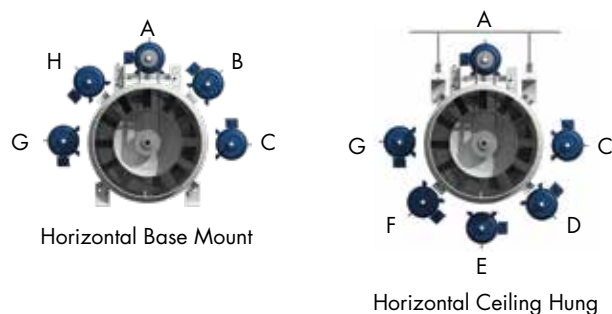
VQEI with universal mounting can be mounted horizontally with one configuration for base mounting or ceiling hung applications. Universal mounting allows for field rotation of motor position.



HORIZONTAL MOUNTING Sizes 30–60

Horizontal Base Mount available with motor positions A, B, C, G and H.
Horizontal Ceiling Hung available with motor positions A, C, D, E, F, G.

Motor positions determined from the discharge end.



VERTICAL MOUNTING

Vertical mounting configurations, upblast or downblast, are provided with heavy-duty steel brackets welded to both ends. These brackets permit either floor or ceiling mounting on the same unit. Optional mounting rails are suggested for any vertical installation for sizes 9-27.



FANS

Inline & Sidewall Exhaust



MODEL VTIC/VTIF

MODEL VTIC BELT DRIVE is a good selection where the motor must be mounted out of the airstream. Used with temperatures up to 180°F or contaminated air. Three levels of construction available.

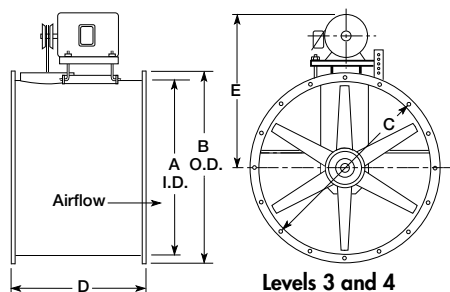
PERFORMANCE

- Capacities range from 1,300 to 95,000 cfm and up to 3.5 in. wg of static pressure.

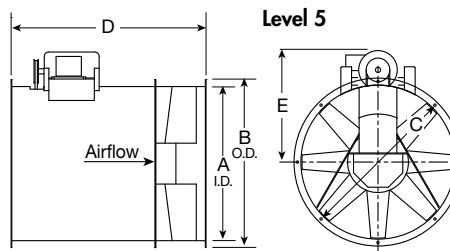
MODEL VTIF BELT DRIVE FANS have motors out of the airstream. They are a good choice for clean or contaminated airstreams with temperatures up to 400°F. Three levels of construction available.

PERFORMANCE

- Capacities range from 6,000 to 77,000 cfm and up to 4.5 in. wg of static pressure.



Levels 3 and 4



Level 5

Standard Construction	VTIC	VTIF
Housing - continuously welded, steel	▼	▼
Cast aluminum hub and blades - airfoil	▼	
Fabricated steel hub and blades - airfoil		▼
Belt tube and bearing cover	▼	▼
Minimum bearing life of L ₁₀ 80,000 hours	▼	▼
Universal mounting system	▼	▼
Extended lubrication lines	▼	▼
Polyester urethane protective powder coating	▼	▼
Options and Accessories	VTIC	VTIF
Motor cover	▼	▼
Guards - inlet, outlet	▼	▼
Belt guard	▼	▼
Companion flanges	▼	▼
Isolators - base, hanging, spring	▼	▼
Easy access construction - bolted	▼	▼
Inspection door - bolted, hinged	▼	▼
Inspection section with removable access panel	▼	▼
NEMA rated disconnect switch	▼	▼
Mounting rails	▼	▼
Shaft seal	▼	▼
Inlet bell	▼	▼
Decorative or protective powder coating	▼	▼
Continuous Duty High Temperature		▼
UL/cUL Listed Power Ventilators	▼	▼
UL/cUL Listed Power Ventilators for Smoke Control Systems		
AMCA Licensed for Air Performance (Level 3 only)	▼	
AMCA Licensed for Sound and Air Performance		▼

VTIC Size	A (ID)	B (OD)	C (BC)	D	E
3L18, 3H18				22	21¾
4L18, 4H18	18¾	21¾	19¾	26	23½
5L18, 5H18				38	
3L20, 3H20				27	
4L20, 4H20	20¾	23¾	21¾	27	26¼
5L20, 5H20				39	
3L24, 3H24				28	
4L24, 4H24	24¾	27¾	25¾	28	28
5L24, 5H24				40	
3L30, 3H30				24	29¼
4L30, 4H30	30¾	33¾	32	33	32¾
5L30, 5H30				45	
3L36, 3H36				29	33¾
4L36, 4H36	36¾	39¾	38	34	35¼
5L36, 5H36				46	
3L42, 3H42				30	37¼
4L42, 4H42	42½	45¾	44¼	39	40
5L42, 5H42				51	
3L48, 3H48				33	40½
4L48, 4H48	48½	52¾	50¾	44	45½
5L48, 5H48				56	
3L54, 3H54				37½	47¼
4L54, 4H54	55	59¼	57¼	48	49¼
5L54, 5H54				60	
3L60, 3H60				40	50¾
4L60, 4H60	61	65¼	63¼	49	54¾
5L60, 5H60				61	

VTIF Size	A (ID)	B (OD)	C (BC)	D	E
3L24, 3H24				23	26
4L24, 4H24	24¾	27¾	25¾	28	28
5L24, 5H24				40	
3L30, 3H30				24	29¼
4L30, 4H30	30¾	33¾	32	33	32¾
5L30, 5H30				45	
3L36, 3H36				29	33¾
4L36, 4H36	36¾	39¾	38	34	35¼
5L36, 5H36				46	
3L42, 3H42				30	37¼
4L42, 4H42	42½	45¾	44¼	39	40
5L42, 5H42				51	
3L48, 3H48				33	40½
4L48, 4H48	48½	52¾	50¾	44	45½
5L48, 5H48				56	
3L54, 3H54				37½	47¼
4L54, 4H54	55	59¼	57¼	48	49¼
5L54, 5H54				60	

FANS

Inline & Sidewall Exhaust



DIRECT DRIVE MODEL VAX with increased performance capabilities and installation configurations to suit project needs. Casing options include, long casing that completely covers the propeller and motor, and bolt-on vane section with 15% performance improvement. Provides total efficiencies in excess of 70% to help reduce upfront electrical expenses for new projects and will save building owners money on long-term energy bills.

Standard Construction

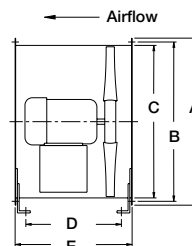
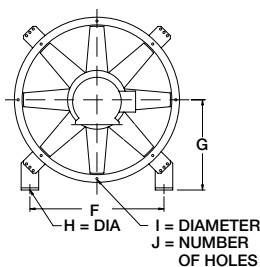
Industrial polyester urethane protective powder coating
High performance, adjustable propeller
Cast aluminum hub and blades
Tight tolerances between the blades and casing improve overall efficiency

Options and Accessories

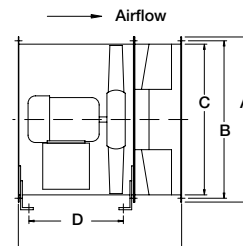
Universal mounting brackets
Companion inlet and outlet flanges
Inlet bells
Inlet and outlet guards
Safety disconnect switches
Isolators
UL/cUL Listed Power Ventilators for Smoke Control Systems
AMCA Licensed for Air Performance

PERFORMANCE

- Capacities range from 500 up to 125,000 cfm and 5 in. wg of static pressure.



VAX with Long Casing,
Standard (VAX)
Universal or Flange Mount



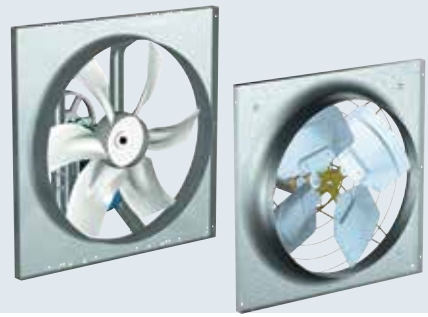
VAX with Vane Section
(VAX-V)
Universal and Flange Mount

DIMENSIONS - In Inches

	VAX/VAX-V		VAX		VAX-V						
Size	A	B	C	D	E	E	F	G	H	I	J
31	15	14	12 $\frac{1}{4}$	12 $\frac{3}{8}$	17	29	13 $\frac{1}{4}$	11 $\frac{1}{8}$	0	$\frac{7}{16}$	8
36	17	16	14 $\frac{1}{4}$	12 $\frac{3}{8}$	17	29	14 $\frac{5}{8}$	11 $\frac{7}{8}$	0	$\frac{7}{16}$	8
41	19	18	16 $\frac{1}{4}$	15 $\frac{3}{8}$	20	32	16 $\frac{1}{8}$	12 $\frac{1}{2}$	0	$\frac{7}{16}$	8
47	21 $\frac{1}{2}$	19 $\frac{3}{4}$	18 $\frac{3}{8}$	18 $\frac{3}{8}$	23	35	17 $\frac{3}{8}$	13 $\frac{1}{4}$	0	$\frac{7}{16}$	8
54	24 $\frac{1}{2}$	23 $\frac{1}{4}$	21 $\frac{3}{8}$	23 $\frac{3}{8}$	28 $\frac{1}{2}$	40 $\frac{1}{2}$	19 $\frac{3}{4}$	14 $\frac{3}{8}$	0	$\frac{7}{16}$	8
63	27 $\frac{5}{8}$	25 $\frac{3}{4}$	24 $\frac{3}{8}$	27 $\frac{1}{8}$	31 $\frac{3}{4}$	43 $\frac{3}{4}$	22	16 $\frac{1}{8}$	0	$\frac{7}{16}$	8
72	31 $\frac{5}{8}$	30 $\frac{1}{4}$	28 $\frac{3}{8}$	29 $\frac{3}{8}$	34	46	24 $\frac{3}{4}$	17 $\frac{1}{2}$	0	$\frac{7}{16}$	8
80	35 $\frac{5}{8}$	34 $\frac{1}{4}$	32 $\frac{3}{8}$	27 $\frac{1}{4}$	34 $\frac{1}{2}$	46 $\frac{1}{2}$	27 $1\frac{1}{16}$	21	0	0	8
90	39 $\frac{3}{4}$	38	36 $\frac{3}{8}$	29 $\frac{1}{4}$	36 $\frac{1}{2}$	48 $\frac{1}{2}$	30 $\frac{3}{8}$	22 $\frac{1}{2}$	0	0	8
103	43 $\frac{3}{4}$	42 $\frac{1}{4}$	40 $\frac{3}{8}$	28 $\frac{3}{4}$	36 $\frac{1}{2}$	48 $\frac{1}{2}$	36 $\frac{1}{8}$	26 $\frac{1}{2}$	0	0	8
113	48 $\frac{3}{4}$	46 $\frac{1}{2}$	44 $\frac{1}{2}$	45 $\frac{1}{2}$	49 $\frac{1}{8}$	61 $\frac{1}{8}$	40	28 $\frac{1}{2}$	$1\frac{3}{16}$	0	8
123	52 $\frac{7}{8}$	50 $\frac{3}{4}$	48 $\frac{1}{2}$	45 $\frac{1}{2}$	49 $\frac{1}{8}$	61 $\frac{1}{8}$	44	29 $\frac{1}{2}$	$1\frac{3}{16}$	0	16
140	59 $\frac{3}{8}$	57 $\frac{1}{4}$	55	45 $\frac{1}{2}$	49 $\frac{1}{8}$	61 $\frac{1}{8}$	51	32	$1\frac{3}{16}$	0	16
160	67 $\frac{3}{8}$	65 $\frac{1}{4}$	63	45 $\frac{1}{2}$	49 $\frac{1}{8}$	61 $\frac{1}{8}$	59	40	$1\frac{3}{16}$	0	16

FANS

Inline & Sidewall Exhaust



MODEL
VWE/VWS
VWCE/VWCS
VWBE/VWBS
VWBCE/VWBCS

SIDEWALL PROPELLER FANS are designed to exhaust or supply high volumes of air from commercial and industrial buildings. Fan panels allow for electrical passage to either side of panel for easy wiring.

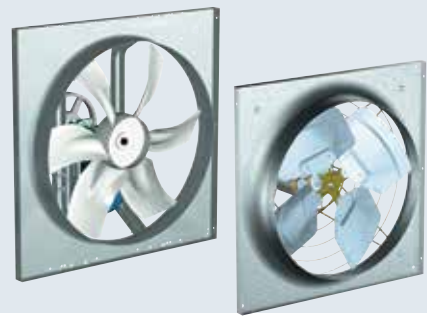
PERFORMANCE

- Capacities range from 100 up to 87,000 cfm and 1 in. wg of static pressure.

Standard Construction			Direct Drive		Belt Drive	
			VWE VWS	VWCE VWCS	VWBE VWBS	VWBCE VWBCS
Fan panel and drive frame - galvanized steel			▼	▼	▼	▼
Propeller construction	Level 1	Stamped aluminum	▼			
		Fabricated steel			▼	
	Level 2	Fabricated steel	▼		▼	
		Fabricated steel			▼	
	Level 3	Cast aluminum		▼		▼
Corrosion-resistance fasteners			▼	▼	▼	▼
Reversible (VWCR & VWBCR)				▼		▼
Ball bearing motor - 1/4 hp and larger			▼	▼	▼	▼
Three speed motor (sizes 8 through 12)			▼			
Adjustable motor pulley					▼	▼
Options and Accessories			VWE VWS	VWCE VWCS	VWBE VWBS	VWBCE VWBCS
EC motor - 80% turndown, 85% efficient Available as standard on select sizes			▼			
Dampers			▼	▼	▼	▼
Wall housing			▼	▼	▼	▼
Wall collar			▼	▼	▼	▼
Weatherhood 45°			▼	▼	▼	▼
Weatherhood 90°			▼	▼	▼	▼
Motor side guard - size 20 through 30			▼	▼	▼	▼
OSHA motor side guard - size 16			▼	▼	▼	▼
Louver/Fire damper - size 20 through 42					▼	▼
Damper guard			▼	▼	▼	▼
Horizontal mounting			▼	▼	▼	▼
Wiring - pigtails			▼	▼	▼	▼
Lube lines					▼	▼
Filters - 2 inch aluminum, washable - supply only			▼	▼	▼	▼
NEMA rated disconnect switch			▼	▼	▼	▼
Dual drives					▼	▼
Relubricatable bearings					▼	▼
Decorative or protective powder coating			▼	▼	▼	▼
UL/cUL Listed Power Ventilators			▼	▼	▼	▼
AMCA Licensed for Sound and Air Performance			▼	▼	▼	▼

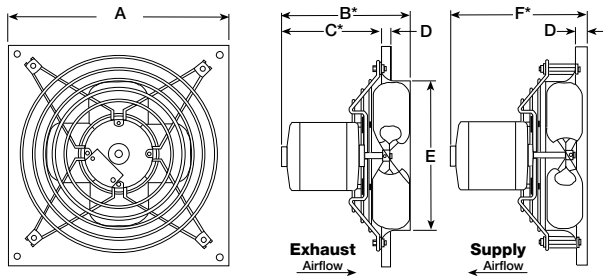
FANS

Inline & Sidewall Exhaust

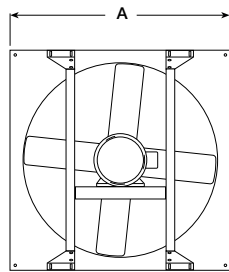


Direct Drive Models: VWE, VWS, VWCE, VWCS

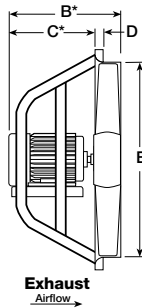
Level 1: Sizes 8-12



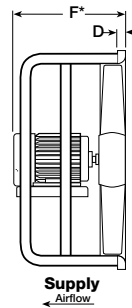
Level 1: Sizes 12-24



Level 2: Sizes 16-54



Level 3: Sizes 20-54



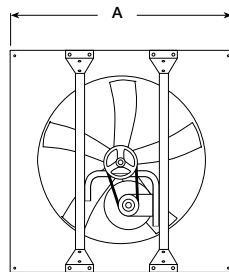
Dimensions - In Inches

Direct Drive Size	Fan Panel		Airflow			
	Sq. Size	Flange	Exhaust		Supply	
	A	D	B*	C*	E	F*
8	13	1	7	5	8 $\frac{3}{8}$	8
10	15	1	8 $\frac{3}{4}$	5	10 $\frac{3}{8}$	8
12	18	1	10 $\frac{3}{4}$	8 $\frac{1}{4}$	12 $\frac{3}{8}$	13 $\frac{1}{8}$
14	20	1	11 $\frac{1}{4}$	8 $\frac{1}{2}$	14 $\frac{3}{8}$	14 $\frac{1}{4}$
16	22	1	11 $\frac{3}{4}$	10 $\frac{1}{4}$	16 $\frac{3}{8}$	14
18	24	1	14	10 $\frac{7}{8}$	18 $\frac{3}{8}$	14 $\frac{1}{4}$
20	26	1	17 $\frac{1}{4}$	13 $\frac{1}{2}$	20 $\frac{1}{2}$	18
24	32	1 $\frac{1}{4}$	20	13 $\frac{1}{2}$	24 $\frac{3}{8}$	21
30	38	1 $\frac{1}{4}$	20 $\frac{1}{2}$	16 $\frac{3}{8}$	30 $\frac{3}{8}$	21 $\frac{3}{4}$
36	44	2	20 $\frac{1}{2}$	16 $\frac{3}{8}$	36 $\frac{3}{8}$	28
42	50	2	26	18 $\frac{1}{4}$	42 $\frac{3}{8}$	28
48	56	2	26 $\frac{3}{8}$	20 $\frac{5}{8}$	48 $\frac{3}{8}$	28 $\frac{1}{2}$
54	62	2	28	22 $\frac{7}{16}$	55 $\frac{3}{8}$	30 $\frac{1}{8}$

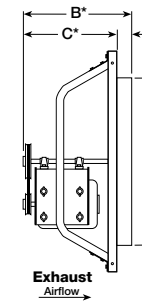
*Varies with motor selection.

Belt Drive Models: VWBE, VWBS, VWBCE, VWBCS

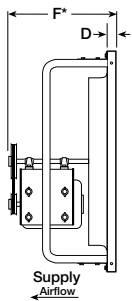
Level 1: Sizes 20-54



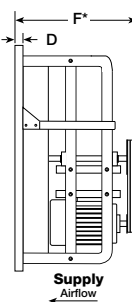
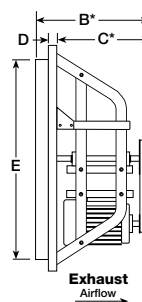
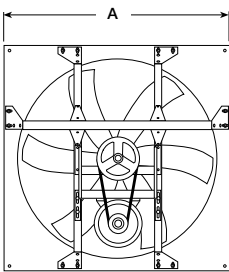
Level 2: Sizes 20-60



Level 3: Sizes 24-30



Level 3: Sizes 36-72



Dimensions - In Inches

Belt Drive Size	Fan Panel		Exhaust				Supply		
	Sq. Size	Flange	Levels 1 and 2		Level 3		All Levels	Levels 1 and 2	Level 3
	A	D	B*	C*	B*	C*	E	F*	F*
20	26	1	19 $\frac{1}{2}$	16 $\frac{1}{4}$	—	—	20 $\frac{1}{2}$	20	—
24	32	1 $\frac{1}{4}$	19 $\frac{1}{2}$	16 $\frac{1}{8}$	19	15 $\frac{5}{8}$	24 $\frac{3}{8}$	20	20 $\frac{1}{2}$
30	38	1 $\frac{1}{4}$	22 $\frac{1}{2}$	18 $\frac{1}{4}$	21 $\frac{1}{2}$	17 $\frac{1}{4}$	30 $\frac{3}{8}$	21	20
36	44	2	21 $\frac{1}{2}$	16 $\frac{1}{2}$	28	23	36 $\frac{3}{8}$	22	27
42	50	2	25	20	28	23	42 $\frac{3}{4}$	25 $\frac{1}{2}$	29 $\frac{1}{4}$
48	56	2	25	19	31 $\frac{1}{2}$	27 $\frac{1}{2}$	48 $\frac{3}{4}$	25 $\frac{1}{2}$	30 $\frac{1}{2}$
54	62	2	25	19 $\frac{1}{2}$	35 $\frac{3}{4}$	30 $\frac{1}{4}$	55 $\frac{1}{4}$	24	36 $\frac{1}{4}$
60	68	2	28	21 $\frac{7}{16}$	35	28 $\frac{7}{16}$	61 $\frac{1}{4}$	24	35 $\frac{1}{2}$
72	82	2 $\frac{1}{8}$	—	—	35	28 $\frac{1}{4}$	73 $\frac{1}{4}$	—	35 $\frac{1}{2}$

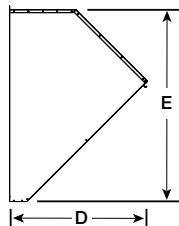
*Varies with motor selection.

FANS

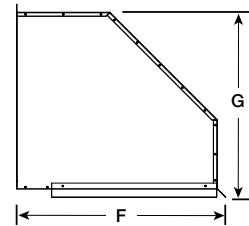
Inline & Sidewall Exhaust

SIDEWALL PROPELLER FANS OPTIONS & ACCESSORIES

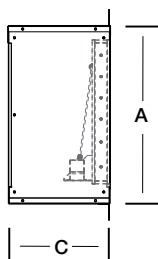
45° Weatherhood



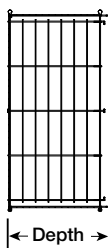
90° Weatherhood



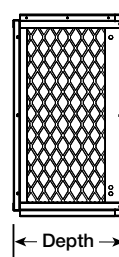
Wall Collar



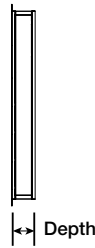
Motor Side Guard



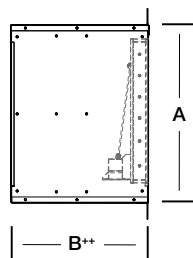
OSHA Motor Side Guard



Damper Guard



Wall Housing



Optional Direct Drive Configuration



Optional Belt Drive Configuration

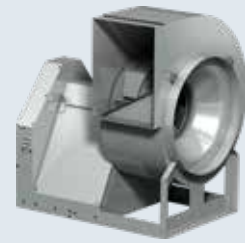


Dimensions - In Inches

Model Size	Wall Opening*	Weatherhood					Wall Housing & Collars			Motor Side Guard	OSHA Motor Side Guard	Damper	Damper Guard
		Width	45°		90°		Square	Length					
			D	E	F	G				A	B**	C	Depth
8	14¼	10½	13¼	11¼	16⅝	12	13¼	19	16⅝	—	9⅝	10	5½
10	16¼	12½	14⅞	13⅝	18½	14	15¼	19	16⅝	—	10	12	6½
12	19¼	14½	16⅝	15⅝	20⅝	16⅝	18¼	23	16⅝	—	12	14	5⅝
14	21¼	16½	17½	17⅝	22½	18⅝	20¼	26	18⅝	—	12	16	6⅝
16	23¼	18½	19⅝	19⅝	25	20⅝	22¼	27	18⅝	—	12	18	6¾
18	25¼	20½	22	21⅝	27½	22⅝	24¼	28	18⅝	—	12	20	6
20	27¼	22½	24¾	23⅝	29¾	24⅝	26¼	32	18⅝	17⅝	17¾	22	6½
24	33¼	29⅝	26⅞	30⅝	36	31¾	32¼	37	18⅝	19½	20	26	6⅝
30	39¾	35⅝	29⅝	36½	40⅝	37⅞	38¼	38	18⅝	22½	21¾	32	6½
36	45¾	41⅝	33	42½	45½	43⅞	44¼	39	18¾	23⅞	24¼	38	6¾
42	51¾	47⅝	35¾	48½	49¼	49⅞	50⅝	44	18¾	25⅞	28½	44	10
48	57¾	53¼	40⅝	54⅝	55½	56	56⅝	44	18⅞	28⅞	28¼	50	9
54	63¾	59½	44¾	60⅞	61¼	62¼	62⅝	52	20⅝	—	34¼	56	7½
60	69¾	65⅝	48⅝	67	66½	68⅝	68⅝	54	21	—	34¼	62	7¼
72	84¾	78⅝	53¼	79½	72⅝	80⅞	83⅝	60	22	—	34¼	74	7½

*Opening is for fan and accessories to fit.

++Indicates short wall housing dimension. Add 6 inches for long wall housing. Add 10 inches for louver/fire damper.



VENCO'S TIERED MODEL APPROACH gives you flexibility in size, performance and construction, matching the appropriate model to your application. Our centrifugal product line offers a variety of options in construction features, materials and performance by model.

VUSFD



VUSF-200



VUSF-300



VUSF-400



VCSW



PERFORMANCE

Model Size	Maximum Capacities CFM	Static Pressure in. wg	Drive		Frame		Scroll Materials			
			Belt	Direct	Bolted	Welded	Galvanized	Coated Steel	Aluminum	Stainless Steel
VUSFD-100	6,500	3		▼	▼		▼	▼		
VUSF-200	10,000	5.5	▼		▼		▼			
VUSF-300	53,000	5.5	▼		▼			▼		
VUSF-400	66,000	9	▼			▼		▼		
VCSW-BI	231,000	21	▼	▼		▼		▼	▼	▼
VCSW-AF	195,000	14	▼	▼		▼		▼	▼	▼



MODEL VUSFD-100

DIRECT DRIVE CENTRIFUGAL BACKWARD-INCLINED UTILITY FANS are designed for applications requiring low to medium air volumes and pressures. The wheel design provides the ability to build pressure without overloading.

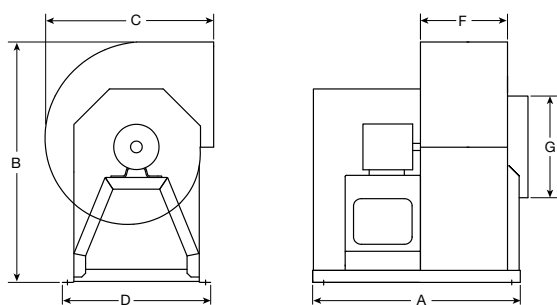
- Integral speed control and simplified wiring.
- Faster start up and lower installed cost – mounted, wired and programed at factory.
- Quicker and easier to balance – adjust with a push or a button or turn of a dial.

Standard Construction

Housing - galvanized steel, lock-seam
 Three Phase - Mounted and programed VFD adjustable interface or 0-10 VCD signal
 Single Phase - EC motor, integral dial or 0-10 VCD signal
 Bolted access door
 NEMA-3R, toggle switch, mounted and wired
 Drain
 Wheel - aluminum
 Corrosion-resistant fasteners
 Weatherhood

Options and Accessories

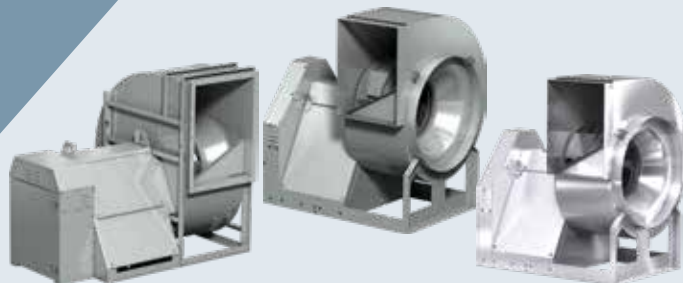
Guards - inlet, outlet
 Flanges - outlet
 Decorative or protective powder coating
 UL/cUL Listed Power Ventilators
 AMCA Licensed for Sound and Air Performance



DIMENSIONS - In Inches

VUSFD-100 Size	A	B	C	D	F	G
10	27 $\frac{1}{8}$	29 $\frac{7}{8}$	20 $\frac{1}{2}$	22 $\frac{3}{4}$	9 $\frac{1}{2}$	11
13	26 $\frac{1}{2}$	33	25	22 $\frac{3}{4}$	8 $\frac{7}{8}$	14
15	28	34 $\frac{1}{2}$	27 $\frac{1}{2}$	22 $\frac{3}{4}$	10 $\frac{1}{2}$	15 $\frac{3}{4}$
16	29	36 $\frac{1}{8}$	29 $\frac{5}{8}$	22 $\frac{3}{4}$	11 $\frac{1}{2}$	17 $\frac{3}{4}$
18	30 $\frac{3}{4}$	38	32 $\frac{1}{2}$	22 $\frac{3}{4}$	13	19 $\frac{1}{4}$

Note: Dimensions may change depending upon motor



MODEL VUSF

THE VUSF BELT DRIVE TIERED MODELS 200, 300 AND 400 offer multiple levels of construction for the best value to match the intended application and performance.



VUSF-200

- Bolted construction using all galvanized material
- Used in light duty, clean air applications



VUSF-300

- Bolted construction, utilizing all painted steel material
- Used for grease, smoke and clean air applications



VUSF-400

- Welded construction, utilizing all painted steel material
- Used for grease, smoke and clean air applications
- Heavier construction and capable of higher performances than VUSF-300

Standard Construction	200	300	400
Housing - lock	▼	▼	▼
Wheel - VUSF-200 and 300, sizes 6-10, aluminum	▼	▼	
Wheel - VUSF-200, sizes 12-22, coated steel VUSF-300, sizes 12-49, coated steel VUSF-400, all sizes, coated steel	▼	▼	▼
Rotatable housing (sizes 7 through 30; arrangement 1, 4 and 10; Class 0, I and II)	▼	▼	▼
Corrosion-resistant fasteners	▼	▼	▼
Ball bearing motor - 1/4 hp and larger	▼	▼	▼
Motor pulley - constant or adjustable	▼	▼	▼
Polyester urethane protective powder coating		▼	▼
Options and Accessories	200	300	400
Welded scroll construction		▼	▼
Wheel rotation - clockwise or counterclockwise	▼	▼	▼
Spark resistance - B or C		▼	▼
NEMA 3R disconnect	▼	▼	▼
Isolators	▼	▼	▼
Weatherhood	▼	▼	▼
Shaft seal with aluminum rub ring		▼	▼
Guards - inlet, outlet	▼	▼	▼
Heat slinger		▼	▼
Extended lube lines	▼	▼	▼
Drain connection	▼	▼	▼
Access door, bolted	▼	▼	▼
Access door, hinged		▼	▼
Flanges - inlet, outlet, companion	▼	▼	▼
Sheaves, multiple groove	▼	▼	▼
Equipment supports	▼	▼	▼
Decorative or protective powder coating		▼	▼
UL/cUL Listed Power Ventilators	▼	▼	▼
UL/cUL Listed Power Ventilators for Restaurant Exhaust Appliances		▼	▼
UL/cUL Listed Power Ventilators for Smoke Control Systems		▼	▼
AMCA Licensed for Air Performance: Model VUSF-206 thru 210, VUSF-306 thru 310, VUSF-327 thru 349			
AMCA Licensed for Sound and Air Performance: Model VUSF-212 thru 222, VUSF-312 thru 324, VUSF-407-BI thru VUSF-449-BI and VUSF-418-AF thru VUSF-449-AF			

FANS

Utility and Centrifugal



VCSW SINGLE-WIDTH, DIRECT DRIVE AND BELT DRIVE CENTRIFUGAL FANS are designed for clean or contaminated ventilation applications up to 1,000°F for 15 minutes. Units can be mounted (both indoor or outdoor) in ducted inlet and/or ducted outlet installations such as exhaust air, supply air, filtration, comfort conditioning, light industrial processes, fume exhaust, fluid bed pressurization and combustion air.

Standard Construction

Housing - heavy-gauge steel

- Lock
- Welded

Direct drive, arrangement 4, 8

Belt drive, arrangement 1, 3, 9, 10

Wheel, flat blade centrifugal, VCSW-BI

Wheel, airfoil centrifugal, VCSW-AF

Rotatable housing (sizes 7 through 30; arrangement 1, 4, and 10; Class 0, I and II)

Final assembly vibration analysis

Minimum bearing life of L₁₀ 80,000 hours (Average life - L₅₀ 400,000 hours)

Polyester urethane protective powder coating

Options and Accessories

Guards - inlet, outlet

Motor cover (Arrangement 1, 3, 4, 8, 9)

Flanges - inlet, outlet, companion

Weatherhood (Arrangement 1 motor positions X or Y, 10)

Drain connection

Access door, bolted or hinged

Isolators - rubber, free standing and restrained

Isolation base

Spark resistance - A, B or C

NEMA-3R, 4, 4X, 7/9, 12 disconnect

Shaft seal

Extended lube lines

Extended life bearings L₁₀ 200,000 hours

UL/cUL Listed Power Ventilators

UL/cUL Listed Power Ventilators for Restaurant Exhaust Appliances (Arrangements 1, 9, 10)

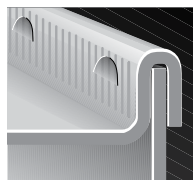
UL/cUL Listed Power Ventilators for Smoke Control Systems (Arrangements 1, 9, 10)

AMCA Licensed for Sound and Air Performance

HOUSING CONSTRUCTION

Lock Housing

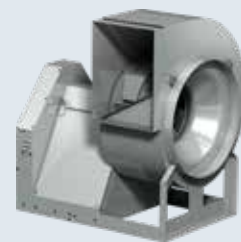
Features an exclusive airtight lock seam. This seam provides a structural bond between the side panels and scroll wrap.



Welded Housing

Features a fully welded housing.





CENTRIFUGAL FAN SELECTION GUIDE

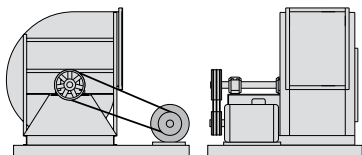
SPARK RESISTANT CONSTRUCTION

Spark C - Includes aluminum inlet cone and rub ring

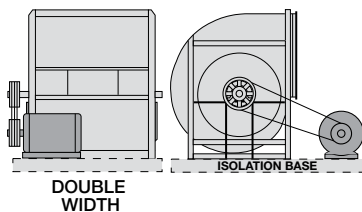
Spark B - Includes aluminum wheel and rub ring

Spark A - Includes aluminum wheel, aluminum scroll and aluminum inlet cone

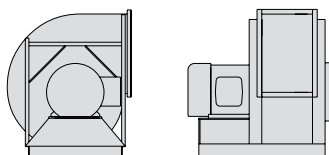
ARRANGEMENT 1 allows for an unlimited motor size and is suitable for high temperatures (up to 1,000°F) or contaminated air. The motor can be located in position W, X/Y or Z around the fan shaft to ensure proper alignment. Isolation base required (by factory) or structural pad (by others).



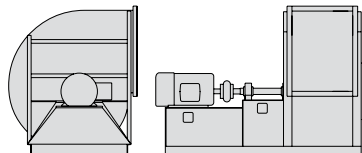
ARRANGEMENT 3 bearing located in the airstream limits temperatures and does not permit spark resistant construction. Requires an isolation base (by factory) or structural pad to mount the fan and motor.



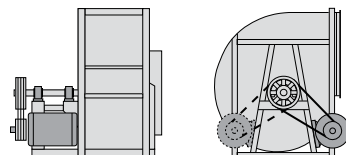
ARRANGEMENT 4 is direct drive with the wheel attached to the motor shaft. Arrangement minimizes maintenance with no sheaves, belt or fan shaft bearings. Provides the most compact design. Limited to temperatures below 110°F.



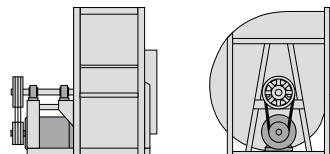
ARRANGEMENT 8 is direct drive with the motor attached to a fan shaft and bearing assembly. Arrangement is recommended for higher horsepower applications in lieu of belt drive. Bearings are located out of the airstream. Available heat fan package to 750°F.



ARRANGEMENT 9 has the motor mounted on the side of the bearing pedestal to allow mounting of larger motor hp sizes in a compact foot print. Isolation base required (by factory).



ARRANGEMENT 10 is the most common fan arrangement. Motor is mounted under the bearing pedestal and can be enclosed with a weatherhood. Limited motor sizes, but arrangement provides smallest overall package size. No mounting base required.



WHEEL TYPES

Backward-Inclined Wheel

Centrifugal, non-overloading style with single-thickness flat blades. Most versatile wheel. Excellent for clean, high-temperature, or contaminated air.



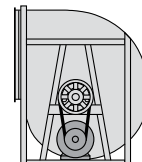
Airfoil Wheel

Centrifugal, non-overloading style with airfoil shaped blades. Higher operating efficiencies. Used for clean air applications.

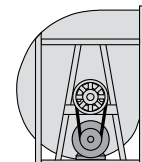


ROTATION

Choice between clockwise (CW) and counter-clockwise (CCW) as determined from the drive side. Rotation changes discharge location as illustrated below.

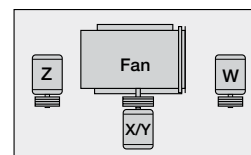


CCW



CW

MOTOR POSITIONS (Arrangement 1 and 3) Motor position determined from the drive side. Letter assignment is independent of discharge position and fan rotation.



DISCHARGE POSITIONS

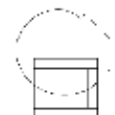
Utility Fans - determined from the drive side. Some models and sizes allow for field rotation.

CCW TH	CW TH	CCW BH	CW BH
CCW TAD	CW TAD	CCW BAU	CW BAU
CCW DB	CW DB	CCW UB	CW UB
CCW BAD	CW BAD	CCW TAU	CW TAU

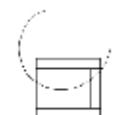
Centrifugal Fans - graphic shows discharge positions available on centrifugal fans. Determined from the drive side. Some models and sizes allow for field rotation.



BH



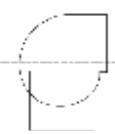
BAU



UB



TAU



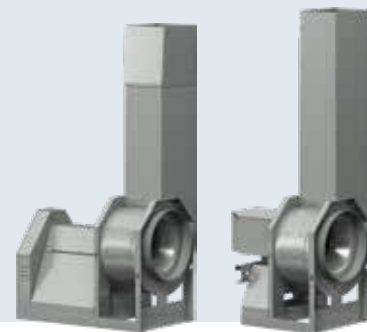
TH



DB

FANS

Fume & Laboratory Exhaust Systems



MODEL VJC • COMMERCIAL BELT DRIVE VJI • INDUSTRIAL BELT OR DIRECT DRIVE

FUME EXHAUST FANS with integral stacks are designed to safely remove and disperse fumes and odors. Fume exhaust 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 115 mph (33.9 PSF) without the need for guy wires.

PERFORMANCE

- Capacities range from 200 to 18,000 cfm and up to 9 in. wg of static pressure.

FEATURES INCLUDE:

- 7 foot discharge height, 10 feet optional
- No guy wires (115 mph wind speed)
- Quick installation

APPLICATIONS INCLUDE:

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

Standard Construction	VJC-200	VJC-300	VJI
Housing construction, lock	▼	▼	▼
Housing construction, welded			▼
Material type - galvanized steel	▼		
Material type - coated steel		▼	▼
Temperature limit	250°F	400°F	500°F
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 only	▼	▼	
Drain connection			▼
Options and Accessories	VJC-200	VJC-300	VJI
Shaft seal - felt, neoprene	▼	▼	▼
Spark B or C resistant construction		▼	▼
NEMA-3R disconnect	▼	▼	▼
Mounting - equipment supports	▼	▼	▼
Access door, bolted	▼	▼	▼
Access door, hinged		▼	▼
Extended life bearings L ₁₀ 200,000 hours			▼
UL/cUL Listed Power Ventilators	▼	▼	▼
AMCA Licensed for Air Performance: Model VJC sizes 6-8			
AMCA Licensed for Sound and Air Performance: VJC sizes 12-15 and VJI			

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.

No-Loss Stack

Discharge stack designed to protect against rain water.



Fume Exhaust with restrained isolators and GESS equipment supports



Fume Exhaust with curb cap inlet box and GPFHL roof curb



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



VJHP 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 VJHP 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.

Standard Construction

Steel construction
Hi-Pro Z - 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 L₁₀ 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
Multiple fans on common plenum for redundancy
Factory mounted actuators - manual, electric
Isolation dampers
Bypass dampers
UL/cUL Listed Power Ventilators
UL Listed Power Ventilators for Restaurant Exhaust Appliances
AMCA Licensed for Sound and Air Performance

PERFORMANCE

Housing Style: Inline Centrifugal
Stack Style: High Plume Nozzle
Minimum Flow: 500 cfm (800 m³/hr)
Maximum Flow: 26,000 cfm (44,200 m³/hr)
Maximum ESP: 4 in. wg (1,000 Pa)

PERFORMANCE FOR VJHP

Model Size	9	10	12	13	16	18	22	24	30	36
Minimum CFM	270	420	600	810	1050	1320	1650	2760	3690	5310
Maximum CFM	1705	1960	2640	3160	7080	7880	10560	14760	19640	24000
Plume Rise at 3000 (ft./min.)	Minimum (ft.)	14	15	16	17	18	19	20	22	24
	Maximum (ft.)	19	19	20	21	25	26	30	33	37

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.

FANS | Fume & Laboratory Exhaust Systems



WHY USE A LABORATORY EXHAUST SYSTEM?

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.

Venco 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 HIGH PLUME DILUTION TECHNOLOGY WORKS

Laboratory exhaust is drawn into the fan (A).

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

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

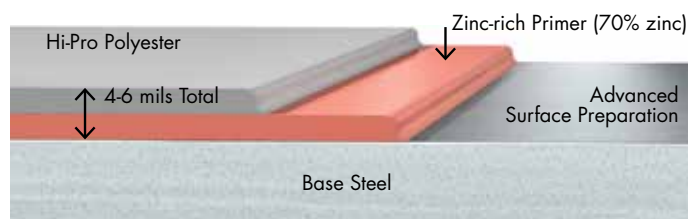
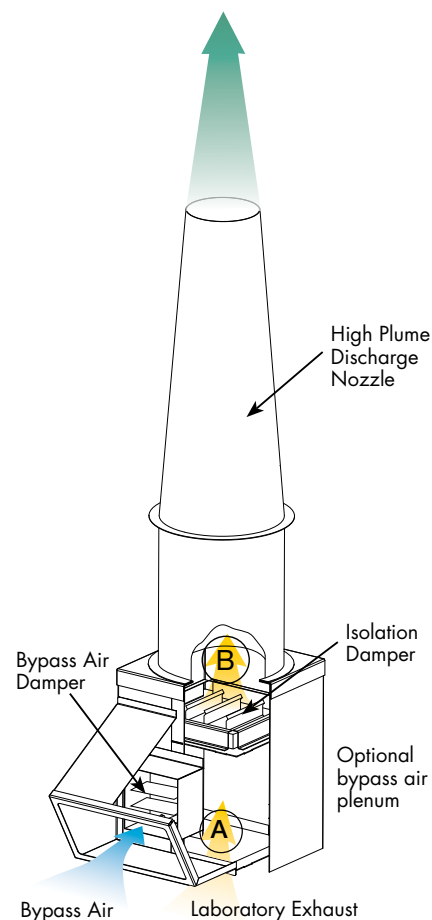
Hi-Pro Z FOR LABORATORY EXHAUST APPLICATIONS

Hi-Pro Z 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

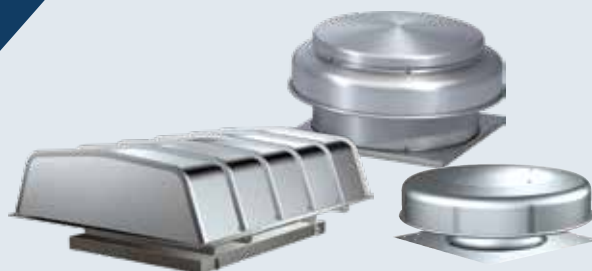
Step 2: The finish coat of polyester resin (Hi-Pro Polyester) is applied and then fully cured at 400°F (204°C)

Hi-Pro Z 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 Hi-Pro Z system exceeds 4,000 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%)
Polyester Urethane					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						
Hi-Pro Z					2H	No Failure						

GRAVITY VENTILATORS



MODEL VGI/VGR VRSI/VRSR/VRGU

GRAVITY VENTILATORS are designed to relieve or take in air via building pressure. As buildings become pressurized, they will relieve the air from the building and as they come under a negative pressure, they will allow air into the building.

Standard Construction	VRSR	VRSI	VGI/VGR	VRGU
Housing - spun aluminum	▼	▼		
Housing - fabra hood, galvanized or aluminum			▼	
Housing - upblast, galvanized				▼
Birdscreen - galvanized	▼	▼	▼	
Corrosion-resistant fasteners	▼	▼	▼	▼
Butterfly dampers - galvanized or aluminum				▼
Options and Accessories	VRSR	VRSI	VGI/VGR	VRGU
Damper	▼	▼	▼	
Roof curb	▼		▼	▼
Roof curb accessories - adaptors, extensions	▼	▼	▼	▼
Damper lifters - fusible link, motorized				▼
Birdscreen - aluminum	▼	▼	▼	
Insect screen	▼	▼	▼	
Insulation - 1/2 or 1-inch	▼	▼	▼	
Filters - 2-inch aluminum, washable (VGI)			▼	
Tie-down points	▼	▼	▼	▼
12-inch high base			▼	
Decorative or protective powder coating	▼	▼	▼	▼

PERFORMANCE

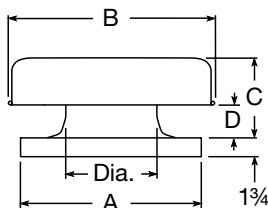
- VRSI, VRSR capacities range from 170 to 8,100 cfm (intake performance) and 230 to 18,300 cfm (relief performance).
- VGI capacities range from 0 to 109,800 cfm and 0.4 in. wg. of static pressure.
- VGR capacities range from 0 to 96,800 cfm and 0.3 in. wg. of static pressure.

THE VGI OR VGR HOOD MODELS are designed for intake or relief applications and offer many important advantages over other gravity roof ventilators. It is superior in load bearing strength, weather-resistance, dimensional flexibility and appearance.

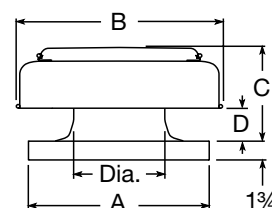


For dimensional and size information please contact your local representative.

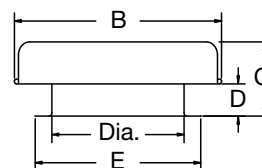
VRSR
Sizes 8 thru 24



VRSR
Sizes 30 thru 48



VRSI with Optional
Flashing Flange
Sizes 8 thru 24



DIMENSIONS - In Inches

Model Size	A	B	C	D	E	Dia.	Throat Area (ft ²)
8	19	20½	7¼	1½	20¼	8¼	0.37
10	19	20½	7¾	2	20¼	10¼	0.57
12	22	29	10	3½	23¼	12¼	0.82
15	22	29	10	3½	23¼	14¼	1.12
16	26	29	11	4¼	27¼	16¼	1.45
18	30	35½	9¾	1¾	31¼	20¼	1.83
20	30	35½	11¼	3¾	31¼	20¼	2.25
24	34	38¼	11	4	35¼	24½	3.24
30	40	48	18¾	5⅞	—	30½	5.03
36	46	56¾	21¼	6	—	36½	7.29
42	52	63¼	24¼	6¼	—	42½	9.77
48	58	72	26¼	6½	—	48½	12.83

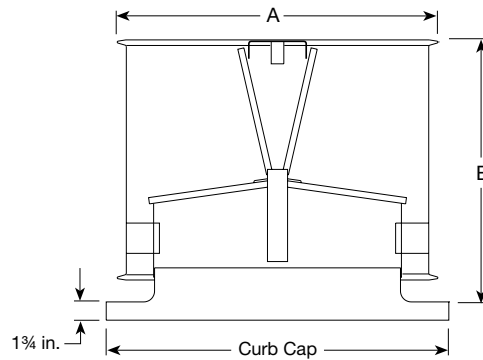
GRAVITY VENTILATORS



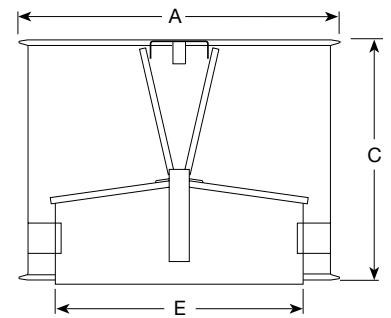
PERFORMANCE

- VRGU capacities range from 0 to 24,000 cfm and 0.7 in. wg. of static pressure.

VRGU
with Curb Cap



VRGU
without Curb Cap



DIMENSIONS - In Inches

Model Size	A	B	C	D	Curb Cap	Recommended Roof Opening
18	25	22	20 1/4	18 1/2	28	22
20	27 1/4	24	21 1/4	20 1/2	30	24
24	31 1/8	26	24	20 1/2	34	28
30	37 3/8	30	26 3/4	30 5/8	40	34
36	43 1/2	33	29 1/4	30 5/8	46	40
42	48 7/8	38	34 1/4	42 3/4	52	46
48	56	40	34 1/4	48 1/2	58	52
54	62 5/8	45	40 1/4	55	66 1/2	60
60	68 3/4	48	43 1/8	61	72 1/2	66

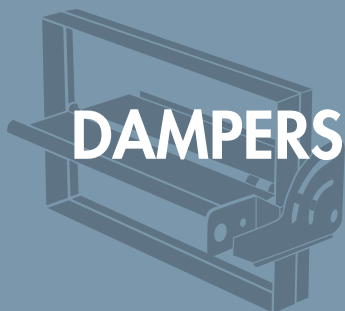
MOTOR STARTERS

MODEL MS-1P MSSC/MSAC

MOTOR STARTERS are available for both single phase and three phase motors in commercial and industrial applications. They include basic motor protection as well as the ability to provide advanced motor protection SmartStart™. All motor starters are available in either indoor or outdoor enclosures.



	MS-1P Universal Single Phase	MSSC Standard Control	MSAC Advanced Control
Description	Hand/Off/Auto (HOA) capability in a single phase package with wide range overload. Universal application.	An economical starter with advanced motor protection.	An innovative and versatile starter. Proven for reliability and advanced control capability.
Ranges	1Ø, 110-240V, 0.1-1 hp	3Ø, 200-600V, 1-25 hp	3Ø, 200-600V, 1-25 hp
User Interface	On/Off switch, recessed hand-auto mode switch, LED status indicators (power, run, fault).	Hand/Off/Auto (HOA) keypad with corresponding LED lights. LED status indicators (power, run, fault).	Hand/Off/Auto (HOA) keypad with corresponding LED lights. LED status indicators (power, run, fault).
Overload Type	Wide range electronic overload (1-16FLA) class 10	Wide range electronic overload (1-40FLA) class 10	Wide range electronic overload (1-40FLA) class 10 or 20
Control Features	<ul style="list-style-type: none"> Voltage input from BMS Auxiliary input (run command contact) Motor status output Fault alarm output signal 	<ul style="list-style-type: none"> Voltage input from BMS Auxiliary input (run command contact) Motor status output 	<ul style="list-style-type: none"> Voltage input from BMS Auxiliary input (run command contact) Motor status output Fault alarm output signal Fireman's override Emergency shutdown Damper control output and limit switch closed loop signal Auxiliary input (stop command contact)
Enclosures	Compact design conceals hand/auto switch behind sliding door. Mounts on a single gang box. Indoor (NEMA-1) enclosure. Outdoor (NEMA-4 & 4X) enclosure is weather resistant.	Indoor (NEMA-1) enclosure constructed of 16 gauge steel. Lockable door. Outdoor (NEMA-3R) enclosure is weather resistant with a fully gasketed door. Constructed of 16 gauge steel. Door and keypad are lockable.	Indoor (NEMA-1) enclosure constructed of 16 gauge steel. Lockable door. Outdoor (NEMA-3R & 4X) enclosure is weather resistant with a fully gasketed door. Constructed of 16 gauge steel. Door and keypad are lockable.
Disconnect	Allows manual control of input power to motor and provides short circuit protection.	Allows manual control of input power to motor and provides short circuit protection. Lockable handle, no fuses required. <i>Optional</i>	Allows manual control of input power to motor and provides short circuit protection. Lockable handle, no fuses required. <i>Optional</i>
UL/cUL Listed	Listed for manual motor controller.	Listed for enclosed industrial control panel.	Listed for enclosed industrial control panel.



DAMPERS

Life Safety Products

- FIRE
- SMOKE
- COMBINATION



LIFE SAFETY DAMPERS are intended to protect openings in walls and/or partitions to prevent the spread of fire and/or smoke.

FIRE DAMPERS are required by all building codes to maintain the required fire resistance ratings of walls, partitions and floors when they are penetrated by air ducts and transfer openings. These products are tested and classified in accordance with UL Standard 555. Fire dampers close automatically upon detection of heat, blocking the opening and preventing the spread of fire into the adjoining compartment or spaces.



Model

DFD-110, 150, 210, 350

FD-100, 150, 350

SMOKE DAMPERS, two applications:

1. They may be applied in a passive smoke control system where they simply close and prevent the circulation of air and smoke through a duct or a ventilation opening in a smoke barrier.
2. They may be applied as part of an engineered smoke control system designed to control the spread of smoke using walls and floors as barriers and using the building's HVAC system and/or dedicated fans to create pressure differences.

These products are tested and classified in accordance with UL Standard 555S.



Model

SMD-201, 202, 203, 301, 302

SMDR-501, 502

COMBINATION FIRE SMOKE DAMPERS perform the function of both a fire damper and a smoke damper. Building layouts and designs often combine fire and smoke rated partitions and barriers requiring the installation of both a fire damper and smoke damper at the same location. These products are tested and classified in accordance with both UL555 and UL555S.



Model

FSD-211, 212, 213, 311, 312

FSDR-511, 512

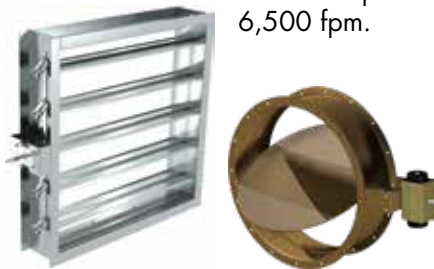
DAMPERS

Control Dampers

- HEAVY DUTY/INDUSTRIAL
- VOLUME CONTROL
- MANUAL BALANCING
- BLAST
- TORNADO
- BUBBLE-TIGHT



HEAVY DUTY/INDUSTRIAL CONTROL DAMPERS have a heavy duty flanged frame designed to regulate airflow and provide shutoff in HVAC or industrial process control systems. They are available in 3V, airfoil or round blade styles. The HCD series is designed for applications with pressure up to 45 in. wg and velocities up to 6,000 fpm. HCDR series is designed for applications with pressure up to 20 in. wg and velocities up to 6,500 fpm.



Model

HCD-120, 130, 135, 140, 220, 230, 240, 330, 430, 530
HCDR-050, 150, 250, 350, 351

BUBBLE-TIGHT DAMPERS are designed for isolation applications. Bubble-tight means the damper has the lowest possible leakage: zero. Every bubble-tight damper is factory leakage tested to ensure a bubble-tight seal. This damper is recommended for two position shut off applications.



Model

HBT-221; HBTR-151

CONTROL DAMPERS are designed to regulate the airflow in a HVAC system. They can be used in intake, exhaust, or mixed air applications. These dampers require operation by either manual, electric or pneumatic actuators.

MANUAL BALANCING DAMPERS are designed to regulate flow of air in an HVAC system. They are used to accomplish system balancing. Each damper is equipped with a locking quadrant which fixes the damper blades in place after adjustment. These dampers are not intended to be used in applications as a positive shut off or for automatic control.



Model

MBD-10, 10M, 15; MBDR-50

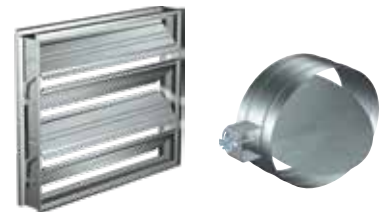
TORNADO DAMPERS are designed to remain open during normal operating conditions to allow normal airflow. In the event of a tornado, the HTOD series are designed to react to rapid pressure changes. These models are double flanged channel frame style dampers with single thickness blades. The HTOD-330 will close in the same direction as normal flow. The HTOD-331 will close in the opposite direction as normal flow.



Model

HTOD-330, 331

VOLUME CONTROL DAMPERS regulate the flow of air and can also be used as a positive shutoff or automatic control. They are available in 3V, airfoil, round and vertical blade styles.



Model

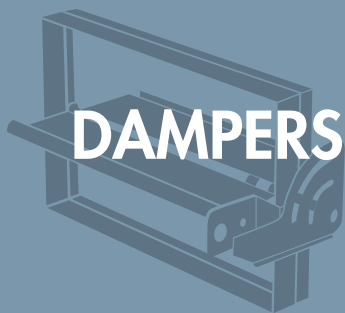
VCD-20, 23, 33, 34, 40, 42, 43;
VCDR-50, 53

BLAST DAMPERS are designed to remain open under normal operating conditions to allow normal airflow. In the event of an explosion, the HBS series are designed to react to the shock-wave and close, helping to contain the explosion. These models are double flanged channel frame style dampers with single thickness blades. The HBS-330 will close in the same direction as normal flow. The HBS-331 will close in the opposite direction as normal flow.



Model

HBS-330, 331



DAMPERS

Backdraft & Relief

- BACKDRAFT
- BAROMETRIC RELIEF
- HEAVY DUTY/INDUSTRIAL BACKDRAFT
- PRESSURE RELIEF



BACKDRAFT DAMPERS are used in ventilation systems to allow airflow in one direction and prevent airflow in the opposite direction. A relief damper has an elevated and adjustable start-open pressure while providing the backdraft function.

BACKDRAFT DAMPERS can be used as exhaust or intake dampers. To help open the damper blades, backdraft dampers use springs, adjustable counterbalance weights, or a motorpack.



Model

BD-100, 300, 320, 330
WD-100, 110, 120, 200, 210, 220, 300, 320, 330, 340, 400, 410, 420, 430
ES-10, 11, 12, 30, 31, 32, 40, 41, 42;
EM-10, 11, 12, 30, 31, 32, 40, 41, 42
WDR-53

HEAVY DUTY/INDUSTRIAL BACKDRAFT DAMPERS have a flanged frame and are designed to prevent backflow at static pressures up to 20 in. wg. Counterbalance weights



are mounted externally for easy adjustment and balancing in the field.

Model

HB-110, 120, 230, 240, 330
HBR-050

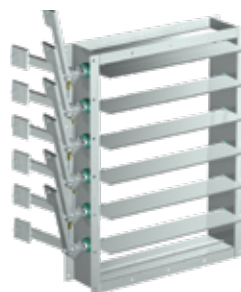
BAROMETRIC RELIEF DAMPERS are backdraft dampers with an adjustable start-open pressure. They are used for gravity ventilation and low velocity systems. Counterbalance weights provide the ability to fine tune start-to-open and full-open operation.



Model

BR-10, 11, 12, 30, 31, 32, 40, 41, 42

PRESSURE RELIEF DAMPERS are backdraft dampers with adjustable start-open pressure, capable of maintaining a relatively constant pressure at various airflows, which closes upon a decrease in differential pressure. Pressure relief dampers do not immediately open fully upon reaching their start-open pressure. HPR series dampers are flange mounted with counterbalance weights mounted externally for easy adjustment and balancing in the field.



Model

HPR-120, 230, 330

LOUVERS

- STATIONARY
- COMBINATION

STATIONARY

STATIONARY EXTRUDED ALUMINUM LOUVERS are used in applications that require intake and exhaust ventilation with moderate protection from rain and weather infiltration. Drainable and non-drainable models available.

DRAINABLE BLADES

Designed with a drainable head and drainable blades to protect air intake and exhaust openings in the building's exterior walls by minimizing water penetration. Drain gutters are located on every blade to capture water which is dispersed to the jambs and drained out of the sill.



Model

VASD-2, 4, 6

NON-DRAINABLE BLADES

Designed to incorporate traditional non-drainable J style blades with sloped sill. High free areas provide minimum resistance to airflow. Design incorporates hidden mullions when multi-wide sections are needed.



Model

VASJ-2, 4, 6

COMBINATION

EXTRUDED ALUMINUM COMBINATION LOUVER/ DAMPERS incorporate operable and stationary blades into one common frame member. Design maintains a stationary appearance when adjustable blades are closed. A tight seal is created to prevent the passage of air.

DRAINABLE BLADES

All models include drainable stationary blades and a drainable head member. Drainable adjustable blades have either concealed blade linkage or exposed on-blade linkage. Design of VACC-6 incorporates airfoil adjustable blades for less airflow resistance.



Model

VACC-4, 6

LOUVERS

- ADJUSTABLE
- WIND DRIVEN RAIN
- PENTHOUSE

ADJUSTABLE

ADJUSTABLE EXTRUDED ALUMINUM OPERABLE BLADE LOUVERS are designed to be open or closed to protect air intake and exhaust openings in exterior building walls. Louver blades are center pivoted and can be operated manually or by any commonly specified damper actuator.

DRAINABLE BLADES

Model VAAD offer concealed blade linkage. Model VAAD-6 offers 35° blade angle.



Model

VAAD-4, 6

WIND DRIVEN RAIN

WIND DRIVEN RAIN LOUVERS are Venco's most effective louvers in minimizing water penetration through wall openings. Designed to protect air intake and exhaust openings in building exterior walls that are sensitive to the penetration of wind driven rain.

HORIZONTAL BLADES

Horizontal blades offer the traditional louver look and excellent protection against wind driven rain.



Model

VAHH-5

VERTICAL BLADES

Vertical blades offer the best protection against wind driven rain although the vertical blade look is not typical.



Model

VAVH-5

PENTHOUSES

LOUVER PENTHOUSES offer clean lines, mitered corners, all aluminum construction and removable hoods.

For complete product information on Model VLPI Intake and VLPR Relief, contact your local representative.

THE LOW SILHOUETTE LOUVERED PENTHOUSES are designed for intake (VLPI) or relief (VLPR) applications with either natural gravity or positive pressure systems. These units feature a storm-proof aluminum louver with mitered corners and clean horizontal lines. The design affords lower pressure drops while maintaining low hood heights. Removable cover is lined with fiberglass to prevent condensation. Maximum throat dimension is 60 x 120 inches.



Model

VLPI, VLPR

FAN INFORMATION

GLOSSARY

- CFM** - (Cubic Feet per Minute)
A measure of airflow over time
- SP** - (Static Pressure) Resistance to airflow measured in inches of water gauge
- Sone** - A measure of loudness
- Bhp** - (Brake Horsepower)
A measure of power consumption
- HP** - (Horsepower) Used to indicate a fan's motor size
- RPM** - (Revolutions per Minute)
A measure of motor speed
- FRPM** - (Revolutions per Minute)
A measure of fan speed

FAN SELECTION BASED ON FAN APPLICATION

Ventilating a building simply replaces stale or foul air with clean, fresh air. Although the ventilation process is required for many different applications, the airflow fundamentals never change: Undesired air out, fresh air in.

The key variables that do change depending on applications are the fan model and the air volume flow rate (CFM). Other considerations include the resistance to airflow (static pressure or SP) and sound produced by the fan (Sones). Occasionally, a customer will require a fan to perform a particular function, yet does not know which model to use or even what CFM is necessary. In this case, some fan specification work must be done.

Fan specification is usually not a precise science and can be done confidently when the fan application is understood. Based on the application, four parameters need to be determined.

FAN SPECIFICATION PARAMETERS

- Fan Model
- CFM
- Static Pressure (SP)
- Loudness Limit (Sones)

The information that follows will help walk you through this type of problem and enable you to select the right fan for the job.

FAN MODEL

Fans all perform the basic function of moving air from one space to another, but the great diversity of fan applications creates the need for manufacturers to develop many different models. Each model has benefits for certain applications, providing the most economical means of performing the air movement function. The trick for most users is sorting through all of the models available to find one that is suitable for their needs. Here are some guidelines.

DIRECT DRIVE VS. BELT DRIVE

Direct drive fans are economical for low volume (2,000 cfm or less) and low static pressure (0.50 inches wg. or less). They require little maintenance and most direct drive motors can be used with a speed control to adjust the CFM.

Belt drive fans are better suited for air volumes above 2,000 cfm or static pressures above 0.50 inches wg. Adjustable pulleys allow fan speed and CFM to be adjusted by about 25%. High temperature fans above 50°C (above 122°F) are almost always belt driven.

PROPELLER VS. CENTRIFUGAL WHEEL

Propeller fans provide an economical method to move large air volumes (5,000+ cfm) at low static pressures (0.50 inches wg. or less). Motors are typically mounted in the airstream which limits applications to relatively clean air at maximum temperatures of 40°C (104°F).

Centrifugal fans are more efficient at higher static pressures and are quieter than propeller fans. Many centrifugal fan models are designed with motors mounted out of the airstream to ventilate contaminated and high temperature air.

FAN LOCATION

Fan models are designed to be mounted in three common locations: on a roof, in a wall, or in a duct. Whatever the location, the basic fan components do not change. Only the fan housing changes to make installation as easy as possible.

Determining the best location for a fan depends on the airflow pattern desired and the physical characteristics of the building. By surveying the building structure and visualizing how the air should flow, the place to locate the fan usually becomes evident.

DETERMINING CFM & STATIC PRESSURE

After the model is known, the CFM must be determined. Consult local code requirements or the table below for suggested air changes for proper ventilation.

The ranges specified will adequately ventilate the corresponding areas in most cases. However, extreme conditions may require "Minutes per Change" outside the specified range. To determine the actual number needed within a range, consider the geographic location and average duty level of the area. For hot climates and heavier than normal area usage, select a lower number in the range to change the air more quickly. For moderate climates with lighter usage, select a higher number in the range.

To determine the CFM required to adequately ventilate an area, divide the room volume by the appropriate "Minutes per Change" value.

Suggested Air Changes for Proper Ventilation					
CFM = $\frac{\text{Room Volume}}{\text{Minutes per Change}}$		Room Volume = L x W x H (in feet)			
Area	Minutes per Change	Area	Minutes per Change	Area	Minutes per Change
Assembly Hall	3-10	Dance Hall	3-7	Machine Shop	3-6
Attic	2-4	Dining Room	4-8	Mill	3-8
Auditorium	3-10	Dry Cleaner	2-5	Office	2-8
Bakery	2-3	Engine Room	1-3	Packing House	2-5
Bar	2-4	Factory	2-7	Projection Room	1-2
Barn	12-18	Foundry	1-5	Recreation Room	2-8
Boiler Room	1-3	Garage	2-10	Residence	2-6
Bowling Alley	3-7	Generator Room	2-5	Restaurant	5-10
Cafeteria	3-5	Gymnasium	3-8	Rest Room	5-7
Church	4-10	Kitchen	1-5	Store	3-7
Classroom	4-6	Laboratory	2-5	Transfer Room	1-5
Club Room	3-7	Laundry	2-4	Warehouse	3-10

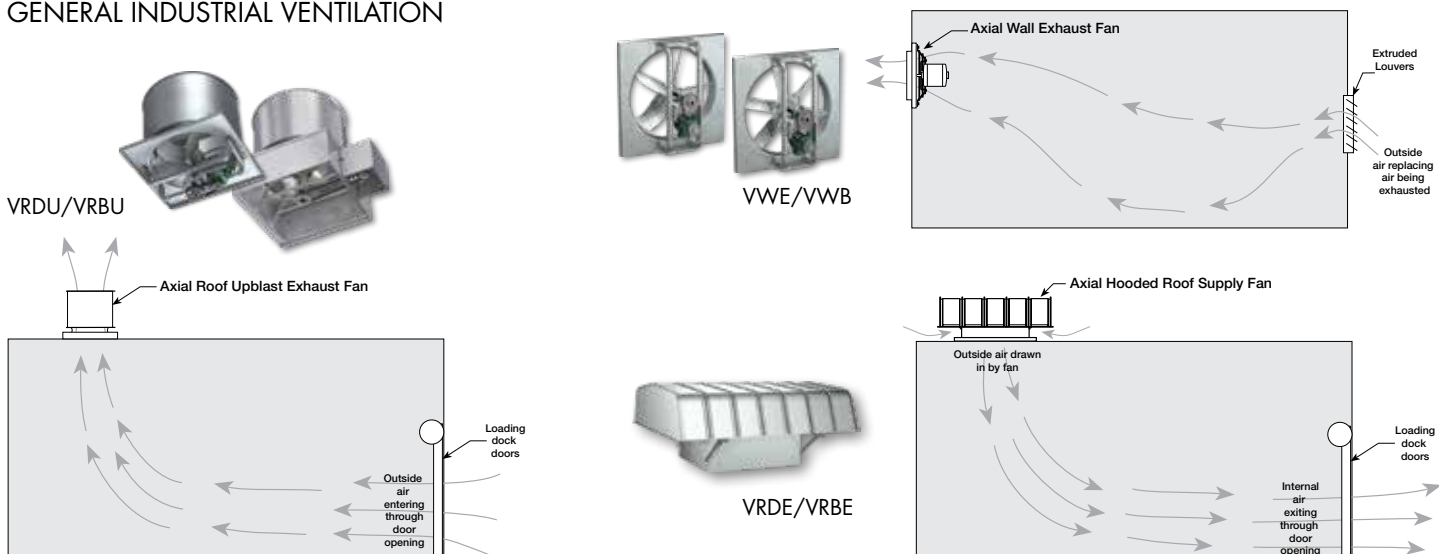
The pressure generated by fans in ductwork is very small. Yet, accurately estimating the static pressure is critical to proper fan selection. Fan static pressure is measured in inches of water gauge. One pound per square inch is equivalent to 27.7 in. of water gauge. Static pressure in fan systems are typically less than 2 in. of water gauge, or 0.072 Psi.

The amount of static pressure that the fan must overcome depends on the air velocity in the ductwork, the number of duct turns (and other resistive elements), and the duct length. For properly designed systems with sufficient make-up air, the guidelines in the table can be used for estimating static pressure.

Static Pressure Guidelines	
Non-Ducted:	0.05 inches to 0.20 inches
Ducted:	0.2 inches to 0.40 inches per 100 feet of duct (assuming duct air velocity falls within 1,000-1,800 feet per minute)
Fittings:	0.08 inches per fitting (elbow, register, grill, damper, etc.)

Important: Static pressure requirements are significantly affected by the amount of make-up air supplied to an area. Insufficient make-up air will increase static pressure and reduce the amount of air that will be exhausted. Remember, for each cubic foot of air exhausted, one cubic foot of air must be supplied.

GENERAL INDUSTRIAL VENTILATION





VENCO  TM

WEB: www.VencoProducts.com
PHONE: 1.833.881.0565
EMAIL: info@vencoproducts.com