VENCO™

Your Ventilation Company

V-1 | Product Catalog

VENCO™

FANS

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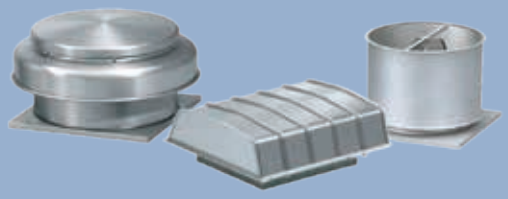
GRAVITY VENTILATORS



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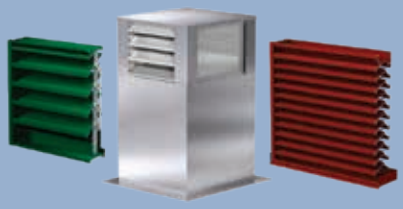
LOUVERS



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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.

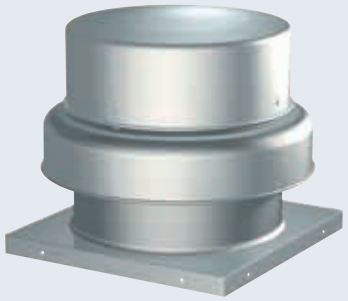
Venco Products certifies that the models VSF, VSFP, VQI, VQIB, VTIC Level 3, VAX, VUSF-206 thru 210, VUSF-306 thru 310, VUSF-327 thru 349, and VJC sizes 6 thru 8 shown here are licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication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

c UL US LISTED

UL/cUL 507 E33599	UL/cUL 705 E40001	UL/cUL 762 MH11745

UL/cUL Power Ventilators for Smoke Control MH17511

FANS | Roof & Sidewall Mounted



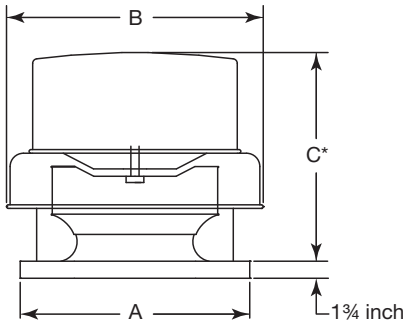
MODEL VECD/VECB

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	19⅜	12⅛	8	17	10½
080, 090, 095	17	21¾	14⅝	10	17	12½
071, 081, 091, 097, 098, 099, 101, 103, 121, 123	19	24⅜	23¾	12	19	14½
131, 133	19	28⅜	23¾	12	19	14½
141, 143, 161, 163	22	28⅜	23¾	16	22	18½
180, 183, 200, 203	30	35½	28	18	30	20½
220, 240	34	42¾	31½	24	34	26½
260, 300	40	50	36	30	40	32½
330, 360	46	58¾	38½	36	46	38½
420	52	65¼	44	42	52	44½
480	58	73¾	47¼	48	58	50½
500, 540	64	83	50¾	54	64	56½

*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

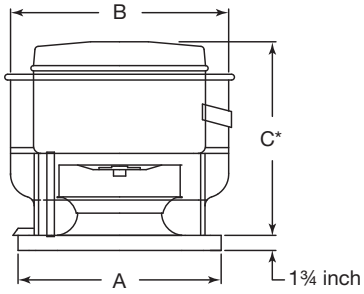
- VUCD capacities range from 60 to 6,400 cfm and 3 in. wg of static pressure.
- VUCB capacities range from 180 to 30,000 cfm and 5 in. wg of static pressure.
- VWCD capacities range from 65 to 6,400 cfm and 3 in. wg of static pressure.
- VWCB capacities range from 375 to 12,450 cfm and 2.75 in. wg of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

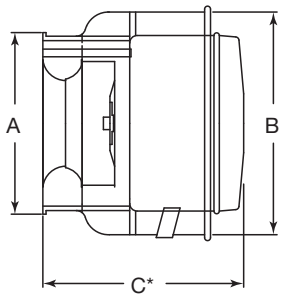
VUCD/VUCB



DIMENSIONS - *In Inches*

Model Size VUCD/VUCB	A	B	C*	Nominal Sq. Sizes		
				Damper^	Roof Curb	Roof Opening
060, 070	17	18⅜	13½	8	17	10½
080, 090	19	21	13⅜	10	19	12½
095	19	21	15¼	10	19	12½
099, 101, 121, 131	19	24⅞	28¼	12	19	14½
141, 161	22	28⅞	29¾	16	22	18½
180, 200	30	35⅜	28⅝	18	30	20½
220, 240	34	42¾	33⅞	24	34	26½
300	40	50	36	30	40	32½
360	46	56 11⁄16	39⅛	36	46	38½
420	52	65⅜	44¾	42	52	44½
480	58	74 3⁄16	48⅛	48	58	50½

VWCD/VWCB



DIMENSIONS - *In Inches*

Model Size VWCD/VWCB	A	B	C*	Nominal Sq. Sizes	
				Damper^	Wall Opening
060, 070	14¾	18⅜	13½	8	8½
080, 090	17⅞	21	13⅜	10	10½
095	17⅞	21	15¼	10	10½
099, 101, 121, 131	19¾	24⅞	28¼	12	12½
141, 161	22⅛	28⅞	29¾	15	15½
180, 200	27¾	35⅜	28⅝	17	17½
220, 240	31¼	42 25⁄32	33⅞	20	20½
300	38⅜	50	36	25	25½

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

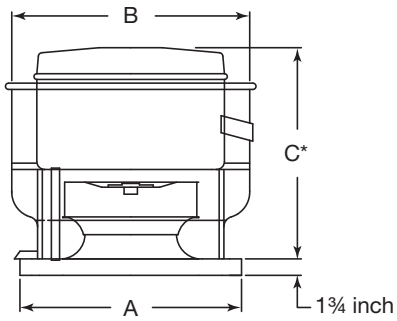
MODEL VUSG

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

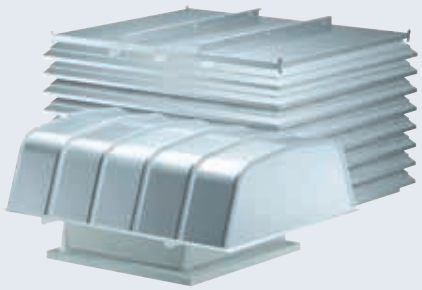


DIMENSIONS - *In Inches*

Model Size VUSG	A	B	C*	Nominal Sq. Sizes	
				Roof Curb	Roof Opening
140, 160	26	28⅞	29¾	26	18½
180, 200	30	35⅜	28⅝	30	20½

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

FANS | Roof & Sidewall Mounted



MODEL VLCD/VLPD VLCB/VLPB

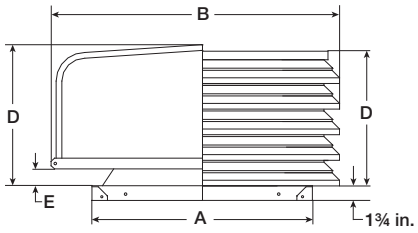
CENTRIFUGAL DOWNBLAST FANS are designed for clean air exhaust applications requiring roof mounting.

PERFORMANCE

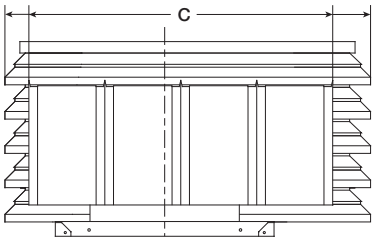
- VLCD, VLPD capacities range from 130 to 1,850 cfm and 0.9 in. wg of static pressure.
- VLCB, VLPB capacities range from 620 to 37,500 cfm and 2.125 in. wg of static pressure.

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

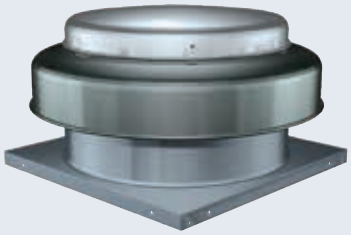


DIMENSIONS - *In Inches*

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	13⅜	2	23	23	14	8	10½
80, 90, 95	19	28	27	16	4	25	25	17	10	12½
100, 120	22	30	27	23¼	4	28	28	19¼	12	14½
14	26	35	39	18	4	32	40	17	16	18½
18	30	40	39	21	4½	36	46	24½	18	20½
21	30	43	51½	23	6	36	46	24½	18	20½
24	34	45½	51½	23¾	6¾	40	49½	23½	24	26½
30	40	50	63	26⅝	8½	46	58	26½	30	32½
36	46	60	63	32⅝	9¾	51¾	63	34⅜	36	38½
42	52	70⅝	75	37⅜	11½	58	70½	38¼	42	44½
48	58	70⅜	87	41½	11⅝	64	76½	40⅜	48	50½
54	64	79⅝	87	45⅜	12½	70	83½	43⅝	54	56½

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

FANS | Roof & Sidewall Mounted



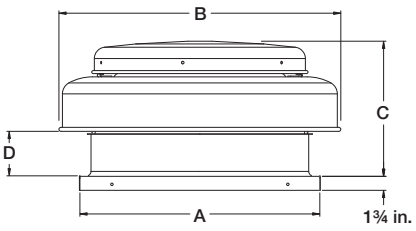
MODEL VAXE/VAXS

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	24⅝	15½	5½	14½
12	22	28⅝	16½	6¼	14½
14	22	28⅝	16½	6¼	16½
16	26	35¼	17¼	6¼	18½
18	30	35¼	17¼	6¼	20½
20	34	42	17½	6¼	26½
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

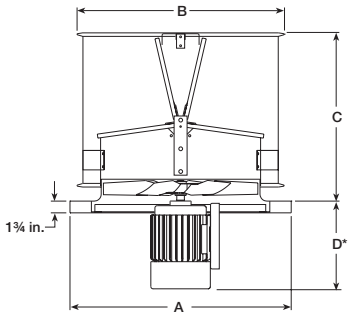
- VRDU capacities range from 4,000 to 43,400 cfm and 0.75 in. wg of static pressure.
- VRBU capacities range from 4,050 to 64,300 cfm and 1 in. wg of static pressure.
- VRBUO capacities range from 4,000 to 61,800 cfm and 1 in. wg of static pressure.

Standard Construction	VRDU	VRBU	VRBUO
Housing - galvanized steel with fully-assembled butterfly dampers and damper stops	▼	▼	▼
Curb cap and drive assembly • 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	▼	▼	▼

FANS | Roof & Sidewall Mounted

MODEL VRDU/VRBU/ VRBUO

VRDU

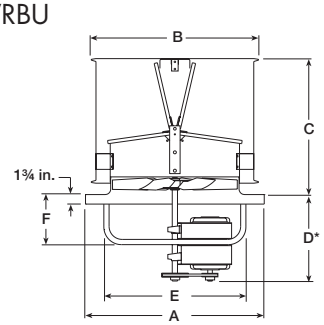


DIMENSIONS - *In Inches*

Model Size VRDU	A Curb Cap ID	B	C	D*	Recommended Roof Opening
24	34	31⅛	26	13½	30½
30	40	37⅜	30	13⅛	36½
36	46	43½	33	12 15⁄16	42½
42	52	49⅝	38	18½	48½
48	58	56	40	18	54½

**Dimension may vary depending on motor.*

VRBU

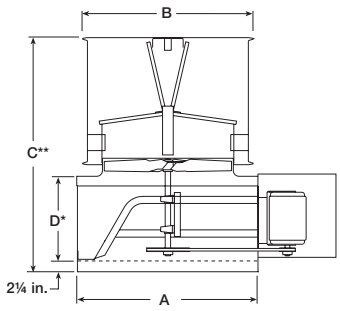


DIMENSIONS - *In Inches*

Model Size VRBU	A Curb Cap ID	B	C	D* Level 1, 2	D* Level 3	E	F	Nominal Sq. Sizes Recommended Roof Opening
24	34	31⅛	26	15½	16¾	27⅜	9 7⁄16	30½
30	40	37⅜	30	15½	16¾	34¾	9⅞	36½
36	46	43½	33	16¾	16¾	40⅞	9⅞	42½
42	52	49⅝	38	19⅜	23⅞	46¾	11¾	48½
48	58	56	40	19⅜	23⅞	52¾	11¾	54½
54	66½	62⅝	45	19¼	26⅞	61¼	11½	63
60	72½	68¾	48	21¼	27	66¼	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	33½	31⅛	45⅝	17½	30
30	39½	37⅜	51¾	19½	36
36	45½	43½	55	19½	42
42	51½	49⅝	59⅝	19⅝	48
48	57½	56	63⅝	21¾	54
54	66	62⅝	70⅝	22¾	62½
60	72	68¾	75	23	68½

**Dimension may vary depending on motor.*
***Sizes 42 through 60 with High Temperature Option will be 5 inches larger.*

FANS | Roof & Sidewall Mounted

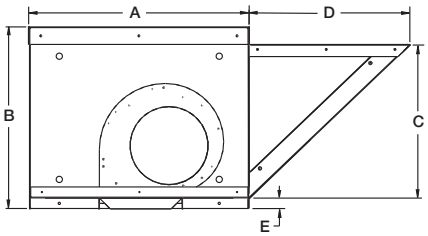
MODEL VSAF

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.

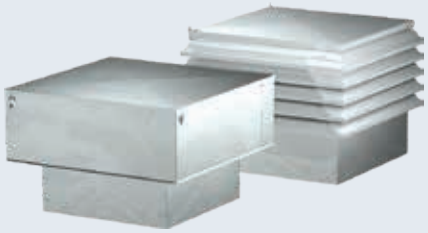
Standard Construction
Housing - galvanized steel
Wheel - forward-curved, galvanized steel, double-width
Housing cover and side access panels - removable
Corrosion-resistant fasteners
Filters - one-inch aluminum, washable
Ball bearing motor - 1/4 hp and larger
Double-studded vibration isolators
Lifting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

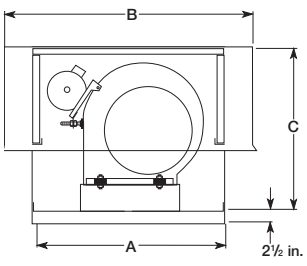
CENTRIFUGAL SUPPLY FANS are designed to draw filtered, untempered air from all four sides of the housing.

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	▼	▼

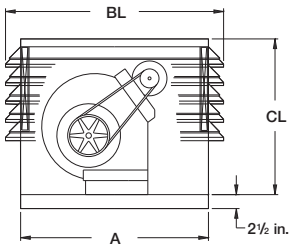
VSF



DIMENSIONS - *In Inches*

Model Size VSF	A sq.	B sq.	C	Nominal Sq. Sizes	
				Recommended Roof Opening	Damper Size
90	26	35⅛	23¼	15	12
100	30	41⅛	23¼	17	14
120	34	47⅛	27¼	21	18
150	40	53⅛	31¼	23	20
180	46	61⅛	34¼	29	26
200	52	73⅛	39¼	33	30

VSFP



DIMENSIONS - *In Inches*

Model Size VSFP	A sq.	BL sq.	CL	Nominal Sq. Sizes	
				Recommended Roof Opening	Damper Size
90	26	31⅞	25⅜	15	12
100	30	35⅞	25⅜	17	14
120	34	39⅞	29⅜	21	18
150	40	45⅞	33⅜	23	20
180	46	51⅞	35⅜	29	26
200	52	58 3/16	40⅜	33	30

FANS | Roof & Sidewall Mounted

MODEL
VRDE/VRDS
VRDE3/VRDS3
VRBE/VRBS/VRBF
VRBCE/VRBCS/VRBCF

Reversible:
VRDP/VRBP

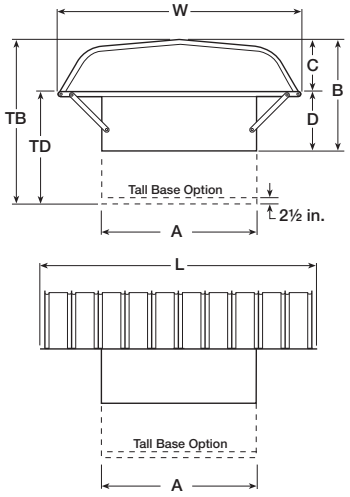
Reversible Filtered:
VRPDF/VRPBF

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	40¼	27¼	48 x 51	—	18	20½
20	30	16	27	11	44¼	28¼	54 x 51	54 x 51	20	22½
24	34	18	29	11	46¼	28¼	66 x 63	66 x 63	24	26½
30	40	20	34	14	51¼	31¼	75 x 75	78 x 87	30	32½
36	46	21	38½	17½	56¾	34¾	88 x 87	94 x 87	36	38½
42	52	24	42½	18½	59¾	35¾	86 x 99	93 x 99	42	44½
48	58	24	43½	19½	60¾	36¾	93 x 111	112 x 111	48	50½
54	64	26½	49	22½	66¼	39¾	112 x 111	124 x 123	54	56½
60	70	26½	50	23½	67¼	40¾	124 x 123	136 x 135	60	62½
72	83	29	53	24	70¼	41¼	136 x 135	136 x 147	72	74½

FANS | Roof & Sidewall Mounted

MODEL VESRMD/ VESRMDF/VERD

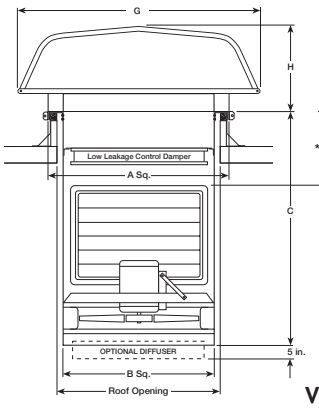
VENCO FOUR-WAY FAN, models VESRMD and VESRMDF offer the flexibility to meet changing needs and to maintain comfortable temperatures in factories, warehouses and other facilities with high ceilings. When temperatures change with production processes or seasonal shifts, the four-way fan can exhaust, supply,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

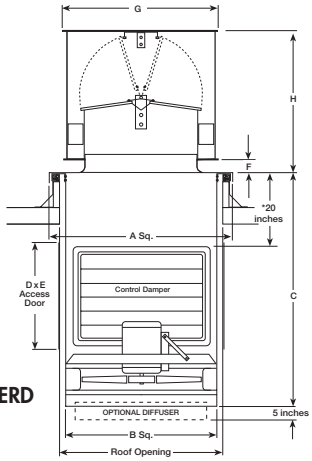
PERFORMANCE

- 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	▼	▼	▼



VESRMD / VESRMDF



VERD

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	31⅜	26¼	570	650	670	750	400	480
30	75	74	32	75	78	32	3½	37⅜	30⅜	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	63⅜	45	1770	2000	1920	2150	1405	1635

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

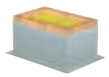
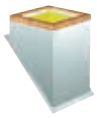
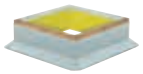
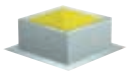
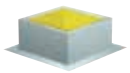
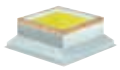
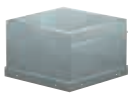
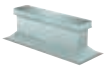
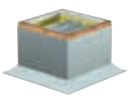
Roof Curbs, Extensions & Equipment Supports

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

MODEL VQ/VQI

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 *Available as standard on select sizes*	▼	▼	▼	▼	▼
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: • 50 or 60 Hz *(select sizes)* • 115 or 277 volt *(select sizes)* • EC motor - 80% turndown, 85% efficient Available on select sizes and models.	▼	▼	▼	▼	▼
AMCA Licensed for Air Performance				▼	▼
AMCA Licensed for Sound and Air Performance	▼	▼	▼		
UL/cUL Listed 507	▼	▼	▼	▼	▼

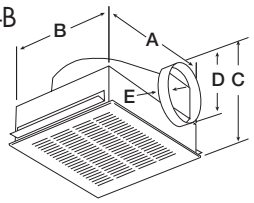
FANS | Bath and Inline

DIMENSIONS - *In Inches*

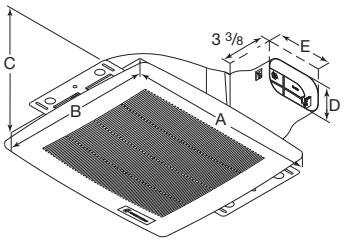
VQ Size	A	B	C	Outlet D	Outlet E	Grille Size*
B50, B70, B80, B90, B110, B150, B200	13⅞	11½	7	6	1¼	14⅞ x 13¼
A50, A70, A90	13¼	10⅝	9	6	6	14⅞ x 13¼
A110, A125, A190	13¼	10⅝	9	8	6	14⅞ x 13¼
A200, A250, A290, A390	14	11⅞	11¼	8	8	14⅞ x 13¼
A410, A510, A510-VG	18	14⅜	14½	8	8	19⅜ x 16⅜
A700	23⅝	11⅝	11⅝	19½	8	25⅛ x 13⅜
A710, A710-VG, A780	18	14⅜	14½	10	8	19⅜ x 16⅜
A900, A1050, A1410, A1550	23¾	14⅜	14½	18⅞	8	25 x 16⅜
L50, L80	13⅞	11½	3⅝	2⅝	4⅞	14⅞ x 13¼

**Grille dimensions are for the designer grille*

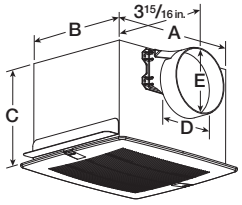
VQ-B



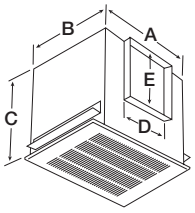
VQ-L 50 & 80



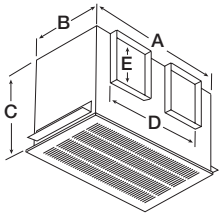
VQ-A50-90



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



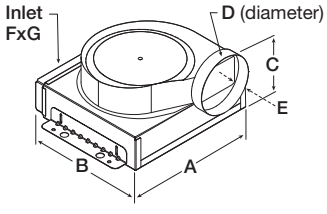
VQ-A700,
VQ-A900 thru 1550



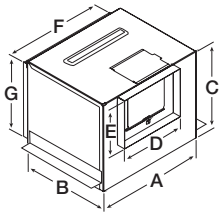
DIMENSIONS - *In Inches*

VQI Size	A	B	C	D	E	F	G
B110, B150, B200	13⅞	11½	7	6	1¼	13½	3¼
A110, A125, A190	13¼	10⅝	9	8	6	12	7¾
A200, A250, A290, A390	14	11⅞	11¼	8	8	12⅞	10
A410, A510, A510-VG	18	14⅜	14½	8	8	16⅞	13¼
A700	23⅝	11⅝	11⅝	19½	8	22⅝	10½
A710, A710-VG, A780	18	14⅜	14½	10	8	16⅞	13¼
A900, A1050, A1410, A1550	23¾	14⅜	14½	18⅞	8	22⅝	13¼
A1750, A2150	35	14¾	14¾	28	6	32¾	13
A3600	45½	16½	16½	40	11	43¼	14⅝

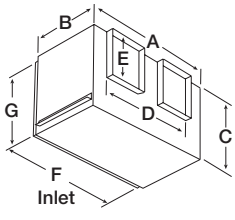
VQI-B110-200



VQI-A110 thru 510
VQI-A510-VG

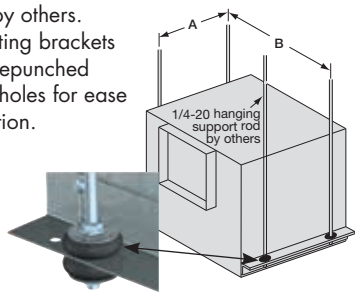


VQI-A700 thru 3600
VQI-A710-VG



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	4½	15⅝
A50 - A190	5½	14⅝
A200 - A390	6¾	15½
A410 - A510, A510-VG, A710, A710-VG & A780	9¼	19⅝
A700	5½	25⅛
A900 - A1050, A1410 - A1550	9¼	25⅜
A1750, A2150	9¼	36¾
A3600	9¼	48⅝

FANS | Inline & Sidewall Exhaust

MODEL VQID/VQIB

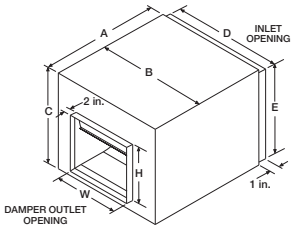
CENTRIFUGAL DUCT FANS are designed for clean air inline exhaust or supply applications.

PERFORMANCE

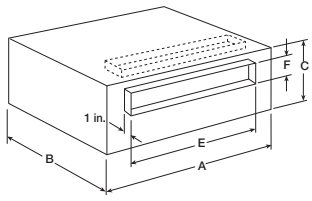
- VQID capacities range from 300 to 15,000 cfm and 3 in. wg of static pressure.
- VQIB capacities range from 200 to 6,000 cfm and 1.5 in. wg of static pressure.

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	23¼	18½	15⅞	9¾ x 8⅞	15³⁄₁₆ x12¹¹⁄₁₆
90	24¼	21¼	18¾	12¼ x10½	18¼ x15⅞
100	26¼	22¾	20¾	13¾ x11⅞	19¾ x17⅞
120	33	27¼	22¾	16 x 13⅜	24⅛ x19⅞
150	34¾	32⅝	27¾	19⅛ x16⅜	28⅝ x 23⅞
180	40¼	41¾	31¾	22½ x18⅞	37½ x 27⅞
200	50¼	49¼	39¾	23⅛ x 25¼	45⅛ x 36

DIMENSIONS - *In Inches*
Top horizontal discharge

VQIB Size	A	B	C	E	F
106	20	23¼	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	23¼	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

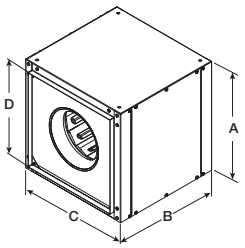
CENTRIFUGAL INLINE FANS are designed for clean air exhaust or supply applications.

PERFORMANCE

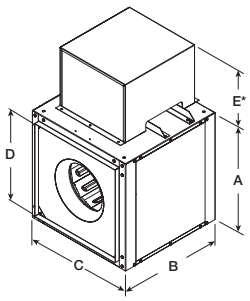
- VICD capacities range from 30 to 5,025 cfm and 2 in. wg of static pressure.
- VICB capacities range from 60 to 27,000 cfm and 4 in. wg of static pressure.

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	8⅞
80, 90, 95	15	16	11⅞
97, 98, 99	15	21	11⅞
100	17	21	13⅞
120	19	21	15⅞
130, 130 HP	21	21	17⅞
140, 140 HP	23	22	19⅞
160, 160 HP	26	26	22⅞

DIMENSIONS - *In Inches*

VICB Size	A & C	B	D	H*
70, 80, 90	17⅛	21	11⅞	13¼
100	17⅛	21	13⅞	13¼
120	19⅛	21	15⅞	13¼
130, 130 HP	21⅛	21	17⅞	13¼
140, 140 HP	23⅛	22	19⅞	13¼
160, 160 HP	26⅛	26	22⅞	13¼
180, 180 HP	27⅛	28	23⅞	13¼
200, 200 HP	31⅛	32	27⅞	16
240, 240 HP	38⅛	34	34⅞	16
300, 300 HP	46	38	41⅞	18
360, 360 HP	52	42	47⅞	18
420	58	50	53⅞	18

**Dimension may be greater depending on motor*

FANS | Inline & Sidewall Exhaust

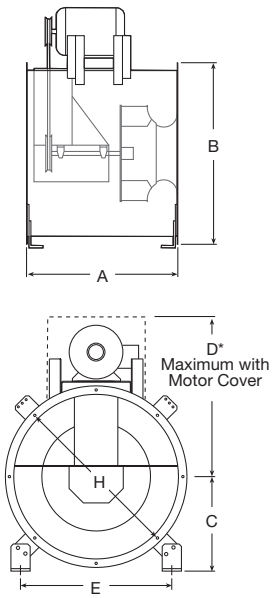
MODEL VTC

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.

Standard Construction	
Housing - continuously welded, steel	Spark B resistant construction
Wheel - backward-inclined, aluminum	Extended lube lines
Flanges - inlet and outlet with mounting holes	Minimum bearing life of L_{10} 80,000 hours (Average life - L_{50} 400,000 hours)
Universal mounting system	Polyester urethane protective powder coating
Aluminum rub ring	
Options and Accessories	
All aluminum construction	Inspection section with removable access panel
Motor cover	
Belt guard	Dual drives
Guards - inlet, outlet	Mounting rails
Companion flanges - inlet, outlet	Decorative or protective powder coating
Isolators - base, hanging	UL/cUL Listed Power Ventilators
NEMA rated disconnect switch	UL Listed Power Ventilators for Restaurant Exhaust Appliances
Easy access construction - bolted	
Inspection door - bolted, hinged	AMCA Licensed for Sound and Air Performance

PERFORMANCE

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



DIMENSIONS - *In Inches*

VTC Size	A	B	C	D*	E	H
9	23	21 5/8	13 1/4	21 3/4	17 5/8	18 3/8
10	23	21 5/8	13 1/4	21 3/4	17 5/8	18 3/8
12	23	21 5/8	13 1/4	21 3/4	17 5/8	18 3/8
13	24 1/2	23 5/8	13 7/8	23 1/4	19	20 3/8
16	28 1/2	27 5/8	16 1/8	26	21 7/8	24 3/8
18	31	33 5/8	18 3/8	29 1/4	26 1/8	30 3/8
22	35 1/2	39 5/8	22 1/2	33 3/4	30 1/2	36 3/8
24	42	45 3/4	24 5/8	37 1/4	34 3/4	42 1/2
30	48 1/2	52 3/4	29 1/2	42 3/4	42	48 1/2
36	54	59 1/4	31 3/4	47 1/4	46 3/4	55

**Dimension may vary depending on motor.*

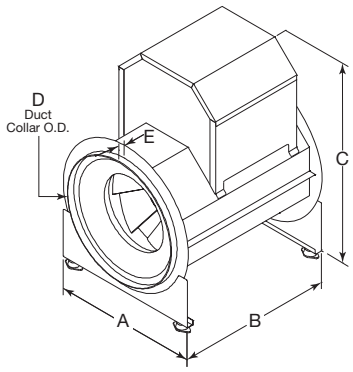
MODEL VMQB

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	19⅜	22	28¾	14¼	1⅜
12	22⅝	26⅝	32¾	17½	1½
15	26⅜	29⅛	38	21⅛	1½
16	28¼	31⅛	32¾	17½	1½
18	30⅞	33⅛	42⅝	25⅝	1½
20	32⅞	35¾	47	28	1⅜
22	36⅜	39¼	49⅞	31¼	1⅜
24	40	42⅝	53¼	34¼	1⅜
27	42⅞	45⅛	58	37¾	1⅜
30	48	52¼	63⅞	42	1⅞
33	52½	56⅝	68½	46⅛	1⅞

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

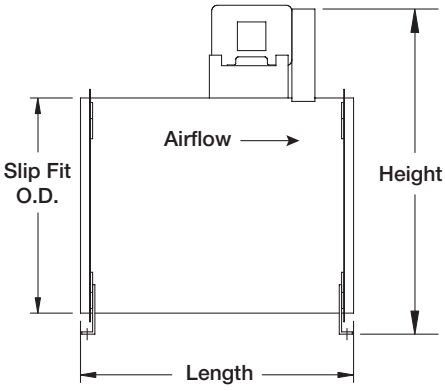
FANS | Inline & Sidewall Exhaust

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-I/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*

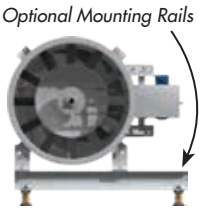
Size	Slip-Fit O.D.	VQEID	VQEI Class I		VQEI Class II	
		Length (Max)	Length	Height	Length	Height
9	17⅛	NA	NA	NA	28½	36½
12	17⅛	25	28½	36½	30½	36½
15	20⅞	25	31	41	34	41
16	23	23	33	44	34	44
18	25⅜	29	35	46½	39½	47½
20	27 13⁄16	34	37½	50½	41½	50½
22	30⅞	35½	41	53½	44	53½
24	34	41½	44½	57½	49	59½
27	37 7⁄16	45	47	61	53	63
30	41⅝	50	54	65	60½	72
33	45¾	54	58½	69	65	76½
36	50 9⁄16	58	64	75	69	82½
40	55¾	61	68½	83	75½	90½
44	61⅝	70	74	89½	80½	97
49	67¾	80½	80½	96½	86½	104
54	75	83	87	105	93½	111
60	82⅞	NA	91½	113	102½	119

MODEL VQEI

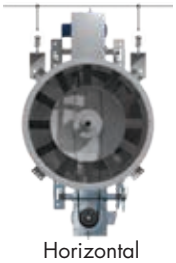
HORIZONTAL MOUNTING Sizes 9–27

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.

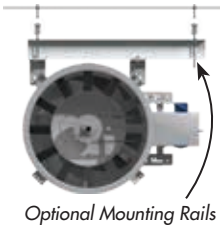
Horizontal Base Mount



Horizontal Base Mount with motor at C or G position



Horizontal Ceiling Hung

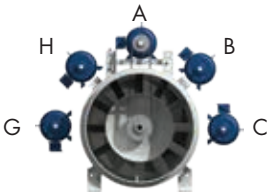


Horizontal Ceiling Hung with motor at C or G position

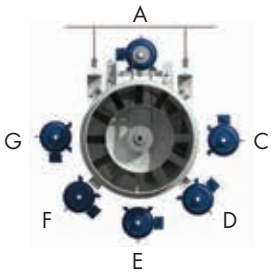
HORIZONTAL MOUNTING Sizes 30–60

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.



Horizontal Base Mount

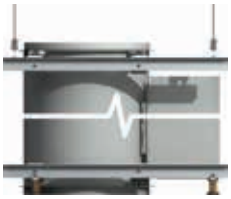


Horizontal Ceiling Hung

VERTICAL MOUNTING

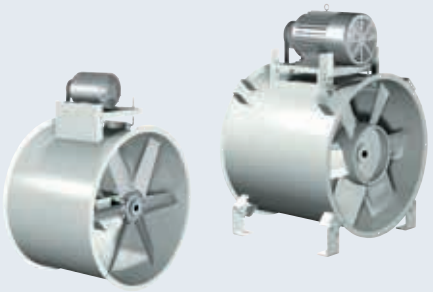
Vertical mounting configurations, upblast or downblast, are provided with heavy-duty steel brackets welded to both ends. These brackets permit either floor or ceiling mounting on the same unit. Optional mounting rails are suggested for any vertical installation for sizes 9-27.

Vertical Ceiling Hung



Vertical Base Mount

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.

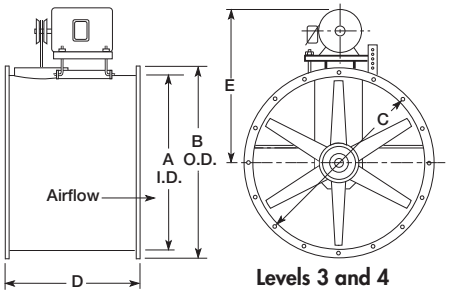
PERFORMANCE

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

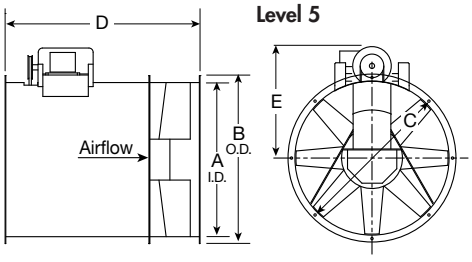
MODEL VTIF BELT DRIVE FANS have motors out of the airstream. They are a good choice for clean or contaminated airstreams with temperatures up to 400°F. Three levels of construction available.

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	18⅜	21⅝	19¾	22	21¾
4L18, 4H18				26	23½
5L18, 5H18				38	
3L20, 3H20	20⅜	23⅝	21¾	27	26¼
4L20, 4H20					
5L20, 5H20				39	
3L24, 3H24	24⅜	27⅝	25¾	28	28
4L24, 4H24					
5L24, 5H24				40	
3L30, 3H30	30⅜	33⅝	32	24	29¼
4L30, 4H30				33	32¾
5L30, 5H30				45	
3L36, 3H36	36⅜	39⅝	38	29	33¾
4L36, 4H36				34	35¼
5L36, 5H36				46	
3L42, 3H42	42½	45¾	44¼	30	37¼
4L42, 4H42				39	40
5L42, 5H42				51	
3L48, 3H48	48½	52¾	50¾	33	40½
4L48, 4H48				44	45½
5L48, 5H48				56	
3L54, 3H54	55	59¼	57¼	37½	47¼
4L54, 4H54				48	49¼
5L54, 5H54				60	
3L60, 3H60	61	65¼	63¼	40	50¾
4L60, 4H60				49	54¾
5L60, 5H60				61	

VTIF Size	A (ID)	B (OD)	C (BC)	D	E
3L24, 3H24	24⅜	27⅝	25¾	23	26
4L24, 4H24				28	28
5L24, 5H24				40	
3L30, 3H30	30⅜	33⅝	32	24	29¼
4L30, 4H30				33	32¾
5L30, 5H30				45	
3L36, 3H36	36⅜	39⅝	38	29	33¾
4L36, 4H36				34	35¼
5L36, 5H36				46	
3L42, 3H42	42½	45¾	44¼	30	37¼
4L42, 4H42				39	40
5L42, 5H42				51	
3L48, 3H48	48½	52¾	50¾	33	40½
4L48, 4H48				44	45½
5L48, 5H48				56	
3L54, 3H54	55	59¼	57¼	37½	47¼
4L54, 4H54				48	49¼
5L54, 5H54				60	

FANS | Inline & Sidewall Exhaust

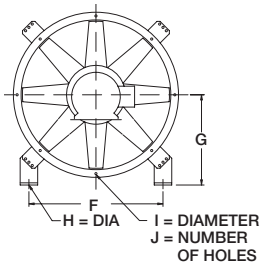
MODEL VAX

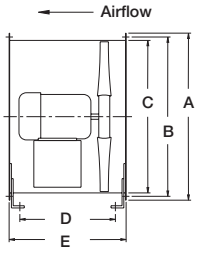
DIRECT DRIVE MODEL VAX with increased performance capabilities and installation configurations to suit project needs. Casing options include, long casing that completely covers the propeller and motor, and bolt-on vane section with 15% performance improvement. Provides total efficiencies in excess of 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

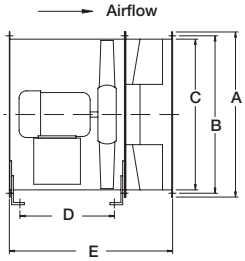
PERFORMANCE

- 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

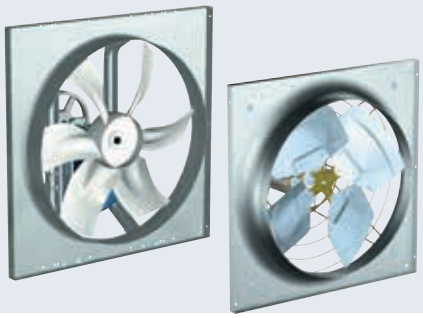


VAX with Vane Section (VAX-V)
Universal and Flange Mount

DIMENSIONS - *In Inches*

				VAX/VAX-V	VAX	VAX-V					
Size	**A**	**B**	**C**	**D**	**E**	**E**	**F**	**G**	**H**	**I**	**J**
31	15	14	12¼	12⅜	17	29	13¼	11⅛	0	7/16	8
36	17	16	14¼	12⅜	17	29	14⅝	11⅞	0	7/16	8
41	19	18	16¼	15⅜	20	32	16⅛	12½	0	7/16	8
47	21½	19¾	18⅜	18⅜	23	35	17⅝	13¼	0	7/16	8
54	24½	23¼	21⅜	23⅞	28½	40½	19¾	14⅜	0	7/16	8
63	27⅝	25¾	24⅜	27⅛	31¾	43¾	22	16⅛	0	7/16	8
72	31⅝	30¼	28⅜	29⅜	34	46	24¾	17½	0	7/16	8
80	35⅝	34¼	32⅜	27¼	34½	46½	27 11/16	21	0	0	8
90	39¾	38	36⅜	29¼	36½	48½	30⅝	22½	0	0	8
103	43¾	42¼	40⅜	28¾	36½	48½	36⅛	26½	0	0	8
113	48¾	46½	44½	45½	49⅛	61⅛	40	28½	13/16	0	8
123	52⅞	50¾	48½	45½	49⅛	61⅛	44	29½	13/16	0	16
140	59⅜	57¼	55	45½	49⅛	61⅛	51	32	13/16	0	16
160	67⅜	65¼	63	45½	49⅛	61⅛	59	40	13/16	0	16

FANS | Inline & Sidewall Exhaust



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

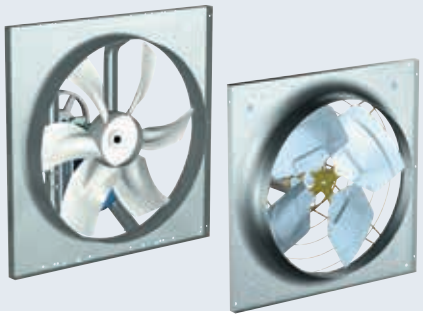
SIDEWALL PROPELLER FANS are designed to exhaust or supply high volumes of air from commercial and industrial buildings. Fan panels allow for electrical passage to either side of panel for easy wiring.

PERFORMANCE

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

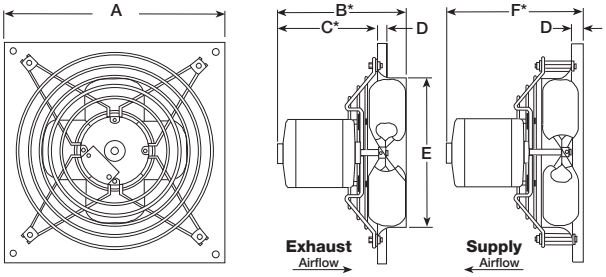
Standard Construction			Direct Drive		Belt Drive	
			VWE VWS	VWCE VWCS	VWBE VWBS	VWBCE VWBCS
Fan panel and drive frame - galvanized steel			▼	▼	▼	▼
Propeller construction	Level 1	Stamped aluminum	▼			
		Fabricated steel			▼	
	Level 2	Fabricated steel	▼		▼	
	Level 3	Fabricated steel			▼	
		Cast aluminum		▼		▼
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

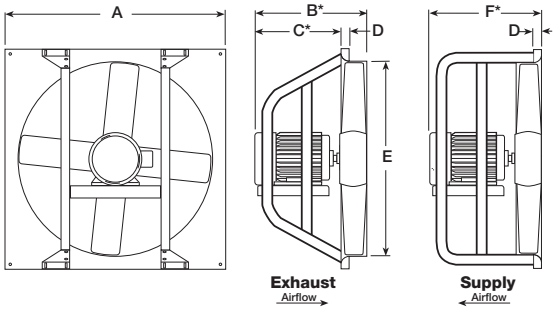


Direct Drive Models: VWE, VWS, VWCE, VWCS

Level 1: Sizes 8-12



Level 1: Sizes 12-24 | Level 2: Sizes 16-54 | Level 3: Sizes 20-54



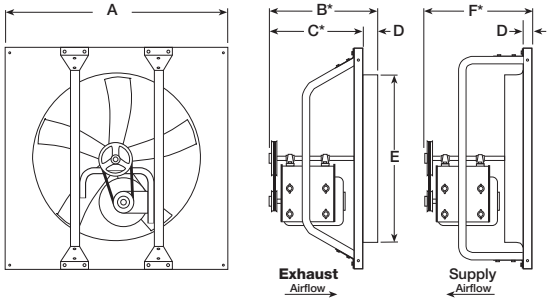
Dimensions - *In Inches*

Direct Drive Size	Fan Panel		Airflow			
	Sq. Size	Flange	Exhaust			Supply
	A	D	B*	C*	E	F*
8	13	1	7	5	8⅜	8
10	15	1	8¾	5	10⅜	8
12	18	1	10¾	8¼	12⅜	13⅛
14	20	1	11¼	8½	14⅜	14¼
16	22	1	11¾	10¼	16⅜	14
18	24	1	14	10⅞	18⅜	14¼
20	26	1	17¼	13½	20½	18
24	32	1¼	20	13½	24⅜	21
30	38	1¼	20½	16⅜	30⅝	21¾
36	44	2	20½	16⅜	36⅝	28
42	50	2	26	18¼	42⅝	28
48	56	2	26⅝	20⅝	48⅝	28½
54	62	2	28	22 7/16	55⅜	30⅛

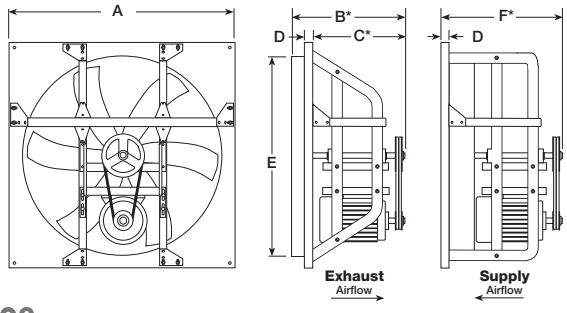
**Varies with motor selection.*

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



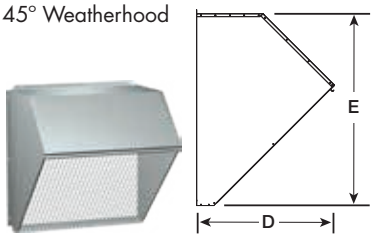
Dimensions - *In Inches*

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	19½	16¼	—	—	20½	20	—
24	32	1¼	19½	16⅛	19	15⅝	24⅝	20	20½
30	38	1¼	22½	18¼	21½	17¼	30⅝	21	20
36	44	2	21½	16½	28	23	36⅝	22	27
42	50	2	25	20	28	23	42¾	25½	29¼
48	56	2	25	19	31½	27½	48¾	25½	30½
54	62	2	25	19½	35¾	30¼	55¼	24	36¼
60	68	2	28	21 7/16	35	28 7/16	61¼	24	35½
72	82	2⅛	—	—	35	28¼	73¼	—	35½

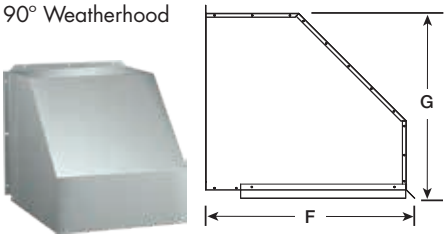
** Varies with motor selection.*

SIDEWALL PROPELLER FANS OPTIONS & ACCESSORIES

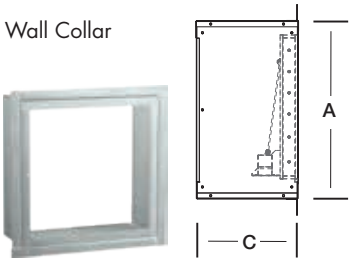
45° Weatherhood



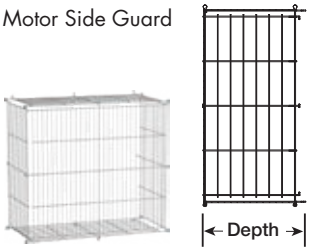
90° Weatherhood



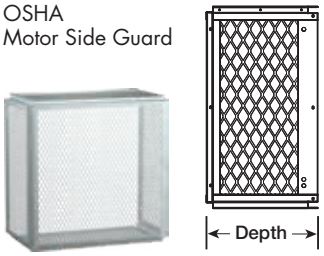
Wall Collar



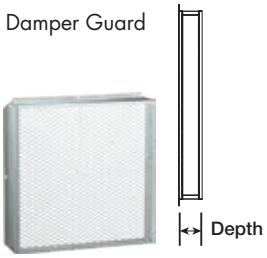
Motor Side Guard



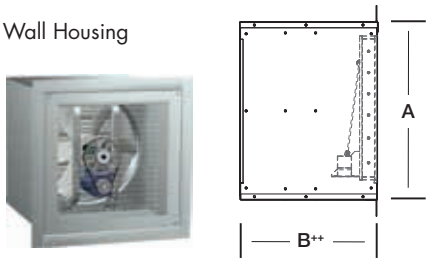
OSHA Motor Side Guard



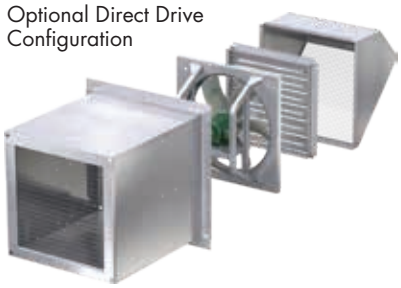
Damper Guard



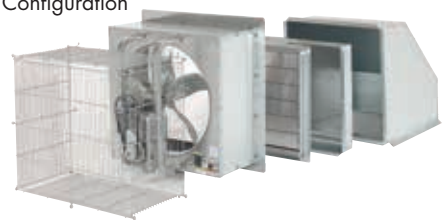
Wall Housing



Optional Direct Drive Configuration



Optional Belt Drive Configuration

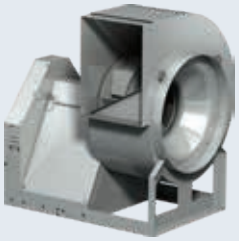


Dimensions - *In Inches*

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	Depth	Square	Depth
8	14¼	10½	13¼	11¼	16⅜	12	13¼	19	16⅛	—	9⅝	10	5½
10	16¼	12½	14⅞	13⅜	18½	14	15¼	19	16⅛	—	10	12	6½
12	19¼	14½	16⅜	15⅝	20⅜	16⅜	18¼	23	16⅛	—	12	14	5⅜
14	21¼	16½	17½	17⅝	22½	18⅜	20¼	26	18⅜	—	12	16	6⅜
16	23¼	18½	19⅜	19⅝	25	20⅜	22¼	27	18⅜	—	12	18	6¾
18	25¼	20½	22	21⅝	27½	22⅜	24¼	28	18⅜	—	12	20	6
20	27¼	22½	24¾	23⅝	29¾	24⅜	26¼	32	18⅜	17⅜	17¾	22	6½
24	33¾	29⅛	26⅞	30⅜	36	31¾	32¼	37	18⅜	19½	20	26	6⅜
30	39¾	35⅛	29⅛	36½	40⅛	37⅞	38¼	38	18⅜	22½	21¾	32	6½
36	45¾	41⅛	33	42½	45½	43⅞	44¼	39	18¾	23⅞	24¼	38	6¾
42	51¾	47⅛	35¾	48½	49¼	49⅞	50⅜	44	18¾	25⅞	28½	44	10
48	57¾	53¼	40⅜	54⅝	55½	56	56⅜	44	18⅞	28⅞	28¼	50	9
54	63¾	59½	44¾	60⅞	61¼	62¼	62⅜	52	20⅛	—	34¼	56	7½
60	69¾	65⅝	48⅜	67	66½	68⅜	68⅜	54	21	—	34¼	62	7¼
72	84¾	78⅛	53¼	79½	72⅛	80⅞	83⅛	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.

FANS | Utility and Centrifugal



CENTRIFUGAL PRODUCTS

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

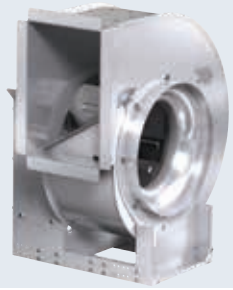
VUSF-300

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	▼	▼		▼		▼	▼	▼

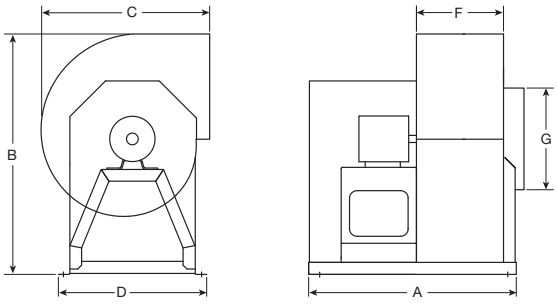


MODEL VUSFD-100

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

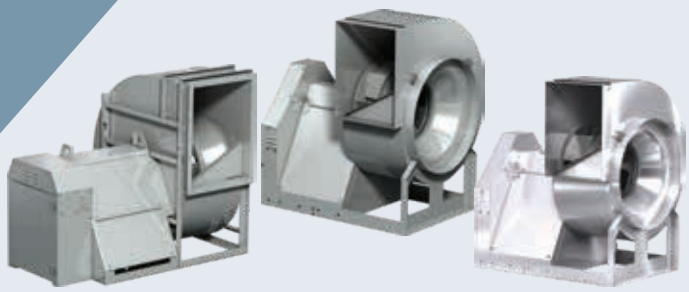


DIMENSIONS - *In Inches*

VUSFD-100 Size	A	B	C	D	F	G
10	27⅛	29⅞	20½	22¾	9½	11
13	26½	33	25	22¾	8⅞	14
15	28	34½	27½	22¾	10½	15¾
16	29	36⅛	29⅝	22¾	11½	17¾
18	30¾	38	32½	22¾	13	19¼

Note: Dimensions may change depending upon motor

FANS | Utility and Centrifugal



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

MODEL VCSW

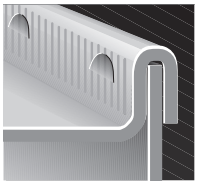
VCSW SINGLE-WIDTH, DIRECT DRIVE AND BELT DRIVE CENTRIFUGAL FANS are designed for clean or contaminated ventilation applications up to 1,000°F for 15 minutes. Units can be mounted (both indoor or outdoor) in ducted inlet and/or ducted outlet installations such as exhaust air, supply air, filtration, comfort 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 L_{10} 80,000 hours (Average life - L_{50} 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 L_{10} 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

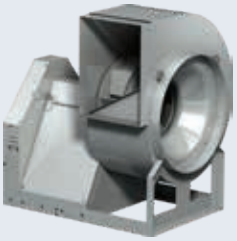
Lock Housing

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

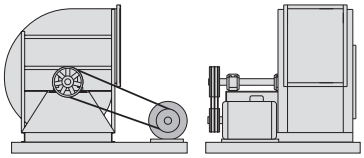
SPARK RESISTANT CONSTRUCTION

Spark C - Includes aluminum inlet cone and rub ring

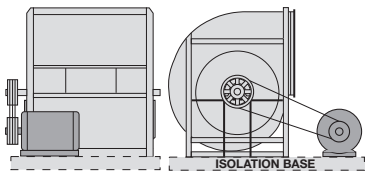
Spark B - Includes aluminum wheel and rub ring

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

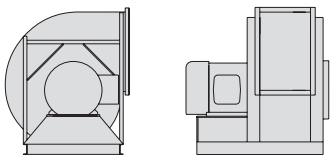
ARRANGEMENT 1 allows for an unlimited motor size and is suitable for high temperatures (up to 1,000°F) or contaminated air. The motor can be located in position W, X/Y or Z around the fan shaft to ensure proper alignment. Isolation base required (by factory) or structural pad (by others).



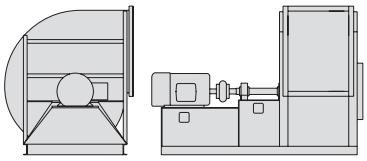
ARRANGEMENT 3 bearing located in the airstream limits temperatures and does not permit spark resistant construction. Requires an isolation base (by factory) or structural pad to mount the fan and motor.



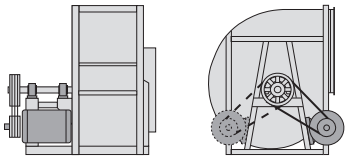
ARRANGEMENT 4 is direct drive with the wheel attached to the motor shaft. Arrangement minimizes maintenance with no sheaves, belt or fan shaft bearings. Provides the most compact design. Limited to temperatures below 110°F.



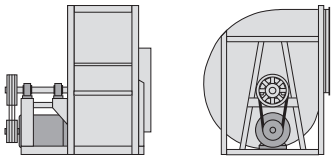
ARRANGEMENT 8 is direct drive with the motor attached to a fan shaft and bearing assembly. Arrangement is recommended for higher horsepower applications in lieu of belt drive. Bearings are located out of the airstream. Available heat fan package to 750°F.



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.

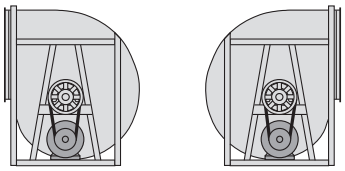


WHEEL TYPES

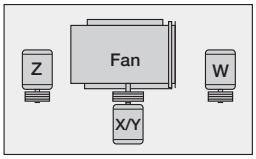
Backward-Inclined Wheel
Centrifugal, non-overloading style with single-thickness flat blades. Most versatile wheel. Excellent for clean, high-temperature, or contaminated air.

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

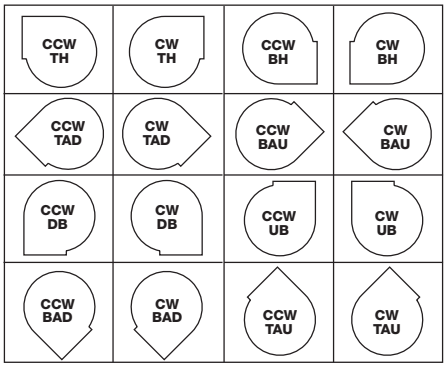
ROTATION
Choice between clockwise (CW) and counter-clockwise (CCW) as determined from the drive side. Rotation changes discharge location as illustrated below.



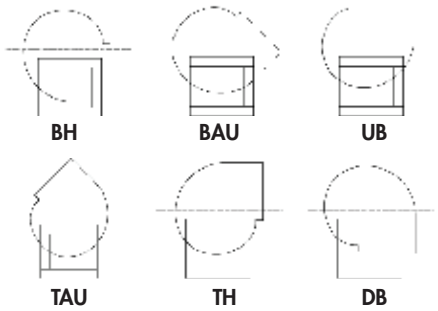
MOTOR POSITIONS (Arrangement 1 and 3)
Motor position determined from the drive side. Letter assignment is independent of discharge position and fan rotation.



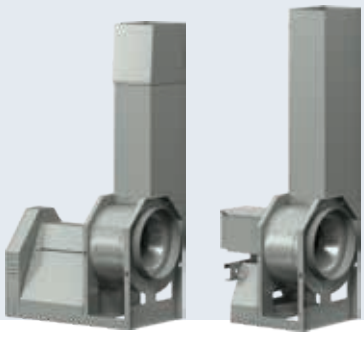
DISCHARGE POSITIONS
Utility Fans - determined from the drive side. Some models and sizes allow for field rotation.



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



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.

MODEL VJHP

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 L_{10} 100,000 hours
Aluminum wheel and shaft seal
Options and Accessories
NEMA-3R disconnect
Roof curb (12-, 18-, or 24-inch high)
Bypass air plenum - bottom or side inlet
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

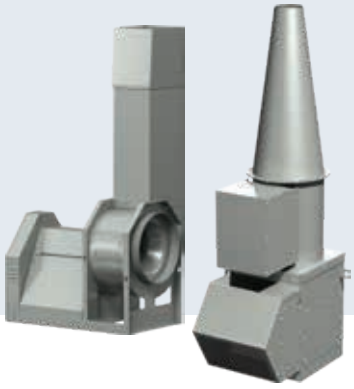
Housing Style:	Inline Centrifugal
Stack Style:	High Plume Nozzle
Minimum Flow:	500 cfm (800 m^3/hr)
Maximum Flow:	26,000 cfm (44,200 m^3/hr)
Maximum ESP:	4 in. wg (1,000 Pa)

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	26
	Maximum (ft.)	19	19	20	21	25	26	30	33	37	42

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

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:

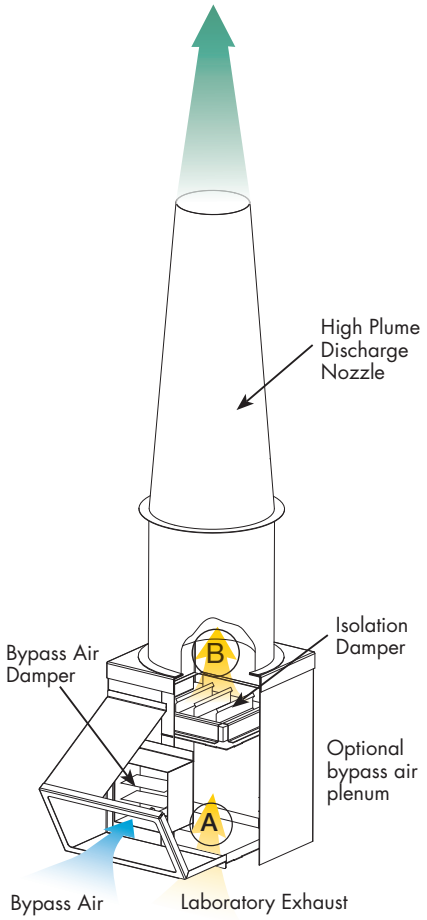
- Significant plume rise without unsightly exhaust stacks that detract from the buildings aesthetics
- Significant dilution of laboratory exhaust effluent, reducing contaminant concentration
- Inline or side inlet centrifugal arrangements
- Reliable drive systems
- Efficient and quiet blower technology
- 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).



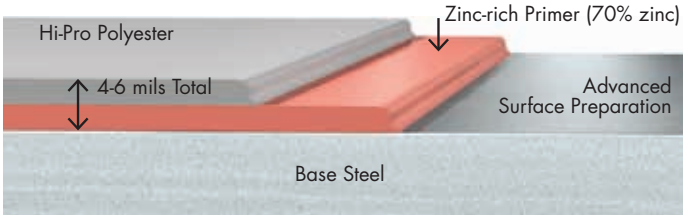
Hi-Pro Z FOR LABORATORY EXHAUST APPLICATIONS

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%)
							0	0	0	1	0	1
Polyester Urethane					3H	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					
Hi-Pro Polyester					2H	No Failure						
Perma-Z					3H	No Failure						
Hi-Pro Z					2H	No Failure						

GRAVITY VENTILATORS

MODEL VGI/VGR VRSI/VRSR/VRGU

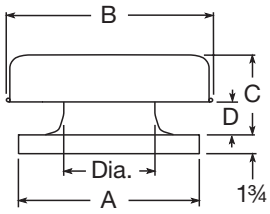
GRAVITY VENTILATORS are designed to relieve or take in air via building pressure. As buildings become pressurized, they will relieve the air from the building and as they come under a negative pressure, they will allow air into the building.

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	▼	▼	▼	▼

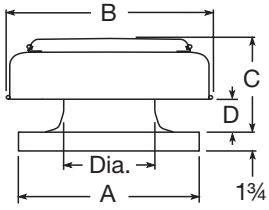
PERFORMANCE

- 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.

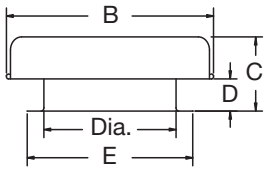
VRSR
Sizes 8 thru 24



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	5 7/16	—	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

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.

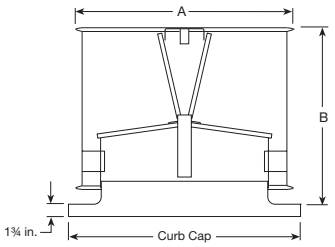
For dimensional and size information please contact your local representative.

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
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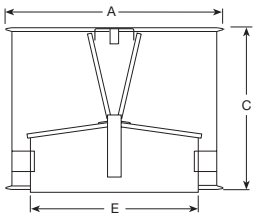


DIMENSIONS - *In Inches*

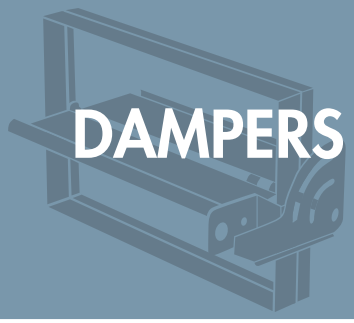
Model Size	A	B	C	D	Curb Cap	Recommended Roof Opening
18	25	22	20¼	18½	28	22
20	27¼	24	21¼	20½	30	24
24	31⅛	26	24	20½	34	28
30	37⅜	30	26¾	30⅝	40	34
36	43½	33	29¼	30⅝	46	40
42	48⅞	38	34¼	42¾	52	46
48	56	40	34¼	48½	58	52
54	62⅝	45	40¼	55	66½	60
60	68¾	48	43⅛	61	72½	66

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	MSSC	MSAC
	Universal Single Phase	**Standard Control**	**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	• Voltage input from BMS • Auxiliary input (run command contact) • Motor status output • Fault alarm output signal	• Voltage input from BMS • Auxiliary input (run command contact) • Motor status output	• 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. *Optional*	Allows manual control of input power to motor and provides short circuit protection. Lockable handle, no fuses required. *Optional*
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

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:

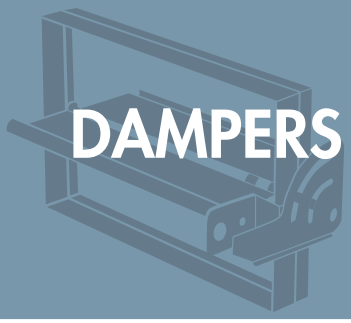
1. They may be applied in a passive smoke control system where they simply close and prevent the circulation of air and smoke through a duct or a ventilation opening in a smoke barrier.
2. They may be applied as part of an engineered smoke control system designed to control the spread of smoke using 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

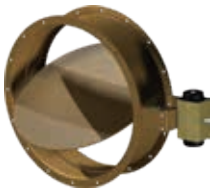
Control Dampers

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

CONTROL

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.

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

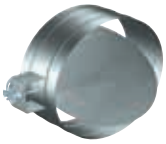
MANUAL BALANCING DAMPERS are designed to regulate flow of air in an HVAC system. They are used to accomplish system balancing. Each damper is equipped with a locking quadrant which fixes the damper blades in place after adjustment. These dampers are not intended to be used in applications as a positive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

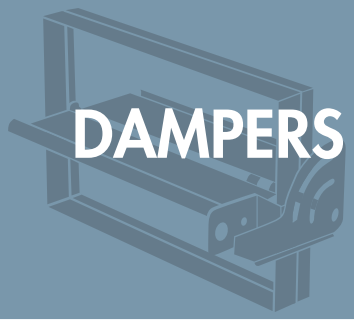
VOLUME CONTROL DAMPERS regulate the flow of air and can also be used as a positive shutoff or automatic control. They are available in 3V, airfoil, round and vertical blade styles.



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

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.

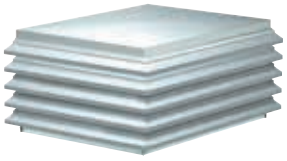
Model
VAVH-5

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 fans 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.

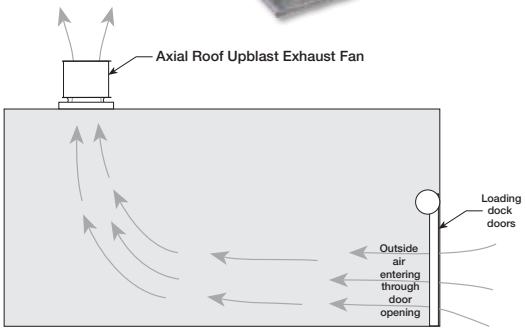
Static Pressure Guidelines

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.)

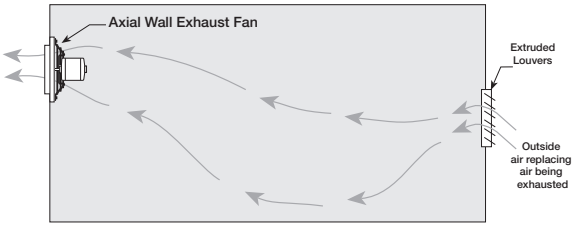
Important: Static pressure requirements are significantly affected by the amount of make-up air supplied to an area. Insufficient make-up air will increase static pressure and reduce the amount of air that will be exhausted. Remember, for each cubic foot of air exhausted, one cubic foot of air must be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

GENERAL INDUSTRIAL VENTILATION

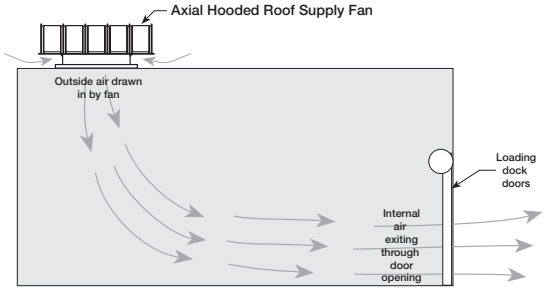
VRDU/VRBU



VWE/VWB



VRDE/VRBE



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