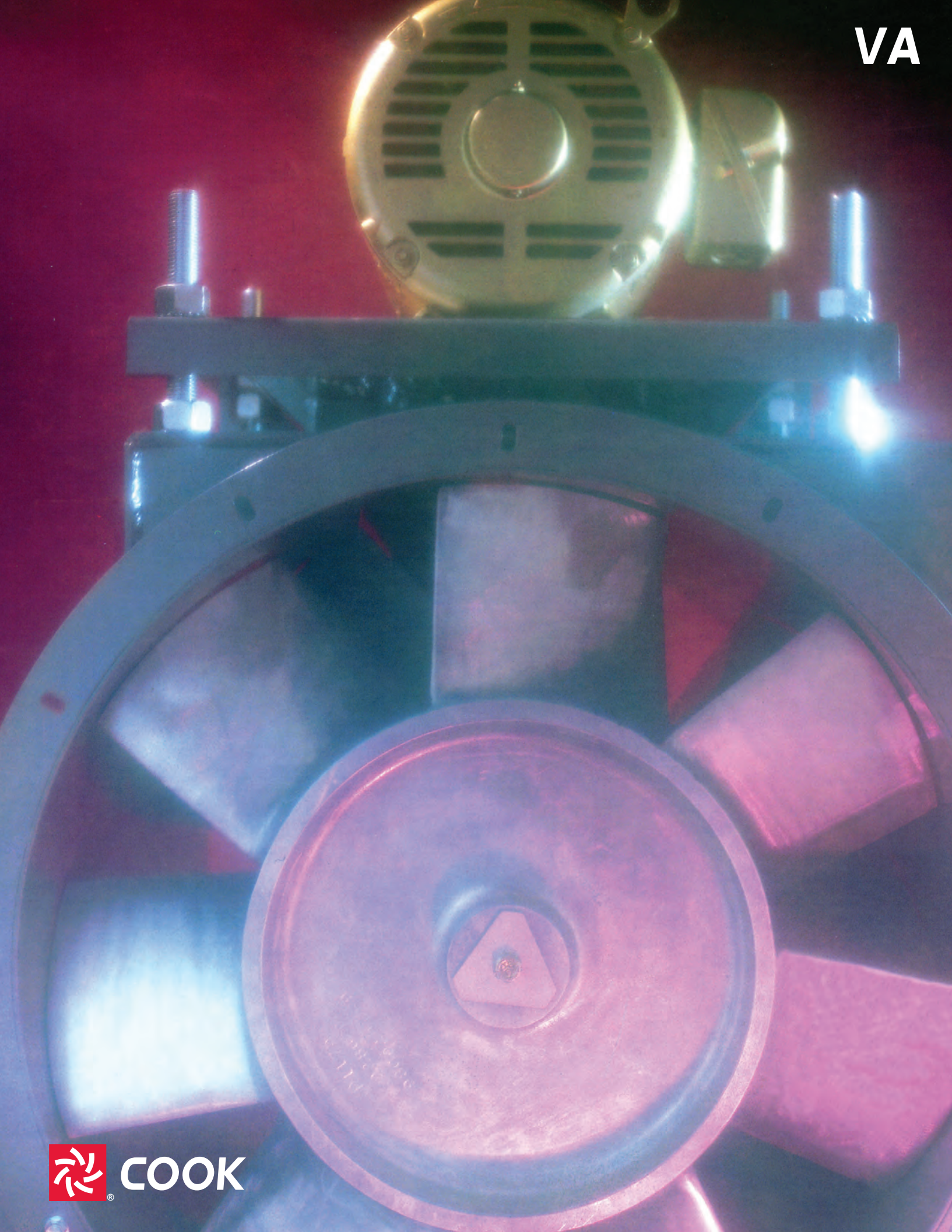
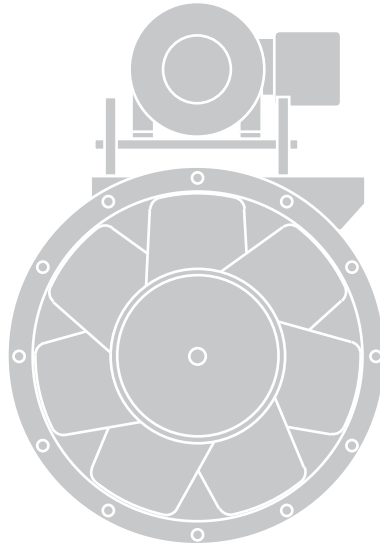
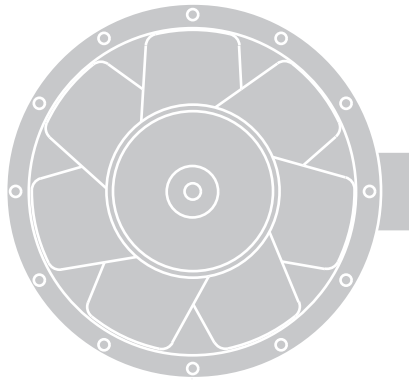


VA



VA

Fixed Pitch Vane Axial Fan



	Page
Introduction	2
Construction Features	3
Mounting Options	3
Lorenized® Fan Finish Specification	3
Duty Levels	4
Inlet/Outlet Cones	4
VAD Specifications and Dimension Data	5
VAB Specifications and Dimension Data	6
VAHB Specifications and Dimension Data	7
Accessories	8 - 9
Performance Data	
VAD Performance Data	10
12 VAB/VAHB Performance Data	11
14 VAB/VAHB Performance Data	12
18 VAB/VAHB Performance Data	13
21 VAB/VAHB Performance Data	14
26 VAB/VAHB Performance Data	15
29 VAB/VAHB Performance Data	16
36 VAB/VAHB Performance Data	17
42 VAB/VAHB Performance Data	18
48 VAB/VAHB Performance Data	19
54 VAB/VAHB Performance Data	20
60 VAB/VAHB Performance Data	21
Sound Data	
VAD Sound Data	22
12 - 21 VAB/VAHB Sound Data	23
26 - 60 VAB/VAHB Sound Data	24

VAD/VAB/VAHB Fixed Pitch Vane Axial Fan

Cook's Fixed Pitch Vane Axial Fans are available in direct and belt drive models offering high efficiencies and high static pressures in a space efficient inline package. The VA is available in sizes 12 inch through 60 inch with flow rates of 1,000 CFM to 116,000 CFM and static pressures up to 7-1/2 inches. The VA features a one-piece cast aluminum airfoil propeller individually ground for balance. The VA Vane Axial Fan is also available with a full range of accessories allowing it to be adapted to many different applications.



VAD



VAB

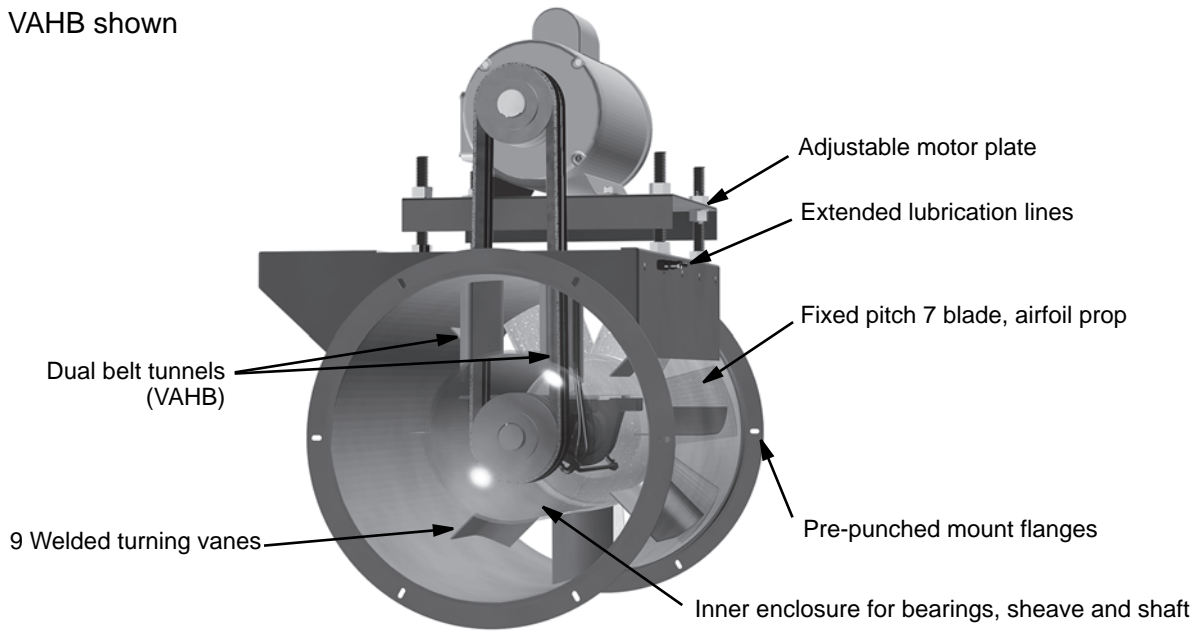


VAHB

- High efficiency one-piece cast aluminum propeller with seven airfoil blades.
- Minimum 12 gauge steel housing with continuously welded seams, and integral inlet and outlet flanges pre-punched for mounting.
- Copper lubrication lines are standard on belt drive units and also standard on direct drive units when applicable.
- The motor plate is attached to a heavy welded subbase and features threaded studs for positive belt tensioning.
- Direct drive units feature a totally enclosed motor installed in a motor tunnel surrounded by welded straightening vanes.
- Belt drive units feature an inner drum that encloses the driven sheave, shaft and bearings.
- All steel fan components feature a Lorenized® powder coat finish.
- VAHB bearings are designed and tested specifically for use in air handling applications. Bearings are heavy duty regreasable ball or roller type in a cast iron pillow block housing selected for a minimum L50 life in excess of 500,000 hours for horizontal units and L50 life in excess of 300,000 hours for vertical units at maximum cataloged operating speed, horsepower and static pressure.
- VAB bearings are heavy duty regreasable ball or roller type in a cast iron housing selected for a minimum L50 life in excess of 200,000 hours at maximum cataloged operating speed, horsepower and static pressure.
- Drives utilize oil and heat-resistant, non-static belts, and precision machined cast iron fixed pitch sheaves keyed and securely attached to the wheel and motor shafts. Drives are sized for 150 percent of motor horsepower.
- Temperature operating range for VAD units is from -20°F to 104°F. Temperature operating range for VAB/VAHB units is from -20°F to 180°F.
- Power (BHP) ratings for all belt drive fans includes drive loss to ensure accurate selection of the motor.
- Accurate performance is assured through compliance with the AMCA Certified Ratings Program. The VAB, VAD and VAHB are licensed to bear the AMCA Seal for Air and Sound Performance.

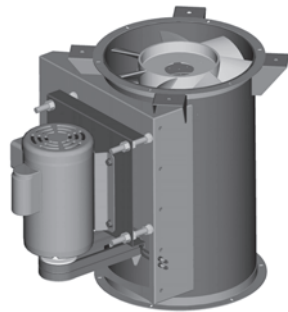
Construction Features

VAHB shown



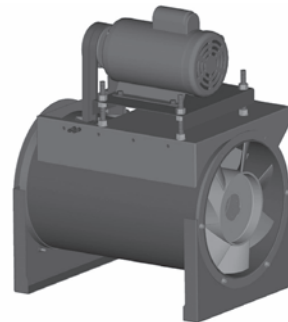
Mounting Options

Vertical



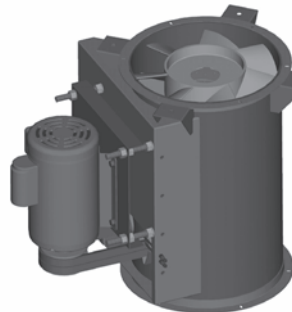
Vertical mounting brackets provide for vertical installation, floor or ceiling mount, with upblast or downblast configuration. Vibration isolators can be used in all mounting configurations. Ceiling brackets with downblast configuration shown.

Floor, Ceiling, Wall



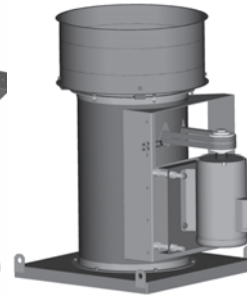
Mounting feet, bolted to the inlet and outlet flanges, provide a field rotatable solid base for mounting to the floor, ceiling or wall. The mounting feet can be used with vibration isolators.

Ceiling Horizontal



Side-angle supports provide for suspension of the unit. The supports can be used with vibration isolators.

Roof Exhauster



VAD, VAB and VAHB, when used with optional butterfly damper, panel and curb, can be mounted as a roof exhauster. Allow 1/8" static pressure resistance for damper. (See table, **CFM Limitation for Damper Operation**, for additional information.)

CFM Limitation for Damper Operation

Fan Size	CFM	
	Min.	Max.
12	990	2435
14	1355	3330
18	2250	5535
21	3070	7560
24	4020	9895
26	4725	11630
29	5885	14490
36	9095	22385
42	12395	30515
48	16165	39795
54	20485	50425
60	25315	62310

Lorenized® Fan Finish Specification

All steel fan components shall be finished with an electrostatically applied, baked polyester powder coating. Each component shall be subject to a five stage environmentally friendly wash system, followed by a minimum 2 mil thick baked powder finish. Paint must exceed 1,000 hour salt spray under ASTM B117 test method.

Standard Color - Gray

Final Coat Thickness - Minimum 2 mils

Polyester Powder Testing Information

Property	Test Method	Value
Impact Resistance	ASTM D2794	100 inch-pounds
Pencil Hardness	ASTM D3363	2H (Mar or Gouge)
Crosshatch Adhesion	ASTM D3359 Method B	100 percent
Humidity Resistance	ASTM D2247	1000+ Hours
Salt Spray	ASTM B117	1000+ Hours
Continuous Service Temperature	N/A	230°F (110°C)

Duty Levels-VAHB

Fan Size	Outer Housing	Duty Level 1			Duty Level 2			Duty Level 3			Duty Level 4			Duty Level 5		
		Shaft Dia.	Bearing Type	Motor HP	Shaft Dia.	Bearing Type	Motor HP	Shaft Dia.	Bearing Type	Motor HP	Shaft Dia.	Bearing Type	Motor HP	Shaft Dia.	Bearing Type	Motor HP
12	10 ga.	1"	1	1/4 - 2	-	-	-	-	-	-	-	-	-	-	-	-
14	10 ga.	1"	1	1/4 - 3	-	-	-	-	-	-	-	-	-	-	-	-
18	10 ga.	1-3/16"	1	1/2 - 2	1-7/16"	1	3	1-7/16"	2	5 - 10	-	-	-	-	-	-
21	10 ga.	1-3/16"	1	3/4 - 1	1-7/16"	1	1-1/2 - 3	1-7/16"	2	5 - 15	-	-	-	-	-	-
26	7 ga.	1-3/16"	1	1 - 1-1/2	1-3/16"	1	2	1-7/16"	2	3 - 25	-	-	-	-	-	-
29	7 ga.	1-7/16"	1	1-1/2 - 2	1-7/16"	2	3	1-7/16"	2	5 - 30	-	-	-	-	-	-
36	7 ga.	1-7/16"	2	2 - 3	1-11/16"	2	5 - 10	1-11/16"	2	15 - 30	2-3/16"	2	40 - 50	-	-	-
42	7 ga.	1-11/16"	2	3	1-11/16"	2	5 - 25	1-15/16"	2	30	1-15/16"	2	40	2-3/16"	2	50
48	7 ga.	1-15/16"	2	5 - 30	2-3/16"	2	40 - 50	2-11/16"	2	60 - 75	-	-	-	-	-	-
54	1/4"	2-3/16"	2	5 - 30	2-7/16"	2	40	2-11/16"	2	50 - 75	3-3/16"	2	100	-	-	-
60	1/4"	2-7/16"	2	7-1/2 - 40	2-11/16"	2	50 - 75	3-3/16"	2	100	3-11/16"	2	125	-	-	-

Bearing Type 1 - Heavy Duty Flange Ball Bearing. Bearing Type 2 - Heavy Duty Flange Roller Bearing.

Duty Levels-VAB

Fan Size	Outer Housing	Duty Level 1			Duty Level 2			Duty Level 3			Duty Level 4			Duty Level 5			Duty Level 6		
		Shaft Dia.	Bearing Type	Motor HP	Shaft Dia.	Bearing Type	Motor HP	Shaft Dia.	Bearing Type	Motor HP	Shaft Dia.	Bearing Type	Motor HP	Shaft Dia.	Bearing Type	Motor HP	Shaft Dia.	Bearing Type	Motor HP
12	12 ga.	1"	1	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
14	12 ga.	1"	1	5	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
18	12 ga.	1-7/16"	1	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
21	12 ga.	1-3/16"	1	7-1/2	1-11/16"	1	15	-	-	-	-	-	-	-	-	-	-	-	-
26	10 ga.	1-3/16"	1	5	1-7/16"	1	7-1/2	1-7/16"	2/1	15	-	-	-	-	-	-	-	-	-
29	10 ga.	1-3/16"	1	5	1-7/16"	1	7-1/2	1-11/16"	1	10	1-11/16"	2/1	25	-	-	-	-	-	-
36	10 ga.	1-3/16"	1	3	1-7/16"	1	5	1-11/16"	1	10	2-3/16"	1	15	2-3/16"	2/1	30	-	-	-
42	10 ga.	1-7/16"	1	7-1/2	1-11/16"	1	10	1-11/16"	2/1	15	1-11/16"	2	30	1-15/16"	2	50	-	-	-
48	10 ga.	1-11/16"	1	10	2-3/16"	1	15	2-7/16"	1	20	2-7/16"	2/1	30	1-15/16"	2	40	2-3/16"	2	60
54	7 ga.	1-15/16"	1	7-1/2	2-3/16"	1	15	2-7/16"	1	20	2-7/16"	2/1	25	1-15/16"	2	40	2-3/16"	2	75
60	7 ga.	1-15/16"	1	15	2-3/16"	1	20	2-7/16"	1	25	2-7/16"	2/1	30	1-15/16"	2	40	2-3/16"	2	75

Bearing Type 1 - Heavy Duty Flange Ball Bearing. Bearing Type 2 - Heavy Duty Flange Roller Bearing. Shaded area indicates 2/1 Roller Bearing Drive Side - Ball Bearing Prop Side.

Inlet/Outlet Cones

Cones are used on the fixed pitch vane axial fan to adapt it to larger or smaller size ducts on both the inlet and outlet sides. For example, a Diverging Outlet Cone, as illustrated in Figure A, connects the fan to a larger duct resulting in static regain. The **Static Regain** table provides examples of the regain for a cone with an angle of 25 degrees to 30 degrees and varying fan outlet velocities.

For other diverging outlet cones, an approximate determination of static regain can be obtained if the following formula is used.

$$SP_2 = SP_1 + .45(VP_1 - VP_2)$$

A Converging Inlet Cone, as illustrated in Figure B, is used to connect a large duct to the fan inlet. Due to the tapered shape of the cone, friction loss is negligible. To determine this slight difference in static pressure, the following formula can be used.

$$SP_2 = SP_1 - .08(VP_1 - VP_2)$$

A Converging Outlet Cone, as illustrated in Figure C, is used to connect a small duct to the outlet flange of the fan. The across-the-cone change in velocity pressure is added to the fan's static pressure. To determine the change in static pressure, the following formula can be used.

$$SP_2 = SP_1 - (VP_1 - VP_2)$$

Static Regain

Velocity (FPM)	SP (in inches)	Velocity (FPM)	SP (in inches)	Velocity (FPM)	SP (in inches)
1000	.012	2750	.099	4500	.261
1250	.020	3000	.117	4750	.290
1500	.029	3250	.138	5000	.323
1750	.040	3500	.160	5250	.356
2000	.052	3750	.183	5500	.392
2250	.065	4000	.207	5750	.428
2500	.081	4250	.233	6000	.467

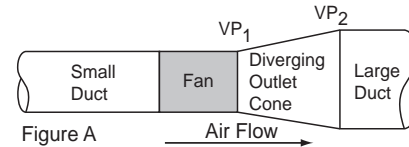


Figure A

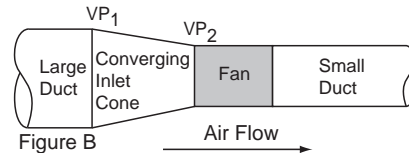


Figure B

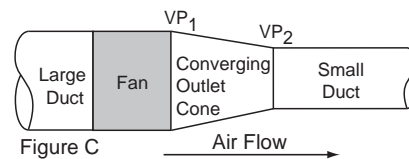


Figure C

Velocity Pressure - $VP = (\text{velocity}/4005)^2$

Velocity (FPM)	VP (in inches)
500	.0156
600	.0225
700	.0305
800	.0400
900	.0504
1000	.0625
1100	.0758
1200	.0900
1300	.106
1400	.122
1500	.141
1600	.160
1700	.181
1800	.203
1900	.226
2000	.250

Velocity (FPM)	VP (in inches)
2250	.316
2500	.391
2750	.473
3000	.562
3250	.661
3500	.768
3750	.880
4000	1.000
4250	1.130
4500	1.265
4750	1.410
5000	1.560
5250	1.720
5500	1.890
5750	2.060
6000	2.250

**Fixed Pitch
Vane Axial Fan
Direct Drive**

Description - Fan shall be a fixed pitch, direct drive vane axial fan.

Certifications - Fan shall be manufactured at an ISO 9001 certified facility. Fan shall be listed by Underwriters Laboratories (UL 705) and UL listed for Canada (cUL 705). Fan shall bear the AMCA Certified Ratings Seal for Sound and Air Performance.

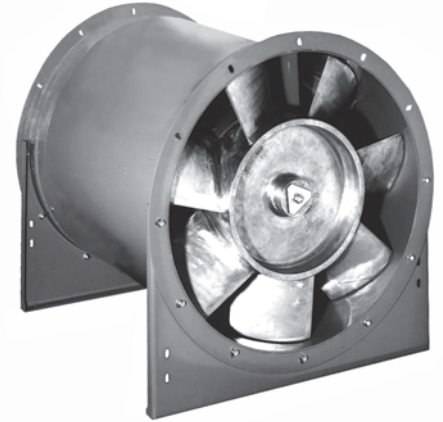
Construction - Fan shall be of bolted and welded construction utilizing corrosion resistant fasteners. Housing shall be minimum 10 gauge steel with continuously welded seams. Housing shall incorporate minimum 1-1/2" x 10 gauge welded inlet and outlet flanges pre-punched for mounting. Housing shall include welded steel discharge vanes surrounding a "C" face mount motor tunnel. Copper lube lines shall be extended from the motor to the outside of the housing. Unit shall bear an engraved aluminum nameplate.

Coating - All steel fan components shall be Lorenized[®] with an electrostatically applied, baked polyester powder coating. Each component shall be subject to a five stage environmentally friendly wash system, followed by a minimum 2 mil thick baked powder finish. Paint must exceed 1,000 hour salt spray under ASTM B117 test method.

Propeller - Propeller shall be fixed pitch, one piece cast aluminum, seven-blade air-foil design. The propeller shall be keyed and locked to the shaft utilizing a split taper bushing. Propeller shall be balanced in accordance with AMCA Standard 204-05, Balance Quality and Vibration Levels for Fans, Category BV-3.

Motor - Motor shall be heavy duty type furnished at the specified voltage and phase.

Product - Fan shall be model VAD as manufactured by Loren Cook Company of Springfield, Missouri.



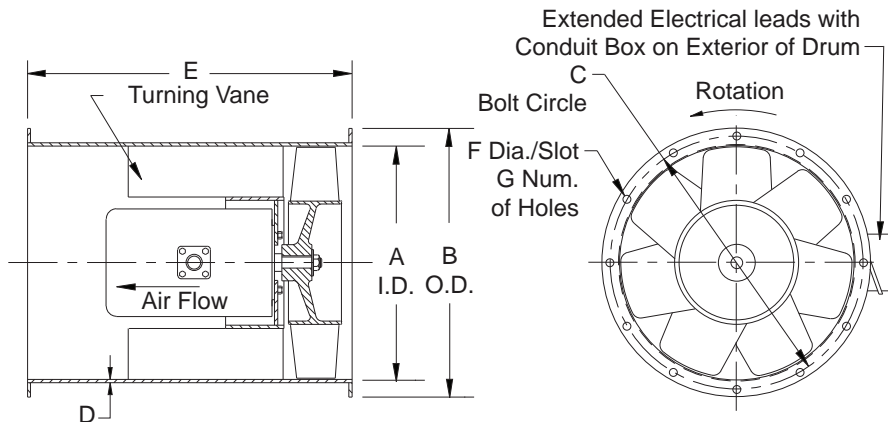
Loren Cook Company certifies that the VAD shown herein is licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 211 and AMCA Publication 311 and comply with the requirements of the AMCA Certified Ratings Program.



Type VAD is furnished standard with UL 705 listing (Power Ventilator/ZACT).



Type VAD is furnished standard with CUL listing (Power Ventilator).



VAD Dimension Data

VAD Size	A	B	C	D	E	F	G	TEFC Max. Motor Frame	*Approx. Ship Wt. Lbs.
18	18	21-5/16	19-3/4	10 ga.	19	7/16	12	143TC	104
21	21	24-5/16	22-3/4	10 ga.	20	7/16	12	145TC	133
26	26	30-7/16	28	7 ga.	22	7/16	12	184TC	210
29	29	33-7/16	31	7 ga.	25	7/16	12	215TC	280
36	36	40-7/16	39	7 ga.	32	9/16	16	254TC	346
42	42	46-7/16	44-3/8	7 ga.	37	9/16	16	284TC	553
48	48	53-7/16	50-1/2	7 ga.	42	9/16	16	364TC	631
54	54	59-9/16	56-1/2	1/4	46	9/16	16	405TC	970
60	60	65-9/16	63-1/4	1/4	46	9/16	16	445TC	1117

All dimensions in inches. *Less motor.

VAB Specifications and Dimension Data

Fixed Pitch Vane Axial Fan Belt Drive



Description - Fan shall be a fixed pitch, belt drive vane axial fan.

Certifications - Fan shall be manufactured at an ISO 9001 certified facility. Fan shall be listed by Underwriters Laboratories (UL 705) and UL listed for Canada (cUL 705). Fan shall bear the AMCA Certified Ratings Seal for Sound and Air Performance.

Construction - Fan shall be of bolted and welded construction utilizing corrosion resistant fasteners. Housing shall be minimum 12 gauge steel with continuously welded seam. Housing shall incorporate continuously welded, inlet and outlet flanges of minimum 1-1/4" x 1-1/4 x 1/4" and be pre-punched for mounting. Housing shall include nine continuously welded steel discharge vanes and aerodynamically designed belt tunnel. Copper lube lines shall be extended from the bearings to the outside of the housing. Pivoting motor plate shall utilize threaded L-bolt design for positive belt tensioning. Unit shall bear an engraved aluminum nameplate.

Coating - All steel fan components shall be Lorenized[®] with an electrostatically applied, baked polyester powder coating. Each component shall be subject to a five stage environmentally friendly wash system, followed by a minimum 2 mil thick baked powder finish. Paint must exceed 1,000 hour salt spray under ASTM B117 test method.

Propeller - Propeller shall be fixed pitch, one piece cast aluminum, seven-blade airfoil design. The propeller shall be attached to the shaft utilizing a taperlock bushing and retaining plate bolted to the shaft. Propeller shall be balanced in accordance with AMCA Standard 204-05, Balance Quality and Vibration Levels for Fans, Category BV-3.

Motor - Motor shall be heavy duty type furnished at the specified voltage, phase and enclosure.

Bearings - Construction shall be heavy duty, self-aligning, regreasable ball or roller type in a cast iron housing selected for a minimum L50 life in excess of 200,000 hours at maximum cataloged operating speed, horsepower and static pressure.

Fan Shaft - Fan shaft shall be AISI C-1045 hot rolled and accurately turned, ground and polished. Shafting shall be sized for a critical speed of at least 125 percent of maximum RPM.

Belts and Drives - Belts shall be oil and heat resistant, non-static type. Drives shall be precision machined cast iron fixed pitch type, keyed and securely attached to the wheel and motor shafts. Drives shall be sized for 150 percent of the installed motor horsepower.

Product - Fan shall be model VAB as manufactured by Loren Cook Company of Springfield, Missouri.



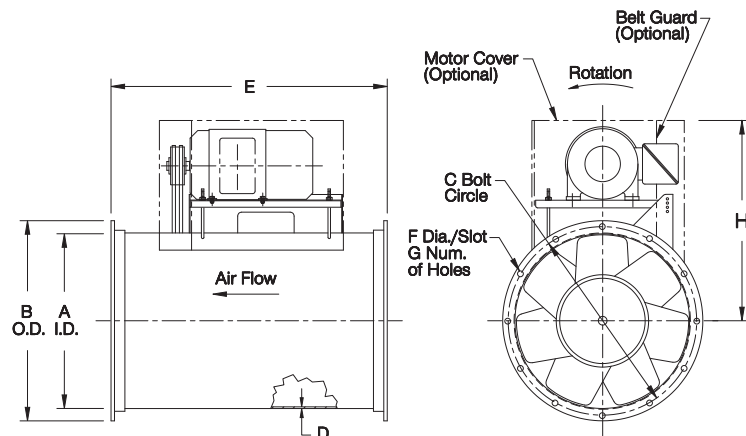
Loren Cook Company certifies that the VAB shown herein is licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 211 and AMCA Publication 311 and comply with the requirements of the AMCA Certified Ratings Program.



Type VAB is furnished standard with UL 705 listing (Power Ventilator/ZACT).



Type VAB is furnished standard with cUL listing (Power Ventilator).



VAB Dimension Data

VAB Size	A	B	C	D	E	F	G	H	ODP Max. Motor Frame	Approx. Ship Wt. Lbs.*
12	12	14-3/4	13-3/8	12 ga.	20	5/16	6	21	184T	91
14	14	16-3/4	15-1/2	12 ga.	23	5/16	6	24	184T	112
18	18	21-1/4	19-3/4	12 ga.	29	7/16 X 13/16	12	27-1/4	215T	197
21	21	24-1/4	22-3/4	12 ga.	31	7/16 X 13/16	12	31-1/2	256T	250
26	26	30-5/16	28	10 ga.	32	7/16 X 13/16	12	34-1/2	256T	367
29	29	33-5/16	31	10 ga.	36	7/16 X 13/16	12	40-1/2	284T	499
36	36	40-5/16	38	10 ga.	42	9/16 X 13/16	16	45-1/2	286T	738
42	42	46-5/16	44-3/8	10 ga.	50	9/16 X 13/16	16	50-1/2	326T	969
48	48	53-5/16	50-1/2	10 ga.	56	9/16 X 13/16	16	54	364T	1205
54	54	59-7/16	56-1/2	7 ga.	62	9/16 X 13/16	16	59-1/2	365T	1861
60	60	65-7/16	63-1/4	7 ga.	69	9/16 X 13/16	16	65	405T	2057

All dimensions in inches. *Less motor.

Fixed Pitch Vane Axial Fan Belt Drive

Description - Fan shall be a fixed pitch, belt drive vane axial fan.

Certifications - Fan shall be manufactured at at ISO 9001 certified facility. Fan shall be listed by Underwriters Laboratories (UL 705) and UL listed for Canada (cUL 705). Fan shall bear the AMCA Certified Ratings Seal for Sound and Air Performance.

Construction - Fan shall be of bolted and welded construction utilizing corrosion resistant fasteners. Housing shall be minimum 10 gauge steel with continuously welded seam. Housing shall incorporate minimum 1-1/4" x 1-1/4 x 1/4" welded inlet and outlet flanges pre-punched for mounting. Housing shall include nine continuously welded steel discharge vanes and aerodynamically designed dual belt tunnels. Copper lube lines shall be extended from the bearings to the outside of the housing. Adjustable motor plate shall be attached to a welded motor sub-base and shall utilize threaded studs for positive belt tensioning. Unit shall bear an engraved aluminum nameplate.

Coating - All steel fan components shall be Lorenized[®] with an electrostatically applied, baked polyester powder coating. Each component shall be subject to a five stage environmentally friendly wash system, followed by a minimum 2 mil thick baked powder finish. Paint must exceed 1,000 hour salt spray under ASTM B117 test method.

Propeller - Propeller shall be fixed pitch, one piece cast aluminum, seven-blade airfoil design. The propeller shall be attached to the shaft utilizing a taperlock bushing and retaining plate bolted to the shaft. Propeller shall be balanced in accordance with AMCA Standard 204-05, Balance Quality and Vibration Levels for Fans, Category BV-3.

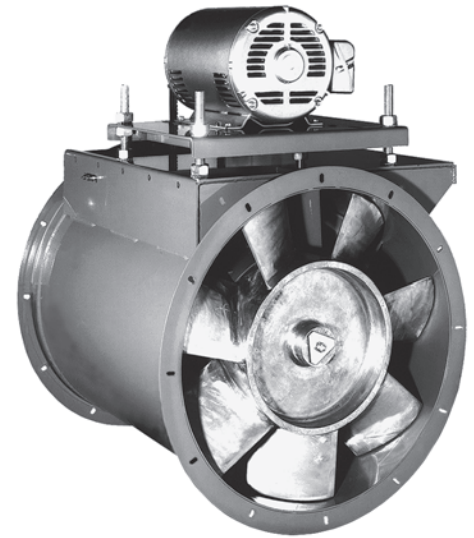
Motor - Motor shall be heavy duty type furnished at the specified voltage, phase and enclosure.

Bearings - Bearings shall be designed and tested specifically for use in air handling applications. Construction shall be heavy duty regreasable ball or roller type in a cast iron pillow block housing selected for a minimum L50 life in excess of 500,000 hours for horizontal units and L50 life in excess of 300,000 hours for vertical units at maximum cataloged operating speed, horsepower and static pressure.

Fan Shaft - Fan shaft shall be AISI C-1045 hot rolled and accurately turned, ground and polished. Shafting shall be sized for a critical speed of at least 125 percent of maximum RPM.

Belts and Drives - Belts shall be oil and heat resistant, non-static type. Drives shall be precision machined cast iron fixed pitch type, keyed and securely attached to the wheel and motor shafts. Drives shall be sized for 150 percent of the installed motor horsepower.

Product - Fan shall be model VAHB as manufactured by Loren Cook Company of Springfield, Missouri.



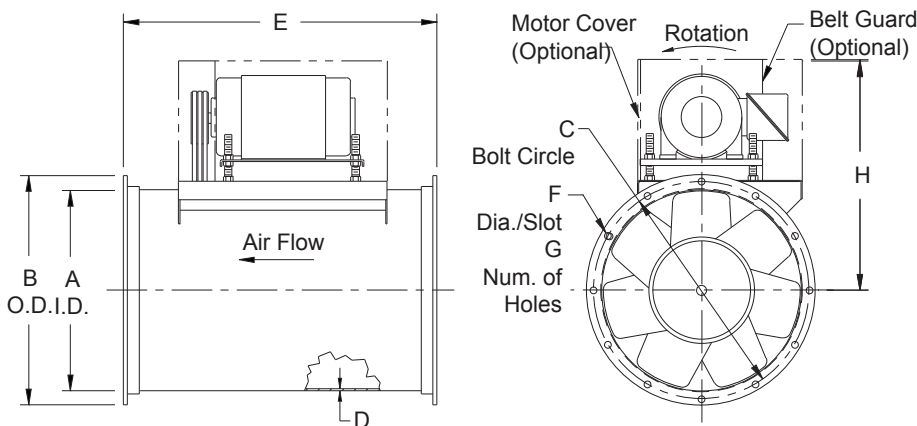
Loren Cook Company certifies that the VAHB shown herein is licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 211 and AMCA Publication 311 and comply with the requirements of the AMCA Certified Ratings Program.



Type VAHB is furnished standard with UL 705 listing (Power Ventilator/ZACT).



Type VAHB is furnished standard with cUL listing (Power Ventilator).



VAHB Dimension Data

VAB Size	A	B	C	D	E	F	G	H	ODP Max. Motor Frame	Approx. Ship Wt. Lbs.*
12	12	14-13/16	13-3/8	10 ga.	20	5/16	6	21	182T	108
14	14	16-13/16	15-1/2	10 ga.	23	5/16	6	24	182T	143
18	18	21-5/16	19-3/4	10 ga.	29	7/16 X 13/16	12	27-1/4	215T	202
21	21	24-5/16	22-3/4	10 ga.	31	7/16 X 13/16	12	31-1/2	254T	301
26	26	30-7/16	28	7 ga.	32	7/16 X 13/16	12	34-1/2	284T	450
29	29	33-7/16	31	7 ga.	36	7/16 X 13/16	12	40-1/2	286T	692
36	36	40-7/16	38	7 ga.	42	9/16 X 13/16	16	45-1/2	326T	906
42	42	46-7/16	44-3/8	7 ga.	50	9/16 X 13/16	16	50-1/2	364T	1286
48	48	53-7/16	50-1/2	7 ga.	56	9/16 X 13/16	16	54	365T	1759
54	54	59-9/16	56-1/2	1/4	62	9/16 X 13/16	16	59-1/2	404T	1941
60	60	65-9/16	63-1/4	1/4	69	9/16 X 13/16	16	65	444T	2218

All dimensions in inches. *Less motor.

VAD/VAB/VAHB Accessories

Disconnect Switches

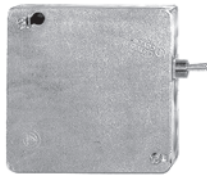
NEMA 1 - Indoor general purpose.

NEMA 1 (Lockable) - Indoor general purpose with locking capability.

NEMA 3R - Exterior mount, rain-tight.

NEMA 4 - Watertight and dust-tight.

NEMA 7 and NEMA 9 - Lockable, indoor, explosion proof.



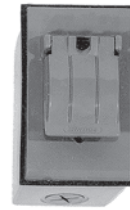
NEMA 1



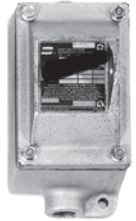
NEMA 1 (lockable)



NEMA 4



NEMA 3R



NEMA 7
NEMA 9

Belt Guard



A Belt Guard is designed to cover the top, front and sides of the drive assembly. Belt guards are constructed of minimum 18 gauge Lorenized[®] steel and have an open back to allow for inspection or belt tightening. Belt guards are factory installed.

Inlet/Outlet Flex Duct Connector



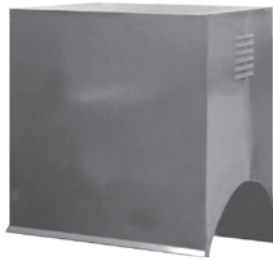
Flex Duct Connectors are available for the inlet or outlet of the VAD/VAB. These connectors provide a flexible connection between the fan and the attached ductwork. This reduces the transmission of noise and vibration to the ductwork as well as allowing for slight misalignment and easy removal of the fan without disturbing the rigid ductwork. Flex Duct Connectors are constructed of reinforced neoprene fabric and aluminum bands.

Inlet/Outlet Companion Flange



Inlet/Outlet Companion Flanges are available for use in conjunction with the standard flanged inlet/outlet. The inlet/outlet companion flange is attached to the adjacent ductwork to provide an exact mate to the flanged connection on the fan.

Motor Cover



The motor cover encloses the motor and drive assembly and serves as an OSHA belt guard. The motor cover is constructed of 18 gauge Lorenized[™] steel. Motor covers are factory installed.

Inlet/Outlet Guard



Inlet/Outlet Guards are used in non-ducted installations to protect personnel and prevent debris from entering the fan.

Mounting Feet

Mounting feet, bolted to the inlet and outlet flanges, provide a solid base for mounting to the floor, ceiling or wall. The mounting feet can be used with vibration isolators.

Mounting Brackets

Suspension brackets are securely welded in place in either the vertical or horizontal discharge configurations and are based upon the specific location requirements. The bracket design allows for use with vibration isolators in all configurations, when required.

Inlet Bell

An Inlet Bell provides for more uniform airflow to the fan blades and is normally used when no inlet ductwork is present. When a non-ducted vane axial fan is installed without an inlet bell, system effect will occur due to the uneven loading of the fan blades.

Inlet Cone/Outlet Cone

Normally used to adapt ductwork to a specific size vane axial fan. Depending on the location of the installation, the velocity pressure change can equate to static pressure regain or static pressure loss.

Sound Muffler

A Sound Muffler can be mounted on both the inlet or outlet of the unit and is used for sound critical applications. The Sound Muffler is not for use with wet atmospheres, velocities greater than 5000 FPM, and temperatures above 250°F.

Butterfly Dampers

Butterfly Dampers provide for a weatherproof closure for outdoor vertical discharge applications. The dampers must be used in conjunction with optional curb panel for roof curb mounting.

Curb Panel

A Curb Panel, when used in conjunction with optional butterfly dampers, converts the unit to a vane axial roof upblast unit. The Curb Panel is used for mounting on a roof curb.

Hub Cover

A Hub Cover is used to prevent material buildup in the propeller hub area.

Inspection Door

An Inspection Door allows for ease of access to the propeller when the unit is installed in a system.

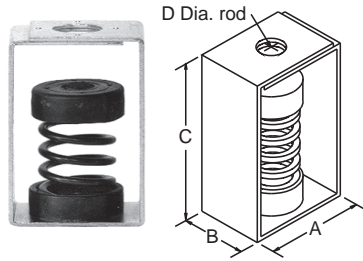
Bombay Construction

Bombay Construction provides for access to the drive, belts, bearings, propeller, and the shaft when the unit is installed in a system. This is a special construction unit. Consult the factory for additional information and dimensions. (VAHB Only)

Thrust Restraints Kit

Thrust Restraints minimize fan movement when the unit thrust ratio exceeds weight ratio. Thrust Restraints require isolators. The kit includes two mounting brackets, welded to the fan housing, and two brackets shipped loose for duct work mounting.

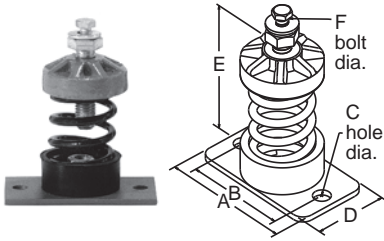
Spring Isolator - Ceiling Mounted



Unit	Rated Load (lbs.)	Spring. Rate (lbs./in.)	A	B	C	D	Approx. Ship Wt. Lbs.
SC-35	35	23	3-11/16	2-1/4	5-1/4	1/2	2
SC-70	70	51	3-11/16	2-1/4	5-1/4	1/2	2
SC-125	125	100	3-11/16	2-1/4	5-1/4	1/2	2
SC-245	245	206	3-11/16	2-1/4	5-1/4	1/2	2
SC-370	370	370	3-11/16	2-1/4	5-1/4	1/2	2
SC-500	500	500	3-11/16	2-1/4	5-1/4	5/8	2
SC-1000	1000	870	5-9/16	3-5/8	8-9/16	3/4	5

All dimensions in inches.

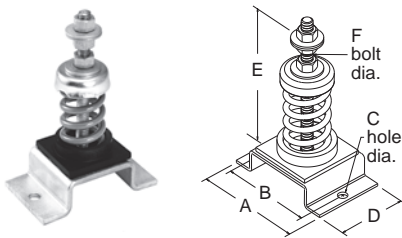
Free Standing Spring Isolator - Floor Mounted



Unit	Rated Load (lbs.)	Spring. Rate (lbs./in.)	A	B	C	D	E	F	Approx. Ship Wt. Lbs.
SF-70	70	51	2-5/8	**	11/16	2-5/8	3-1/2	3/8	2
SF-120	120	98	4-1/2	3-1/2	9/16	2-1/2	3-1/2	3/8	2
SF-220	220	196	4-1/2	3-1/2	9/16	2-1/2	3-1/2	3/8	2
SF-370	370	366	4-1/2	3-1/2	9/16	2-1/2	3-1/2	3/8	2
SF-625	625	419	7	5-1/2	11/16	4	4-1/2	3/8	4
SF-1250	1250	1096	7	5-1/2	11/16	4	4-3/4	3/8	5

All dimensions in inches. Isolators listed are designed to provide a minimum of 50 percent of overload capacity. A single hole is provided at the center of the plate.

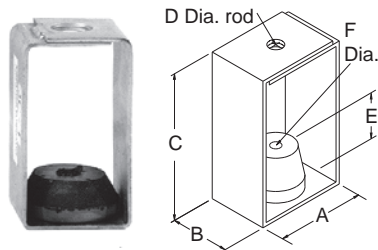
Restrained Spring Isolator - Floor Mounted



Unit	Rated Load (lbs.)	Spring. Rate (lbs./in.)	A	B	C	D	E	F	Approx. Ship Wt. Lbs.
RS-70	70	51	4-3/4	3-3/4	7/16	3	5	1/2	3
RS-120	120	98	4-3/4	3-3/4	7/16	3	5	1/2	3
RS-220	220	196	4-3/4	3-3/4	7/16	3	5	1/2	3
RS-370	370	366	4-3/4	3-3/4	7/16	3	5	1/2	3
RS-625	625	419	8	6-1/2	11/16	4	7-1/2	5/8	6
RS-1250	1250	1096	8	6-1/2	11/16	4	7-1/2	5/8	7

All dimensions in inches. Isolators listed are designed to provide a minimum of 50 percent of overload capacity.

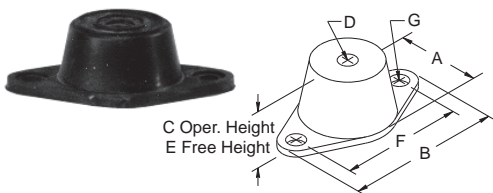
Rubber-in-Shear Isolator - Ceiling Mounted



Unit	Rated Load (lbs.)	A	B	C	D	E	F	Approx. Ship Wt. Lbs.
RC-75	75	2-5/32	1-1/2	2-23/32	11/16	15/32	3/8	1
RC-125	125	2-5/32	1-1/2	2-23/32	11/16	15/32	3/8	1
RC-175	175	3-5/32	2-1/4	5-11/16	3/4	1-31/64	3/4	2
RC-300	300	3-5/32	2-1/4	5-11/16	3/4	1-31/64	3/4	2
RC-450	450	3-5/32	2-1/4	5-11/16	3/4	1-31/64	3/4	2
RC-700	700	4	4-3/4	8	3/4	1-1/2	3/4	3
RC-1100	1100	4	4-3/4	8	3/4	1-1/2	3/4	5

All dimensions in inches.

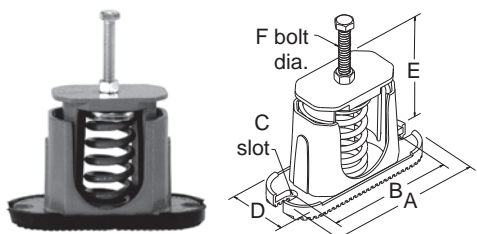
Rubber-in-Shear Isolator - Floor Mounted



Unit	Rated Load (lbs.)	A	B	C	D	E	F	G	Approx. Ship Wt. Lbs.
RF-55	55	1-13/16	3-3/16	1-7/64	5/16 NC	1-1/2	2-3/8	11/32	1
RF-120	120	2-3/8	3-7/8	1-1/4	3/8 NC	1-3/4	3	11/32	1
RF-220	220	2-3/8	3-7/8	1-1/4	3/8 NC	1-3/4	3	11/32	1
RF-375	375	2-3/8	3-7/8	1-1/4	3/8 NC	1-3/4	3	11/32	1
RF-600	600	3-1/4	5-1/2	2	1/2 NC	2-1/2	4-1/8	9/16	2
RF-1100	1100	3-1/4	5-1/2	2	1/2 NC	2-1/2	4-1/8	9/16	2

All dimensions in inches.

Housed Spring Isolator - Floor Mounted



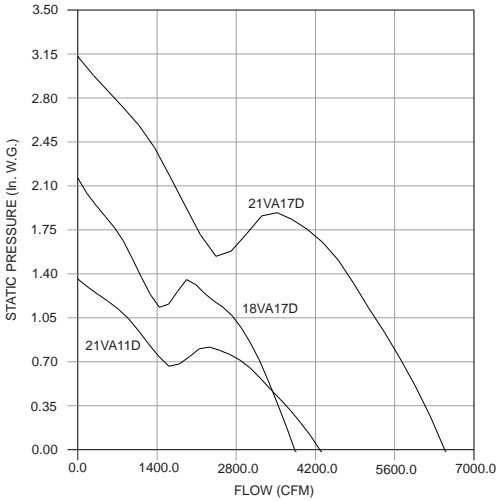
Unit	Rated Load (lbs.)	Spring. Rate (lbs./in.)	A	B	C	D	E	F	Approx. Ship Wt. Lbs.
HF-120	120	98	6-1/8	5-5/8	5/16	2-1/8	3-1/2	3/8	2
HF-220	220	196	6-1/8	5-5/8	5/16	2-1/8	3-1/2	3/8	2
HF-320	320	302	6-1/8	5-5/8	5/16	2-1/8	3-1/2	3/8	2
HF-370	370	366	6-1/8	5-5/8	5/16	2-1/8	3-1/2	3/8	2
HF-500	500	500	6-1/8	5-5/8	5/16	2-1/8	3-1/2	3/8	2
HF-700	700	700	6-1/8	5-5/8	5/16	2-1/8	3-1/2	3/8	2
HF-800	800	588	9	7-1/2	7/16	3-1/2	5	5/8	13
HF-1000	1000	826	9	7-1/2	7/16	3-1/2	5	5/8	13

All dimensions in inches. Isolators listed are designed to provide a minimum of 50 percent of overload capacity.

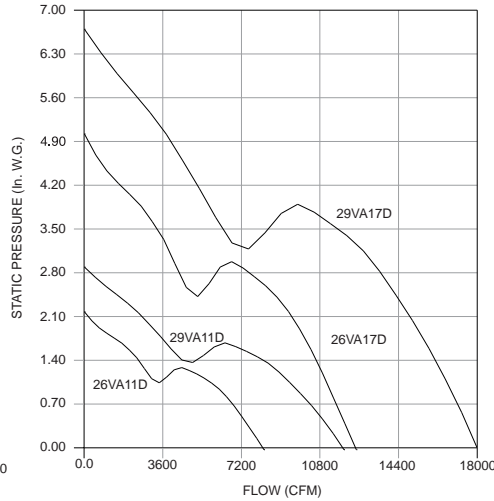
Unit	Max BHP	RPM	Motor HP	CFM vs. Static Pressure												
				0.0	0.500	1.000	1.500	2.000	2.500	3.000	3.500	4.000	4.500	5.000	5.500	6.000
18VA17D	0.75	1725	3/4	3845	3424	2868										
21VA11D	0.51	1140	1/2	4296	3393											
21VA17D	1.88	1725	2	6501	5993	5338	4638									
26VA11D	1.56	1160	1-1/2	8386	7441	6289										
26VA17D	5.48	1725	5	12470	11843	11203	10528	9751	8639							
29VA11D	3.02	1160	3	11899	10881	9616	7789									
29VA17D	10.5	1760	10	18054	17403	16725	15979	15135	14225	13216	11629					
36VA11D	8.05	1160	7-1/2	22304	21157	19947	18599	17064								
36VA17D	27.2	1760	25	33840	33089	32332	31560	30762	29931	29052	28129	27157				
42VA11D	17.9	1160	20	35497	34162	32789	31332	29742	28007	25942						
42VA17D	53.4	1780	50	54470	53603	52733	51853	50961	50049	49112						
48VA06D	7.93	690	7-1/2	32217	29372	25814	20370									
48VA08D	15.2	860	15	40155	37927	35448	32506	29136								
48VA11D	39.7	1180	40	55096	53491	51842	50093	48168	46049	43802	41418	38391	33797			
48VA17D	109	1780	100	83111	82051	80985	79908	78815	77701							
54VA06D	14.3	690	15	45952	42800	39099	34703	27371								
54VA08D	26.4	880	25	58605	56171	53595	50671									
54VA11D	64.9	1180	60	78585	76780	74948	73047	71042	68854	66498						
54VA17D	217	1780	200	118543	117349	116152	114949	113730	112500	111248	109965	108654	107304	105889	104429	102922
60VA05D	14.1	575	15	52602	48360	43155	36388									
60VA06D	24.0	690	25	63122	59647	55788	51207	45983								
60VA08D	50.5	880	50	80503	77807	75009	71974	68568	64851	60922	55870	48215				
60VA11D	109	1180	100	107948	105944	103918	101847	99704	97450	95027	92455					

Performance shown is for Installation Type D: ducted inlet, ducted outlet. Performance ratings do not include the effects of appurtenances in the airstream. Sound data, page 22.

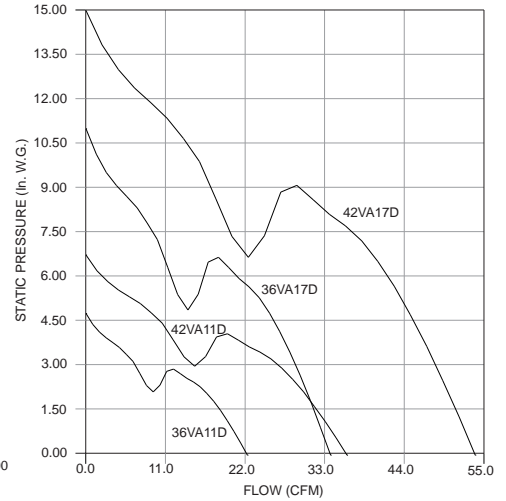
18 & 21 VAD



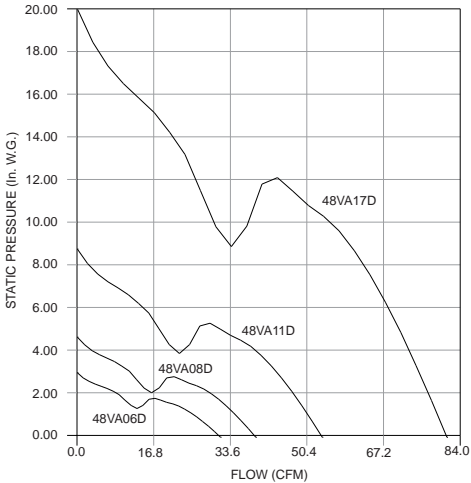
26 & 29 VAD



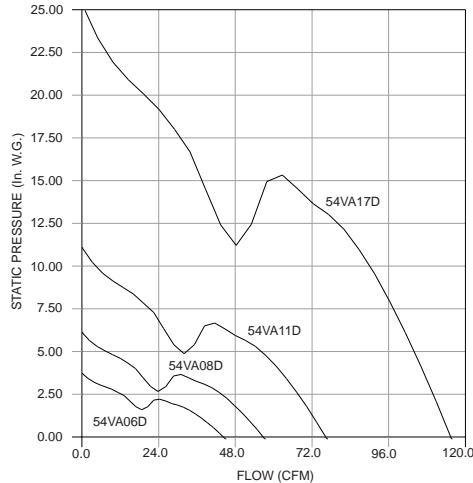
36 & 42 VAD



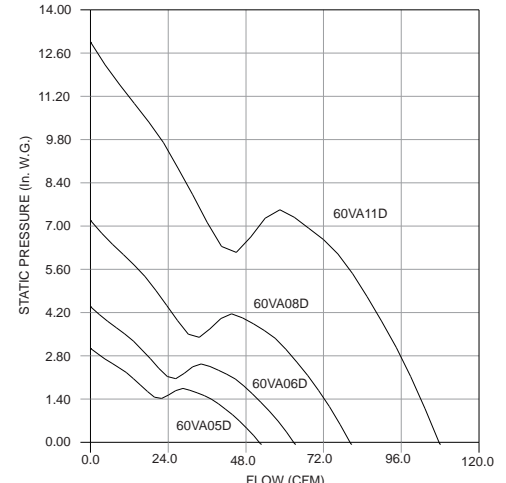
48 VAD



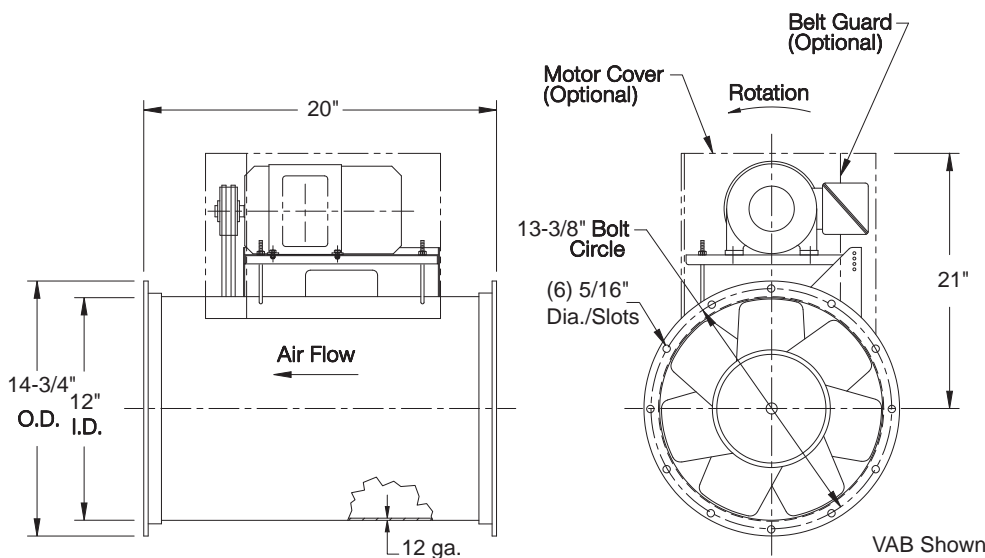
54 VAD



60 VAD



Data VAB/VAHB 12



Prop Diameter - 11.81"
VAHB Maximum Frame - 182T
VAB Maximum Frame - 184T
Tip Speed (FPM) = 3.09 x RPM
Sound Data - Page 22
VAHB Approx. Shipping Wt.-Lbs. - 108 (less motor)
VAB Approx. Shipping Wt.-Lbs. - 91 (less motor)
VAB/VAHB Maximum RPM - 4601

12 VAB/VAHB

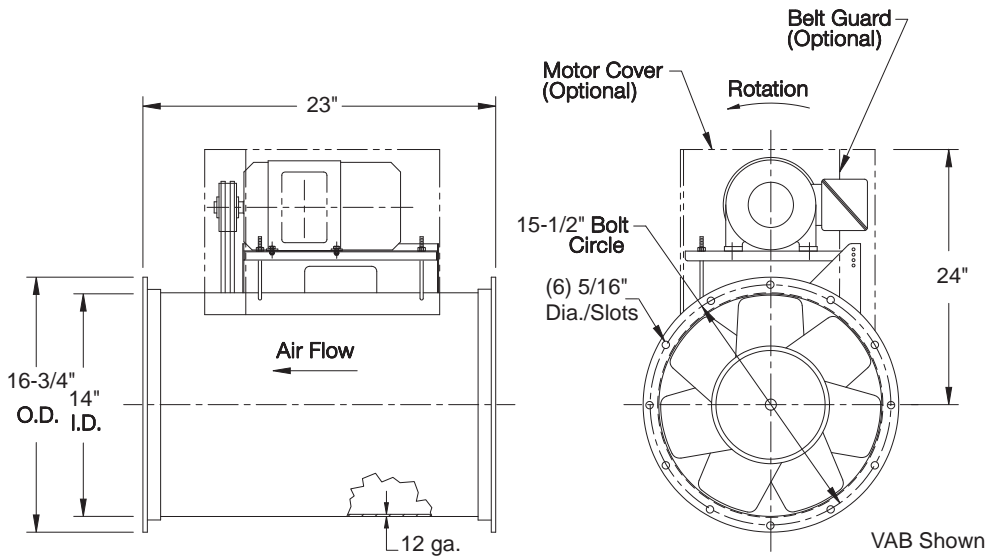
CFM	OV	0" SP		1/8" SP		1/4" SP		3/8" SP		1/2" SP		5/8" SP		3/4" SP		7/8" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1000	1273	1438	.07	1611	.10	1746	.13	1872	.16	1993	.19						
1100	1400	1582	.09	1739	.12	1871	.16	1986	.19	2099	.23	2208	.26				
1200	1527	1725	.11	1878	.15	1997	.19	2109	.23	2214	.27	2316	.30	2414	.34		
1300	1655	1869	.15	2015	.19	2127	.23	2231	.27	2331	.31	2428	.35	2521	.39	2611	.43
1400	1782	2013	.18	2150	.23	2260	.27	2359	.31	2453	.36	2541	.40	2631	.45	2719	.49
1500	1909	2157	.22	2283	.27	2389	.32	2483	.36	2574	.41	2664	.46	2746	.51	2828	.56
1600	2037	2300	.27	2416	.32	2520	.37	2615	.42	2703	.47	2783	.52	2864	.57	2943	.63
1700	2164	2444	.33	2554	.38	2659	.43	2748	.49	2828	.54	2908	.59	2986	.65	3059	.70
1800	2291	2588	.39	2693	.44	2797	.50	2879	.56	2955	.61	3036	.67	3104	.72	3182	.79
1900	2419	2732	.46	2832	.51	2933	.58	3006	.63	3090	.69	3161	.75	3235	.81	3301	.87
2000	2546	2876	.53	2971	.59	3068	.66	3143	.72	3222	.78	3287	.84	3362	.91	3426	.97
2100	2673	3019	.62	3111	.68	3201	.75	3282	.82	3352	.88	3422	.94	3486	1.01	3555	1.08
2200	2801	3163	.71	3251	.77	3332	.84	3420	.92	3479	.98	3555	1.05	3613	1.12	3681	1.19
2300	2928	3307	.81	3390	.88	3469	.95	3556	1.03	3615	1.09	3686	1.17	3748	1.24	3804	1.31
2400	3055	3451	.92	3532	.99	3606	1.06	3691	1.15	3755	1.22	3814	1.29	3881	1.37	3935	1.44
2500	3183	3594	1.04	3673	1.12	3745	1.19	3825	1.28	3893	1.36	3942	1.42	4012	1.51	4070	1.59
2600	3310	3738	1.17	3814	1.25	3884	1.33	3957	1.41	4030	1.50	4082	1.57	4141	1.65	4202	1.74
2700	3437	3882	1.31	3955	1.39	4022	1.47	4088	1.55	4166	1.66	4222	1.74	4268	1.80	4333	1.90
2800	3565	4026	1.46	4095	1.54	4161	1.63	4225	1.71	4301	1.82	4360	1.91	4404	1.98	4462	2.07
2900	3692	4169	1.62	4237	1.71	4302	1.80	4363	1.88	4434	1.99	4497	2.09	4544	2.17		
3000	3819	4313	1.80	4380	1.89	4442	1.98	4500	2.06	4566	2.17						
3100	3947	4457	1.98	4523	2.08	4581	2.17										
3200	4074	4601	2.18														

CFM	OV	1" SP		1-1/4" SP		1-1/2" SP		1-3/4" SP		2" SP		2-1/4" SP		2-1/2" SP		2-3/4" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1400	1782	2802	.53														
1500	1909	2910	.60	3067	.69												
1600	2037	3019	.68	3171	.78	3320	.87										
1700	2164	3135	.76	3278	.86	3416	.97										
1800	2291	3248	.84	3388	.96	3525	1.07	3654	1.18								
1900	2419	3372	.94	3504	1.06	3629	1.17	3760	1.29	3882	1.41						
2000	2546	3493	1.03	3616	1.16	3745	1.29	3866	1.42	3985	1.54	4104	1.66				
2100	2673	3613	1.14	3741	1.28	3860	1.41	3974	1.54	4093	1.68	4203	1.80	4318	1.93		
2200	2801	3743	1.26	3862	1.40	3972	1.54	4091	1.68	4197	1.82	4312	1.96	4416	2.09		
2300	2928	3870	1.39	3980	1.53	4097	1.68	4204	1.82	4313	1.97	4417	2.12				
2400	3055	3995	1.52	4107	1.67	4219	1.83	4321	1.98	4429	2.13						
2500	3183	4117	1.65	4236	1.82	4337	1.98	4445	2.14								
2600	3310	4253	1.82	4363	1.98	4461	2.14										
2700	3437	4387	1.99	4487	2.15												
2800	3565	4519	2.16														

Performance shown is for Installation Type D: ducted inlet, ducted outlet. Power rating (BHP) includes drive losses. Performance ratings do not include the effects of appurtenances in the airstream.

14 VAB/VAHB Data

- Prop Diameter - 13.81"
- VAHB Maximum Frame - 182T
- VAB Maximum Frame - 184T
- Tip Speed (FPM) = 3.62 x RPM
- Sound Data - Page 22
- VAHB Approx. Shipping Wt.-Lbs. - 147 (less motor)
- VAB Approx. Shipping Wt.-Lbs. - 112 (less motor)
- VAB/VAHB Maximum RPM - 4640



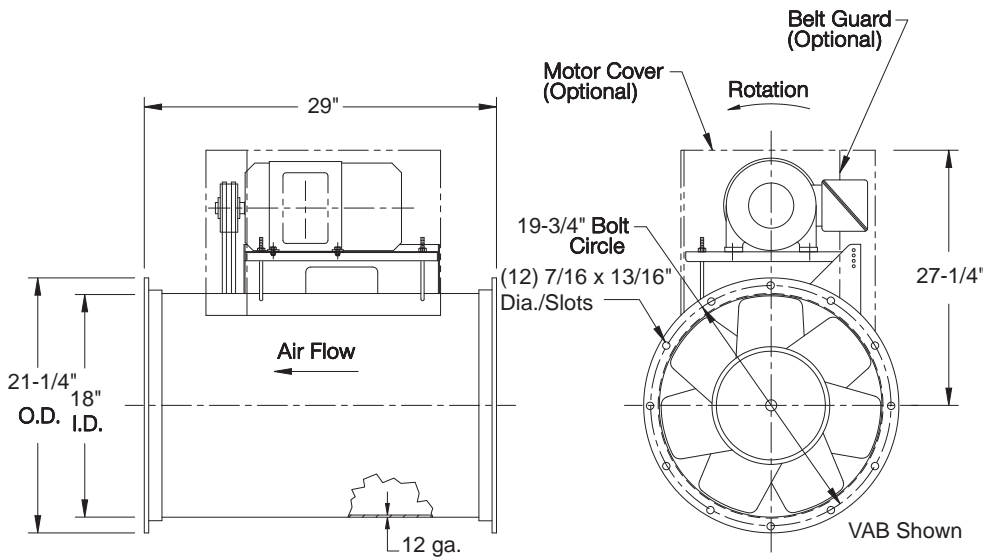
14 VAB/VABH

CFM	OV	0" SP		1/4" SP		1/2" SP		3/4" SP		1" SP		1-1/4" SP		1-1/2" SP		1-3/4" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1100	1028	1154	.05	1443	.11	1674	.18	1894	.28								
1250	1169	1311	.07	1574	.14	1788	.22	1983	.31	2179	.42						
1400	1309	1468	.10	1711	.18	1909	.26	2088	.36	2261	.46	2437	.59				
1550	1449	1625	.14	1850	.22	2035	.31	2204	.41	2363	.52	2519	.64	2676	.78		
1700	1590	1783	.18	1991	.27	2166	.37	2326	.47	2475	.59	2618	.71	2761	.84	2904	.99
1850	1730	1940	.23	2136	.33	2301	.44	2451	.55	2593	.66	2729	.79	2859	.92	2990	1.07
2000	1870	2097	.29	2281	.40	2437	.51	2581	.63	2716	.75	2845	.88	2969	1.02	3089	1.17
2150	2011	2255	.36	2427	.48	2577	.60	2713	.73	2842	.85	2965	.99	3084	1.13	3199	1.28
2300	2151	2412	.45	2575	.57	2718	.70	2848	.83	2972	.97	3090	1.10	3204	1.25	3314	1.40
2450	2291	2569	.54	2722	.67	2859	.81	2986	.95	3104	1.09	3217	1.23	3327	1.39	3433	1.54
2600	2432	2726	.64	2873	.78	3004	.93	3125	1.08	3239	1.23	3347	1.38	3453	1.53	3555	1.70
2750	2572	2884	.76	3022	.91	3148	1.06	3264	1.22	3375	1.37	3480	1.53	3582	1.70	3680	1.86
2900	2712	3041	.89	3174	1.05	3296	1.21	3407	1.37	3512	1.53	3615	1.70	3713	1.87	3808	2.05
3050	2853	3198	1.04	3326	1.20	3442	1.37	3549	1.54	3653	1.71	3751	1.89	3845	2.06	3938	2.25
3200	2993	3356	1.20	3476	1.37	3589	1.55	3695	1.73	3793	1.90	3888	2.09	3981	2.27	4070	2.46
3350	3133	3513	1.38	3630	1.56	3737	1.74	3838	1.92	3936	2.11	4028	2.30	4117	2.50	4203	2.69
3500	3274	3670	1.57	3784	1.76	3885	1.95	3986	2.15	4077	2.34	4167	2.53	4255	2.74	4339	2.94
3650	3414	3828	1.78	3937	1.98	4036	2.18	4132	2.38	4223	2.58	4310	2.79	4394	2.99	4476	3.20
3800	3554	3985	2.01	4090	2.22	4186	2.42	4277	2.63	4367	2.84	4452	3.05	4534	3.27		
3950	3695	4142	2.25	4242	2.47	4335	2.68	4426	2.90	4512	3.12						
4100	3835	4299	2.52	4396	2.74	4488	2.97	4574	3.19								
4250	3975	4457	2.81	4552	3.04	4640	3.27										
4400	4115	4614	3.12														

CFM	OV	2" SP		2-1/2" SP		3" SP		3-1/2" SP		4" SP		4-1/2" SP		5" SP		5-1/2" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
1850	1730	3122	1.23														
2000	1870	3210	1.32	3455	1.67												
2150	2011	3312	1.44	3536	1.78	3767	2.17										
2300	2151	3421	1.56	3632	1.91	3842	2.29	4060	2.71								
2450	2291	3535	1.70	3736	2.05	3931	2.43	4132	2.85	4336	3.30						
2600	2432	3654	1.86	3847	2.22	4032	2.60	4219	3.01								
2750	2572	3776	2.03	3961	2.39	4140	2.78	4317	3.20								
2900	2712	3900	2.22	4080	2.59	4254	2.99										
3050	2853	4027	2.43	4201	2.81	4369	3.21										
3200	2993	4158	2.65	4325	3.04												
3350	3133	4288	2.89	4453	3.29												
3500	3274	4421	3.14														

Performance shown is for Installation Type D: ducted inlet, ducted outlet. Power rating (BHP) includes drive losses. Performance ratings do not include the effects of appurtenances in the airstream.

Data **VAB/VAHB 18**



- Prop Diameter - 17.94"**
- VAHB Maximum Frame - 215T**
- VAB Maximum Frame - 215T**
- Tip Speed (FPM) = 4.70 x RPM**
- Sound Data - Page 22**
- VAHB Approx. Shipping Wt.-Lbs. - 202 (less motor)**
- VAB Approx. Shipping Wt.-Lbs. - 197 (less motor)**
- VAB Maximum RPM - 3656**
- VAHB Maximum RPM - 4100**

18 VAB/VAHB

CFM	OV	0" SP		1/4" SP		1/2" SP		3/4" SP		1" SP		1-1/4" SP		1-1/2" SP		1-3/4" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
2350	1329	991	.14	1155	.26	1316	.41	1461	.58	1608	.77						
2600	1471	1097	.19	1243	.32	1397	.48	1527	.66	1661	.85						
2850	1612	1202	.25	1335	.39	1479	.56	1602	.74	1721	.94	1844	1.16				
3100	1754	1308	.33	1431	.48	1560	.65	1683	.85	1792	1.05	1903	1.28	2015	1.52		
3350	1895	1413	.41	1529	.57	1643	.75	1765	.96	1869	1.18	1969	1.41	2073	1.65	2177	1.91
3600	2037	1518	.51	1628	.69	1729	.87	1847	1.08	1950	1.31	2044	1.55	2138	1.80	2234	2.07
3850	2178	1624	.63	1728	.81	1820	1.00	1928	1.22	2032	1.47	2123	1.71	2210	1.97	2299	2.25
4100	2320	1729	.76	1828	.95	1915	1.15	2011	1.38	2114	1.63	2205	1.89	2288	2.16	2370	2.44
4350	2461	1835	.91	1929	1.11	2011	1.32	2097	1.55	2195	1.81	2288	2.09	2369	2.37	2446	2.65
4600	2602	1940	1.07	2030	1.29	2109	1.51	2187	1.74	2277	2.00	2369	2.29	2451	2.59	2527	2.89
4850	2744	2046	1.26	2132	1.49	2207	1.72	2280	1.95	2361	2.22	2450	2.52	2534	2.83	2609	3.14
5100	2885	2151	1.46	2233	1.70	2306	1.95	2375	2.19	2449	2.46	2531	2.75	2615	3.08	2691	3.40
5350	3027	2257	1.69	2336	1.94	2406	2.20	2472	2.45	2540	2.72	2615	3.02	2696	3.35	2773	3.69
5600	3168	2362	1.93	2438	2.20	2506	2.47	2569	2.73	2633	3.01	2702	3.31	2777	3.64	2854	3.99
5850	3310	2467	2.20	2540	2.48	2606	2.76	2667	3.04	2728	3.32	2792	3.63	2861	3.95	2935	4.31
6100	3451	2573	2.50	2643	2.79	2708	3.09	2767	3.37	2824	3.66	2883	3.97	2948	4.30	3017	4.66
6350	3593	2678	2.81	2747	3.13	2808	3.43	2866	3.73	2921	4.03	2976	4.34	3037	4.68	3101	5.03
6600	3734	2784	3.16	2850	3.49	2910	3.80	2966	4.11	3019	4.42	3072	4.74	3127	5.07	3188	5.44
6850	3876	2889	3.53	2953	3.87	3011	4.20	3066	4.52	3117	4.84	3169	5.17	3221	5.51	3277	5.88
7100	4017	2995	3.94	3056	4.28	3113	4.62	3166	4.96	3217	5.30	3266	5.63	3316	5.98	3368	6.34
7350	4159	3100	4.37	3159	4.72	3215	5.08	3267	5.43	3316	5.77	3364	6.12	3411	6.47	3461	6.85
7600	4300	3206	4.83	3263	5.20	3317	5.57	3368	5.93	3416	6.29	3462	6.64	3509	7.01	3555	7.38
7850	4442	3311	5.32	3368	5.71	3420	6.09	3468	6.45	3516	6.83	3562	7.20	3606	7.57	3651	7.95
8100	4583	3417	5.85	3473	6.26	3522	6.63	3571	7.02	3616	7.40	3661	7.78	3704	8.17	3747	8.55
8350	4724	3522	6.40	3577	6.83	3624	7.21	3672	7.62	3717	8.01	3760	8.40	3802	8.79	3845	9.20
8600	4866	3627	6.99	3682	7.45	3727	7.83	3774	8.25	3818	8.65	3861	9.06	3902	9.47	3942	9.87
8850	5007	3733	7.62	3786	8.09	3831	8.49	3874	8.90	3919	9.33	3961	9.75	4001	10.20	4041	10.60
9100	5149	3838	8.29	3890	8.76	3934	9.18	3977	9.61	4020	10.00	4060	10.50	4100	10.90		
9350	5290	3944	8.99	3994	9.48	4038	9.92	4080	10.40	4122	10.80						
9600	5432	4049	9.73	4098	10.20	4141	10.70										

CFM	OV	2" SP		2-1/2" SP		3" SP		3-1/2" SP		4" SP		4-1/2" SP		5" SP		5-1/2" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
3600	2037	2332	2.35														
3850	2178	2389	2.53	2570	3.14												
4100	2320	2454	2.73	2623	3.35	2791	4.01										
4350	2461	2524	2.95	2683	3.58	2843	4.26										
4600	2602	2599	3.19	2747	3.83	2899	4.52	3049	5.24								
4850	2744	2679	3.45	2818	4.11	2960	4.81	3103	5.54	3246	6.32						
5100	2885	2761	3.73	2893	4.40	3026	5.11	3162	5.87	3299	6.65	3434	7.47				
5350	3027	2843	4.03	2972	4.72	3098	5.45	3226	6.22	3356	7.01	3487	7.85	3615	8.71		
5600	3168	2926	4.35	3053	5.07	3173	5.81	3294	6.59	3418	7.40	3542	8.25	3667	9.13	3789	10.00
5850	3310	3007	4.68	3135	5.43	3252	6.19	3366	6.98	3484	7.81	3602	8.67	3722	9.57	3840	10.50
6100	3451	3088	5.04	3218	5.82	3333	6.60	3443	7.41	3554	8.25	3667	9.12	3781	10.00	3895	11.00
6350	3593	3169	5.42	3300	6.22	3415	7.03	3523	7.86	3628	8.71	3735	9.60	3843	10.50		
6600	3734	3252	5.83	3381	6.65	3498	7.49	3604	8.34	3706	9.21	3808	10.10	3911	11.00		
6850	3876	3336	6.26	3462	7.10	3580	7.97	3686	8.85	3786	9.74	3884	10.70				
7100	4017	3424	6.73	3543	7.57	3662	8.47	3769	9.38	3867	10.30						
7350	4159	3513	7.23	3626	8.08	3743	9.00	3851	9.93	3950	10.90						
7600	4300	3604	7.77	3710	8.62	3823	9.54	3933	10.50								
7850	4442	3697	8.35	3797	9.20	3905	10.10										
8100	4583	3791	8.95	3885	9.81	3989	10.70										
8350	4724	3887	9.60	3976	10.50												

Performance shown is for Installation Type D: ducted inlet, ducted outlet. Power rating (BHP) includes drive losses. Performance ratings do not include the effects of appurtenances in the airstream. Shaded areas require VAHB fan construction.

21 VAB/VAHB Data

Prop Diameter - 20.81"

VAHB Maximum Frame - 254T

VAB Maximum Frame - 256T

Tip Speed (FPM) = 5.45 x RPM

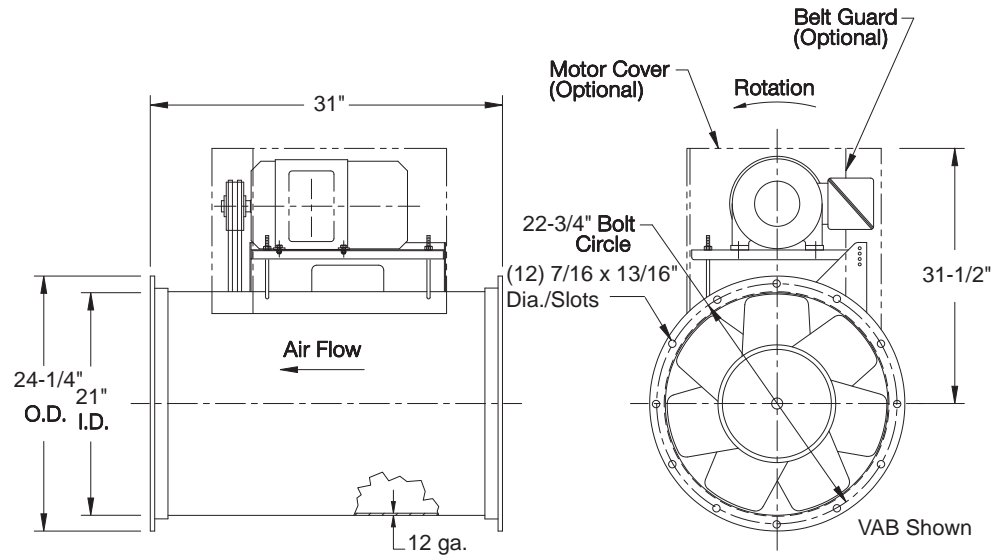
Sound Data - Page 22

VAHB Approx. Shipping Wt.-Lbs. - 301 (less motor)

VAB Approx. Shipping Wt.-Lbs. - 250 (less motor)

VAB Maximum RPM - 3151

VAHB Maximum RPM - 3692



21 VAB/VAHB

CFM	OV	0" SP		1/4" SP		1/2" SP		3/4" SP		1" SP		1-1/2" SP		2" SP		2-1/2" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
3100	1288	800	.16	934	.31	1054	.48	1167	.66	1280	.87						
3500	1455	904	.23	1022	.39	1134	.58	1234	.77	1336	.99						
3900	1621	1007	.32	1114	.50	1217	.70	1311	.91	1400	1.13	1583	1.64				
4300	1787	1110	.43	1208	.63	1302	.84	1391	1.07	1474	1.31	1639	1.82				
4700	1954	1214	.57	1303	.77	1390	1.00	1474	1.25	1553	1.51	1701	2.04	1855	2.64		
5100	2120	1317	.73	1401	.95	1480	1.19	1559	1.45	1635	1.73	1773	2.29	1912	2.90	2052	3.57
5500	2286	1420	.91	1497	1.15	1572	1.40	1645	1.68	1718	1.98	1851	2.57	1977	3.19	2108	3.88
5900	2452	1523	1.12	1597	1.38	1664	1.64	1734	1.94	1802	2.24	1931	2.88	2050	3.53	2168	4.22
6300	2619	1627	1.37	1696	1.64	1760	1.92	1824	2.22	1889	2.55	2013	3.22	2127	3.91	2237	4.62
6700	2785	1730	1.64	1795	1.93	1855	2.23	1916	2.54	1977	2.88	2096	3.59	2207	4.32	2311	5.05
7100	2951	1833	1.96	1895	2.27	1953	2.58	2009	2.90	2067	3.25	2181	4.00	2288	4.76	2389	5.53
7500	3118	1937	2.31	1997	2.64	2050	2.96	2104	3.30	2157	3.65	2266	4.43	2371	5.23	2469	6.05
7900	3284	2040	2.70	2099	3.06	2147	3.38	2200	3.74	2251	4.11	2353	4.90	2454	5.74	2550	6.59
8300	3450	2143	3.13	2200	3.51	2248	3.86	2295	4.21	2344	4.60	2442	5.42	2539	6.29	2633	7.18
8700	3617	2246	3.60	2301	4.00	2347	4.37	2393	4.74	2440	5.14	2532	5.98	2626	6.88	2717	7.81
9100	3783	2350	4.12	2401	4.53	2446	4.92	2491	5.32	2535	5.72	2623	6.58	2712	7.50	2801	8.48
9500	3949	2453	4.69	2501	5.11	2544	5.51	2587	5.92	2630	6.35	2716	7.24	2801	8.19	2886	9.18
9900	4115	2556	5.30	2601	5.73	2644	6.16	2686	6.59	2728	7.04	2809	7.95	2891	8.92	2973	9.95
10300	4282	2660	5.98	2703	6.42	2746	6.88	2786	7.33	2826	7.79	2902	8.70	2982	9.71	3061	10.80
10700	4448	2763	6.70	2803	7.15	2848	7.66	2886	8.12	2922	8.56	2999	9.54	3073	10.50	3150	11.60
11100	4614	2866	7.48	2906	7.95	2950	8.50	2985	8.94	3019	9.39	3094	10.40	3167	11.50	3239	12.50
11500	4781	2969	8.31	3009	8.82	3051	9.38	3083	9.81	3119	10.30	3188	11.30	3260	12.40	3330	13.50
11900	4947	3073	9.22	3112	9.75	3152	10.30	3180	10.70	3219	11.30	3286	12.30	3353	13.40	3420	14.50
12300	5113	3176	10.20	3214	10.70	3253	11.30	3283	11.80	3319	12.30	3384	13.40	3449	14.50	3515	15.70
12700	5280	3279	11.20	3317	11.80	3353	12.40	3385	12.90	3417	13.40	3481	14.50	3545	15.70		
13100	5446	3383	12.30	3419	12.90	3453	13.50	3487	14.10	3516	14.60	3578	15.70				
13500	5612	3486	13.50	3521	14.10	3553	14.60	3589	15.30	3614	15.80						
13900	5778	3589	14.70	3623	15.30	3652	15.90										
14300	5945	3692	16.00														

CFM	OV	3" SP		3-1/2" SP		4" SP		4-1/2" SP		5" SP		5-1/2" SP		6" SP		6-1/2" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
5500	2286	2236	4.62														
5900	2452	2292	4.98	2410	5.78												
6300	2619	2350	5.38	2465	6.20	2575	7.05										
6700	2785	2415	5.82	2522	6.65	2630	7.53	2734	8.44								
7100	2951	2486	6.32	2585	7.15	2687	8.04	2789	8.97	2887	9.94						
7500	3118	2563	6.87	2655	7.71	2749	8.60	2846	9.55	2942	10.50	3035	11.50	3123	12.60		
7900	3284	2641	7.45	2730	8.33	2817	9.23	2907	10.20	2999	11.20	3090	12.20	3179	13.30	3264	14.40
8300	3450	2722	8.09	2807	8.99	2890	9.91	2974	10.90	3060	11.90	3147	12.90	3235	14.00	3320	15.10
8700	3617	2803	8.75	2887	9.70	2967	10.70	3046	11.60	3126	12.60	3208	13.70	3292	14.80	3375	15.90
9100	3783	2886	9.46	2968	10.50	3046	11.40	3122	12.40	3198	13.50	3275	14.50	3353	15.60		
9500	3949	2970	10.20	3050	11.20	3126	12.30	3200	13.30	3273	14.30	3346	15.40	3420	16.50		
9900	4115	3054	11.00	3131	12.10	3207	13.10	3280	14.20	3351	15.30	3421	16.40				
10300	4282	3138	11.80	3216	13.00	3290	14.10	3361	15.20	3431	16.30						
10700	4448	3225	12.70	3300	13.90	3372	15.00	3443	16.20								
11100	4614	3312	13.70	3385	14.90	3456	16.10										
11500	4781	3401	14.70	3471	15.90												
11900	4947	3489	15.70														

Performance shown is for Installation Type D: ducted inlet, ducted outlet. Power rating (BHP) includes drive losses. Performance ratings do not include the effects of appurtenances in the airstream. Shaded areas require VAHB fan construction.

Data **VAB/VAHB 26**

Prop Diameter - 25.81"

VAHB Maximum Frame - 284T

VAB Maximum Frame - 256T

Tip Speed (FPM) = 6.76 x RPM

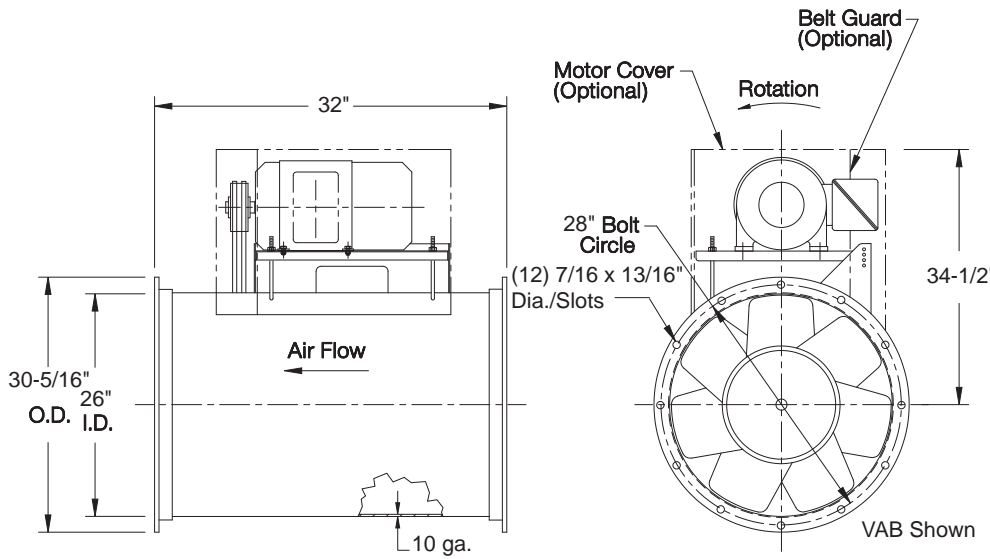
Sound Data - Page 23

VAHB Approx. Shipping Wt.-Lbs. - 450 (less motor)

VAB Approx. Shipping Wt.-Lbs. - 367 (less motor)

VAB Maximum RPM - 2541

VAHB Maximum RPM - 2874



26 VAB/VAHB

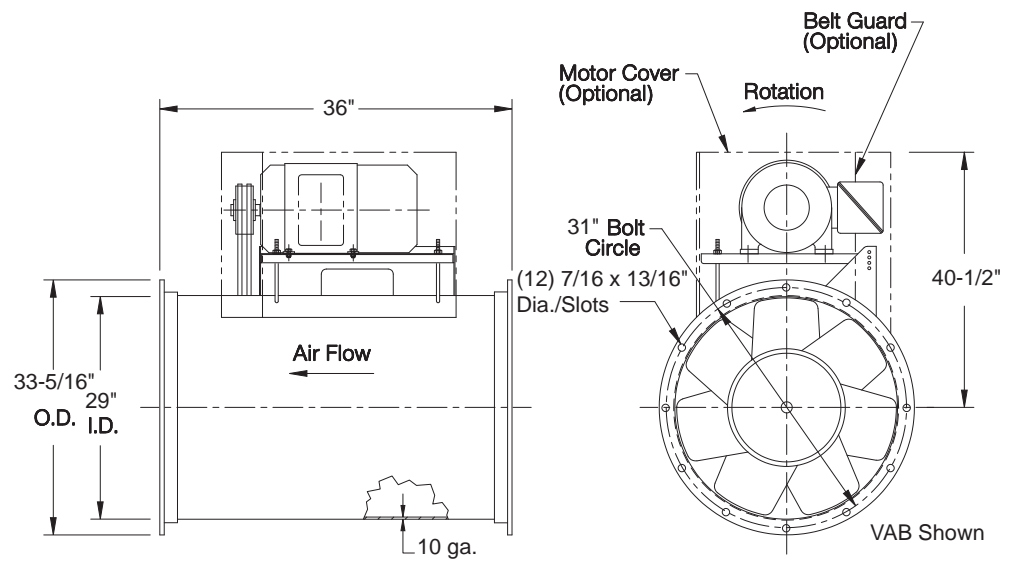
CFM	OV	0" SP		1/4" SP		1/2" SP		3/4" SP		1" SP		1-1/2" SP		2" SP		2-1/2" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
5200	1410	719	.32	807	.52	903	.77	983	1.04								
5700	1545	788	.42	869	.64	954	.90	1036	1.19	1104	1.48						
6200	1681	858	.54	933	.78	1007	1.04	1088	1.36	1156	1.68						
6700	1817	927	.68	997	.93	1063	1.21	1139	1.54	1209	1.89	1324	2.58				
7200	1952	996	.85	1063	1.12	1123	1.40	1191	1.74	1261	2.12	1374	2.85				
7700	2088	1065	1.04	1127	1.32	1185	1.63	1245	1.96	1312	2.36	1427	3.15	1525	3.94		
8200	2224	1134	1.25	1195	1.56	1246	1.87	1302	2.22	1363	2.61	1480	3.47	1575	4.30		
8700	2359	1203	1.49	1261	1.83	1311	2.15	1361	2.50	1417	2.91	1532	3.80	1628	4.69	1713	5.58
9200	2495	1273	1.77	1327	2.12	1374	2.45	1422	2.82	1472	3.22	1583	4.16	1681	5.11	1764	6.03
9700	2630	1342	2.07	1393	2.43	1440	2.80	1484	3.18	1530	3.58	1634	4.53	1734	5.55	1817	6.53
10200	2766	1411	2.41	1462	2.80	1505	3.18	1547	3.57	1590	3.98	1686	4.93	1785	6.00	1870	7.04
10700	2902	1480	2.78	1530	3.20	1570	3.58	1611	3.99	1651	4.41	1740	5.38	1835	6.46	1923	7.59
11200	3037	1549	3.18	1598	3.64	1636	4.03	1675	4.45	1714	4.90	1796	5.86	1886	6.97	1975	8.15
11700	3173	1618	3.63	1665	4.11	1703	4.52	1740	4.96	1776	5.40	1852	6.37	1938	7.50	2026	8.73
12200	3308	1688	4.12	1733	4.62	1770	5.06	1806	5.51	1841	5.97	1913	6.96	1992	8.09	2076	9.33
12700	3444	1757	4.65	1799	5.15	1836	5.62	1871	6.09	1904	6.56	1972	7.57	2046	8.70	2128	9.98
13200	3580	1826	5.22	1866	5.73	1902	6.22	1935	6.70	1968	7.20	2035	8.25	2104	9.39	2180	10.70
13700	3715	1895	5.83	1933	6.35	1968	6.86	2002	7.39	2034	7.90	2097	8.97	2162	10.10	2234	11.40
14200	3851	1964	6.49	2001	7.03	2036	7.58	2069	8.12	2100	8.65	2158	9.70	2222	10.90	2288	12.20
14700	3986	2033	7.20	2069	7.76	2105	8.36	2136	8.90	2165	9.43	2223	10.50	2282	11.70	2346	13.00
15200	4122	2103	7.97	2137	8.54	2173	9.18	2202	9.72	2229	10.20	2287	11.40	2344	12.60	2403	13.90
15700	4258	2172	8.78	2205	9.37	2241	10.00	2268	10.60	2295	11.10	2351	12.30	2407	13.60	2463	14.90
16200	4393	2241	9.64	2273	10.30	2308	11.00	2334	11.50	2362	12.10	2415	13.30	2468	14.50	2523	15.90
16700	4529	2310	10.60	2341	11.20	2376	11.90	2399	12.40	2429	13.10	2481	14.40	2532	15.60	2584	17.00
17200	4665	2379	11.50	2410	12.20	2443	12.90	2468	13.50	2496	14.20	2547	15.50	2596	16.80	2647	18.10
17700	4800	2448	12.60	2478	13.20	2510	14.00	2536	14.60	2562	15.30	2612	16.60	2660	17.90	2709	19.30
18200	4936	2517	13.70	2547	14.40	2577	15.10	2605	15.80	2628	16.50	2677	17.80	2724	19.20	2770	20.60
18700	5071	2587	14.80	2615	15.50	2643	16.30	2673	17.10	2694	17.70	2741	19.00	2787	20.40	2834	21.90
19200	5207	2656	16.10	2683	16.80	2710	17.50	2740	18.40	2759	18.90	2807	20.40	2854	21.90		
19700	5343	2725	17.30	2752	18.10	2778	18.80	2808	19.70	2828	20.30	2874	21.80				

CFM	OV	3" SP		3-1/2" SP		4" SP		4-1/2" SP		5" SP		5-1/2" SP		6" SP		6-1/2" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
9200	2495	1847	7.02														
9700	2630	1894	7.52														
10200	2766	1945	8.07	2019	9.14												
10700	2902	1998	8.67	2068	9.75	2139	10.90										
11200	3037	2051	9.29	2120	10.40	2187	11.60	2255	12.80								
11700	3173	2104	9.94	2174	11.10	2238	12.30	2302	13.50								
12200	3308	2156	10.60	2227	11.90	2290	13.10	2352	14.30	2414	15.60						
12700	3444	2207	11.30	2279	12.60	2344	13.90	2404	15.20	2463	16.50	2523	17.90				
13200	3580	2258	12.00	2331	13.40	2397	14.80	2457	16.10	2515	17.40	2572	18.80	2629	20.20		
13700	3715	2308	12.80	2382	14.20	2450	15.70	2511	17.00	2567	18.40	2622	19.80	2677	21.20		
14200	3851	2361	13.60	2433	15.10	2501	16.50	2564	18.00	2621	19.50	2675	20.90				
14700	3986	2413	14.40	2484	15.90	2552	17.50	2616	19.00	2674	20.50	2728	22.00				
15200	4122	2468	15.30	2536	16.90	2603	18.40	2667	20.00	2727	21.60						
15700	4258	2523	16.30	2587	17.80	2654	19.40	2718	21.10								
16200	4393	2581	17.30	2642	18.90	2705	20.50										
16700	4529	2638	18.40	2696	19.90	2757	21.60										
17200	4665	2699	19.60	2753	21.10												
17700	4800	2758	20.80														

Performance shown is for Installation Type D: ducted inlet, ducted outlet. Power rating (BHP) includes drive losses. Performance ratings do not include the effects of appurtenances in the airstream. Shaded areas require VAHB fan construction.

29 VAB/VAHB Data

- Prop Diameter - 28.81"
- VAHB Maximum Frame - 286T
- VAB Maximum Frame - 284T
- Tip Speed (FPM) = 7.54 x RPM
- Sound Data - Page 23
- VAHB Approx. Shipping Wt.-Lbs. - 692 (less motor)
- VAB Approx. Shipping Wt.-Lbs. - 499 (less motor)
- VAB Maximum RPM - 2276
- VAHB Maximum RPM - 2547



29 VAB/VAHB

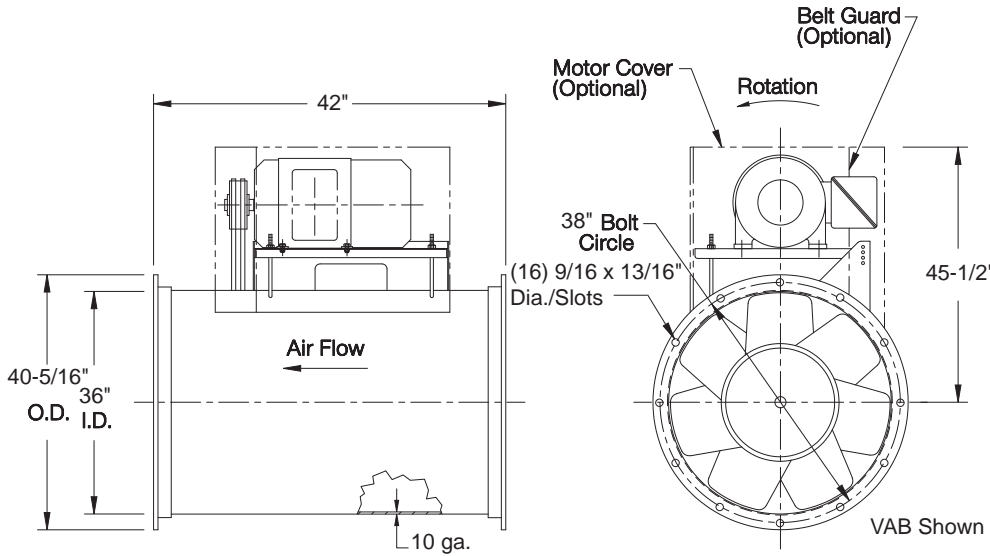
CFM	OV	0" SP		1/4" SP		1/2" SP		3/4" SP		1" SP		1-1/2" SP		2" SP		2-1/2" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
6800	1482	666	.47	738	.75	809	1.07	882	1.42	955	1.83						
7450	1624	729	.61	795	.92	859	1.26	927	1.63	993	2.04						
8100	1765	793	.79	853	1.12	913	1.48	974	1.87	1035	2.29	1157	3.26				
8750	1907	857	.99	912	1.35	968	1.73	1023	2.14	1081	2.58	1194	3.56				
9400	2049	920	1.23	971	1.62	1024	2.01	1075	2.45	1128	2.91	1234	3.90	1338	5.05		
10050	2191	984	1.50	1031	1.92	1081	2.34	1129	2.79	1177	3.26	1277	4.29	1375	5.45	1471	6.73
10700	2332	1048	1.82	1092	2.26	1139	2.70	1184	3.17	1229	3.67	1323	4.73	1415	5.90	1507	7.20
11350	2474	1111	2.16	1152	2.64	1197	3.10	1240	3.59	1282	4.10	1369	5.20	1457	6.39	1544	7.70
12000	2616	1175	2.56	1214	3.07	1255	3.54	1297	4.06	1337	4.59	1418	5.74	1502	6.94	1584	8.27
12650	2757	1238	2.99	1275	3.53	1314	4.04	1354	4.57	1393	5.13	1469	6.31	1548	7.55	1626	8.88
13300	2899	1302	3.48	1337	4.04	1374	4.59	1412	5.13	1449	5.71	1521	6.93	1595	8.21	1671	9.57
13950	3041	1366	4.02	1399	4.61	1434	5.18	1470	5.74	1506	6.34	1575	7.60	1644	8.93	1717	10.30
14600	3182	1429	4.61	1461	5.23	1494	5.82	1529	6.42	1563	7.02	1629	8.32	1695	9.70	1764	11.10
15250	3324	1493	5.25	1523	5.89	1555	6.53	1588	7.14	1621	7.78	1685	9.11	1748	10.50	1812	12.00
15900	3466	1557	5.96	1586	6.63	1615	7.27	1647	7.92	1679	8.57	1740	9.94	1800	11.40	1862	12.90
16550	3608	1620	6.71	1648	7.41	1677	8.11	1706	8.76	1737	9.43	1797	10.80	1855	12.30	1913	13.90
17200	3749	1684	7.54	1711	8.27	1738	8.98	1767	9.68	1796	10.40	1854	11.80	1910	13.30	1966	15.00
17850	3891	1748	8.43	1773	9.17	1800	9.93	1827	10.70	1855	11.40	1912	12.90	1966	14.40	2019	16.10
18500	4033	1811	9.38	1836	10.20	1861	10.90	1888	11.70	1915	12.40	1970	14.00	2022	15.60	2074	17.30
19150	4174	1875	10.40	1899	11.20	1923	12.00	1948	12.80	1974	13.60	2028	15.20	2079	16.80	2128	18.50
19800	4316	1938	11.50	1962	12.30	1985	13.20	2009	14.00	2035	14.80	2085	16.40	2136	18.10	2185	19.80
20450	4458	2002	12.70	2025	13.50	2048	14.40	2071	15.30	2094	16.10	2144	17.70	2193	19.40	2240	21.20
21100	4600	2066	13.90	2088	14.80	2110	15.70	2132	16.60	2155	17.40	2203	19.10	2251	20.90	2297	22.70
21750	4741	2129	15.20	2151	16.20	2172	17.10	2193	18.00	2216	18.90	2262	20.60	2309	22.40	2354	24.30
22400	4883	2193	16.60	2214	17.60	2234	18.50	2255	19.50	2276	20.40	2321	22.20	2367	24.00	2411	25.90
23050	5025	2257	18.10	2277	19.10	2297	20.10	2317	21.10	2338	22.00	2381	23.90	2425	25.70		
23700	5166	2320	19.70	2341	20.80	2360	21.70	2379	22.70	2399	23.70	2441	25.60	2483	27.50		
24350	5308	2384	21.40	2404	22.50	2422	23.40	2441	24.50	2461	25.50	2501	27.50				
25000	5450	2447	23.10	2467	24.30	2484	25.20	2503	26.30	2522	27.30						
25650	5592	2511	25.00	2531	26.20	2547	27.20										

CFM	OV	3" SP		3-1/2" SP		4" SP		4-1/2" SP		5" SP		5-1/2" SP		6" SP		6-1/2" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
12650	2757	1705	10.40	1782	11.90	1857	13.50										
13300	2899	1745	11.00	1820	12.60	1893	14.30	1963	16.00								
13950	3041	1788	11.80	1859	13.40	1930	15.10	1999	16.80	2066	18.70						
14600	3182	1833	12.60	1900	14.20	1968	15.90	2036	17.70	2101	19.60	2165	21.50				
15250	3324	1879	13.50	1944	15.10	2008	16.80	2073	18.60	2138	20.50	2200	22.50	2261	24.50		
15900	3466	1926	14.50	1989	16.10	2051	17.80	2113	19.70	2175	21.60	2237	23.50	2297	25.60		
16550	3608	1973	15.50	2035	17.20	2095	18.90	2154	20.70	2214	22.60	2274	24.60	2333	26.70		
17200	3749	2023	16.60	2082	18.30	2141	20.10	2198	21.90	2255	23.80	2312	25.80				
17850	3891	2074	17.80	2130	19.50	2187	21.30	2243	23.10	2297	25.10	2352	27.10				
18500	4033	2126	19.00	2179	20.80	2234	22.60	2289	24.50	2342	26.40						
19150	4174	2179	20.30	2230	22.10	2282	24.00	2335	25.90								
19800	4316	2233	21.70	2281	23.50	2331	25.40	2382	27.40								
20450	4458	2287	23.10	2335	25.00	2382	27.00										

Performance shown is for Installation Type D: ducted inlet, ducted outlet. Power rating (BHP) includes drive losses. Performance ratings do not include the effects of appurtenances in the airstream. Shaded areas require VAHB fan construction.

Data **VAB/VAHB 36**

- Prop Diameter - 35.81"**
- VAHB Maximum Frame - 326T**
- VAB Maximum Frame - 286T**
- Tip Speed (FPM) = 9.38 x RPM**
- Sound Data - Page 23**
- VAHB Approx. Shipping Wt.-Lbs. - 906 (less motor)**
- VAB Approx. Shipping Wt.-Lbs. - 738 (less motor)**
- VAB Maximum RPM - 1831**
- VAHB Maximum RPM - 2180**



36 VAB/VAHB

CFM	OV	0" SP		1/4" SP		1/2" SP		3/4" SP		1" SP		1-1/2" SP		2" SP		2-1/2" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
10000	1414	511	.58	581	.98	641	1.44	696	1.96	749	2.52						
11000	1556	562	.77	627	1.21	682	1.68	734	2.23	783	2.82						
12000	1697	613	1.00	674	1.48	725	1.98	775	2.56	821	3.17						
13000	1839	665	1.28	721	1.79	770	2.32	816	2.91	860	3.56	943	4.97				
14000	1980	716	1.59	769	2.14	815	2.71	858	3.32	900	3.99	979	5.46				
15000	2122	767	1.96	817	2.55	861	3.15	902	3.79	941	4.47	1017	5.99	1088	7.64		
16000	2263	818	2.38	866	3.01	907	3.64	946	4.30	984	5.02	1056	6.58	1124	8.28	1191	10.10
17000	2405	869	2.85	915	3.53	954	4.19	992	4.89	1027	5.62	1097	7.24	1162	8.99	1225	10.90
18000	2546	920	3.38	964	4.11	1001	4.79	1037	5.52	1072	6.30	1138	7.95	1201	9.76	1261	11.70
19000	2687	971	3.98	1012	4.73	1049	5.47	1083	6.23	1116	7.02	1180	8.73	1241	10.60	1299	12.60
20000	2829	1022	4.64	1061	5.42	1097	6.22	1129	6.99	1162	7.83	1222	9.56	1281	11.50	1338	13.50
21000	2970	1074	5.38	1110	6.18	1145	7.02	1177	7.86	1207	8.69	1266	10.50	1323	12.50	1377	14.50
22000	3112	1125	6.19	1160	7.04	1193	7.90	1224	8.77	1254	9.66	1310	11.50	1365	13.50	1418	15.60
23000	3253	1176	7.07	1210	7.96	1242	8.87	1271	9.75	1300	10.70	1354	12.60	1407	14.60	1459	16.80
24000	3395	1227	8.03	1259	8.94	1292	9.95	1320	10.90	1347	11.80	1400	13.80	1451	15.80	1501	18.10
25000	3536	1278	9.07	1310	10.10	1341	11.10	1368	12.00	1395	13.00	1445	15.00	1495	17.20	1543	19.40
26000	3678	1329	10.20	1360	11.20	1389	12.30	1416	13.30	1441	14.30	1492	16.40	1539	18.50	1586	20.90
27000	3819	1380	11.40	1410	12.50	1437	13.50	1464	14.60	1490	15.70	1538	17.80	1584	20.00	1629	22.40
28000	3961	1431	12.70	1460	13.80	1487	14.90	1513	16.10	1538	17.20	1584	19.30	1630	21.70	1674	24.10
29000	4102	1482	14.10	1510	15.30	1536	16.40	1563	17.60	1586	18.70	1632	21.00	1675	23.30	1718	25.80
30000	4244	1534	15.70	1561	16.90	1585	18.00	1612	19.30	1634	20.40	1679	22.80	1722	25.20	1763	27.70
31000	4385	1585	17.30	1611	18.50	1635	19.70	1660	21.00	1681	22.10	1726	24.60	1768	27.10	1809	29.70
32000	4527	1636	19.00	1661	20.30	1685	21.50	1709	22.80	1731	24.10	1773	26.50	1814	29.10	1854	31.70
33000	4668	1687	20.90	1711	22.10	1734	23.40	1757	24.70	1780	26.10	1821	28.60	1861	31.20	1899	33.90
34000	4810	1738	22.80	1762	24.20	1784	25.40	1806	26.80	1830	28.30	1870	30.90	1908	33.50	1946	36.30
35000	4951	1789	24.90	1812	26.30	1834	27.60	1856	29.00	1879	30.50	1918	33.20	1956	35.90	1993	38.70
36000	5092	1840	27.10	1863	28.50	1884	29.90	1905	31.30	1927	32.80	1966	35.60	2003	38.40	2038	41.20
37000	5234	1891	29.40	1914	30.90	1934	32.30	1954	33.70	1976	35.30	2013	38.10	2049	40.90	2085	43.90
38000	5375	1943	31.90	1965	33.40	1984	34.80	2004	36.30	2024	37.80	2061	40.70	2098	43.80	2133	46.80
39000	5517	1994	34.40	2016	36.10	2034	37.50	2054	39.00	2073	40.50	2111	43.70	2146	46.70	2180	49.80

CFM	OV	3" SP		3-1/2" SP		4" SP		4-1/2" SP		5" SP		5-1/2" SP		6" SP		6-1/2" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
21000	2970	1430	16.70	1481	19.00	1531	21.30										
22000	3112	1469	17.90	1519	20.20	1567	22.60	1614	25.10								
23000	3253	1509	19.10	1557	21.50	1604	24.00	1650	26.50	1695	29.10						
24000	3395	1549	20.40	1596	22.80	1641	25.30	1686	28.00	1731	30.70	1774	33.40				
25000	3536	1590	21.80	1636	24.30	1681	26.90	1724	29.50	1766	32.20	1809	35.10	1851	37.90		
26000	3678	1631	23.30	1676	25.80	1720	28.50	1762	31.20	1804	34.00	1844	36.80	1885	39.70	1926	42.70
27000	3819	1674	24.90	1717	27.50	1760	30.20	1801	32.90	1842	35.80	1882	38.70	1921	41.60	1960	44.70
28000	3961	1716	26.50	1759	29.20	1800	31.90	1841	34.80	1881	37.70	1920	40.60	1958	43.70	1996	46.80
29000	4102	1760	28.40	1801	31.00	1842	33.90	1881	36.70	1920	39.60	1958	42.70	1996	45.80	2033	48.90
30000	4244	1803	30.20	1843	33.00	1883	35.80	1922	38.70	1960	41.70	1997	44.80	2034	48.00	2071	51.20
31000	4385	1848	32.30	1887	35.10	1925	37.90	1963	40.90	2001	44.00	2037	47.10	2073	50.30	2109	53.60
32000	4527	1892	34.40	1930	37.20	1967	40.10	2005	43.20	2041	46.20	2078	49.50	2113	52.70		
33000	4668	1937	36.70	1975	39.60	2011	42.50	2047	45.50	2083	48.70	2118	51.90				
34000	4810	1983	39.10	2019	42.00	2054	44.90	2089	48.00	2125	51.30	2159	54.50				
35000	4951	2028	41.60	2063	44.50	2098	47.50	2133	50.70	2167	53.90						
36000	5092	2074	44.20	2109	47.20	2143	50.30	2176	53.40								

Performance shown is for Installation Type D: ducted inlet, ducted outlet. Power rating (BHP) includes drive losses. Performance ratings do not include the effects of appurtenances in the airstream. Shaded areas require VAHB fan construction.

42 VAB/VAHB Data

Prop Diameter - 41.81"

VAHB Maximum Frame - 364T

VAB Maximum Frame - 326T

Tip Speed (FPM) = 10.95 x RPM

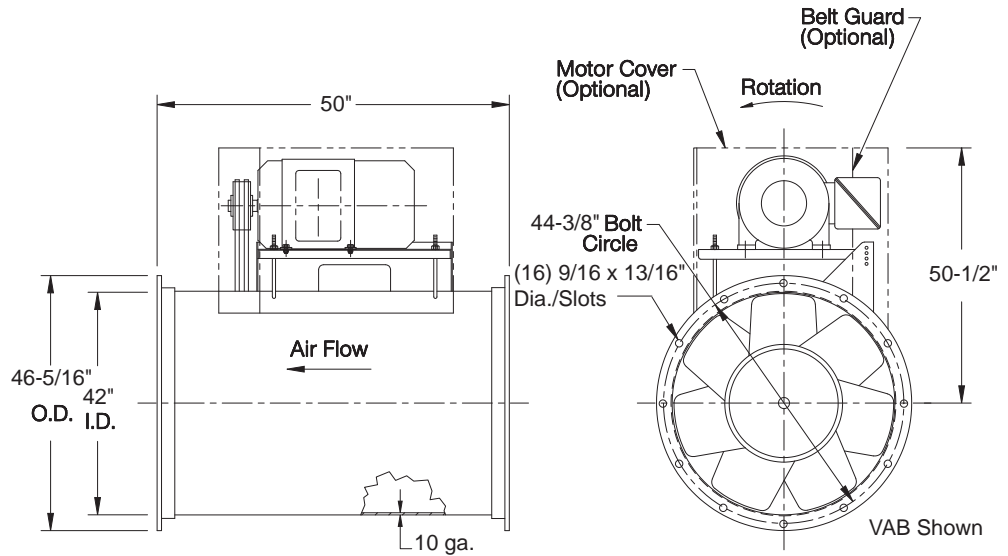
Sound Data - Page 23

VAHB Approx. Shipping Wt.-Lbs. - 1286 (less motor)

VAB Approx. Shipping Wt.-Lbs. - 969 (less motor)

VAB Maximum RPM - 1569

VAHB Maximum RPM - 1879



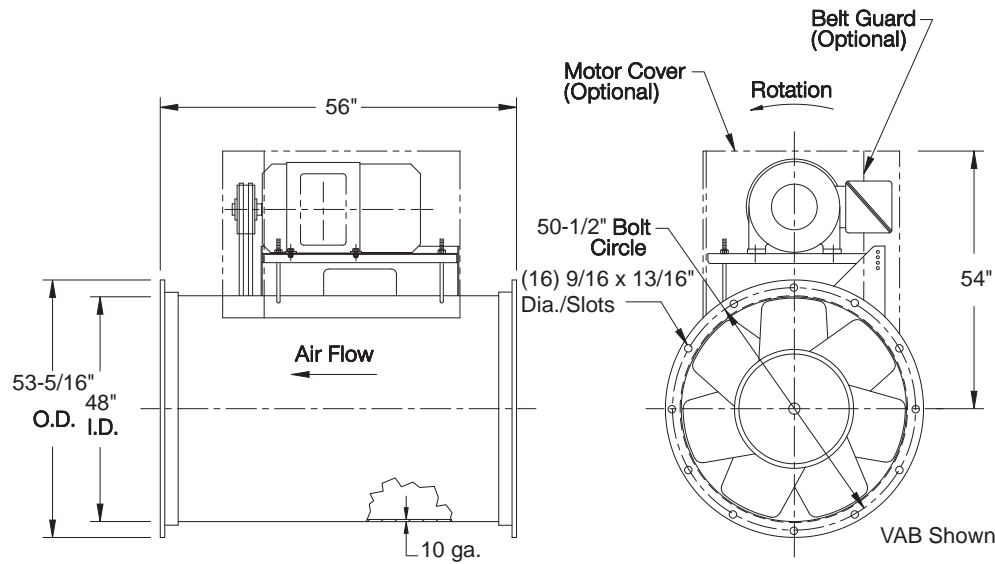
42 VAB/VAHB

CFM	OV	0" SP		1/4" SP		1/2" SP		3/4" SP		1" SP		1-1/2" SP		2" SP		2-1/2" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
14500	1507	466	.95	523	1.53	571	2.16	617	2.90	660	3.69						
16000	1663	514	1.28	566	1.90	612	2.59	654	3.35	695	4.20						
17500	1818	562	1.67	611	2.36	653	3.08	693	3.88	731	4.76	803	6.68				
19000	1974	610	2.14	656	2.89	696	3.66	733	4.49	769	5.40	837	7.40				
20500	2130	658	2.68	701	3.49	739	4.31	774	5.18	808	6.13	873	8.21	933	10.40		
22000	2286	707	3.33	747	4.19	782	5.04	816	5.97	848	6.95	910	9.10	968	11.40	1024	13.90
23500	2442	755	4.05	794	5.00	827	5.90	859	6.87	889	7.87	948	10.10	1003	12.50	1057	15.10
25000	2598	803	4.88	839	5.86	871	6.83	902	7.85	931	8.90	987	11.20	1040	13.70	1092	16.30
26500	2754	851	5.80	885	6.83	917	7.90	945	8.93	973	10.00	1026	12.40	1078	14.90	1127	17.70
28000	2910	899	6.84	932	7.95	962	9.06	990	10.20	1016	11.30	1067	13.70	1117	16.40	1164	19.10
29500	3066	948	8.02	978	9.15	1007	10.30	1034	11.50	1060	12.70	1109	15.20	1156	17.90	1202	20.70
31000	3222	996	9.31	1025	10.50	1053	11.70	1078	12.90	1103	14.20	1150	16.70	1196	19.50	1241	22.50
32500	3377	1044	10.70	1072	12.00	1100	13.30	1124	14.50	1148	15.80	1193	18.50	1237	21.30	1280	24.30
34000	3533	1092	12.30	1119	13.60	1146	15.00	1170	16.30	1192	17.60	1236	20.40	1279	23.30	1320	26.40
35500	3689	1140	14.00	1166	15.30	1192	16.80	1215	18.20	1236	19.50	1280	22.40	1320	25.40	1360	28.50
37000	3845	1188	15.80	1213	17.20	1237	18.70	1260	20.20	1282	21.60	1323	24.60	1363	27.70	1401	30.80
38500	4001	1237	17.80	1261	19.30	1284	20.80	1307	22.40	1328	23.90	1366	26.80	1406	30.10	1443	33.40
40000	4157	1285	20.00	1308	21.50	1330	23.10	1353	24.80	1373	26.30	1412	29.50	1448	32.60	1485	36.00
41500	4313	1333	22.30	1356	24.00	1377	25.50	1399	27.30	1418	28.80	1456	32.10	1492	35.40	1527	38.90
43000	4469	1381	24.80	1403	26.50	1424	28.20	1445	30.00	1463	31.50	1500	34.90	1536	38.40	1570	41.90
44500	4625	1429	27.50	1451	29.30	1471	31.00	1490	32.70	1510	34.60	1545	37.90	1579	41.40	1613	45.10
46000	4781	1478	30.40	1498	32.20	1517	33.90	1536	35.70	1556	37.70	1591	41.30	1624	44.80	1657	48.60
47500	4937	1526	33.50	1545	35.30	1564	37.10	1583	39.00	1603	41.10	1636	44.70	1669	48.40	1701	52.30
49000	5092	1574	36.70	1593	38.60	1612	40.60	1629	42.40	1649	44.60	1682	48.30	1713	52.10	1744	56.00
50500	5248	1622	40.20	1641	42.20	1659	44.20	1676	46.10	1694	48.20	1726	52.00	1757	55.90	1788	60.00
52000	5404	1670	43.90	1689	46.00	1706	48.00	1723	50.00	1740	52.00	1771	56.00	1803	60.20	1833	64.40
53500	5560	1718	47.80	1737	50.00	1753	52.00	1770	54.10	1786	56.10	1818	60.40	1849	64.70		
55000	5716	1767	52.00	1785	54.20	1800	56.20	1817	58.40	1832	60.50	1865	65.00				
56500	5872	1815	56.30	1833	58.70	1848	60.70	1863	62.80	1879	65.10						

CFM	OV	3" SP		3-1/2" SP		4" SP		4-1/2" SP		5" SP		5-1/2" SP		6" SP		6-1/2" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
28000	2910	1210	22.10	1254	25.10	1298	28.30										
29500	3066	1246	23.80	1290	27.00	1331	30.20	1373	33.60								
31000	3222	1284	25.60	1325	28.80	1366	32.20	1406	35.60	1446	39.20						
32500	3377	1322	27.60	1362	30.80	1401	34.20	1439	37.70	1478	41.50	1516	45.20				
34000	3533	1360	29.60	1399	33.00	1438	36.50	1475	40.10	1511	43.80	1548	47.70	1584	51.60		
35500	3689	1399	31.80	1438	35.30	1475	38.90	1511	42.60	1547	46.40	1581	50.20	1617	54.30	1651	58.40
37000	3845	1439	34.20	1476	37.80	1513	41.50	1548	45.20	1583	49.10	1617	53.10	1650	57.10	1684	61.40
38500	4001	1479	36.80	1515	40.40	1551	44.10	1585	48.00	1619	51.90	1652	56.00	1686	60.30	1717	64.40
40000	4157	1520	39.50	1555	43.20	1590	47.00	1624	51.00	1657	55.00	1689	59.10	1721	63.40		
41500	4313	1562	42.50	1596	46.20	1629	50.10	1662	54.10	1695	58.30	1726	62.40				
43000	4469	1604	45.60	1637	49.40	1669	53.30	1701	57.40	1732	61.50	1764	65.90				
44500	4625	1645	48.80	1678	52.80	1710	56.80	1741	60.90	1772	65.20						
46000	4781	1689	52.50	1720	56.40	1750	60.40	1781	64.60								
47500	4937	1731	56.10	1761	60.00	1792	64.30										

Performance shown is for Installation Type D: ducted inlet, ducted outlet. Power rating (BHP) includes drive losses. Performance ratings do not include the effects of appurtenances in the airstream. Shaded areas require VAHB fan construction.

Data VAB/VAHB 48



- Prop Diameter - 47.75"
- VAHB Maximum Frame - 365T
- VAB Maximum Frame - 364T
- Tip Speed (FPM) = 12.50 x RPM
- Sound Data - Page 24
- VAHB Approx. Shipping Wt.-Lbs. - 1759 (less motor)
- VAB Approx. Shipping Wt.-Lbs. - 1205 (less motor)
- VAB Maximum RPM - 1373
- VAHB Maximum RPM - 1582

48 VAB/VAHB

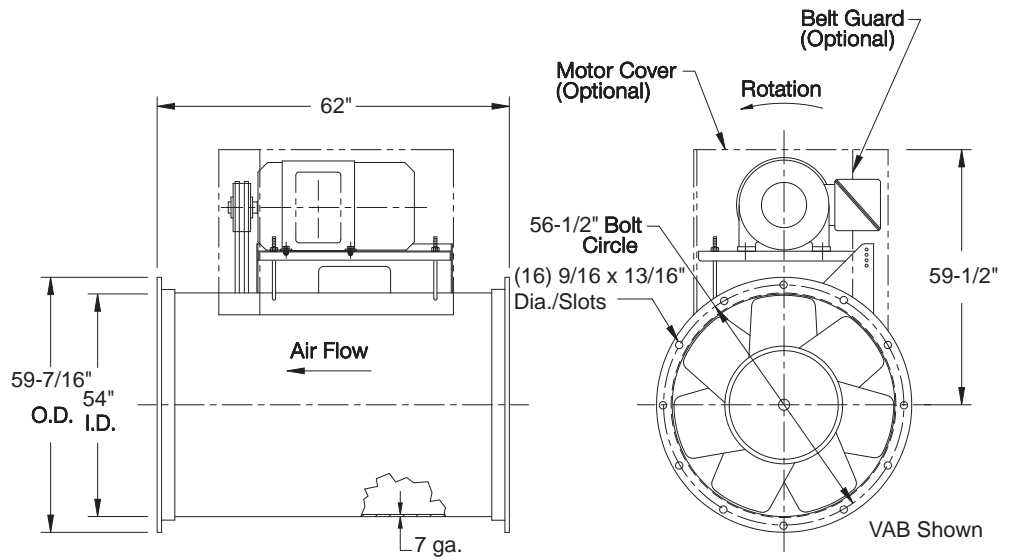
CFM	OV	0" SP		1/4" SP		1/2" SP		3/4" SP		1" SP		1-1/2" SP		2" SP		2-1/2" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
18700	1488	403	1.20	453	1.93	497	2.78	537	3.73	575	4.76						
20400	1623	440	1.56	487	2.36	527	3.24	565	4.23	601	5.31						
22100	1758	477	1.99	521	2.86	558	3.76	594	4.80	628	5.92	693	8.39				
23800	1893	513	2.47	555	3.42	590	4.37	624	5.44	657	6.63	717	9.14				
25500	2029	550	3.04	589	4.05	623	5.07	655	6.18	686	7.39	744	10.00	800	12.90		
27200	2164	587	3.70	623	4.75	656	5.85	686	6.98	716	8.25	772	11.00	824	13.90		
28900	2299	623	4.43	659	5.58	689	6.69	718	7.89	746	9.17	800	12.00	851	15.10	899	18.30
30600	2435	660	5.26	694	6.49	723	7.67	751	8.92	777	10.20	829	13.10	878	16.30	924	19.60
32300	2570	697	6.20	729	7.48	757	8.72	784	10.00	809	11.40	859	14.40	906	17.60	951	21.00
34000	2705	733	7.21	763	8.52	791	9.88	817	11.20	841	12.60	889	15.70	934	19.00	978	22.50
35700	2840	770	8.35	799	9.75	826	11.20	850	12.60	874	14.00	920	17.20	963	20.50	1006	24.20
37400	2976	807	9.62	834	11.00	860	12.50	884	14.00	907	15.50	950	18.70	993	22.20	1034	25.90
39100	3111	843	11.00	870	12.50	894	14.00	918	15.60	940	17.10	983	20.50	1024	24.00	1063	27.70
40800	3246	880	12.50	906	14.10	930	15.70	952	17.30	973	18.90	1014	22.20	1054	25.90	1093	29.80
42500	3382	917	14.10	941	15.70	965	17.50	987	19.10	1007	20.80	1047	24.30	1085	27.90	1122	31.80
44200	3517	953	15.80	977	17.60	1000	19.40	1021	21.10	1041	22.80	1079	26.30	1117	30.20	1153	34.20
45900	3652	990	17.80	1013	19.60	1035	21.40	1056	23.20	1075	25.00	1113	28.70	1149	32.60	1184	36.60
47600	3787	1027	19.80	1049	21.70	1070	23.50	1089	25.30	1109	27.30	1146	31.10	1181	35.10	1215	39.20
49300	3923	1063	22.00	1085	23.90	1105	25.80	1125	27.80	1144	29.80	1179	33.60	1213	37.70	1246	41.90
51000	4058	1100	24.40	1121	26.40	1140	28.30	1160	30.40	1178	32.40	1212	36.30	1246	40.60	1278	44.90
52700	4193	1137	26.90	1157	29.00	1176	31.00	1196	33.20	1213	35.20	1247	39.40	1279	43.60	1310	47.90
54400	4329	1173	29.50	1193	31.70	1211	33.80	1231	36.10	1247	38.10	1281	42.50	1312	46.80	1343	51.30
56100	4464	1210	32.40	1229	34.60	1247	36.80	1266	39.10	1282	41.20	1314	45.60	1345	50.10	1375	54.70
57800	4599	1247	35.50	1265	37.70	1283	40.00	1300	42.20	1317	44.60	1348	49.00	1378	53.50	1407	58.20
59500	4734	1283	38.60	1301	41.00	1318	43.30	1335	45.60	1353	48.20	1383	52.70	1412	57.40	1441	62.20
61200	4870	1320	42.10	1337	44.40	1354	46.80	1370	49.20	1388	51.90	1418	56.60	1447	61.50	1475	66.40
62900	5005	1357	45.70	1374	48.20	1390	50.60	1406	53.10	1423	55.80	1452	60.60	1480	65.50	1508	70.60
64600	5140	1393	49.50	1410	52.10	1426	54.60	1441	57.00	1458	59.80	1486	64.70	1514	69.80	1540	74.70
66300	5275	1430	53.50	1447	56.20	1462	58.70	1477	61.30	1492	63.90	1520	69.00	1547	74.10	1575	79.60
68000	5411	1467	57.80	1483	60.50	1498	63.10	1513	65.70	1527	68.30	1555	73.60	1582	79.00		

CFM	OV	3" SP		3-1/2" SP		4" SP		4-1/2" SP		5" SP		5-1/2" SP		6" SP		6-1/2" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
37400	2976	1074	29.80	1112	33.80	1150	38.10										
39100	3111	1102	31.80	1139	35.90	1175	40.20	1210	44.50								
40800	3246	1130	33.80	1166	38.00	1202	42.50	1236	47.00	1270	51.60						
42500	3382	1159	36.00	1194	40.30	1229	44.90	1262	49.40	1296	54.30	1329	59.20				
44200	3517	1188	38.40	1223	42.80	1257	47.50	1289	52.10	1321	56.90	1353	61.90	1385	67.00		
45900	3652	1218	40.90	1252	45.40	1285	50.10	1317	54.90	1348	59.80	1379	64.90	1409	70.00	1440	75.30
47600	3787	1248	43.50	1281	48.10	1313	52.90	1344	57.70	1375	62.80	1405	68.00	1435	73.30	1464	78.60
49300	3923	1279	46.40	1311	51.10	1342	55.90	1373	60.90	1403	66.00	1432	71.20	1461	76.60	1490	82.10
51000	4058	1310	49.40	1341	54.10	1372	59.10	1402	64.20	1431	69.40	1460	74.70	1488	80.10		
52700	4193	1341	52.60	1371	57.30	1401	62.30	1431	67.60	1459	72.80	1488	78.30				
54400	4329	1373	56.00	1402	60.80	1431	65.80	1460	71.10	1488	76.50	1516	82.00				
56100	4464	1405	59.60	1433	64.40	1462	69.60	1490	74.90	1517	80.30						
57800	4599	1436	63.10	1465	68.30	1493	73.50	1520	78.90								
59500	4734	1469	67.20	1497	72.40	1524	77.60										
61200	4870	1502	71.40	1528	76.40	1555	81.80										

Performance shown is for Installation Type D: ducted inlet, ducted outlet. Power rating (BHP) includes drive losses. Performance ratings do not include the effects of appurtenances in the airstream. Shaded areas require VAHB fan construction.

54 VAB/VAHB Data

- Prop Diameter - 53.75"
- VAHB Maximum Frame - 404T
- VAB Maximum Frame - 365T
- Tip Speed (FPM) = 14.07 x RPM
- Sound Data - Page 24
- VAHB Approx. Shipping Wt.-Lbs. - 1941 (less motor)
- VAB Approx. Shipping Wt.-Lbs. - 1861 (less motor)
- VAB Maximum RPM - 1220
- VAHB Maximum RPM - 1466



54 VAB/VAHB

CFM	OV	0" SP		1/4" SP		1/2" SP		3/4" SP		1" SP		1-1/2" SP		2" SP		2-1/2" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
24500	1540	370	1.67	414	2.65	451	3.72	486	4.94	519	6.27						
27000	1697	408	2.24	448	3.30	483	4.45	516	5.74	547	7.14						
29500	1854	446	2.93	483	4.08	516	5.31	546	6.63	576	8.12	631	11.30				
32000	2012	484	3.75	519	5.01	549	6.28	578	7.69	605	9.18	658	12.60	708	16.20		
34500	2169	522	4.70	554	6.03	583	7.41	610	8.87	636	10.40	686	13.90	733	17.70		
37000	2326	559	5.77	591	7.27	618	8.71	643	10.20	668	11.90	715	15.40	760	19.30	802	23.40
39500	2483	597	7.03	627	8.62	653	10.20	677	11.80	700	13.40	745	17.10	788	21.10	829	25.40
42000	2640	635	8.46	663	10.10	687	11.70	711	13.50	733	15.20	776	19.00	817	23.10	857	27.60
44500	2797	673	10.10	699	11.80	723	13.60	745	15.30	767	17.20	807	21.00	847	25.30	885	29.90
47000	2955	711	11.90	735	13.70	759	15.60	780	17.40	800	19.30	840	23.40	878	27.80	914	32.40
49500	3112	748	13.80	772	15.80	794	17.70	815	19.70	835	21.70	872	25.80	909	30.30	944	35.10
52000	3269	786	16.00	809	18.10	831	20.20	850	22.20	869	24.20	905	28.50	940	33.10	975	38.10
54500	3426	824	18.50	846	20.60	867	22.90	886	25.00	904	27.10	939	31.50	972	36.20	1006	41.30
57000	3583	862	21.20	883	23.40	903	25.70	921	27.90	939	30.10	972	34.60	1005	39.50	1037	44.70
59500	3741	900	24.10	920	26.40	939	28.80	957	31.10	973	33.30	1007	38.20	1038	43.10	1069	48.40
62000	3898	937	27.20	957	29.70	975	32.10	993	34.60	1010	37.10	1041	41.90	1072	47.10	1101	52.30
64500	4055	975	30.60	994	33.20	1011	35.60	1029	38.30	1045	40.80	1075	45.80	1105	51.10	1134	56.60
67000	4212	1013	34.40	1031	37.00	1048	39.60	1066	42.50	1081	45.00	1111	50.30	1139	55.60	1167	61.20
69500	4369	1051	38.40	1068	41.10	1085	43.80	1102	46.70	1116	49.20	1146	54.80	1174	60.40	1201	66.20
72000	4527	1089	42.70	1106	45.60	1121	48.20	1137	51.10	1152	54.00	1180	59.50	1208	65.40	1234	71.20
74500	4684	1126	47.20	1143	50.20	1158	53.00	1173	55.90	1189	59.10	1216	64.80	1242	70.60	1268	76.70
77000	4841	1164	52.10	1180	55.20	1195	58.20	1209	61.10	1225	64.50	1252	70.40	1277	76.40	1302	82.60
79500	4998	1202	57.40	1217	60.50	1232	63.60	1246	66.70	1261	70.10	1287	76.20	1312	82.40	1337	88.90
82000	5155	1240	63.00	1255	66.30	1269	69.40	1282	72.50	1297	76.00	1323	82.40	1347	88.70	1370	95.00
84500	5313	1278	69.00	1293	72.50	1306	75.60	1319	78.80	1333	82.30	1358	88.80	1382	95.40	1406	102.0
87000	5470	1315	75.20	1330	78.80	1343	82.10	1356	85.40	1368	88.60	1394	95.70	1418	103.0	1441	110.0
89500	5627	1353	81.90	1368	85.70	1380	88.90	1393	92.40	1405	95.80	1430	103.0	1454	110.0		
92000	5784	1391	89.00	1405	92.80	1417	96.20	1429	99.60	1442	103.0						
94500	5941	1429	96.40	1443	101.0	1455	104.0	1466	107.0								

CFM	OV	3" SP		3-1/2" SP		4" SP		4-1/2" SP		5" SP		5-1/2" SP		6" SP		6-1/2" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
47000	2955	949	37.20	983	42.30	1017	47.70										
49500	3112	978	40.10	1012	45.50	1044	50.90	1075	56.40								
52000	3269	1008	43.30	1040	48.70	1071	54.20	1102	60.00	1132	65.90						
54500	3426	1038	46.60	1069	52.10	1099	57.80	1129	63.70	1158	69.70	1187	76.00				
57000	3583	1068	50.10	1098	55.70	1128	61.60	1157	67.70	1185	73.80	1213	80.20	1240	86.60		
59500	3741	1099	53.90	1128	59.60	1157	65.60	1185	71.80	1213	78.20	1239	84.50	1266	91.20	1292	97.90
62000	3898	1130	57.90	1159	63.90	1187	70.00	1214	76.20	1241	82.70	1268	89.50	1293	96.10	1319	103.0
64500	4055	1162	62.30	1190	68.40	1217	74.60	1244	81.00	1270	87.60	1296	94.50	1321	101.0	1345	108.0
67000	4212	1194	67.00	1221	73.10	1248	79.50	1274	86.10	1299	92.70	1324	99.60	1349	107.0		
69500	4369	1227	72.00	1253	78.20	1279	84.70	1304	91.30	1329	98.20	1354	105.0				
72000	4527	1260	77.30	1285	83.60	1310	90.10	1335	97.00	1359	104.0						
74500	4684	1293	82.90	1318	89.50	1342	96.00	1366	103.0	1390	110.0						
77000	4841	1327	89.00	1351	95.60	1374	102.0	1398	109.0								
79500	4998	1360	95.20	1384	102.0	1407	109.0										

Performance shown is for Installation Type D: ducted inlet, ducted outlet. Power rating (BHP) includes drive losses. Performance ratings do not include the effects of appurtenances in the airstream. Shaded areas require VAHB fan construction.

Data **VAB/VAHB 60**

Prop Diameter - 59.75"

VAHB Maximum Frame - 444T

VAB Maximum Frame - 405T

Tip Speed (FPM) = 15.64 x RPM

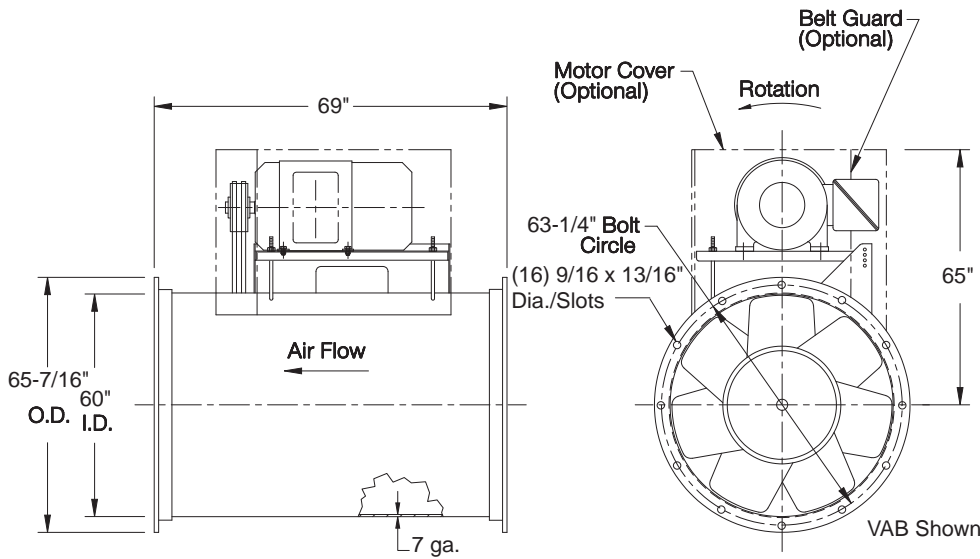
Sound Data - Page 24

VAHB Approx. Shipping Wt.-Lbs. - 2218 (less motor)

VAB Approx. Shipping Wt.-Lbs. - 2057 (less motor)

VAB Maximum RPM - 1098

VAHB Maximum RPM - 1266



60 VAB/VAHB

CFM	OV	0" SP		1/4" SP		1/2" SP		3/4" SP		1" SP		1-1/2" SP		2" SP		2-1/2" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
29000	1476	318	1.95	353	3.15	388	4.52	424	6.06	459	7.80						
32000	1629	351	2.62	383	3.95	414	5.39	447	7.00	479	8.78						
35000	1782	384	3.43	413	4.87	442	6.43	471	8.11	501	9.93	559	14.10				
38000	1935	417	4.39	443	5.94	470	7.57	497	9.39	524	11.20	578	15.50	630	20.30		
41000	2088	450	5.51	474	7.20	500	8.96	524	10.80	549	12.80	599	17.10	649	22.00		
44000	2240	483	6.82	505	8.63	529	10.50	552	12.40	575	14.50	622	18.90	668	23.90	714	29.50
47000	2393	516	8.31	537	10.30	559	12.20	581	14.30	602	16.40	646	21.00	689	26.00	733	31.70
50000	2546	549	10.00	568	12.10	589	14.10	610	16.30	630	18.60	670	23.30	712	28.50	753	34.20
53000	2699	582	11.90	600	14.10	620	16.30	639	18.50	658	20.90	696	25.90	736	31.20	774	36.90
56000	2852	615	14.10	632	16.40	650	18.70	669	21.00	687	23.40	723	28.70	760	34.10	797	39.90
59000	3004	648	16.50	664	18.90	681	21.30	699	23.70	717	26.30	750	31.60	785	37.40	820	43.20
62000	3157	681	19.10	696	21.70	712	24.20	729	26.70	746	29.30	778	34.90	811	40.80	844	46.80
65000	3310	714	22.00	728	24.70	744	27.40	760	30.10	776	32.70	807	38.50	838	44.60	869	50.80
68000	3463	746	25.10	761	28.10	775	30.80	790	33.50	806	36.40	836	42.30	865	48.50	895	55.10
71000	3615	779	28.60	793	31.70	807	34.60	821	37.40	836	40.30	865	46.40	893	52.80	921	59.50
74000	3768	812	32.40	825	35.50	839	38.70	852	41.60	866	44.50	895	50.90	921	57.30	949	64.50
77000	3921	845	36.50	858	39.80	870	43.00	883	46.10	897	49.20	924	55.60	950	62.40	976	69.50
80000	4074	878	40.90	890	44.30	902	47.70	915	51.00	928	54.20	954	60.80	979	67.60	1004	74.90
83000	4227	911	45.70	923	49.30	934	52.70	946	56.10	959	59.60	984	66.30	1009	73.50	1033	80.90
86000	4379	944	50.90	956	54.70	966	58.10	978	61.70	990	65.20	1014	72.10	1038	79.40	1062	87.10
89000	4532	977	56.40	988	60.20	999	64.00	1010	67.70	1021	71.20	1045	78.50	1068	85.90	1090	93.40
92000	4685	1010	62.30	1020	66.10	1031	70.10	1041	73.80	1053	77.80	1075	85.00	1098	92.80	1120	101.0
95000	4838	1043	68.60	1053	72.60	1063	76.60	1073	80.50	1084	84.50	1106	92.20	1128	100.0	1150	108.0
98000	4991	1076	75.40	1086	79.60	1096	83.80	1105	87.60	1115	91.60	1137	99.70	1158	108.0	1179	116.0
101000	5143	1109	82.50	1119	87.00	1128	91.10	1137	95.10	1147	99.40	1167	107.0	1188	116.0	1209	124.0
104000	5296	1142	90.10	1151	94.60	1160	98.80	1169	103.0	1179	108.0	1199	116.0	1219	124.0	1239	133.0
107000	5449	1175	98.10	1184	103.0	1193	107.0	1202	112.0	1211	116.0	1230	125.0	1249	133.0		
110000	5602	1208	107.0	1217	112.0	1225	116.0	1234	121.0	1243	125.0	1261	134.0				
113000	5755	1240	115.0	1250	121.0	1258	125.0	1266	130.0	1275	135.0						
116000	5907	1273	125.0	1282	130.0	1290	135.0										

CFM	OV	3" SP		3-1/2" SP		4" SP		4-1/2" SP		5" SP		5-1/2" SP		6" SP		6-1/2" SP	
		RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP	RPM	BHP
56000	2852	833	46.10	870	53.00	905	59.90										
59000	3004	855	49.60	890	56.40	924	63.50	958	71.10								
62000	3157	878	53.30	911	60.20	944	67.40	977	75.10	1008	82.90						
65000	3310	902	57.40	933	64.20	964	71.50	996	79.30	1027	87.30	1058	95.90	1087	104.0		
68000	3463	926	61.80	956	68.70	986	76.00	1016	83.80	1047	92.20	1076	101.0	1105	109.0	1133	118.0
71000	3615	950	66.40	980	73.60	1009	81.00	1038	88.90	1067	97.20	1096	106.0	1124	115.0	1152	124.0
74000	3768	976	71.50	1004	78.70	1033	86.40	1060	94.10	1088	103.0	1116	111.0	1143	120.0	1171	130.0
77000	3921	1002	76.80	1029	84.30	1057	92.10	1084	100.0	1110	108.0	1136	117.0	1163	126.0	1190	135.0
80000	4074	1029	82.40	1055	90.30	1081	98.10	1107	106.0	1133	115.0	1158	123.0	1184	132.0		
83000	4227	1057	88.60	1081	96.40	1106	105.0	1131	113.0	1157	121.0	1181	130.0				
86000	4379	1085	95.00	1108	103.0	1132	111.0	1156	120.0	1181	129.0	1205	137.0				
89000	4532	1113	102.0	1135	110.0	1158	119.0	1181	127.0	1205	136.0						
92000	4685	1142	109.0	1163	117.0	1185	126.0	1207	135.0								
95000	4838	1171	117.0	1192	125.0	1213	134.0										

Performance shown is for Installation Type D: ducted inlet, ducted outlet. Power rating (BHP) includes drive losses. Performance ratings do not include the effects of appurtenances in the airstream. Shaded areas require VAHB fan construction.

Sound VAD Data

18 VAD

RPM	SP	Sound Power re 10 ⁻¹² Watts								
		Octave Bands								
		1	2	3	4	5	6	7	8	L _{wo} A
1725	0.000	91	87	87	83	81	78	78	76	87
	1.000	90	88	83	80	79	77	77	75	85

21 VAD

RPM	SP	Sound Power re 10 ⁻¹² Watts								
		Octave Bands								
		1	2	3	4	5	6	7	8	L _{wo} A
1140	0.000	79	75	76	75	72	70	68	66	78
	0.500	77	73	72	71	69	68	67	65	75
1725	0.000	89	87	84	85	83	80	78	76	88
	0.500	88	86	84	83	81	79	77	76	87
	1.500	88	86	83	82	80	78	77	75	86

26 VAD

RPM	SP	Sound Power re 10 ⁻¹² Watts								
		Octave Bands								
		1	2	3	4	5	6	7	8	L _{wo} A
1160	0.000	81	80	81	80	77	73	69	67	82
	0.500	79	81	80	78	75	72	69	67	81
	1.000	82	78	80	79	75	72	69	67	81
1725	0.000	91	88	89	89	87	84	80	77	92
	0.500	90	87	91	88	86	83	79	77	91
	1.500	89	86	90	87	85	83	79	77	91
	2.500	95	88	90	90	88	83	80	77	92

29 VAD

RPM	SP	Sound Power re 10 ⁻¹² Watts								
		Octave Bands								
		1	2	3	4	5	6	7	8	L _{wo} A
1160	0.000	81	82	83	83	81	76	70	65	85
	1.000	79	80	81	82	80	75	70	66	84
	1.500	83	84	86	85	82	76	71	66	86
1760	0.000	90	90	92	93	92	88	83	77	96
	3.000	89	89	91	93	92	88	81	77	96
	3.500	92	92	95	96	94	89	82	78	98

36 VAD

RPM	SP	Sound Power re 10 ⁻¹² Watts								
		Octave Bands								
		1	2	3	4	5	6	7	8	L _{wo} A
1160	0.000	87	89	89	90	86	83	79	77	92
	2.000	87	88	89	89	85	82	79	77	91
1760	0.000	94	97	98	99	98	94	91	87	102
	4.000	94	96	97	97	96	93	90	87	101

42 VAD

RPM	SP	Sound Power re 10 ⁻¹² Watts								
		Octave Bands								
		1	2	3	4	5	6	7	8	L _{wo} A
1160	0.000	92	94	94	95	91	88	84	81	96
	3.000	93	93	95	94	91	87	84	81	96
	3.500	78	96	97	97	93	88	84	81	98
1780	0.000	99	102	103	104	103	99	96	92	107
	1.000	99	101	102	103	102	98	95	92	106
	2.000	98	100	101	102	101	98	94	92	105
	4.000	98	100	101	101	100	98	94	92	105

48 VAD

RPM	SP	Sound Power re 10 ⁻¹² Watts								
		Octave Bands								
		1	2	3	4	5	6	7	8	L _{wo} A
690	0.000	85	87	88	86	81	76	70	65	87
	0.500	84	86	86	85	80	75	71	66	86
	1.500	88	90	90	87	82	76	72	67	88
860	0.000	89	91	92	92	88	82	77	72	93
	0.500	87	91	91	91	87	82	77	72	92
	2.000	89	92	93	92	87	81	77	73	93
1180	0.000	96	97	99	99	97	92	86	81	101
	0.500	95	97	98	99	96	91	86	81	101
	4.000	97	98	100	100	97	91	86	82	101
	4.500	99	101	103	102	98	92	87	82	103
1780	0.000	106	105	107	108	108	104	98	93	112
	1.500	105	104	107	107	107	104	98	93	111
	2.500	104	103	107	106	107	103	98	93	111

54 VAD

RPM	SP	Sound Power re 10 ⁻¹² Watts								
		Octave Bands								
		1	2	3	4	5	6	7	8	L _{wo} A
690	0.000	89	91	91	90	85	79	74	69	91
	0.500	87	90	90	89	84	79	74	70	90
	1.500	87	89	90	89	84	78	75	71	90
880	0.000	93	96	96	96	92	87	81	76	97
	0.500	92	95	95	96	92	86	81	76	97
	1.500	91	94	94	95	91	85	81	77	96
1180	0.000	100	101	102	103	100	95	90	84	105
	0.500	99	101	102	102	100	95	90	85	104
	1.000	98	100	102	102	100	95	90	85	104
	2.000	98	100	101	101	99	94	89	85	103
	3.500	98	99	101	101	99	94	89	85	103
1780	0.000	109	109	111	112	112	108	102	97	115
	1.000	109	108	111	111	111	107	102	97	115
	2.000	108	107	111	111	111	107	101	97	115
	3.000	108	106	111	110	110	107	101	96	114
	4.000	107	106	110	110	110	107	101	96	114
	6.000	107	106	109	109	110	107	101	97	114

60 VAD

RPM	SP	Sound Power re 10 ⁻¹² Watts								
		Octave Bands								
		1	2	3	4	5	6	7	8	L _{wo} A
575	0.000	88	90	90	88	83	77	72	66	89
	0.500	88	89	89	87	82	77	72	68	88
	1.500	90	92	91	88	82	77	73	69	89
690	0.000	92	94	94	93	88	83	77	72	94
	0.500	91	93	93	92	87	82	77	73	93
	2.000	92	94	94	93	87	82	78	74	93
880	0.000	97	99	100	100	95	90	84	79	101
	0.500	95	99	99	99	95	89	84	79	100
	1.000	94	99	98	98	95	89	84	80	99
	3.000	95	98	99	99	94	88	84	81	100
	3.500	97	100	101	100	95	89	85	81	101
1180	0.000	103	104	106	106	104	99	93	88	108
	1.000	102	104	105	105	103	98	93	88	107
	3.500	101	102	103	104	102	98	93	88	106

The sound power level ratings shown are in decibels referred to 10⁻¹² watts calculated per AMCA Standard 301. The A-weighted sound ratings shown have been calculated per AMCA Standard 301. Values shown are for outlet L_{wo} and outlet L_{wo}A sound power levels for Installation Type D: ducted inlet, ducted outlet. Ratings include the effects of duct end correction.

12 VAB/VAHB

RPM	SP	Sound Power re 10^{-12} Watts								
		Octave Bands								
		1	2	3	4	5	6	7	8	L _{woA}
1800	0.000	74	68	69	71	67	63	62	62	73
	0.125	73	68	69	70	67	63	62	62	72
	0.250	73	68	68	74	67	63	63	63	74
2200	0.000	81	74	73	75	72	68	67	67	77
	0.250	81	74	72	75	73	68	67	67	77
	0.500	80	74	72	78	75	69	67	67	79
2600	0.000	87	79	76	78	77	73	70	70	81
	0.250	87	79	76	78	77	73	70	70	81
	0.500	86	79	75	79	79	73	71	71	82
	0.750	86	79	76	80	81	74	71	71	84
3000	0.250	92	83	79	81	81	77	73	73	85
	0.500	92	83	78	80	82	77	73	74	85
	0.750	91	83	78	81	85	77	74	74	87
	1.000	91	83	79	81	86	78	74	74	88
3400	0.375	96	87	81	83	84	80	76	76	88
	0.500	97	86	81	83	84	80	76	76	88
	0.750	96	86	81	83	86	80	76	76	89
	1.000	96	87	81	82	89	80	76	77	91
3800	1.250	96	87	82	83	90	81	77	76	91
	0.500	98	90	84	85	86	83	79	79	90
	0.750	98	90	84	85	87	84	79	79	91
	1.000	98	90	84	84	89	84	79	79	92
4200	1.500	98	90	85	84	91	85	80	79	93
	1.750	98	90	85	85	92	86	80	79	94
	0.625	100	94	87	87	88	86	82	81	93
	0.750	100	94	87	87	88	86	82	81	93
4600	1.000	100	94	87	86	89	87	82	81	93
	2.000	99	94	88	86	92	89	83	81	95
	2.250	99	94	88	87	93	90	83	81	96
	0.000	101	98	90	89	91	89	85	83	95
1.000	98	90	84	84	89	84	79	79	92	

14 VAB/VAHB

RPM	SP	Sound Power re 10^{-12} Watts								
		Octave Bands								
		1	2	3	4	5	6	7	8	L _{woA}
1500	0.000	89	81	74	70	69	68	68	69	77
	0.250	89	81	74	70	69	68	68	69	77
1900	0.000	96	89	81	76	75	74	73	74	83
	0.250	96	89	81	76	74	74	73	74	82
	0.500	95	91	82	77	75	74	73	74	83
	0.750	94	93	85	79	76	74	73	74	84
2300	0.250	102	96	86	81	79	78	77	78	87
	0.500	101	96	87	81	79	78	77	78	87
	0.750	100	97	88	82	80	78	77	78	88
	1.000	99	98	90	84	81	78	77	78	89
2700	0.500	104	101	92	86	83	82	81	81	92
	0.750	104	101	92	85	82	82	81	81	92
	1.000	103	101	94	87	83	82	81	81	92
	1.500	101	102	96	90	85	83	81	81	94
3100	0.500	107	105	97	90	86	85	84	84	96
	0.750	106	105	97	90	86	85	84	84	95
	1.000	106	105	97	90	86	85	84	84	95
3500	1.750	104	105	100	93	88	86	84	84	97
	0.750	109	109	101	93	89	88	87	87	99
	1.000	109	109	101	93	89	87	87	87	99
	2.000	107	108	104	96	91	88	87	87	100
3900	2.500	105	108	105	98	92	89	87	87	101
	0.750	111	112	105	97	91	90	89	89	102
	1.000	111	112	105	97	91	90	89	89	102
	2.000	109	111	106	98	92	90	89	89	103
4300	3.000	108	110	109	101	95	92	90	89	104
	1.000	112	115	109	100	94	92	91	91	105
	2.000	112	115	109	100	94	92	91	91	105
	3.000	110	113	111	102	96	93	92	91	106
3.500	109	112	112	104	97	94	92	91	107	

18 VAB/VAHB

RPM	SP	Sound Power re 10^{-12} Watts								
		Octave Bands								
		1	2	3	4	5	6	7	8	L _{woA}
1500	0.250	83	83	81	81	82	77	67	59	85
	0.500	85	83	81	81	82	77	68	59	85
1900	0.250	88	88	87	85	86	85	75	67	91
	0.500	88	88	87	86	87	85	76	67	91
	0.750	90	89	87	85	87	86	76	67	91
	1.000	89	90	88	85	87	86	76	68	91
2300	0.500	91	92	92	90	90	91	82	73	96
	0.750	93	93	92	90	91	91	82	74	96
	1.000	94	93	92	90	91	92	82	74	96
	1.500	93	94	93	89	91	92	82	74	96
2700	0.750	94	96	95	94	94	95	88	79	99
	1.000	95	96	95	94	94	95	88	79	99
	1.500	97	97	96	94	94	95	88	79	100
	1.750	97	97	96	94	94	95	88	79	100
	2.000	96	97	96	94	94	95	88	80	100
3100	0.750	97	98	98	97	96	97	93	83	102
	1.000	97	98	98	97	97	97	93	84	103
	1.500	98	100	99	97	97	98	93	84	103
	1.750	99	100	99	97	96	98	93	84	103
	2.000	100	101	99	97	96	98	93	84	103
3500	1.000	99	101	101	100	99	100	97	88	105
	1.500	99	101	101	100	99	100	97	88	106
	2.000	101	102	102	100	99	100	97	88	106
	3.000	101	103	102	101	99	100	98	88	106
	3.500	100	103	103	101	99	101	98	88	106
3900	1.000	101	103	104	103	101	102	101	91	108
	1.500	101	103	104	103	101	102	101	91	108
	3.000	104	106	104	103	101	102	102	92	108
	4.000	103	105	105	104	101	103	102	92	109

21 VAB/VAHB

RPM	SP	Sound Power re 10^{-12} Watts								
		Octave Bands								
		1	2	3	4	5	6	7	8	L _{woA}
1350	0.250	85	82	78	76	73	69	64	60	78
	0.500	87	82	78	75	72	68	64	61	78
	0.750	88	83	77	75	72	68	63	60	78
1750	0.250	89	92	84	82	80	77	71	67	86
	0.500	90	91	84	82	80	77	70	67	85
	0.750	91	92	84	81	79	76	70	67	85
	1.000	93	92	84	81	79	76	70	67	85
2150	0.750	93	97	89	87	85	83	76	73	90
	1.000	94	97	89	87	84	82	76	73	90
	1.500	97	98	89	87	84	82	76	73	90
	2.000	96	99	89	86	84	82	76	72	90
2550	0.750	95	100	95	91	89	87	82	77	95
	1.000	96	100	95	91	89	87	82	77	95
	1.500	97	100	95	91	89	86	82	77	95
	2.000	99	101	95	91	88	86	81	77	95
	2.500	99	102	95	91	88	86	81	77	95
	3.000	99	102	96	91	88	86	81	77	95
2950	1.000	98	102	100	95	93	91	87	81	99
	1.500	99	102	100	95	92	91	86	81	99
	2.000	100	103	100	95	92	90	86	81	99
	2.500	101	104	100	95	92	90	86	81	99
	3.000	102	105	101	95	92	89	86	81	99
3350	4.000	101	105	102	95	92	90	86	81	99
	1.000	100	103	105	98	96	94	91	85	103
	1.500	100	104	105	98	96	94	91	85	102
	2.000	101	104	105	98	95	94	90	84	102
	2.500	102	105	105	98	95	93	90	84	102
	3.000	103	106	105	98	95	93	90	84	102
4300	4.000	104	107	106	98	95	93	90	84	102
	5.000	104	107	107	98	95	93	90	84	103

The sound power level ratings shown are in decibels referred to 10^{-12} watts calculated per AMCA Standard 301. The A-weighted sound ratings shown have been calculated per AMCA Standard 301. Values shown are for outlet L_{wo} and outlet L_{woA} sound power levels for Installation Type D: ducted inlet, ducted outlet. Ratings include the effects of duct end correction.



LOREN COOK COMPANY

2015 E. DALE STREET
SPRINGFIELD, MO 65803-4637
417.869.6474
FAX 417.862.3820
lorencook.com