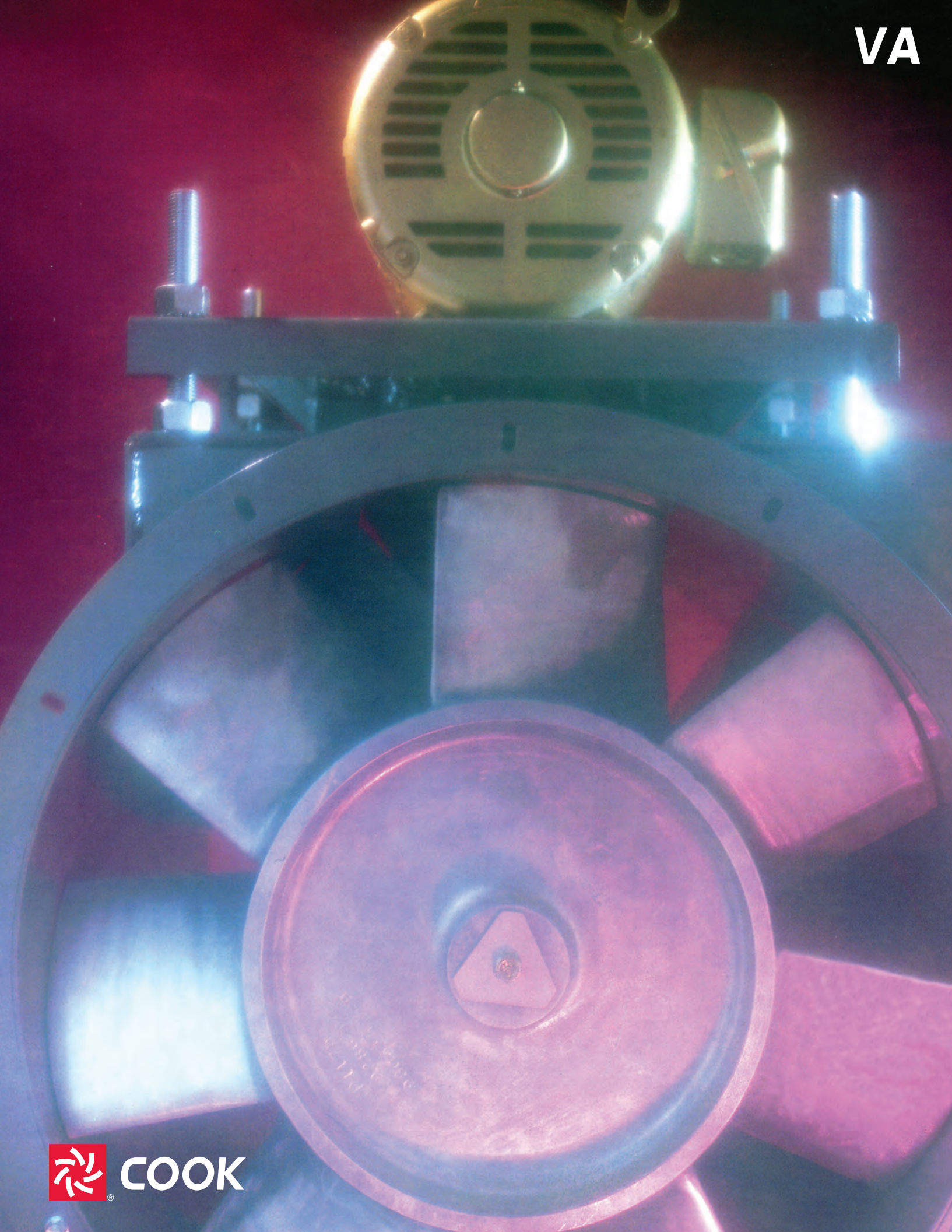

VA
COOK

VA

Fixed Pitch Vane Axial Fan

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

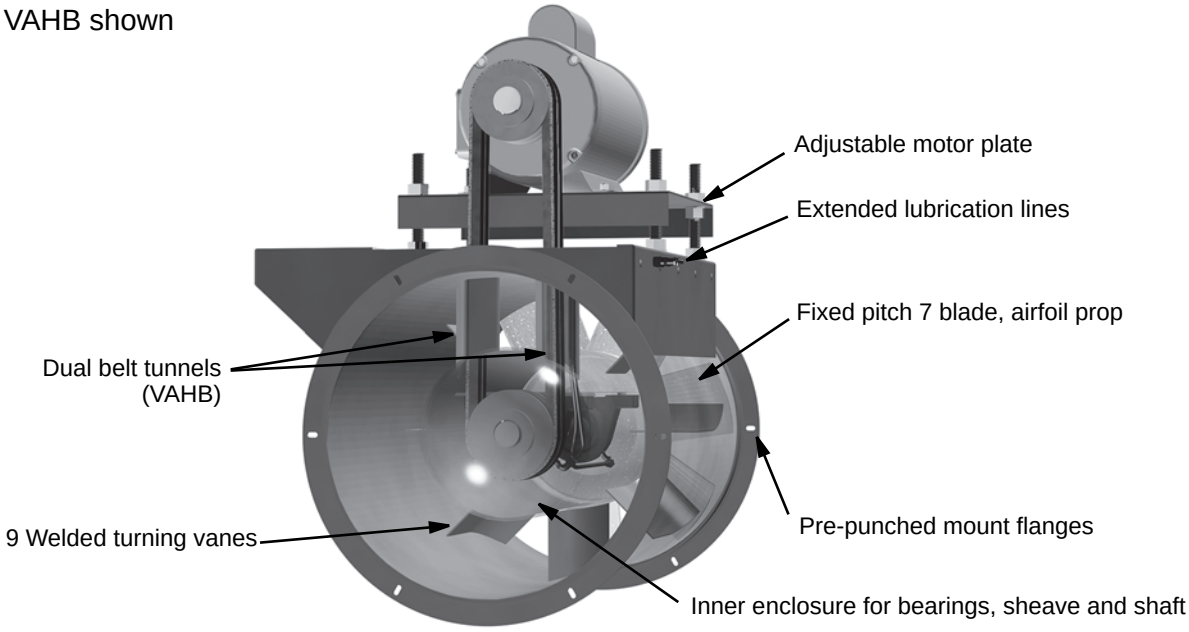
VAB

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 accurates 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.

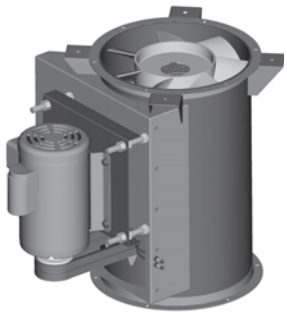
Construction Features

VAHB shown



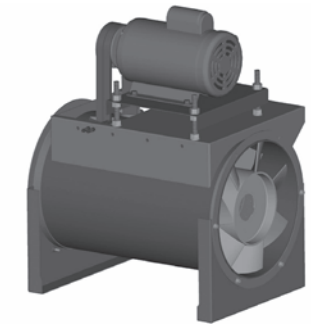
Mounting Options

Vertical



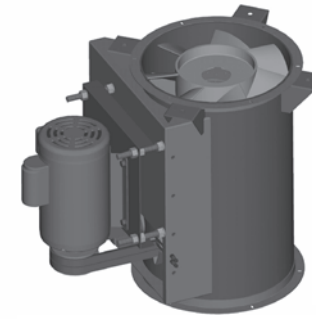
Vertical mounting brackets provide for vertical installation, floor or ceiling mount, with upblast or downblast configuration. Vibration isolators can be used in all mounting configurations. Ceiling brackets with downblast configuration shown.

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)

VAD/VAB/VAHB Information

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.

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

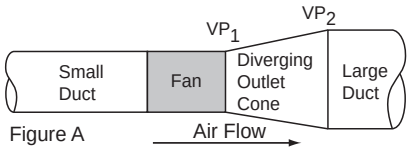


Figure A

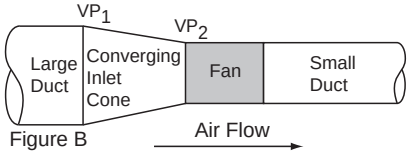


Figure B

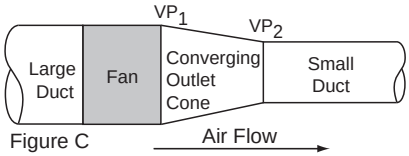


Figure C

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

Velocity Pressure - $VP=(velocity/4005)^2$

Velocity (FPM)	VP (in inches)	Velocity (FPM)	VP (in inches)
500	.0156	2250	.316
600	.0225	2500	.391
700	.0305	2750	.473
800	.0400	3000	.562
900	.0504	3250	.661
1000	.0625	3500	.768
1100	.0758	3750	.880
1200	.0900	4000	1.000
1300	.106	4250	1.130
1400	.122	4500	1.265
1500	.141	4750	1.410
1600	.160	5000	1.560
1700	.181	5250	1.720
1800	.203	5500	1.890
1900	.226	5750	2.060
2000	.250	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.

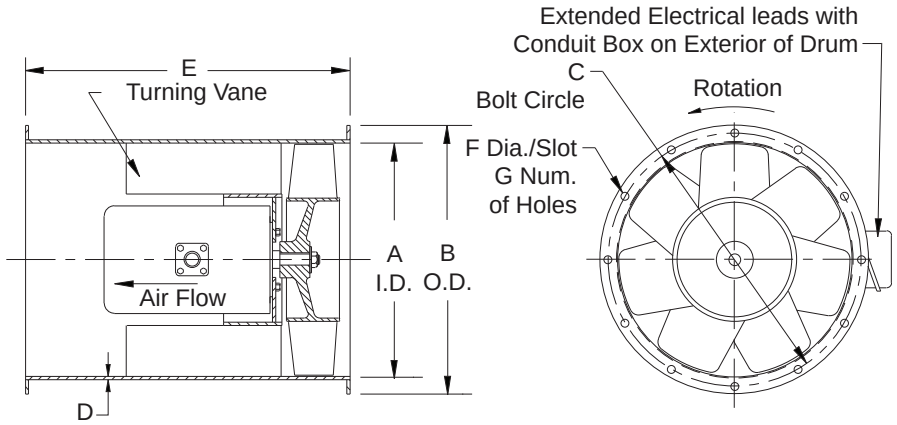
Motor - Motor shall be heavy duty type furnished at the specified voltage and phase.

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

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).

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.

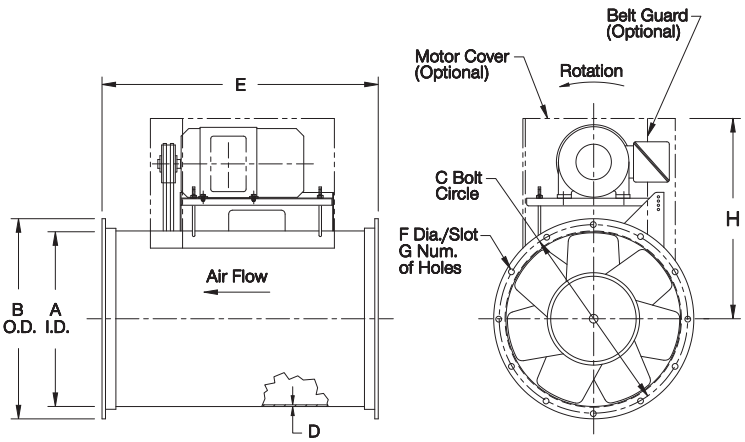
Motor - Motor shall be heavy duty type furnished at the specified voltage, phase and enclosure.

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.



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.

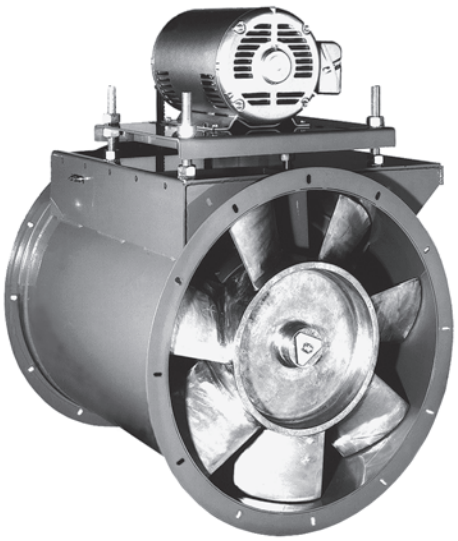
Motor - Motor shall be heavy duty type furnished at the specified voltage, phase and enclosure.

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.

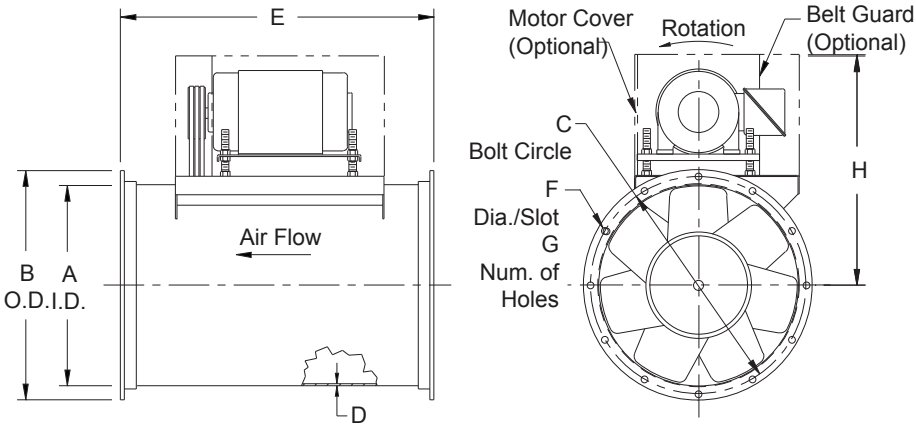
Product - Fan shall be model VAHB as manufactured by Loren Cook Company of Springfield, Missouri.



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

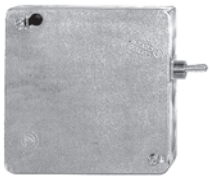
VAB Size	A	B	C	D	E	F	G	H	ODP Max. Motor Frame	Approx. Ship Wt. Lbs.*
12	12	14-13/16	13-3/8	10 ga.	20	5/16	6	21	182T	108
14	14	16-13/16	15-1/2	10 ga.	23	5/16	6	24	182T	143
18	18	21-5/16	19-3/4	10 ga.	29	7/16 X 13/16	12	27-1/4	215T	202
21	21	24-5/16	22-3/4	10 ga.	31	7/16 X 13/16	12	31-1/2	254T	301
26	26	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.

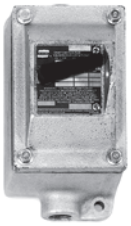


NEMA 1

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.

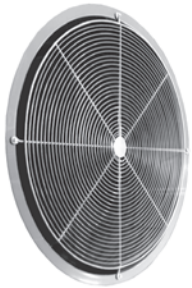
Inlet/Outlet Companion Flange

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.

Bufferfly 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.

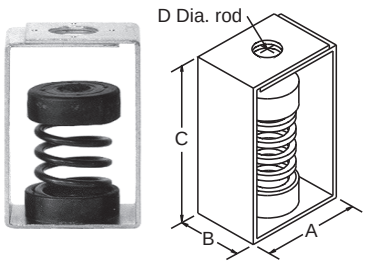
Bombay Construction

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.

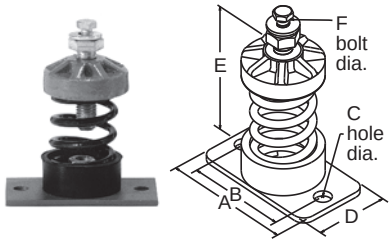
Spring Isolator - Ceiling Mounted



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.

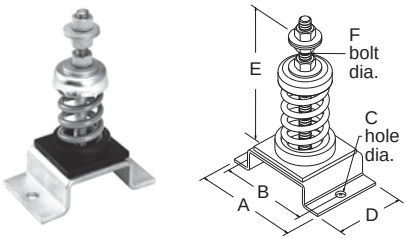
Free Standing Spring Isolator - Floor Mounted



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.

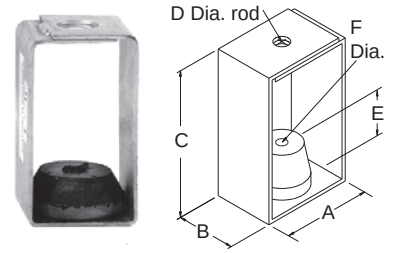
Restrained Spring Isolator - Floor Mounted



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.

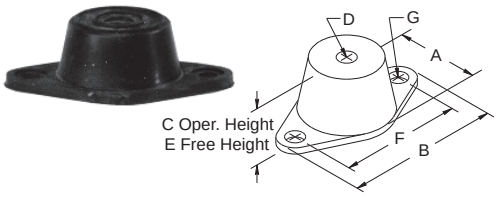
Rubber-in-Shear Isolator - Ceiling Mounted



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.

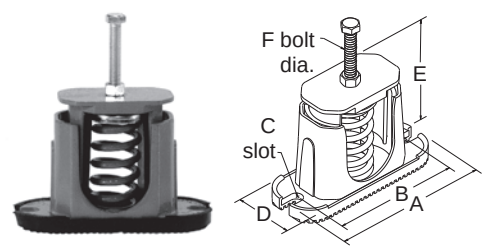
Rubber-in-Shear Isolator - Floor Mounted



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.

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