

TUBEAXIAL FANS MACHETA® AIRFOIL DESIGN



**Model TA
Direct Drive**



**Model TABD
Belt Driven**

MODELS: TA/TABD



Overview

TA | TABD



Model TA
Direct Drive

The Model TA and TABD tubeaxial fans are designed for relatively clean air applications that permit the location of motor to be in the airstream. The TA/TABD features the Macheta® tipped cast aluminum airfoil blade for increased performance, and a continuously-welded, heavy-gauge flanged casing with bolt holes for mounting to fan accessories or ductwork.

Typical Applications Include

Data Center Exhaust, General HVAC, Generator Room Ventilation, Swimming Pool Exhaust, Kitchen Exhaust, Dishwasher Exhaust, Elevator Shaft Exhaust/Pressurization, Emergency Smoke Exhaust, Stairwell Pressurization

Configurations

Direct and Belt Driven - vertical & horizontal mount configurations

Impeller Type

Aluminum

Optional Construction

Clamshell Design, Swingout Design, Spark Resistant Construction, Aluminum Housing, Hot Dip Galvanized Housing, 304SS Housing, 316SS Housing

Certifications

AMCA Air, AMCA Sound/Air and FEI



Model TABD
Belt Driven



Aerovent, A Twin City Fan Company, certifies that the Model TA and TABD Tubeaxial Fans shown herein are licensed to bear the AMCA Seal. Certified performance data may be found in Aerovent's Fan Selector software.



Scan the QR code to search Aerovent's AMCA-certified products.



For complete product performance, drawings and available accessories, download our Fan Selector software at aerovent.com.

Overview

TA | TABD

TA Direct Drive

Aerovent's direct drive tubeaxial fan is designed for use in all general applications to move relatively clean, non-corrosive air while operating within standard motor temperature limits. An array of highly efficient impellers from 12" to 96" diameters deliver powerful performance from 900 to 132,000 CFM.

The motor base assembly provides maximum strength while minimizing resistance to airflow. Fan casings are flanged steel and can easily be connected to duct work. Protective coatings and aluminum, hot-dipped galvanized or stainless steel construction are available upon specification. Motor leads are wired to an external conduit box and extended grease leads are standard when applicable.

TABD Belt Driven

Aerovent's belt driven tubeaxial fan is recommended for all general applications and is particularly useful in handling corrosive fumes, smoke, and hot or moist air when specified with special coatings, stainless steel, hot dipped galvanized or aluminum construction. Fans are furnished with an array of impellers in sizes from 14" through 96" to deliver performances ranging from 1,500 to 131,000 CFM.

Belts and bearings are enclosed in an air-insulated housing for protection from contamination and to keep them cool to prolong service life under severe operating conditions. The standard fan can operate at temperatures to 275°F. Adjustable sheaves are standard through 5 HP, for convenience in changing fan speeds. All fans are furnished with a belt guard for personnel safety and bearing grease leads will be brought to the casing exterior for ease of lubrication.

Energy Regulations

Aerovent supports energy efficiency regulations enacted by the U.S. Department of Energy (DOE) and specific states. The selection and application of fan products is a significant part of these regulations. Engineers and specifiers must understand how to apply Aerovent products to their specific applications to meet applicable DOE and state regulatory requirements. Aerovent has made significant investments in product testing and development to provide efficient products. Developments in Aerovent's Fan Selector software are in place to aid your decision in product selection to assist with meeting the efficiency requirements as stipulated in the applicable regulations.



Sugar Beet Storage



Engine Room Exhaust

Spark Resistant Construction

Fan applications may involve the handling of fumes or vapors. Such applications require careful consideration by the system designer to insure the safe handling of such gases. Aerovent offers the following classifications of spark resistant construction per AMCA Standard 99-0401. It is the specifier's or the user's responsibility to specify the type of spark resistant construction with full recognition of the potential hazards and the degree of protection required.

Type A - All parts of the fan in contact with the airstream must be made of nonferrous material — usually aluminum and limited to 275°F.

Type B - The fan shall have a nonferrous impeller and nonferrous rub ring about the opening through which the shaft passes — usually aluminum impeller and rub ring and limited to 275°F. Consult factory for availability.

Swingout Construction

Swingout construction provides easy access to the fan for cleaning and general maintenance without removing it from the ductwork. When quickopen clamp latches are released, the door swings out on heavy-duty hinges to provide out of the airstream access to the impeller for cleaning. For additional access to the shaft and bearings, a split inner cylinder is standard. Available on Sizes 21-60 with vertical discharge.

Clamshell Construction

Clamshell construction is ideal for applications needing regular cleaning. Depending on the size, one door (sizes 18-36) or two doors (sizes 42-60) are secured with quick access latches. These doors open outward and allow access to the internal components of the fan. As standard, there is an access door on the inner cylinder, allowing easy access to clean around the bearings. It is essential to follow proper safety precautions during cleaning. If bearing, shaft or impeller replacement is required, the fan should be removed from the ductwork or roof to facilitate safe replacement of parts. If replacement of these parts while ducted or on the roof is required, it is recommended to use swingout construction.

Corrosion Resistant Construction

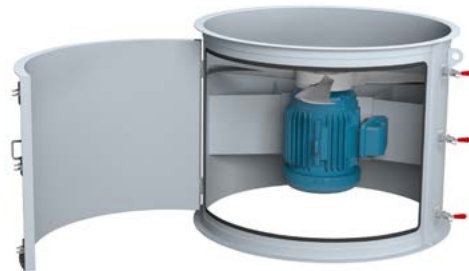
For handling corrosive fumes, etc. Fan casings can be constructed of hot dipped galvanized steel, stainless steel, aluminum, fiberglass or protected with a wide variety of suitable protective coatings.

Other Optional Construction

- High Moisture Modification
- Reverse Flow Construction



Swingout Construction



Clamshell Construction



AEROVENT 
INDUSTRIAL VENTILATION SYSTEMS

Aerovent's trademark Macheta® impeller design is the result of many years of research on, and development of, cast aluminum airfoil impellers. Through this research, Aerovent developed the Macheta® tip on the trailing edge of each blade to increase the fan performance.

Aerovent's trademark impeller designs are suitable for a wide variety of applications. Each impeller is manufactured to withstand the punishing loads and high rotational speeds characteristic of fan operation.

All impellers and hubs are cast from aluminum as standard. Impeller sizes 14" through 72" are cast solid. Sizes 84" and larger are adjustable pitch with individual blades and hub.

Type L

Available in a four-blade design on sizes 14" through 96". The Type L impeller features a wide Macheta® tip blade to meet high volumes and low noise requirements at reduced speeds.

Type S7

Available in a seven-blade design on sizes 21" through 60". The Type S7 impeller design increases the static pressure capabilities up to 1.50", yet maintains low brake horsepower requirements. The Type S7 impeller is recommended for applications requiring 0.75" static pressure and higher.

Type B

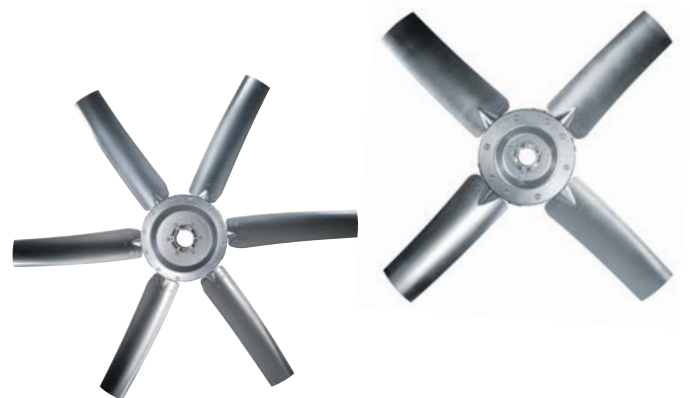
The "B" series features a die cast aluminum impeller available in multiple blade designs for your unique performance needs. Blade angles are factory set and mounted in a die cast aluminum hub. "B" impellers are available in 12" through 72" diameters.



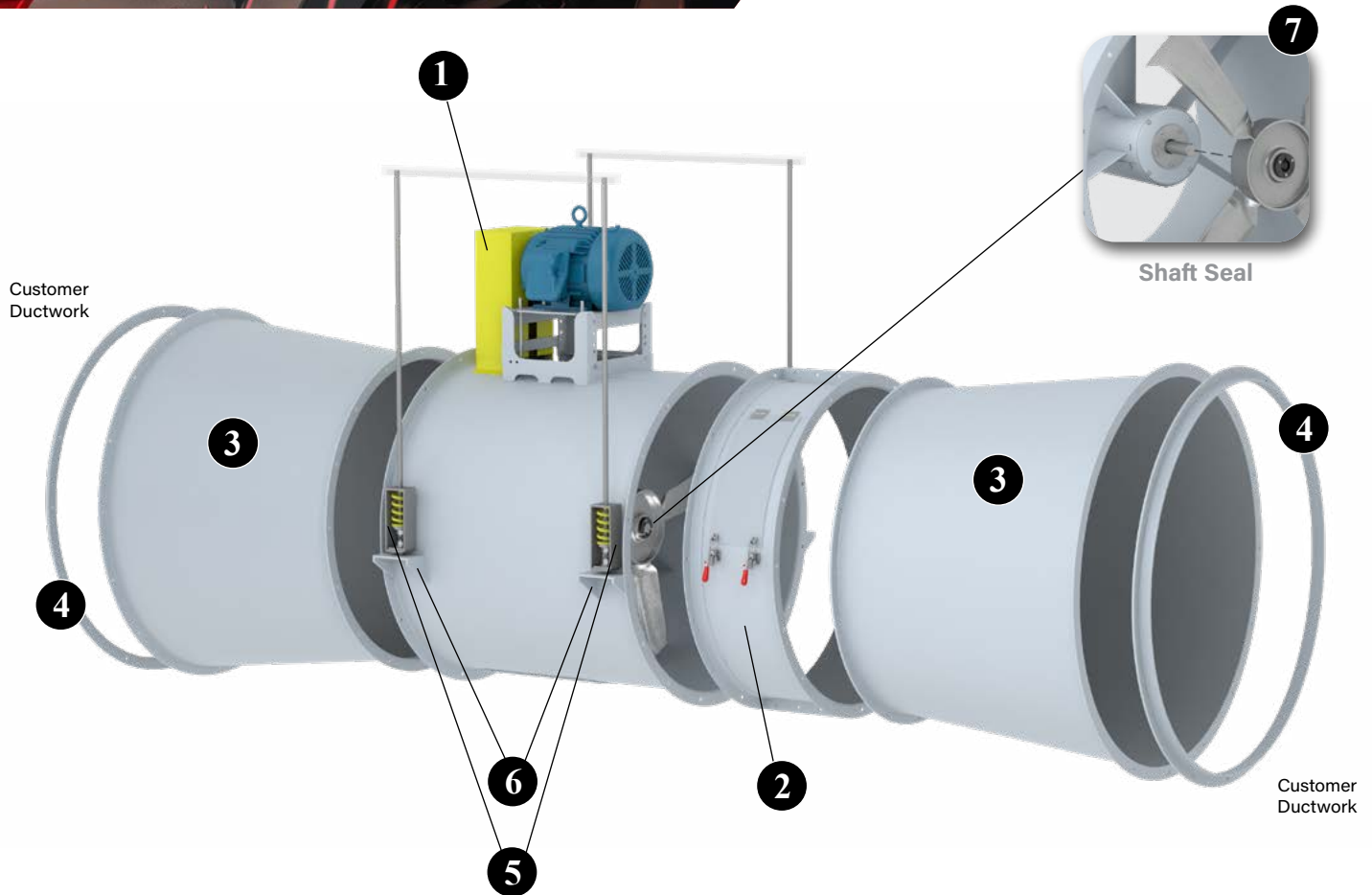
Type L



Type S7



Type B



1 Belt Guard Belt guard protects personnel from the moving drive parts. OSHA and quick access guards are available.

2 Impeller Access Section (Outlet Side) The impeller access section is a short duct section that bolts to the fan inlet or outlet and includes a hinged inspection door. Half the access section can be removed or the hinged inspection door can be opened to permit inspection or cleaning of the fan impeller.

3 Inlet and Outlet Cones A round-to-round transition bolted to the inlet or discharge flange of the fan housing provides a smooth connection of the fan to larger or smaller ductwork. Cones are flanged on both ends and drilled to mate with the fan's flange. Outlet cones can be utilized to affect performance and transform velocity pressure into static pressure.

4 Companion Flanges Companion flanges are commonly connected to a user's duct for easy installation of flexible connections between the fan and duct. Companion flanges and flex connectors are punched to match the fan's inlet or outlet punching.

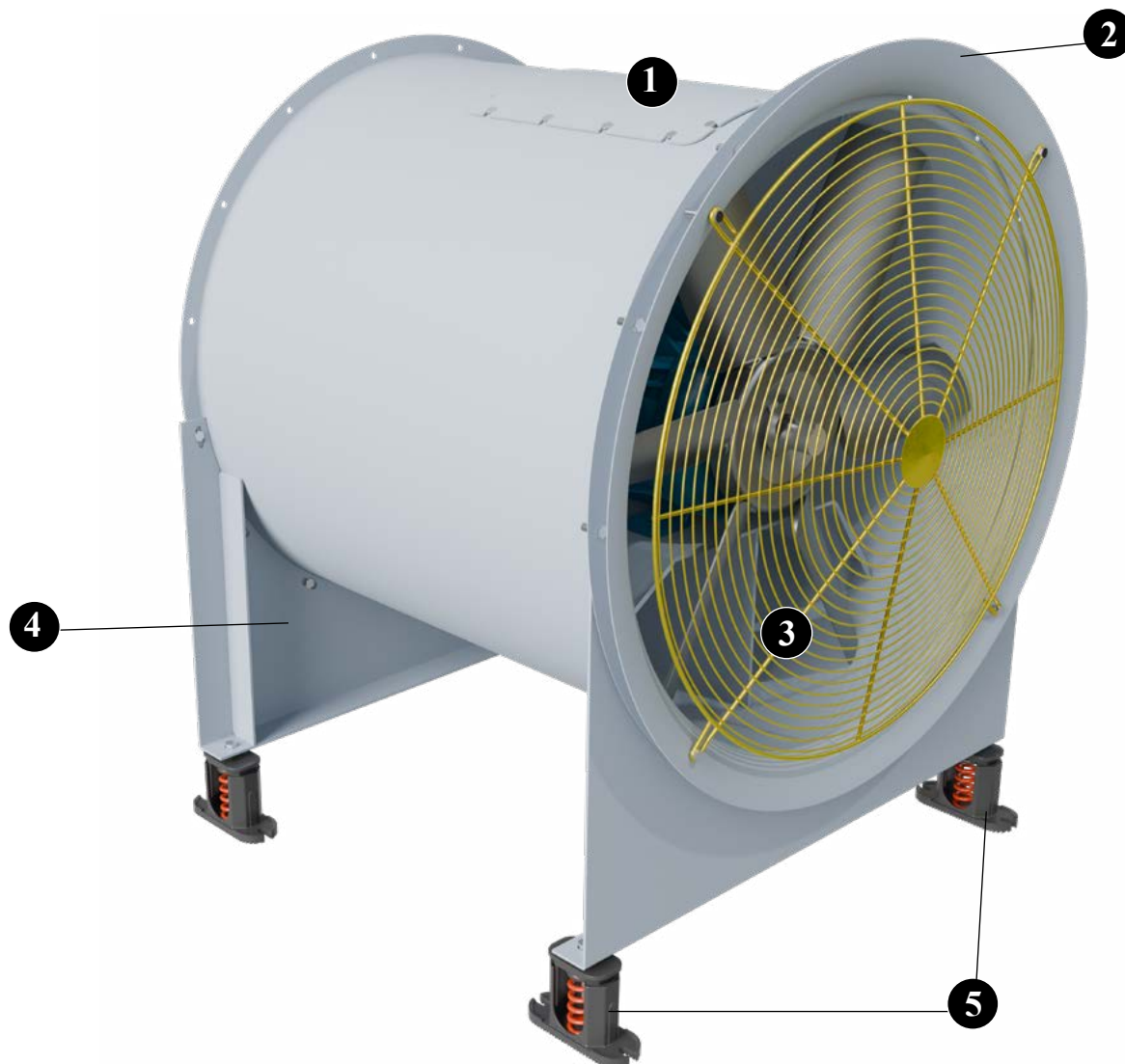
5 Spring Isolators (Ceiling) Spring or neoprene type vibration isolators are available for ceiling suspended or floor mounted installations.

6 Horizontal Ceiling Clips Clips are recommended to permit easy installation and when using vibration isolators. Horizontal ceiling clips are welded to the fan housing.

7 Shaft Seal An elastomeric rotary shaft seal is recommended to protect the shaft and bearings when the fan is used for handling dirty, wet or corrosive air. It is suitable for operation to 300°F. **Note:** The shaft seal does not make the fan gas tight and is not for use in high temperature applications.

Other Accessories Include:

- Mounted Conduit Box
- Externally Mounted Conduit Box Mounting/Wiring of Motor
- Explosion-Proof Wiring
- Motor Covers
- Quick Open Access Door
- Vertical Support Section
- Horizontal Support Legs (Ceiling Suspended)
- Vertical Mounting Bracket/Clips
- Outlet Guards
- RIS Isolators (Floor)
- RIS Isolators (Ceiling)



1 Bolted Access Door For quick impeller inspection and maintenance. Access doors are specified where examination and cleaning of the fan interior is required.

2 Inlet Bell An inlet bell is recommended on the inlet side of the fan to minimize entrance losses for installations where the fan inlet is not attached to a duct system.

3 Inlet Guard Inlet and outlet guards are offered to protect personnel from the moving parts. Recommended for use when no ductwork is attached to the inlet and/or outlet. Fan sizes 14" through 72" are supplied with spiral wire type PMS guards and size 84" is supplied with a wire mesh guard Type WM.

4 Horizontal Support Legs (Floor Mount) For horizontal flow with floor mounting, support legs are welded to the fan flange with bolt holes aligned for connection of ductwork.

5 Spring Isolators (Floor) Spring type vibration isolation mounts are available to reduce the transmission of fan vibration in 1" or 2" deflection.

AEROVENT 
INDUSTRIAL VENTILATION SYSTEMS



1 Clamshell Motor Cover For outdoor installations, the weather cover completely encloses the motor and V-belt drive from the elements. Provided with slots for ventilation, the cover is easily removable for inspection and maintenance. Weather covers are available for either horizontal or vertical flow fans.

2 Curb Caps Curb caps are designed for mounting vertical fans on roof curbs. Using a stack cap and curb cap on the Model TA or TABD tubeaxial fan converts the unit into a roof ventilator. As an option, stack caps and curb caps can be furnished with protective coatings or special metals for handling corrosive fumes.

3 Discharge Bird Screen for Stack Caps Bird screens are available for mounting inside the hood of the penthouse. They are easily removed during maintenance. Screens are manufactured from expanded aluminum and are used in lieu of filters.

4 Stack Caps Stack caps are designed for roof mounted fans with vertical discharge. Stack caps include backdraft dampers that protect the interior of the building from precipitation when the fan is shut off. A motorized stack cap is also available as an option. (Check with factory for available sizes.) Using a stack cap and curb cap on the Model TA or TABD tubeaxial fan converts the unit into a roof ventilator. As an option, stack caps and curb caps can be furnished with protective coatings or special metals for handling corrosive fumes.

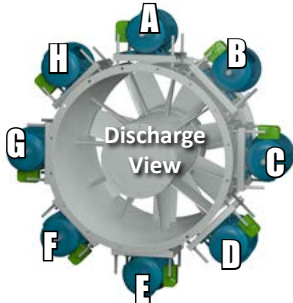
Horizontal Construction

Horizontal construction is available in sizes 12 through 96.

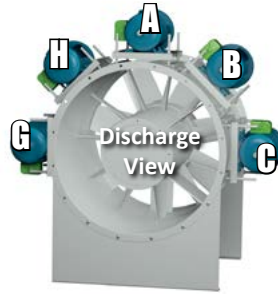
Horizontal Base Mounted (HBM) — Support legs are provided at each end of the fan for floor mounting.

Horizontal Ceiling Hung (HCH) — For duct mounted fans, four suspension clips are welded to the fan casing to allow ceiling suspension using rod hangers.

Horizontal (HOR) — For mounting configurations where support legs and suspension clips are not required.



HCH
Horizontal
Ceiling Hung



HBM
Horizontal Base
Mounted



HOR
Horizontal
No Mounting
Brackets

Vertical Construction

Vertical construction is available in sizes 12 through 96.

Floor or Ceiling Mounted (VUI/VUO/VDI/VDO) — Four vertical brackets are welded to either end of the fan housing. Bracket location is determined by airflow direction and support details (see below).

Roof Mounted (VRM) — A curb cap provides weathertight seal for roof curb mounted fans. A stack cap and weather cover are also available for the upblast style roof ventilator.

Vertical (VUN/VDN) — For mounting configurations where support brackets are not required.



VRM
Vertical Roof
Mounted



VUI
Vertical Discharge Up,
Floor Mount Support
Brackets On Inlet



VUO
Vertical Discharge Up,
Ceiling Hung Support
Brackets On Outlet



VUN
Vertical Up
No Brackets



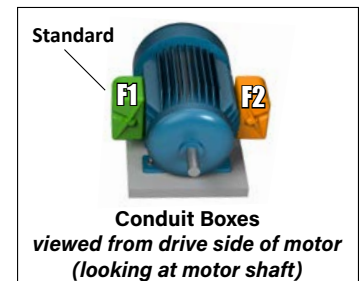
VDI
Vertical Discharge Down,
Ceiling Hung Support
Brackets On Inlet

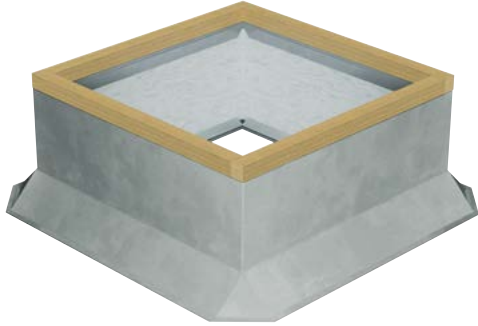


VDO
Vertical Discharge Down,
Floor Mount Support
Brackets On Outlet



VDN
Vertical Down
No Brackets





Canted Roof Curbs

- Constructed of 18-gauge galvanized steel with continuously-welded seams
- Large 3" built-in 45° cant to accommodate roofing material to top of curb. Cant is beveled at corners for better support of roofing material
- Wood nailer (1 1/2") secured to top ledge
- Lined with 1 1/2" fiberglass fire-resistant, sound-absorbing insulation
- Damper shelf standard
- Options: Aluminum (16-gauge) construction, burglar security bars, metal liner (galvanized or aluminum), special heights up to 24", single- or double-pitched curbs for sloping roofs



Self-Flashing & Straight-Sided Roof Curbs

- Constructed of 18-gauge galvanized steel with continuously-welded seams
- Wide base plate (flashing) to ensure watertight seal to roof
- Top ledge covered with 3/16" polystyrene gasket (self-flashing) for weather seal and to reduce metal-to-metal conducted noise
- Wood nailer secured to top ledge (straight-sided)
- Lined with 1 1/2" fiberglass fire-resistant, sound-absorbing insulation
- Damper shelf standard
- Straight-sided roof curbs are constructed with the same features as the self-flashing curbs, but are one dimensional to allow for field supplied cants and roofing material to be brought up to the top of the curb
- Options: Aluminum (16-gauge) construction, burglar security bars, metal liner (galvanized or aluminum), special heights up to 24", single- or double-pitched curbs for sloping roofs



Self-Flashing Vented Roof Curbs

For High Temperature Applications

- Completely assembled unit, easier to install and less expensive than a field constructed curb
- Constructed of 18-gauge galvanized steel with continuously-welded seams and wide base flashing for watertight seal to roof
- Meets NFPA-96 code requirements
- Top ledge covered with 3/16" polystyrene gasket
- Furnished with ventilation slots

Curb Adapters

- Constructed of heavy-gauge galvanized steel with continuously-welded seams
- Top ledge covered with 3/8" polystyrene gasket to reduce metal-to-metal conducted noise and act as a weather seal
- Available in enlarger or reducer (shown) models



Disconnect switches provide positive electrical shutoff during fan cleaning or maintenance.

NEMA 3R Disconnect Switch

A NEMA 3R, rain proof, disconnect is available shipped loose for field mounting and wiring or factory mounted and wired externally.



**NEMA 3R
Disconnect Switch**

NEMA 4 Disconnect Switch

A NEMA 4, water and dust tight, disconnect is available shipped loose for field mounting and wiring or factory mounted and wired externally.

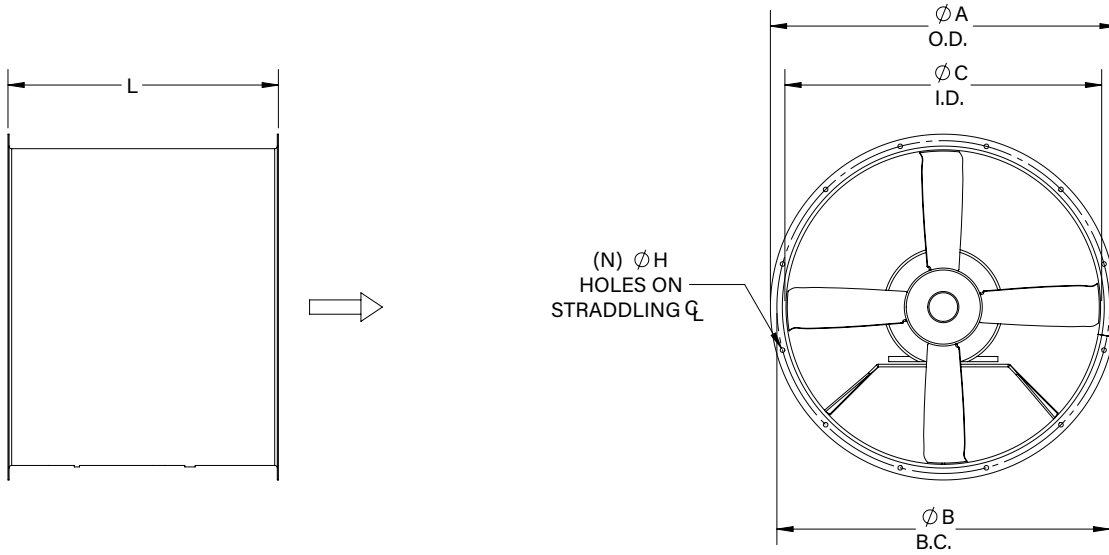


**NEMA 4
Disconnect Switch**

NEMA 7/9 Disconnect Switch

A NEMA 7/9 disconnect switch is recommended on fans with explosion proof motors. The NEMA 7/9 switch is designed for use with fans operating in hazardous environments. Available shipped loose for field mounting and wiring. (Not shown.)

Model TA | Standard Mount

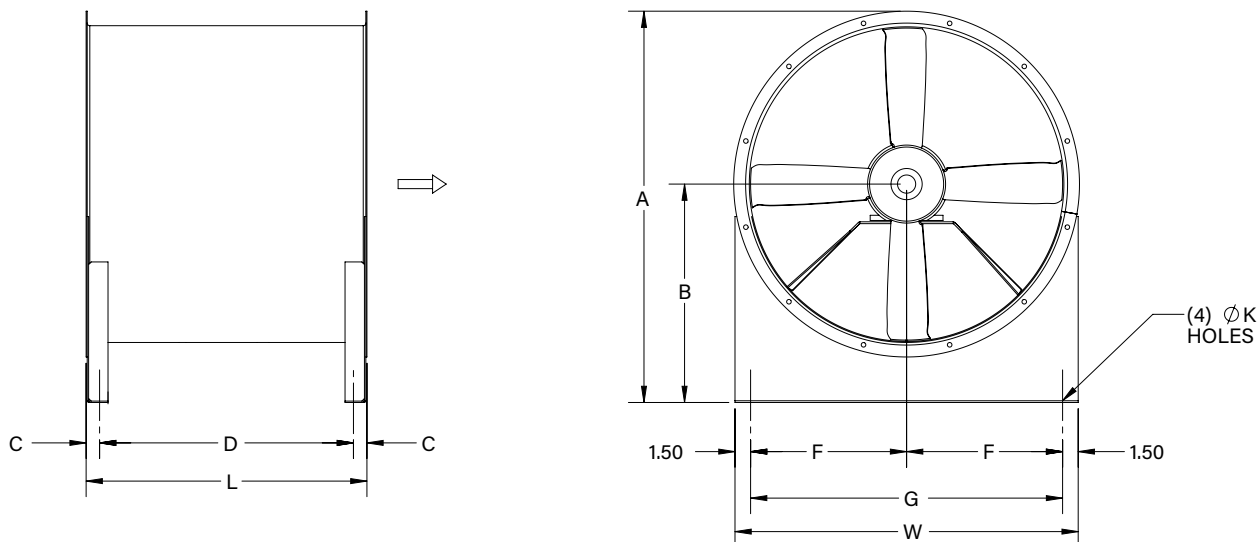


SIZE	A	B	C	H	L						N	MIN. MTR. FRAME SIZE	MAX. MTR. FRAME SIZE
					B1	B2	B3	B4	B6	CAST SOLID			
12	15.13	13.88	12.13	0.44	27					27	8	48	56
14	17.13	15.88	14.13	0.44	27					27	8	48	56
16	19.13	17.88	16.13	0.44	27					27	8	48	145T
18	21.19	19.88	18.19	0.44	27					27	8	48	145T
21	24.19	22.88	21.19	0.44	27					27	8	48	184T
24	27.19	25.88	24.19	0.44	27					27	12	48	184T
30	33.25	32.00	30.25	0.44	27	27				27	12	56	215T
36	39.31	38.00	36.31	0.44		27	36	36		27	16	182T	256T
42	46.31	44.63	42.31	0.56			36	36		36	16	182T	286T
48	52.38	50.63	48.38	0.56			36	36		36	16	182T	286T
54	58.44	56.63	54.44	0.56				36		36	16	213T	286T
60	64.44	63.38	60.44	0.56					48	36	16	254T	326T
72	78.56	75.38	72.56	0.81					48	48	20	254T	365T
84	90.63	88.38	84.63	0.81						48	20	324T	365T
96	102.69	100.38	96.69	0.81						48	20	365T	404T

Dimensions shown are in inches unless otherwise indicated.
Dimensions are not to be used for construction.

R23135E

Model TA | Horizontal Floor & Ceiling Mount



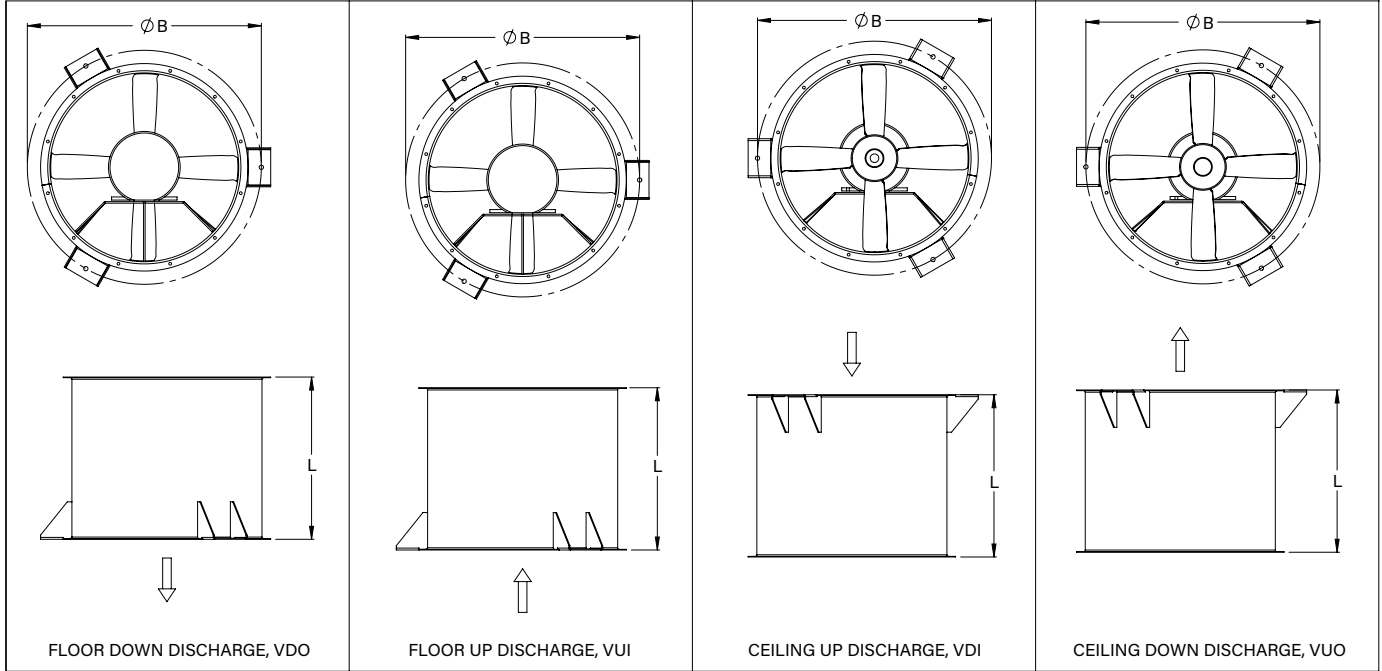
SIZE	A	B	C	D						F	G	K	L						W		
				B1	B2	B3	B4	B6	CAST SOLID				B1	B2	B3	B4	B6	CAST SOLID			
12	16.81	9.25	1.01	24.97						24.97	6.13	12.25	0.56	27						27	15.25
14	19.31	10.75	1.01	24.97						24.97	7.13	14.25	0.56	27						27	17.25
16	21.06	11.50	1.04	24.91						24.91	8.13	16.25	0.56	27						27	19.25
18	23.09	12.50	1.04	24.91						24.91	9.13	18.25	0.56	27						27	21.25
21	27.09	15.00	1.04	24.91						24.91	10.63	21.25	0.56	27						27	24.25
24	30.59	17.00	1.29	24.41						33.41	12.25	24.50	0.56	27						36	27.50
30	37.63	21.00	1.29	24.41	24.41					24.41	15.00	30.00	0.56	27	27					27	33.00
36	44.66	25.00	1.63		23.73	32.73	32.73			44.73	18.50	37.00	0.81		27	36	36			48	40.00
42	53.16	30.00	1.63			32.73	32.73			44.73	21.88	43.75	0.81			36	36			48	46.75
48	60.19	34.00	1.68			32.64	32.64			44.64	24.88	49.75	0.81			36	36			48	52.75
54	67.22	38.00	1.68				32.64			44.64	27.75	55.50	0.81				36			48	58.50
60	74.72	42.50	2.43					43.14	43.14	43.14	31.00	62.00	0.94						48	48	65.00
72	90.28	51.00	2.43					43.14	43.14	43.14	36.25	72.50	0.94						48	48	75.50
84	103.31	58.00	2.43						43.14	43.14	42.50	85.00	0.94							48	88.00

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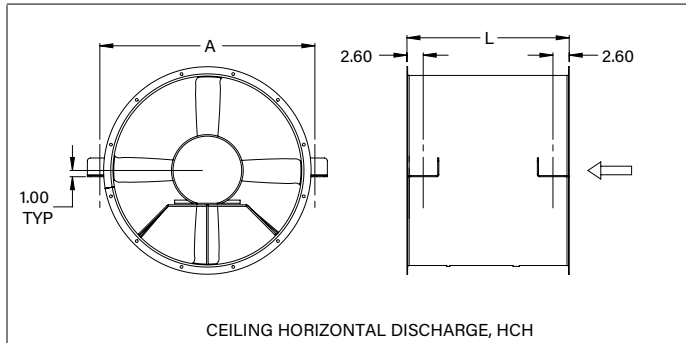
R22004B

Model TA | Horizontal Floor & Ceiling Mount

3 PADS - ALL SIZE



4 PADS - ALL SIZE

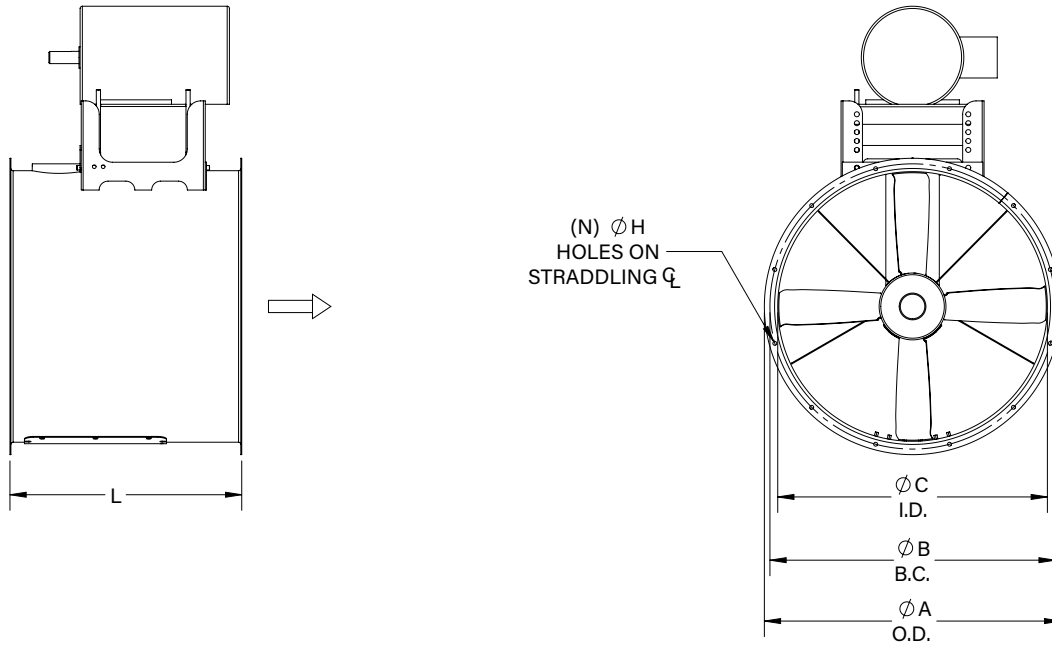


SIZE	A	B	L					CAST SOLID
			B1	B2	B3	B4	B6	
12	15.25	18.88	27.00					27.00
14	17.25	20.88	27.00					27.00
16	19.38	23.00	27.00					27.00
18	21.38	25.00	27.00					27.00
21	24.38	28.00	27.00					27.00
24	27.38	31.00	27.00					27.00
30	33.50	37.50	27.00	27.00				27.00
36	39.63	44.00		27.00	36.00	36.00		27.00
42	45.63	50.00			36.00	36.00		36.00
48	51.75	56.00			36.00	36.00		36.00
54	57.75	63.00				36.00		36.00
60	63.75	69.00					48.00	36.00
72	75.88	82.00					48.00	48.00
84	88.00	96.00						48.00
96	100.00	108.00						48.00

Dimensions shown are in inches unless otherwise indicated.
Dimensions are not to be used for construction.

R11729H

Model TABD | Standard Mount

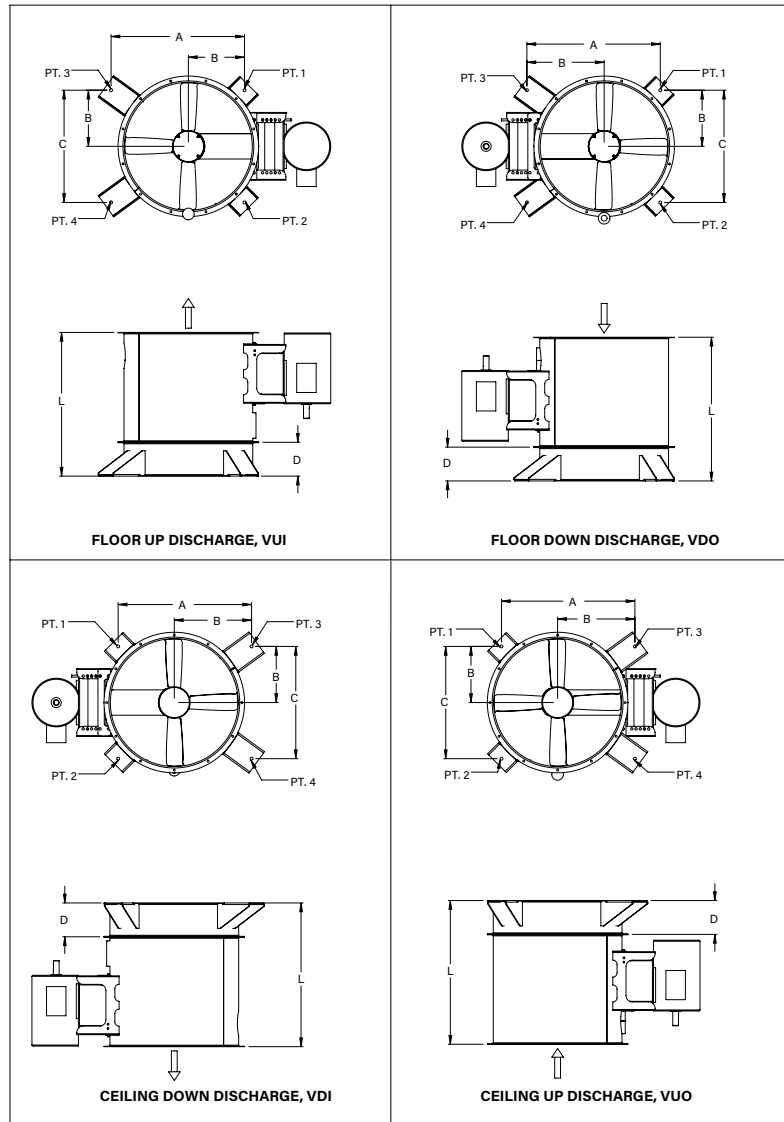


SIZE	A	B	C	H	L						N	MIN. MTR. FRAME SIZE	MAX. MTR. FRAME SIZE
					B1	B2	B3	B4	B6	CAST SOLID			
12	15.13	13.88	12.13	0.44	27					27	8	48	145T
14	17.13	15.88	14.13	0.44	27					27	8	48	145T
16	19.13	17.88	16.13	0.44	27					27	8	48	184T
18	21.19	19.88	18.19	0.44	27					27	8	48	184T
21	24.19	22.88	21.19	0.44	27					27	8	48	215T
24	27.19	25.88	24.19	0.44	27					27	12	48	215T
30	33.25	32.00	30.25	0.44	27	27				27	12	48	215T
36	39.31	38.00	36.31	0.44		27	36	36		27	16	56	215T
42	46.31	44.63	42.31	0.56			36	36		36	16	143T	256T
48	52.38	50.63	48.38	0.56			36	36		36	16	143T	256T
54	58.44	56.63	54.44	0.56				36		36	16	143T	286
60	64.44	63.38	60.44	0.56					48	36	16	143T	286T
72	78.56	75.38	72.56	0.81					48	48	20	182T	326T
84	90.63	88.38	84.63	0.81						48	20	182T	326T
96	102.69	100.38	96.69	0.81						48	20	213T	326T

Dimensions shown are in inches unless otherwise indicated.
Dimensions are not to be used for construction.

R23136H

Model TABD | Floor & Ceiling Mount

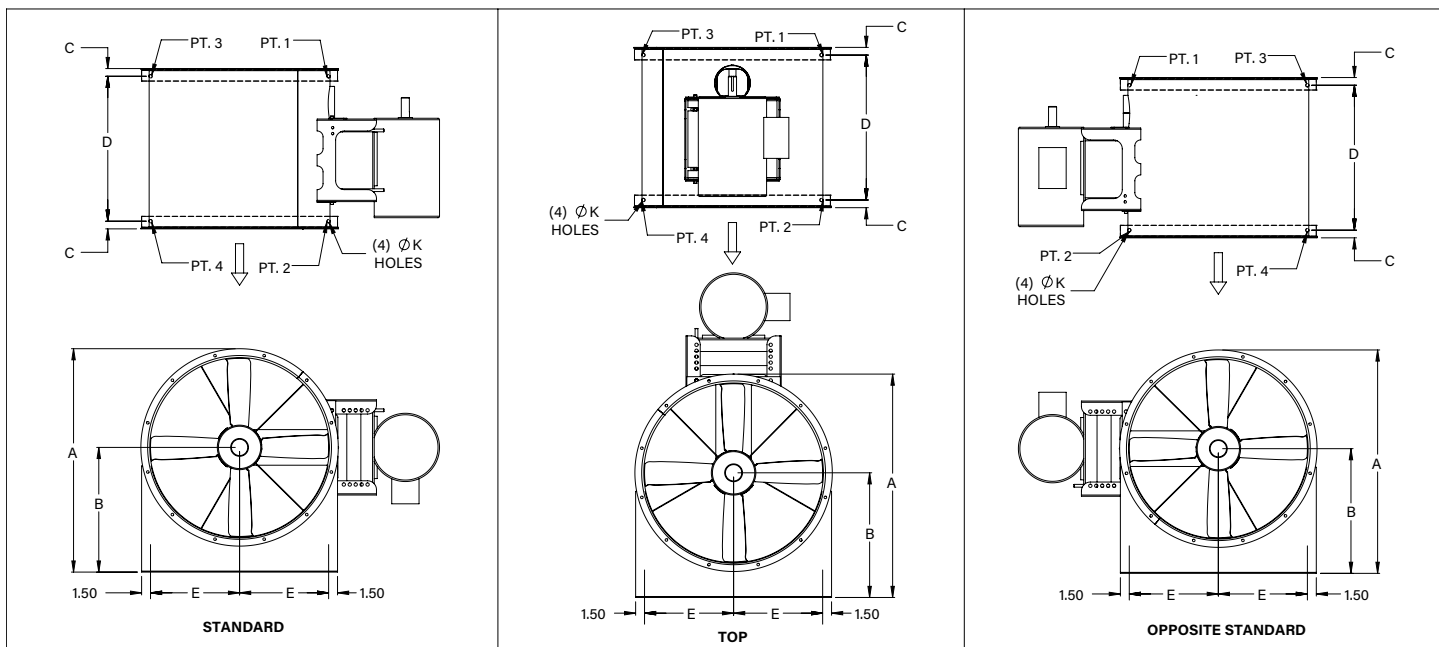


SIZE	A	B	C	D	L					CAST SOLID
					B1	B2	B3	B4	B6	
12	15.97	6.69	13.38	6.00	33					33
14	17.41	7.38	14.75	6.00	33					33
16	18.91	8.13	16.25	6.00	33					33
18	20.34	8.84	17.69	6.00	33					33
21	22.47	9.91	19.81	6.00	33					33
24	24.59	10.97	21.94	6.00	33					33
30	31.56	13.28	26.56	8.00	35	35				35
36	30.03	15.38	30.75	8.00		35	44	44		35
42	43.16	17.69	35.38	10.00			46	46		46
48	47.44	19.81	39.63	10.00			46	46		46
54	52.44	22.28	44.56	10.00				46		46
60	56.72	24.41	48.81	10.00					58	46
72	65.28	28.63	57.25	10.00					58	58
84	75.22	33.59	67.19	10.00						58
96	83.75	37.84	75.69	10.00						58

Dimensions shown are in inches unless otherwise indicated.
Dimensions are not to be used for construction.

R21978E

Model TABD | Floor & Ceiling Mount



SIZE	A	B	C	D					CAST SOLID	E	K
				B1	B2	B3	B4	B6			
12	16.81	9.25	1.01	24.94					24.97	6.13	0.56
14	19.31	10.75	1.01	24.97					24.97	7.13	0.56
16	21.06	11.50	1.04	24.91					24.91	8.13	0.56
18	23.09	12.50	1.04	24.91					24.91	9.13	0.56
21	27.09	15.00	1.04	24.91					24.91	10.63	0.56
24	30.59	17.00	1.29	24.41					24.41	12.25	0.56
30	37.63	21.00	1.29	24.41	24.41				24.41	15.00	0.56
36	44.66	25.00	1.63		23.73	32.73	32.73		23.73	18.50	0.81
42	53.16	30.00	1.63			32.73	32.73		32.73	21.88	0.81
48	60.19	34.00	1.68			32.64	32.64		32.64	24.88	0.81
54	67.22	38.00	1.68				32.64		32.64	27.75	0.81
60	74.72	42.50	2.43					43.16	31.13	31.00	0.94
72	90.28	51.00	2.43					43.14	43.14	36.25	0.94
84	103.31	58.00	2.43						43.14	42.50	0.94

Dimensions shown are in inches unless otherwise indicated.
Dimensions are not to be used for construction.

R21979B



Model TA

Fans shall be of the direct drive tubeaxial type, Arrangement 4, as manufactured by Aerovent, Minneapolis, Minnesota, and shall be of the size and capacity as indicated in the fan schedule. Fans shall have the fan impeller mounted directly on the motor shaft with the assembly enclosed entirely within the fan casing. Fans shall be tested and certified in accordance with ANSI/ASHRAE 51 and ANSI/AMCA 210 test codes and guaranteed by the manufacturer to deliver at the rated published performance levels. In addition, each unit shall be factory run tested prior to shipment.

CONSTRUCTION — Fan housings shall be of welded one-piece, hot rolled steel. The housing seam shall be continuously-welded and ground smooth for less resistance to airflow. Inlet and outlet flanges are standard.

IMPELLER — Precision Macheta® tipped airfoil fan blades and hub shall be aluminum alloy castings. The impeller shall be secured to the motor shaft with knurled cup point set screws on sizes to 16" diameter and with split taper lock bushings on sizes of 18" diameter and larger.

MOTORS — Direct drive fan motors shall be NEMA Design B, standard industrial, continuous duty, ball bearing, variable torque type and shall be provided with the enclosure type, voltage, phase and hertz as listed in the fan schedule. If motors have regreasable bearings, external grease fittings with extended copper grease leads shall be supplied for lubrication of the motor bearings. Direct drive fans shall have the motor wiring extended through liquid-tight conduit to the outside of the housing for easy connection. Motor bearings shall have a minimum L-10 life as defined by AFBMA of at least 40,000 hours (200,000 hours average life).

BALANCING — The impeller assembly shall be statically and dynamically balanced in accordance with ANSI/AMCA 204-96 "Balance Quality and Vibration Levels for Fans" to Fan Application Category BV-3, Balance Quality Grade G6.3. In addition, direct drive fan impellers shall be balanced on the fan shaft after final assembly in the fan casing, in the manufacturing facility, to the following peak velocity values, filter-in, at the fan test speed:

Fan Application Category	Rigidly Mounted (in. / s)	Flexibly Mounted (in. / s)
BV-3	0.15	0.20

FINISH — The entire fan assembly, excluding the shaft, shall be properly washed and pretreated before application of a rust-preventative primer, if called out on the order. After the fan is completely assembled, a finish coat of paint shall be applied to the entire assembly, if called out on the order. The fan shaft shall be coated with a petroleum-based rust protectant.

ACCESSORIES — The units shall be furnished complete with:

- Horizontal Support Legs
- Horizontal Ceiling Clips
- Vertical Support Section
- OSHA Inlet Guard
- Inlet Bell
- Inlet Cone
- Outlet Cone
- Swingout Construction
- Clamshell Construction
- Bolted Inspection Door
- Impeller Access Section
- OSHA Outlet Guard
- Acoustic Silencer (Inlet and/or Outlet)
- Companion Flanges
- Access Section
- Curb Cap
- Stack Cap
- Floor Mounted Vibration Isolators [RIS] [Spring]
- Ceiling Mounted Vibration Isolators [RIS] [Spring]



Model

TABD



Fans shall be of the belt driven tubeaxial type, Arrangement 9, as manufactured by Aerovent, Minneapolis, Minnesota, and shall be of the size and capacity as indicated in the fan schedule. Fans shall have the fan impeller mounted on a separate shaft and bearings in an enclosed tube with V-belt drives with a 1.3 service factor. Fans shall be tested and certified in accordance with ANSI/ASHRAE 51 and ANSI/AMCA 210 test codes and guaranteed by the manufacturer to deliver at the rated published performance levels. In addition, each unit shall be factory run tested prior to shipment.

CONSTRUCTION — Fan housings shall be of welded one-piece, hot rolled steel. The housing seam shall be continuously-welded and ground smooth for less resistance to airflow. Inlet and outlet flanges are standard.

IMPELLER — Precision Macheta® tipped airfoil fan blades and hub shall be aluminum alloy castings. The impeller shall be secured to the fan shaft with knurled cup point set screws on sizes to 16" diameter and with split taper lock bushings on sizes of 18" diameter and larger.

BEARINGS — Model TABD Belt Driven Fans shall be supplied with sealed pillow block bearings with lubrication lines extended to the outside of the fan housing for easy maintenance. Bearings shall have a minimum L-10 life as defined by AFBMA of at least 20,000 hours (100,000 hours average life).

DRIVE — All drive selections on Model TABD Belt Driven Fans shall be designed with a 1.4 service factor unless otherwise specified. Sheaves shall be cast iron with static conducting belts. Belt adjustment shall be accomplished with an adjustable motor slide rail base. Bearings and belts are enclosed in an air insulated housing for protection. An OSHA type belt guard shall be provided for personnel protection.

MOTORS — Belt driven motors shall be NEMA Design B, standard industrial, continuous duty, ball bearing, variable torque type and shall be provided with the enclosure type, voltage, phase and hertz as listed in the fan schedule.

BALANCING — The impeller assembly shall be statically and dynamically balanced in accordance with ANSI/AMCA 204-96 "Balance Quality and Vibration Levels for Fans" to Fan Application Category BV-3, Balance Quality Grade G6.3. In addition, belt driven fan impellers shall be balanced on the fan shaft after final assembly in the fan casing, in the manufacturing facility, to the following peak velocity values, filter-in, at the fan test speed:

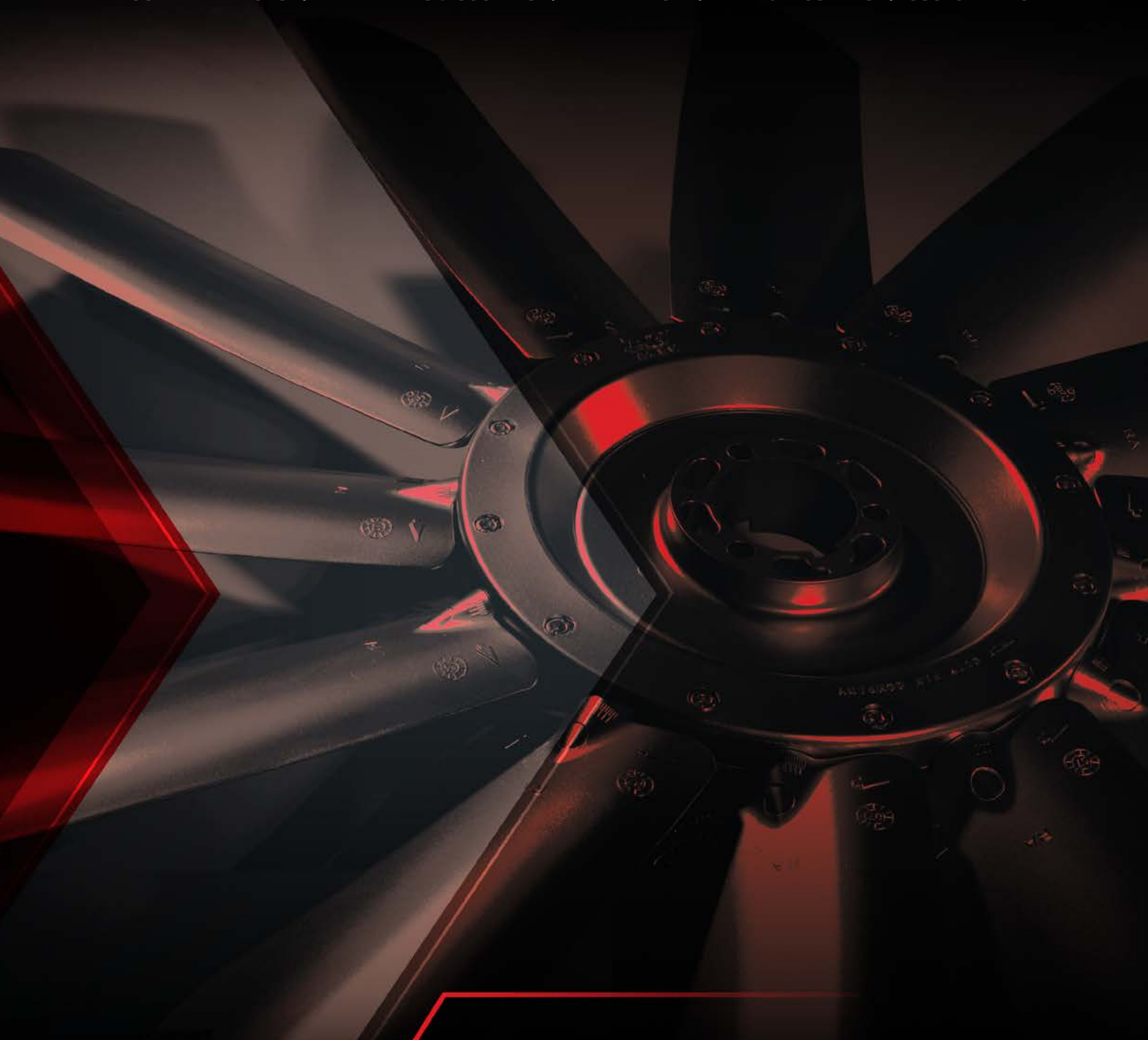
Fan Application Category	Rigidly Mounted (in. / s)	Flexibly Mounted (in. / s)
BV-3	0.15	0.20

FINISH — The entire fan assembly, excluding the shaft, shall be properly washed and pretreated before application of a rust-preventative primer, if called out on the order. After the fan is completely assembled, a finish coat of paint shall be applied to the entire assembly, if called out on the order. The fan shaft shall be coated with a petroleum-based rust protectant.

ACCESSORIES — The units shall be furnished complete with:

- Horizontal Support Legs
- Horizontal Ceiling Clips
- Vertical Support Section
- OSHA Inlet Guard
- Shaft Seal
- Inlet Bell
- Inlet Cone / Outlet Cone
- Swingout Construction (Sizes 21"-60")
- Clamshell Construction (Sizes 18"-60")
- Bolted Inspection Door
- Impeller Access Section
- OSHA Outlet Guard
- Spark Resistant Construction (AMCA Type A or B)
- Acoustic Silencer (Inlet and/or Outlet)
- Companion Flanges
- Access Section
- Motor Cover
- Curb Cap
- Stack Cap
- Floor Mounted Vibration Isolators [RIS] [Spring]
- Ceiling Mounted Vibration Isolators [RIS] [Spring]

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