

AXIAD II[®]

**Adjustable Pitch Airfoil
Axial Flow Fan**

AXIAD II® Fans

The axial flow fan with:

- High efficiency
- Low sound level
- Adjustable pitch blades
- Complete range of accessories

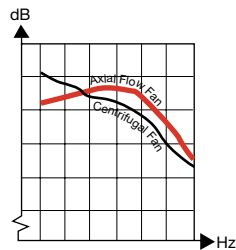
AXIAD II® has an efficiency of up to 85%.

When downstream guide vanes are used, the maximum efficiency of the AXIAD II is very high, even higher than that of belt driven centrifugal fans.

	Centrifugal Fan		Axial Flow Fan	
	Type FC Impeller	Type BI Impeller	Without	With
Fan Efficiency	70	85	75	85
Belt Drive	-5	-5	-0	-0
Net	65%	80%	75%	85%

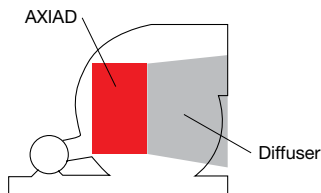
AXIAD II® is simple and inexpensive to silence.

Axial flow fans are usually noisier than centrifugal fans, but on the AXIAD II the difference is no more than a few decibels. In addition, the sound has a higher frequency and has no single tones. So the cost of silencing is usually as low as that for a centrifugal fan.



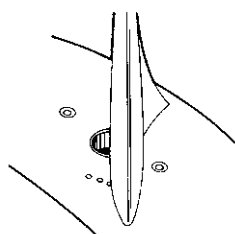
AXIAD II® is compact.

The AXIAD II is appreciably more compact than an equivalent centrifugal fan if fitted with a diffuser.



AXIAD II® is easy to adapt.

The AXIAD II has adjustable pitch blades for adjusting the fan to the required airflow and pressure. Just slacken two screws, turn the blade to the required angle and retighten.



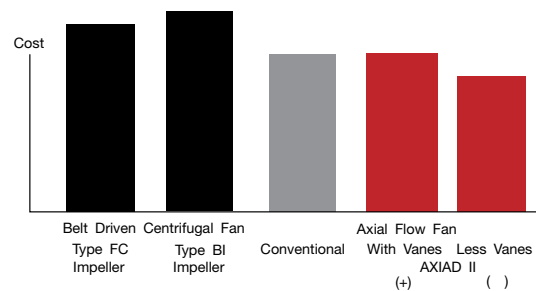
Axial flow or centrifugal fan?

Efficiency, sound level and adaptability are factors which must often be weighed against space requirements and investment, installation and service costs when choosing the type of fan for a particular application.

The AXIAD II® simplifies the choice.

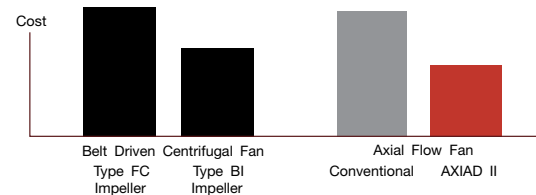
AXIAD II® costs less to buy.

The AXIAD II is less expensive than a conventional belt driven centrifugal fan. Usually it costs no more than an ordinary axial flow fan.



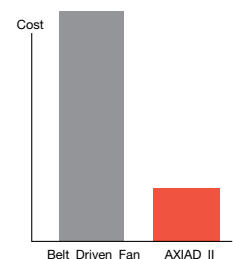
AXIAD II® costs less to run.

High efficiency and the lack of a belt drive combine to ensure low operating costs. The comparison is made at the best efficiency of each fan.



AXIAD II® costs less to service.

The AXIAD II is direct driven. It has only two bearings, which do not carry the load of a belt drive. This ensures optimum reliability and thus a minimum of service costs.



AXIAD II® also has:

- A standard foot mounted motor.
- High strength cast aluminum blades.
- A lightweight impeller (low bearing load).
- A complete range of accessories.
- Simple vibration isolators. It does not need costly iner-bases or concrete foundations.

AXIAD II® Features

- Available in 11 sizes from 22" to 55" diameter.
- Airflows from 2000 to 100,000 CFM
- Static pressure capabilities to 14" w.g.

Aerovent is proud to introduce the AXIAD II fan. This fan is the culmination of a design effort to produce a low noise adjustable pitch axial flow fan with high efficiency, compact size and simple blade adjustment.

The AXIAD II fan has been researched both aerodynamically and acoustically in AMCA approved computerized laboratories. The result is a fan that produces low sound power level when compared to other standard axial flow and centrifugal fans. The compact size occupies less space than comparable centrifugal fans and the straight-through airflow design provides installation savings.

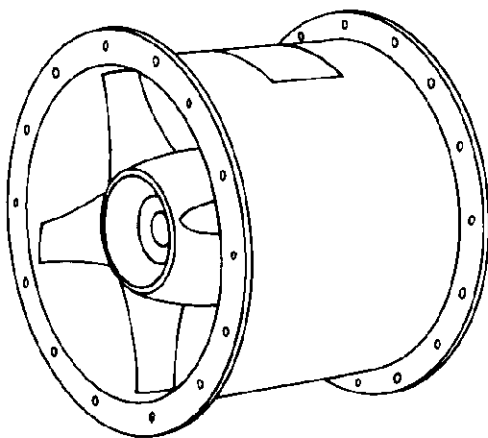
The blade adjustment mechanism is of simple yet strong design consisting of two bolts and a clamp. To change pitch angle it is necessary merely to loosen the bolts, turn the blade to the proper angle, and retighten the bolts. This provides ease of adjustment and assurance that position will not change. The hub of the fan is index marked for each blade angle. The correct blade position is indicated on the performance curves and corresponds to the hub markings.

The adjustable pitch blade feature permits easy system balancing or adjustment for unpredictable duct losses. It also permits changing fan characteristics to match changing job conditions. Since the blades can be changed in pitch approximately 35°, a wide variation in performance is possible.

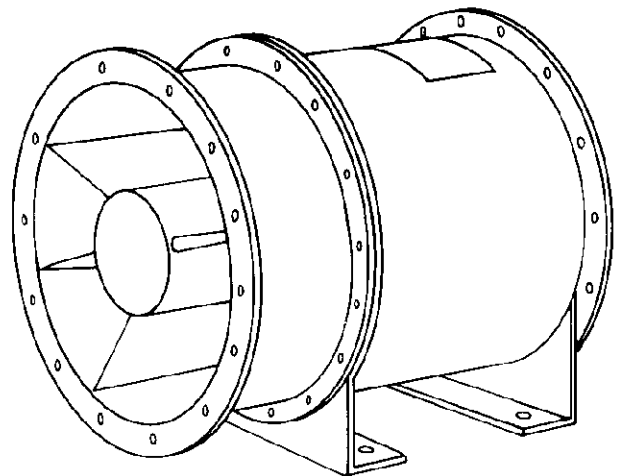
Compared with airfoil centrifugal or tubular centrifugal fans, AXIAD II fans are much lighter in weight, requiring only simple isolators instead of concrete inertia bases. AXIAD II fans are also more compact, occupying considerably less space than centrifugal fans.

The standard AXIAD II fan has an internal direct connected electric drive motor. A variety of full load speeds is possible, giving wide size selection possibilities. The direct connected motor also eliminates cumbersome V-belt drives, and the adjustable pitch blade design eliminates changing pulley sizes to obtain capacity changes.

Because the AXIAD II rotor is a high efficiency design, the fan can be supplied with or without the discharge vane section. This feature allows further refinements in fan selection, making economy in first cost and operating expense a certainty.



Without Vane

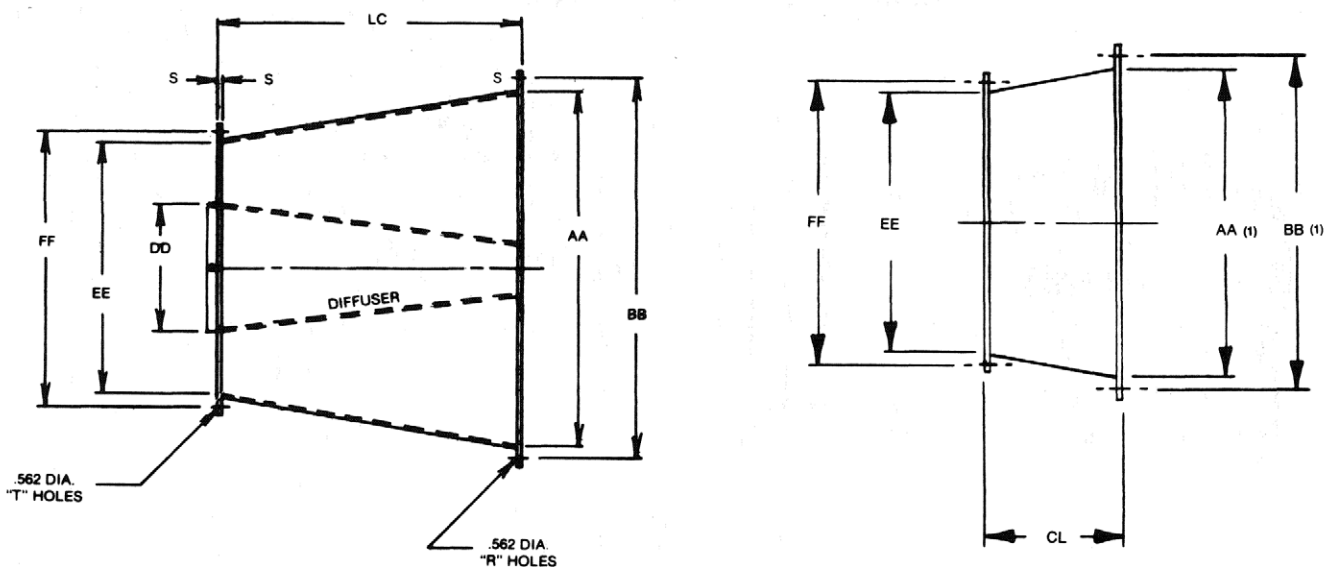


With Vane Section



Aerovent certifies that the AXIAD II fans have been tested and rated in accordance with industry accepted test codes, and are guaranteed by the manufacturer to deliver rated performance.

C-D Diffuser and Cone



Diffuser Size	Annular		AA	AA ⁽¹⁾	EE	FF	LC Diff.	CL Cone	R	S	T	Fan Casing Overall Area	Cone Outlet	
	Area Inlet	Sq. Ft. Outlet											ID	Area
056-3	1.78	3.49	26.00	28.00	22.05	23.93	24.00	12	12	.188	8	2.65	27.95	4.26
063-3	2.48	4.71	30.00	32.00	24.80	26.68	24.00	13	12	.188	8	3.35	31.50	5.41
071-3	3.39	6.11	34.00	36.00	27.95	29.85	32.00	14	12	.188	12	4.26	35.43	5.41
071-4	2.80	6.11												
080-3	4.54	7.67	38.00	40.00	31.50	33.38	36.00	16	16	.188	12	5.41	39.37	8.45
080-4	3.95	7.67												
090-3	5.98	9.42	42.00	44.00	35.43	37.25	36.00	18	16	.188	12	6.85	44.09	10.60
090-4	5.39	9.42												
090-5	4.52	9.18												
100-3	7.58	12.37	48.00	50.00	39.37	41.25	36.00	20	16	.188	12	8.46	49.21	13.21
100-4	6.99	12.37												
100-5	6.12	12.12												
112-4	9.14	15.70	54.00	56.00	44.09	46.00	42.00	22	24	.188	16	10.60	55.12	16.57
112-5	8.27	15.63												
125-4	11.75	19.43	60.00	62.00	49.21	51.00	46.00	25	24	.188	16	13.21	63.00	21.64
125-5	10.88	19.43												
140-5	14.24	25.01	68.00	72.00	55.12	57.62	56.00	28	24	.250	24	16.58	70.89	27.39

R100598B R100629F

3 Hub: DD = 12.28
 4 Hub: DD = 16.11
 5 Hub: DD = 20.35

For Size < 125 _____
 For Size > 125 _____

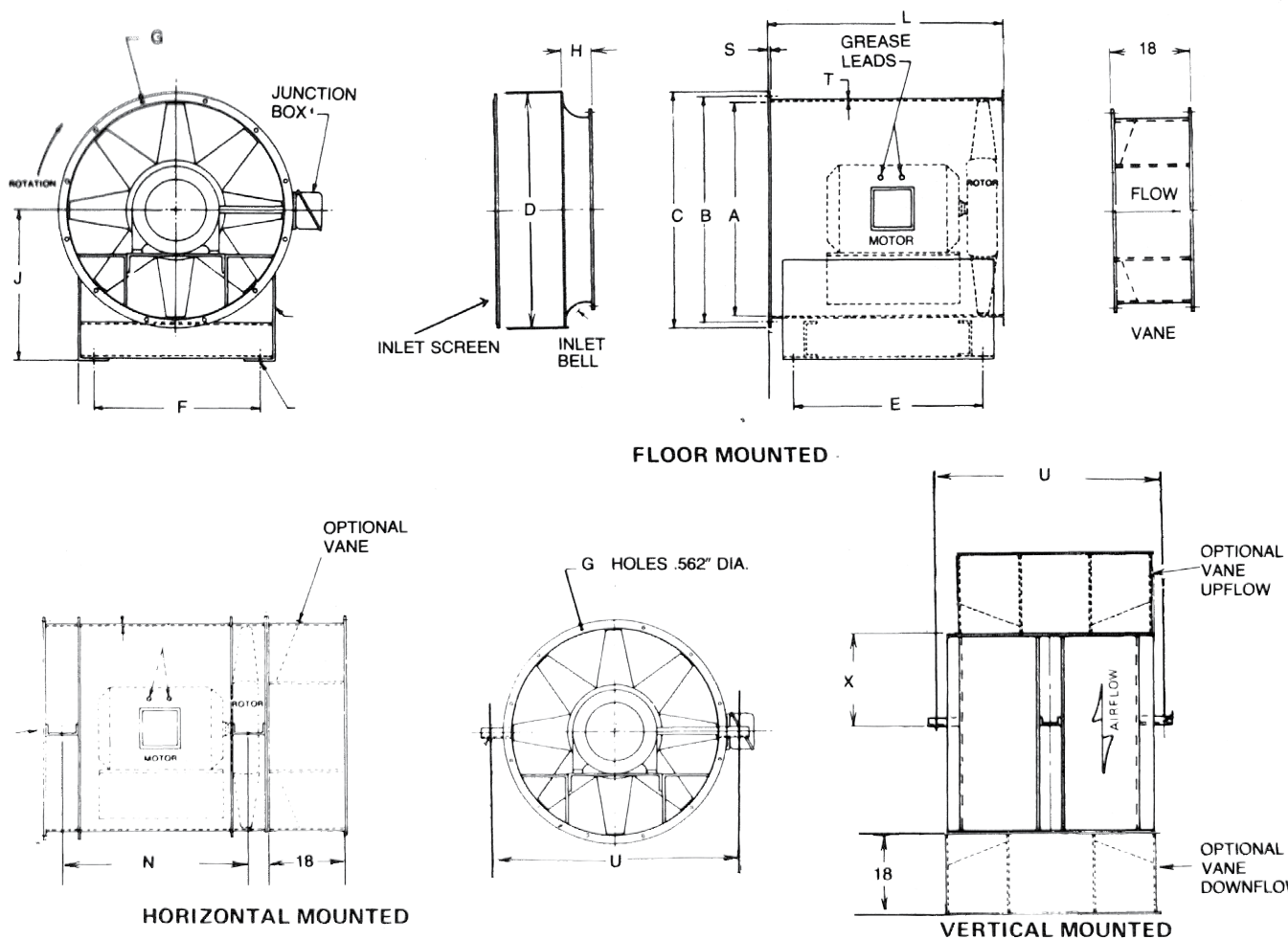
BB = AA + 1.5" _____
 BB = AA + 2.0" _____

BB⁽¹⁾ = AA⁽¹⁾ + 1.5"
 BB⁽¹⁾ = AA⁽¹⁾ + 2.0"

C-D Diffuser

Cone

Arrangement 4, Type 2



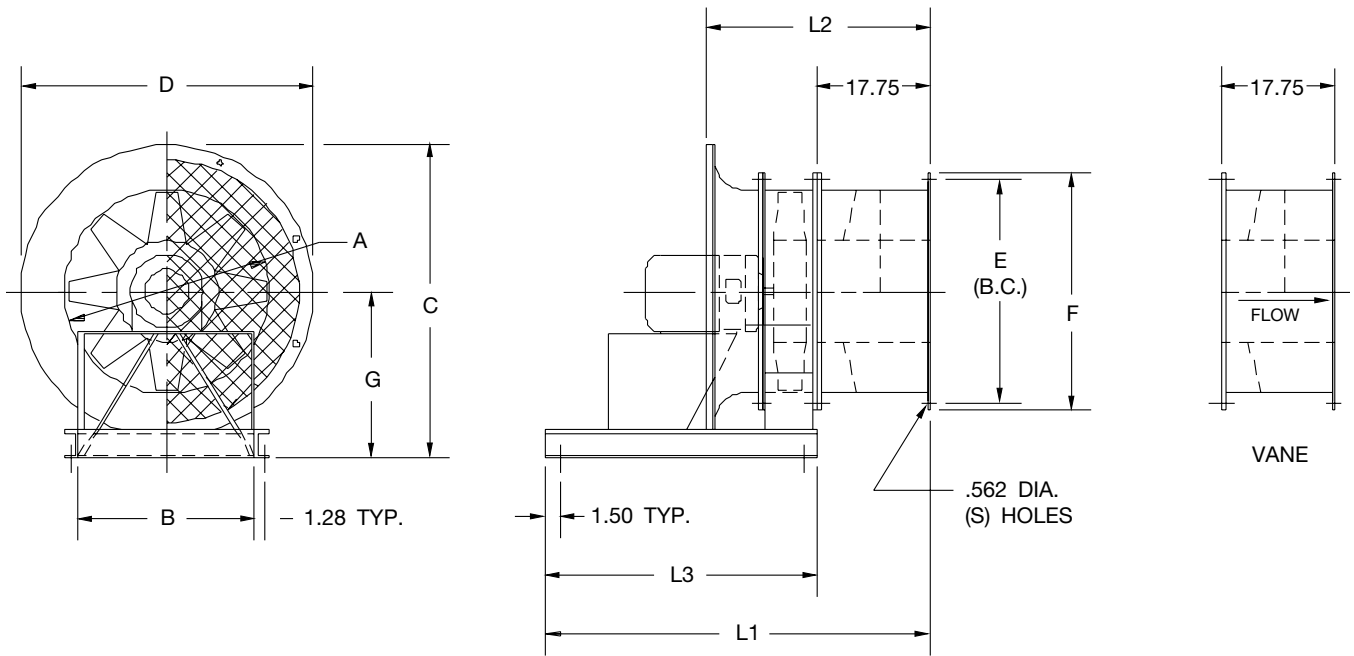
Fan Size	A	B	C	D	E	F	G	H	J	L	N	S	T	U	X
056	22.05	23.93	25.52	30.04	22.00	16.00	8	4.00	16.00	28.00	21.63	.188	.188	29.43	14.00
063	24.80	26.68	28.27	32.80	22.00	18.00	8	4.00	17.00	28.00	21.63	.188	.188	32.18	14.00
071	27.95	29.85	31.46	38.00	22.00	20.00	12	5.00	20.00	28.00	21.63	.188	.188	35.33	14.00
080	31.50	33.38	34.50	41.50	22.00	23.00	12	5.00	22.00	28.00	21.63	.188	.188	38.88	14.00
090	35.43	37.31	38.43	45.40	30.00	25.00	12	5.00	24.00	36.00	29.63	.188	.188	42.81	18.00
100	39.37	41.25	42.37	49.40	30.00	28.00	12	5.00	26.00	36.00	29.63	.188	.188	46.75	18.00
112	44.09	45.97	47.09	54.10	34.00	31.00	16	5.00	28.00	40.00	33.63	.188	.188	51.47	20.00
125	49.21	51.09	52.21	63.20	34.00	35.00	16	7.00	33.00	40.00	33.63	.188	.188	56.59	20.00
140	55.12	57.37	59.12	69.10	34.00	39.00	24	7.00	36.00	40.00	33.50	.250	.250	62.62	20.00

All dimensions in inches

R100666B R100669B
R100667B R100670B
R100668B R100671B



Arrangement 4, Type 3



Fan Size	A	B	C	D	E	F	G	L1	L2	L3	S
056	22.05	21.00	32.00	30.00	23.93	25.52	17.00	46.00	31.90	28.00	8
063	24.80	24.00	34.40	32.80	26.68	28.27	18.00	46.00	31.90	28.00	8
071	27.95	26.50	39.00	38.00	29.85	31.43	20.00	46.00	32.90	28.00	12
080	31.50	28.00	43.75	41.50	33.38	34.50	23.00	46.00	32.90	28.00	12
090	35.43	30.00	46.70	45.40	37.31	38.43	24.00	51.00	32.90	33.00	12
100	39.37	32.00	51.70	49.40	41.25	42.37	26.00	54.00	32.90	36.00	12
112	44.09	34.50	55.05	54.10	45.97	47.09	28.00	54.00	32.90	36.00	16
125	49.21	39.50	65.60	63.20	51.09	52.21	34.00	54.00	34.90	36.00	16
140	55.12	41.50	70.55	69.10	57.37	59.12	36.00	54.00	34.90	36.00	24
160	63.00	48.00	78.50	77.00	65.25	67.00	40.00	54.00	34.90	36.00	24
180	70.87	52.00	86.45	84.90	73.37	74.87	44.00	54.00	34.90	36.00	30

All dimensions in inches

R100731D

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