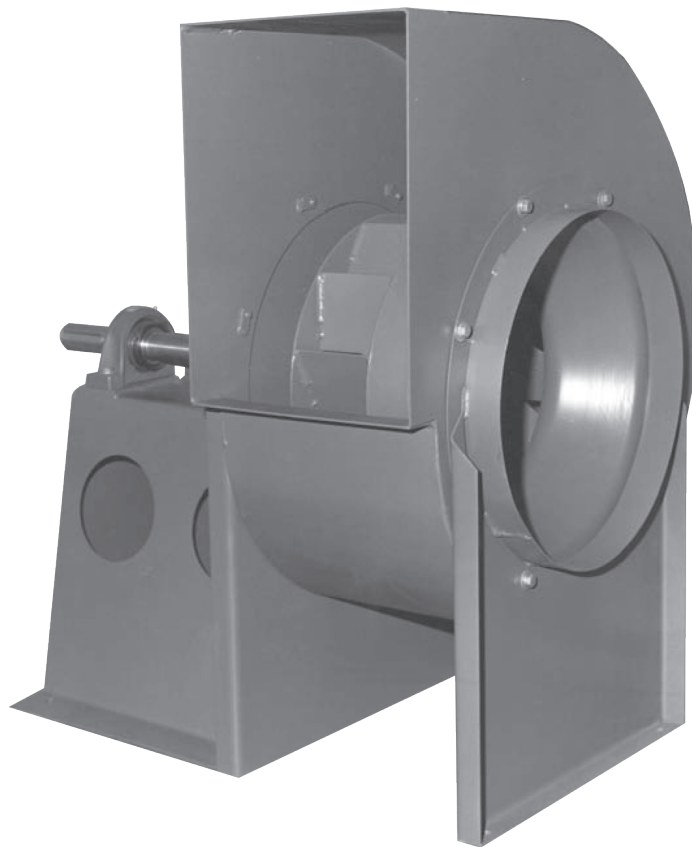


HDAF series

CENTRIFUGAL FAN

engineering data
and specifications



CINCINNATI FAN 

Since the founding of Cincinnati Fan in 1956, the company's mission has been to provide quality products at competitive prices, backed by depend-able service.

This mission is carried out by specializing in the market for industrial air handling products up to 125 hp. But specialization does not mean the product line is small. Cincinnati Fan offers a wide variety of standard and customized products, production flexibility, and customer responsiveness.

CINCINNATI FAN PROVIDES

- ◆ Technical evaluation for correct performance conditions
- ◆ Review of air stream and ambient conditions that require special attention
- ◆ Selection of proper components to meet required design specifications
- ◆ Selection of proper accessories
- ◆ System analysis for proper fan design

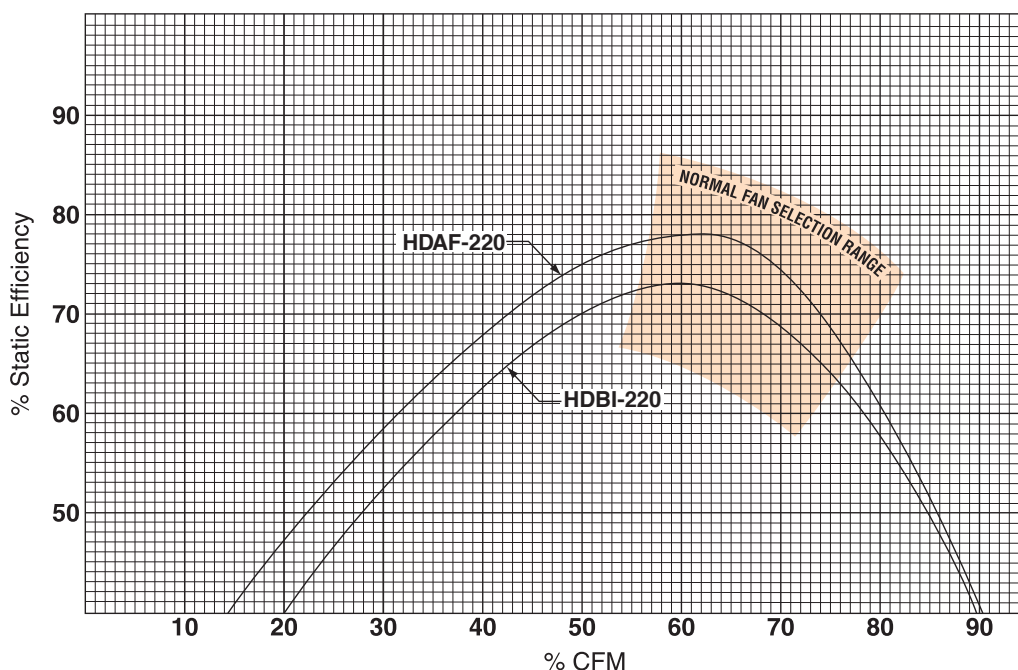
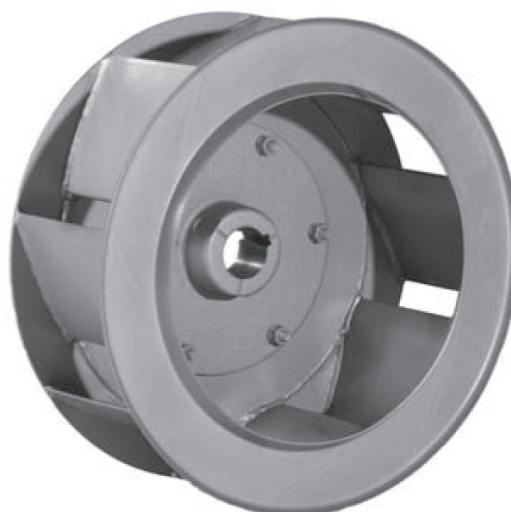
Cincinnati Fan operates in a modern facility specifically designed for world class manufacturing enabling us to build standard products to order, including accessories, and ship within 5 to 10 working days.

With support like this, you can be sure your Cincinnati Fan product will be well-built and will provide maximum dependability and longevity.

Cincinnati Fan has over 170 experienced sales engineers across the US and Canada ready to serve your air handling needs.

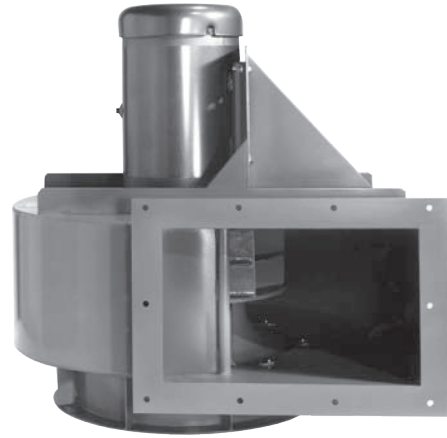
EFFICIENCY OF AIRFOIL WHEEL VS. BACKWARD INCLINED WHEEL

Airfoil wheels provide the highest efficiency of all centrifugal fan designs. The curve overlays below comparing a HDAF-220 and a HDBI-220 illustrates a 10% increase in static efficiency for the airfoil design versus the backward inclined design in the normal selection range. This benefit results in lower brake horsepower consumption and a reduction in sound levels of 2-6 dBA.



DIRECT DRIVE ADVANTAGES — ARRANGEMENT 4 and ARRANGEMENT 4HM

All sizes available in 100% to 50% widths in 5% increments

**ADVANTAGES**

- ♦ Compact—requires less space
- ♦ Weighs Less—requires less supporting structure
- ♦ Less Maintenance—no belts or fan bearings to replace
- ♦ Less Expensive—above features result in lower first cost and lower maintenance costs
- ♦ More Ratings—the combination of several motor speeds and eleven fan widths results in a vast selection of direct drive ratings
- ♦ Temperature—good up to 200°F (93°C)

HORIZONTAL MOUNTING OPTION

Ideal for bag house or other equipment requiring the simplicity of a horizontally mounted fan. Motors are limited to frame 365T maximum.

This mounting is available on all sizes. All horizontal mount housings are non-reversible. Inlet flange is optional and must be added if required. Supporting equipment must be adequate to support weights shown on page 22 plus motor weight.

HDAF ARRANGEMENT 9 FEATURES

A - Airfoil blades are fabricated of high-strength steel to assure long lasting, efficient operation.

B - Turned, ground and polished shafting assures smooth operation.

C - Heavy-duty, self-aligning, relubricatable, ball bearings in cast-iron pillow blocks. Bearings are selected for optimal performance depending on fan size and class with an L_{10} life of 30,000 hours minimum.

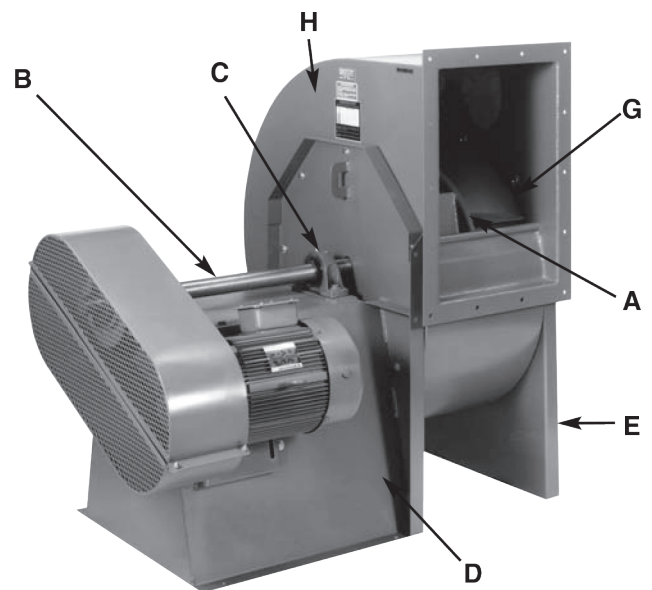
D - Bearing base is heavy steel construction with internal supports to maximize rigidity and assure long equipment life. Arrangement 1 fans can be converted to Arrangement 9 with the addition of the motor slide base.

E - Inlet side support is used to assure a vibration-free, stable housing.

F - Slip collar inlet (not shown) is used for duct work connection. Flanged inlet optional.

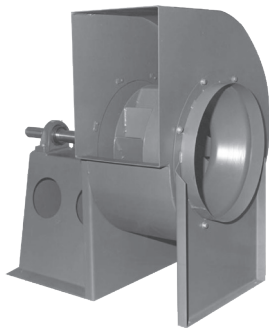
G - Inlet bell is designed for smooth air entrance into the wheel inlet for maximum efficiency.

H - Reversible housing provides increased configuration flexibility. Removable side plates allow the wheel to be removed from the motor or inlet side of the housing. Housings are rotatable in 45 degree increments. Wheels are not reversible. See note at right.



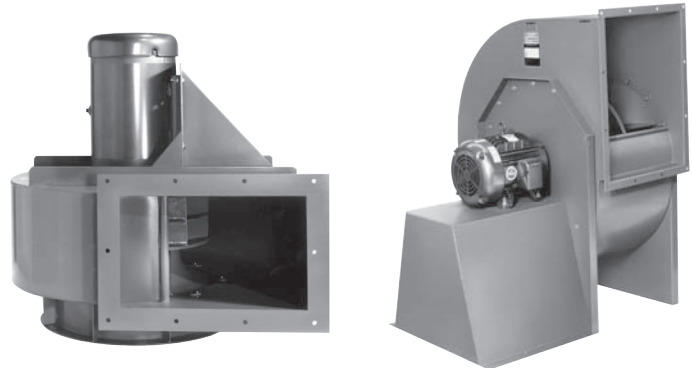
Note: HDAF-330 and HDAF-360 housings are not rotatable or reversible.

SEVEN STANDARD ARRANGEMENTS



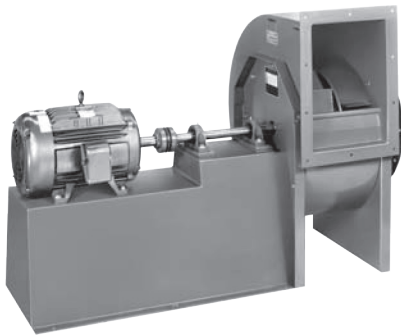
Arrangement 1 - Belt Drive

- ♦ Motor not mounted on bearing base
- ♦ Wheel mounted on fan shaft with two pillow block bearings
- ♦ Maximum temperature of standard design 300°F (149°C) High temperature design up to 750°F (398°C)



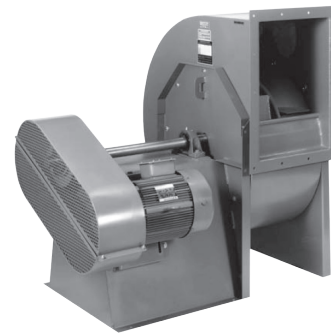
Arrangement 4HM - Arrangement 4 - Direct Drive

- ♦ Motor mounted on motor base
- ♦ Wheel mounted on motor shaft
- ♦ Maximum temperature of standard design 200°F (93°C) High temperature design not available



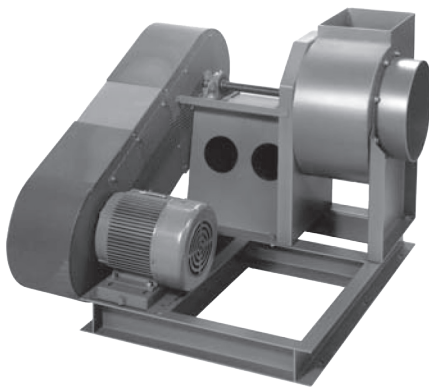
Arrangement 8 - Direct Drive

- ♦ Motor mounted on motor base extending beyond the bearing base Shaft/coupling guard is standard—shown with guard removed
- ♦ Wheel mounted on fan shaft with two pillow block bearings
- ♦ Maximum temperature of standard design 300°F (149°C) High temperature design up to 750°F (398°C)



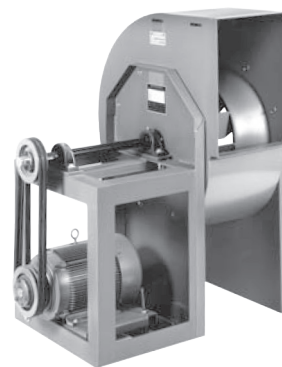
Arrangement 9 - Belt Drive

- ♦ Motor mounted on an adjustable slide base on the side of the bearing base
- ♦ Wheel mounted on fan shaft with two pillow block bearings
- ♦ Maximum temperature of standard design 300°F (149°C) High temperature design up to 750°F (398°C)



Arrangement 9CB - Belt Drive

- ♦ Same as Arrangement 9 except motor and fan are mounted on a common channel base
- ♦ Maximum temperature of standard design 300°F (149°C) High temperature design up to 750°F (398°C)



Arrangement 10 - Belt Drive

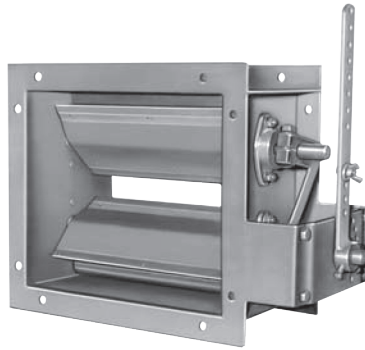
- ♦ Motor mounted on an adjustable slide base under the fan shaft Shown with weather cover removed
- ♦ Wheel mounted on fan shaft with two pillow block bearings
- ♦ Maximum temperature of standard design 300°F (149°C) High temperature design up to 750°F (398°C)

OPTIONS



Shaft Seal

Teflon shaft seal good to 400°F (204°C). Ceramic fiber gasket material with steel cover plate above 400°F (205°C).



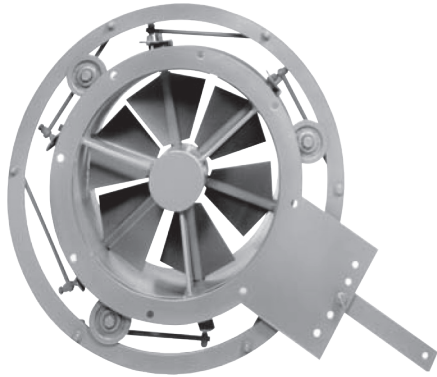
Outlet Damper

All dampers are 1 or 2 blade. Opposed blade construction is standard.



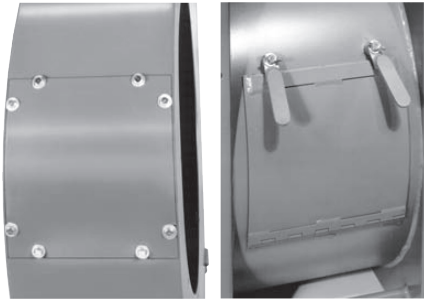
Belt Guard

Belt guard standard on Arrangement 9 and 9CB only. Painted safety yellow.



Inlet Vane Control

Linkage assembly is external on smaller sizes, internal on larger sizes. Inlet vane depth varies with inlet diameter. Contact your local Cincinnati Fan sales representative for dimensions.



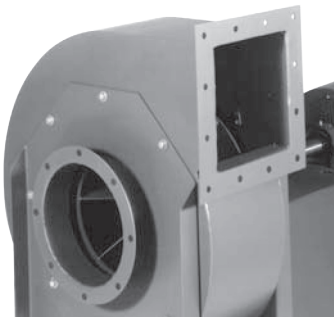
Inspection Door

Bolted or quick-release doors positioned as specified on scroll. Rubber gasket standard up to 250°F (121°C) Ceramic fiber gasket standard at temperatures above 250°F (122°C).



Drain Connection

3/4" pipe coupling welded to lowest point of housing. Not required on BH discharge position.



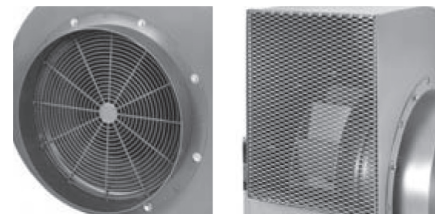
Inlet and Outlet Flange

Flanges on inlet and outlet available where installation requires tight duct connections. Standard hole pattern furnished. Outlet flange not available on some discharge positions. Outlet flange standard on all sizes 270 through 360. See page 31 for dimensions.



Shaft and/or Heat Slinger Guard

Guard available on Arrangement 1, 9 and 9CB. Covers bearings and shaft between fan housing and belt guard. Has extended lube lines. Standard on high temperature fans above 301°F (150°C). Painted safety yellow.



Inlet and Outlet Guards

Ring guard on inlet and expanded metal on discharge. Meets OSHA approval.

SPARK-RESISTANT CONSTRUCTION

Note—For AMCA Type A or B spark resistant construction, please contact your local Cincinnati Fan sales representative.

Type C: Consists of aluminum inlet bell and aluminum plate on drive side of the fan. Maximum Temperature is the same as for high temperature construction below for each arrangement.

⚠ Caution— All fans and blowers shown have rotating parts and pinch points. Severe personal injury can result if operated without guards. Stay away from rotating equipment unless it is disconnected from its power source. Read and understand operating instructions.

⚠ WARNING

The use of aluminum or aluminum alloys in the presence of steel which has been allowed to rust requires special consideration. Research by the U.S. Bureau of Mines and others has shown that aluminum impellers rubbing on rusty steel may cause high intensity sparking.

The use of the above Standard in no way implies a guarantee of safety for any level of spark resistance. Spark-resistant construction also does not protect against ignition of explosive gases caused by catastrophic failure or from any airstream material that may be present in a system.

HIGH TEMPERATURE CONSTRUCTION

Standard Construction: Arrangements 1, 8, 9, 9CB and 10 suitable to 300°F (149°C)
Arrangements 4 and 4HM suitable to 200°F (93°C).

301° to 400°F Construction: Standard fan with heat slinger and shaft/slinger guard. Arrangements 1, 8, 9 and 9CB only.

401° to 600°F Construction: Standard fan with heat slinger, shaft/slinger guard, high temperature shaft seal, gasketing and paint. Arrangements 1, 8, 9 and 9CB only.

601° to 750°F Construction: Standard fan with heat slinger, shaft/slinger guard, high temperature bearings, shaft seal, gasketing and paint. Arrangements 1, 8, 9 and 9CB only.

Temperature Range °F	Maximum RPM Reduction Factor†
Up to 175°	0%
176° - 200°	2%
201° - 300°	4%
301° - 400°	7%
401° - 500°	11%
501° - 600°	15%
601° - 700°	20%
701° - 750°	30%

† Steel wheels only

TEMPERATURE - ALTITUDE ADJUSTMENT

Air Temperature °F	Altitude in Feet Above Sea Level										
	0	1000	2000	3000	4000	5000	6000	7000	8000	9000	10000
0°	0.87	0.91	0.94	0.98	1.01	1.05	1.09	1.13	1.17	1.22	1.26
40°	0.94	0.98	1.02	1.06	1.10	1.14	1.19	1.23	1.28	1.32	1.36
70°	1.00	1.04	1.08	1.12	1.16	1.20	1.25	1.30	1.35	1.40	1.45
80°	1.02	1.06	1.10	1.14	1.19	1.23	1.28	1.33	1.38	1.43	1.48
100°	1.06	1.10	1.14	1.19	1.23	1.28	1.33	1.38	1.43	1.48	1.54
120°	1.09	1.14	1.18	1.23	1.28	1.32	1.38	1.43	1.48	1.53	1.58
140°	1.13	1.18	1.22	1.27	1.32	1.37	1.42	1.48	1.54	1.58	1.65
160°	1.17	1.22	1.26	1.31	1.36	1.42	1.47	1.53	1.59	1.64	1.70
180°	1.21	1.26	1.30	1.36	1.41	1.46	1.52	1.58	1.64	1.70	1.75
200°	1.25	1.29	1.34	1.40	1.45	1.51	1.57	1.63	1.69	1.75	1.81
250°	1.34	1.39	1.45	1.50	1.56	1.62	1.68	1.74	1.82	1.88	1.94
300°	1.43	1.49	1.55	1.61	1.67	1.74	1.80	1.87	1.94	2.00	2.08
350°	1.53	1.59	1.65	1.72	1.78	1.85	1.92	2.00	2.07	2.14	2.22
400°	1.62	1.69	1.75	1.82	1.89	1.96	2.04	2.12	2.20	2.27	2.35
450°	1.72	1.79	1.86	1.93	2.00	2.08	2.16	2.24	2.33	2.41	2.50
500°	1.81	1.88	1.96	2.03	2.11	2.19	2.28	2.36	2.46	2.54	2.62
550°	1.91	1.98	2.06	2.14	2.22	2.30	2.40	2.49	2.58	2.68	2.77
600°	2.00	2.08	2.16	2.24	2.33	2.42	2.50	2.61	2.71	2.80	2.90
650°	2.10	2.18	2.26	2.35	2.44	2.54	2.63	2.74	2.84	2.94	3.04
700°	2.19	2.27	2.36	2.46	2.55	2.65	2.75	2.86	2.97	3.06	3.18
750°	2.28	2.37	2.47	2.56	2.66	2.76	2.87	2.98	3.10	3.19	3.31

Fan performance tables are developed using standard air which is 70°F, 29.92" barometric pressure and .075 lb/ft³ per cubic foot. Density changes resulting from temperature or barometric pressure variations (such as higher altitudes) must be corrected to standard conditions before selecting a fan based on standard performance data. Temperature and/or altitude conversion factors are used in making corrections to standard conditions.

EXAMPLE: Select a belt driven fan to deliver 8400 CFM at 8" SP at 200°F, and 7000' altitude.

Step 1 - From the table, conversion factor is 1.63.

Step 2 - Correct static pressure is:

$$1.63 \times 8" \text{ SP} = 13.04" \text{ SP at standard conditions.}$$

Step 3 - Check HDAF catalog for 8400 CFM at 13" SP. We select a belt driven HDAF-200. Class IIP at 3335 RPM and 22.77 bhp.

Step 4 - Correct the bhp for the lighter air:

$$22.77 \div 1.63 = 13.97 \text{ bhp.}$$

A 15 hp motor will suffice at 200°F, and 7000' but not at standard conditions. Special motor insulation may be required due to altitude.

DIRECT DRIVE RATINGS TABLES for Full (100%) Width Fan

CFM and bhp at static pressure shown

Sizes 120-160 have Class II wheels–Sizes 180-240 have Class IIP wheels–Sizes 270-360 have Class III wheels

Model	RPM	Wheel Type	1" SP		2" SP		3" SP		4" SP		5" SP		5" SP	
			CFM	bhp	CFM	bhp	CFM	bhp	CFM	bhp	CFM	bhp	CFM	bhp
HDAF-120	1750	HDAF	993 ■	0.29										
		SOAF	1002 ■	0.29										
	3500	HDAF	2879	2.21	2608	2.28	2320	2.31	1985	2.29	1524	2.15	270	1.51
		SOAF	2734	2.14	2509	2.26	2275	2.33	2003	2.35	1650	2.28	1144	2.08
HDAF-130	1750	HDAF	1491 ■	0.47										
		SOAF	1457 ■	0.47	501 ■	0.38								
	3500	HDAF	3917	3.57	3620	3.67	3314	3.74	2982	3.76	2597	3.71	2087	3.52
		SOAF	3680	3.39	3432	3.56	3183	3.68	2913	3.76	2601	3.76	2206	3.66
HDAF-150	1750	HDAF	2289 ■	0.77	1436 ■	0.76								
		SOAF	2188 ■	0.83	1405 ■	0.86								
	3500	HDAF	5568	5.72	5260	5.94	4928	6.09	4578	6.19	4213	6.25	3827	6.27
		SOAF	5239	6.15	4955	6.32	4671	6.49	4376	6.66	4058	6.81	3705	6.92
HDAF-160	1750	HDAF	3209 ■	1.23	2377 ■	1.26								
		SOAF	3056 ■	1.32	2312 ■	1.40	1053 ■	1.28						
	3500	HDAF	7478	9.14	7147	9.45	6792	9.69	6419	9.87	6031	9.99	5629	10.07
		SOAF	7055	9.89	6739	10.11	6429	10.34	6113	10.58	5784	10.80	5434	10.99
HDAF-180	1750	HDAF	4574	1.83	4031	2.02	3333	2.08						
		SOAF	5174	2.51	4648	2.70	4006	2.74	3037	2.60				
	3500	HDAF	9885	13.17	9638	13.82	9393	14.27	9148	14.66	8903	15.05	8632	15.43
		SOAF	11136	18.68	10874	19.16	10611	19.63	10348	20.11	10085	20.49	9822	20.85
HDAF-200	1750	HDAF	6128	2.85	5556	3.10	4910	3.32	3930	3.22				
	3500	SOAF	6918	3.90	6342	4.16	5706	4.31	4955	4.33	2562	3.30		
HDAF-220	1750	HDAF	13064	20.65	12794	21.50	12524	22.24	12256	22.76	11988	23.27	11720	23.79
	1750	SOAF	8357	3.90	7655	4.56	6874	4.84	5919	4.81	2593	3.51		
HDAF-240	1750	HDAF	9801	7.13	9257	7.51	8669	7.76	7952	7.60	7014	7.05	5301	6.80
	1750	SOAF	11316	6.14	10550	7.00	9771	7.92	8840	7.79	7726	7.80	3990	6.01
HDAF-270	1750	HDAF	13227	11.44	12651	12.04	12006	12.37	11359	12.70	10496	12.21	9518	11.44
	1750	SOAF	17215	14.49	16558	15.39	15859	16.23	15048	16.94	14222	17.57	13254	17.52
HDAF-300	1750	HDAF	19339	19.26	18632	20.02	17900	20.77	17039	21.50	16178	22.23	15126	22.28
	1750	SOAF	23786	24.25	23056	25.48	22326	26.71	21488	27.78	20587	28.75	19685	29.71
HDAF-330	1750	HDAF	26746	32.44	25961	33.48	25175	34.51	24304	35.53	23347	36.54	22390	37.55
	1750	SOAF	31828	38.71	31025	40.35	30222	41.99	29419	43.62	28442	44.94	27450	46.23
HDAF-360	1750	HDAF	35611	51.56	34748	52.93	33885	54.30	33022	55.68	32013	57.02	30962	58.35
HDAF-360	1750	HDAF	41488	59.41	40612	61.53	39736	63.66	38859	65.78	37953	67.84	36872	69.52

Model	RPM	Wheel Type	7" SP		8" SP		9" SP		10" SP		11" SP		12" SP	
			CFM	bhp	CFM	bhp	CFM	bhp	CFM	bhp	CFM	bhp	CFM	bhp
HDAF-120	3500	SOAF	492	1.79										
HDAF-130	3500	HDAF	963	2.84										
		SOAF	1672	3.41	1002	3.05								
HDAF-150	3500	HDAF	3399	6.23	2872	6.06								
		SOAF	3298	6.96	2810	6.90	2217	6.70	1504	6.31	464	5.50		
HDAF-160	3500	HDAF	5207	10.10	4755	10.07	4242	9.95	3584	9.61				
		SOAF	5052	11.15	4625	11.24	4135	11.24	3562	11.10	2888	10.79	2105	10.27
HDAF-180	3500	HDAF	8347	15.81	8062	16.19	7777	16.57	7458	16.81	7063	16.73	6667	16.65
		SOAF	9559	21.21	9295	21.57	9010	21.82	8678	21.84	8347	21.86	8012	21.89
HDAF-200	3500	HDAF	11425	24.29	11113	24.79	10800	25.29	10488	25.78	10176	26.28	9820	26.57
HDAF-220	1750	SOAF	786	3.74										
HDAF-240	1750	SOAF	7589	11.17	4696	9.23								
HDAF-270	1750	HDAF	11686	16.92	5348	11.49								
		SOAF	14012	22.10	12811	21.74	10950	20.60	5165	15.06				
HDAF-300	1750	HDAF	18618	29.70	17542	29.62	14988	27.89	5687	17.61				
		SOAF	21287	37.91	20048	37.66	18778	37.33	17442	36.84	15521	35.49	6754	24.72
HDAF-330	1750	HDAF	26459	47.52	25337	47.87	24154	47.77	22797	47.44	19596	44.61	9040	30.36
		SOAF	29911	59.68	28804	60.72	27444	60.39	26084	60.06	24666	59.56	23198	58.91
HDAF-360	1750	HDAF	35790	71.19	34708	72.87	33567	74.03	32275	73.90	30984	73.78	29249	72.93

Model	RPM	Wheel Type	13" SP		14" SP		15" SP		16" SP		17" SP		12" SP	
			CFM	bhp	CFM	bhp	CFM	bhp	CFM	bhp	CFM	bhp	CFM	bhp
HDAF-160	3500	SOAF	1139	9.45										
HDAF-180	3500	HDAF	6173	16.43	5547	16.02	2938	11.83						
		SOAF	7655	21.93	7298	21.97	6942	22.02	6073	20.76	2931	14.85		
HDAF-200	3500	HDAF	9387	26.46	8953	26.35	8520	26.25	7859	25.76	5178	21.19	3803	18.59
HDAF-330	1750	SOAF	21730	58.25	12177	44.11	10079	42.05						
HDAF-360	1750	HDAF	25758	69.25	15045	52.68								

■ These performance ratings require a larger motor frame size even though the bhp is available in a smaller motor frame. See pages 23, 24 or 27 for the minimum motor frame size for each fan model.

Performance shown is for installation type B-Free inlet, ducted outlet.

Performance ratings do not include the effect of appurtenances (accessories).

DIRECT DRIVE RATINGS TABLES for Partial Width Fan with Two Wheel Types

CFM and bhp at static pressure shown

Sizes 120-160 have Class II wheels–Sizes 180-240 have Class IIP wheels–Sizes 270-360 have Class III wheels

Model	RPM	Wheel Type	Fan Width	1" SP		2" SP		3" SP		4" SP		5" SP		5" SP	
				CFM	bhp	CFM	bhp	CFM	bhp	CFM	bhp	CFM	bhp	CFM	bhp
HDAF-120	3500	HDAF	50%	1440	1.11	1304	1.14	1160	1.16	993	1.14	762	1.08	135	0.75
		SOAF	50%	1367	1.07	1255	1.13	1138	1.17	1002	1.18	825	1.14	572	1.04
		HDAF	75%	2159	1.66	1956	1.71	1740	1.73	1489	1.72	1143	1.61	202	1.13
		SOAF	75%	2051	1.61	1882	1.69	1706	1.75	1502	1.76	1237	1.71	858	1.56
HDAF-130	3500	HDAF	50%	1959	1.79	1810	1.83	1657	1.87	1491	1.88	1299	1.85	1043	1.76
		SOAF	50%	1840	1.70	1716	1.70	1591	1.84	1457	1.88	1300	1.88	1103	1.83
		HDAF	75%	2938	2.68	2715	2.75	2485	2.80	2237	2.82	1948	2.78	1565	2.64
		SOAF	75%	2760	2.55	2574	2.67	2387	2.76	2185	2.82	1950	2.82	1655	2.74
HDAF-150	1750	HDAF	50%	1145	0.39	718	0.38								
		SOAF	50%	1094	0.42	703	0.43								
		HDAF	75%	1717	0.58	1077	0.57								
		SOAF	75%	1641	0.62	1054	0.65								
	3500	HDAF	50%	2784	2.86	2630	2.97	2464	3.05	2289	3.10	2107	3.13	1913	3.14
		SOAF	50%	2620	3.07	2477	3.16	2335	3.25	2188	3.33	2029	3.41	1853	3.46
		HDAF	75%	4176	4.29	3945	4.45	3696	4.57	3434	4.65	3160	4.69	2870	4.70
		SOAF	75%	3929	4.61	3716	4.74	3503	4.87	3282	5.00	3044	5.11	2779	5.19
HDAF-160	1750	HDAF	50%	1605	0.62	1189	0.63								
		SOAF	50%	1528	0.66	1156	0.70	526	0.64						
		HDAF	75%	2407	0.93	1783	0.94								
		SOAF	75%	2292	0.99	1734	1.05	789	0.96						
	3500	HDAF	50%	3739	4.57	3574	4.73	3396	4.85	3209	4.93	3015	5.00	2814	5.03
		SOAF	50%	3527	4.95	3370	5.05	3214	5.17	3056	5.29	2892	5.40	2717	5.50
		HDAF	75%	5608	6.86	5360	7.09	5094	7.27	4814	7.40	4523	7.49	4221	7.55
		SOAF	75%	5291	7.42	5055	7.58	4821	7.76	4585	7.93	4338	8.10	4075	8.25
HDAF-180	1750	HDAF	50%	2287	0.92	2016	1.01	1667	1.04						
		SOAF	50%	2587	1.26	2324	1.35	2003	1.37	1519	1.30				
		HDAF	75%	3431	1.37	3023	1.52	2500	1.56						
		SOAF	75%	3881	1.88	3486	2.03	3005	2.06	2278	1.95				
	3500	HDAF	50%	4943	6.59	4819	6.91	4697	7.14	4574	7.33	4452	7.53	4316	7.72
		SOAF	50%	5568	9.34	5437	9.58	5306	9.82	5174	10.06	5043	10.25	4911	10.43
		HDAF	75%	7414	9.88	7229	10.37	7045	10.70	6861	11.00	6677	11.29	6474	11.57
		SOAF	75%	8352	14.01	8156	14.37	7958	14.72	7761	15.08	7564	15.37	7367	15.64
HDAF-200	1750	HDAF	50%	3064	1.43	2778	1.55	2455	1.66	1965	1.61				
		SOAF	50%	3459	1.95	3171	2.08	2853	2.16	2478	2.17	1281	1.65		
		HDAF	75%	4596	2.14	4167	2.33	3683	2.49	2948	2.42				
		SOAF	75%	5189	2.93	4757	3.12	4280	3.23	3716	3.25	1922	2.48		
	3500	HDAF	50%	6532	10.33	6397	10.75	6262	11.12	6128	11.38	5994	11.64	5860	11.90
		HDAF	75%	9798	15.49	9596	16.13	9393	16.68	9192	17.07	8991	17.45	8790	17.84
	1750	HDAF	50%	4179	1.95	3828	2.28	3437	2.42	2960	2.41	1297	1.76		
		SOAF	50%	4901	3.57	4629	3.76	4335	3.88	3976	3.80	3507	3.53	2651	3.40
HDAF-220	1750	HDAF	75%	6268	2.93	5741	3.42	5256	3.63	4439	3.61	1945	2.63		
		SOAF	75%	7351	5.35	6943	5.63	6502	5.82	5964	5.70	5261	5.29	3976	5.10
HDAF-240	1750	HDAF	50%	5658	3.07	5275	3.50	4886	3.96	4420	3.90	3863	3.90	1995	3.01
		SOAF	50%	6614	5.72	6326	6.02	6003	6.19	5680	6.35	5248	6.11	4759	5.72
	1750	HDAF	75%	8487	4.61	7913	5.25	7328	5.94	6630	5.84	1945	5.85	2993	4.51
		SOAF	75%	9920	8.58	9488	9.03	9005	9.28	8519	9.53	7872	9.16	7139	8.58
HDAF-270	1750	HDAF	50%	8608	7.25	8279	7.70	7930	8.12	7524	8.47	7111	8.79	6627	8.76
		SOAF	50%	9670	9.63	9316	10.01	8950	10.39	8520	10.75	8089	11.12	7563	11.14
	1750	HDAF	75%	12911	10.87	12419	11.54	11894	12.17	11286	12.71	10667	13.18	9941	13.14
		SOAF	75%	14504	14.45	13974	15.02	13425	15.58	12779	16.13	12134	16.67	11345	16.71
HDAF-300	1750	HDAF	50%	11893	12.13	11528	12.74	11163	13.36	10744	13.89	10294	14.38	9843	14.86
		SOAF	50%	13373	16.22	12981	16.74	12588	17.26	12152	17.77	11674	18.27	11195	18.78
	1750	HDAF	75%	17840	18.19	17292	19.11	16745	20.03	16116	20.84	15440	21.56	14764	22.28
		SOAF	75%	20060	24.33	19471	25.11	18881	25.88	18288	26.65	17510	27.41	16793	28.16
HDAF-330	1750	HDAF	50%	15914	19.36	15513	20.18	15111	21.00	14710	21.81	14221	22.47	13725	23.12
		SOAF	50%	17806	25.78	17374	26.47	16943	27.15	16511	27.84	16007	28.51	15481	29.18
	1750	HDAF	75%	23871	29.03	23269	30.26	22667	31.49	22064	32.72	21332	33.71	20588	34.67
		SOAF	75%	26708	38.67	26061	39.70	25414	40.73	24767	41.76	24010	42.77	23222	43.76
HDAF-360	1750	HDAF	50%	20744	29.71	20306	30.77	19868	31.83	19430	32.89	18977	33.92	18436	34.76
		SOAF	50%	24276	42.69	23798	43.62	23320	44.55	22843	45.48	22365	46.41	21802	47.32
	1750	HDAF	75%	31116	44.56	30459	46.15	29802	47.75	29144	49.34	27465	50.88	27654	52.14
		SOAF	75%	36413	64.03	35697	65.42	34980	66.83	34264	68.22	33547	69.62	32702	70.98

- These performance ratings require a larger motor frame size even though the bhp is available in a smaller motor frame. See pages 23, 24 or 27 for the minimum motor frame size for each fan model.

Performance shown is for installation type B-Free inlet, Ducted Outlet.

Performance ratings do not include the effects of appurtenances (accessories).

The partial width fan ratings shown on this page and on pages 9, 10 and 11 were derived from tests performed in accordance with AMCA Publication 210 and fan laws were applied to arrive at the data shown.

DIRECT DRIVE RATINGS TABLES for Partial Width Fan with Two Wheel Types

CFM and bhp at static pressure shown .

Sizes 120-160 have Class II wheels–Sizes 180-240 have Class IIP wheels–Sizes 270-360 have Class III wheels

7" SP		8" SP		9" SP		10" SP		11" SP		12" SP		13" SP		14" SP	
CFM	bhp	CFM	bhp	CFM	bhp	CFM	bhp	CFM	bhp	CFM	bhp	CFM	bhp	CFM	bhp
246 ■	0.89														
369 ■	1.34														
481 ■	1.42														
836	1.70	501	1.53												
722	2.13														
1254	2.55	752	2.29												
1700	3.11	1436	3.03												
1649	3.48	1405	3.45	1108	3.35	752	3.16	232	2.75						
2550	4.67	2154	4.55												
2473	5.22	2108	5.18	1662	5.02	1128	4.73	348	4.12						
2604	5.05	2377	5.04	2121	4.98	1792	4.81								
2526	5.57	2312	5.62	2068	5.62	1781	5.55	1444	5.39	1053	5.14	569	4.72		
3906	7.58	3566	7.56	3182	7.46	2688	7.21								
3789	8.36	3469	8.43	3101	8.43	2671	8.32	2166	8.09	1579	7.70	854	7.09		
4174	7.91	4031	8.10	3889	8.29	3729	8.41	3532	8.37	3334	8.33	3087	8.22	2774	8.01
4780	10.61	4648	10.79	4505	10.91	4339	10.92	4174	10.93	4006	10.95	3828	10.97	3649	10.99
6260	11.86	6047	12.14	5833	12.43	5594	12.61	5297	12.55	5000	12.49	4630	12.32	4160	12.02
7169	15.91	6971	16.18	6758	16.37	6509	16.38	6260	16.40	6009	16.42	5741	16.45	5474	16.48
5713	12.15	5557	12.40	5400	12.65	5244	12.89	5088	13.14	4910	13.29	4694	13.23	4477	13.18
8569	18.22	8335	18.59	8100	18.97	7866	19.34	7632	19.71	7365	19.93	7040	19.85	6715	19.76
393 ■	1.87														
590	2.81														
3795	5.59	2348 ■	4.62												
5692	8.38	3522	6.92												
5843	8.46	2674	5.75												
7006	11.05	6406	10.87	5475	10.30	2583	7.53								
8765	12.69	4011	8.62												
10509	16.58	9608	16.31	8213	15.45	3874	11.30								
9309	14.85	8771	14.81	7494	13.95	2844	8.81								
10644	18.96	10024	18.83	9389	18.67	8721	18.42	7761	17.75	3377	12.36				
13964	22.28	13157	22.22	11241	20.92	4265	13.21								
15965	28.43	15036	28.25	14084	28.00	13082	27.63	11641	26.62	5066	18.54				
13230	23.76	12669	23.94	12077	23.89	11399	23.72	9798	22.31	4520 ■	15.18				
14956	29.84	14402	30.36	13722	30.20	13042	30.03	12333	29.78	11599	29.46	10865	29.13	6089	22.06
19844	35.64	19003	35.90	18116	35.83	17098	35.58	14697	33.46	6780	22.77				
22433	44.76	21603	45.54	20583	45.29	19563	45.05	18500	44.67	17399	44.18	16298	43.69	9133	33.08
17895	35.60	17354	36.44	16784	37.02	16138	36.95	15492	36.89	14625	36.47	12879	34.63	7523	26.34
21220	48.23	20638	49.13	20056	50.04	19403	50.48	18650	50.25	17897	50.03	17134	49.77	16322	49.33
26843	53.39	26031	54.65	25175	55.52	24206	55.43	23238	55.34	21937	54.70	19319	51.94	11284	39.51
31829	72.34	30957	73.70	30084 ●	75.05	29105 ●	75.71	27975 ●	75.38	26846 ●	75.05	25701	74.66	24482	73.99

■ These performance ratings require a larger motor frame size even though the bhp is available in a smaller motor frame. See pages 23, 24 or 27 for the minimum motor frame size for each fan model.

● These performance ratings not available in Arrangement 4HM because motor exceed frame size limits. See page 24.

HDAF-120**Wheel**

Diameter - 12.25"

Outlet OD

Size - 9.38" x 13.69"

Area - .85 ft² ID**Inlet OD**

Size - 13.25"

Area - .93 ft² ID

All wheels are Class II HDAF Type

Volume CFM	O.V. fpm	0" SP		¼" SP		½" SP		¾" SP		1" SP		1 ½" SP		2" SP	
		RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp
400	447	444	0.01	813	0.03	1073	0.06	1288	0.10	1474	0.14	1790	0.24	2058	0.35
600	670	665	0.01	953	0.05	1170	0.08	1360	0.13	1531	0.17	1831	0.28	2092	0.41
800	894	887	0.03	1125	0.08	1310	0.12	1475	0.17	1627	0.22	1901	0.34	2147	0.47
1000	1117	1109	0.07	1312	0.12	1474	0.17	1620	0.23	1755	0.29	2004	0.42	2231	0.56
1200	1341	1331	0.12	1508	0.18	1653	0.24	1784	0.31	1906	0.37	2132	0.52	2341	0.67
1400	1564	1553	0.19	1710	0.26	1841	0.33	1961	0.40	2073	0.48	2280	0.64	2472	0.81
1600	1787	1774	0.28	1915	0.36	2036	0.44	2146	0.52	2249	0.61	2441	0.78	2620	0.97
1800	2011	1996	0.40	2124	0.49	2235	0.58	2338	0.67	2434	0.77	2613	0.96	2779	1.16
2000	2234	2218	0.54	2335	0.65	2438	0.75	2534	0.85	2624	0.95	2792	1.16	2948	1.38
2200	2458	2440	0.72	2547	0.84	2644	0.95	2733	1.06	2818	1.17	2976	1.40	3125	1.64
2400	2681	2662	0.94	2761	1.06	2851	1.19	2936	1.31	3016	1.43	3166	1.68	3306	1.93
2600	2904	2883	1.20	2976	1.33	3061	1.46	3140	1.59	3216	1.73	3359	1.99	3493	2.26
2800	3128	3105	1.49	3191	1.64	3272	1.78	3347	1.92	3419	2.06	3555	2.35	3683	2.64
3000	3351	3327	1.84	3408	1.99	3484	2.14	3555	2.30	3624	2.45	3754	2.75	3876	3.06
3200	3575	3549	2.23	3625	2.39	3697	2.56	3765	2.72	3830	2.88	3955	3.21	4072	3.54
3400	3798	3771	2.68	3843	2.85	3911	3.02	3976	3.20	4038	3.37	4158	3.71		
400	447	2295	0.48	2509	0.61	2706	0.76	2889	0.91	3060	1.07	3223	1.24	3377	1.42
600	670	2325	0.54	2537	0.69	2733	0.84	2916	1.01	3088	1.18	3250	1.37	3405	1.56
800	894	2370	0.62	2576	0.77	2768	0.94	2948	1.12	3118	1.30	3279	1.50	3433	1.70
1000	1117	2441	0.72	2637	0.88	2821	1.06	2995	1.24	3160	1.44	3318	1.64	3470	1.85
1200	1341	2536	0.84	2720	1.01	2895	1.20	3061	1.39	3220	1.60	3373	1.81	3520	2.03
1400	1564	2653	0.98	2826	1.17	2990	1.37	3148	1.57	3299	1.79	3446	2.01	3587	2.24
1600	1787	2789	1.16	2950	1.36	3104	1.57	3253	1.79	3397	2.01	3536	2.24	3671	2.48
1800	2011	2938	1.36	3089	1.58	3234	1.80	3375	2.03	3511	2.27	3644	2.51	3772	2.76
2000	2234	3097	1.60	3240	1.83	3377	2.07	3510	2.31	3640	2.56	3765	2.82	3888	3.08
2200	2458	3265	1.88	3400	2.12	3531	2.37	3657	2.63	3780	2.89	3899	3.16	4016	3.44
2400	2681	3440	2.19	3568	2.45	3692	2.71	3813	2.99	3930	3.27	4044	3.55	4155	3.84
2600	2904	3620	2.54	3743	2.82	3861	3.10	3976	3.39	4088	3.68				
2800	3128	3805	2.93	3922	3.23	4035	3.53	4145	3.84						
3000	3351	3993	3.37	4105	3.69										
3200	3575	4185	3.87												
400	447	3524	1.61	3665	1.80	3801	2.00	3932	2.20	4059	2.41				
600	670	3553	1.75	3695	1.96	3831	2.17	3963	2.39	4090	2.61				
800	894	3581	1.9	3722	2.12	3858	2.34	3990	2.57	4117	2.81				
1000	1117	3615	2.07	3754	2.30	3889	2.53	4020	2.77	4146	3.01				
1200	1341	3661	2.26	3798	2.49	3930	2.74	4059	2.99	4183	3.24				
1400	1564	3724	2.48	3856	2.72	3985	2.97	4110	3.23						
1600	1787	3803	2.73	3930	2.99	4054	3.25	4176	3.52						
1800	2011	3898	3.02	4020											
2000	2234	4008		4125	3.63										
2200	2458	4131													

Performance is for installation type B-Free inlet, ducted outlet. Performance ratings do not include the effects of appurtenances (accessories). Power rating (bhp) does not include transmission losses.

See pages 22 for maximum wheel RPM and WR².

HDAF-130

Wheel

Diameter - 13.50"

Outlet OD

Size - 10.38" x 15.19"

Area - 1.14 ft² ID

Inlet OD

Size - 14.63"

Area - 1.14 ft² ID

All wheels are Class II HDAF Type

Volume CFM	O.V. fpm	0" SP		¼" SP		½" SP		¾" SP		1" SP		1 ½" SP		2" SP	
		RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp
500	455	414	0.01	744	0.03	978	0.07	1172	0.12	1340	0.17	1626	0.29	1869	0.43
750	683	622	0.02	878	0.06	1072	0.11	1242	0.16	1395	0.22	1666	0.35	1901	0.50
1000	910	829	0.05	1040	0.10	1205	0.15	1353	0.21	1488	0.28	1735	0.42	1956	0.59
1250	1138	1036	0.09	1216	0.15	1361	0.22	1491	0.29	1612	0.36	1834	0.52	2037	0.70
1500	1365	1243	0.16	1400	0.23	1530	0.31	1646	0.39	1755	0.47	1957	0.65	2144	0.84
1750	1593	1450	0.25	1589	0.34	1707	0.43	1813	0.52	1913	0.61	2098	0.81	2270	1.02
2000	1820	1658	0.37	1782	0.47	1890	0.57	1988	0.68	2080	0.78	2251	1.00	2410	1.23
2250	2048	1865	0.53	1978	0.64	2077	0.75	2168	0.87	2253	0.99	2413	1.23	2562	1.47
2500	2275	2072	0.72	2175	0.85	2267	0.98	2352	1.10	2432	1.23	2582	1.49	2721	1.76
2750	2503	2279	0.96	2374	1.10	2459	1.24	2539	1.38	2614	1.52	2756	1.81	2888	2.10
3000	2730	2486	1.25	2574	1.40	2654	1.55	2729	1.70	2800	1.86	2934	2.17	3059	2.48
3250	2958	2694	1.59	2775	1.75	2850	1.92	2921	2.08	2988	2.25	3115	2.58	3235	2.92
3500	3185	2901	1.98	2977	2.16	3048	2.34	3115	2.51	3179	2.69	3299	3.05	3413	3.41
3750	3413	3108	2.44	3179	2.63	3246	2.82	3310	3.01	3371	3.20	3486	3.58	3595	3.96
4000	3641	3315	2.96	3382	3.16	3446	3.36	3506	3.57	3564	3.77	3675	4.18	3779	4.58
4250	3868	3522	3.55	3586	3.76	3646	3.98	3704	4.20	3759	4.41				
4500	4096	3730	4.21	3790	4.44										
Volume CFM	O.V. fpm	2 ½" SP		3" SP		3 ½" SP		4" SP		4 ½" SP		5" SP		5 ½" SP	
		RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp
500	455	2084	0.58	2278	0.75	2457	0.93	2623	1.11	2779	1.31	2926	1.52	3066	1.74
750	683	2112	0.66	2305	0.84	2482	1.03	2648	1.24	2804	1.45	2952	1.67	3092	1.90
1000	910	2157	0.76	2343	0.95	2517	1.16	2679	1.37	2833	1.60	2979	1.84	3119	2.08
1250	1138	2226	0.89	2402	1.09	2568	1.31	2725	1.54	2875	1.77	3017	2.02	3154	2.28
1500	1365	2319	1.05	2484	1.26	2641	1.49	2790	1.73	2934	1.98	3071	2.24	3203	2.51
1750	1593	2432	1.24	2586	1.47	2733	1.71	2875	1.96	3011	2.22	3142	2.50	3269	2.78
2000	1820	2561	1.46	2705	1.71	2843	1.97	2977	2.23	3106	2.51	3230	2.80	3352	3.09
2250	2048	2703	1.73	2838	1.99	2968	2.27	3094	2.55	3216	2.84	3334	3.14	3450	3.45
2500	2275	2854	2.04	2982	2.32	3104	2.61	3223	2.92	3339	3.22	3451	3.54	3561	3.86
2750	2503	3013	2.39	3134	2.70	3250	3.01	3363	3.33	3473	3.65	3580	3.99	3684	4.33
3000	2730	3178	2.80	3293	3.12	3403	3.46	3511	3.79	3615	4.14	3717	4.49	3817	4.85
3250	2958	3348	3.26	3457	3.60	3563	3.96	3665	4.31	3765	4.68				
3500	3185	3522	3.77	3627	4.14	3728	4.52	3826	4.90						
3750	3413	3699	4.35	3799	4.74										
Volume CFM	O.V. fpm	6" SP		6 ½" SP		7" SP		7 ½" SP		8" SP		8 ½" SP			
		RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp		
500	455	3200	1.96	3328	2.20	3451	2.344	3570	2.69	3685	2.95	3796	3.21		
750	683	3226	2.15	3355	2.40	3479	2.65	3598	2.92	3714	3.19	3826	3.47		
1000	910	3252	2.34	3380	2.60	3504	2.87	3623	3.15	3739	3.44				
1250	1138	3285	2.55	3412	2.82	3534	3.11	3652	3.40	3767	3.70				
1500	1365	3331	2.79	3455	3.08	3574	3.37	3690	3.68	3803	3.99				
1750	1593	3392	3.07	3512	3.37	3628	3.68	3740	3.99						
2000	1820	3470	3.40	3584	3.71	3696	4.03	3805	4.36						
2250	2048	3562	3.77	3672	4.10	3779	4.43								
2500	2275	3668	4.20	3773	4.54										
2750	2503	3786	4.68												

Performance is for installation type B-Free inlet, ducted outlet. Performance ratings do not include the effects of appurtenances (accessories). Power rating (bhp) does not include transmission losses.

See pages 22 for maximum wheel RPM and WR².

HDAF-150

Wheel

Diameter - 15.00"

Outlet OD

Size - 11.38" x 16.75"

Area - 1.28 ft² ID

Inlet OD

Size - 16.13"

Area - 1.39 ft² ID

All wheels are Class II HDAF Type

Volume CFM	O.V. fpm	0" SP		¼" SP		½" SP		¾" SP		1" SP		1 ½" SP		2" SP	
		RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp
1000	753	599	0.03	808	0.08	969	0.13	1107	0.20	1233	0.26	1461	0.42	1666	0.60
1250	941	749	0.05	925	0.11	1071	0.18	1197	0.25	1311	0.33	1517	0.49	1705	0.68
1500	1129	898	0.09	1049	0.16	1182	0.24	1298	0.32	1404	0.40	1595	0.59	1768	0.79
1750	1318	1048	0.15	1179	0.23	1300	0.32	1408	0.41	1507	0.50	1685	0.70	1847	0.91
2000	1506	1198	0.22	1313	0.31	1423	0.41	1524	0.51	1617	0.62	1785	0.83	1938	1.06
2250	1694	1347	0.31	1450	0.41	1550	0.52	1644	0.64	1732	0.75	1892	0.99	2037	1.24
2500	1882	1497	0.43	1590	0.54	1681	0.66	1768	0.78	1851	0.91	2003	1.17	2142	1.44
2750	2071	1647	0.57	1731	0.69	1815	0.82	1896	0.96	1973	1.09	2118	1.37	2251	1.66
3000	2259	1796	0.74	1873	0.87	1951	1.01	2026	1.16	2099	1.31	2237	1.61	2364	1.92
3250	2447	1946	0.94	2017	1.08	2088	1.24	2159	1.39	2227	1.55	2358	1.87	2481	2.21
3500	2635	2096	1.17	2162	1.33	2228	1.49	2294	1.66	2358	1.83	2483	2.17	2600	2.53
3750	2824	2246	1.44	2307	1.61	2369	1.78	2430	1.96	2491	2.14	2609	2.51	2722	2.88
4000	3012	2395	1.74	2453	1.92	2511	2.11	2569	2.30	2626	2.49	2738	2.88	2846	3.28
4250	3200	2545	2.09	2599	2.28	2654	2.48	2708	2.68	2762	2.88	2869	3.29	2972	3.71
4500	3388	2695	2.48	2746	2.69	2797	2.89	2849	3.10	2900	3.32	3002	3.75	3100	4.19
4750	3577	2844	2.92	2893	3.13	2941	3.35	2990	3.57	3039	3.80	3136	4.25	3230	4.72
5000	3765	2994	3.40	3040	3.63	3086	3.86	3133	4.09	3179	4.33	3271	4.80	3362	5.29
5250	3953	3144	3.94	3187	4.18	3231	4.42	3276	4.66	3320	4.91	3408	5.41	3495	5.91
5500	4141	3293	4.53	3335	4.78	3377	5.03	3419	5.28	3462	5.54				
5750	4330	3443	5.18	3483	5.44										
Volume CFM	O.V. fpm	2 ½" SP		3" SP		3 ½" SP		4" SP		4 ½" SP		5" SP		5 ½" SP	
		RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp
1000	753	1853	0.79	2027	1.00										
1250	941	1879	0.89	2043	1.11	2197	1.34	2344	1.59	2483	1.85				
1500	1129	1929	1.00	2082	1.23	2227	1.48	2366	1.74	2499	2.01	2627	2.30	2750	2.59
1750	1318	1998	1.14	2141	1.39	2277	1.64	2408	1.91	2534	2.20	2655	2.49	2773	2.80
2000	1506	2081	1.31	2215	1.56	2343	1.83	2467	2.12	2586	2.41	2701	2.72	2813	3.03
2250	1694	2172	1.50	2300	1.77	2422	2.05	2539	2.35	2652	2.66	2761	2.97	2868	3.30
2500	1882	2271	1.71	2393	2.00	2510	2.30	2621	2.61	2729	2.93	2834	3.26	2935	3.60
2750	2071	2376	1.96	2493	2.27	2604	2.58	2712	2.91	2815	3.24	2915	3.59	3013	3.94
3000	2259	2484	2.24	2597	2.56	2705	2.89	2808	3.24	2907	3.59	3004	3.95	3098	4.32
3250	2447	2596	2.54	2705	2.89	2809	3.24	2909	3.60	3005	3.97	3098	4.35	3189	4.73
3500	2635	2711	2.88	2817	3.25	2917	3.62	3014	4.00	3107	4.39	3198	4.78	3285	5.19
3750	2824	2829	3.26	2931	3.65	3028	4.04	3122	4.44	3213	4.85	3301	5.26	3386	5.68
4000	3012	2949	3.68	3048	4.09	3142	4.50	3234	4.92	3322	5.35	3407	5.78	3490	6.22
4250	3200	3071	4.14	3167	4.57	3259	5.00	3347	5.44	3433	5.89				
4500	3388	3196	4.64	3288	5.09	3377	5.55	3463	6.01						
4750	3577	3322	5.18	3411	5.66	3498	6.14								
5000	3765	3450	5.78												
Volume CFM	O.V. fpm	6" SP		6 ½" SP		7" SP		7 ½" SP		8" SP		8 ½" SP		9" SP	
		RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp
1500	1129	2869	2.90	2985	3.21										
1750	1318	2887	3.11	2998	3.44	3106	3.78	3211	4.13	3314	4.48	3414	4.85	3512	5.22
2000	1506	2922	3.36	3028	3.70	3132	4.05	3233	4.40	3332	4.77	3428	5.14		
2250	1694	2972	3.64	3073	3.99	3172	4.35	3269	4.71	3364	5.09	3457	5.48		
2500	1882	3035	3.95	3131	4.31	3226	4.68	3319	5.06	3410	5.45	3500	5.85		
2750	2071	3108	4.31	3201	4.68	3291	5.06	3381	5.45	3468	5.85				
3000	2259	3189	4.70	3279	5.08	3366	5.48	3452	5.88						
3250	2447	3277	5.12	3364	5.53	3448	5.94								
3500	2635	3371	5.59	3454	6.01										
3750	2824	3469	6.11												

Performance is for installation type B-Free inlet, ducted outlet. Performance ratings do not include the effects of appurtenances (accessories). Power rating (bhp) does not include transmission losses.

See pages 22 for maximum wheel RPM and WR².

HDAF-160**Wheel**

Diameter - 16.50"

Outlet OD

Size - 12.50" x 18.38"

Area - 1.54 ft² ID**Inlet OD**

Size - 18.00"

Area - 1.73 ft² ID

All wheels are Class II HDAF Type

Volume CFM	O.V. fpm	0" SP		¼" SP		½" SP		¾" SP		1" SP		1 ½" SP		2" SP	
		RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp
2000	1250	900	0.15	1026	0.24	1140	0.34	1241	0.45	1333	0.56	1499	0.79	1650	1.04
2300	1437	1035	0.23	1145	0.33	1249	0.45	1343	0.57	1430	0.69	1586	0.94	1728	1.21
2600	1625	1170	0.33	1268	0.45	1362	0.57	1450	0.71	1531	0.84	1680	1.12	1815	1.41
2900	1812	1305	0.45	1392	0.59	1479	0.73	1560	0.87	1637	1.02	1779	1.32	1907	1.63
3200	1999	1440	0.61	1519	0.76	1598	0.91	1674	1.07	1747	1.23	1881	1.55	2004	1.89
3500	2187	1575	0.80	1647	0.96	1720	1.12	1791	1.29	1859	1.47	1987	1.82	2105	2.18
3800	2374	1710	1.02	1776	1.19	1843	1.37	1909	1.56	1974	1.74	2095	2.12	2209	2.51
4100	2562	1845	1.28	1906	1.47	1969	1.66	2030	1.86	2091	2.06	2206	2.46	2315	2.88
4400	2749	1980	1.58	2037	1.78	2095	1.99	2153	2.20	2210	2.41	2320	2.84	2424	3.29
4700	2937	2114	1.93	2168	2.14	2223	2.36	2277	2.59	2330	2.81	2435	3.27	2535	3.74
5000	3124	2249	2.33	2300	2.55	2351	2.78	2402	3.02	2453	3.26	2552	3.74	2648	4.24
5300	3312	2384	2.77	2432	3.01	2480	3.25	2528	3.50	2576	3.75	2671	4.27	2762	4.79
5600	3499	2519	3.27	2565	3.52	2610	3.78	2656	4.04	2701	4.30	2791	4.84	2879	5.39
5900	3686	2654	3.82	2697	4.09	2740	4.36	2784	4.63	2827	4.91	2913	5.47	2997	6.05
6200	3874	2789	4.43	2830	4.71	2871	5.00	2912	5.28	2953	5.58	3035	6.17	3116	6.77
6500	4061	2924	5.11	2963	5.40	3002	5.70	3041	6.00	3081	6.30	3159	6.92		
6800	4249	3059	5.85	3096	6.16	3134	6.47	3171	6.78						
7100	4436	3194	6.66												

Volume CFM	O.V. fpm	2 ½" SP		3" SP		3 ½" SP		4" SP		4 ½" SP		5" SP		5 ½" SP	
		RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp
2000	1250	1791	1.31	1924	1.60	2050	1.91	2172	2.23	2289	2.57	2402	2.92	2511	3.28
2300	1437	1861	1.50	1986	1.80	2105	2.12	2220	2.46	2330	2.81	2437	3.17	2541	3.55
2600	1625	1940	1.71	2059	2.04	2172	2.37	2280	2.72	2385	3.09	2487	3.47	2586	3.86
2900	1812	2027	1.96	2140	2.30	2248	2.66	2351	3.02	2451	3.40	2548	3.80	2642	4.20
3200	1999	2119	2.24	2227	2.60	2331	2.98	2430	3.36	2525	3.76	2618	4.17	2708	4.59
3500	2187	2215	2.56	2320	2.94	2419	3.33	2514	3.74	2606	4.16	2696	4.58	2782	5.02
3800	2374	2315	2.91	2416	3.32	2512	3.73	2604	4.16	2693	4.60	2779	5.04	2862	5.50
4100	2562	2418	3.30	2515	3.73	2608	4.17	2697	4.62	2783	5.08	2866	5.55	2947	6.02
4400	2749	2523	3.73	2617	4.19	2707	4.65	2793	5.13	2877	5.61	2958	6.10	3036	6.59
4700	2937	2630	4.21	2721	4.69	2808	5.18	2893	5.68	2974	6.18	3052	6.69	3129	7.21
5000	3124	2740	4.74	2828	5.25	2912	5.76	2994	6.28	3073	6.81	3149	7.34		
5300	3312	2851	5.31	2936	5.85	3018	6.39	3098	6.93	3174	7.49				
5600	3499	2964	5.94	3046	6.50	3126	7.07								
5900	3686	3079	6.63	3158	7.21										
6200	3874	3195	7.37												

Volume CFM	O.V. fpm	6" SP		6 ½" SP		7" SP		7 ½" SP		8" SP		8 ½" SP	
		RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp
2000	1250	2616	3.66	2719	4.05	2819	4.46	2915	4.87				
2300	1437	2642	3.94	2740	4.35	2836	4.76	2929	5.19	3021	5.63	3110	6.08
2600	1625	2682	4.26	2776	4.68	2867	5.11	2957	5.55	3045	6.00	3131	6.46
2900	1812	2734	4.62	2824	5.05	2911	5.49	2997	5.95	3082	6.41	3164	6.88
3200	1999	2796	5.03	2882	5.47	2966	5.93	3049	6.39	3129	6.87		
3500	2187	2867	5.47	2949	5.93	3030	6.41	3109	6.89	3187	7.38		
3800	2374	2944	5.97	3023	6.45	3101	6.93	3178	7.43				
4100	2562	3026	6.51	3103	7.01	3178	7.51						
4400	2749	3113	7.10	3187	7.62								

Performance is for installation type B-Free inlet, ducted outlet. Performance ratings do not include the effects of appurtenances (accessories). Power rating (bhp) does not include transmission losses.

See pages 22 for maximum wheel RPM and WR².

HDAF-180

Wheel

Diameter - 18.25"

Outlet OD

Size - 13.88" x 20.38"

Area - 1.90 ft² ID

Inlet OD

Size - 20.00"

Area - 2.13 ft² ID

All wheels are HDAF Type

Class II = light text face above Class IIP

Class IIP = **bold text face below Class II**

Volume CFM	O.V. fpm	0" SP		½" SP		1" SP		1 ½" SP		2" SP		2 ½" SP		3" SP		3 ½" SP	
		RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp
1500	789	518	0.04	745	0.16	938	0.31										
1800	947	622	0.07	816	0.21	984	0.37	1143	0.56								
2100	1105	725	0.11	899	0.27	1049	0.45	1189	0.64	1323	0.87						
2400	1263	829	0.17	984	0.35	1116	.55	1247	0.75	1370	0.98	1488	1.23				
2700	1421	933	0.24	1071	0.44	1196	0.65	1313	0.88	1424	1.12	1534	1.38	1640	1.66		
3000	1578	1036	0.33	1164	0.55	1279	0.78	1382	1.03	1490	1.29	1588	1.55	1687	1.84	1785	2.15
3300	1736	1140	0.43	1258	0.68	1364	0.93	1463	1.20	1557	1.48	1654	1.76	1743	2.05	1831	2.36
3600	1894	1244	0.56	1354	0.83	1451	1.09	1546	1.38	1632	1.69	1721	1.99	1808	2.30	1890	2.62
3900	2052	1347	0.71	1450	1.01	1540	1.29	1630	1.59	1714	1.92	1791	2.25	1875	2.58	1956	2.91
4200	2210	1451	0.89	1547	1.22	1633	1.51	1716	1.83	1797	2.17	1872	2.52	1943	2.88	2023	3.24
4500	2368	1555	1.10	1645	1.45	1727	1.77	1804	2.09	1882	2.45	1955	2.82	2023	3.20	2091	3.59
4800	2526	1658	1.33	1744	1.71	1821	2.05	1893	2.39	1968	2.76	2038	3.15	2105	3.55	2169	3.95
5100	2684	1762	1.60	1843	2.00	1917	2.37	1986	2.73	2055	3.11	2123	3.51	2189	3.93	2251	4.35
5400	2842	1865	1.90	1942	2.32	2013	2.72	2080	3.10	2143	3.48	2209	3.91	2273	4.34	2334	4.79
5700	3000	1969	2.23	2042	2.68	2110	3.11	2174	3.50	2235	3.91	2297	4.34	2358	4.79	2418	5.25
6000	3157	2073	2.60	2142	3.07	2208	3.53	2269	3.95	2328	4.37	2384	4.81	2445	5.28	2503	5.76
6300	3315	2176	3.01	2243	3.50	2306	4.00	2365	4.44	2422	4.88	2476	5.33	2532	5.80	2589	6.30
6600	3473	2280	3.46	2344	3.98	2404	4.50	2461	4.97	2516	5.43	2569	5.90	2620	6.37	2675	6.89
6900	3631	2384	3.96	2445	4.49	2503	5.04	2558	5.54	2611	6.02	2663	6.51	2712	7.00	2763	7.52
7200	3789	2487	4.50	2546	5.05	2602	5.63	2656	6.16	2707	6.66	2757	7.17	2805	7.68	2852	8.20
7500	3947	2591	5.08	2647	5.66	2701	6.26	2753	6.84	2803	7.35	2852	7.88	2898	8.41	2944	8.94
7800	4105	2695	5.72	2749	6.32	2801	6.94	2851	7.56	2900	8.10	2947	8.64	2993	9.19	3037	9.74
8100	4263	2798	6.40	2851	7.03	2901	7.67	2950	8.31	2997	8.89	3043	9.45	3087	10.02	3130	10.59
8400	4421	2902	7.14	2952	7.79	3001	8.45	3049	9.12	3094	9.74	3139	10.32	3182	10.91	3224	11.50
8700	4578	3006	7.93	3054	8.61	3102	9.29	3148	9.98	3192	10.65	3236	11.25	3278	11.85	3319	12.46
9000	4736	3109	8.78	3156	9.48	3202	10.18	3247	10.90	3290	11.61	3333	12.23	3374	12.86	3414	13.49
9300	4894	3213	9.69	3259	10.41	3303	11.14	3346	11.87	3389	12.62	3430	13.28	3470	13.92	3509	14.57
9600	5052	3316	10.66	3361	11.40	3404	12.15	3446	12.91	3487	13.68	3528	14.39	3567	15.05	3605	15.72
Volume CFM	O.V. fpm	4" SP		4 ½" SP		5" SP		6" SP		7" SP		8" SP		9" SP		10" SP	
		RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp
3000	1578	1876	2.47														
3300	1736	1922	2.70	2008	3.05	2089	3.41										
3600	1894	1969	2.95	2054	3.32	2135	3.69	2287	4.46								
3900	2052	2032	3.26	2104	3.61	2182	3.99	2332	4.80	2472	5.64						
4200	2210	2098	3.60	2169	3.97	2237	4.34	2379	5.16	2517	6.03	2647	6.93				
4500	2368	2164	3.97	2235	4.35	2302	4.75	2429	5.55	2564	6.45	2693	7.38	2814	8.34		
4800	2526	2233	4.37	2302	4.77	2368	5.18	2493	6.02	2611	6.89	2739	7.86	2860	8.86	2975	9.88
5100	2684	2310	4.79	2370	5.22	2435	5.65	2559	6.53	2675	7.43	2786	8.36	2907	9.39	3021	10.45
5400	2842	2392	5.24	2448	5.69	2504	6.16	2626	7.08	2740	8.01	2848	8.97	2953	9.96	3068	11.05
5700	3000	2475	5.72	2530	6.20	2583	6.68	2694	7.66	2807	8.63	2914	9.62	3015	10.63	3114	11.68
6000	3157	2558	6.25	2612	6.74	2664	7.24	2764	8.27	2874	9.29	2980	10.32	3080	11.37	3176	12.43
6300	3315	2643	6.81	2696	7.32	2747	7.85	2844	8.91	2942	9.99	3047	11.06	3146	12.14	3242	13.24
6600	3473	2729	7.42	2780	7.95	2830	8.49	2926	9.59	3017	10.71	3114	11.84	3213	12.96	3307	14.10
6900	3631	2815	8.06	2865	8.62	2914	9.17	3008	10.31	3098	11.47	3184	12.66	3281	13.82	3374	15.00
7200	3789	2902	8.76	2951	9.33	2999	9.90	3092	11.08	3180	12.28	3264	13.50	3349	14.73	3441	15.95
7500	3947	2990	9.50	3038	10.09	3085	10.68	3176	11.89	3263	13.13	3346	14.39	3425	15.67	3510	16.95
7800	4105	3080	10.30	3126	10.89	3172	11.51	3261	12.76	3346	14.03	3428	15.33	3506	16.64	3582	17.98
8100	4263	3173	11.17	3214	11.75	3259	12.39	3347	13.67	3430	14.99	3511	16.32	3588	17.67	3663	19.05
8400	4421	3266	12.10	3306	12.70	3347	13.32	3433	14.64	3515	15.99	3594	17.36	3671	18.75	3744	20.16
8700	4578	3359	13.08	3399	13.70	3437	14.32	3520	15.67	3601	17.05	3678	18.46	3754	19.89		
9000	4736	3453	14.12	3492	14.76	3530	15.40	3607	16.75	3687	18.17	3763	19.62				
9300	4894	3548	15.22	3586	15.88	3623	16.54	3695	17.89	3774	19.35						
9600	5052	3643	16.39	3680	17.07	3716	17.75	3787	19.12								
Volume CFM	O.V. fpm	11" SP		12" SP		13" SP		14" SP		15" SP		16" SP					
		RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp				
5000	2631	3115	11.33														
5300	2789	3161	11.95	3265	13.08	3366	14.23										
5600	2947	3207	12.61	3311	13.77	3412	14.95	3508	16.16								
5900	3105	3254	13.29	3358	14.49	3458	15.71	3554	16.95	3647	18.21	3737	19.49				
6200	3263	3311	14.08	3405	15.24	3504	16.50	3600	17.77	3693	19.07	3783	20.38				
6500	3421	3376	14.95	3464	16.11	3551	17.31	3647	18.63	3739	19.96						
6800	3578	3442	15.88	3529	17.08	3613	18.29	3694	19.52	3786	20.88						
7100	3736	3508	16.85	3595	18.08	3678	19.33	3759	20.60								
7400	3894	3575	17.87	3661	19.14	3744	20.43			See page 25, 28 or 29 for minimum motor frame sizes regardless of bhp							
7700	4052	3643	18.94	3728	20.25	3810	21.57										
8000	4210	3711	20.06	3795	21.41												
8300	4368	3789	21.21														
8600	4526	3867	22.46											</			

See page 25, 28 or 29 for minimum motor
frame sizes regardless of bhp

Performance is for installation type B-Free inlet, ducted outlet. Performance ratings do not include the effects of appurtenances (accessories). Power rating (bhp) does not include transmission losses.

See pages 22 for maximum wheel RPM and WR².

Belt Drive Ratings Table – at 70°F | .075 density | sea level

15

HDAF-200

Wheel

Diameter - 20.00"

Outlet OD

Size - 15.25" x 22.38"

Area - 2.30 ft² ID

Inlet OD

Size - 22.00"

Area - 2.58 ft² ID

All wheels are HDAF Type

Class II = light text face above Class IIP

Class IIP = **bold text face below Class II**

Volume CFM	O.V. fpm	0" SP		½" SP		1" SP		1 ½" SP		2" SP		2 ½" SP		3" SP		3 ½" SP	
		RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp
1500	652	394	0.03	632	0.15												
1900	826	499	0.06	696	0.21	867	0.39										
2300	1000	604	0.10	773	.28	920	0.48	1059	0.71								
2700	1173	709	0.16	858	0.37	987	0.59	1108	0.83	1228	1.11						
3100	1347	814	0.25	946	0.48	1062	0.73	1174	1.00	1276	1.27	1383	1.59	1480	1.92		
3500	1521	919	0.36	1038	0.62	1145	0.89	1242	1.19	1342	1.49	1432	1.80	1527	2.15	1616	2.52
3900	1695	1024	0.50	1133	0.79	1231	1.08	1322	1.40	1410	1.73	1498	2.07	1580	2.42	1663	2.79
4300	1869	1129	0.66	1229	0.99	1319	1.30	1406	1.65	1484	2.01	1566	2.38	1646	2.75	1721	3.13
4700	2043	1234	0.87	1327	1.23	1409	1.56	1491	1.93	1567	2.31	1638	2.71	1714	3.11	1787	3.52
5100	2217	1339	1.11	1426	1.50	1503	1.86	1579	2.25	1652	2.66	1720	3.08	1784	3.52	1855	3.95
5500	2391	1444	1.39	1525	1.82	1598	2.21	1667	2.60	1738	3.04	1804	3.49	1866	3.95	1925	4.42
5900	2565	1549	1.72	1625	2.18	1695	2.60	1759	3.02	1825	3.47	1889	3.94	1950	4.43	2007	4.92
6300	2739	1654	2.09	1726	2.58	1792	3.04	1854	3.48	1914	3.95	1976	4.44	2034	4.95	2091	5.47
6700	2913	1759	2.51	1827	3.04	1890	3.54	1949	4.00	2005	4.48	2063	5.00	2121	5.53	2175	6.08
7100	3086	1864	2.99	1928	3.54	1988	4.09	2045	4.58	2099	5.08	2152	5.60	2208	6.16	2261	6.73
7500	3260	1969	3.52	2030	4.11	2087	4.70	2142	5.22	2194	5.74	2244	6.28	2296	6.85	2348	7.45
7900	3434	2074	4.12	2132	4.73	2187	5.36	2240	5.92	2290	6.47	2338	7.03	2385	7.60	2435	8.22
8300	3608	2179	4.78	2234	5.42	2287	6.08	2338	6.68	2386	7.26	2433	7.84	2478	8.44	2524	9.06
8700	3782	2284	5.50	2337	6.17	2388	6.86	2436	7.52	2483	8.12	2528	8.73	2572	9.35	2615	9.97
9100	3956	2389	6.29	2439	7.00	2488	7.72	2535	8.43	2581	9.05	2624	9.69	2667	10.33	2708	10.98
9500	4130	2494	7.16	2542	7.90	2589	8.65	2635	9.41	2679	10.07	2721	10.73	2762	11.39	2802	12.07
9900	4304	2599	8.10	2645	8.87	2691	9.65	2735	10.44	2777	11.16	2818	11.84	2858	12.53	2897	13.23
10300	4478	2704	9.13	2749	9.92	2792	10.73	2835	11.55	2876	12.33	2916	13.04	2955	13.76	2993	14.48
10700	4652	2809	10.23	2852	11.06	2894	11.90	2935	12.75	2975	13.59	3014	14.33	3052	15.07	3089	15.82
11100	4826	2914	11.42	2956	12.28	2996	13.15	3036	14.03	3075	14.92	3113	15.70	3150	16.47	3186	17.24
11500	5000	3019	12.70	3059	13.59	3099	14.49	3137	15.40	3175	16.32	3212	17.17	3247	17.96	3283	18.76
Volume CFM	O.V. fpm	4" SP		4 ½" SP		5" SP		6" SP		7" SP		8" SP		9" SP		10" SP	
		RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp
3500	1521	1700	2.89														
3900	1695	1747	3.20	1825	3.61	1899	4.03										
4300	1869	1794	3.52	1872	3.96	1946	4.41	2084	5.33								
4700	2043	1857	3.93	1923	4.35	1993	4.81	2130	5.78	2257	6.79						
5100	2217	1923	4.39	1988	4.83	2050	5.29	2177	6.26	2304	7.32	2422	8.41				
5500	2391	1991	4.89	2055	5.36	2117	5.84	2232	6.81	2351	7.88	2468	9.02	2579	10.18		
5900	2565	2062	5.43	2124	5.93	2184	6.43	2298	7.46	2404	8.51	2515	9.66	2626	10.88	2730	12.12
6300	2739	2144	6.00	2196	6.54	2253	7.08	2365	8.16	2470	9.26	2569	10.38	2673	11.61	2777	12.90
6700	2913	2228	6.63	2278	7.20	2327	7.77	2433	8.91	2537	10.06	2634	11.23	2728	12.43	2825	13.72
7100	3086	2312	7.31	2361	7.90	2409	8.50	2502	9.71	2604	10.92	2701	12.14	2793	13.39	2881	14.65
7500	3260	2398	8.05	2446	8.66	2492	9.29	2582	10.56	2673	11.84	2769	13.11	2860	14.41	2947	15.72
7900	3434	2484	8.85	2531	9.49	2577	10.14	2664	11.45	2748	12.80	2837	14.14	2927	15.49	3014	16.86
8300	3608	2571	9.71	2618	10.38	2662	11.05	2748	12.42	2830	13.81	2908	15.24	2996	16.64	3081	18.06
8700	3782	2660	10.64	2705	11.33	2748	12.03	2833	13.45	2913	14.89	2989	16.37	3065	17.86	3149	19.33
9100	3956	2749	11.64	2793	12.36	2836	13.08	2918	14.55	2997	16.04	3072	17.56	3145	19.11	3219	20.67
9500	4130	2842	12.75	2882	13.46	2924	14.20	3004	15.72	3081	17.27	3156	18.84	3227	20.44	3296	22.06
9900	4304	2936	13.94	2973	14.65	3012	15.40	3091	16.97	3167	18.57	3240	20.19	3310	21.84	3378	23.51
10300	4478	3030	15.21	3066	15.95	3102	16.69	3179	18.30	3253	19.95	3325	21.62	3394	23.32	3461	25.04
10700	4652	3125	16.57	3161	17.33	3195	18.10	3268	19.72	3340	21.41	3411	23.13	3479	24.88	3544	26.65
11100	4826	3221	18.02	3255	18.81	3289	19.60	3357	21.22	3428	22.96	3497	24.73				
11500	5000	3317	19.57	3351	20.38	3384	21.19	3449	22.84	3517	24.60						
Volume CFM	O.V. fpm	11" SP		12" SP		13" SP		14" SP		15" SP		16" SP		17" SP			
		RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp		
6000	2608	2842	13.59														
6400	2782	2888	14.43	2984	15.79	3075	17.17										
6800	2956	2936	15.31	3030	16.71	3122	18.14	3210	19.60	3295	21.08						
7200	3130	2983	16.23	3078	17.68	3169	19.16	3256	20.67	3341	22.19	3423	23.74	3503	25.31		
7600	3304	3047	17.35	3127	18.72	3216	20.23	3303	21.78	3388	23.35	3470	24.95	3549	26.56		
8000	3478	3113	18.55	3193	19.97	3270	21.40	3351	22.94	3435	24.56	3517	26.21				
8400	3652	3180	19.82	3259	21.29	3335	22.77	3409	24.27	3483	25.82						
8800	3826	3248	21.16	3326	22.68	3401	24.21	3475	25.76	3546	27.33						
9200	4000	3316	22.57	33													

HDAF-220**Wheel**

Diameter - 22.25"

Outlet OD

Size - 16.88" x 20.38"

Area - 2.84 ft² ID**Inlet OD**

Size - 24.63"

Area - 3.24 ft² ID**All wheels are HDAF Type**

Class II = light text face above Class IIP

Class IIP = **bold text face below Class II**

Volume CFM	O.V. fpm	0" SP		½" SP		1" SP		1 ½" SP		2" SP		2 ½" SP		3" SP		3 ½" SP	
		RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp
2500	880	484	0.07	670	0.27	822	0.50										
3000	1056	581	0.12	743	0.37	880	.61	1003	0.90								
3500	1232	678	0.19	821	0.49	943	0.75	1057	1.06	1160	1.40	1273	1.79				
4000	1408	775	.29	904	0.62	1015	0.94	1118	1.25	1215	1.61	1303	2.00	1404	2.43		
4500	1584	871	0.41	989	0.77	1089	1.18	1185	1.49	1276	1.86	1362	2.27	1441	2.70	1527	3.17
5000	1760	968	0.56	1076	0.95	1169	1.41	1258	1.80	1340	2.16	1423	2.58	1500	3.04	1573	3.51
5500	1936	1065	0.75	1164	1.17	1252	1.66	1332	2.15	1412	2.54	1486	2.93	1561	3.41	1633	3.91
6000	2112	1162	0.97	1254	1.43	1336	1.95	1412	2.51	1486	2.98	1557	3.40	1624	3.83	1693	4.35
6500	2288	1259	1.23	1344	1.73	1422	2.27	1494	2.86	1561	3.47	1631	3.92	1696	4.38	1757	4.85
7000	2464	1355	1.54	1436	2.07	1509	2.64	1578	3.27	1642	3.92	1705	4.51	1768	5.00	1828	5.50
7500	2640	1452	1.89	1528	2.46	1597	3.05	1663	3.71	1724	4.41	1782	5.12	1843	5.68	1901	6.21
8000	2816	1549	2.30	1620	2.90	1686	3.52	1749	4.21	1808	4.94	1864	5.69	1918	6.43	1975	6.99
8500	2992	1646	2.76	1713	3.39	1776	4.05	1835	4.76	1893	5.52	1947	6.30	1999	7.11	2050	7.85
9000	3169	1743	3.27	1807	3.95	1866	4.64	1923	5.36	1978	6.16	2031	6.98	2081	7.82	2129	8.67
9500	3345	1839	3.85	1900	4.56	1957	5.29	2012	6.03	2065	6.86	2115	7.71	2164	8.58	2211	9.47
10000	3521	1936	4.49	1994	5.23	2049	6.00	2101	6.78	2152	7.62	2201	8.50	2248	9.41	2294	10.34
10500	3697	2033	5.20	2088	5.98	2141	6.78	2191	7.59	2239	8.44	2287	9.36	2333	10.31	2378	11.27
11000	3873	2130	5.98	2183	6.79	2233	7.63	2282	8.48	2328	9.35	2374	10.29	2419	11.27	2462	12.26
11500	4049	2227	6.83	2277	7.68	2326	8.55	2373	9.44	2418	10.34	2462	11.29	2505	12.30	2547	13.33
12000	4225	2324	7.76	2372	8.65	2419	9.56	2464	10.48	2508	11.41	2550	12.36	2592	13.41	2633	14.48
12500	4401	2420	8.77	2467	9.69	2512	10.64	2556	11.60	2598	12.57	2639	13.55	2679	14.60	2719	15.70
13000	4577	2517	9.86	2562	10.82	2606	11.80	2648	12.80	2689	13.80	2729	14.82	2767	15.87	2806	17.01
13500	4753	2614	11.05	2657	12.04	2699	13.06	2740	14.09	2780	15.13	2819	16.18	2856	17.25	2894	18.39
14000	4929	2711	12.32	2753	13.36	2793	14.41	2833	15.47	2872	16.55	2909	17.64	2946	18.74	2982	19.87

Volume CFM	O.V. fpm	4" SP		4 ½" SP		5" SP		6" SP		7" SP		8" SP		9" SP		10" SP	
		RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp
4500	1584	1614	3.67														
5000	1760	1644	4.00	1726	4.54	1803	5.10										
5500	1936	1700	4.42	1764	4.95	1833	5.51	1977	6.73								
6000	2112	1760	4.89	1823	5.45	1883	6.02	2006	7.22	2138	8.55						
6500	2288	1821	5.41	1883	5.99	1942	6.59	2054	7.81	2168	9.13	2291	10.56				
7000	2464	1885	6.00	1944	6.58	2003	7.20	2113	8.49	2216	9.81	2321	11.22	2436	12.75	2546	14.32
7500	2640	1957	6.74	2011	7.28	2065	7.87	2174	9.21	2275	10.60	2371	12.02	2466	13.50	2575	15.13
8000	2816	2030	7.56	2082	8.12	2133	8.69	2235	9.99	2336	11.43	2430	12.91	2520	14.43	2606	15.98
8500	2992	2104	8.45	2155	9.04	2205	9.65	2299	10.86	2397	12.33	2490	13.87	2580	15.44	2664	17.05
9000	3169	2179	9.42	2229	10.05	2278	10.68	2370	11.96	2459	13.29	2552	14.88	2640	16.51	2724	18.18
9500	3345	2257	10.38	2304	11.13	2352	11.80	2443	13.14	2528	14.49	2613	15.96	2701	17.65	2784	19.37
10000	3521	2338	11.28	2381	12.24	2427	13.00	2516	14.40	2600	15.82	2681	17.25	2762	18.85	2845	20.64
10500	3697	2421	12.25	2463	13.24	2503	14.25	2590	15.77	2673	17.25	2752	18.74	2828	20.24	2907	21.97
11000	3873	2504	13.28	2545	14.31	2585	15.35	2665	17.23	2747	18.77	2825	20.32	2900	21.89	2972	23.47
11500	4049	2588	14.38	2628	15.45	2667	16.53	2742	18.73	2821	20.40	2898	22.01	2972	23.64	3043	25.28
12000	4225	2673	15.56	2712	16.66	2750	17.77	2823	20.05	2896	22.13	2972	23.81	3045	25.50	3115	27.20
12500	4401	2758	16.82	2796	17.95	2834	19.10	2905	21.44	2974	23.84	3047	25.72	3119	27.47	3188	29.24
13000	4577	2844	18.16	2882	19.33	2918	20.51	2988	22.92	3056	25.38	3122	27.75	3193	29.57		
13500	4753	2931	19.58	2967	20.79	3003	22.00	3072	24.48	3138	27.01						
14000	4929	3018	21.09	3054	22.33	3088	23.59	3156	26.13								

Volume CFM	O.V. fpm	11" SP		12" SP		13" SP		14" SP		15" SP	
		RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp
7500	2640	2679	16.80								
8000	2816	2709	17.70	2808	19.47	2904	21.27				
8500	2992	2746	18.69	2838	20.46	2933	22.32	3025	24.21	3114	26.14
9000	3169	2805	19.87	2882	21.60	2963	23.41	3054	25.36	3143	27.34
9500	3345	2864	21.12	2941	22.91	3015	24.72	3087	26.57	3173	28.59
10000	3521	2924	22.45	3001	24.29	3074	26.16	3146	28.06		
10500	3697	2985	23.84	3061	25.74	3134	27.67				
11000	3873	3047	25.31	3122	27.27	3195	29.25				
11500	4049	3111	26.93	3184	28.87						
12000	4225	3183	28.91								

See page 25, 28 or 29 for minimum motor
frame sizes regardless of bhp

Performance is for installation type B-Free inlet, ducted outlet. Performance ratings do not include the effects of appurtenances (accessories). Power rating (bhp) does not include transmission losses.

See pages 22 for maximum wheel RPM and WR².

Belt Drive Ratings Table – at 70°F | .075 density | sea level

17

HDAF-240

Wheel

Diameter - 24.50"

Outlet OD

Size - 18.56" x 27.38"

Area - 3.45 ft² ID

Inlet OD

Size - 27.00"

Area - 3.90 ft² ID

All wheels are HDAF Type

Class II = light text face above Class IIP

Class IIP = **bold text face below Class II**

Volume CFM	O.V. fpm	0" SP		½" SP		1" SP		1 ½" SP		2" SP		2 ½" SP		3" SP		3 ½" SP	
		RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp
3000	869	435	0.08	605	0.32	745	0.60										
3600	1043	522	0.14	671	0.44	796	0.73	909	1.09								
4200	1217	609	0.23	740	0.58	852	0.89	956	1.27	1052	1.69						
4800	1391	696	0.34	815	0.73	916	1.12	1010	1.49	1099	1.93	1181	2.40				
5400	1565	783	0.48	891	0.91	983	1.40	1070	1.78	1153	2.23	1232	2.72	1304	3.24	1384	3.81
6000	1739	870	0.66	969	1.13	1054	1.68	1136	2.14	1211	2.57	1286	3.09	1357	3.64	1423	4.21
6600	1913	957	0.88	1048	1.38	1129	1.98	1202	2.56	1275	3.02	1342	3.50	1411	4.08	1476	4.68
7200	2086	1044	1.14	1129	1.69	1204	2.31	1273	2.99	1341	3.54	1406	4.05	1467	4.57	1531	5.21
7800	2260	1131	1.45	1210	2.04	1281	2.70	1347	3.41	1409	4.12	1472	4.67	1531	5.22	1587	5.78
8400	2434	1218	1.81	1292	2.44	1359	3.13	1422	3.89	1480	4.68	1539	5.36	1596	5.95	1651	6.55
9000	2608	1305	2.23	1375	2.90	1438	3.62	1498	4.42	1554	5.25	1607	6.11	1663	6.76	1716	7.39
9600	2782	1392	2.70	1458	3.42	1518	4.17	1575	5.00	1629	5.88	1681	6.78	1731	7.65	1783	8.32
10200	2956	1479	3.24	1541	4.00	1598	4.80	1653	5.65	1705	6.56	1755	7.51	1802	8.48	1850	9.33
10800	3130	1566	3.85	1625	4.65	1680	5.49	1732	6.36	1782	7.32	1830	8.30	1876	9.31	1920	10.35
11400	3304	1653	4.53	1709	5.37	1761	6.25	1811	7.15	1860	8.14	1906	9.17	1951	10.22	1994	11.29
12000	3478	1740	5.28	1793	6.17	1844	7.09	1891	8.03	1938	9.04	1983	10.11	2026	11.20	2068	12.31
12600	3652	1827	6.11	1878	7.05	1926	8.01	1972	8.99	2017	10.01	2060	11.12	2102	12.26	2143	13.41
13200	3826	1914	7.02	1963	8.00	2009	9.01	2053	10.03	2096	11.07	2138	12.22	2179	13.39	2219	14.59
13800	4000	2001	8.03	2048	9.05	2092	10.10	2135	11.16	2176	12.25	2217	13.39	2256	14.61	2295	15.85
14400	4173	2088	9.12	2133	10.19	2176	11.28	2217	12.38	2257	13.51	2296	14.66	2334	15.92	2372	17.21
15000	4347	2175	10.31	2218	11.42	2260	12.55	2300	13.70	2338	14.87	2376	16.05	2413	17.32	2450	18.65
15600	4521	2262	11.60	2304	12.75	2344	13.93	2382	15.12	2420	16.33	2456	17.55	2492	18.82	2528	20.19
16200	4695	2349	12.99	2389	14.18	2428	15.40	2465	16.64	2502	17.89	2537	19.15	2572	20.44	2606	21.82
16800	4869	2437	14.48	2475	15.72	2512	16.98	2549	18.26	2584	19.56	2618	20.86	2652	22.19	2685	23.56
17400	5043	2524	16.09	2561	17.37	2597	18.68	2632	20.00	2666	21.34	2700	22.69	2733	24.05	2765	25.43

Volume CFM	O.V. fpm	4" SP		4 ½" SP		5" SP		6" SP		7" SP		8" SP		9" SP		10" SP	
		RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp
5400	1565	1464	4.41														
6000	1739	1490	4.81	1564	5.46	1635	6.14										
6600	1913	1538	5.30	1596	5.94	1661	6.63										
7200	2086	1591	5.86	1649	6.53	1703	7.21	1818	8.68								
7800	2260	1646	6.47	1703	7.17	1757	7.89	1858	9.37	1965	10.97						
8400	2434	1703	7.15	1758	7.87	1811	8.62	1911	10.17	2005	11.77	2104	13.48	2209	15.33	2308	17.23
9000	2608	1767	8.03	1816	8.67	1866	9.42	1966	11.03	2058	12.70	2145	14.41	2235	16.23	2335	18.19
9600	2782	1833	8.99	1880	9.67	1926	10.36	2021	11.96	2112	13.69	2198	15.47	2280	17.30	2361	19.20
10200	2956	1899	10.05	1946	10.76	1991	11.49	2077	12.95	2167	14.75	2252	16.61	2333	18.50	2410	20.44
10800	3130	1966	11.19	2012	11.95	2056	12.71	2140	14.25	2222	15.89	2307	17.81	2387	19.77	2464	21.78
11400	3304	2035	12.39	2079	13.23	2123	14.03	2205	15.64	2284	17.27	2362	19.09	2442	21.12	2518	23.20
12000	3478	2108	13.45	2147	14.61	2190	15.46	2271	17.14	2348	18.84	2421	20.56	2497	22.55	2572	24.70
12600	3652	2182	14.59	2220	15.79	2258	16.99	2338	18.75	2413	20.53	2486	22.32	2555	24.13	2628	26.28
13200	3826	2257	15.81	2294	17.05	2331	18.31	2405	20.48	2479	22.33	2550	24.20	2619	26.08	2684	27.98
13800	4000	2332	17.11	2369	18.40	2404	19.69	2473	22.33	2546	24.26	2616	26.20	2683	28.15	2748	30.12
14400	4173	2408	18.51	2444	19.83	2479	21.17	2546	23.90	2614	26.31	2683	28.32	2749	30.35	2813	32.39
15000	4347	2485	19.99	2520	21.36	2554	22.74	2619	25.56	2682	28.44	2750	30.58	2815	32.69	2878	34.80
15600	4521	2562	21.57	2596	22.98	2629	24.40	2694	27.30	2755	30.27	2817	32.98	2882	35.16		
16200	4695	2640	23.25	2673	24.70	2706	26.17	2768	29.15	2829	32.20	2887	35.31				
16800	4869	2718	25.04	2751	26.53	2782	28.04	2844	31.10								
17400	5043	2797	26.93	2828	28.46	2859	30.01										

Volume CFM	O.V. fpm	11" SP		12" SP		13" SP		14" SP		15" SP	
		RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp
9000	2608	2429	20.21								
9600	2782	2456	21.28	2546	23.41						
10200	2956	2484	22.41	2572	24.59	2659	26.84	2743	29.12	2823	31.44
10800	3130	2537	23.82	2608	25.90	2686	28.13	2769	30.49	2849	32.88
11400	3304	2590	25.31	2660	27.46	2728	29.65	2796	31.90	2876	34.36
12000	3478	2644	26.88	2714	29.10	2781	31.35	2846	33.64		
12600	3652	2699	28.53	2768	30.82	2835	33.15	2899	35.50		
13200	3826	2755	30.28	2823	32.63	2889	35.03				
13800	4000	2810	32.11	2878	34.54						
14400	4173	2874	34.45								

See page 25, 28 or 29 for minimum motor
frame sizes regardless of bhp

Performance is for installation type B-Free inlet, ducted outlet. Performance ratings do not include the effects of appurtenances (accessories). Power rating (bhp) does not include transmission losses.

See pages 22 for maximum wheel RPM and WR².

HDAF-270**Wheel**

Diameter - 27.00"

Outlet OD

Size - 20.44" x 30.13"

Area - 4.19 ft² ID**Inlet OD**

Size - 30.00"

Area - 4.83 ft² ID**All wheels are HDAF Type**

Class II = light text face above Class III

Class III = **bold text face below Class II**

Volume CFM	O.V. fpm	0" SP		¼" SP		½" SP		¾" SP		1" SP		1 ½" SP		2" SP		2 ½" SP	
		RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp
2500	596	245	0.04	343	0.13												
3250	775	318	0.08	397	0.20	470	0.33										
4000	954	392	0.15	457	0.30	518	0.45	576	0.61	646	0.83						
4750	1133	465	0.26	520	0.42	573	0.61	623	0.79	672	0.98						
5500	1312	539	0.40	587	0.59	633	0.80	677	1.02	721	1.22	809	1.68				
6250	1491	612	0.58	655	0.80	696	1.03	736	1.27	775	1.52	849	2.00	931	2.55	1019	3.23
7000	1670	685	0.82	724	1.06	760	1.31	797	1.58	833	1.86	901	2.40	965	2.93	1041	3.57
7750	1849	759	1.11	794	1.37	827	1.65	860	1.93	893	2.24	956	2.86	1017	3.44	1074	4.04
8500	2028	832	1.46	865	1.75	895	2.05	924	2.35	955	2.68	1014	3.36	1071	4.02	1126	4.66
9250	2207	906	1.88	936	2.20	964	2.52	991	2.85	1018	3.19	1074	3.92	1126	4.67	1179	5.36
10000	2386	979	2.38	1007	2.72	1034	3.07	1059	3.42	1083	3.78	1136	4.55	1186	5.35	1233	6.15
10750	2565	1053	2.96	1079	3.32	1104	3.69	1128	4.07	1150	4.45	1198	5.26	1246	6.10	1291	6.97
11500	2744	1126	3.62	1151	4.01	1174	4.40	1197	4.81	1218	5.21	1262	6.05	1308	6.95	1351	7.86
12250	2923	1199	4.38	1223	4.79	1245	5.21	1266	5.64	1287	6.07	1327	6.94	1370	7.88	1412	8.84
13000	3102	1273	5.23	1295	5.67	1316	6.11	1336	6.56	1356	7.02	1394	7.94	1433	8.91	1474	9.92
13750	3281	1346	6.19	1367	6.65	1387	7.12	1406	7.60	1425	8.07	1462	9.05	1497	10.04	1536	11.10
14500	3460	1420	7.26	1439	7.74	1458	8.24	1477	8.74	1495	9.24	1530	10.26	1564	11.30	1599	12.39
15250	3639	1493	8.44	1512	8.95	1530	9.48	1548	10.00	1565	10.53	1599	11.60	1631	12.68	1663	13.79
16000	3818	1567	9.75	1584	10.29	1602	10.83	1619	11.38	1636	11.93	1668	13.05	1699	14.18	1729	15.34
16750	3997	1640	11.19	1657	11.75	1674	12.32	1690	12.89	1706	13.47	1737	14.63	1768	15.82	1797	17.01
17500	4176	1714	12.76	1730	13.35	1746	13.94	1762	14.54	1777	15.14	1807	16.35	1836	17.58	1865	18.83
18250	4355	1787	14.47	1803	15.08	1818	15.70	1833	16.32	1848	16.95	1877	18.21	1905	19.49	1933	20.78
19000	4534	1860	16.33	1875	16.97	1890	17.61	1905	18.26	1919	18.91	1947	20.22	1974	21.55	2001	22.89
19750	4713	1934	18.34	1948	19.00	1963	19.67	1977	20.35	1990	21.02	2018	22.38	2044	23.75	2070	25.14
20500	4892	2007	20.51	2021	21.20	2035	21.89	2049	22.59	2062	23.29	2088	24.70	2114	26.12	2139	27.56
21250	5071	2081	22.85	2094	23.54	2107	24.27	2121	25.00	2134	25.73	2159	27.18	2184	28.65	2208	30.14

Volume CFM	O.V. fpm	3" SP		4" SP		5" SP		6" SP		7" SP		8" SP		9" SP		10" SP	
		RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp
8500	2028	1177	5.32	1306	6.97												
9250	2207	1229	6.06	1332	7.58	1453	9.50										
10000	2386	1282	6.90	1372	8.42	1475	10.20	1588	12.35								
10750	2565	1336	7.82	1424	9.43	1509	11.14	1610	13.18	1714	15.49						
11500	2744	1393	8.80	1477	10.54	1556	12.29	1639	14.20	1736	16.46	1832	18.94	1945	22.69		
12250	2923	1452	9.83	1531	11.76	1608	13.60	1680	15.48	1763	17.58	1854	20.04	1967	23.93	2053	26.73
13000	3102	1513	10.95	1586	13.07	1662	15.01	1732	16.98	1799	18.99	1880	21.28	1992	25.30	2075	28.11
13750	3281	1574	12.18	1646	14.39	1716	16.55	1785	18.61	1851	20.70	1915	22.87	2028	27.08	2100	29.65
14500	3460	1636	13.51	1706	15.82	1771	18.19	1839	20.35	1903	22.54	1965	24.76	2075	29.16	2136	31.63
15250	3639	1699	14.96	1766	17.37	1830	19.83	1893	22.23	1957	24.51	2017	26.82	2127	31.44	2182	33.90
16000	3818	1762	16.54	1828	19.03	1890	21.59	1949	24.21	2010	26.62	2070	29.02	2180	33.88	2234	36.43
16750	3997	1826	18.23	1890	20.82	1951	23.48	2008	26.19	2065	28.87	2124	31.36	2233	36.46	2287	39.10
17500	4176	1892	20.09	1952	22.75	2012	25.50	2068	28.30	2122	31.16	2178	33.85	2287	39.21	2340	41.94
18250	4355	1959	22.09	2015	24.81	2073	27.66	2129	30.55	2182	33.51	2233	36.50	2342	42.11	2394	44.94
19000	4534	2027	24.24	2079	27.02	2136	29.96	2190	32.95	2242	36.00	2292	39.09	2399	45.07	2448	48.10
19750	4713	2095	26.55	2144	29.39	2198	32.41	2251	35.50	2302	38.64	2351	41.83	2458	48.05		
20500	4892	2163	29.01	2211	31.95	2261	35.02	2313	38.20	2363	41.44	2412	44.72				
21250	5071	2232	31.63	2278	34.67	2325	37.78	2376	41.07	2425	44.40	2472	47.78				

Volume CFM	O.V. fpm	11" SP		12" SP		13" SP		14" SP	
		RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp
13000	3102	2134	29.59						
13750	3281	2156	31.07	2234	34.08				
14500	3460	2178	32.59	2256	35.70	2331	38.86		
15250	3639	2205	34.33	2278	37.37	2353	40.63	2425	43.94
16000	3818	2240	36.50	2306	39.34	2375	42.46	2447	45.86
16750	3997	2286	39.00	2342	41.72	2405	44.68	2469	47.84
17500	4176	2338	41.77	2388	44.46	2440	47.27		
18250	4355	2391	44.69	2440	47.47				
19000	4534	2444	47.78						
10400	4521								

See page 25, 28 or 29 for minimum motor
frame sizes regardless of bhp

Performance is for installation type B-Free inlet, ducted outlet. Performance ratings do not include the effects of appurtenances (accessories). Power rating (bhp) does not include transmission losses.

See pages 22 for maximum wheel RPM and WR².

HDAF-300

Wheel
Diameter - 30.00"

Outlet OD

Size - 22.75" x 33.56"
Area - 5.20 ft² ID

Inlet OD

Size - 33.50"
Area - 6.12 ft² ID

All wheels are HDAF Type

Class II = light text face above Class III
Class III = **bold text face below Class II**

Volume CFM	O.V. fpm	0" SP		¼" SP		½" SP		¾" SP		1" SP		1 ½" SP		2" SP	
		RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp
4600	884	328	0.15	391	0.32	448	.50	510	0.71						
5400	1038	385	0.25	439	0.44	490	0.65	537	0.86	591	1.10				
6200	1192	443	.37	489	0.59	535	0.83	578	1.07	619	1.31	715	1.91		
7000	1346	500	0.54	542	0.78	583	1.04	621	1.33	660	1.59	734	2.15	822	2.89
7800	1500	557	.74	595	1.01	631	1.30	668	1.60	702	1.92	768	2.51	839	3.18
8600	1653	614	0.99	649	1.29	681	1.59	715	1.93	747	2.27	809	2.94	866	3.59
9400	1807	671	1.30	703	1.62	733	1.95	764	2.30	794	2.67	851	3.42	907	4.13
10200	1961	728	1.66	758	2.00	786	2.36	813	2.73	842	3.13	896	3.95	948	4.73
11000	2115	785	2.08	813	2.45	840	2.84	864	3.23	891	3.64	942	4.51	991	5.40
11800	2269	842	2.57	869	2.97	893	3.38	917	3.79	940	4.22	990	5.14	1035	6.10
12600	2423	899	3.13	924	3.55	948	3.99	970	4.43	991	4.88	1038	5.85	1082	6.85
13400	2576	957	3.76	980	4.21	1002	4.67	1023	5.14	1044	5.62	1086	6.62	1129	7.67
14200	2730	1014	4.47	1036	4.95	1057	5.44	1077	5.94	1097	6.44	1136	7.47	1177	8.58
15000	2884	1071	5.27	1092	5.78	1112	6.29	1131	6.81	1150	7.34	1186	8.42	1226	9.57
15800	3038	1128	6.16	1148	6.69	1167	7.23	1186	7.78	1204	8.33	1238	9.46	1274	10.64
16600	3192	1185	7.15	1204	7.70	1222	8.27	1240	8.84	1257	9.42	1291	10.60	1324	11.81
17400	3346	1242	8.23	1260	8.81	1278	9.41	1295	10.01	1312	10.61	1344	11.84	1375	13.09
18200	3500	1299	9.42	1316	10.03	1333	10.65	1350	11.27	1366	11.90	1397	13.18	1427	14.49
19000	3653	1356	10.72	1373	11.35	1389	12.00	1405	12.65	1420	13.31	1451	14.64	1480	15.99
19800	3807	1413	12.13	1429	12.78	1445	13.46	1460	14.14	1475	14.82	1504	16.21	1532	17.61
20600	3961	1470	13.66	1486	14.35	1501	15.05	1516	15.75	1530	16.46	1558	17.89	1586	19.35
21400	4115	1528	15.31	1542	16.03	1557	16.75	1571	17.48	1585	18.22	1612	19.71	1639	21.21
22200	4269	1585	17.09	1599	17.82	1613	18.58	1627	19.35	1640	20.10	1667	21.64	1692	23.20
23000	4423	1642	19.01	1656	19.77	1669	20.56	1682	21.34	1696	22.12	1721	23.72	1746	25.32
23800	4576	1699	21.06	1712	21.85	1725	22.66	1738	23.47	1751	24.29	1776	25.93	1800	27.59
24600	4730	1756	23.26	1769	24.06	1782	24.91	1794	25.74	1806	26.59	1831	28.28	1854	29.99
25400	4884	1813	25.60	1826	26.45	1838	27.31	1850	28.17	1862	29.03	1886	30.78	1909	32.55
26200	5038	1870	28.10	1882	28.95	1894	29.84	1906	30.74	1918	31.64	1941	33.44	1963	35.25
Volume CFM	O.V. fpm	2 ½" SP		3" SP		4" SP		5" SP		6" SP		7" SP		8" SP	
		RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp
7800	1500	919	4.02												
8600	1653	936	4.39	1008	5.32										
9400	1807	960	4.87	1025	5.75										
10200	1961	998	5.50	1049	6.32	1169	8.38								
11000	2115	1039	6.22	1085	7.06	1186	8.97	1299	11.35						
11800	2269	1081	7.01	1126	7.90	1212	9.76	1316	12.07	1417	14.66				
12600	2423	1124	7.88	1167	8.81	1247	10.73	1334	12.85	1434	15.51				
13400	2576	1170	8.75	1209	9.82	1288	11.83	1362	13.92	1451	16.39	1545	19.28		
14200	2730	1216	9.71	1254	10.87	1329	13.02	1400	15.18	1475	17.52	1562	20.30	1649	23.38
15000	2884	1264	10.75	1300	11.96	1371	14.31	1441	16.57	1506	18.87	1582	21.46	1666	24.54
15800	3038	1312	11.88	1347	13.13	1414	15.69	1482	18.05	1546	20.45	1610	22.95	1683	25.74
16600	3192	1360	13.10	1394	14.41	1459	17.09	1524	19.64	1587	22.14	1647	24.68	1711	27.41
17400	3346	1409	14.42	1442	15.77	1506	18.56	1567	21.34	1629	23.94	1687	26.58	1743	29.26
18200	3500	1458	15.84	1491	17.25	1553	20.13	1611	23.10	1671	25.86	1728	28.59	1783	31.37
19000	3653	1507	17.36	1539	18.83	1600	21.81	1657	24.88	1713	27.90	1770	30.73	1824	33.60
19800	3807	1560	19.03	1589	20.52	1648	23.60	1704	26.77	1757	30.01	1812	33.00	1865	35.96
20600	3961	1612	20.82	1638	22.32	1696	25.51	1751	28.78	1803	32.12	1854	35.39	1907	38.46
21400	4115	1665	22.73	1690	24.28	1745	27.54	1798	30.91	1849	34.35	1898	37.85	1949	41.09
22200	4269	1717	24.77	1742	26.37	1794	29.70	1846	33.17	1896	36.71	1944	40.31	1992	43.87
23000	4423	1771	26.95	1794	28.59	1843	31.99	1894	35.56	1944	39.20	1991	42.90	2036	46.67
23800	4576	1824	29.26	1847	30.96	1892	34.41	1943	38.08	1991	41.83	2038	45.63		
24600	4730	1877	31.72	1900	33.47	1944	37.00	1992	40.75	2039	44.59				
25400	4884	1931	34.32	1953	36.12	1996	39.76	2041	43.56						
26200	5038	1985	37.08	2007	38.93	2048	42.67								
Volume CFM	O.V. fpm	9" SP		10" SP		11" SP		12" SP		See page 25, 28 or 29 for minimum motor frame sizes regardless of bhp					
		RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp						
14800	2846	1743	27.48												
15600	3000	1760	28.77	1838	32.18										
16400	3153	1777	30.10	1854	33.61	1928	37.20								
17200	3307	1800	31.73	1871	35.09	1945	38.78	2015	42.54						
18000	3461	1828	33.67	1893	36.82	1962	40.40	2032	44.26						
18800	3615	1866	35.91	1921	38.96	1982	42.26	2049	46.03						
19600	3769	1907	38.34	1956	41.36	2011	44.60	2069	48.04						
20400	3923	1948	40.90	1996	44.01	2044	47.16								
21200	4076	1989	43.60	2037	46.81										
22000	4230	2031	46.44												
22800	4384	2073	49.42												

HDAF-330**Wheel**

Diameter - 33.00"

Outlet OD

Size - 24.88" x 36.88"

Area - 6.20 ft² ID**Inlet OD**

Size - 36.75"

Area - 7.20 ft² ID**All wheels are HDAF Type**

Class II = light text face above Class III

Class III = **bold text face below Class II**

Volume CFM	O.V. fpm	0" SP		¼" SP		½" SP		¾" SP		1" SP		1 ½" SP		2" SP	
		RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp
5000	806	268	0.13	331	.32	388	0.52								
6200	1000	333	0.25	384	0.48	432	0.72	478	0.96	532	1.27				
7400	1193	397	0.43	440	.69	482	0.98	522	1.27	559	1.55	648	2.29	2.29	
8600	1387	461	0.68	499	0.98	535	1.30	570	1.65	605	1.97	671	2.66	2.66	3.54
9800	1580	526	1.00	559	1.34	590	1.70	623	2.08	653	2.48	712	3.22	3.22	4.02
11000	1774	590	1.42	620	1.80	648	2.19	677	2.60	705	3.04	759	3.90	3.90	4.74
12200	1967	654	1.94	682	2.35	708	2.78	732	3.23	759	3.70	808	4.68	4.68	5.61
13400	2161	719	2.57	744	3.02	768	3.49	790	3.97	814	4.47	861	5.53	5.53	6.61
14600	2354	783	3.32	806	3.81	828	4.32	850	4.84	870	5.36	914	7.60	6.50	7.67
15800	2548	847	4.21	869	4.74	890	5.29	910	5.84	929	6.41	969	8.84	7.60	8.85
17000	2741	912	5.24	932	5.82	951	6.40	970	6.99	988	7.60	1024	10.25	8.84	10.17
18200	2935	976	6.43	995	7.04	1013	7.67	1031	8.30	1048	8.94	1081		10.25	11.64
19400	3129	1040	7.79	1058	8.44	1075	9.11	1092	9.78	1108	10.46	1140	11.84	11.84	13.28
20600	3322	1105	9.33	1122	10.02	1138	10.72	1154	11.43	1169	12.15	1199	13.61	13.61	15.09
21800	3516	1169	11.06	1185	11.79	1201	12.53	1216	13.28	1230	14.04	1259	15.57	15.57	17.13
23000	3709	1233	12.98	1249	13.76	1263	14.54	1278	15.33	1292	16.12	1319	17.73	17.73	19.37
24200	3903	1298	15.12	1312	15.93	1326	16.75	1340	17.58	1354	18.42	1380	20.11	20.11	21.82
25400	4096	1362	17.49	1376	18.34	1389	19.20	1403	20.06	1415	20.94	1441	22.70	22.70	24.50
26600	4290	1427	20.08	1440	20.97	1453	21.87	1465	22.78	1478	23.70	1502	25.54	25.54	27.40
27800	4483	1491	22.93	1503	23.85	1516	24.80	1528	25.74	1540	26.70	1563	28.62	28.62	30.56
29000	4677	1555	26.02	1567	27.00	1579	27.97	1591	28.96	1602	29.95	1625	31.95	31.95	33.97
30200	4870	1620	29.39	1631	30.39	1643	31.42	1654	32.45	1665	33.48	1687	35.56	35.56	37.65
31400	5064	1684	33.04	1695	34.09	1706	35.14	1717	36.21	1728	37.28	1749	39.44	39.44	41.62
32600	5258	1748	36.97	1759	38.06	1770	39.15	1780	40.26	1790	41.37	1811	43.61	43.61	45.87

Volume CFM	O.V. fpm	2 ½" SP		3" SP		4" SP		5" SP		6" SP		7" SP		8" SP	
		RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp
9800	1500	841	5.03												
11000	1774	863	5.65	926	6.76										
12200	1967	902	6.54	950	7.54	1061	10.04								
13400	2161	948	7.61	989	8.63	1080	10.93	1182	13.82						
14600	2354	996	8.82	1036	9.91	1110	12.16	1202	14.92	1294	18.08				
15800	2548	1045	10.13	1083	11.35	1155	13.73	1227	16.29	1313	19.39	1398	22.82		
17000	2741	1098	11.52	1132	12.91	1201	15.48	1266	18.07	1337	20.93	1417	24.35	1496	28.04
18200	2935	1151	13.07	1184	14.54	1249	17.40	1312	20.13	1371	22.93	1440	26.08	1515	29.79
19400	3129	1205	14.79	1237	16.33	1297	19.49	1359	22.39	1417	25.33	1471	28.32	1537	31.75
20600	3322	1260	16.68	1291	18.30	1349	21.61	1406	24.84	1463	27.93	1516	31.07	1569	34.29
21800	3516	1315	18.76	1345	20.45	1402	23.91	1455	27.47	1510	30.74	1563	34.03	1613	37.36
23000	3709	1371	21.03	1400	22.80	1455	26.41	1507	30.12	1558	33.78	1609	37.21	1659	40.69
24200	3903	1430	23.56	1455	25.36	1509	29.13	1559	32.99	1607	36.93	1657	40.64	1705	44.26
25400	4096	1489	26.31	1512	28.14	1563	32.06	1613	36.07	1660	40.17	1705	44.31	1752	48.08
26600	4290	1548	29.29	1571	31.20	1618	35.22	1667	39.38	1712	43.63	1756	47.96	1800	52.16
27800	4483	1608	32.52	1630	34.51	1674	38.62	1721	42.93	1766	47.33	1809	51.81	1850	56.37
29000	4677	1668	36.02	1689	38.08	1730	42.27	1776	46.74	1819	51.29	1861	55.92	1902	60.62
30200	4870	1729	39.77	1749	41.91	1788	46.25	1831	50.81	1874	55.51	1915	60.30	1955	65.15
31400	5064	1789	43.81	1809	46.03	1847	50.51	1886	55.15	1928	60.01	1969	64.94	2008	69.94
32600	5258	1850	48.14	1869	50.43	1906	55.07	1942	59.78	1983	64.78				

Volume CFM	O.V. fpm	9" SP		10" SP		11" SP		12" SP		13" SP		14" SP	
		RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp
17800	2870	1583	33.08										
19000	3064	1602	35.04	1673	39.17								
20200	3258	1622	37.07	1692	41.36	1759	45.73	1823	50.18				
21400	3451	1652	39.83	1711	43.63	1778	48.15	1842	52.76	1903	57.45		
22600	3645	1691	43.02	1743	46.76	1799	50.77	1861	55.42	1922	60.26	1981	65.18
23800	3838	1736	46.66	1781	50.31	1830	54.23	1884	58.45	1942	63.17	2000	68.24
25000	4032	1783	50.54	1827	54.34	1870	58.18	1915	62.25	1967	66.67		
26200	4225	1830	54.68	1873	58.63	1915	62.62	1956	66.64	1998	70.82		
27400	4419	1877	59.09	1920	63.19	1962	67.32	2002	71.49				
28600	4612	1925	63.78	1967	68.03								
29800	4806	1976	68.48										

Performance is for installation type B-Free inlet, ducted outlet. Performance ratings do not include the effects of appurtenances (accessories). Power rating (bhp) does not include transmission losses.

See pages 22 for maximum wheel RPM and WR².

HDAF-360

Wheel
Diameter - 36.00"

Outlet OD
Size - 27.25" x 40.25"
Area - 7.50 ft² ID

Inlet OD
Size - 40.00"
Area - 8.10 ft² ID

All wheels are HDAF Type
Class II = light text face above Class III
Class III = **bold text face below Class II**

Volume CFM	O.V. fpm	0" SP		¼" SP		½" SP		¾" SP		1" SP		1 ½" SP		2" SP	
		RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp
6000	800	248	0.16	305	0.39	357	0.62								
7500	1000	310	0.32	356	0.59	400	0.88	440	1.17	489	1.54				
9000	1200	372	0.55	410	0.86	448	1.22	484	1.57	518	1.91	597	2.77		
10500	1400	434	0.87	468	1.23	500	1.63	532	2.05	562	2.45	620	3.27	691	4.31
12000	1600	496	1.30	526	1.71	553	2.14	583	2.61	610	3.10	663	4.01	714	4.96
13500	1800	558	1.85	585	2.31	610	2.79	635	3.30	661	3.83	708	4.90	755	5.92
15000	2000	620	2.54	644	3.05	667	3.58	689	4.12	713	4.70	757	5.90	800	7.06
16500	2200	682	3.38	704	3.94	725	4.52	745	5.10	766	5.71	808	7.01	846	8.35
18000	2400	744	4.39	764	5.00	784	5.63	803	6.26	821	6.91	860	8.29	897	9.72
19500	2600	806	5.59	825	6.25	843	6.92	861	7.60	878	8.29	913	9.74	948	11.27
21000	2800	867	6.98	885	7.69	903	8.41	919	9.14	935	9.88	966	11.39	1000	13.02
22500	3000	929	8.58	946	9.34	962	10.11	978	10.89	993	11.68	1022	13.28	1053	14.98
24000	3200	991	10.42	1007	11.22	1022	12.04	1037	12.87	1052	13.71	1079	15.41	1107	17.16
25500	3400	1053	12.49	1068	13.35	1083	14.22	1097	15.09	1110	15.98	1137	17.78	1162	19.61
27000	3600	1115	14.83	1129	15.74	1143	16.65	1156	17.58	1170	18.52	1195	20.41	1219	22.33
28500	3800	1177	17.44	1191	18.39	1204	19.36	1216	20.34	1229	21.32	1253	23.31	1277	25.33
30000	4000	1239	20.34	1252	21.35	1264	22.36	1276	23.39	1288	24.42	1312	26.51	1334	28.62
31500	4200	1301	23.55	1313	24.60	1325	25.67	1337	26.75	1348	27.83	1371	30.01	1392	32.22
33000	4400	1363	27.08	1375	28.17	1386	29.29	1397	30.42	1408	31.55	1430	33.83	1451	36.14
34500	4600	1425	30.94	1436	32.09	1447	33.26	1458	34.43	1468	35.61	1489	37.99	1509	40.40
36000	4800	1487	35.15	1498	36.35	1508	37.56	1518	38.80	1529	40.02	1548	42.50	1568	45.00
37500	5000	1549	39.73	1559	40.97	1569	42.24	1579	43.51	1589	44.80	1608	47.37	1627	49.98
39000	5200	1611	44.69	1621	45.97	1630	47.32	1640	48.62	1649	49.96	1668	52.64	1686	55.33
Volume CFM	O.V. fpm	2 ½" SP		3" SP		4" SP		5" SP		6" SP		7" SP		8" SP	
		RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp
12000	1600	775	6.14												
13500	1800	800	6.99	854	8.27										
15000	2000	841	8.19	880	9.36	978	12.30								
16500	2200	886	9.59	923	10.84	1000	13.54	1091	16.94						
18000	2400	932	11.18	968	12.52	1035	15.26	1109	18.35	1194	22.19				
19500	2600	982	12.84	1014	14.41	1079	17.33	1139	20.33	1212	23.87	1290	28.04		
21000	2800	1033	14.68	1063	16.38	1125	19.62	1183	22.80	1241	26.13	1309	29.99	1381	34.48
22500	3000	1084	16.74	1114	18.53	1170	22.15	1228	25.51	1281	28.94	1336	32.58	1400	36.72
24000	3200	1137	19.01	1165	20.90	1219	24.78	1273	28.48	1326	32.09	1375	35.76	1428	39.70
25500	3400	1190	21.53	1217	23.52	1270	27.58	1319	31.72	1371	35.52	1419	39.37	1465	43.28
27000	3600	1243	24.30	1270	26.38	1321	30.64	1369	35.00	1416	39.24	1464	43.27	1509	47.36
28500	3800	1299	27.38	1323	29.52	1373	33.96	1419	38.52	1463	43.18	1510	47.48	1554	51.75
30000	4000	1356	30.77	1377	32.94	1425	37.58	1471	42.32	1514	47.17	1556	52.01	1600	56.47
31500	4200	1413	34.46	1434	36.72	1478	41.49	1522	46.42	1564	51.46	1605	56.59	1645	61.53
33000	4400	1471	38.47	1491	40.83	1531	45.71	1574	50.84	1616	56.07	1655	61.38	1693	66.79
34500	4600	1529	42.83	1548	45.28	1585	50.26	1627	55.59	1667	61.00	1706	66.51	1743	72.10
36000	4800	1587	47.53	1605	50.07	1641	55.25	1680	60.68	1719	66.28	1757	71.98	1794	77.76
37500	5000	1645	52.60	1663	55.24	1698	60.60	1734	66.12	1772	71.93	1809	77.81	1845	83.78
39000	5200	1704	58.05	1721	60.79	1755	66.34	1788	71.97	1825	77.94	1861	84.02		
Volume CFM	O.V. fpm	9" SP		10" SP		11" SP		12" SP		13" SP		14" SP			
		RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp	RPM	bhp		
21500	2866	1455	39.88												
23000	3066	1474	42.35	1538	47.32	1599	52.39								
24500	3266	1495	45.11	1557	50.08	1618	55.34	1676	60.70						
26000	3466	1525	48.69	1579	53.29	1636	58.41	1695	63.96	1751	69.61	1805	75.35		
27500	3666	1567	52.99	1610	57.28	1661	62.14	1714	67.33	1770	73.17	1823	79.10		
29000	3866	1612	57.67	1653	62.11	1692	66.60	1741	71.67	1788	76.86	1842	82.98		
30500	4066	1657	62.69	1697	67.30	1736	71.97	1773	76.68	1818	81.90	1864	87.32		
32000	4266	1702	68.05	1742	72.85	1780	77.69	1817	82.58	1853	87.52				
33500	4466	1748	73.77	1787	78.75	1825	83.78	1862	88.86						
35000	4666	1796	79.69	1833	85.04										
36500	4866	1846	85.66												

Performance is for installation type B-Free inlet, ducted outlet. Performance ratings do not include the effects of appurtenances (accessories). Power rating (bhp) does not include transmission losses.

See pages 22 for maximum wheel RPM and WR².

Maximum Shaft and Bearing Speeds for Belt Drive Fans WR² (lb-ft²) and Maximum Wheel Speed for All Fans

Fan Size	Maximum Shaft and Bearing Speeds note 1			WR ² and Maximum Wheel Speed			
	Fan Class			HDAF Wheel note 2		SQAF Wheel note 3	
	II	IIP	III	Wheel WR ²	Max RPM note 4	Wheel WR ²	Max RPM note 4
120	4189			2.9	5000	3.7	4624
130	3834			4.1	4600	5.0	4251
150	3513			5.6	4130	7.2	3890
160	3195			7.7	3900	10.0	3670
180	3142	3810		12.9	3810	18.1	3610
200	2885	3550		17.9	3550	25.7	3410
220	2668	3000		25.3	3200	39.2	2910
240	2427	2900		54.7	2900	66.5	2680
270	1967		2478	81.2	2550	89.6	3480
300	1777		2239	117.2	2310	169.0	2180
330	1598		2014	164.8	2080	254.0	1880
360	1483		1868	226.0	1868	370.0	1700

- 1 All maximum safe shaft speeds are independent of temperature.
 2 All wheels are steel with a cast iron hub plate. Wheels are not available in aluminum or stainless steel.
 Size 120-160 wheels are Class II construction. Size 180-240 wheels are Class IIP construction. Size 270-360 wheels are Class III construction.

- 3 All wheels are steel with a cast iron hub plate. Wheels are not available in aluminum or stainless steel.
 Size 120-160 wheels are Class II construction. Size 180 wheel are Class IIP construction. Size 200-360 wheels are Class III construction.
 4 For steel wheels up to 175°F (80°C). At temperatures above 175°F the maximum safe wheel speeds must be reduced by the Maximum RPM Reduction Factors listed on page 6.

Approximate Shipping Weight Less Motor and Options

Fan Size	Arrangement 1		Arrangement 4		Arrangement 4HM		Arrangement 8		Arrangement 9		Arrangement 9CB		Arrangement 10	
	Class II	Class III	Class II	Class III	Class II	Class III	Class II	Class III	Class II	Class III	Class II	Class III	Class II	Class III
180	350	360	300	310	270	280	380	390	380	390	500	510	390	400
200	390	410	350	360	320	330	430	450	430	450	560	580	430	450
220	470	500	430	440	390	400	520	540	530	550	660	680	530	550
240	610	620	550	555	450	455	670	690	660	670	800	810	620	630
270	740	750	690	695	550	555	820	840	800	810	960	970	760	770
300	910	945	840	845	640	645	1000	1000	970	1005	1130	1165	900	930
330	1200	1320	1090	1090	940				1260	1380	1420	1560		
360	1410	1600	1390	1430	1100				1470	1660	1650	1840		

Note — Blower housing dimensions common to all Blower Arrangements

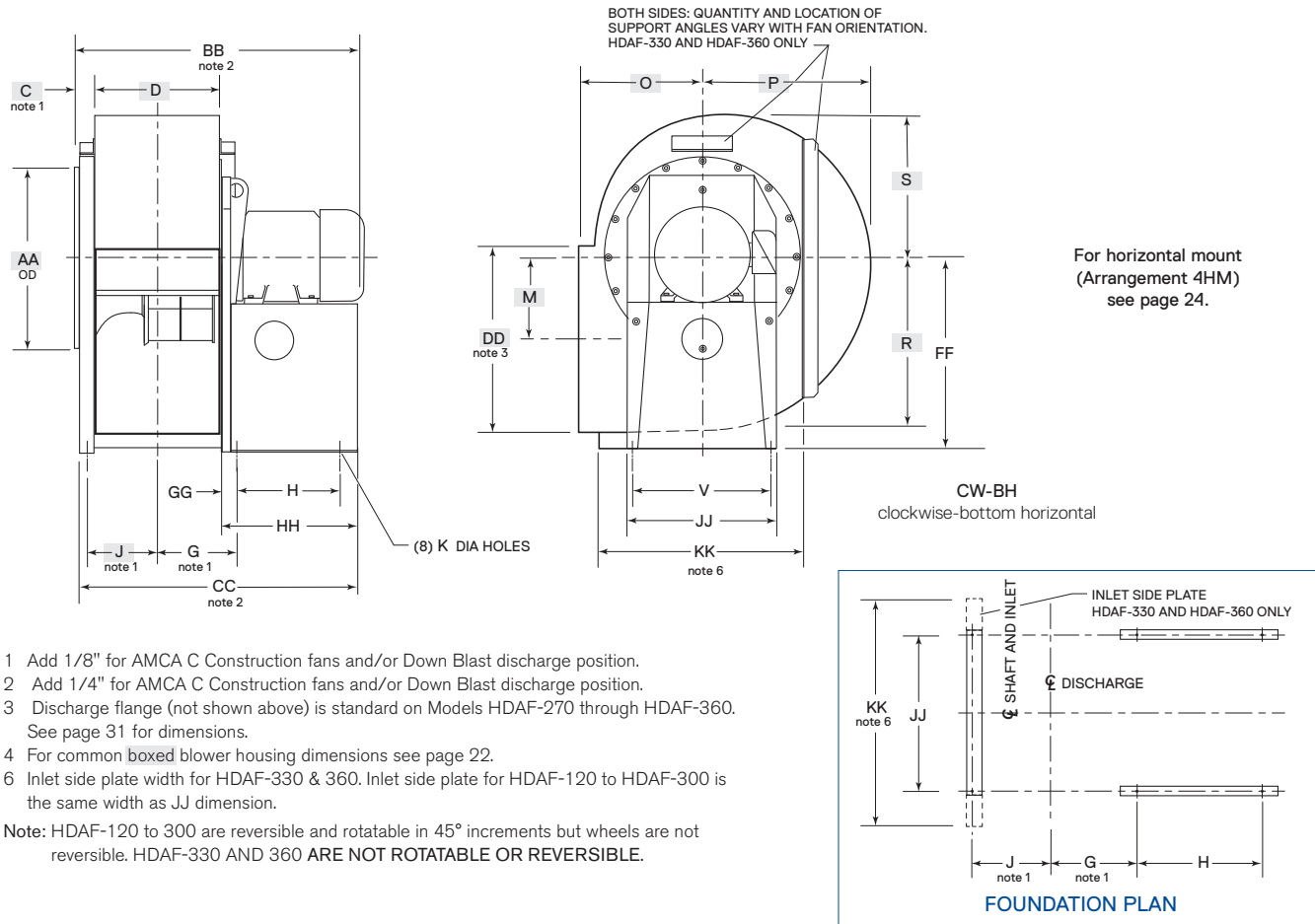
Model	C note 1	D note 2 - note 3	J note 1 - note 2	M	O note 3	P	R	S	AA	DD note 3
HDAF-120	4 1/16"	9 3/8"	5 3/4"	6 3/16"	9 15/16"	12 3/8"	13"	10 3/8"	13 1/4"	13 3/4"
HDAF-130	4 1/16"	10 3/8"	6 1/4"	6 13/16"	10 13/16"	13 3/4"	14 7/16"	11 9/16"	14 5/8"	15 1/4"
HDAF-150	4 1/16"	11 3/8"	6 3/4"	7 9/16"	11 3/4"	15 3/16"	15 15/16"	12 3/4"	16 1/8"	16 13/16"
HDAF-160	4 1/16"	12 1/2"	7 5/16"	8 5/16"	12 11/16"	16 11/16"	17 1/2"	14"	18"	18 7/16"
HDAF-180	4 1/16"	13 7/8"	8"	9 1/4"	13 13/16"	18 7/16"	19 7/16"	15 1/2"	20"	20 3/8"
HDAF-200	4 1/16"	15 1/4"	8 11/16"	10 1/16"	14 15/16"	20 1/4"	21 1/4"	17"	22"	22 3/8"
HDAF-220	4 1/16"	16 7/8"	9 1/2"	11 3/16"	16 3/8"	22 1/2"	23 5/8"	18 7/8"	24 5/8"	24 7/8"
HDAF-240	6 1/16"	18 9/16"	10 3/8"	12 5/16"	18 13/16"	24 3/4"	26"	20 3/4"	27"	27 3/8"
HDAF-270	6 1/16"	20 7/16"	11 5/16"	13 9/16"	20 5/8"	27 1/4"	28 5/8"	22 7/8"	30"	30 1/16"
HDAF-300	6 1/16"	22 3/4"	12 7/16"	15 1/8"	22 5/8"	30 3/8"	31 7/8"	25 1/2"	33 1/2"	33 9/16"
HDAF-330*	3 1/4"	24 7/8"	14 1/2"	16 3/16"	24 11/16"	33 3/8"	35"	28"	36 3/4"	36 7/8"
HDAF-360*	3 1/4"	27 1/4"	15 11/16"	18 1/8"	27 3/16"	36 1/2"	38 1/4"	30 1/2"	40"	40 1/4"

*HDAF-330 and 360 have fixed housings and are not rotatable in the field.

- 1 Add 1/8" for AMCA C Construction fans and/or Down Blast discharge position.
 2 Dimensions shown are for 100% width housings. For partial width housings contact your local Cincinnati Fan sales representative.

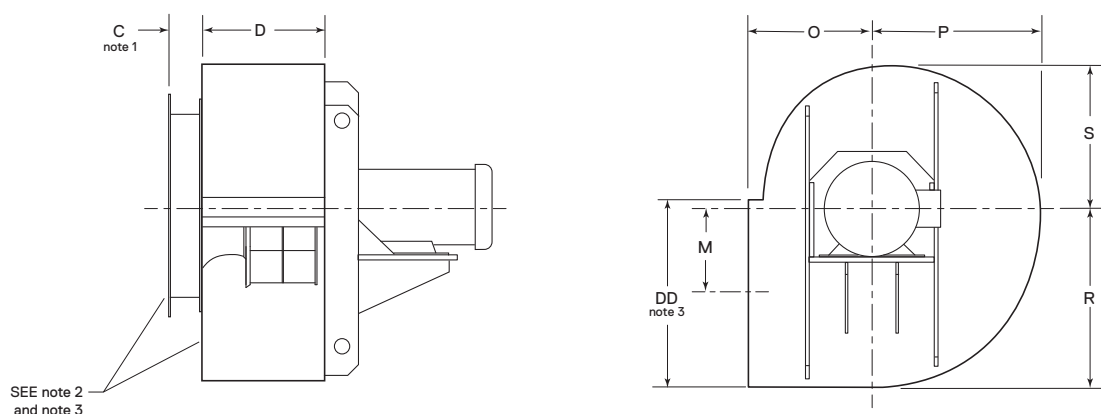
- 3 Discharge flange is standard on Models HDAF-270 through HDAF-360. See page 31 for dimensions

ARRANGEMENT 4 — DIRECT DRIVE



Note: HDAF-120 to 300 are reversible and rotatable in 45° increments but wheels are not reversible. HDAF-330 AND 360 ARE NOT ROTATABLE OR REVERSIBLE.

Model	Motor Frame	G note 1	H	V	K	BB note 2	CC note 2	FF	GG	HH	JJ	KK note 6
HDAF-120	142T-184T	7 1/16"	5 1/2"	4"	9/16"	24 15/16"	22 15/16"	15 1/2"	3"	11 1/2"	16"	
HDAF-130	143T-215T	8 3/16"	7 5/8"	5 3/4"	9/16"	28 1/16"	26 1/16"	16 5/8"	3"	13 5/8"	17 3/4"	
HDAF-150	143T-215T	8 1/16"	7 5/8"	7 1/4"	9/16"	29 1/16"	27 1/16"	18 1/8"	3"	13 5/8"	19 1/4"	
HDAF-160	143T-184T	9 1/4"	7 5/8"	9 1/8"	9/16"	30 3/16"	28 3/16"	19 3/4"	3"	13 5/8"	21 1/8"	
	213T-256T	9 1/4"	17"	9 1/8"	9/16"	39 3/16"	37 9/16"	19 3/4"	3"	23"	21 1/8"	
HDAF-180	143T-215T	9 15/16"	8 3/8"	2 1/2"	9/16"	32 5/16"	30 5/16"	22 3/4"	3"	14 3/8"	23 1/2"	
	254T-286T	9 15/16"	18 1/2"	2 1/2"	9/16"	42 7/16"	40 7/16"	22 3/4"	3"	24 1/2"	23 1/2"	
	324T-326T	9 15/16"	21"	2 1/2"	9/16"	44 15/16"	42 15/16"	22 3/4"	3"	27"	23 1/2"	
HDAF-200	182T-256T	10 5/8"	11 1/2"	3 1/2"	9/16"	36 13/16"	34 13/16"	23 1/2"	3"	17 1/2"	25 1/2"	
	284T-286T	10 5/8"	18 1/2"	3 1/2"	9/16"	43 13/16"	41 13/16"	23 1/2"	3"	24 1/2"	25 1/2"	
	324T-326T	10 5/8"	21"	3 1/2"	9/16"	46 5/16"	44 5/16"	23 1/2"	3"	27"	25 1/2"	
HDAF-220	182T-256T	11 7/16"	11 1/2"	6 1/8"	9/16"	38 7/16"	36 7/16"	26 1/4"	3"	17 1/2"	28 1/8"	
	284T-326T	11 7/16"	21"	6 1/8"	9/16"	47 15/16"	45 15/16"	26 1/4"	3"	27"	28 1/8"	
HDAF-240	213T-256T	12 5/16"	11 1/2"	8 1/4"	9/16"	42 1/8"	38 1/8"	28 1/2"	3"	17 1/2"	30 3/4"	
	284T-326T	12 5/16"	21"	8 1/4"	9/16"	51 5/8"	47 5/8"	28 1/2"	3"	27"	30 3/4"	
HDAF-270	213T-256T	13 1/4"	11 1/2"	3"	9/16"	44"	40"	31 1/4"	3"	17 1/2"	33 3/4"	
	284T-326T	13 1/4"	21"	3"	9/16"	53 1/2"	49 1/2"	31 1/4"	3"	27"	33 3/4"	
HDAF-300	213T-256T	14 3/8"	11 1/2"	3 1/4"	9/16"	46 5/16"	42 5/16"	34 1/2"	3"	17 1/2"	37 1/4"	
	284T-326T	14 3/8"	21"	3 1/4"	9/16"	55 13/16"	51 13/16"	34 1/2"	3"	27"	37 1/4"	
HDAF-330	284T-326T	15 15/16"	20"	2"	3/4"	55 1/8"	54 15/16"	38 3/4"	3 1/2"	27"	30"	
	364T-405T	5 15/16"	25"	2"	3/4"	60 1/8"	59 15/16"	38 3/4"	3 1/2"	32"	30"	
	444T	5 15/16"	29"	2"	3/4"	64 1/8"	63 5/16"	38 3/4"	3 1/2"	36"	30"	
HDAF-360	284T-326T	17 1/8"	20"	3"	3/4"	57 1/2"	57 5/16"	42"	3 1/2"	27"	33"	4 3/4"
	364T-405T	17 1/8"	25"	3"	3/4"	62 1/2"	62 5/16"	42"	3 1/2"	2"	33"	5"

ARRANGEMENT 4HM — DIRECT DRIVE

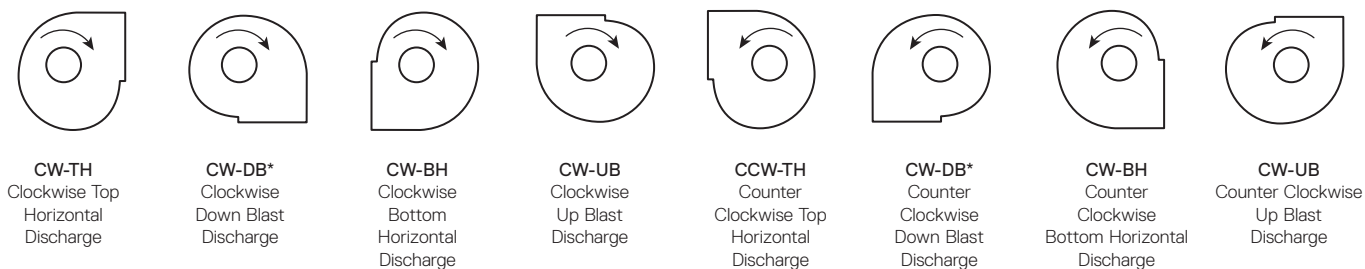
- 1 Add 1/8" for AMCA "C" Construction. Includes optional inlet flange.
 2 Optional inlet flange may be added to assist in fan installation. See page 31 for flange dimensions.

- 3 Discharge flange (not shown above) is standard on Models HDAF-270 and HDAF-300. See page 31 for flange dimensions.
 4 For sizes 330 and 360 contact your local Cincinnati sales representative.

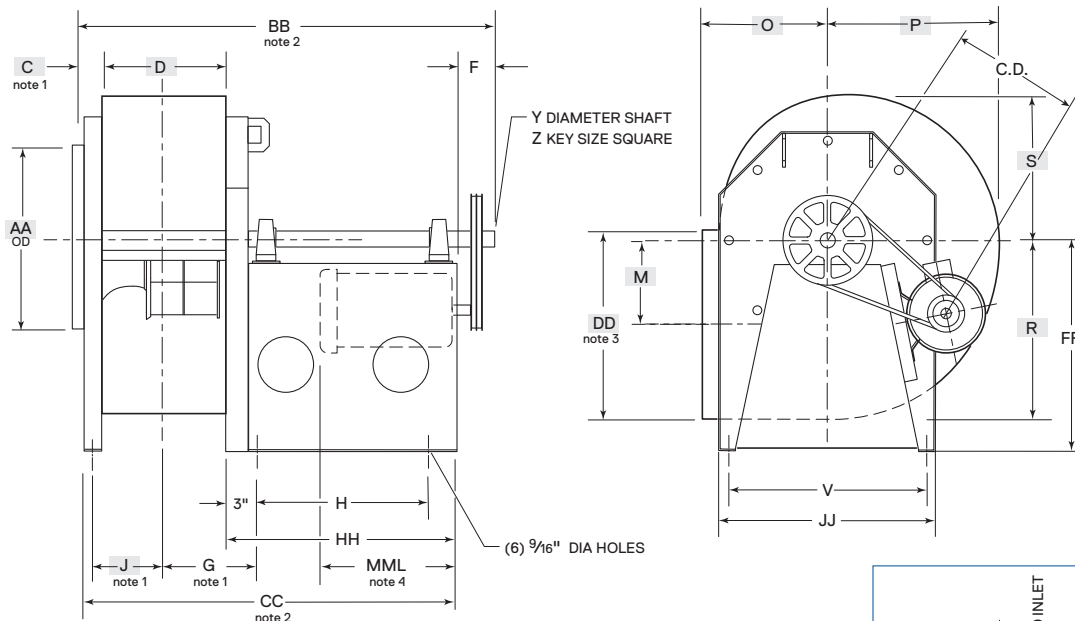
Model	Motor Frame	C note 1	D	M	O note 3	P	R	S	DD note 3
HDAF-120	142T-184T	4 1/4"	9 3/8"	6 3/16"	9 15/16"	12 3/8"	13"	10 3/8"	13 3/4"
HDAF-130	143T-215T	4 1/4"	10 3/8"	6 13/16"	10 13/16"	13 3/4"	14 7/16"	11 9/16"	15 1/4"
HDAF-150	143T-215T	4 1/4"	11 3/8"	7 9/16"	11 3/4"	15 3/16"	15 15/16"	12 3/4"	16 13/16"
HDAF-160	143T-256T	4 1/4"	12 1/2"	8 5/16"	12 11/16"	16 11/16"	17 1/2"	14"	18 7/16"
HDAF-180	143T-326T	4 3/16"	13 7/8"	9 1/4"	13 13/16"	18 7/16"	19 7/16"	15 1/2"	20 3/8"
HDAF-200	182T-326T	4 3/16"	15 1/4"	10 1/16"	14 15/16"	20 1/4"	21 1/4"	17"	22 3/8"
HDAF-220	182T-326T	4 1/4"	16 7/8"	11 3/16"	16 3/8"	22 1/2"	23 5/8"	18 7/8"	24 7/8"
HDAF-240	213T-326T	6 1/4"	18 9/16"	12 5/16"	18 13/16"	24 3/4"	26"	20 3/4"	27 3/8"
HDAF-270	213T-326T	6 1/4"	20 7/16"	13 9/16"	20 5/8"	27 1/4"	28 5/8"	22 7/8"	30 1/16"
HDAF-300	213T-326T	6 1/4"	22 3/4"	15 1/8"	22 5/8"	30 3/8"	31 7/8"	25 1/2"	33 9/16"

Sixteen Discharge Positions Available. 45° Discharge Positions Not shown*

Discharges shown are determined by viewing fan from motor or drive side



*Not available on models HDAF-270 through HDAF-360 or any models with discharge flange option without special discharge extension.
 For arrangements 9CB units, contact your local Cincinnati sales representative.

ARRANGEMENT 1 AND 9 — BELT DRIVE specify 9R or 9L

For channel base dimensions, see page 29.

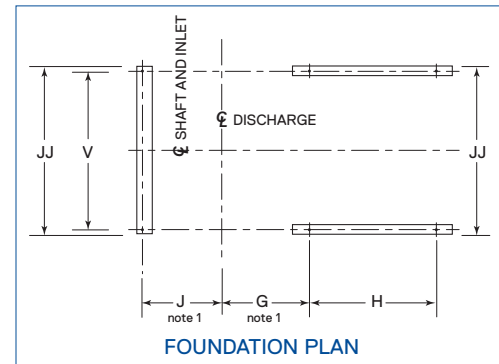
Unit shown is Arrangement 9R (motor on right side). For motor on left side, specify Arrangement 9L.

CW-BH
clockwise-bottom horizontal

- 1 Add 1/8" for AMCA C Construction fans and/or Down Blast discharge position.
- 2 Add 1/4" for AMCA C Construction fans and/or Down Blast discharge position.
- 3 Discharge flange (not shown above) is standard on Models HDAF-270 through HDAF-360. See page 31 for dimensions.
- 4 MML is maximum motor length on customer supplied motor. Motor manufacturers C dimension cannot exceed MML without a special base.
- 5 For common boxed blower housing dimensions see page 22.

Note: Housings are reversible and rotatable in 45° increments but wheels are not reversible.

⚠ CAUTION All fans and blowers shown have rotating parts and pinch points. Severe personal injury can result if operated without guards. Stay away from rotating equipment unless it is disconnected from its power source.

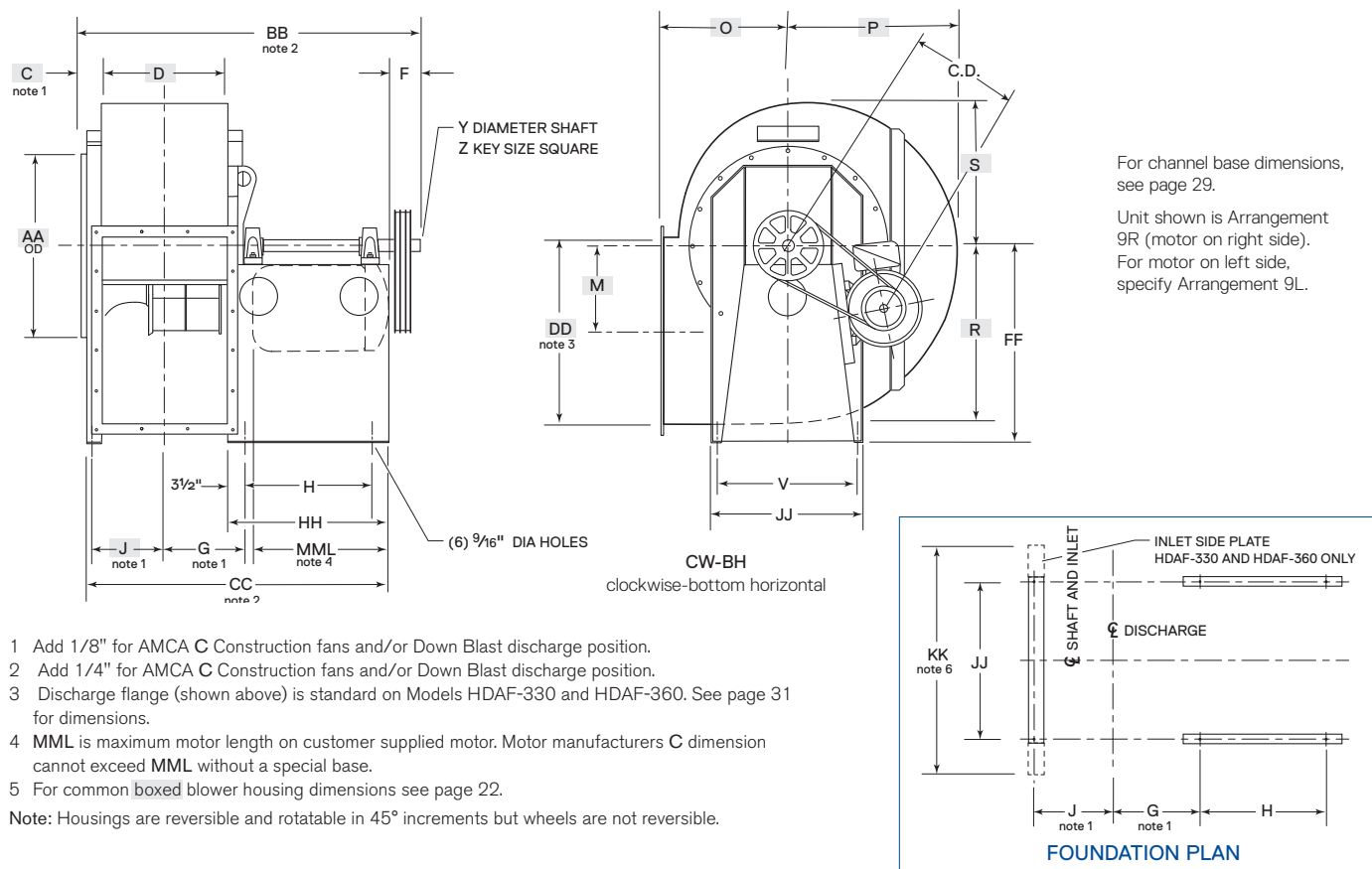


Model	Motor Frame	F	G note 1	H	V	Y			Z			BB note 2	CC note 2	FF	HH	JJ	MML note 4
						CL II	CL IIP	CL III	CL II	CL IIP	CL III						
HDAF-120	56-215T	4"	7 11/16"	12 3/4"	14"	1 3/16"			1/4"			36 3/16"	30 3/16"	15 1/2"	18 3/4"	16"	19 3/8"
HDAF-130	56-256T	4"	8 3/16"	17"	15 3/4"	1 3/16"			1/4"			41 7/16"	35 7/16"	16 5/8"	23"	17 3/4"	24 1/4"
HDAF-150	56-256T	4"	8 11/16"	17"	17 1/4"	1 7/16"			3/8"			42 7/16"	36 7/16"	18 1/8"	23"	19 1/4"	24 1/4"
HDAF-160	56-256T	4"	9 1/4"	17"	19 1/8"	1 7/16"			3/8"			43 9/16"	37 9/16"	19 3/4"	23"	21 1/8"	24 1/4"
HDAF-180	145T-286T	4"	9 15/16"	18 1/2"	21 1/2"	1 7/16"	1 11/16"		3/8"	3/8"		46 7/16"	40 7/16"	22 3/4"	24 1/2"	23 1/2"	26 3/8"
HDAF-200	145T-286T	4"	10 5/8"	18 1/2"	23 1/2"	1 7/16"	1 15/16"		3/8"	1/2"		47 13/16"	41 13/16"	23 1/2"	24 1/2"	25 1/2"	26 3/8"
HDAF-220	145T-324T	5"	11 7/16"	21"	26 1/8"	1 7/16"	1 15/16"		3/8"	1/2"		52 15/16"	45 15/16"	26 1/4"	27"	28 1/8"	29 1/2"
HDAF-240	145T-324T	6"	12 5/16"	21"	28 1/4"	1 11/16"	2 3/16"		3/8"	1/2"		57 5/16"	47 5/16"	28 1/2"	27"	30 3/4"	29 1/2"
HDAF-270	182T-324T	6"	13 1/4"	21"	31"	1 11/16"	2 3/16"		3/8"		1/2"	59 1/2"	49 1/2"	31 1/4"	27"	33 3/4"	29 1/2"
HDAF-300	182T-324T	6"	14 3/8"	24 3/4"	34 1/4"	1 15/16"	1 7/16"		1/2"			65 9/16"	55 9/16"	34 1/2"	30 3/4"	37 1/4"	30 1/4"

C.D. Belt Center Distance

Model	56-145T		182T-184T		213T-215T		254T-256T		284T-286T		324T-326T		364T	
	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
HDAF-120	11 3/16"	12 3/4"	12 1/8"	13 1/2"	12 3/16"	13 11/16"								
HDAF-130	11 1/8"	12 11/16"	12 13/16"	14 3/8"	13 1/8"	14 11/16"	13 7/16"	14 13/16"						
HDAF-150	11 5/8"	13 3/16"	13 7/16"	14 15/16"	13 7/8"	15 5/8"	14 5/16"	16"						
HDAF-160	12 3/16"	13 11/16"	14"	15 1/2"	15 1/8"	17 3/16"	15 11/16"	17 5/8"						
HDAF-180	12 7/8"	14 3/8"	14 9/16"	16 1/16"	15 13/16"	17 11/16"	17 1/2"	19 11/16"	17 13/16"	19 3/16"				
HDAF-200	12 5/8"	14 1/4"	14 1/4"	15 7/8"	15 5/8"	17 1/2"	17 1/4"	19 3/16"	18 1/8"	20 13/16"				
HDAF-220	13 9/16"	15 1/16"	15 3/16"	16 5/16"	16 7/16"	18 3/16"	18 1/8"	20 1/4"	19 1/4"	21 3/4"	20 3/4"	22 9/16"		
HDAF-240	13 11/16"	15 3/16"	15 7/16"	16 15/16"	16 11/16"	18 9/16"	18 1/2"	20 11/16"	19 7/16"	22"	21 5/16"	24 3/8"		
HDAF-270			16"	17 1/2"	17 5/16"	19 3/16"	19"	21 1/4"	20 1/16"	22 11/16"	21 15/16"	25 1/16"		
HDAF-300			15 15/16"	17 5/16"	17 15/16"	19 1/4"	19 9/16"	21 11/16"	20 5/8"	23 1/8"	22 7/16"	25 1/2"	23 15/16"	27 3/8"

ARRANGEMENT 1 AND 9 — BELT DRIVE specify 9R or 9L HDAF-330 HDAF-360



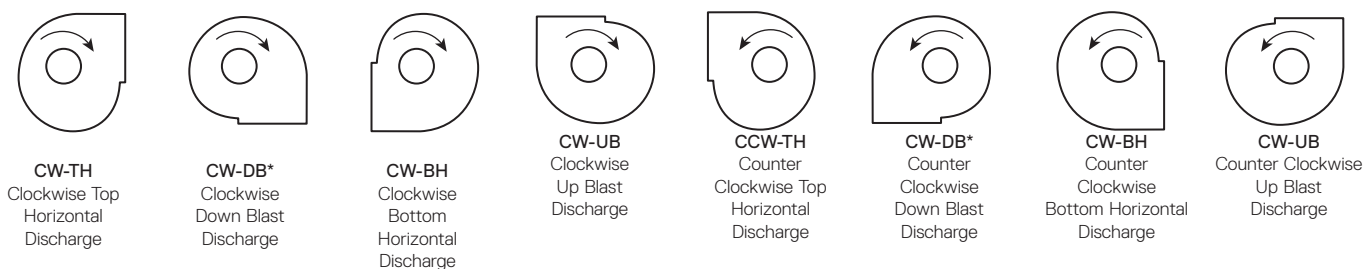
Model	Motor Frame	F	G note 1	H	V	Y		Z		BB note 2	CC note 2	FF	HH	JJ	KK	MML note 4
						CL II	CL III	CL II	CL III							
HDAF-330	182T-365T	6"	15 15/16"	25"	28"	2 3/16"	2 7/16"	1/2"	5/8"	66 1/8"	59 15/16"	38 3/4"	32"	30"	41 3/4"	33"
HDAF-360	182T-365T	6"	17 1/8"	25"	31"	2 7/16"	2 11/16"	5/8"	5/8"	68 1/2"	62 5/16"	42"	32"	33"	45"	33"

C.D. Belt Center Distance

Motor Frame	Class II - Class III		Motor Frame	Class II - Class III	
	Min	Max		Min	Max
182T-184T	17 9/16"	18 5/8"	284T-286T	21 9/16"	23 11/16"
213T-215T	18 7/8"	20 5/16"	324T-326T	23 1/2"	26 1/16"
254T-256T	20 9/16"	22 5/16"	364T-365T	24 15/16"	28"

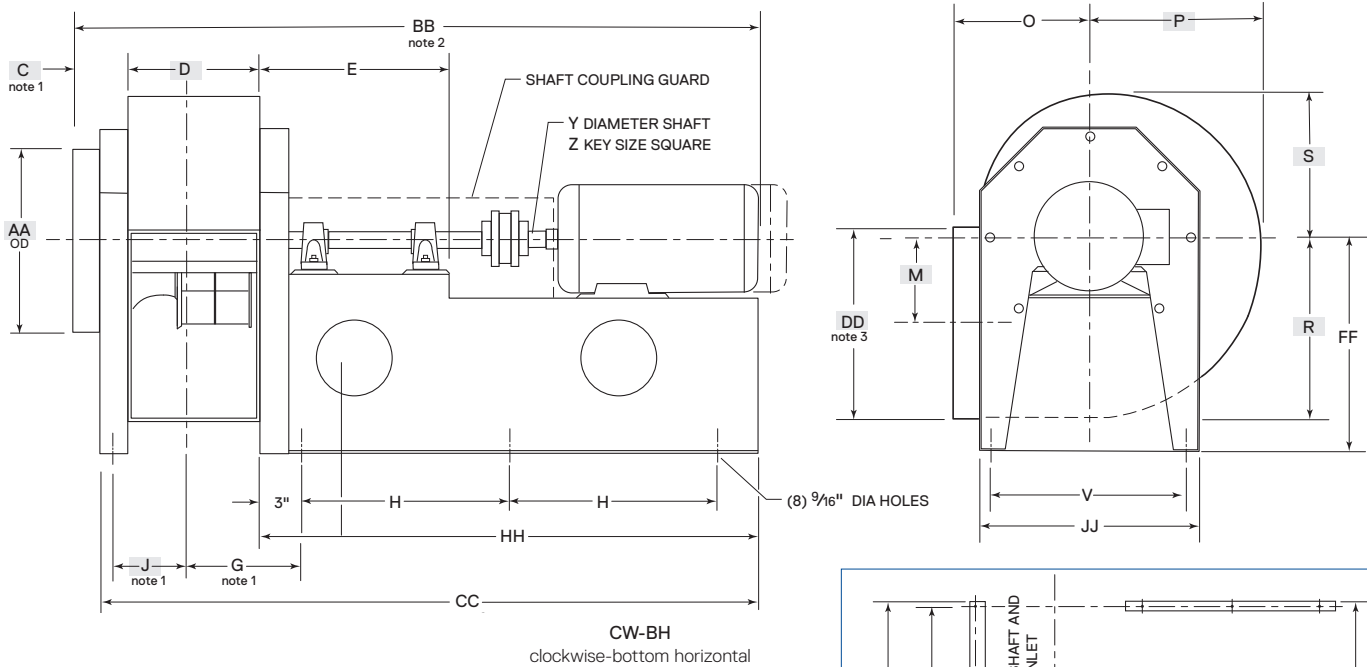
Sixteen Discharge Positions Available. 45° Discharge Positions Not shown*

Discharges shown are determined by viewing fan from motor or drive side

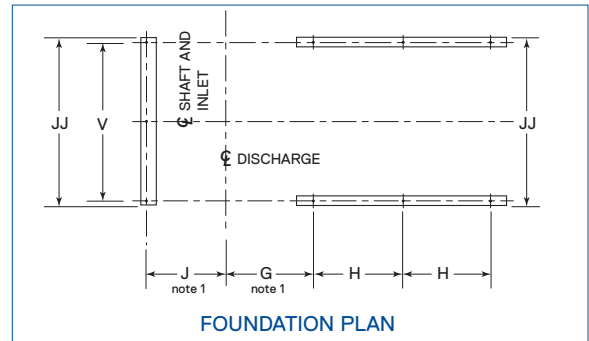


*Not available on models HDAF-270 through HDAF-360 or any models with discharge flange option without special discharge extension. For arrangements 9CB units, contact your local Cincinnati sales representative.

ARRANGEMENT 8 — DIRECT CONNECTED



- 1 Add 1/8" for AMCA C Construction fans and/or Down Blast discharge position.
- 2 Add 1/4" for AMCA C Construction fans and/or Down Blast discharge position.
- 3 Discharge flange (not shown above) is standard on Models HDAF-270 through HDAF-360. See page 31 for dimensions.
- 4 For HDAF-330 and HDAF-360 dimensions, contact your local Cincinnati sales representative.
- 5 For common boxed blower housing dimensions see page 22.



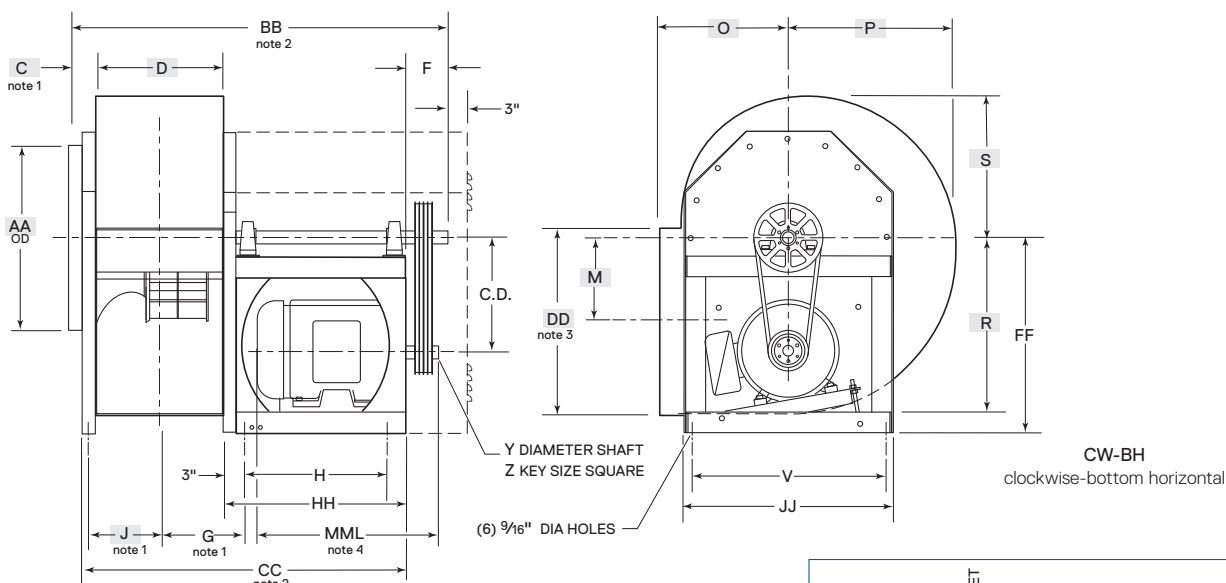
Model	Motor Frame	E	G note 1	H	V	Y		Z		BB note 2	CC note 2	FF	HH	JJ
						CL II	CL III	CL II	CL III					
HDAF-120	143T-184T	15 5/16"	7 11/16"	16"	14"	1 3/16"		1/4"		51 7/16"	49 7/16"	15 1/2"	38"	16"
HDAF-130	143T-215T	15 5/8"	8 3/16"	16"	15 3/4"	1 3/16"		1/4"		52 7/16"	50 7/16"	16 5/8"	38"	17 3/4"
HDAF-150	143T-215T	15 5/8"	8 11/16"	16 1/2"	17 1/4"	1 7/16"		3/8"		54 7/16"	52 7/16"	18 1/8"	39"	19 1/4"
HDAF-160	143T-256T	15 5/8"	9 1/4"	16 1/2"	19 1/8"	1 7/16"		3/8"		55 9/16"	53 9/16"	19 3/4"	39"	21 1/8"
HDAF-180	143T-286T	15 5/8"	9 15/16"	18 3/16"	21 1/2"	1 7/16"	1 11/16"	3/8"	3/8"	61 1/16"	59 1/16"	22 3/4"	43 1/8"	23 1/2"
HDAF-200	182T-324T	15 5/8"	10 5/8"	18 3/16"	23 1/2"	1 7/16"	1 15/16"	3/8"	1/2"	62 7/16"	60 7/16"	23 1/2"	43 1/8"	25 1/2"
HDAF-220	182T-324T	17 5/8"	11 7/16"	21 1/8"	26 1/8"	1 7/16"	1 15/16"	3/8"	1/2"	69 3/16"	67 3/16"	26 1/4"	43 1/4"	28 1/8"
HDAF-240	213T-324T	17 5/8"	12 5/16"	21 1/8"	28 1/4"	1 11/16"		3/8"		72 7/8"	68 7/8"	28 1/2"	48 1/4"	30 3/4"
HDAF-270	213T-324T	19 5/8"	13 1/4"	23 5/8"	31"	1 11/16"		3/8"		79 3/4"	75 3/4"	31 1/4"	53 1/4"	33 3/4"
HDAF-300	213T-324T	19 5/8"	14 3/8"	23 5/8"	34 1/4"	1 15/16"	2 7/16"	1/2"	5/8"	82 1/16"	78 1/16"	34 1/2"	53 1/4"	37 1/4"

Construction Gauges

Fan Size	Housing	Inlet Side Plate	Inlet Bell	Bearing and Motor Base	Wheel (all classes)			
					Shroud	Airfoil Blades	Back Plate	Reinforcement Plate
120	10	10	14	10	12	16	7	10
130	10	10	14	10	12	16	7	10
150	10	10	14	10	12	16	7	10
160	10	10	14	10	12	16	7	10
180	10	10	14	10	12	16	7	10
200	10	10	14	10	12	16	7	10
220	10	10	14	10	12	16	7	10
240	10	7	14	7	12	16	7	10
270	10	7	14	7	11	16	1/4"	1/4"
300	10	7	14	7	11	16	1/4"	1/4"
320	*	7	14	*	10	16	1/4"	1/4"
360	*	7	13	*	10	16	1/4"	1/4"

* Varies with class and arrangement, contact you local Cincinnati Fan sales representatives

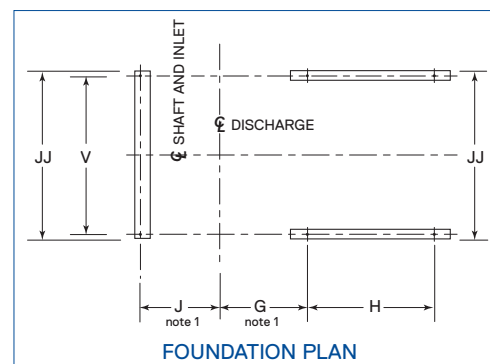
ARRANGEMENT 10 — BELT DRIVE



- 1 Add 1/8" for AMCA C Construction fans and/or Down Blast discharge position.
- 2 Add 1/4" for AMCA C Construction fans and/or Down Blast discharge position.
- 3 Discharge flange (not shown above) is standard on Models HDAF-270 through HDAF-360. See page 31 for dimensions.
- 4 MML is maximum motor length on customer supplied motor. Motor manufacturers C dimension cannot exceed MML without a special base.
- 5 For HDAF-330 and HDAF-360 dimensions, contact your local Cincinnati sales representative.
- 6 For common boxed blower housing dimensions see page 22.

Note: Housings are reversible and rotatable in 45° increments but wheels are not reversible.

CAUTION All fans and blowers shown have rotating parts and pinch points. Severe personal injury can result if operated without guards. Stay away from rotating equipment unless it is disconnected from its power source.

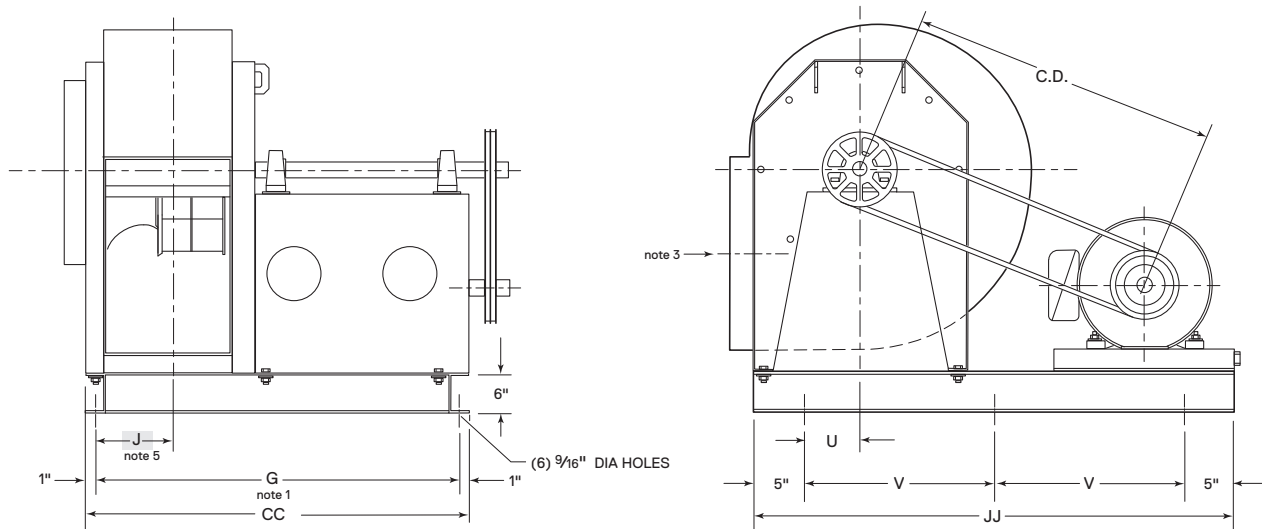


Model	Motor Frame	F	G note 1	H	V	Y			Z			BB note 2	CC note 2	FF	HH	JJ	MML note 4
						CL II	CL IIP	CL III	CL II	CL IIP	CL III						
HDAF-120	56-184T	4 1/8"	7 11/16"	12 3/4"	14"	1 3/16"			1/4"			36 3/16"	30 3/16"	15 1/2"	18 5/8"	16"	18 7/16"
HDAF-130	56-184T	4 1/8"	8 3/16"	17"	15 3/4"	1 3/16"			1/4"			41 7/16"	35 5/16"	16 5/8"	22 7/8"	17 3/4"	23 1/8"
HDAF-150	56-215T	4 1/8"	8 11/16"	17"	17 1/4"	1 7/16"			3/8"			42 7/16"	36 5/16"	18 1/8"	22 7/8"	19 1/4"	24 1/4"
HDAF-160	56-215T	4 1/8"	9 1/4"	17"	19 1/8"	1 7/16"			3/8"			43 9/16"	37 7/16"	19 3/4"	22 7/8"	21 1/8"	24 1/4"
HDAF-180	56-256T	4 1/8"	9 15/16"	18 1/2"	21 1/2"	1 7/16"	1 11/16"		3/8"	3/8"		46 7/16"	40 5/16"	22 3/4"	24 3/8"	23 1/2"	26 5/8"
HDAF-200	56-256T	4 1/8"	10 5/8"	18 1/2"	23 1/2"	1 7/16"	1 15/16"		3/8"	1/2"		47 13/16"	41 11/16"	23 1/2"	24 3/8"	25 1/2"	26 5/8"
HDAF-220	145T-286T	5 1/8"	11 7/16"	21"	26 1/8"	1 7/16"	1 15/16"		3/8"	1/2"		52 15/16"	45 13/16"	26 1/4"	26 7/8"	28 1/8"	29 3/4"
HDAF-240	145T-324T	6 3/16"	12 5/16"	21"	28 1/4"	1 11/16"	2 3/16"		3/8"	1/2"		57 5/8"	47 7/8"	28 1/2"	26 13/16"	30 3/4"	29 5/8"
HDAF-270	182T-324T	6 3/16"	13 1/4"	21"	31"	1 11/16"	2 7/16"		3/8"		5/8"	59 1/2"	49 5/16"	31 1/4"	26 13/16"	33 3/4"	29 5/8"
HDAF-300	182T-324T	6 3/16"	14 3/8"	24 3/4"	34 1/4"	1 15/16"	2 7/16"		1/2"		5/8"	65 9/16"	55 3/8"	34 1/2"	30 9/16"	37 1/4"	33 3/8"

C.D. Belt Center Distance

Model	56		143T-145T		182T-184T		213T-215T		254T-256T		284T-286T		324T	
	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
HDAF-120	8 1/16"	10"	8 1/8"	10"	7 1/2"	9"								
HDAF-130	9 1/4"	11 1/8"	9 1/4"	11 1/8"	8 3/8"	10 1/8"								
HDAF-150	10"	12 1/8"	10"	12 1/8"	9 1/8"	11 1/8"	8 3/8"	10 3/8"						
HDAF-160	11 5/8"	13 5/8"	11 5/8"	13 5/8"	10 5/8"	12 5/8"	10"	11 7/8"						
HDAF-180	14"	16 1/8"	14"	16 1/8"	12 3/4"	15 1/8"	12"	14 3/8"	11 1/8"	13 3/8"				
HDAF-200	14 3/4"	16 7/8"	14 3/4"	16 7/8"	13 1/2"	15 7/8"	12 3/4"	15 7/8"	11"	13"				
HDAF-220			17"	19 3/4"	16 1/8"	18 5/8"	15 3/8"	17 7/8"	14 3/8"	16 7/8"	13 3/4"	16 1/4"		
HDAF-240			19 1/4"	22"	18 1/4"	21"	17 5/8"	20 1/8"	16 5/8"	19 1/8"	15 7/8"	18 3/8"	14 7/8"	17 3/8"
HDAF-270					21"	23 3/4"	20 3/8"	22 7/8"	19 3/8"	21 7/8"	18 5/8"	21 1/8"	17 5/8"	20 1/8"
HDAF-300					24 1/4"	26 7/8"	23 1/2"	26 1/8"	22 1/2"	25 1/8"	21 7/8"	24 3/8"	20 7/8"	23 3/8"

ARRANGEMENT 9RCB OR 9LCB CHANNEL BASE — BELT DRIVE



- 1 Add 1/8" for AMCA C Construction.
 - 2 Discharge flange (not shown above) is standard on Models HDAF-270 and HDAF-300. See page 31 for dimensions.
 - 3 For blower dimensions see pages 22 and 25.
 - 4 For HDAF-330 and HDAF-360 Arrangement 9CB see page 30.
 - 5 Subtract 1/8" for AMCA C Construction.
- Note:** Housings are reversible and rotatable in 45° increments but wheels are not reversible.

Unit shown is Arrangement 9RCB (motor on right side).
For motor on left side, specify Arrangement 9LCB.

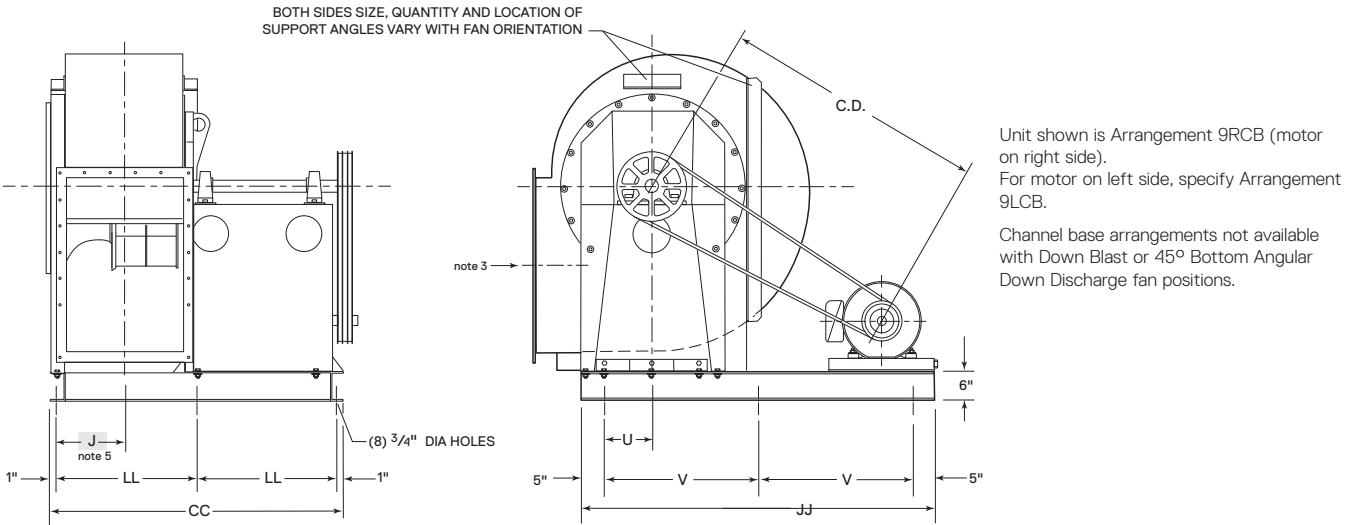
Channel base arrangements not available with Down Blast or 45° Bottom Angular Down Discharge fan positions.

Model	Motor Frame	G note 1	J note 5	U	V	CC	JJ
HDAF-120	184T-215T	28 ³ / ₁₆ "	5 ³ / ₄ "	3"	13 ¹⁵ / ₃₂ "	30 ³ / ₁₆ "	36 ¹⁵ / ₁₆ "
HDAF-130	184T-256T	33 ⁷ / ₁₆ "	6 ¹ / ₄ "	3 ⁷ / ₈ "	15 ¹³ / ₃₂ "	35 ⁷ / ₁₆ "	41 ⁵ / ₈ "
HDAF-150	184T-284T	34 ⁷ / ₁₆ "	6 ³ / ₄ "	4 ⁵ / ₈ "	17 ³ / ₄ "	36 ⁷ / ₁₆ "	45 ¹ / ₂ "
HDAF-160	184T-286T	35 ⁹ / ₁₆ "	7 ⁵ / ₁₆ "	5 ⁹ / ₁₆ "	18 ¹¹ / ₁₆ "	37 ⁹ / ₁₆ "	47 ³ / ₈ "
HDAF-180	184T-324T	38 ⁷ / ₁₆ "	8"	6 ³ / ₄ "	21 ³ / ₁₆ "	40 ⁷ / ₁₆ "	52 ³ / ₈ "
HDAF-200	254T-324T	39 ¹³ / ₁₆ "	8 ¹¹ / ₁₆ "	7 ³ / ₄ "	22 ³ / ₁₆ "	41 ¹³ / ₁₆ "	54 ³ / ₈ "
HDAF-220	254T-364T	43 ¹⁵ / ₁₆ "	9 ¹ / ₂ "	9 ¹ / ₁₆ "	26 ¹¹ / ₁₆ "	45 ¹⁵ / ₁₆ "	63 ³ / ₈ "
HDAF-240	254T-364T	48 ¹ / ₈ "	10 ¹¹ / ₃₂ "	10 ³ / ₈ "	28"	50 ¹ / ₈ "	66"
HDAF-270	254T-364T	50"	11 ⁹ / ₃₂ "	11 ⁷ / ₈ "	29 ¹ / ₂ "	52"	69"
HDAF-300	254T-364T	56 ¹ / ₁₆ "	12 ⁷ / ₁₆ "	13 ⁵ / ₈ "	31 ¹ / ₄ "	58 ¹ / ₁₆ "	72 ¹ / ₂ "

C.D. Belt Center Distance

Model	184T		213T-215T		254T-256T		284T-286T		324T-326T		364T	
	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
HDAF-120	23 ⁵ / ₈ "	25 ⁷ / ₈ "	21 ¹⁵ / ₁₆ "	24 ¹¹ / ₁₆ "								
HDAF-130	27 ¹ / ₂ "	29 ⁵ / ₈ "	25 ⁵ / ₈ "	28 ⁵ / ₈ "	23 ¹⁵ / ₁₆ "	27 ³ / ₁₆ "						
HDAF-150	31"	33"	29 ⁵ / ₁₆ "	32 ¹ / ₈ "	27 ³ / ₈ "	30 ⁵ / ₈ "	25 ¹⁵ / ₁₆ "	29 ¹¹ / ₁₆ "				
HDAF-160	32 ⁵ / ₈ "	34 ¹³ / ₁₆ "	30 ⁷ / ₈ "	33 ⁹ / ₁₆ "	28 ⁷ / ₈ "	32 ¹ / ₁₆ "	27 ⁷ / ₁₆ "	31 ¹ / ₁₆ "				
HDAF-180	37 ¹ / ₄ "	23 ⁵ / ₈ "	35 ⁵ / ₈ "	38 ¹ / ₄ "	33 ⁵ / ₈ "	35 ¹¹ / ₁₆ "	32 ¹ / ₈ "	35 ³ / ₄ "	29 ¹³ / ₁₆ "	34 ¹ / ₈ "		
HDAF-200					34 ¹³ / ₁₆ "	37 ¹⁵ / ₁₆ "	33 ³ / ₈ "	36 ¹⁵ / ₁₆ "	31 ¹ / ₁₆ "	35 ⁵ / ₁₆ "		
HDAF-220					42 ¹⁵ / ₁₆ "	40 ⁵ / ₁₆ "	41 ¹ / ₂ "	45 ¹ / ₈ "	39 ³ / ₁₆ "	43 ¹ / ₂ "	37 ³ / ₁₆ "	42 ³ / ₁₆ "
HDAF-240					45 ¹ / ₈ "	48 ³ / ₁₆ "	43 ¹¹ / ₁₆ "	47 ³ / ₁₆ "	41 ⁵ / ₁₆ "	45 ⁹ / ₁₆ "	39 ⁵ / ₁₆ "	44 ¹ / ₄ "
HDAF-270					47 ³ / ₄ "	50 ³ / ₄ "	46 ¹ / ₄ "	49 ³ / ₄ "	43 ¹⁵ / ₁₆ "	48 ¹ / ₁₆ "	41 ¹⁵ / ₁₆ "	46 ³ / ₄ "
HDAF-300					50 ⁷ / ₈ "	53 ¹³ / ₁₆ "	49 ⁷ / ₁₆ "	52 ¹³ / ₁₆ "	47 ¹ / ₁₆ "	51 ¹ / ₈ "	45 ¹ / ₁₆ "	49 ³ / ₄ "

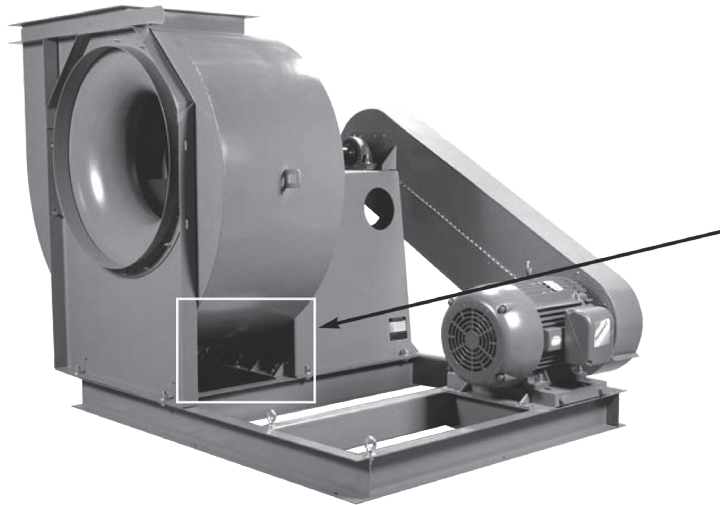
ARRANGEMENT 9RCB OR 9LCB CHANNEL BASE — BELT DRIVE HDAF-330 HDAF-360



Model	Motor Frame	J note 5	U	V	CC	JJ	LL
HDAF-330	182T-444T	14 1/2"	10"	32 11/16"	62 7/16"	75 3/8"	30 7/32"
HDAF-360	182T-444T	15 11/16"	11 1/2"	32 11/16"	64 13/16"	75 3/8"	31 13/32"

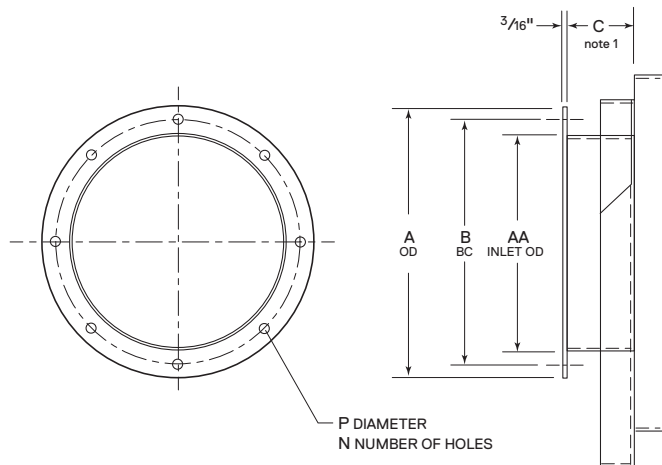
- 3 Discharge flange is standard on Models HDAF-330 and HDAF-360. See page 31 for dimensions.
 - 4 For blower dimensions see pages 22 and 25.
 - 5 Subtract 1/8" for AMCA C Construction.
- Note: HDAF-330 AND HDAF-360 are not reversible or rotatable in the field.

C.D. Belt Center Distance																
Model	182T-184T		213T-215T		254T-256T		284T-286T		324T-326T		364T-365T		404T-405T		444T	
	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max	Min	Max
HDAF-330	62 3/8"	64 3/8"	60 11/16"	63 1/8"	58 5/8"	61 9/16"	57 3/16"	60 1/2"	54 13/16"	58 13/16"	52 13/16"	57 7/16"	53 1/8"	58 13/16"	51 3/16"	57 11/16"
HDAF-360	62 15/16"	64 7/8"	61 1/4"	63 9/16"	59 3/16"	62"	57 3/4"	60 15/16"	55 5/16"	59 3/16"	53 9/16"	57 13/16"	53 1/2"	59"	51 7/8"	57 13/16"



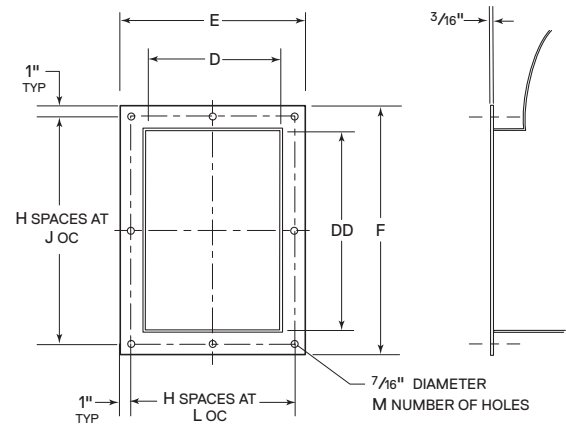
Fan base support angle is attached to the front and rear of the fan base/channel for extra rigidity on sizes HDAF-330 and HDAF-360

INLET AND OUTLET FLANGES



1 Add 1/8" for AMCA C Construction fans and/or Down Blast discharge position.

Note: Flanges will be drilled unless otherwise specified.



Outlet flange is not available on Down Blast, Top Angular Down or Bottom Angular Down fan discharge positions for any models without a discharge extension. Outlet flange is standard on all HDAF-270 through HDAF-360.

Dimensions shown in table are for 100% width housings. For partial width housings contact your local Cincinnati Fan sales representative.

Model	A	B	C** note 1	D**	E	F	H	J	K	L	M	N	P	AA**	DD**
HDAF-120	16"	14 3/8"	4 1/16"	9 3/8"	13 3/8"	17 11/16"	2	7 27/32"	2	5 11/16"	8	8	7/16"	13 1/4"	13 3/4"
HDAF-130	17 3/8"	15 15/16"	4 1/16"	10 3/8"	14 3/8"	19 3/16"	2	8 19/32"	2	6 3/16"	8	8	7/16"	14 5/8"	15 1/4"
HDAF-150	19 1/4"	17 1/2"	4 1/16"	11 3/8"	15 3/8"	20 3/4"	3	6 1/4"	2	6 11/16"	10	8	7/16"	16 1/8"	16 13/16"
HDAF-160	21 1/8"	19 3/8"	4 1/16"	12 1/2"	16 1/2"	22 7/16"	3	6 13/16"	2	7 1/4"	10	8	7/16"	18"	18 7/16"
HDAF-180	23 1/2"	21 1/2"	4 1/16"	13 7/8"	17 7/8"	24 1/2"	3	7 1/2"	2	7 15/16"	10	12	7/16"	20"	20 3/8"
HDAF-200	25 1/2"	23 1/2"	4 1/16"	15 1/4"	19 1/4"	26 3/8"	3	8 1/8"	3	5 3/4"	12	12	7/16"	22"	22 3/8"
HDAF-220	28 1/8"	26 1/8"	4 1/16"	16 7/8"	20 15/16"	28 7/8"	4	6 23/32"	3	6 5/16"	14	12	7/16"	24 5/8"	24 7/8"
HDAF-240	30 3/4"	28 3/4"	6 1/16"	18 9/16"	22 5/8"	31 3/8"	4	7 11/32"	3	6 7/8"	14	16	7/16"	27"	27 3/8"
HDAF-270	33 3/4"	31 5/8"	6 1/16"	21 7/16"	24 1/2"	34 1/8"	4	8 1/32"	3	7 1/2"	14	16	7/16"	30"	30 1/16"
HDAF-300	37 1/4"	35 1/4"	6 1/16"	22 3/4"	25 3/4"	37 5/8"	5	7 1/8"	3	8 1/4"	16	16	7/16"	33 1/2"	33 9/16"
HDAF-330*	40 3/8"	38 3/4"	6 1/16"	24 7/8"	28 7/8"	40 7/8"	7	5 9/16"	5	5 3/8"	24	16	1/2"	36 3/4"	36 7/8"
HDAF-360*	43 5/8"	42"	6 1/16"	27 1/4"	31 1/4"	44 1/4"	7	6 1/32"	5	5 27/32"	24	16	1/2"	40"	40 1/4"

* HDAF-330 and HDAF-360 have fixed housings and are not rotatable in the field.

** Dimensions C, D, AA and DD are ± 1/8"

SPX ENGINEERED AIR MOVEMENT

7697 SNIDER ROAD
MASON, OH 45040 USA
513 573 1000 | spxairmovement.com

CF-HDAF-TECH-24 | ISSUED 3/2024

©2024 SPX ENGINEERED AIR MOVEMENT | ALL RIGHTS RESERVED

In the interest of technological progress, all products are subject to design and/or material change without notice.

SPX 
TECHNOLOGIES