

# Tubeaxial Fans

Direct  
and  
Belt Driven



SYMBOL  
OF  
QUALITY

TUBEMASTER® Models

HDD | HA

ACME ENGINEERING & MANUFACTURING CORPORATION / MUSKOGEE, OKLAHOMA

# PRODUCT FEATURES

These fans must be installed in a manner which insures that the exhausted air and the surrounding environment are always free of flammable gases, vapors, or liquids, combustible dusts or ignitable fibers or flyings. The fans cannot be used in hazardous environments where the fans electrical system could provide ignition to combustible or flammable materials. The installation of the product must comply with all local and national safety codes including the National Electrical Code (NEC) and the National Fire Protection Act (NFPA).

**Model HA fan** is a belt drive, tubeaxial exhauster with the motor, drives and bearings located outside the airstream. Capacities range from 1420 to 63,475 CFM and up to 2 inch static pressure. The HA is designed to operate in any position and is furnished with mounting flanges on both ends for easy installation.



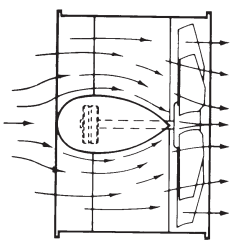
**Belt Drive**

**MODEL HDD fan** is a direct drive, tubeaxial exhauster with the motor in the airstream. Capacities range from 1182 to 63,475 CFM and up to ¾ inch static pressure. The compact design provides easy installation. The HDD is designed to operate in any position and is furnished with mounting flanges on both ends for easy installation.



**Direct Drive**

## BELT AND BEARING ENCLOSURE (Model HA only)



Drive enclosure is designed to minimize air turbulence in order to achieve high aerodynamical quality of the fan. Drive compartment is ventilated with air from the exterior of the fan. These fans can handle air up to temperature of 200°F. For temperature up to 350°F the steel propeller and unitary pillow block bearings must be used.

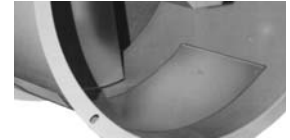
## MOTOR AND DRIVE (Model HA only)

Easy belt adjustment feature. Rugged motor mount. Fans are furnished with heavy duty static conducting, oil and heat resistant V-belts. Drives are 1 or 2 belt combinations depending on horsepower. The sheaves are machined steel or cast iron.



## ACCESS DOOR

A gasketed access door for inspecting propeller, interior of fan housing and duct or for servicing bearings is standard on HA42-60 (not available on HDD).



## BEARING LIFE

All bearings are designed for L50 life of 200,000 hours.

## DUPLEX SPLIT PILLOW BLOCK BEARINGS (Model HA only)

Permanently lubricated ball bearings are used in a duplex split pillow block housing specially engineered by Acme for superior reliability. Bearings retain alignment throughout shipment, installation and fan operation. Bearings are resilient mounted to provide vibration isolation. This feature is used for all sizes up through size 54. Acme features 5 year limited warranty for Duplex Split Pillow Block Bearings.



## UNITARY SPLIT PILLOW BLOCK BEARINGS (Model HA only)

These bearings as standard feature are only being used on size 60. Acme features 2 year limited warranty for Unitary Pillow Block Bearings.

## PROPELLER

All propellers are balanced to grade G6.3 by AMCA 204. Heavy duty, all welded uncoated aluminum propeller is standard.



## EXTRA STRENGTH CONSTRUCTION

For extra structural rigidity and strength, housings are reinforced on each end with a rolled flange to eliminate any possibility of leakage at flanged connection.

## STANDARD FINISH


A tough acrylic epoxy finish is standard on all fans, except for the standard aluminum prop. Acrylic epoxy is a multi-purpose finish that provides a tough and durable surface.



## WIRING (Model HDD only)

Factory wiring provides great savings in installation time and cost. All motors are factory wired to the externally mounted junction box. Standard wiring complies with the National Electric Code and materials used are U.L. Listed. A standard disconnect switch is factory installed and wired from the fan motor to a junction box on Model HDD.

## TWO SPEED SWITCH (Model HDD only)

Two speed switch is standard on Models HDD12, 16, 18 and 21 allowing for multiple capacity operation. Not available on HDD24 and 30 (3-phase).

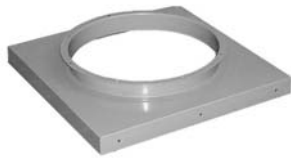

 Acme Engineering & Manufacturing Corporation certifies that Models HA and HDD shown herein are licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 211 and AMCA Publication 311 and comply with the requirements of the AMCA Certified Ratings Program.


 U.L. 705 Listed
 
 CSA Certified

*Consult your Acme representative for availability.*

# OPTIONAL FEATURES AND ACCESSORIES

An optional curb base and discharge cap are available for converting the inline tubeaxial fan (for sizes 16" through 60") into a roof mounted exhauster.



**CURB BASE**  
Constructed of heavy gauge steel with a tough acrylic epoxy finish.

**DISCHARGE CAP**

Constructed of heavy gauge galvanized steel. Removable panels for easy access to damper. Dampers are constructed of aluminum for easy opening at low velocities. (field assembly required)



**DRIVE GUARDS**

Encases drive assembly for protection from rotating parts.



**MOTOR WEATHER COVER**  
Protects motor and drive from weather. Also serves as a drive guard.

**COMPANION FLANGES**

For easy attachment of fan in duct system.



**MOUNTING BASE**

Consists of steel frame bolted to housing. Used for securing fan to a platform or base and can be used to suspend fan from ceiling. Shipped knocked down for field assembly.



**INLET BELL**

Inlet bells are available for installations with non-ducted inlets to minimize entrance losses.

**INLET/DISCHARGE GUARD**

For bolting to intake or exhaust end of tube; constructed of 16 ga.



# SMOKE EXHAUST APPLICATIONS

**HA & HDD Inline Exhausters** are available with special construction features that meet or exceed the requirements for smoke removal applications.

**HA-SE, HDD-SE**

The **HA-SE & HDD-SE Inline Exhausters** are specially designed and constructed to remove smoke. These specially equipped exhausters meet IRI (Industrial Risk Insurers) requirements for exhausting 500°F air for 4 hours and SBCCI's "Standard Fire Prevention Code" requirements for exhausting 1000°F air for 15 minutes in emergency situations.

**Note: While Model HA-SE & HDD-SE fans are constructed to operate in temperature and time limits stated above, some parts of the fan may be destroyed when exposed to unusually high temperatures for prolonged periods.**

Construction Features	Model HA-SE	Model HDD-SE
Hi Temperature Bearings	●	
Copper Lubrication Lines	●	
Dual Heat Resistant Belts	●	
Heat Slinger	●	
Steel Propeller	●	●
Motor Outside Airstream	●	
Ventilated Belt and Bearing Enclosure	●	
UL Listed "Power Ventilator for Smoke Control Systems"	●	●
Special Construction motor in airstream		●



# HA PERFORMANCE DATA

Fan Model	RPM	Tip Speed	HP	CFM vs. Static Pressure												Max. BHP	Est. Fan Ship Wt.
				.000"		.125"		.250"		.375"		.500"		.625"			
				CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone		CFM
HA12E	2090	6670	1/4	1780	24	1680	22	1560	21	1420	20					.25	48
HA12F	2320	7400	1/3	1970	30	1880	28	1790	26	1670	25	1520	25			.33	49
HA12G	2680	8540	1/2	2270	38	2200	36	2120	34	2030	33	1930	32	1800	31	.50	51
HA12H	3070	9780	3/4	2600	48	2540	46	2470	43	2400	41	2320	41	2230	40	.74	54
HA16E1	1570	6512	1/4	2413	21	2164	21	1814	22	993	22					.22	66
HA16E2	1800	7466	1/4	2766	25	2550	28	2286	28	1945	31	1114	28			.33	66
HA16F	1976	8196	1/3	3037	27	2840	27	2616	28	2339	30	1603	29			.43	67
HA16G	2267	9403	1/2	3484	36	3312	37	3141	38	2918	36	2668	35	2117	36	.65	69
HA16H	2600	10784	3/4	3996	44	3846	44	3697	49	3534	44	3336	42	3126	44	1.00	72
HA16J	2855	11842	1	4388	52	4252	53	4115	60	3979	55	3812	51	3632	51	1.29	73
HA18E	1375	6660	1/4	3230	20	2970	19	2700	22	2350	25					.28	71
HA18F	1510	7310	1/3	3550	21	3320	21	3060	22	2770	25	2350	26			.38	72
HA18G	1730	8380	1/2	4060	25	3860	24	3660	24	3440	28	3160	34	2850	31	.58	74
HA18H	1980	9580	3/4	4640	31	4460	30	4270	30	4080	30	3880	34	3650	38	.82	77
HA18J	2180	10550	1	5120	36	4960	35	4800	34	4640	35	4450	37	4250	40	1.09	78
HA18K	2495	12100	1 1/2	5860	44	5720	45	5580	43	5450	43	5300	44	5150	47	1.85	88
HA21F	1200	6680	1/3	4320	22	3959	21	3482	22	2113	23					.59	99
HA21G	1355	7540	1/2	4878	26	4559	24	4173	23	3595	24	2273	29	1714	27	.85	101
HA21H	1580	8790	3/4	5688	32	5414	31	5137	30	4760	28	4243	29	2937	32	1.26	104
HA21J	1730	9620	1	6228	41	5978	39	5728	38	5417	36	5074	34	4525	35	1.48	105
HA21K	1980	11000	1 1/2	7128	58	6909	59	6691	54	6472	49	6179	44	5879	42	1.86	115
HA24G	1090	6950	1/2	5900	20	5470	20	5000	22	4430	27					.54	111
HA24H	1250	7980	3/4	6750	28	6370	28	5950	29	5520	31	5000	34			.85	114
HA24J	1375	8770	1	7450	32	7100	30	6750	32	6360	34	5910	35	5400	41	1.08	115
HA24K	1570	10000	1 1/2	8500	41	8200	38	7900	41	7600	43	7250	44	6880	45	1.61	125
HA24L	1730	11040	2	9350	48	9050	47	8800	49	8520	49	8250	48	7950	48	2.30	134
HA24M	1980	12600	3	10660	55	10450	52	10220	52	9970	52	9720	50	9470	49	3.20	151
HA30H	856	6830	3/4	9100	22	8450	22	7750	23	6850	29	4400	28			.79	228
HA30J	942	7520	1	10000	26	9450	26	8800	26	8050	28	7050	34			1.06	229
HA30K	1078	8600	1 1/2	11500	33	11000	31	10450	30	9850	30	9100	35	8250	40	1.60	239
HA30L	1187	9480	2	12600	42	12200	44	11750	43	11250	43	10650	41	9950	46	2.11	248
HA30M	1358	10850	3	14450	55	14100	49	13700	48	13250	47	12800	48	12300	49	3.17	265
HA30N	1610	12860	5	17120	69	16790	64	16440	61	16070	60	15680	59	15290	59	5.60	279
HA36J	698	6670	1	12700	27	11800	26	10700	25	9200	25					1.05	274
HA36K	799	7640	1 1/2	14550	29	13750	28	12900	30	11900	33	10400	40	6800	39	1.59	284
HA36L	880	8410	2	16050	38	15300	34	14500	34	13700	35	12650	41	11300	46	2.12	293
HA36M	1007	9620	3	18350	56	17700	57	17000	53	16300	52	15500	54	14600	58	3.18	310
HA36N	1193	11400	5	21750	71	21200	66	20600	61	20100	58	19400	58	18800	57	5.30	324
HA42K	620	6900	1 1/2	17850	28	16700	30	15250	37	13300	37	9400	31			1.60	555
HA42L	683	7600	2	19650	30	18700	31	17250	34	15750	37	13700	36	9000	35	2.12	564
HA42M	781	8690	3	22500	35	21500	37	20400	38	19250	41	17900	47	16400	46	3.17	581
HA42N	926	10300	5	26650	56	25800	56	25000	56	24000	57	23000	58	22000	60	5.28	595
HA42P	1060	11800	7 1/2	30500	69	29800	69	29100	69	28300	69	27600	71	26700	73	8.50	646
HA42R	1170	12980	10	33550	82	32910	81	32240	81	31520	81	30780	83	30040	85	11.00	666
HA48K	498	6320	1 1/2	21300	30	19500	28	17400	26	14300	31					1.59	596
HA48L	548	6960	2	23400	37	21800	36	20000	34	17800	36	12500	37			2.11	600
HA48M	627	7960	3	26800	48	25400	45	23800	45	22200	47	20100	48	16400	48	3.16	643
HA48N	743	9430	5	31800	73	30600	68	29500	64	28000	65	26700	67	25000	66	5.26	653
HA48P	851	10800	7 1/2	36400	92	35300	89	34300	86	33200	82	32000	77	30700	74	8.50	713
HA48R	936	11900	10	40000	124	39200	120	38200	116	37200	111	36200	107	35000	100	11.00	746
HA54K	416	5881	1 1/2	24057	20	21721	17.9	18858	18.0	11669	19.7					1.69	631
HA54L	458	6475	2	26486	24	24383	22	22000	21	18616	21					2.29	640
HA54M	524	7408	3	30303	29	28478	28	26527	26	24223	26	21023	30	13199	30	3.42	659
HA54N	603	8525	5	34871	38	33293	35	31656	34	29879	34	27813	34	25144	35	6.10	682
HA54P	711	10052	7 1/2	41117	52	39782	50	38423	47	37009	45	35501	45	33838	46	9.09	728
HA54R	783	11069	10	45281	60	44070	57	42844	54	41586	51	40275	51	38882	51	12.00	774
HA54S	870	12299	15	50312	73	49223	72	48125	68	47009	67	45864	63	44675	63	15.40	828
HA60M	416	6535	3	32709	24	30145	23	27251	22	23184	22	12696	23	6949	24	3.56	765
HA60N	458	7194	5	36011	29	33696	27	31193	26	28140	26	23645	28	11793	28	4.71	779
HA60P	585	8231	7 1/2	45997	44	44198	42	42349	41	40388	39	38217	39	35642	38	8.14	830
HA60R	621	9755	10	48828	50	47134	47	45404	46	43595	44	41643	44	39446	44	10.73	850
HA60S	750	11781	15	58971	69	57571	69	56157	65	54715	62	53227	59	51669	60	16.82	861
HA60T	812	12755	20	63845	81	62553	77	61252	74	59931	73	58581	72	57187	71	20.59	873

Performance certified is for Installation Type B: free inlet, ducted outlet. Power rating (BHP) does not include transmission losses.  
 Performance ratings do not include the effects of appurtenances (accessories).  
 The sound ratings shown are loudness values in fan sones at 5 feet (1.524 m) in a hemispherical free field calculated per AMCA Standard 301. Values shown are for Installation Type B: free inlet hemispherical sone levels.



# HA PERFORMANCE DATA

Fan Model	RPM	Tip Speed	HP	CFM vs. Static Pressure												Max. BHP	Est. Fan Ship Wt.	
				.750"		1.000"		1.250"		1.500"		1.750"		2.000"			lbs.	
				CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone	CFM	Sone			
HA12E	2090	6670	1/4														.25	48
HA12F	2320	7400	1/3														.33	49
HA12G	2680	8540	1/2	1660	35												.50	51
HA12H	3070	9780	3/4	2130	39	1870	44										.74	54
HA16E1	1570	6512	1/4														.22	66
HA16E2	1800	7466	1/4														.33	66
HA16F	1976	8196	1/3														.43	67
HA16G	2267	9403	1/2	1520	35												.65	69
HA16H	2600	10784	3/4	2875	46	1712	47										1.00	72
HA16J	2855	11842	1	3440	53	2588	54	1785	57								1.29	73
HA18E	1375	6660	1/4														.28	71
HA18F	1510	7310	1/3														.38	72
HA18G	1730	8380	1/2	2000	32												.58	74
HA18H	1980	9580	3/4	3370	39												.82	77
HA18J	2180	10550	1	4050	44												1.09	78
HA18K	2495	12100	1 1/2	4980	50	4600	55	4160	58	3000	60						1.85	88
HA21F	1200	6680	1/3														.59	99
HA21G	1355	7540	1/2														.85	101
HA21H	1580	8790	3/4	2343	35												1.26	104
HA21J	1730	9620	1	3211	41												1.48	105
HA21K	1980	11000	1 1/2	5462	42	3559	48	2718	49								1.86	115
HA24G	1090	6950	1/2														.54	111
HA24H	1250	7980	3/4														.85	114
HA24J	1375	8770	1	4650	33												1.08	115
HA24K	1570	10000	1 1/2	6450	47												1.61	125
HA24L	1730	11040	2	7630	47	6900	50	5000	53								2.30	134
HA24M	1980	12600	3	9200	51	8600	58	7950	66	7000	68						3.20	151
HA30H	856	6830	3/4														.79	228
HA30J	942	7520	1														1.06	229
HA30K	1078	8600	1 1/2	6700	39												1.60	239
HA30L	1187	9480	2	9150	48												2.11	248
HA30M	1358	10850	3	11700	51	10250	55	6800	56								3.17	265
HA30N	1610	12860	5	14890	60	13980	65	13010	75	11800	78	8200	84				5.60	279
HA36J	698	6670	1														1.05	274
HA36K	799	7640	1 1/2														1.59	284
HA36L	880	8410	2	7800	46												2.12	293
HA36M	1007	9620	3	13500	63	8000	72										3.18	310
HA36N	1193	11400	5	18100	59	16450	67	14000	76	7800	78						5.30	324
HA42K	620	6900	1 1/2														1.60	555
HA42L	683	7600	2														2.12	564
HA42M	781	8690	3	13800	46												3.17	581
HA42N	926	10300	5	20750	63	17700	64										5.28	595
HA42P	1060	11800	7 1/2	25900	76	23800	81	21200	82	13000	85						8.50	646
HA42R	1170	12980	10	29260	87	27530	92	25670	96	23500	97	17500	107	11250	119		11.00	666
HA48K	498	6320	1 1/2														1.59	596
HA48L	548	6960	2														2.11	600
HA48M	627	7960	3														3.16	643
HA48N	743	9430	5	23000	69												5.26	653
HA48P	851	10800	7 1/2	29300	74	26000	77	16400	81								8.50	713
HA48R	936	11900	10	34000	97	31300	96	28000	99	18200	100	12000	106				11.00	746
HA54K	416	5881	1 1/2														1.69	631
HA54L	458	6475	2														2.29	640
HA54M	524	7408	3														3.42	659
HA54N	603	8779	5	20322	37	8598	38										6.10	682
HA54P	711	10052	7 1/2	31899	45	26443	52	12679	52								9.09	728
HA54R	783	11069	10	37367	51	33634	60	27732	60								12.00	774
HA54S	870	12299	15	43426	63	40639	63	37125	67								15.40	828
HA60M	416	6535	3														3.56	765
HA60N	458	7194	5	7831	27												4.71	779
HA60P	585	8231	7 1/2	32356	44	16589	46										8.14	830
HA60R	621	9755	10	36799	44	25072	51	13068	51								10.73	850
HA60S	750	11781	15	50011	59	46178	60	41081	71								16.82	861
HA60T	812	12755	20	55733	71	52549	71	48692	72								20.59	873

Performance certified is for Installation Type B: free inlet, ducted outlet. Power rating (BHP) does not include transmission losses.  
 Performance ratings do not include the effects of appurtenances (accessories).  
 The sound ratings shown are loudness values in fan sones at 5 feet (1.524 m) in a hemispherical free field calculated per AMCA Standard 301. Values shown are for Installation Type B: free inlet hemispherical sone levels.



# HDD PERFORMANCE DATA

Fan Model	HP	RPM	Max. BHP	Sones 0.0"	CFM vs. Static Pressure							Est. Unit Wt.
					.000"	.125"	.250"	.375"	.500"	.625"	.750"	
HDD12E	1/4	1750	0.14	17.1	1627	1465	1182					35
		1160	0.04	9.9	1079							
HDD16F	1/3	1750	0.36	22	2763	2595	2388					47
		1160	0.10	14.9	1832	1530						
HDD18G	1/2	1750	0.52	25	3938	3724	3521	3323	3058			54
		1160	0.14	14.1	2610	2299	1807					
HDD18H	3/4	1750	0.80	29	4670	4436	4198	3947	3653			54
		1160	0.21	16.7	3095	2738	2266					
HDD21J	1	1750	1.10	27	6193	5970	5738	5489	5211	4891	4468	66
		1160	0.33	14.3	4105	3760	3341	2167				
HDD24J	1	1160	1.02	20	8555	8105	7613	6998				76
HDD30M	3	1160	3.06	29	14792	14208	13624	13036	12419	11681		98

Fan Model	HP	RPM	Max. BHP	Sones 0.0"	CFM vs. Static Pressure					Est. Unit Wt.		
					.000"	.500"	1.000"	1.500"	2.000"		2.500"	3.000"
HDD48Y	40	1470	39.35	108	63475	60953	58450	55416	51514	46332	38305	1334

Performance certified is for Installation Type A - free inlet, free outlet. Performance ratings do not include the effects of appurtenances (accessories). The sound ratings shown are loudness values in fan sones at 5 feet (1.524 m) in a hemispherical free field calculated per AMCA Standard 301. Values shown are for Installation Type A: free inlet hemispherical sone levels.

## OPTIONAL COATINGS

### PAINTED FINISHES

Aluminum and galvanized components remain unpainted as a standard finish, but when required are processed through the finishing system to apply special coatings. A high turbulence oven is used to produce a baked on finish for most special coatings.

### SPECIAL COATINGS

Products receiving special coatings have components painted before assembly. Fasteners are corrosion resistant.

### HERESITE (AIR DRY)

A phenolic coating with greater resistance to most organic and inorganic acids.

**Note:** For any coating selected the user assumes the responsibility for the corrosive agent, its concentration, temperature, moisture content and the ultimate effect on the coating and the equipment.

## TYPICAL SPECIFICATIONS

These fans must be installed in a manner which insures that the exhausted air and the surrounding environment are always free of flammable gases, vapors, or liquids, combustible dusts or ignitable fibers or flyings. The fans cannot be used in hazardous environments where the fans electrical system could provide ignition to combustible or flammable materials. The installation of the product must comply with all local and national safety codes including the National Electrical Code (NEC) and the National Fire Protection Act (NFPA).

The tubeaxial fan shall be belt (or direct) drive type designed to operate in any position.

The propellers shall be precision balanced. Propellers shall be heavy duty, uncoated welded aluminum in design and construction with die formed blades and spherical hubs.

The acrylic epoxy coated fan housing shall be constructed of heavy gage steel. Drive enclosure is designed to minimize air turbulence in order to achieve high efficiency of the fan. The housing shall have an access door (except Models HDD and HA12 through HA36) for internal inspection and an integral rolled flange for structural rigidity and to eliminate leakage at the flange.

Rugged **motor base** shall be adjustable.

Belt drive fans shall have permanently lubricated ball bearings in a **duplex split pillow block** housing for accurate alignment and rated at a L<sub>50</sub> life of 200,000 hours. Bearings shall be resilient mounted for vibration isolation.

**Drives** for belt drive fans shall be cast iron pulleys with static free oil and heat resistant belts and designed for 1.5 service factor. The **fan shaft** shall have a protective coating for resistance against corrosion.

Sealed ball bearing **motors** shall be mounted out of the airstream for belt drive fans (in the airstream for direct drive fans).

All fans shall bear the **AMCA Certified Ratings Seal** for Sound and Air performance.

Each fan shall have a permanently affixed manufacturer's **nameplate** containing the model number and serial number for future identification.

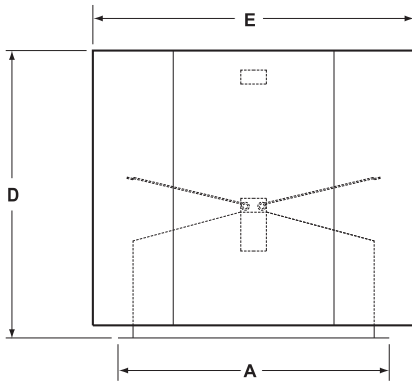
Fans shall be covered by a **2 year** limited warranty with **5 year** limited warranty on duplex split pillow block bearing and shaft.

Fans shall be Model HA (or HDD) as manufactured by Acme Engineering and Manufacturing Corporation of Muskogee, Oklahoma.

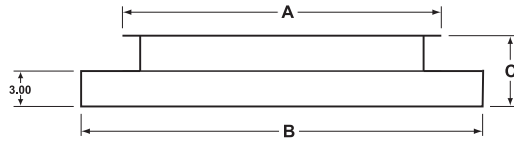


# DIMENSIONAL DATA

## DISCHARGE CAP

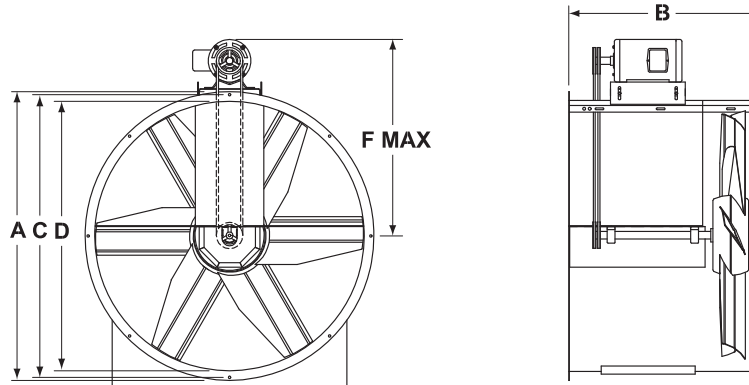


## CURB BASE



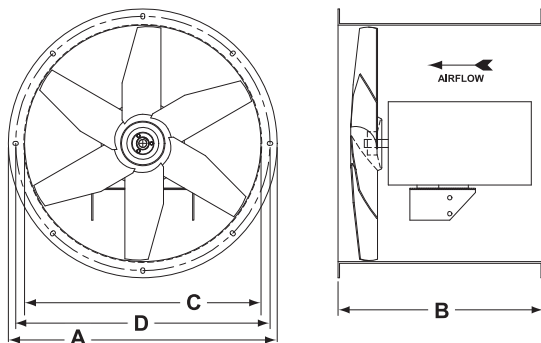
Fan Size	A	B	C	D	E
16	18.75	26.00	6.00	18.10	24.00
18	21.13	30.00	6.00	20.10	26.00
21	23.82	34.00	6.00	26.10	32.00
24	27.00	34.00	6.00	26.10	32.00
30	33.63	42.00	6.00	32.10	38.00
36	39.75	46.00	6.00	38.40	44.20
42	45.75	57.00	6.00	44.40	50.20
48	51.75	57.00	6.00	50.40	56.20
54	57.75	64.00	6.00	58.00	69.31
60	64.25	70.00	6.00	63.13	79.19

## MODEL HA



Fan Model	A	B	C	D	F	Qty. Of Slots	Access Door
HA12	14.56	12.00	13.44	12.22	17.00	6	None
HA16	18.50	16.50	17.38	16.10	19.00	8	None
HA18	21.00	16.50	19.75	18.48	20.50	8	None
HA21	23.88	18.00	22.50	21.25	22.41	8	None
HA24	26.88	18.00	25.75	24.44	24.00	8	None
HA30	33.64	24.00	32.12	30.60	29.00	8	None
HA36	39.76	29.00	38.26	36.60	32.19	8	None
HA42	45.78	32.00	44.28	42.60	37.00	8	12.00 x 17.00
HA48	51.78	36.00	50.28	48.60	42.00	8	12.00 x 17.00
HA54	57.78	39.00	56.28	54.60	45.00	8	15.00 x 17.00
HA60	64.28	43.34	63.03	60.57	49.00	8	16.00 x 18.00

## MODEL HDD



Fan Model	A	B	C	D	Est. Unit Wt.
HDD12	14.56	14.00	12.22	13.44	35
HDD16	18.50	14.00	16.10	17.50	47
HDD18	21.00	16.00	18.48	19.88	54
HDD21	23.88	16.00	21.25	22.56	66
HDD24	26.88	18.00	24.44	25.75	76
HDD30	33.64	18.00	30.60	32.25	98
HDD48	52.63	33.82	48.60	50.28	1334

These are typical drawings for dimensional purposes only. They are correct within limits suitable for normal installation requirements and do not necessarily show actual construction. Dimensions are shown in inches.



**CENTRIFUGAL EXHAUSTERS**



**CEILING AND CABINET EXHAUSTERS**



**IN-LINE CENTRIFUGAL FANS**



**IN-LINE AXIAL FANS**



**PROPELLER ROOF FANS**



**PROPELLER WALL FANS**



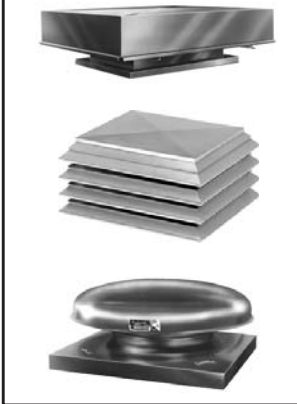
**UTILITY BLOWERS**



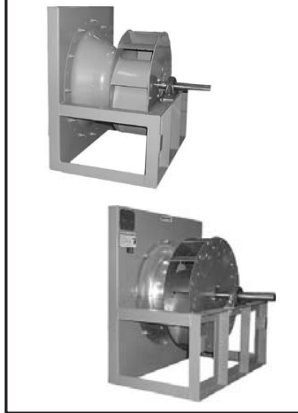
**SUPPLY AIR FANS**



**ROOF VENTS**



**PLENUM FANS**



**BACKWARD INCLINED/AIRFOIL CENTRIFUGAL FANS**



**LIMITED WARRANTY** Acme Engineering and Manufacturing Corporation extends this limited warranty to the original purchaser and warrants that products described herein shall be free from original defects in workmanship and materials for two years from date of shipment (except for Acme's exclusive duplex split pillow block bearings and shaft 5 years from shipment, belts one year from shipment, and polyethylene tubing at 90 days from shipping), provided same have been properly handled, stored, installed, serviced, maintained and operated. Refer to Form MS149 for complete limited warranty terms and conditions. This form is available to anyone at [www.acmefan.com](http://www.acmefan.com). The Company's warranty is in lieu of all other warranties, express or implied, arising by law or otherwise, including without limitation the implied warranties of merchantability and fitness for a particular purpose, which are hereby expressly disclaimed and waived.

Acme products are designed and manufactured to provide reliable performance but they are not guaranteed to be 100% free of defects. Even reliable products will experience occasional failures and this possibility should be recognized by the Purchaser and End User. If these products are used in a life support ventilation system where failure could result in loss or injury, the Purchaser and End User should provide adequate back-up ventilation, supplementary natural ventilation or failure alarm system, or acknowledge willingness to accept the risk of such loss or injury.

**WARNING** DO NOT use in HAZARDOUS ENVIRONMENTS where fan's electrical system could provide ignition to combustible or flammable materials unless unit is specifically built for hazardous environments. Comply with all local and national safety codes including the National Electrical Code (NEC) and National Fire Protection Act (NFPA). Guards

must be installed when fan is within reach of personnel or within eight (8) feet (2.5 m) of working level or when deemed advisable for safety.

**DISCLAIMER** The Company has made a diligent effort to illustrate and describe the products in this literature accurately; however, such illustrations and descriptions are for the sole purpose of identification, and do not express or imply a warranty that the products are merchantable, or fit for a particular purpose.

**INDEMNITY** Purchaser acknowledges various warnings by the Company regarding the products and its installation and use. If the Company incurs any claims, lawsuits, settlements, or expenses (including attorney fees) for any loss, injury, death or property damage including, but not limited to, claims arising out of the Purchaser's or any end user's installation or use of the products, the Purchaser shall indemnify and hold the Company harmless.



**ACME ENGINEERING & MANUFACTURING CORP.**

P.O. Box 978, Muskogee, Oklahoma 74402  
 Telephone: 918-682-7791 Fax: 918-682-0134  
[www.acmefan.com](http://www.acmefan.com) e-mail: [acmefan@acmefan.com](mailto:acmefan@acmefan.com)

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