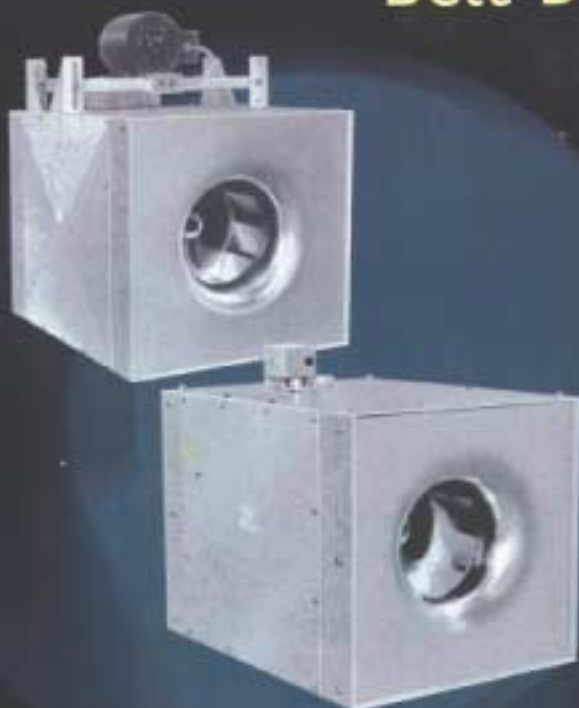


IN-LINE  
CENTRIFUGAL  
FANS

Direct  
and  
Belt Driven



SYMBOL  
OF QUALITY

CENTRIMASTER® MODELS

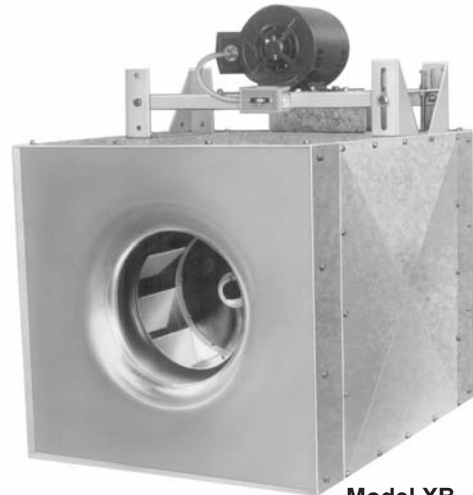
XD | XB

## CONSTRUCTION FEATURES

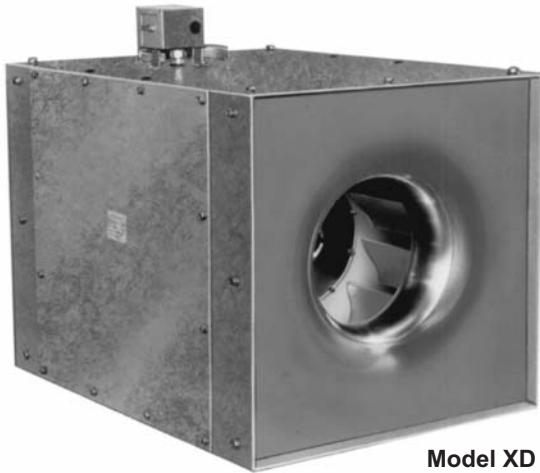
### SQUARE IN-LINE DIRECT OR BELT DRIVE

Models XB and XD Centrifugal In-Line Fans provide an efficient, straight-through or right angle airflow with a minimum of complicated duct connections. Costly round to square type transition pieces are eliminated. Its aerodynamic engineering and design features meet today's high static pressure ventilation requirements.

Used in clean air applications as supply, return, exhaust or make-up, the units are ideal for compact arrangements.



**Model XB  
Belt Drive**



**Model XD  
Direct Drive**

### ALL ANGLE OPERATION

Fans are designed to be mounted and operated in any position. Fan support brackets and vibration isolators are available to ease installation (see page 8).

### HOUSING

Heavy-duty housing and drive enclosure, internal structural supports and bracing are constructed of galvanized steel. Duct connection collars are an integral part of in-line housing on all model sizes. Removable panels on both sides allow easy access to all working parts for inspection, servicing or cleaning. Panels may be removed allowing for side discharge (see page 8). Aluminum housing is available as an option.



Acme Engineering & Manufacturing Corporation certifies that the XB and XD Exhausters 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.*



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## CONSTRUCTION FEATURES

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### QUIET HOLLOW AIRFOIL IMPELLER

All fans have backward curved non-overloading aluminum impellers with hollow airfoil blades. (XB425 uses single thickness airfoil blades.) Impellers are statically and dynamically balanced. Air moves smoothly over the airfoil blades resulting in a higher airflow performance impeller that operates with a minimum of air noise, and at less horsepower.

### BEARINGS

Permanently lubricated bearings are used in a duplex split pillow block housing (XB425 uses heavy duty self-aligning unitary pillow block bearings). The bearings remain in perfect alignment after shipment, installation, and subsequent operation. Bearings are resiliently mounted in neoprene rings, providing extra protection and vibration isolation. The bearing assembly is rated at and L<sub>50</sub> life of 200,000 hours and features Acme's **5 year** limited warranty. When relubricated bearings are required, external pressure relief fittings are provided with unitary pillow block bearings as an option.



### MOTORS OUT OF AIR STREAM

These fans are suitable for continuous duty applications with gas temperatures of 140°F on direct drive applications and 200°F on belt drive applications.

XB and XD units have AMCA B spark resistant construction as a standard feature.

THESE UNITS ARE NOT AIR TIGHT AND SHOULD NOT BE USED WHERE SOME ESCAPE OF CONTAMINATED AIR WOULD CAUSE PROBLEMS.

### MOTOR AND DRIVE ASSEMBLY

Motors are continuous duty and matched to the fan load. Only motors of nationally recognized motor manufacturers are used.

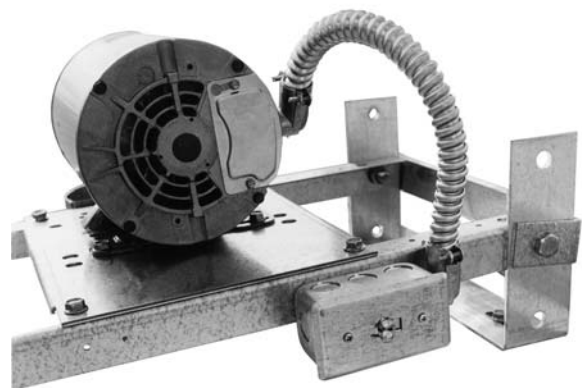
The entire drive assembly is located out of the air stream. Steel fan shaft and impeller hub have a corrosion resistant coating.

Cast iron machined sheaves are used throughout. Variable pitch motor sheaves are standard equipment and are precision selected so when set at maximum speed, the impeller can not exceed the cataloged speed rating and will not overload the motor. Drives are 1 or 2-belt combinations, depending on horsepower. Heavy-duty oil and heat resistant belts are designed for 150% of drive horsepower.

### FACTORY WIRED DISCONNECT SWITCH

Factory wiring provides big savings in installation time and costs. All motors (except for explosion resistant and motors shipped not mounted) are factory wired to an external mounted disconnect switch. Standard wiring complies with NEC and materials used are U.L. Listed.

Explosion resistant disconnect switches are not rated for outdoor use.



## XD PERFORMANCE DATA

Fan Model	RPM	HP	.000"		.125"		.250"		.375"		.500"		.625"		.750"		1.000"		1.250"		1.500"		1.750"		Max. BHP	Est. Ship Wt.
			CFM	Sones	CFM	Sones	CFM	Sones	CFM	Sones	CFM	Sones	CFM	Sones	CFM	Sones	CFM	Sones	CFM	Sones	CFM	Sones	CFM	Sones		
XD100	860	1/10	380	5.3	220	3.8																			.012	41
	1050		460	7.0	350	5.6																			.022	
	1300		570	9.4	480	8.0	380	7.5	230	9.6															.042	
	1550		680	12.0	610	11.0	530	10.0	430	10.0	290	9.2													.070	
XD120-7	825	1/20	770	4.4	665	3.5																			.033	72
	955		890	5.2	805	4.8	650	4.4																	.052	
	1050		980	6.4	900	5.6	800	5.5	440	5.2															.069	
XD120F4	1750	1/3	1635	15.0	1590	15.0	1540	15.0	1490	14.0	1440	14.0	1375	14.0	1290	14.0	860	13.0							.322	86
XD137B8	860	1/12	1022	6.5	822	6.2	618	5.7																	.060	114
XD137E6	1160	1/4	1379	9.7	1230	9.7	1082	9.7	929	9.9	789	10.2													.150	116
XD137H4	1750	3/4	2081	17.1	1982	16.9	1882	16.6	1784	16.0	1687	16.0	1586	15.5	1485	15.1	1282	14.9	1126	14.4					.530	130
XD161D8	860	1/6	2040	8.6	1925	8.1	1770	7.6	1545	7.1	775	6.7													.184	150
XD161G6	1160	1/2	2750	14.0	2670	13.0	2580	12.0	2475	12.0	2330	12.0	2170	12.0	1960	12.0									.452	171
XD161K4	1750	1 1/2	4145	25	4095	25	4040	24	3960	23	3925	23	3865	22	3800	21	3630	21	3420	20	3200	19.0	2870	19.0	1.547	181
XD200K6	1160	1 1/2	5445	16.0	5280	16.0	5115	16.0	4950	16.0	4780	15.0	4605	15.0	4425	15.0	4045	15.0	3190	15.0					1.295	279

Outlet Velocity  
 XD100: Outlet Velocity = CFM x 1.00  
 XD120: Outlet Velocity = CFM x .571  
 XD137: Outlet Velocity = CFM x .421  
 XD161: Outlet Velocity = CFM x .291  
 XD200: Outlet Velocity = CFM x .184

The brake horsepower capability of an exhaustor motor is dependent on the degree of cooling the motor receives from the air moving through the motor. The above motor loadings do not overheat the motor and are in accordance with the motor manufacturer's recommendations. It is, therefore, not detrimental to the motor and economically desirable. Maximum RPM shown obtained with the standard one speed motor; for all other RPM's add solid state speed controller.

Speed (RPM) shown is nominal. Performance is based on actual speed of test.

Performance shown is for Installation Type A: Free Inlet, Free Outlet. Performance ratings do not include the effects of appurtenances in the airstream.

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 fan Sone levels.

## XB PERFORMANCE DATA

Fan Model	Min. Max. RPM	HP	Sones @ .125"	.125"	.250"	.375"	.500"	.625"	.750"	1.000"	1.250"	1.500"	1.750"	2.000"	2.250"	2.500"	Max. BHP	Est. Ship Wt.
				CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM		
XB090E1	1583 2177	1/4	7.0 12.4	608 879	510 830	405 766	280 682	604	532	338							.07 .18	48
XB090E2	1847 2492	1/4	9.2 15.6	730 1019	663 978	568 931	479 872	382 799	254 729	599	433	Outlet Velocity = CFM x 1.00					.11 .27	49
XB090F	1920 2717	1/3	9.9 18.5	764 1118	702 1081	613 1041	524 993	437 936	326 867	742	619	463					.12 .35	56
XB090G	2333 3196	1/2	13.9 25	949 1327	904 1296	850 1264	780 1229	701 1191	630 1147	480 1039	274 928	828	719	587	436		.22 .56	64
XB120E1	910 1375	1/4	5.6 10.0	755 1225	545 1160	1090	645	965	645								.06 .18	105
XB120E2	1070 1570	1/4	7.0 14.5	920 1415	825 1360	520 1305	1235	1135	930			Outlet Velocity = CFM x .571					.09 .27	106
XB120F	1140 1725	1/3	7.3 15.9	995 1565	910 1515	730 1465	1410	1345	1250	760							.11 .35	110
XB120G	1400 2060	1/2	11.7 21	1250 1885	1190 1845	1115 1805	1010 1760	740 1720	1670	1545	1285	740					.19 .57	116
XB120H	1590 2335	3/4	15.0 23	1435 2145	1380 2110	1325 2075	1260 2040	1165 2005	980 1965	1880	1770	1580	1210	720			.27 .81	124
XB120J	1935 2570	1	18.9 27	1765 2370	1725 2340	1680 2305	1635 2275	1585 2240	1530 2210	1350 2135	875 2055	1955	1800	1535	1075	680	.47 1.07	130
XB137F	930 1365	1/3	7.0 12.4	1205 1920	990 1790	815 1635	1490	1380	1275								.12 .34	136
XB137G	1060 1605	1/2	8.9 14.5	1430 2300	1230 2195	1075 2080	885 1945	1815	1705	1530	930	Outlet Velocity = CFM x .421					.16 .54	142
XB137H	1325 1830	3/4	11.7 20	1860 2645	1720 2560	1560 2465	1420 2360	1310 2240	1180 2120	1930	1775	1500					.31 .78	146
XB137J	1400 2060	1	13.2 23	1980 3000	1850 2920	1700 2840	1555 2755	1440 2660	1345 2555	2350	2180	2045	1895	1350			.36 1.11	153
XB137K	1675 2310	1 1/2	15.3 26	2405 3380	2310 3310	2200 3245	2075 3170	1945 3090	1830 3010	1655 2825	1395 2640	2485	2355	2240	2090	1550	.80 1.55	164
XB137L	1955 2490	2	20 29	2840 3650	2760 3590	2670 3530	2575 3460	2470 3390	2360 3320	2155 3155	2000 2980	1850 2815	1435 2675	745 2555	2445	2325	.95 1.94	173

Power rating (BHP) does not include drive losses. Performance shown is for installation type A: Free inlet, free outlet. Performance ratings do not include the effects of appurtenances in the airstream. The brake horsepower capability of an exhaustor motor is dependent on the degree of cooling the motor receives from the air moving through the motor. The motor loading beyond the motor nameplate rating does not overheat the motor and is in accordance with the motor manufacturer's recommendations. It is, therefore, not detrimental to the motor and economically desirable. The sound ratings shown are loudness values in fan sones at 5 feet (1.524m) in a hemispherical free field calculated per AMCA Standard 301. Values shown are for Installation Type A: Free Inlet fan Sone levels.



# XB PERFORMANCE DATA

Fan Model	Min. Max. RPM	HP	Sones @ .125"	.125"	.250"	.375"	.500"	.625"	.750"	1.000"	1.250"	1.500"	1.750"	2.000"	2.250"	2.500"	Max. BHP	Est. Ship Wt.
				CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM	CFM		
XB161F	695 1055	1/3	5.1 10.9	1500 2410	1235 2310	2170	2000	1770	970								.10 .35	182
XB161G	825 1210	1/2	6.7 14.6	1840 2790	1660 2710	1410 2610	2485	2330	2165			Outlet Velocity = CFM x .291					.17 .53	188
XB161H	930 1365	3/4	8.4 16.7	2100 3165	1970 3095	1780 3020	1500 2930	2815	2680	2375	1285						.24 .76	193
XB161J	1070 1570	1	10.9 19.9	2450 3660	2350 3600	2220 3540	2045 3470	1840 3390	1140 3300	3070	2820	2160					.37 1.14	199
XB161K	1330 1710	1 1/2	16.2 26	3080 4000	3010 3940	2930 3885	2830 3825	2710 3760	2565 3690	2210 3510	3290	3055	2480	1445			.70 1.47	208
XB161L	1405 1865	2	17.6 28	3265 4370	3195 4320	3120 4270	3035 4215	2930 4160	2805 4100	2525 3960	1715 3780	3580	3365	3030	2110	1155	.82 1.90	210
XB161M	1735 2210	3	24 39	4060 5195	4005 5150	3950 5110	3890 5065	3826 5020	3755 4975	3585 4880	3370 4770	3145 4640	2760 4485	1720 4310	4140	3950	1.53 3.16	227
XB200H	670 985	3/4	7.0 14.4	2860 4430	2555 4235	2195 4035	3830	3610	3375	1890							.26 .80	288
XB200J	730 1055	1	7.8 16.3	3165 4770	2890 4590	2600 4405	1960 4215	4020	3815	3160		Outlet Velocity = CFM x .184					.33 .98	294
XB200K	860 1250	1 1/2	12.6 20	3815 5715	3590 5560	3355 5410	3105 5250	2790 5095	1785 4930	4590	4205	3155					.54 1.64	304
XB200L	1020 1410	2	15.3 25	4600 6485	4415 6350	4220 6215	4020 6080	3815 5940	3600 5800	2565 5510	5210	4885	4380	3030			.89 2.34	299
XB200M	1195 1525	3	19.5 31	5450 7035	5290 6910	5130 6785	4965 6660	4800 6530	4625 6400	4260 6140	3740 5870	2070 5590	5290	4870	3765	2305	1.42 2.97	325
XB200N	1570 1885	5	32 44	7250 8750	7130 8645	7005 8545	6885 8445	6760 8340	6635 8240	6380 8035	6120 7825	5855 7610	5570 7395	5240 7175	4525 6950	3255 6710	3.24 5.57	339
XB245H	440 645	3/4	5.5 10.9	3595 5600	2925 5315	2195 5010	4550	2710									.22 .69	402
XB245J	500 735	1	7.3 14.8	4195 6455	3790 6210	2115 5955	5675	5295	4130			Outlet Velocity = CFM x .119					.32 1.01	407
XB245K	590 855	1 1/2	9.3 17.2	5075 7585	4760 7375	4375 7160	2925 6940	2790 6705	1785 6435	4590	5060						.52 1.58	416
XB245L	665 965	2	11.7 21	5790 8610	5515 8425	5225 8235	4840 8045	3495 7850	1230 7645	2130	5095						.75 2.28	418
XB245M	860 1100	3	17.6 29	7630 9865	7420 9700	7210 9540	6990 9370	6760 9205	6495 9035	5255 8680	8260	7600	5330				1.60 3.39	440
XB245N	1050 1295	5	27 35	9400 11665	9230 11530	9055 11390	8885 11250	8710 11110	8530 10970	8140 10680	7630 10385	6315 10070	3365 9700	9180	8055	5615	2.95 5.53	448
XB300J	355 520	1	6.5 11.4	4735 7560	3640 7025	6375	5640	3835									.31 .96	608
XB300K	410 595	1 1/2	7.4 13.8	5715 8780	4910 8340	3400 7830	7255	6625	5560			Outlet Velocity = CFM x .082					.47 1.42	620
XB300L	485 670	2	9.7 16.6	6980 9990	6380 9610	5660 9195	4505 8720	4205	7665	5570							.77 2.01	622
XB300M	610 775	3	14.6 20	9025 11660	8600 11340	8110 11000	7550 10640	6960 10240	6145 9800	8880	7470	3870					1.53 3.09	638
XB300N	710 875	5	18.5 25	10603 13245	10270 12960	9890 12670	9470 12370	8995 12045	8505 11700	7280 10925	3715 10110	9080	6715				2.40 4.47	654
XB300P	825 1010	7 1/2	22 32	15370 21255	12150 15125	11840 14875	11510 14625	11155 14365	10765 14090	9925 13500	8980 12835	7060 12150	11410	10470	8630	5665	3.75 6.85	719
XB300R	925 1135	10	26 40	14030 17325	13765 17110	13490 16890	13210 16670	12915 16445	12600 16215	11900 15730	11150 15200	10340 14615	9150 14005	6520 13385	12710	11880	5.25 9.72	739
XB365K	310 450	1 1/2	6.2 14.2	7615 11945	6265 11140	10280	9335	7785	3915								.54 1.63	865
XB365L	365 505	2	8.8 16.1	9360 13580	8310 12885	7000 12140	11360	10510	9300			Outlet Velocity = CFM x .054					.88 2.29	873
XB365M	435 555	3	13.3 19.2	11495 15050	10655 14430	9755 13770	8715 13075	6520 12360	11585	8705							1.48 3.03	891
XB365N	550 675	5	18.6 25	14905 18545	14275 18040	13610 17525	12905 16990	12185 16430	11385 15855	8225 14665	13200	10210					2.96 5.47	894
XB365P	620 760	7 1/2	22 30	16950 21000	16400 20555	15830 20105	15225 19640	14600 19165	13965 18670	12530 17650	9685 16590	15375	13505	9680			4.24 7.78	970
XB365R	680 815	10	25 34	18690 22580	18190 22165	17680 21750	17150 21325	16595 20885	16025 20435	14845 19500	13430 18540	10685 17520	4860 16355	14600	11275	6155	5.59 9.60	990
XB425K	255 380	1 1/2	5.2 12.4	9157 14928	7290 13891	12742	11493	9917									.50 1.68	1240
XB425L	300 415	2	7.4 14.2	11301 16477	9862 15550	8098 14537	13451	12263	10766			Outlet Velocity = CFM x .038					.83 2.19	1248
XB425M	355 475	3	10.1 17.6	13811 19100	12674 18311	11411 17473	9941 16574	7503 15629	14631	3.28							1.36 3.28	1266
XB425N	445 565	5	15.6 24	17792 22987	16941 22335	16024 21644	15037 20961	13999 20221	12838 19448	8815 17825	15963						2.66 5.62	1270
XB425P	525 645	7 1/2	21 32	21265 26413	20559 25846	19824 25269	19046 24677	18223 24063	17368 23424	15515 22076	13026 20662	19124	17272	14659			4.34 8.21	1346
XB425R	545 690	10	23 37	22127 28332	21449 27803	20748 27268	20009 26721	19230 26159	18416 25578	16695 24355	14589 23065	10794 21721	20249	18499	16160	10392	4.95 10.05	1395

Power rating (BHP) does not include drive losses. Performance shown is for installation type A: Free inlet, free outlet. Performance ratings do not include the effects of appurtenances in the airstream. The brake horsepower capability of an exhaustor motor is dependent on the degree of cooling the motor receives from the air moving through the motor. The motor loading beyond the motor nameplate rating does not overheat the motor and is in accordance with the motor manufacturer's recommendations. It is, therefore, not detrimental to the motor and economically desirable. The sound ratings shown are loudness values in fan sones at 5 feet (1.524m) in a hemispherical free field calculated per AMCA Standard 301. Values shown are for Installation Type A: Free Inlet fan Sone levels.





## OPTIONAL ACCESSORIES

### ALUMINUM CONSTRUCTION

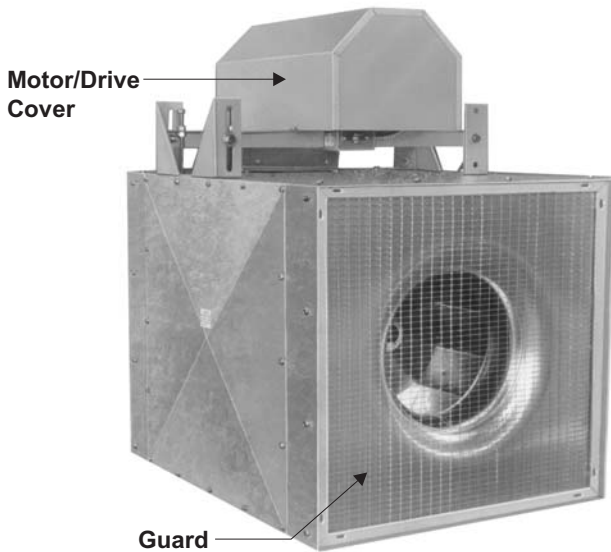
Available for all sizes of XD or XB units (except XB425).

### INSULATED HOUSING

A 1" thick duct liner type insulation attached to the inside of housing is available for condensation and noise reduction.

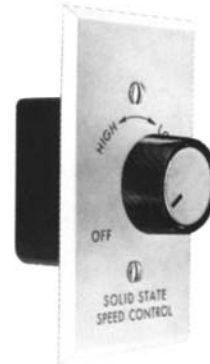
### MOTOR AND DRIVE COVER

Protection for motors, drives and personnel.



### SOLID STATE SPEED CONTROLLER

A solid state controller provides an infinite number of fan speed settings when used with certain motors of direct driven units. You simply "dial the amount of ventilation desired" down to 50% of maximum capacity. The controller easily installs in a standard wall box. It also serves as an on-off switch. It eliminates the need for 2 or 3-speed motors. The controller is available for 115-volt single phase for the following models: XD100, XD120-7, XD137B8, XD137E6 and XD161D8.



### INLET OR DISCHARGE GUARDS

Made of 1/2" x 1" mesh galvanized welded wire attached to a metal frame. Guard bolts to flange on inlet or outlet of fan, please specify.

### BELT GUARD

Constructed of heavy gauge galvanized steel. Attaches to fan housing and protects belt and drive.



**CAUTION!** Guards must be installed when a fan is within reach of personnel or within seven (7) feet of working level or when deemed advisable for safety.



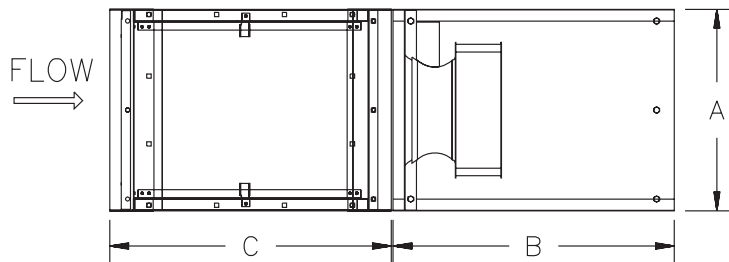
# OPTIONAL ACCESSORIES

## FILTER BOX

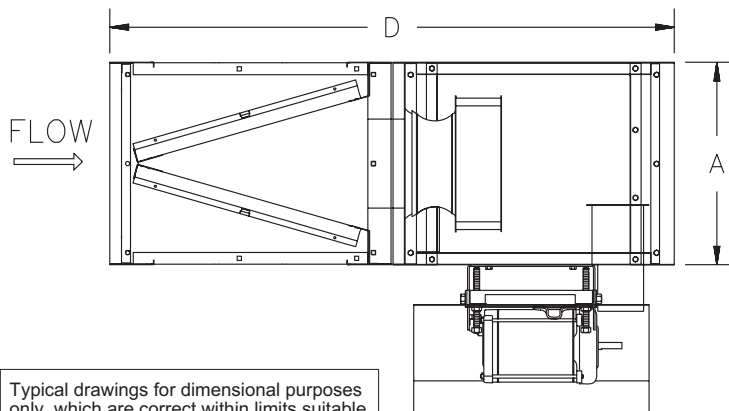
The filter box option for Models XB and XD In-line Centrifugal Fans provides an economical air filtering alternative to special remote filter box assemblies that require extra fabrication, design and installation.

- Eliminates need for special ductwork
- Removable panels for easy maintenance
- Easy, versatile installation
- Reduced design and installation costs

Top View



Side View



Typical drawings for dimensional purposes only, which are correct within limits suitable for normal installation requirements, and do not necessarily show actual construction.

## FILTER BOX SELECTION PROCEDURE

1. Not including filters, calculate the CFM requirements and system pressure drop. Now select a preliminary model size.
2. The filter pressure drop for the size selected can be recalculated using the following equation:  $P = F(CFM/10,000)^2$ . The filter factor (F) can be determined from Table 1.
3. A revised model selection can be made by adding the filter pressure drop (P) to the system pressure drop. The selection is completed if it equals the preliminary size. If the sizes differ, repeat steps 2 and 3 by using the revised model size to calculate the new filter pressure drop.
4. Multiply factor (F) of 1" Aluminum Filter by:

1.30 for 2" Aluminum Filter  
1.70 for 1" Paper Filter  
1.60 for 2" Paper Filter

TABLE 1		
FAN MODEL		1" ALUM. FILTER
XD	XB	FACTOR (F)
100	90	8.72
120	120	5.58
137	137	5.58
161	161	2.09
200	200	0.77
-	245	0.41
-	300	0.33
-	365	0.15
-	425	NA

FILTER BOX and FILTER DIMENSIONS (In.)								
FAN MODEL		A	B	C	D	FILTER SIZE	QTY	FILTER AREA FT <sup>2</sup>
XD	XB							
100	90	14.00	18.56	18.56	37.13	11.5 x 13.5	2	2.16
120	120	17.88	24.88	24.88	49.75	15.5 x 19.5	2	4.19
137	137	20.50	28.13	28.13	56.25	24 x 18.4	2	6.13
161	161	24.25	32.69	32.69	65.38	21.9 x 28.5	2	8.66
200	200	30.00	39.75	39.75	79.50	27.5 x 36	2	13.75
-	245	36.75	48.06	48.06	96.13	34.25 x 44.25	2	21.05
-	300	45.00	58.31	58.31	116.63	42 x 55	2	32.08
-	365	54.75	71.06	71.06	142.13	52 x 69.5	2	50.19
-	425	Not Available						

Filter box available in aluminum or galvanized steel. 1" and 2" aluminum and 2" paper filters available on all model sizes; 1" paper filters available on model sizes 100-200 only.



## OPTIONAL ACCESSORIES

### FAN SUPPORT BRACKETS (Model SB)

Four steel brackets for mounting fan in place. Brackets to be bolted to fan housing in the field. They may be used for ceiling or floor mounting along with vibration isolators as shown.



### VIBRATION ISOLATORS

Available in spring or rubber. Vibration isolators are sized to match the weight of the fan. Two designs are used, one for base mounting to floor, the other for hanging support from overhead structural members. Fan support brackets included with isolators and are to be field mounted to fan. (See Form 613101 for additional information.)

Model	Description
HSI	Hanging Spring
HRI	Hanging Rubber
BSI	Base Spring
BRI	Base Rubber

### HANGING SUPPORT

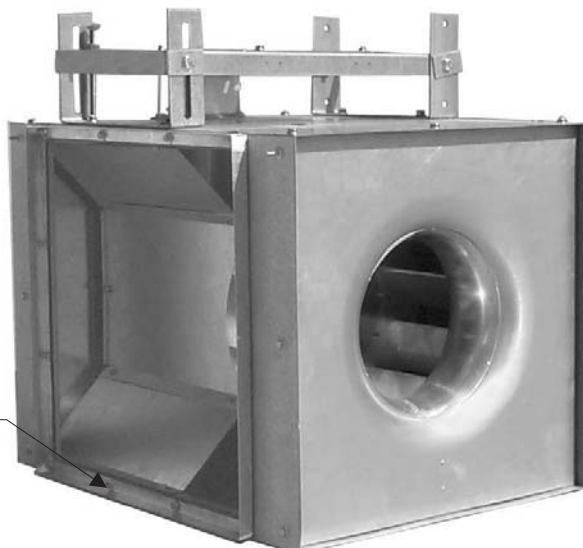
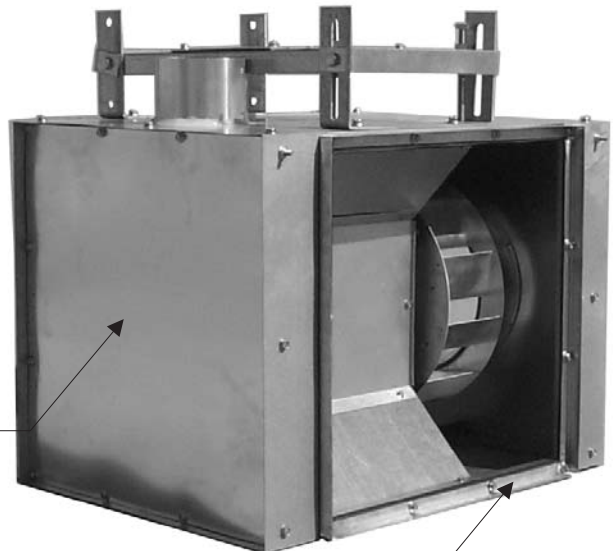


### BASE MOUNTING



### SIDE DISCHARGE

Side discharge options consist of a duct connection collar for right or left discharge configurations. The side panel is removed and attached to the rear (normal discharge) of the housing. The side discharge collar is then attached to the fan housing. Dual side discharge is accomplished by utilizing a right and left duct connection collar. Performance can be estimated by applying a 5% reduction on the system curve when using side discharge options.



Duct  
Connection  
Collar

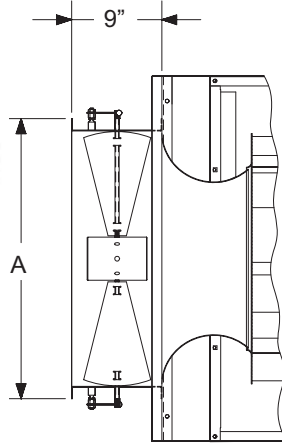




## OPTIONAL ACCESSORIES

### INLET VANE CONTROLS

IVC's are available in separately encased, externally mounted type designs. All IVC's are available with single point operation for either manual or automatic control. Standard design for external type consists of heavy construction suitable for clean air or gas applications.

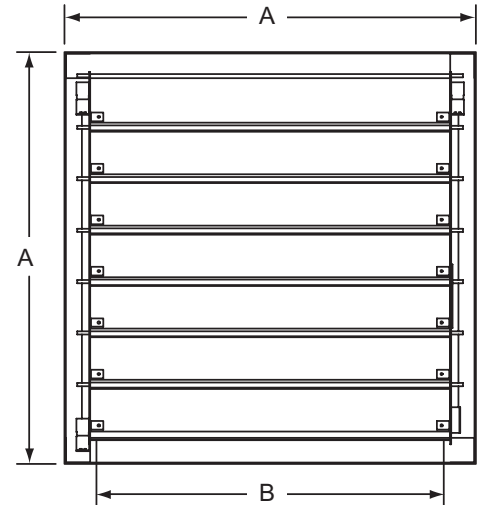


IVC DIMENSIONS (In.)		
FAN MODEL		A
XD	XB	
100	90	Not Available
120	120	15.00
137	137	17.38
161	161	19.13
200	200	23.00
-	245	28.75
-	300	32.50
-	365	40.44
-	425	Not Available

Typical drawings for dimensional purposes only, which are correct within limits suitable for normal installation requirements, and do not necessarily show actual construction.

### BACKDRAFT DAMPERS

All aluminum multiple blade construction. Precision balanced full opening blades with nylon bearings. Available in gravity or motor operated configurations for in-duct mounting.



DAMPER DIMENSIONS (In.)				
FAN MODEL		MODEL	A	B*
XD	XB			
100	90	ARF13	13.00	9.25
120	120	ARF17	17.00	13.25
137	137	ARF19	19.00	15.25
161	161	ARF24	24.00	20.25
200	200	ARF29	29.00	25.25
-	245	ARF35	35.00	31.25
-	300	ARF45	45.00	41.25
-	365	ARF53	53.00	49.25
-	425	ARF61	61.00	57.25

\*I.D. Of frame (flow area)

## OPTIONAL COATINGS

Aluminum and galvanized components remain unpainted as a standard finish, but when required are processed through the finishing system to apply decorative or special coatings. A high turbulence oven is used to produce a baked on finish for most special coatings. Decorative coatings are not baked on.

### DECORATIVE COATINGS

Acme offers 16 popular colors for decorative finishes utilizing an industrial grade, semi-gloss enamel applied to the exterior of the unit. Special colors are available upon request. Contact your Acme Representative for complete color selections.

### SPECIAL COATINGS

Products receiving special coatings have components painted before assembly. Fasteners are not painted.

### ACRYLIC EPOXY

This product provides a more durable surface.

### HERESITE (Air Dry)

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

### INSULAMASTIC

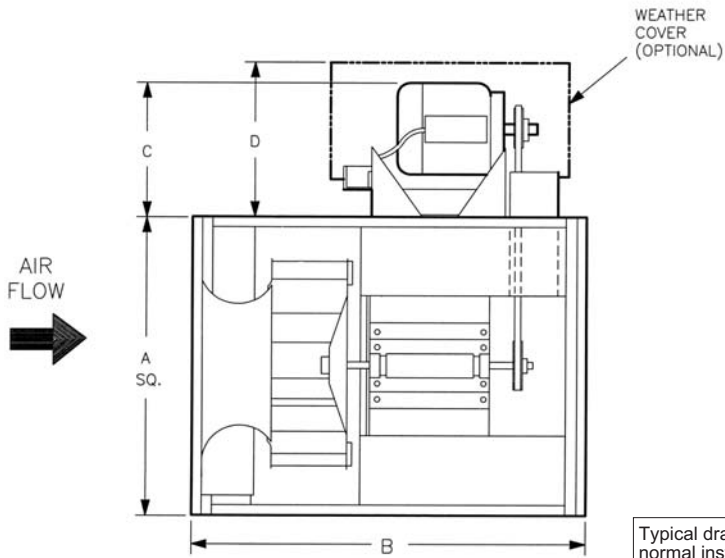
A black asphalt based mastic that provides some condensation control, sound deadening and corrosion resistance.

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.

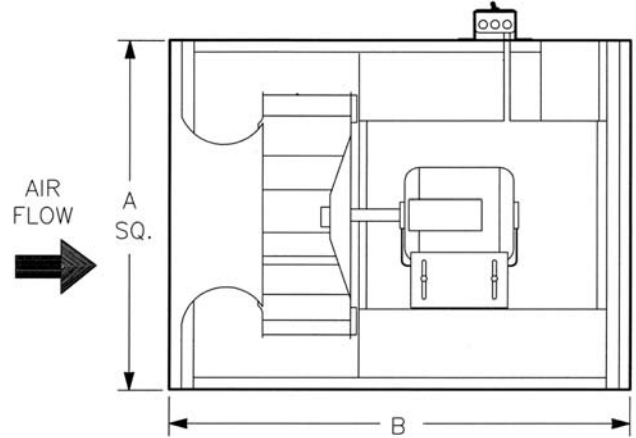


# DIMENSIONAL DATA

**MODEL XB**



**MODEL XD**



Typical drawings for dimensional purposes only, which are correct within limits suitable for normal installation requirements, and do not necessarily show actual construction.

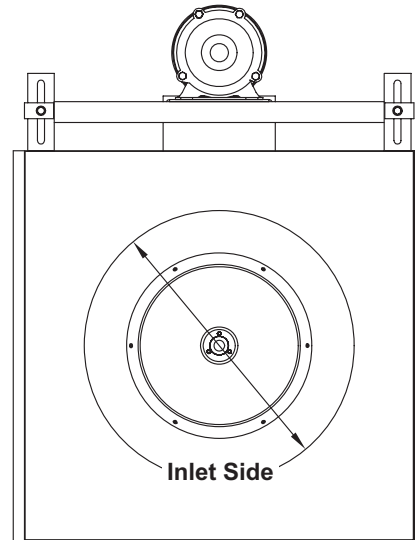
**XB DIMENSIONS (In.)**

FAN MODEL	A	B	C MAX.	D MAX.	IMPELLER SIZE
XB090	14.02	18.56	12.17	14.06	10.19
XB120	17.88	24.88	11.19	15.25	11.94
XB137	20.50	28.13	11.19	15.25	13.69
XB161	24.25	32.69	13.69	18.50	16.13
XB200	30.00	39.75	13.69	18.50	20.00
XB245	36.75	48.06	13.69	18.50	24.50
XB300	45.00	59.31	16.38	20.00	30.00
XB365	54.75	71.06	16.38	20.00	36.50
XB425	63.88	72.75	13.88	20.00	42.50

**XD DIMENSIONS (In.)**

FAN MODEL	A	B	IMPELLER SIZE
XD100	14.00	18.62	9.88
XD120	17.88	24.88	11.94
XD137	20.50	28.12	13.69
XD161	24.25	32.63	16.13
XD200	30.00	39.75	20.00

FAN MODEL		DIAMETER ORIFICE (In.)
XD	XB	
100	90	9.50
120	120	11.50
137	137	13.50
161	161	16.50
200	200	20.00
-	245	24.50
-	300	30.00
-	365	37.00
-	425	39.00



**INLET SIDE**

Typical drawings for dimensional purposes only, which are correct within limits suitable for normal installation requirements, and do not necessarily show actual construction.



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## TYPICAL SPECIFICATIONS

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1. **Square inline fan** shall be centrifugal belt drive or direct drive type designed to operate in any position.
2. The fan **impeller** shall have centrifugal backwardly inclined hollow airfoil blades constructed of aluminum and includes die-stamped and die-formed blades and front plate. The impeller is optimally matched with a special aluminum orifice. The impeller is statically and dynamically balanced.
3. The fan **housing** shall be constructed of heavy gauge galvanized steel with two removable panels for access to the motor compartment on direct drive models and access to the shaft and bearing compartment on belt drive models. The panels shall have heavy-duty gaskets for weather protection.
4. The **structural steel frame** transmits the weight of the motor and impeller directly to the housing to prevent orifice distortion.
5. On belt drive units, permanently lubricated ball bearings shall be used in a **duplex split pillow block housing** (except XB425 which shall have unitary pillow block) for accurate alignment and rated at a  $L_{50}$  life of 200,000 hours. Bearings shall be resilient mounted in neoprene rings providing protection and vibration isolation.
6. Fan shall be suitable for **continuous duty** with exhaust gas temperatures to 140°F on direct drive units and to 200°F on belt drive units.
7. **Drives** for the belt driven units are cast iron pulleys with variable pitch motor pulley, static free, oil and heat resistant belts and are designed for 150% of driven horsepower. The **fan shaft** shall have a corrosion resistant coating.
8. Sealed ball bearing **motors** shall be mounted out of the air stream. The motor compartment is ventilated with fresh outside air by the **“forced air” cooling system** for direct drive models. The belt drive models have slide rails for easy belt adjustment.
9. **Straightener vanes** shall be provided to reduce the turbulent discharge spin and to provide smooth and gradual directional changes in airflow.
10. A **conduit post** shall be provided to the motor compartment on direct drive models for ease of electrical wiring.
11. A **disconnect device/switch** is factory installed and wired from the junction box to the motor compartment for direct drive models or from the external junction box to the motor for belt drive models.
12. Standard **wiring** complies with National Electric Code and the fan is listed by **Underwriters Laboratories (UL705)**.
13. All fans shall bear the **AMCA Certified Ratings Seal** for sound and air performance.
14. Fans shall have a permanently affixed manufacturers **nameplate** containing the model number and serial number for future identification.
15. **Thermal overload protectors** shall be standard for EP (explosion proof) motors.
16. Fan shall be supplied with a **2 year** limited warranty and a **5 year** limited warranty on the duplex split pillow block bearing and shaft.
17. Fan shall be **Model XB or XD** as manufactured by Acme Engineering and Manufacturing Corporation of Muskogee, Oklahoma.



### CENTRIFUGAL EXHAUSTERS



### CEILING AND CABINET EXHAUSTERS



### IN-LINE CENTRIFUGAL FANS



### IN-LINE AXIAL FANS



### PROPELLER ROOF FANS



### PROPELLER WALL FANS



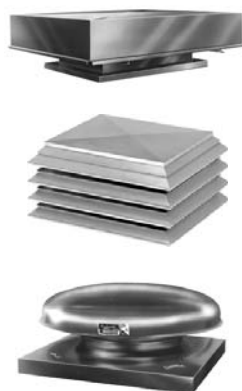
### UTILITY BLOWERS



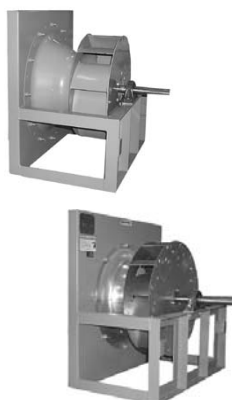
### SUPPLY AIR FANS



### ROOF VENTS



### PLENUM FANS



### BACKWARD INCLINED/AIRFOIL CENTRIFUGAL FANS



### CENTRIFUGAL INDUSTRIAL EXHAUSTERS



**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 seven (7) feet (2.134 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)

Member Air Movement and Control Association International, Inc.

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