Belt Driven Propeller Fans PropMaster





C10T Section 8

Quality and Service that will Blow you Away!

Industry Leadership

Founded in 1938, Acme Engineering and Manufacturing Corporation is known worldwide as a leader in the manufacture of fans, blowers, and ventilation equipment. Acme's growth over the past half century is a tribute to superior quality, customer loyalty, and dedicated employees and sales representatives.

Today, from its headquarters in Muskogee, Oklahoma, Acme serves customers worldwide with high quality air movement and control products.

Manufacturing

With approximately 350,000 square feet of manufacturing space, Acme produces one of the broadest lines of air moving equipment in the industry. State-of-the-art manufacturing equipment and a well trained, experienced workforce is the key to Acme's timely delivery of quality air moving products.

Research and Testing

The Acme Research and Development Center operates both air and sound laboratories. The Center houses four wind tunnels with a data acquisition system, a reverberant sound room with the latest sound analyzer equipment, and a structural laboratory for stress and vibration analysis. Solid modeling, and finite element analysis support product research and development. The Center also houses a fully equipped prototype facility enabling Acme to develop and introduce new products to the market in the shortest time possible.

Sales & Service

A factory trained, knowledgeable sales organization addresses the needs of many diverse and distinct markets. Customers around the world are serviced by a complete system of sales representatives, equipment distributors and local dealers supported by nationwide distribution centers and backed by a staff of sales and marketing professionals.

Quality

A highly trained production staff sets the standard for dependable, quality air moving products. By using the latest computer techniques for research and design, and rigorous quality control standards Acme can offer one of the best warranty programs in the industry. Our exclusive 2/5 year limited warranty provides our customers with confidence...Year After Year.











CONSTRUCTION FEATURES

TABLE OF CONTENTS
Construction Features 3
Optional Coatings 3
Optional Accessories 4
Dimensions 5
Typical Specifications 6
FANtastic!6
Performance Data 7
Weights 7

FRAME

All welded construction. Deep rolled streamlined orifice for most efficient performance. Panel section of 42" thru 72" sizes reinforced with angle frame. Heavy wall steel tubing for greatest structural strength. *Designed to operate in any position.*

HEAVY-DUTY ALUMINUM PROPELLER

Circular-arc blades provide higher air flow capacity and smoother operation. Blades heavily reinforced. Propeller precision balanced on corrosion resistant coated shaft. Steel propeller available as option.

BEARINGS

Self-aligning unitary pillow-block ball bearings sized for high overload capacity and long trouble free operation. Pre-lubricated and double sealed requiring a minimum amount of maintenance.



MOTOR

Continuous duty type, shielded ball bearings. Mounted on rails for convenient belt adjustment. K fans should operate at $104^{\circ} \cdot F$ (40° C) or less ambient temperature.



Model K Series

DRIVE

For those air moving applications demanding unusual ruggedness and stable performance at higher static pressures.

All fans factory tested and shipped fully assembled.

All fans furnished with heavy-duty static frequency oil and heat resistant V belts. Drives are 1 or 2 belt combinations depending on horsepower. Sheaves constructed of cast iron.

STANDARD FINISH

An acrylic epoxy is standard on the frame and orifice of all K fans and is optional on the aluminum propeller. It is a multi-purpose finish that provides resistance to many chemicals and corrosive agents. Metal surfaces are prepared prior to painting by an icon phosphate process (size 72 has a vinyl wash primer) for rust protection and bonding of the paint to the base metal.

ACRYLIC EPOXY COATING

Acrylic Epoxy finish is the standard finish for all K fans. Metal surfaces are prepared prior to painting by an iron phosphate process (72" has a vinyl wash primer).

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.

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 decorative or special coatings. A high turbulence oven is used to produce a baked on finish for most special coatings. Decorative coatings are air dried.

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

Acrylic Epoxy This product provides a more durable surface.

Carboline Sanitile (Eisenheiss) This air dry synthetic polyester forms a black coating that offers greater resistance to most organic and inorganic acids.

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 ultimate effect on the coating and equipment due the corrosive agent, its concentration, temperature and moisture content.

OPTIONAL ACCESSORIES

HEAVY DUTY WALL SHUTTERS

EXCEPTIONALLY QUIET Nylon bearings practically eliminate the rattle prevalent in ordinary shutters.

CONSTRUCTION Rigid corrosion resistant galvanized steel frame, double tie rods. Industrial weight aluminum blades reinforced with steel rods. Splash proof weather seal integral with frame. Counterbalanced blades open easier, permit higher fan capacity. Each blade has a formed reinforcement member providing triple strength and rigidity.



NYLON BEARINGS Utilizes rust resistant stainless steel hinge pins to insure easy positive blade action. Corrosion resistant, helps prevent shutter sticking. Suitable for dusty or humid applications. Tough, wear resistant, more years of trouble free operation.

Supply type fans utilizing a motorized wall shutter must have a time delay switch in the fan motor control circuit to allow the shutter to fully open before the fan is activated. A separate power relay is also needed to operate the fan motor. Order type WAGCH with motor operator for supply fans.

	AUTOMATIC SHUTTER DIMENSIONS														
Fan Size	Model	:	Ship Wt.	s Of	hutter bening Size	Overall Size									
		lbs.	kg	in	mm	in	mm								
24"	WAGH3030	19	9	27 x 27	686 x 686	30 x 30	762 x 762								
30"	WAGH3737	26	12	34 x 34	864 x 864	37 x 37	940 x 940								
36"	WAGH4545	33	15	42 x 42	1067 x 1067	45 x 45	1143 x 1143								
42"	WAGH5252	45	20	49 x 49	1245 x 1245	52 x 52	1321 x 1321								
48"	WAGH6060	61	28	57 x 57	1448 x 1448	60 x 60	1524 x 1524								
54"	WAGH6767	148	67	64 x 64	1626 x 1626	67 x 67	1702 x 1702								
60"	WAGH7575	171	78	72 x 72	1829 x 1829	75 x 75	1905 x 1905								
72"	WAGH9090	216	98	87 x 87	2210 x 2210	90 x 90	2286 x 2286								

SAFETY GUARDS

Extruded aluminum framed guards model BA for back (motor side) and model FA for front of fan. Constructed of ½" x 1" mesh heavy gauge welded galvanized wire. Open on all sides for maximum air flow. Guards are shipped knocked down. Easily assembled with connecting clips. Bolts to fan frame. Easily removed for servicing fan. Guards are optional.



CAUTION! 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.



Single Panel up to WAGH3737



Double Panel WAGH4545 thru WAGH6060



Quadrant Frame WAGH6767 thru WAGH9090 (Shipped Knocked-Down)

DIMENSIONS

	EXHAUST FAN DIMENSIONS														
	•					<u> </u>		`		*		-	Shaft	Metal C	Gauges
Fan Size		•	В		C C			U		Ľ		г ,	Size	Orifico	Blades
	in	mm	in	mm	in	mm	in	mm	in	mm	in	mm	in	Offlice	in
24	30.00	762	20.25	514	4.00	102	1.75	44	8.00	203	3.00	76	1.00	16	.125
30	37.50	953	26.00	660	5.75	146	1.75	44	10.00	254	3.75	95	1.187	16	.125
36	45.00	1143	25.50	648	5.75	146	1.75	44	12.00	305	4.50	114	1.187	16	.125
42	52.50	1334	30.00	762	5.00	127	2.00	51	15.00	381	3.38	86	1.437	16	.125
48	60.00	1524	30.00	762	4.50	114	2.00	51	16.00	406	6.00	152	1.437	14	.125
54	67.50	1372	30.75	781	5.00	127	2.00	51	15.00	381	3.75	95	1.437	14	.125
60	75.00	1905	34.50	876	6.00	152	2.00	51	16.00	406	5.50	140	1.687	14	.125
72	90.00	2286	35.00	889	5.75	146	2.50	64	18.00	457	9.00	229	1.687	14	.125

* K42 through K48 - 4 holes; K54 through K72 - 5 holes.





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.

	SUPPLY FAN DIMENSIONS														
				•		-		-		-	Shaft	Metal Gauges			
Fan Size	,	•	В		U			=			Size	0.17	Blades		
	in	mm	in	mm	in	mm	in	mm	in	mm	in	Orifice	in		
24	30.00	762	25.00	635	1.75	44	8.00	203	3.00	76	1.00	16	.125		
30	37.50	953	29.00	736	1.75	44	10.00	254	3.75	95	1.188	16	.125		
36	45.00	1143	31.50	800	1.75	44	12.00	305	4.50	114	1.188	16	.125		
42	52.50	1334	32.00	813	2.00	51	15.00	381	3.75	86	1.188	16	.125		
48	60.00	1524	33.00	838	2.00	51	16.00	406	6.00	152	1.438	14	.125		





.344 IN(9mm) HOLES

* 50 IN(13mm) HOLES ON 42 AND 48

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.

TYPICAL SPECIFICATIONS

The all welded heavy duty wall exhaust fan shall be propeller belt drive type, designed to operate in any position.

The precision balanced **propeller** shall be all aluminum with die-formed circular-arc airfoil blades attached to a special die-formed spherical hub or to a special cylindrical hub.

The acrylic epoxy finish fan **housing** shall be constructed of heavy duty steel with heavy wall steel tubing structural frame and a deep rolled streamlined orifice for increased efficiency.

Pre-lubricated double sealed unitary pillow block bearings shall be used for accurate alignment and are rated at a L-50 life of 200,000 hours. Bearings shall have external lubrication fittings.

Sealed ball bearing motors shall be adjustable on the motor slide rail base for belt adjustment.

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

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.

Thermal overload protectors shall be standard on all single phase ($\frac{1}{4}$ through $\frac{1}{2}$ HP) totally enclosed and all EP (explosion resistant) motors.

Fans shall be model K as manufactured by Acme Engineering and Manufacturing Corporation of Muskogee, Oklahoma.

Because of constantly changing developmental research, Acme must reserve the right to change specifications without notice.



FANtastic!®

Fan Selection Program

FANtasticl® is a Windows® based fan selection program with user friendly menus and full project management capabilities for over a dozen methods of reporting. FANtasticl® supports all Acme fan lines with performance and sound ratings. The user has the ability to plot performance curves to any graphics screen and to a wide variety of printers. If required, appurtenance derating factors for drive losses, etc. are available. Batch processing allows for printouts to be printed during off-hours. All data is available in any combination of

PERFORMANCE DATA

										LICENS	SED CFM	, SONES	SVSSTA		SSURE							Max
FAN	Fan Model	FAN RPM	ΗP	.0	00	.1	25	.2	50	.3	75	.5	00	.6	25	.7	50	1.0	000	1.2	:50	BHP
0.22	model	i a m		CFM	Sones	CFM	Sones	CFM	Sones	CFM	Sones	CFM	Sones	CFM	Sones	CFM	Sones	CFM	Sones	CFM	Sones	•
24"	K24F K24G K24H K24J	950 1090 1250 1375	131/341	5300 6080 6980 7670	17 21 24 26	4850 5700 6640 7370	20 23 27 28	4210 5200 6250 7020	22 26 31 32	2820 4500 5760 6640	23 29 33 35	3000 5130 6170	29 36 38	4060 5550	37 34	4570	40					.39 .58 .85 1.12
30"	K30G K30H K30J K30K K30L	748 856 942 1078 1187	×2×1 1×2 1×2	8220 8780 9660 11060 12170	19 23 25 33 35	7450 8170 9120 10590 11750	21 25 27 37 39	6430 7270 8430 10060 11300	24 27 32 41 44	4200 5940 7340 9320 10740	25 30 34 43 47	5930 8320 9940	38 45 49	7170 9020	48 51	5580 7970	53 54					.56 .83 1.09 1.62 2.15
36"	K36J K36K K36L K36M K36N	698 799 880 1007 1193	1 1½ 2 3 5	13150 15050 16580 18970 22480	20 24 26 32 43	12200 14250 15950 18400 22000	21 26 25 32 42	11000 13350 15150 17700 21450	24 27 27 33 42	9300 12150 14200 17000 20850	34 33 32 35 45	10450 12900 16050 20200	44 41 41 47	11200 15000 19500	50 48 54	13650 18800	68 59	1670	78	13600	88	1.07 1.59 2.13 3.17 5.24
42"	K42K K42L K42M K42N	620 683 781 926	1½ 2 3 5	18440 20310 23230 27540	23 26 35 68	17300 19200 22350 26750	24 27 34 60	15750 17900 21250 25900	30 32 38 64	13600 16250 20000 25000	35 37 44 69	13900 18500 24000	46 48 70	16500 22800	50 65	13300 21400	45 67	17300	71			1.58 2.11 3.15 5.23
48"	K48K K48L K48M K48N K48P	511 562 643 763 874	1½ 2 3 5 7½	21550 23700 27120 32180 36870	29 34 39 57 66	19600 21900 25600 31100 35900	33 35 39 61 66	17100 19800 23900 29800 34800	32 34 39 65 66	17200 21800 28400 33700	35 39 66 65	19200 26600 32400	43 63 65	24600 31000	64 65	21200 29300	66 66	23000	76			1.60 2.13 3.17 5.29 7.94
54"	K54K K54L K54M K54N K54P K54R	421 463 530 628 719 792	1½ 2 3 5 7½ 10	25200 27710 31720 37590 43030 47400	24 28 35 47 60 71	22600 25400 29600 35700 41600 46000	24 28 35 47 60 71	18900 22300 27400 33900 40100 44800	25 28 35 47 60 71	24300 31800 38500 43300	36 47 60 70	29300 36400 41800	48 60 70	25900 34400 40000	53 61 71	31700 38000	63 71	31800	80			1.60 2.12 3.17 5.27 7.91 10.56
60"	K60L K60M K60P K60R K60S	389 445 528 604 665 761	2 3 5 7 1/2 10 15	31850 36440 43230 49450 54450 62300	25 32 43 54 65 83	28600 33700 41000 47500 52700 60800	25 32 42 54 65 83	24600 30500 38500 45500 50700 59200	27 32 42 54 65 82	25900 35600 43200 48700 57500	35 43 54 65 82	31900 40700 46400 55600	46 55 65 82	37500 43800 53800	57 66 82	41000 51600	67 82	46800	85			2.12 3.16 5.26 7.89 10.53 15.77
72"	K72M K72N K72P K72R K72S	329 390 447 492 563	3 5 7 <u>/</u> 2 10 15	46360 54950 62980 69320 79330	27 36 46 54 70	42000 51300 59700 66300 76900	27 36 46 54 69	36000 47500 56200 63400 74200	29 36 45 54 69	41400 52200 59900 71500	38 46 54 69	47400 55900 68200	48 55 70	50800 64700	58 70	60700	72					3.15 5.25 7.90 10.52 15.77

Performance shown is for Installation Type A - Free Inlet, Free Outlet. Performance ratings do not include the effects of appurtenances in the airstream. Power rating (BHP) does not include drive losses.

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.

 MAX BHP: The brake horsepower capability of a fan motor is dependent on the degree of cooling the motor receives from the moving air stream over the motor. The motor loading beyond the motor nameplate rating on Acme built fans does not overheat the motor and is within NEMA recommended limits. It is therefore not detrimental to the motor and is economically desirable.

Models numbers shown are for Exhaust Fans with standard direction of air flow (motor on intake side of propeller). To order Supply with direction of air flow reversed (motor on discharge side of propeller) add letter "R" to Model number. EXAMPLE: K-R54L. K54, 60 & 72 not available as supply type.

WEIGHTS

FAN SIZE	FAN MODEL	FAN Est. UI MODEL Weigh		Est. Ship Weight*		FAN	FAN MODEL	Est. Unit Weight		Est. Ship Weight *		FAN	FAN MODEL	Est. Unit Weight		Est. Ship Weight*		FAN	FAN MODEL	Est. Unit Weight		Est. Ship Weight	
SIZE	Exhaust	lbs.	kg.	lbs.	kg.	JIZE	Exhaust	lbs.	kg.	lbs.	kg.	SIZE	Supply	lbs.	kg.	lbs.	kg.	SIZE	Supply	lbs.	kg.	lbs.	kg.
24"	K24F K24G K24H K24J	106 110 113 131	48 50 51 59	152 156 159 177	69 71 72 80	48"	K48K K48L K48M K48N K48P	258 264 344 364 425	117 120 156 165 193	455 461 541 561 622	206 209 245 254 282	24"	K-R24F K-R24G K-R24H K-R24J	111 115 118 136	50 52 53 62	157 161 164 182	71 73 74 83	48"	K-R48K K-R48L K-R48M K-R48N K-R48P	265 271 401 371 502	120 123 182 168 228	502 468 548 568 629	213 216 252 261 289
30"	K30G K30H K30J K30K K30L	144 147 165 176 182	65 67 75 80 83	197 200 218 229 235	89 91 99 104 107	54"	K54K K54L K54M K54P K54R	376 382 449 472 529 583	171 173 204 214 240 264	585 591 658 681 738 792	265 268 298 309 335 359	30"	K-R30G K-R30H K-R30J K-R30K K-R30L	150 153 171 182 188	68 69 78 83 85	203 206 224 235 241	92 94 102 107 109						
36"	K36J K36K K36L K36M K36N	206 217 222 249 269	93 98 101 113 122	276 287 292 319 339	125 130 132 145 154	60"	K60L K60M K60N K60P K60R K60S	498 525 545 597 653 724	226 238 247 271 296 328	769 796 816 868 924 995	349 361 370 394 419 451	36"	K-R36J K-R36K K-R36L K-R36M K-R36N	214 325 300 257 277	97 148 136 117 126	284 305 300 327 347	129 138 136 148 158						
42"	K42K K42L K42M K42N	226 230 315 335	103 104 143 152	391 395 480 500	177 179 218 227	72"	K72M K72N K72P K72R K72S	715 735 805 842 916	324 333 365 382 415	1028 1048 1118 1155 1229	466 475 507 524 557	42"	K-R42K K-R42L K-R42M K-R42N	231 235 320 340	105 107 145 154	396 400 485 505	180 182 220 229						

* Based on drip proof (open) motors 1 HP and up.



LIMITED WARRANTY Acme Engineering and Man ufacturing Corporation warrants the prod ucts man u fac tured by Acme to be free from original defects in work man ship and mate rial for two years subject to the terms and conditions of its published limited warranty. War ranties on pur chased prod ucts are subject to the ven dor's warranty. Refer to cur rent Form MS149 for complete limited warranty terms and con di tions.

WARNING Acme products are de signed and manufactured to provide reliable performance but they are not guaranteed to be 100% free of de fects. Even re li able products will experience occasional failures and this possibility should be recognized by the User. If these products are used in a life support ventilation system where fail ure could result in loss or in jury, the User should provide ad equate back-up ventilation, supplementary nat u ral ven tilation or fail ure alarm system, or acknowl edge will ing ness to accept the risk of such loss or in jury.

WARNING DO NOT use in HAZ ARD OUS EN VI RON MENTS where fan's elec tri cal sys tem could pro vide ig ni tion to com bus ti ble or flammablematerials unless unitis specifically built for haz ard ous en viron ments. **CAU TION** Guards must be in stalled when fan is within reach of per son nel or within seven (7) feet (2.134 m) of working level or when deemed ad vis able for safety.

DISCLAIMER The Com pany has made a diligent ef fort to il lus trate and de scribe the products in this lit era ture ac cu rately; how ever, such il lus tra tions and de scrip tions are for the sole pur pose of iden ti fi ca tion, and do not ex press or imply a war ranty that the products are merchant able, or fit for a par ticu lar pur pose, or that the products will nec es sar ily con form to the illus trations or de scrip tions or dimen sion.



ACME ENGINEERING & MANUFACTURING CORP.

P.O. Box 978, Muskogee, Oklahoma 74402 Telephone: 918-682-7791 Fax: 918-682-0134 www.acmefan.com e-mail: acmefan@acmefan.com Member Air Movement and Control Association