

# UPBLAST EXHAUSTERS

JetMaster®  
Model UBH,  
UBH-UF &  
UBH-SE



**SYMBOL  
OF QUALITY**

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## MODEL UBH Tube Axial Belt Drive Upblast Roof Exhauster

The rugged design of the UBH is best suited for commercial roof exhaust applications where conditions require the motor, drives, and bearings to be out of the airstream. The high velocity upblast discharge of the UBH disperses air high above the building's roof. The UBH mounts directly over the roof opening for efficient exhaust from ducts or open areas. Models are available in 9 sizes ranging from 16 to 60 inches with a CFM range of 1757 to 61,236 and static pressures up to  $\frac{1}{4}$  inch. UBH exhausters are capable to handle temperatures up to 200°F.



Acme Engineering & Manufacturing Corp. certifies that Upblast Roof Exhauster Models UBH, UBH-UF and UBH-SE shown on page 5 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.



Most Acme JETMASTER™ fans bear the U.L. listing mark. Consult the Acme representative for availability.



Most Acme JETMASTER™ fans are listed by the Canadian Standards Association Testing Laboratory as approved. Consult the Acme representative for availability.



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## CONSTRUCTION FEATURES

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### WINDBAND

Windbands are made of heavy gauge steel with a flange at the top to provide extra strength and protection from driving crosswinds. A channel type cross tie member provides additional lateral rigidity for the windband and serves as an open position stop for butterfly dampers.

### BUTTERFLY DAMPERS

Butterfly dampers automatically swing up to full open position to permit free passage of exhaust air and fumes. They automatically close when the fan is turned off. Constructed of heavy gauge aluminum and reinforced with two full length hinge brackets for extra durability.



### STAINLESS HINGE PINS

Positive damper action is insured by stainless steel hinge pins in nylon bearings for quieter, low friction operation. No lubrication required.

### MAGNETIC LATCHES/DRAINAGE TROUGH

Weather protection is provided by magnetic latches that hold dampers closed when the exhauster is not in use. A water trough is positioned under the butterfly damper hinge to provide drainage for rain, melting ice, and snow.

### RUBBER BUMPERS

Dampers open and close against rubber bumpers for quieter operation.

### PROPELLERS

Propellers utilize the high efficiency circular arc airfoil blade design. Constructed of all welded heavy gauge aluminum (except UBH54, UBH-UF and UBH-SE Models, which are steel). All other sizes available with steel construction. Precision balanced.

### HOUSING

Standard construction of windband, curb-base, housing and frame is of heavy gauge steel with an epoxy finish.

### DRIVES

All drives use heavy-duty type neoprene spark proof, oil, and heat resistant V-Belts. Drives are 1 or 2 belt combinations depending on horsepower. Motor and fan sheaves are cast iron.

### BEARINGS

Pre-lubricated bearings are used in a duplex split pillow block bearing housing. 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 an L-50 life of 200,000 hours. Acme provides a **5 Year Limited Warranty** on duplex split pillow block bearings and shaft. Unitary pillow block bearings are used on UBH60, UBH-UF and UBH-SE models.

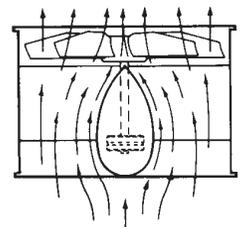


### MOTOR WEATHER COVER

Motor weather covers protect motor and drive from adverse weather conditions.

### STREAMLINED BELT & BEARING ENCLOSURE

Full streamline virtually eliminates the turbulence and air drag produced by conventional belt enclosures. Bearings are ventilated with outside air for cooler operation. Maximum recommended temperature of UBH model not to exceed 200°F.



### EPOXY FINISH

A tough baked-on acrylic epoxy is the standard finish inside and out for all steel parts. Access door, motor cover, aluminum prop, and butterfly dampers are not coated. Attractive in appearance, it is a multi-purpose finish that provides exceptional resistance to attack by many chemicals and corrosive agents. Metal surfaces are prepared prior to painting by an iron phosphate process for superior rust protection and bonding of the paint to the base metal.

# HIGH TEMPERATURE AND SMOKE EXHAUST APPLICATIONS

UBH Upblast Exhausters are available with special construction features that meet or exceed the requirements for emergency high temperature exhaust and smoke removal applications.

## Models UBH-UF and UBH-SE

The UBH-UF and UBH-SE Upblast Exhausters are specially designed and constructed to remove high temperature exhaust and 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.

The UBH-SE Butterfly Damper meets the requirements of UL793 for snow loading.

**NOTE:** While Models UBH-UF and UBH-SE 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 UBH-UF	Model UBH-SE
Hi-Temperature Bearings	•	•
Copper Lubrication Lines	•	•
Dual Heat Resistant Belts	•	•
Heat Slinger	•	•
Steel Propeller	•	•
Motor Outside Airstream	•	•
Ventilated Belt and Bearing Enclosure	•	•
Fusible Link Damper Lifters	•	•
Fusible Link Damper Lifters - capable of lifting 10 lbs/sq. ft., meets UL 793		•
UL Listed "Power Ventilator for Smoke Control Systems"		•



## UBH, UBH-UF and UBH-SE PERFORMANCE DATA

FAN SIZE	MODEL No.	HP	RPM	TIP SPEED	MAX SONES	CFM VS. STATIC PRESSURE										MAX BHP*	SHIP WTS. LBS.
						.000	.125	.250	.375	.500	.625	.750	1.000	1.250			
16"	UBH16E	1/4	1800	7568	24	2273	2070	1794								.27	124
	UBH16F	1/3	1976	8308	28	2495	2310	2081	1757							.36	130
	UBH16G	1/2	2267	9532	32	2862	2702	2530	2304	2000						.54	132
	UBH16H	3/4	2600	10931	42	3283	3142	3002	2829	2631	2365	2064				.81	134
	UBH16J	1	2855	12004	48	3604	3477	3349	3217	3038	2854	2604	2074			1.08	138
18"	UBH18F	1/3	1510	7214	23	3118	2862	2552								.37	140
	UBH18G	1/2	1730	8266	27	3573	3349	3103	2795							.54	144
	UBH18H	3/4	1980	9460	34	4089	3893	3697	3456	3171	2670					.81	148
	UBH18J	1	2180	10416	38	4502	4324	4146	3950	3722	3437	2995				1.09	152
	UBH18K	1 1/2	2495	11921	47	5153	4997	4842	4686	4506	4308	4105	3316	2605		1.63	156
24"	UBH24G	1/2	1090	6950	19.2	5488	4976	4292								0.50	367
	UBH24H	3/4	1250	7980	28	6294	5852	5327	4624							0.75	372
	UBH24J	1	1375	8770	36	6923	6521	6072	5549	4780						1.00	379
	UBH24K	1 1/2	1600	10200	45	8056	7711	7365	6939	6496	5866	4875				1.53	388
	UBH24L	2	1730	11040	53	8711	8391	8072	7706	7306	6835	6252	4633			2.00	399
	UBH24M	3	1945	12400	64	9793	9509	9225	8941	8589	8233	7850	6765			2.83	410
30"	UBH30H	3/4	856	6830	21	8820	8300									.75	568
	UBH30J	1	942	7520	27	9740	9260	8360								1.00	574
	UBH30K	1 1/2	1078	8600	38	11110	10400	9750	8850	7650						1.50	583
	UBH30L	2	1187	9480	45	12130	11580	10920	10160	9340	7920					1.95	596
	UBH30M	3	1358	10850	53	14000	13610	13040	12410	11720	11030	10080				3.00	607
	UBH30N	5	1644	13140	71	16946	16519	16085	15639	15171	14671	14129	12842			5.30	615
36"	UBH36J	1	698	6670	27	12500	11230									1.07	805
	UBH36K	1 1/2	799	7640	31	14310	13230	11840								1.60	812
	UBH36L	2	880	8410	37	15770	14850	13600	12080							2.14	823
	UBH36M	3	1007	9620	61	18040	17230	16200	15090	13660	11990					3.20	832
	UBH36N	5	1193	11400	71	21380	20700	19950	19100	18160	16940	15810	12230			5.33	840
42"	UBH42K	1 1/2	620	6900	28	18330	16870	15160								1.73	1046
	UBH42L	2	683	7600	32	20190	18900	17510	15750							2.30	1049
	UBH42M	3	781	8690	47	23070	21960	20740	19300	17710	14760					3.43	1058
	UBH42N	5	926	10300	54	27860	26390	25450	24420	23230	21950	20580				5.73	1073
	UBH42P	7 1/2	1060	11800	77	31400	30580	29740	28910	28030	26500	25870	23320			8.66	1148
	UBH42R	10	1170	13025	95	34584	33779	32974	32169	31364	30463	29546	27651			10.91	1178
48"	UBH48K	1 1/2	498	6320	30	22115	20400									1.48	1366
	UBH48L	2	548	6960	36	24330	22830	20570								1.96	1375
	UBH48M	3	627	7960	55	27840	26500	24930	22660	19390						2.94	1384
	UBH48N	5	743	9430	68	33000	31930	30740	29240	27300	24770	21780				4.90	1394
	UBH48P	7 1/2	851	10800	78	37770	36890	35870	34670	33310	31770	29720	24600			7.36	1475
	UBH48R	10	936	11900	92	41580	40800	39860	38730	37790	36470	34970	31400			9.80	1506
54"	UBH54K	1 1/2	416	5881	21	23074	20424	17140								1.71	1566
	UBH54L	2	458	6475	25	25403	23014	20325	16254							2.30	1575
	UBH54M	3	524	7408	30	29064	26989	24793	22144	18038						3.41	1584
	UBH54N	5	621	8779	40	34444	32700	30910	29003	26788	23991					5.76	1594
	UBH54P	7 1/2	711	10052	53	39436	37916	36373	34780	33088	31186	28907				8.56	1676
	UBH54R	10	783	11069	61	43430	42050	40657	39234	37761	36198	34463	30122			11.55	1706
	UBH54S	15	870	12299	73	48255	47014	45765	44500	43207	41873	40472	37262	33186		15.85	1766
60"	UBH60M	3	432	6786	28	32579	29779	26713	22539							3.24	1952
	UBH60N	5	510	8011	36	38416	36104	33652	30906	27359						5.31	2072
	UBH60P	7 1/2	590	9268	45	44494	42462	40387	38210	35793	32848					8.15	2175
	UBH60R	10	640	10053	54	48265	46393	44494	42532	40447	38096	35275				10.43	2218
	UBH60S	15	750	11781	69	56560	54965	53358	51724	50047	48300	46432	41960	35497		16.73	2395
	UBH60T	20	812	12755	82	61236	59763	58282	56784	55258	53691	52061	48432	43912		21.39	2455

Performance shown is for Installation Type A: Free Inlet, Free Outlet.

Performance ratings do not include the effects of appurtenances in the airstream.

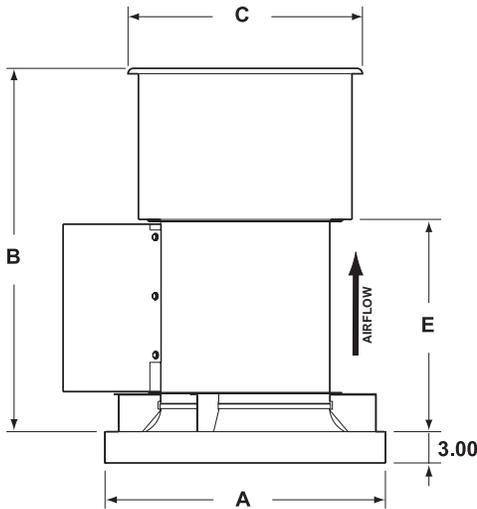
\*Power rating (BHP) does not include drive losses.

The sound ratings shown are loudness values in fan sones at 5 feet (1.5 m) in a hemispherical free field calculated per AMCA Standard 301.

Values shown are for installation Type A: Free Inlet fan sone levels.



## DIMENSIONAL DATA



FAN SIZES	A	B	C	E	CURB MODEL
16"	27	34	22 <sup>1</sup> / <sub>2</sub>	14 <sup>1</sup> / <sub>2</sub>	C25.5
18"	31	35	24 <sup>1</sup> / <sub>2</sub>	15 <sup>1</sup> / <sub>2</sub>	C29.5
24"	38	40 <sup>3</sup> / <sub>4</sub>	30	20	C36.5
30"	46	54 <sup>1</sup> / <sub>4</sub>	37 <sup>1</sup> / <sub>2</sub>	25	C44.5
36"	52 <sup>1</sup> / <sub>2</sub>	64 <sup>7</sup> / <sub>8</sub>	45	30 <sup>7</sup> / <sub>8</sub>	C51
42"	60	67 <sup>3</sup> / <sub>8</sub>	52 <sup>1</sup> / <sub>2</sub>	32 <sup>3</sup> / <sub>8</sub>	C58.5
48"	64	74 <sup>3</sup> / <sub>4</sub>	60	37 <sup>1</sup> / <sub>4</sub>	C62.5
54"	67	84 <sup>7</sup> / <sub>8</sub>	67 <sup>1</sup> / <sub>2</sub>	41 <sup>1</sup> / <sub>4</sub>	C65.5
60"	75	94 <sup>3</sup> / <sub>8</sub>	75	46 <sup>1</sup> / <sub>2</sub>	C73.5

All dimensions shown in inches

Typical drawing for dimensional purposes only, which is correct within limits suitable for normal installation requirements, and does not necessarily show actual construction.

## TYPICAL SPECIFICATIONS

Roof exhaust fan shall be propeller belt drive tubeaxial type.

The precision balanced propeller shall be all aluminum with die-formed circular-arc airfoil blades attached to a special die-formed spherical hub for high airflow capacity.

The fan housing shall consist of a windband, curb base/orifice assembly, motor weather cover and tube with full streamline belt and bearing enclosure to increase efficiency. The windband shall have a rolled flange for strength and have an integral channel cross member with rubber bumpers for damper stops and lifting brackets. The deep drawn orifice shall be die-formed. Butterfly damper should include a rubber bumper strip for quiet opening and closing. Heavy duty structural steel brackets shall transmit the weight of the motor, propeller, butterfly dampers and tube directly to the curb base/curb to prevent orifice distortion. The tube shall have an access door (except sizes 16-36) for internal inspection and an integral rolled flange for structural rigidity and to eliminate leakage at the flange connection.

Butterfly dampers shall be constructed of aluminum and have stainless steel hingepins which rotate freely in nylon bearings requiring no lubrication. An internal double outlet drainage trough and magnetic latches give greater weather protection.

Pre-lubricated ball bearings shall be mounted in a duplex split pillow block housing for accurate alignment and are rated at a L-50 life of 200,000 hours. Bearings shall be resiliently mounted in neoprene rings providing protection and vibration isolation. Model UBH60 shall be with unitary pillow block bearings.

Drives shall be cast iron pulleys with static conducting, oil and heat resistant belts and shall be designed for 1.50 service factor.

Sealed ball bearing motors shall be adjustable on the motor base.

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 available for single phase motors (1/2 thru 3/4 HP).

Fan shall be supplied with a two year limited warranty and a 5 year limited warranty on the duplex split pillow block bearings and shaft.

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



## OPTIONAL ACCESSORIES

### PREFABRICATED CURBS

Heavy gauge galvanized steel curbs for easy installation of exhauster over roof openings. Acoustically lined and thermally insulated with 1<sup>1</sup>/<sub>2</sub>" thick, rigid fire resistant glass fiber to reduce heat transfer.

### SELF-FLASHING TYPE (SF)

Features continuous welded and mitered corner seams with wide base flange for easy flashing to roof. Curb top has foam rubber gasket for better weather seal. Self-flashing type curbs are also available in a single or double pitch roof style.

### ROOFED-OVER TYPE (RF)

Features cant strip to accommodate roofing material for flashing up over top of curb. Wood nailer is standard. Also available in single or double pitched roof style.

### FUSIBLE HEAT RELEASE TRIP

Automatically opens butterfly dampers when temperature exceeds predetermined temperature setting to provide venting of heat and smoke in case of fire. Strong torsion spring actuated by melting type fusible link, completely independent of fan operation with no motors, switches or electrical power required. Standard on UBH-UF and UBH-SE models.

### DISCONNECT SWITCHES

Available with NEMA 3R raintight disconnect switches, can be factory mounted and wired.

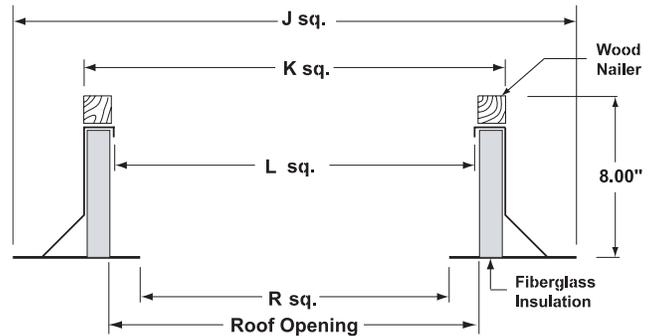
### OUTLET SCREEN

Outlet screens available to protect dampers and fan from debris.

### INLET GUARDS

Protective guards for the fan inlet to provide protection for the fan and nearby personnel.

### TYPICAL ROOF CURB



Fan Model	J	K	N	M	H
UBH16	/	/	/	/	8
UBH18	/	/	/	/	8
UBH24	/	/	/	/	8
UBH30	/	/	/	/	8
UBH36					8
UBH42	/	/	/	/	8
UBH48	/	/	/	/	8
UBH54	/	/	/	/	8
UBH60	/	/	/	/	8

All dimensions shown in inches.

### ACCESS DOOR

Access door available for inspecting fan components, maintenance and servicing. Standard on UBH42-60.

### SHAFT SEALS

A shaft seal is available to protect the bearings from contaminants. Not available for fans with high temperature options.

## OPTIONAL COATINGS

Products receiving protective coatings have each component part painted before assembly.

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

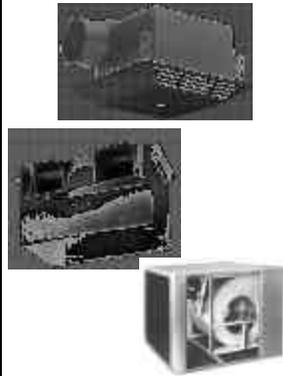
**CENTRIFUGAL VENTILATION FANS**



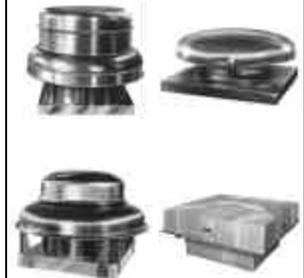
**DUCT FANS PROPELLER AND INLINE CENTRIFUGAL**



**CEILING, INLINE AND CABINET FANS**



**CENTRIFUGAL & PROPELLER ROOF EXHAUST FANS**



**CENTRIFUGAL & PROPELLER ROOF SUPPLY FANS**



**CENTRIFUGAL AND PROPELLER UPBLAST ROOF EXHAUSTERS**



**CENTRIFUGAL INDUSTRIAL PROCESS FANS**



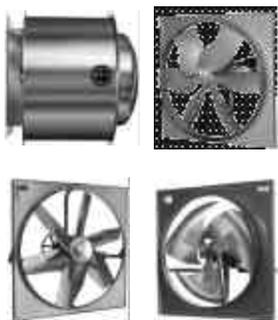
**CENTRIFUGAL HEAVY DUTY INDUSTRIAL FANS**



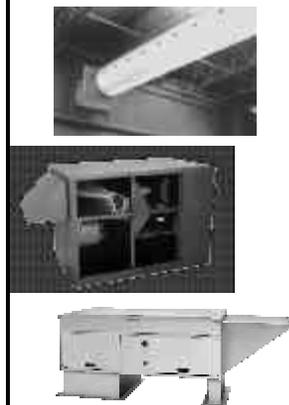
**CENTRIFUGAL AIR HANDLING FANS**



**CENTRIFUGAL AND PROPELLER WALL FANS**



**MAKE-UP AIR SYSTEMS**



**EXHAUST & SUPPLY VENTS**



**LIMITED WARRANTY** Acme Engineering and Manufacturing Corporation warrants the products manufactured by Acme to be free from original defects in workmanship and material for two years subject to the terms and conditions of its published limited warranty. Warranties on purchased products are subject to the vendor's warranty. Refer to current Form MS149 for complete limited warranty terms and conditions.

**WARNING** 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 User. If these products are used in a life support ventilation system where failure could result in loss or injury, the 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.

**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.

**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, or that the products will necessarily conform to the illustrations or descriptions or dimension.



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