UPBLAST EXHAUSTERS

JETMASTER®
Model UD

ACME

SYMBOL OF QUALITY

ACME ENGINEERING & MANUFACTURING CORP. • MUSKOGEE, OKLAHOMA

DIRECT DRIVEN UPBLAST PROPELLER EXHAUSTERS

FORM C161A
SECTION 4

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MODEL UD

Upblast Roof Exhauster

Direct Drive

The unique Acme design of the UD features a low silhouette to harmonize with modern building construction trends. The UD has a deep drawn, streamlined orifice and high efficiency propeller that results in a high volume vertical exhauster at minimum horsepowers. Available in 7 sizes with a range of 2,560 to 25,130 CFM and static pressures up to one-half inch.

CONSTRUCTION FEATURES

WINDBANDS
Windbands are made of heavy gauge steel with a curled 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. Dampers 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.

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. Precision balanced.

HOUSING
Heavy gauge base housing has a deep drawn streamlined orifice. A special steel structural frame under the base of the exhauster extends out over the roof curb to carry the weight of the motor, fan and drive assembly on sizes 42 and 48. This provides a rugged support for the entire exhauster.

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.

amca CERTIFIED RATINGS SOUND and AIR PERFORMANCE AIR MOVEMENT AND CONTROL ASSOCIATION, INC.

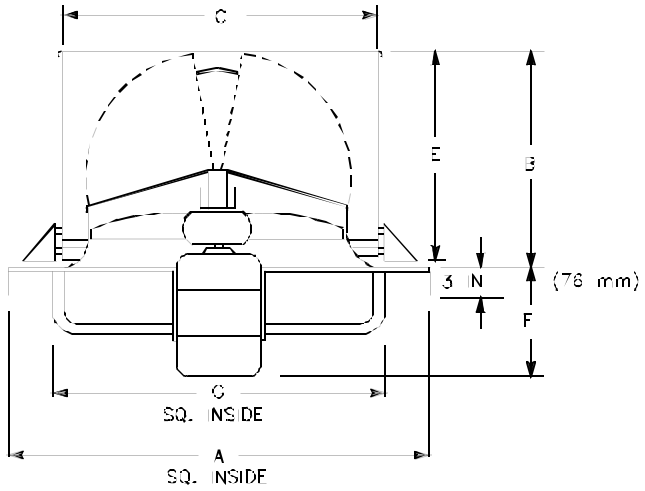
Acme Engineering & Manufacturing Corp. certifies that the JETMASTER® Upblast Roof Exhauster Model UD shown herein are licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 211 and AMCA Publication 311 and comply with the requirements of the AMCA Certified Ratings Program.

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.

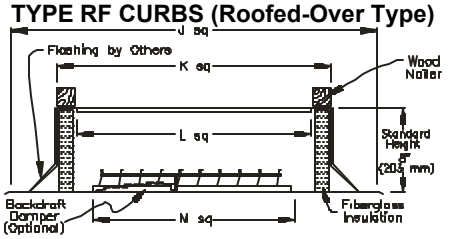
Most Acme JETMASTER® fans are listed by the Canadian Standards Association Testing Laboratory as approved.

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

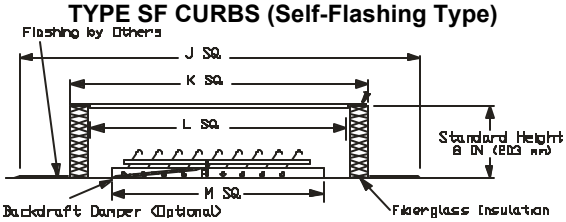
DIMENSIONAL DATA



TYPE RF CURBS (Roofed-Over Type)



TYPE SF CURBS (Self-Flashing Type)



DIMENSIONAL DATA

FAN SIZES	A		B		C		E		Fmax		G	
	IN	mm	IN	mm	IN	mm	IN	mm	IN	mm	IN	mm
18	31	787	16 1/2	419	22 1/2	572	15 1/2	394	12	305	22	559
21	34	864	19	483	26 1/4	667	17 1/2	445	14 1/4	362	26	660
24	38	965	21	533	30	762	20	508	14 7/8	378	29	737
30	46	1168	26 1/4	667	37 1/2	953	25	635	16 3/8	416	38	965
36	52 1/2	1334	31 1/2	800	45	1143	30	762	15 1/4	387	44	1118
42	60	1524	36	914	52 1/2	1334	34 1/2	876	19 1/2	495	52	1321
48	64	1626	38	965	60	1524	36	914	19 1/2	495	54	1372

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

CURB DIMENSIONS

Fan Size	Curb Model	J		K		L		M	
		IN	mm	IN	mm	IN	mm	IN	mm
18	C29.5	37 1/2	953	29 1/2	749	26 1/2	673	23 1/2	597
21	C32.5	40 1/2	1029	32 1/2	826	29 1/2	749	26 1/2	673
24	C36.5	44 1/2	1130	36 1/2	927	33 1/2	851	30 1/2	775
30	C44.5	52 1/2	1334	44 1/2	1130	41 1/2	1054	38 1/2	978
36	C51	59	1499	51	1295	48	1219	45	1143
42	C58.5	66 1/2	1689	58 1/2	1486	55 1/2	1410	52 1/2	1334
48	C62.5	70 1/2	1791	62 1/2	1588	59 1/2	1511	56 1/2	1435

Additional curb height, sloped roof curbs, or other curb variations available upon request, consult your representative.

PERFORMANCE DATA

PERFORMANCE TABLE

FAN SIZE	MODEL NO.	HP	RPM	TIP SPEED	MAX SONES	CFM VS. STATIC PRESSURE						MAX. BHP	SHIP WTS.	
						.000	.100	.125	.250	.375	.500		lbs.	Kg
18"	UD18-6	1/8	1160	5460	14	2730						.14	111	50
	UD18-6	1/6	1160	5460	14	3020	2560					.19	124	56
	UD18-4	1/4	1760	8290	26	3250	3100	3050	2730			.30	111	50
	UD18-4	1/3	1760	8290	23	3760	3540	3490	3100			.40	114	52
	UD18-4	1/2	1760	8290	27	4290	4120	4060	3720			.59	122	55
21"	UD21-6	1/3	1160	6370	19	4520	4110	3980				.37	173	78
	UD21-4	1/2	1760	9670	28	5230	4990	4920	4580			.58	163	74
	UD21-4	3/4	1760	9670	29	6160	5870	5800	5420			.88	161	73
	UD21-4	1	1760	9670	31	6530	6270	6190	5810			1.04	199	90
24"	UD24-6	1/2	1160	7280	20	6230	5760	5630	4880			.54	243	110
	UD24-6	3/4	1160	7280	23	7180	6680	6530	5680			.81	266	121
	UD24-4	1	1760	11050	37	7790	7530	7480	7100			1.13	266	121
	UD24-4	1 1/2	1760	11050	39	9230	8890	8800	8370			1.68	271	123
	UD24-4	2	1760	11050	39	10340	10000	9940	9500			2.26	276	125
30"	UD30-8	3/4	860	6750	20	9920	9040	8820	7380			.77	375	170
	UD30-8	1	860	6750	23	10880	9980	9740	8330			1.07	375	170
	UD30-6	3/4	1160	9110	39	9240	8750	8620	7970			.78	365	166
	UD30-6	1	1160	9110	29	10660	10100	9960	9200			1.04	370	168
	UD30-6	1 1/2	1160	9110	37	13100	12390	12220	11370			1.72	375	170
	UD30-6	2	1160	9110	38	14400	13700	13500	12610			2.24	424	192
36"	UD36-8	1	860	8100	32	13980	13080	12800	11500			1.15	541	245
	UD36-8	1 1/2	860	8100	33	16600	15650	15400	14040			1.70	548	249
	UD36-8	2	860	8100	36	18490	17400	17130	15600			2.23	555	252
	UD36-6	2	1160	10930	44	17000	16370	16200	15250			2.09	541	245
	UD36-6	3	1160	10930	53	20390	19700	19530	18600			3.13	555	252
42"	UD42-8	1 1/2	860	9460	35	17000	15900	15700	14200			1.72	616	279
	UD42-8	2	860	9460	33	18600	17400	17100	15600			2.03	626	284
	UD42-8	3	860	9460	43	23300	22100	21800	20400			3.43	636	288
48"	UD48-8	1 1/2	860	10810	36	16870	15380	15040	13440	11830	10270	1.61	654	297
	UD48-8	2	860	10810	39	19860	18610	18290	16610	14860	13080	2.02	664	301
	UD48-8	3	860	10810	41	25130	23950	23660	22140	20520	18702	3.04	674	306

Performance shown is for Installation Type A: Free Inlet, Free Outlet.
Performance ratings do not include the effects of appurtenances in the airstream.
Speed (RPM) shown is nominal. Performance is based on actual speed of test.

OPTIONAL ACCESSORIES

PREFABRICATED CURBS
Heavy gauge galvanized steel curbs for easy installation of exhauster over roof openings. Replaces conventional field constructed curbs for steel, concrete or wood roofs.

Acoustically lined and thermally insulated with 1 1/2" thick, rigid fire resistant glass fiber to reduce heat transfer.

Available in two types, SF and RF. Also available with galvanized steel liner.

SELF-FLASHING TYPE (SF)
Features continuous welded and mitered corner seams with wide base flange for easy flashing to roof. Eliminates need for extending roofing material up over top of curb. Curb top has foam rubber gasket for better weather seal. Self-flashing type curbs are also available in a single pitch roof style for installation on sloped roofs, or in a double pitch roof style for installation on the ridge. Specify roof pitch when ordered.

ROOF-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 styles.

FUSIBLE HEAT RELEASE TRIP
Automatically opens both butterfly dampers to provide venting heat and smoke in case of fire when inside temperature exceeds predetermined temperature setting . Strong torsion spring actuated by melting type fusible link, completely independent of fan operation with no motors, switches or electrical power required.

DISCONNECT SWITCHES:
Switch, when provided, is factory mounted on bottom side of exhauster base housing through 1 ½ horsepower single phase and 2 horsepower three phase. Switch extends through base and is operated from outside of exhauster for maximum safety when servicing. For 3 horsepower and above Nema 3R raintight switches mounted above curb cap.

OUTLET SCREEN
Outlet Screens available to protect dampers and fan from debris.

OPTIONAL COATINGS

PROTECTIVE COATING (OPTIONAL)
Products receiving protective coatings have each component part painted before assembly, thereby being painted on the interior as well as the exterior. Fasteners are not coated.

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.

TYPICAL SPECIFICATIONS

Low silhouette roof exhaust fan shall be direct drive propeller type.

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

The fan housing shall consist of a windband, curb base/orifice assembly and motor frame. The windband shall have a rolled flange for strength and have an integral channel cross member with rubber bumpers for damper stops. The deep drawn orifice shall be die-formed and include a rubber bumper strip for quiet butterfly damper closing. The heavy duty motor frame shall transmit the weight of the motor and propeller directly to the curb to prevent orifice distortion.

Butterfly dampers shall be constructed of aluminum and have stainless steel hingepins which rotate freely in nylon bearings requiring no lubrication. Shall be constructed with an internal double outlet drainage trough and magnetic latches to provide weather protection.

Sealed ball bearing motors shall be adjustable on motor base.

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

Fans with totally enclosed motors shall be listed by Underwriters Laboratories (UL705).

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 on single phase motors (1/2 thru ¾ HP).

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

WARRANTY INFORMATION

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 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.