UB3400

Upblast Propeller Roof Exhauster

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MOFFITT CORPORATION
NATURAL VENTILATION SOLUTIONS

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UB3400 Propeller Upblast Roof Exhauster Product Details

STANDARD FEATURES

- Sizes: 24" – 120"
- CFM Range: 5,000 – 100,000 +
- Belt drive motor
- Statically and Dynamically Balanced Aluminum Propeller
- All Galvanized Steel Construction
- Variable Pitch Drives Standard Through 3HP
- Drives Sized for a Minimum 150% of Drive Horsepower
- 1 Year Fan and Motor Warranty
- Removable Panel for Easy Damper Access
- Heavy Duty 200,000 Hour Rated Pillow Block Bearings
- Integral Deep Spun Inlet
- Motor: Open Drip Proof
- Bird screen: ½" mesh, 19 ga. galvanized steel
- Complete Operation & Maintenance instructions
- Assembly drawings
- Units have been tested and rated in accordance with AMCA
- Standards and are guaranteed to perform as stated

OPTIONAL FEATURES

- Construction
  - Aluminum
  - Stainless Steel
- Propeller – FRP blades with cast aluminum hub
- Fiberglass damper doors
- Cushion Close - Steel Doors Only
- Magnetic latches
- Outlet Guard
- Safety basket guard
- Extended Lube Lines (Belt Drive)
- Roof Curbs
- Curb Cap Adaptor Max 4" + or -
- Access Door (Bolted)
- Disconnect Switch
- Coatings:
  - Epoxy
  - Heresite
  - Coal Tar
- Finishes:
  - Baked Powder Polyester
  - Baked Powder Fluropolymer
  - Baked Powder Clear Coat
  - Clear Anodize
  - Integral Color Anodize

BENEFITS

- Low profile design

APPLICATIONS

- Steel & Aluminum Plants
- Glass Plants
- Power Plants
- General Manufacturing Plants
- Chemical & Plastic Plants
- Mine Processing Plants
- Warehouses
- Pulp and Paper Plants
- Gypsum Wallboard Plants

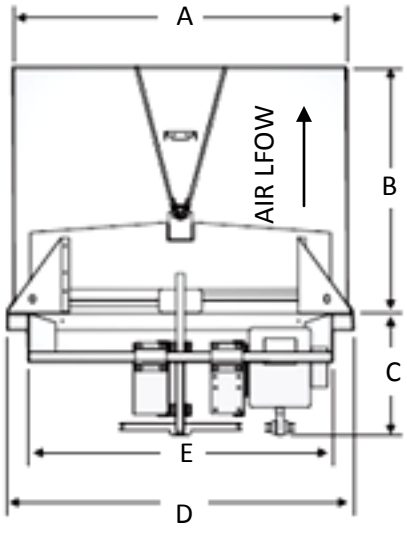
PRODUCT DESCRIPTION

Moffitt Corporation, Inc. low silhouette axial upblast fans are designed for standard duty roof mount applications for exhausting building air to provide general ventilation of hot, stagnant areas. The series 3000 vertically exhausts the building air away from the roof and is available in direct and belt drive configurations. Sizes available range from 24" thru 120".

UB3400 Propeller Upblast Roof Exhauster Submittal Data

STANDARD FEATURES

- Galvanized Steel Butterfly Dampers
- Galvanized Steel Wind band
- Lifting Eyes at all four corners of Curb Cap
- Galvanized Curb Cap with fully welded corners
- Heavy Galvanized Schedule 40 Pipe Frame
- Cast Iron Pillow Block Bearings with Lube Fittings.
  Average life of 200,000 hours.
- V-Belt Drive with adjustable motor sheave
  (Standard through 3HP)
- Nationally recognized and locally serviced motor
- Heavy epoxy coated steel hub plate. Keyed to fan shaft.
- Die formed epoxy coated steel propeller blades
- Integral Galvanized Steel Rain Channel
- Stainless Steel Damper Rod
- cULus Listed - Standard 705 (Optional)



A - Outside diameter of wind band
B - Height of Unit above Curb required for adequate clearance of fan frame, actual depth varies with motor Size
C- Max depth of unit below top of curb
D - Inside dimension of sq. curb cap
E- Min. inside dimension of curb cap opening required for adequate clearance of fan frame
F - Outside dimension of factory built pre-fabricated

MODEL UB3400	A	B	C	D	E	F	METAL GAUGES WIND SHROUD	METAL GAUGES FAN PANEL	AVG. WT. LBS.
24	30	26	20	32	28	31	18	16	250
30	36	29	21	38	34	37		16	325
36	42	31	21	44	40	43		16	350
42	48	34	22	50	46	49		16	425
48	54	37	26	56	52	55		16	450
54	60	40	26	62	58	61		14	575
60	66	43	26	68	64	67		14	750

FAN SPECIFICATIONS								
Line	QTY	Model No	Tag	CFM	Static	Fan RPM	BHP	Sones
1								
2								
3								
4								
5								

MOTOR SPECIFICATIONS					
HP	Volts	Phase	Hertz	Encl.	HP

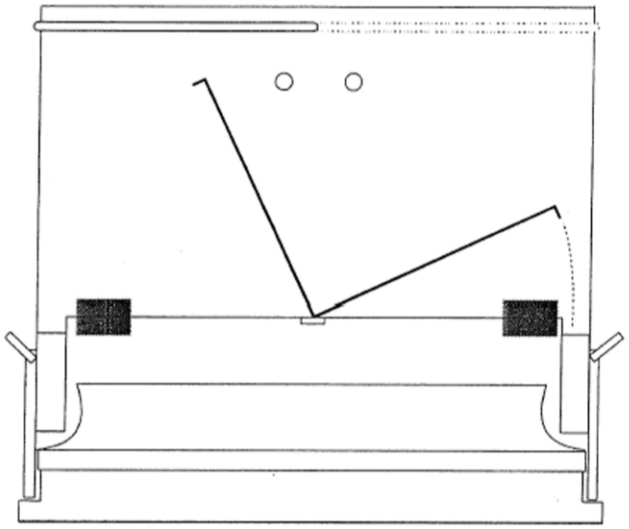
UB3400 Propeller Upblast Roof Exhauster Performance Data

MODEL	CFM @ STATIC PRESSURE					HP	RPM	MAX.	SONES @ .375
UB3400	0	1/8	1/4	3/8	1/2			BHP	
24	7079	6599	6023	5284	3732	1/2	1070	0.82	22
	7939	7511	7068	6461	5718	1	1200	1.1	27
30	10546	9463	7865	5230	3906	1	871	1.1	16.8
	12781	11952	10895	9435	7270	1 1/2	1055	1.65	23
	14388	13700	12782	11745	10346	2	1188	2.2	29
36	11872	10354	8064	5301	3522	1	575	1.15	14.6
	14557	13389	11962	9903	6871	1 1/2	705	1.65	21
	16415	15416	14200	12722	10776	2	795	2.2	24
	19087	18221	17299	16291	15181	3	950	3.3	36
42	16307	14087	11400	7270	5386	1 1/2	510	1.65	16.4
	19184	17283	15281	12804	8980	2	600	2.2	22
	22382	20749	19150	17245	15170	3	700	3.3	31
	25259	23813	22382	20885	19127	5	790	5.5	42
48	22656	20052	16506	10504	7559	2	475	2.2	19.7
	27187	25018	25563	19410	14113	3	570	3.3	26
	31480	29606	27732	25319	22538	5	660	5.5	33
54	29460	25454	20962	14718	11910	3	485	3.3	19
	36456	33013	30586	26237	19623	5	600	5.5	29
60	44555	40707	36545	27962	22834	5	495	5.5	26
	50996	47635	44150	39164	31620	7 1/2	555	8.62	35

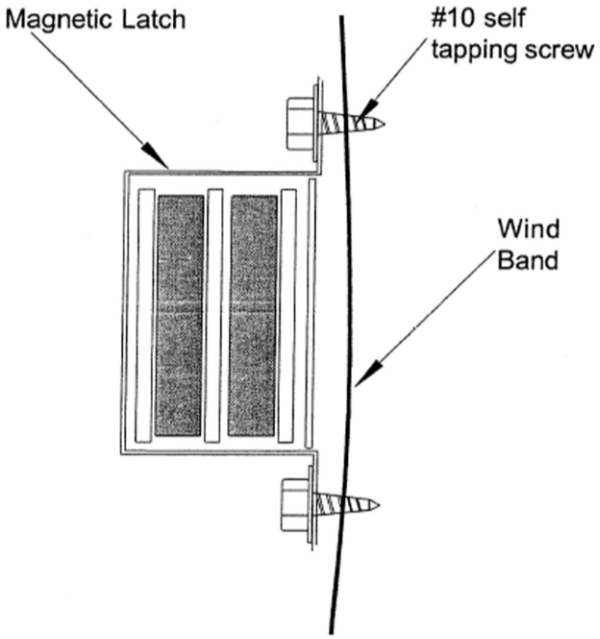
Performance shown is for roof ventilators for installation type A: Free inlet, Free outlet. The power rating (BHP) does not include drive losses. Performance ratings do not include the effects of appurtenances in the airstream.

Sound ratings are loudness values in fan sones at 5 feet (1.5 m) in a hemispherical free field calculated per AMCA standard 301. Values are for installation type A: Free inlet fan sone levels. For additional sound data and for selections at other static pressures, please contact Moffitt Corporation. Due to air stream cooling, the motor loading into the service factor shown does not overheat the motor and is within NEMA recommended limits. BHP at most static pressure points is less than the maximum power shown - in many cases substantially less.

UB3400 Magnetic Damper Latch Installation Instructions

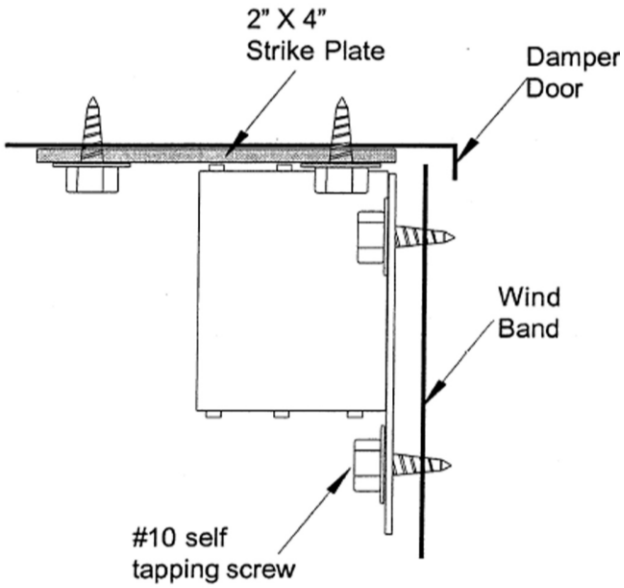


1. Locate latches as shown.
2. Attach magnet to wind band with 4 #10 self-tapping screws.
3. Attach 2” x 4” latch plate to bottom of damper doors (required on fiberglass doors) with 4 #10 self-tapping screws, making sure it makes contact with magnets on latch.
4. Make sure latch is level and true with damper for good holding power- select smooth and level damper area for installation.
5. Caulk around all screws on damper doors to eliminate leakage.



TOP VIEW

CHECK OPERATION MANUALLY



SIDE VIEW

UB3400 Propeller Upblast Roof Exhauster Guide Specification

1.1. **DESCRIPTION**
Furnish and Install UB3400 Belt Drive Propeller Up-blast Exhaust Fan and accessories as indicated on drawings.

1.2. **QUALITY ASSURANCE**
MOFFITT (Jacksonville, FL, 1 800-474-3267) Products establish the standard of quality required. Manufacturer and erector shall demonstrate a minimum of five (5) years of related industry experience.

1.3. **SUBSTITUTIONS**
No substitutions will be considered unless written request for approval has been submitted by the bidder and has been received by the designer at least ten (10) days prior to bid date. Any proposed substitutions should meet the standards set by the specification.

1.4. **SUBMITTALS**
Furnish approval drawings prior to fabrication; and erection drawings prior to shipment showing all erection procedures and accessories required for the specified product.

2.1. **DESIGN**
- 2.1.1. Fan shall be a straight-through airflow design to maximize exhaust efficiency.
- 2.1.2. Air velocity to be adequate to open butterfly dampers. Damper to close and cover venturi when fan is not operating.
- 2.1.3. Fan to be belt drive to afford quieter operation and wider performance range.
- 2.1.4. Curb Cap required for curb mounting on roof.

2.2. **CONSTRUCTION**
- 2.2.1. Panel Assembly to be constructed from heavy gauge G90 galvanized steel with one piece Venturi for maximum efficiency. All welded and bolted support structure to be schedule 40 galvanized pipe with motor bearing plate to be a minimum of 10ga galvanized steel. Lifting Eyes to be provided at the four corners of curb cap.
- 2.2.2. Wind band to be heavy gauge galvanized steel. Dampers to be steel construction unless otherwise specified. Bronze bushings to be provided for stainless steel damper shaft to rotate freely. Galvanized rain channel to be provided to drain water from damper
- 2.2.3. Propellers are be Die-formed Epoxy coated steel blades mounted on epoxy coated steel hub with steel taper lock bushings. Propellers to be statically and dynamically balanced at factory before shipping. Drive to be belt drive with motor sized 150% of drive horsepower. Single belt adjustable pitch sheave to be used to 3hp. (Two belt fixed sheaves 5hp and 7 ½ hp hp pitch sheaves.) Drives to have adjustable tension rods for belt adjustment, and non-static oil resistant V-belts. Shafts to be keyed, turned, ground and polished. Motor to be open drip proof unless specified otherwise. Motors to be nationally recognized and locally serviced brand.
- 2.2.4. Bearings to be minimum 200,000 hour life design. Cast-iron self-aligning pillow blocks of the ball bearing type, sealed, pre-lubricated and have serviceable grease fittings.

2.3. **ACCESSORIES** (Select as Required)
- 2.3.1. Motor to be High Efficiency (TEFC; Explosion-proof; Corrosion duty).
- 2.3.2. Drive sheaves to be adjustable pitch design to allow performance adjustment.
- 2.3.3. Safety guards to be provided at inlet and outlet of fan. ½" x 1" mesh galvanized steel screen.
- 2.3.4. Pre-fabricated Roof Curbs to be constructed from heavy gauge steel, welded construction. Curb height to be ____" (8", 12", special ht) with 1 ½" treated wood nailer, flat roof. (Pitched roof ___rise on ____run; double pitched roof ___rise on ___run.)
- 2.3.5. Roof Curbs to have burglar bars installed of ____" dia x _____centers in ____directions.
- 2.3.6. Non-fused Disconnect to be provided in NEMA___ (1, 3R, 4,4X) enclosure.
- 2.3.7. Magnetic Latches to be provided to limit damper chatter.
- 2.3.8. Install Closing Cushion to allow dampers to close quietly.
- 2.3.9. Nylon tube extended lube lines to be provided for bearing lubrication.
- 2.3.10. UL-705 Listed

UB3400 Propeller Upblast Roof Exhauster Guide Specification cont.

3.1. **INSPECTION**

Examine fan prior to installation for any damage in shipping. Report it immediately. Examine Roof Curb prior to installation to ensure a true flat mounting condition. Make sure flat surface of curb is clear of debris to ensure proper adhesion of caulking material between vent and curb surface.

3.2. **INSTALLATION AND ERECTION**

3.2.1. Install UB3400 Belt Drive Propeller Up-blast Exhaust Fan and Accessories in conformance with approved drawings and MOFFITT specifications.

3.2.2. Any necessary hardware and caulking for ventilator shall be included with units.

3.2.3. Any additional material to be provided by installing contractor.

3.3. **DAMAGED MATERIAL**

Repair or replace all damaged material.