



# Propeller Roof Ventilators

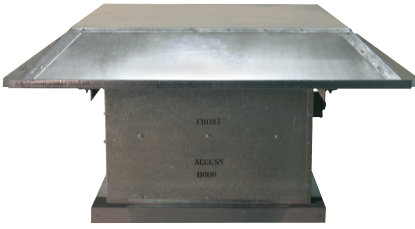


**HRSB • HRSD • HREB-C • HRED-C • ARE • ARS  
UBS • UBS-P • UBSRD • UBSRD-HT • UBSRD-HT1  
UBB • UBX • UBRD • TUB • TUB-HT**

*Advancing Ventilation*

# MODELS HRSB & HRSD

## HOODED PROPELLER ROOF SUPPLY FANS



### **MODEL FEATURES**

- Supply air to over 56,000 CFM up to 3/4" w.g.
- Belt drives permit easy performance adjustments when needed
- Direct drive units have low sound levels and quiet operation.
- Filtered models available
- cULus 705 Listed (HRSB only)

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### **MODEL OPTIONS**

<b>MODEL NAME</b>	<b>DESCRIPTION</b>
<b>HRSB</b>	Belt Drive Hooded Propeller Roof Supply Fan
<b>HRSB-F</b>	Belt Drive Hooded Propeller Roof Filtered Supply Fan
<b>HRSD</b>	Direct Drive Hooded Propeller Roof Supply Fan
<b>HRSD-F</b>	Direct Drive Hooded Propeller Roof Filtered Supply Fan

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### **MODEL OVERVIEW**

Models HRSB and HRSD are roof mounted supply fans rated from 4,000 to over 56,000 CFM and to 3/4" static pressure. They are used in a variety of commercial and industrial operations such as warehouses manufacturing plants, equipment and machinery rooms, assembly plants and similar facilities to provide fresh outside air for personal comfort and to reduce negative pressure caused by exhaust systems.

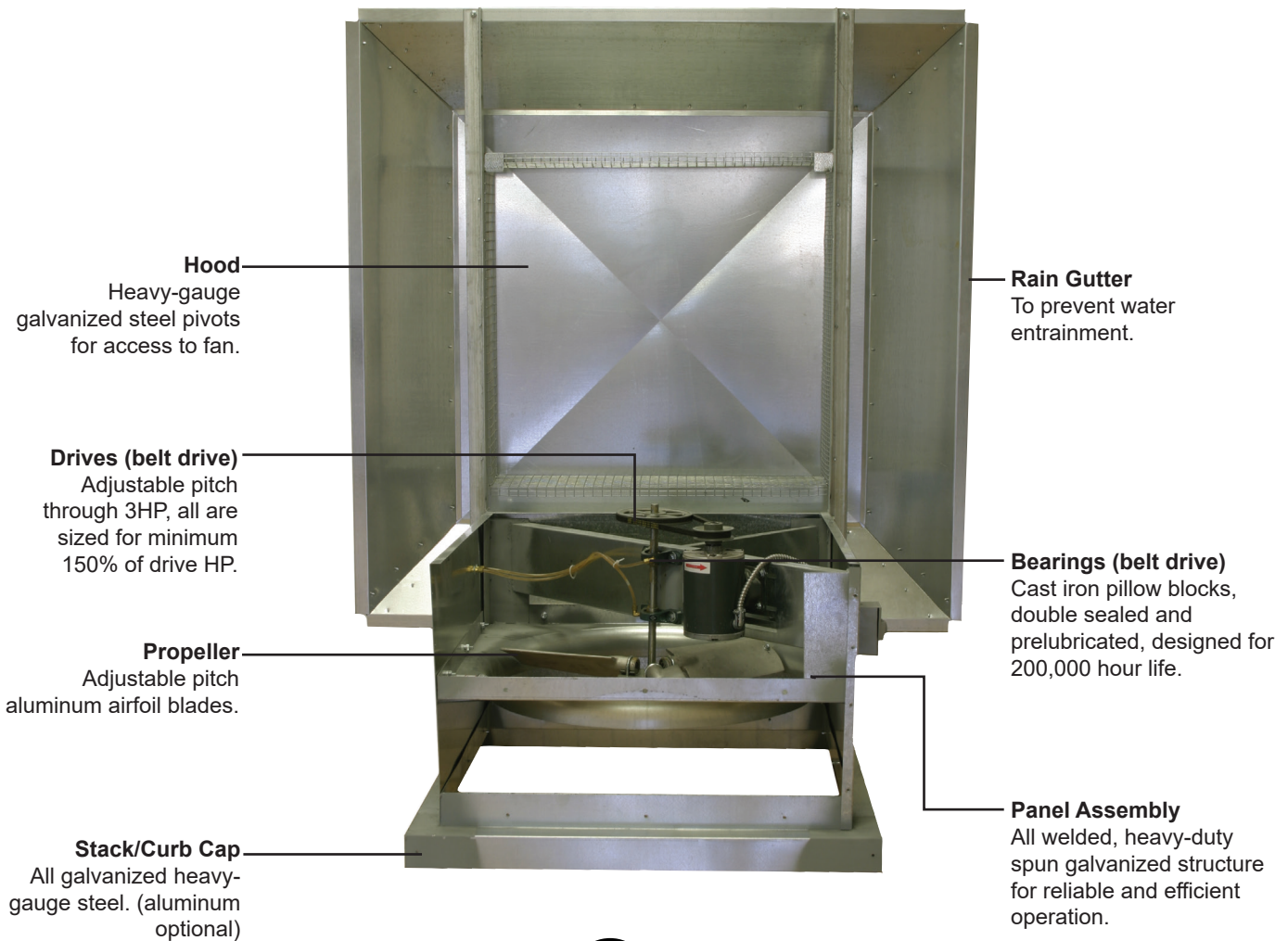
Models HRSB-F and HRSD-F include permanent re-cleanable aluminum filters for application where filtered supply air is required. Performance ratings include the effect of filters on air delivery.

Belt drive units usually operate more quietly and afford easier performance adjustments, while direct drive units require less maintenance.

**2 year fan housing warranty, 1 year motor warranty**



# CONSTRUCTION FEATURES AND OPTIONS



**Hood**

Heavy-gauge galvanized steel pivots for access to fan.

**Rain Gutter**

To prevent water entrainment.

**Drives (belt drive)**

Adjustable pitch through 3HP, all are sized for minimum 150% of drive HP.

**Bearings (belt drive)**

Cast iron pillow blocks, double sealed and prelubricated, designed for 200,000 hour life.

**Propeller**

Adjustable pitch aluminum airfoil blades.

**Panel Assembly**

All welded, heavy-duty spun galvanized structure for reliable and efficient operation.

**Stack/Curb Cap**

All galvanized heavy-gauge steel. (aluminum optional)



**UL Standard 705 (optional)**  
 Listing assures electrical reliability.  
 Not available on HRSD units.

**Factory Run & Tested**

Assures dependable operation.



## **Construction/Specification Checklist**

### **Panel Assembly**

- Heavy-gauge G90 galvanized steel panel.
- One piece spun venturi for maximum efficiency.
- All welded support structure of schedule 40 galvanized pipe.
- Motor/bearing plates of minimum 10 gauge galvanized steel.
- All welds coated with cold galvanized paint.

### **Hood**

- All heavy-gauge G90 galvanized steel.
- Low silhouette design for pleasing appearance.
- Unique design rain gutter minimizes water entrainment.
- Gutter provides additional hood strength and rigidity.

### **Base**

- All galvanized construction for corrosion resistance.
- Secures fan unit to roof curb.
- Elevates fan unit above curb for ease of damper installation.

### **Propeller**

- Two, three, four or six airfoil aluminum blades.
- Steel hub plate with steel taper lock busing.
- Hub finished with corrosion resistant epoxy paint.
- Adjustable pitch for optimum efficiency.

### **Drives (belt drive models)**

- Sized for minimum 150% of drive horsepower.
- Single belt adjustable pitch sheaves through 3HP.
- Two belt fixed pitch sheaves through 10HP.
- Adjustable pitch sheaves are optional above 3HP.
- Adjustable tension rods for belt adjustment.
- Nonstatic oil resistant v-belts.
- Keyed, turned, ground and polished shafts.

### **Bearings**

- Bearings designed for minimum 200,000 hour life, L50.
- Cast iron self-aligning pillow block ball bearings.
- Bearings are sealed, prelubricated with relube fittings.

### **Motors**

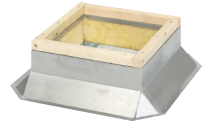
- Brands are nationally recognized and locally serviced.
- Open drip-proof construction is standard.
- High-efficiency, explosion proof, totally enclosed, and corrosion duty motors can be specified.



## Options/Accessories

**Filters:** Permanent cleanable aluminum mesh 2" filters installed in hood opening. See pages 298 and 299 for certified performance data with filters in place.

**Roof Curb:** Prefabricated heavy-gauge galvanized steel, welded construction, 12" high (other heights are also available) with 1-1/2" wood nailer. Assures perfect fit of unit to roof opening. Options include burglar bars, single or double pitch construction and hinged curbs for easy duct access.



**Disconnect Switch:** Nonfused safety disconnects are available for all motor sizes in rain-tight or open enclosures. Explosion proof, Nema 4 and 4X are also available.



**Motor Operated Damper:** Motor operated for positive closure against backdraft.

**Automatic Damper:** Automatic (counter-balanced) damper for ease in installation.

**Bird Screen:** 1/2" x 1" wire mesh guard prevents birds and other objects from entering fan.

**Fiberglass Free Insulation:** Hood crown is covered with 1/2" high performance and ecologically friendly fiberglass free insulation only, to reduce fan sound and condensation.

**Extended Grease Lines:** Extended copper grease lines allow motor and/or fan bearings to be relubricated from the exterior.

**Motor Safety Chain:** Secures motor to fan unit to prevent motor accidentally falling during maintenance.

**Aluminum Construction:** Optional aluminum construction available for external fan components (hood and base) only.

**Special Coatings:** For protective and decorative purposes. Available coatings include: Synthetic Resin, Epoxy, and Heresite (air-dried phenolic). Contact your representative or the factory for more information on available coatings and colors.



# PERFORMANCE DATA - HRSB BELT DRIVE

Model HRSB	CFM @ Static Pressure							HP	RPM	No. of Blades	Max BHP	Sones @ 5 ft.
	0	1/8	1/4	3/8	1/2	5/8	3/4					
24	4724	4043	2979	-	-	-	-	1/3	930	3	.38	15
	5444	4844	4022	3000	-	-	-	1/2	1060	4	.58	19
	6171	5648	5049	4244	3315	-	-	3/4	1215	3	.85	24
	6781	6302	5841	5121	4374	3493	-	1	1335	3	1.13	28
	7771	7354	6946	6467	5830	5189	4436	1 1/2	1530	3	1.70	34
	8533	8153	7777	7412	6881	6298	5715	2	1680	4	2.25	41
30	7099	5557	3085	-	-	-	-	1/3	660	3	.37	13
	8194	6922	5008	-	-	-	-	1/2	775	3	.58	16
	9304	8246	6822	4979	-	-	-	3/4	865	3	.85	21
	10310	9369	8175	6585	-	-	-	1	950	3	1.15	24
	11724	10915	9991	8841	7402	-	-	1 1/2	1090	3	1.70	30
	12908	12173	11373	10448	9266	7946	-	2	1200	3	2.27	36
	14669	13780	12876	11851	10820	9824	8804	3	1370	3	3.44	45
36	9903	6558	-	-	-	-	-	1/3	495	3	.38	11
	11381	8600	-	-	-	-	-	1/2	565	3	.58	14
	12993	10696	7433	-	-	-	-	3/4	645	3	.85	18
	14302	12333	9637	-	-	-	-	1	710	3	1.14	21
	16417	14783	12589	10000	-	-	-	1 1/2	815	3	1.73	27
	18029	16541	14686	12604	-	-	-	2	895	3	2.29	31
	20647	19348	17959	16131	14300	11940	-	3	1025	3	3.44	39
42	14503	9169	-	-	-	-	-	1/2	445	3	.58	13
	16525	12079	-	-	-	-	-	3/4	510	3	.85	16
	18251	14350	-	-	-	-	-	1	560	3	1.15	19
	20858	17815	13510	-	-	-	-	1 1/2	640	3	1.72	24
	22977	20268	16414	12245	-	-	-	2	705	3	2.30	35
	26236	23863	20873	17540	13601	-	-	3	805	3	3.43	46
48	19542	11487	-	-	-	-	-	3/4	405	3	.86	14
	21742	14137	-	-	-	-	-	1	445	3	1.14	17
	24493	17864	10164	-	-	-	-	1 1/2	500	3	1.72	21
	27161	22026	15327	-	-	-	-	2	560	3	2.30	25
	30881	26694	20675	15035	-	-	-	3	640	3	3.40	30
	36671	33145	28874	23792	19200	-	-	5	760	3	5.71	40
	46322	38899	35818	31144	26982	23220	-	7 1/2	870	3	8.55	53
	49979	43530	40739	37344	32782	29339	25924	10	960	3	11.49	64
54	29628	23717	14745	-	-	-	-	2	465	3	2.09	23
	33769	29093	22202	-	-	-	-	3	530	3	3.10	28
	39709	35990	31085	25359	-	-	-	5	630	3	4.99	37
	45382	42128	38469	33640	28551	21662	-	7 1/2	720	3	7.47	47
	50109	47162	44215	40031	35603	30935	-	10	795	3	10.07	58
60	30739	25920	-	-	-	-	-	2	390	3	2.02	20
	35284	31586	23994	-	-	-	-	3	450	3	3.05	26
	41557	38758	34372	-	-	-	-	5	530	3	4.99	35
	47830	45398	42206	37327	29300	-	-	7 1/2	610	3	7.59	44
	52534	50320	47771	44348	38720	-	-	10	670	3	10.07	52

Performance shown is for Models HRSB and HRSD without inlet or outlet ducts.

Brake horsepower does not include drive losses.

The sound ratings shown are loudness values in fan sones at 5 ft. (1.5m) in a hemispherical free field calculated per AMCA Standard 301 @ free air. Values shown are installation Type A, free inlet fan sone levels.



UL Standard 705



## PERFORMANCE DATA - HRSD DIRECT DRIVE

Model HRSD	CFM @ Static Pressure							HP	RPM	No. of Blades	Max BHP	Sones @ 5 ft.
	0	1/8	1/4	3/8	1/2	5/8	3/4					
24	4645	4210	3779	3286	2509	-	-	1/2	870	3	.57	17
	4455	3793	2703	-	-	-	-	1/3	1160	2	.38	17
	5433	4766	3747	-	-	-	-	1/2	1160	2	.56	19
	6336	5750	5077	4202	3203	-	-	3/4	1160	3	.86	21
	6756	6091	5460	4730	3978	3168	-	1	1160	4	1.13	22
	6232	5838	5348	4705	3942	3175	-	1	1750	2	1.14	30
	7709	7308	6880	6322	5619	4786	-	1 1/2	1750	2	1.71	34
	8646	8212	7722	7157	6486	5650	-	2	1750	2	2.26	38
	9447	9023	8599	8208	7811	7340	6917	3	1750	4	3.34	42
30	9272	8232	6830	5009	-	-	-	3/4	870	3	.84	19
	10276	9223	8132	6732	5191	-	-	1	870	4	1.13	29
	8691	7744	6428	4459	-	-	-	3/4	1160	2	.85	23
	10150	9275	8152	6209	-	-	-	1	1160	2	1.14	25
	11973	11016	9766	8085	5714	-	-	1 1/2	1160	2	1.71	29
	13020	12213	11322	10281	9004	7572	6106	2	1160	3	2.28	33
	11269	10688	9930	9101	7924	6719	5504	2	1750	2	2.30	43
	14249	13723	13109	12374	11661	10595	9225	3	1750	2	3.41	47
	17790	17198	16557	15818	14918	14219	13147	5	1750	2	5.65	58
36	12436	10693	7806	-	-	-	-	3/4	870	2	.85	21
	14185	12501	10031	-	-	-	-	1	870	2	1.13	23
	16237	14844	13175	11021	8499	-	-	1 1/2	870	3	1.73	26
	18084	16439	14310	11982	-	-	-	2	870	3	2.34	29
	15289	14160	12700	10280	-	-	-	1 1/2	1160	2	1.73	32
	17594	16478	14962	13317	10332	-	-	2	1160	2	2.29	33
	20753	19552	18052	16345	13852	-	-	3	1160	2	3.41	37
	24253	23000	21746	20165	18307	16643	14526	5	1160	3	5.66	49
	22388	21666	20886	19790	18910	17717	16129	5	1750	2	5.70	65
27417	26691	25942	25145	24055	23018	22187	7 1/2	1750	2	8.46	70	
42	15924	13504	9568	-	-	-	-	1	870	2	1.13	27
	20258	18236	15266	10310	-	-	-	1 1/2	870	2	1.74	28
	22642	20590	17805	-	-	-	-	2	870	2	2.25	29
	26128	23792	20453	15603	-	-	-	3	870	2	3.43	35
	24423	22947	21061	18816	15600	-	-	3	1160	2	3.34	43
	30979	29471	27836	25605	23318	19844	15452	5	1160	2	5.71	48
	21071	19517	17487	15477	13897	11833	-	5	1750	2	5.72	92
	30329	29285	28177	26703	25307	23501	21555	7 1/2	1750	2	8.49	91
	48	19172	14905	-	-	-	-	-	1	680	2	1.13
23378		20013	13975	-	-	-	-	1 1/2	680	2	1.70	24
26407		22763	16577	-	-	-	-	2	680	2	2.29	26
24151		21396	17029	-	-	-	-	2	870	2	2.32	34
29404		26778	23214	18540	-	-	-	3	870	2	3.40	35
35765		32909	29547	24033	18298	-	-	5	870	2	5.71	41
41979		38899	35818	31144	26982	23220	18390	7 1/2	870	2	8.55	49
32705		30685	28585	25121	21863	17961	-	5	1160	2	5.64	57
40052		38113	36090	33945	30299	26778	23119	7 1/2	1160	2	8.46	59
45047	43029	40906	38618	35611	31538	27579	10	1160	2	11.40	64	
54	43139	40158	37454	33863	29948	26098	20042	7 1/2	1160	2	7.70	71
	50109	47343	44544	42270	38346	34362	30282	10	1160	2	10.02	72

Performance shown is for Models HRSB and HRSD without inlet or outlet ducts.

Brake horsepower does not include drive losses.

The sound ratings shown are loudness values in fan sones at 5 ft. (1.5m) in a hemispherical free field calculated per AMCA Standard 301 @ free air. Values shown are installation Type A, free inlet fan sone levels.



## PERFORMANCE DATA - HRSB-F BELT DRIVE WITH FILTERS

Model HRSB-F	CFM @ Static Pressure							HP	RPM	No. of Blades	Max BHP	Sones @ 5 ft.
	0	1/8	1/4	3/8	1/2	5/8	3/4					
24	4327	3650	2716	-	-	-	-	1/3	930	3	.381	15
	4984	4430	3645	2754	-	-	-	1/2	1060	3	.575	19
	5653	5211	4555	3863	3042	-	-	3/4	1215	3	.848	24
	6277	5891	5344	4698	4052	3270	-	1	1335	3	1.155	28
	7194	6857	6434	5909	5352	4797	4153	1 1/2	1530	3	1.738	34
	7899	7592	7244	6807	6287	5789	5282	2	1680	3	2.300	41
30	7242	6003	4432	-	-	-	-	1/2	755	3	.582	16
	8226	7196	5894	4445	-	-	-	3/4	865	3	.850	21
	9034	8128	6988	5739	4244	-	-	1	950	3	1.134	24
	10366	9599	8675	7624	6530	5257	-	1 1/2	1090	3	1.713	30
	11412	10715	9917	9009	8027	7023	5867	2	1200	3	2.283	36
	13028	12418	11782	11024	10211	9350	8483	3	1370	3	3.398	45
36	9637	7192	4033	-	-	-	-	1/2	565	3	.579	14
	11002	8881	6416	-	-	-	-	3/4	645	3	.856	18
	12110	10205	8056	5552	-	-	-	1	710	3	1.147	21
	13901	12276	10515	8501	6284	-	-	1 1/2	815	3	1.737	27
	15266	13792	12203	10056	8620	6434	-	2	895	3	2.295	31
	17483	16196	14851	13452	11915	10281	8550	3	1025	3	3.457	39
42	13841	10120	5578	-	-	-	-	3/4	510	3	.868	16
	15198	11764	8009	-	-	-	-	1	560	3	1.147	19
	17369	14370	11270	7653	-	-	-	1 1/2	640	3	1.720	24
	19133	16415	13766	10577	-	-	-	2	705	3	2.296	35
	21846	19467	17070	14716	11851	-	-	3	805	3	3.415	46
	17949	12146	-	-	-	-	-	1	445	3	1.152	17
48	20571	15261	9820	-	-	-	-	1 1/2	510	3	1.734	21
	22587	17713	12771	-	-	-	-	2	560	3	2.295	25
	25814	21489	17701	12978	-	-	-	3	640	3	3.428	30
	30654	27000	23498	20506	16124	12188	-	5	760	3	5.739	40
	35091	31899	28757	25802	23302	19238	16118	7 1/2	870	3	8.610	53
	38721	35828	32935	30200	27684	25195	21506	10	960	3	11.570	64

Performance shown is for Models HRSB-F and HRSD-F without inlet or outlet ducts.

Performance includes the effect of a filter.

Brake horsepower does not include drive losses.

The sound ratings shown are loudness values in fan sones at 5 ft. (1.5m) in a hemispherical free field calculated per AMCA Standard 301 @ free air. Values shown are installation Type A, free inlet fan sone levels.



UL Standard 705



## PERFORMANCE DATA - HRSD-F DIRECT DRIVE WITH FILTERS

Model HRSD-F	CFM @ Static Pressure							HP	RPM	No. of Blades	Max BHP	Sones @ 5 ft.
	0	1/8	1/4	3/8	1/2	5/8	3/4					
24	5724	5215	4523	3733	2889	-	-	3/4	1160	3	.853	21
	6204	5713	5141	4541	3945	3395	2860	1	1160	4	1.115	22
	5932	5527	5090	4466	3692	2891	-	1	1750	2	1.149	30
	7164	6778	6335	5919	5262	4434	3593	1 1/2	1750	2	1.720	34
	7988	7544	7057	6567	6002	5256	4429	2	1750	2	2.352	38
	8779	8476	8173	7821	7463	7091	6726	3	1750	4	3.408	42
30	8273	7251	5961	4530	-	-	-	3/4	870	3	.865	19
	9111	8130	6737	5324	3664	-	-	1	870	4	1.152	21
	7919	7012	5841	4468	-	-	-	3/4	1160	2	.865	23
	9019	8119	7087	5733	4094	-	-	1	1160	2	1.154	25
	10319	9275	8126	6799	5451	-	-	1 1/2	1160	2	1.728	29
	11489	10703	9835	8888	7839	6751	5513	2	1160	3	2.306	33
	10360	9677	9024	8212	7360	6614	5540	2	1750	2	2.340	43
	12739	12155	11560	10934	10224	9351	8439	3	1750	2	3.403	47
	15375	14701	14027	13304	12562	11818	10915	5	1750	2	5.657	58
36	10814	9160	7004	-	-	-	-	3/4	870	2	.866	21
	12029	10298	8210	5682	-	-	-	1	870	2	1.144	23
	13467	11303	8919	6739	-	-	-	1 1/2	870	2	1.740	26
	15229	13606	11915	10099	8115	-	-	2	870	3	2.313	29
	13211	11941	10567	8903	7115	-	-	1 1/2	1160	2	1.712	32
	15197	13942	12667	11097	9432	7374	-	2	1160	2	2.338	33
	17216	15783	14320	12708	10951	9433	-	3	1160	2	3.442	37
	20545	19284	18023	16724	15468	14160	12528	5	1160	3	5.749	49
	19654	18794	17943	17155	16187	15117	14010	5	1750	2	5.726	65
23366	22527	21689	20853	20022	19089	18090	7 1/2	1750	2	8.437	70	
42	13965	11651	8971	5239	-	-	-	1	870	2	1.147	27
	16958	14787	12347	9265	-	-	-	1 1/2	870	2	1.703	28
	18835	16487	14046	11171	-	-	-	2	870	2	2.307	29
	20709	17795	14729	11692	8483	-	-	3	870	2	3.396	35
	25471	23668	21893	20074	18041	15847	13556	5	1160	2	5.739	48
	26240	24928	23677	22653	21293	19916	18551	7 1/2	1750	2	8.425	91
48	21205	18422	15525	10623	-	-	-	2	870	2	2.344	34
	24860	22013	19430	16007	-	-	-	3	870	2	3.397	35
	28822	25302	21915	18436	13330	-	-	5	870	2	5.724	41
	35091	31899	28757	25802	23302	19238	16118	7 1/2	870	3	8.610	49
	28661	26447	24563	22522	20057	16080	12406	5	1160	2	5.709	57
	33747	31570	29480	27547	25436	22954	19494	7 1/2	1160	2	8.473	59
36844	34454	32078	29866	27653	25141	22274	10	1160	2	11.337	64	

Performance shown is for Models HRSB-F and HRSD-F without inlet or outlet ducts.

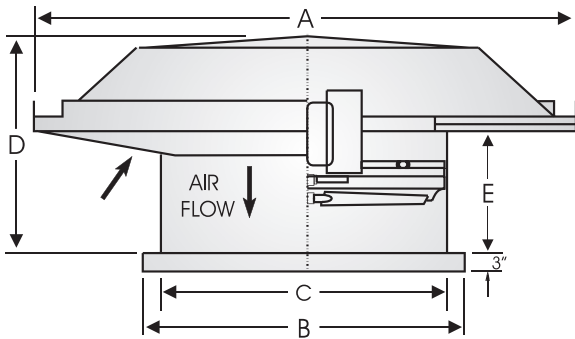
Performance includes the effect of a filter.

Brake horsepower does not include drive losses.

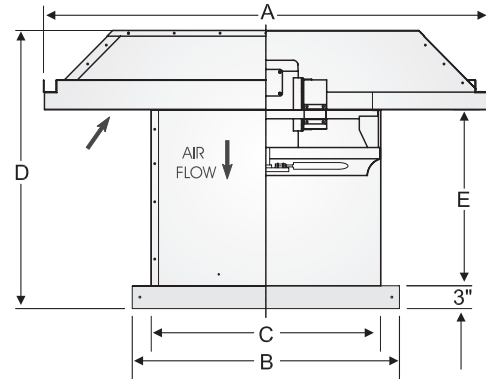
The sound ratings shown are loudness values in fan sones at 5 ft. (1.5m) in a hemispherical free field calculated per AMCA Standard 301 @ free air. Values shown are installation Type A, free inlet fan sone levels.



# DIMENSIONS



**Model HRSB - Belt Drive**  
**Model HRSD - Direct Drive**



**Model HRSB-F - Belt Drive**  
**Model HRSD-F - Direct Drive**

Model HRSB/ HRSD	Dimensions (Inches)						Metal Gauges			Avg. Wt.
	A	B	C	D	E	F	Crown / Side Hood	Stack	Curb Cap	
24	58	35	30	31	23	33-1/4	18 / 18	18	16	425
30	66	41	36	32	23	39-1/4	18 / 18	18	16	550
36	78	47	42	34	23	45-1/4	18 / 18	18	16	700
42	87	53	48	43	30	51-1/4	18 / 18	16	16	800
48	99	59	54	44	30	57-1/4	18 / 18	16	14	1100
54	111	65	60	45	30	63-1/4	18 / 18	16	14	1300
60	111	71	66	46	30	69-1/4	18 / 18	16	14	1550

Model HRSB-F/ HRSD-F	Dimensions (Inches)						Standard Filter <sup>7</sup>	Avg. Wt.
	A	B	C	D	E	F	Size (Nominal)	
24	58	35	30	31	23	33-1/4	15 x 20 x 2	375
24	66	35	30	32	23	33-1/4	19 x 22 x 2	450
30	66	41	36	32	23	39-1/4	16 x 25 x 2	550
30	78	41	36	34	23	39-1/4	19 x 22 x 2	600
36	78	47	42	34	23	45-1/4	19 x 29-3/4 x 2	675
36	87	47	42	43	23	45-1/4	16-1/8 x 23-1/2 x 2	750
42	87	53	48	43	30	51-1/4	20 x 25 x 2/16 x 20 x 2	850
42	99	53	48	44	30	51-1/4	18-3/8 x 26-1/2 x 2	900
48	99	59	54	44	30	57-1/4	19-1/8 x 23-1/2 x 2	1100
48	111	59	54	45	30	57-1/4	16-1/2 x 29-1/2 x 2	1200

- A** - Outside dimension of square hood.
- B** - Inside dimension of square curb cap.
- C** - Minimum inside dimension of curb opening for rated performance.
- D** - Height of unit above curb cap.
- E** - Height of hood opening above curb cap.
- F** - Outside dimension of prefab curb.

# MODELS HREB-C & HRED-C

## HOODED PROPELLER ROOF EXHAUST FANS



### **MODEL FEATURES**

- Exhaust air to over 40,000 CFM up to 3/4" w.g.
- Belt drives permit easy performance adjustments when needed
- Direct drive units have low sound levels and quiet operation.
- Reversible blades available
- cULus 705 Listed (HREB-C only)

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### **MODEL OPTIONS**

<b>MODEL NAME</b>	<b>DESCRIPTION</b>
<b>HREB-C</b>	Belt Drive Hooded Propeller Roof Exhaust Fan
<b>HRED-C</b>	Direct Drive Hooded Propeller Roof Exhaust Fan

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### **MODEL OVERVIEW**

Models HREB-C and HRED-C are roof mounted, low profile exhaust fans rated from 5,700 to over 40,000 CFM. Performances are rated to 3/4" static pressure. Seven sizes (from 24-60 inches) are available AMCA rated for Air and Sound performance. Fans, hoods and bases are available in galvanized or aluminum construction. They are used to exhaust air from a variety of commercial and industrial operations such as manufacturing and assembly plants, warehouses, garages, laundries and similar buildings.

For greater versatility, reversible blades are available as an option. Exhaust or supply air movement is achieved by a remote reversing switch. The reverse feature can provide positive or negative building pressurization with single or multiple fan units. Maximum utilization of the fans can be achieved with this inexpensive option.

The unit's low silhouette fits today's clean uncluttered building design and its standard all-galvanized construction provides years of resistance to corrosion.

Greater hood strength and weather resistance is achieved from the modular design. Heavy-gauge galvanized hood sections are cross broken and connected by a standing seam for extra strength over conventional hood designs.

The knockdown feature on the larger sizes also provides lower transit costs and ease of jobsite handling. This modular design is one of the strongest and easiest to assemble in the industry. Hood sizes 58 to 78 inch (represents fan sizes 24 to 36 inch) ship assembled. Hood sizes 87 to 123 inch (represent fan sizes 42 to 60 inch) ship knockdown or can be special ordered assembled.

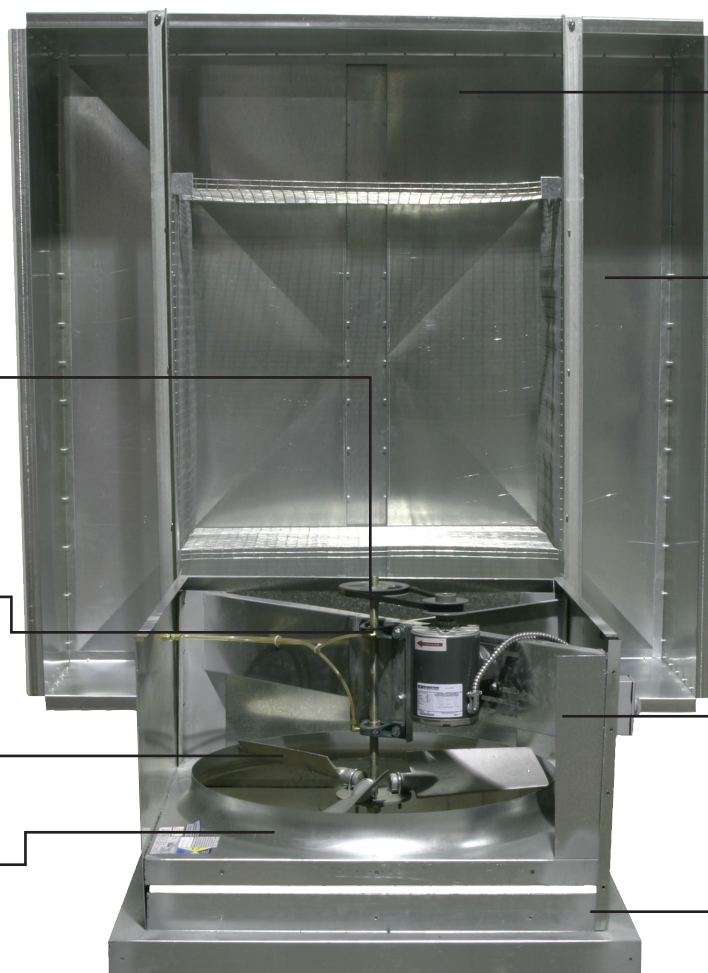
For damper maintenance, an entire side panel of the fan stack easily removes for access. The hood hinges open for motor access. The belt drive fan units all have outboard drives and adjustable motor bases for easy maintenance. These features are standard.

**2 year fan housing warranty, 1 year motor warranty**

All specifications are subject to change without notice unless approved in submittal by Soler & Palau.



# CONSTRUCTION FEATURES AND OPTIONS



**All galvanized and welded construction.**

**Drives (belt drive)**

Adjustable pitch through 3HP, sized for minimum 150% of drive HP with outboard drives for ease of maintenance.

**Bearings (belt drive)**

Cast iron pillow blocks, double sealed and prelubricated, designed for 200,000 hour life.

**Propeller**

Adjustable pitch aluminum airfoil blades.

**Panel Assembly**

All welded, heavy-duty spun galvanized structure for reliable and efficient operation.

**AMCA Seal**

Assures rating of Air and Sound performance.

**Factory Run & Tested**

Assures dependable operation.

**Hood**  
Modular hood design for maximum strength and lower cost.

**Hood**  
Heavy-gauge galvanized steel (aluminum optional) pivots for access to fan - removal is not necessary.

**Rain Gutter**  
To prevent water entrainment.

**Access Panel**  
Removable side panel for fan and damper access.

**Stack/Curb Cap**  
All galvanized heavy-gauge steel. (aluminum optional)



**UL Standard 705** (optional) Listing assures electrical safety and reliability. Not available on HRED-C units.

## **CONSTRUCTION/SPECIFICATION CHECKLIST**

### **Panel Assembly**

- Heavy-gauge G90 galvanized steel panel.
- One piece spun venturi for maximum efficiency.
- All welded support structure of minimum schedule 40 galvanized pipe.
- Motor/bearing plates of minimum 10 gauge galvanized steel.
- All welds coated with cold galvanized paint.

### **Hood**

- All heavy-gauge G90 galvanized steel.
- Low silhouette design for pleasing appearance.
- Unique design rain gutter minimizes water entrainment.
- Gutter provides additional hood strength and rigidity.
- Modular design for extra strength and cost savings.

### **Base**

- All galvanized construction for corrosion resistance.
- Secures fan unit to roof curb.
- Elevates fan unit above curb for ease of damper installation.
- Removable panel for damper access.

### **Propeller**

- Two, three, four or six airfoil aluminum blades.
- Steel hub plate with steel taper lock bushing.
- Hub finished with corrosion resistant epoxy paint.
- Adjustable pitch for optimum efficiency.

### **Drives (belt drive models)**

- Sized for minimum 150% of drive horsepower.
- Single belt adjustable pitch sheaves through 3HP.
- Two belt fixed pitch sheaves 5HP through 10HP.
- Adjustable pitch sheaves are optional above 3HP.
- Adjustable tension rods or slide base for belt adjustment.
- Nonstatic oil resistant v-belts.
- Keyed, turned, ground and polished shafts with an anti-rust coating.

### **Bearings**

- Bearings designed for minimum 200,000 hour life, L50.
- Cast iron self-aligning pillow block ball bearings.
- Bearings are sealed, prelubricated with relube fittings.

### **Motors**

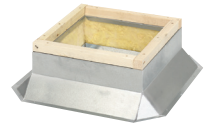
- Brands are nationally recognized and locally serviced.
- Open drip-proof construction is standard.
- High-efficiency, explosion proof, totally enclosed, multi-speed and corrosion duty motors can be specified.

### **AMCA Seal**

- Assures ratings of Air and Sound performance.

## **OPTIONS/ACCESSORIES**

**Roof Curb:** Prefabricated heavy-gauge galvanized steel, welded construction, 12" high (other heights are also available) with 1-1/2" wood nailer. Assures perfect fit of exhauster to roof opening. Options include burglar bars, single or double pitch construction and hinged curbs for easy duct access.



**Disconnect Switch:** Nonfused safety disconnects are available for all motor sizes in rain-tight or open enclosures. Explosion proof, Nema 4 and 4X are also available.



**Motor Operated Damper:** Motor operated for positive closure against backdraft.

**Automatic Damper:** Automatic (counter-balanced) damper for ease in installation.

**Bird Screen:** 1/2" x 1" wire mesh guard prevents birds and other objects from entering fan.

**Remote Drive:** The motor is mounted on the stack exterior, out of the airstream. A motor cover is provided.

**Fiberglass Free Insulation:** Hood crown is covered with 1/2" high performance and ecologically friendly fiberglass free insulation only, to reduce fan sound and condensation.

**Extended Grease Lines:** Extended copper grease lines allow motor and/or fan bearings to be relubricated from the exterior.

**Motor Safety Chain:** Secures motor to fan unit to prevent motor accidentally falling during maintenance.

**Aluminum Construction:** Optional aluminum construction available for external fan components (hood and base) only.

**Special Coatings:** Powered roof exhausters often require special coatings for protective and decorative purposes. Available coatings include: Synthetic Resin, Epoxy, and Heresite (air-dried phenolic). Contact your representative or the factory for more information on available coatings and colors.



**PERFORMANCE DATA - HREB-C BELT DRIVE**

Model HREB-C	CFM / BHP @ Static Pressure							HP	RPM	Sones @ 5 ft.
	0	1/8	1/4	3/8	1/2	5/8	3/4			
24	5702 / 0.377	4678 / 0.400	3661 / 0.397	2480 / 0.392	1159 / 0.416	-	-	1/3	970	14.9
	6525 / 0.565	5613 / 0.599	4764 / 0.599	3792 / 0.595	2730 / 0.587	1582 / 0.624	-	1/2	1110	18.3
	7466 / 0.847	6653 / 0.894	5915 / 0.896	5153 / 0.896	4271 / 0.890	3399 / 0.891	2240 / 0.896	3/4	1270	23
	8230 / 1.135	7482 / 1.193	6806 / 1.202	6134 / 1.201	5417 / 1.193	4592 / 1.193	3809 / 1.194	1	1400	26
	9318 / 1.646	8647 / 1.722	8038 / 1.744	7450 / 1.743	6850 / 1.743	6220 / 1.733	5501 / 1.731	1-1/2	1585	32
	10347 / 2.254	9735 / 2.345	9176 / 2.382	8641 / 2.389	8113 / 2.384	7569 / 2.386	7003 / 2.382	2	1760	38
30	7209 / 0.404	5018 / 0.387	3176 / 0.370	-	-	-	-	1/3	680	13.2
	8269 / 0.610	6517 / 0.591	4594 / 0.558	3076 / 0.565	-	-	-	1/2	780	16.3
	9435 / 0.906	7802 / 0.879	6092 / 0.852	4715 / 0.826	3378 / 0.842	-	-	3/4	890	20
	10389 / 1.209	8811 / 1.173	7407 / 1.157	5963 / 1.135	4761 / 1.106	3524 / 1.129	-	1	980	24
	11874 / 1.805	10351 / 1.752	9420 / 1.752	7876 / 1.698	6728 / 1.674	5675 / 1.648	4619 / 1.667	1-1/2	1120	29
	13093 / 2.420	11601 / 2.350	10764 / 2.349	9647 / 2.312	8292 / 2.277	7287 / 2.216	6332 / 2.209	2	1235	34
	15001 / 3.640	13542 / 3.539	12783 / 3.532	12052 / 3.533	10959 / 3.478	9741 / 3.424	8829 / 3.431	3	1415	44
36	8786 / 0.387	6104 / 0.389	2134 / 0.352	-	-	-	-	1/3	580	13.3
	10073 / 0.584	7683 / 0.594	5107 / 0.550	-	-	-	-	1/2	665	16.5
	11588 / 0.889	9473 / 0.904	7492 / 0.863	4732 / 0.744	-	-	-	3/4	765	20
	12724 / 1.176	10811 / 1.197	9014 / 1.181	6896 / 1.104	3781 / 1.012	-	-	1	840	23
	14542 / 1.756	12808 / 1.788	11215 / 1.788	9677 / 1.708	7717 / 1.648	5057 / 1.472	-	1-1/2	960	29
	15981 / 2.331	14338 / 2.374	12909 / 2.372	11537 / 2.340	9985 / 2.263	8167 / 2.193	5673 / 1.949	2	1055	33
	18329 / 3.516	16799 / 3.580	15675 / 3.578	14345 / 3.579	12167 / 3.530	11855 / 3.414	10286 / 3.301	3	1210	42
	21737 / 5.865	20331 / 5.964	19363 / 5.974	18375 / 5.969	17234 / 5.969	16243 / 5.940	15229 / 5.892	5	1435	55
42	11430 / 0.55	7602 / 0.51	3608 / 0.50	-	-	-	-	1/2	500	13.8
	13031 / 0.82	9733 / 0.78	6209 / 0.72	-	-	-	-	3/4	570	17.3
	14402 / 1.11	11464 / 1.07	8258 / .99	5111 / .99	-	-	-	1	630	20
	16460 / 1.66	13936 / 1.63	11154 / 1.53	8367 / 1.46	5612 / 1.48	-	-	1-1/2	720	25
	18174 / 2.23	15913 / 2.21	13435 / 2.11	10887 / 2.01	8389 / 1.96	5881 / 2.00	3067 / 2.15	2	795	29
	20804 / 3.35	18847 / 3.33	16747 / 3.24	14532 / 3.11	12309 / 3.00	10124 / 2.95	7953 / 2.96	3	910	36
48	24690 / 5.59	23047 / 5.59	21347 / 5.52	19539 / 5.39	17671 / 5.24	15792 / 5.09	13930 / 4.98	5	1080	49
	15781 / 0.832	12968 / 0.908	9524 / 0.814	-	-	-	-	3/4	450	16.3
	17360 / 1.107	14879 / 1.199	11860 / 1.102	8269 / 1.111	-	-	-	1	495	18.9
	19814 / 1.647	17669 / 1.743	15126 / 1.761	12415 / 1.612	9098 / 1.660	-	-	1-1/2	565	23
	21919 / 2.229	19977 / 2.344	17838 / 2.432	15433 / 2.384	12834 / 2.182	9694 / 2.256	-	2	625	27
	25075 / 3.337	23364 / 3.512	21654 / 3.560	19566 / 3.587	17502 / 3.470	15250 / 3.264	12688 / 3.232	3	715	32
	29809 / 5.606	28351 / 5.885	26957 / 5.894	25466 / 6.081	23707 / 6.096	21940 / 6.000	20177 / 5.563	5	850	43
	33842 / 8.204	32546 / 8.574	31316 / 8.634	30072 / 8.712	28720 / 8.921	27168 / 8.936	25584 / 8.776	7-1/2	965	53
54	37349 / 11.028	36166 / 11.478	35044 / 11.602	33932 / 11.595	32782 / 11.718	31524 / 12.008	30116 / 12.021	10	1065	62
	28075 / 2.084	24746 / 2.252	21152 / 2.357	17397 / 2.317	13225 / 2.128	-	-	2	530	28
	32312 / 3.177	29421 / 3.371	27975 / 3.468	23156 / 3.593	19939 / 3.532	16352 / 3.241	-	3	610	34
	37874 / 5.116	35407 / 5.343	32940 / 5.570	30341 / 5.745	27494 / 5.789	24714 / 5.687	21912 / 5.522	5	715	44
	43171 / 7.576	41007 / 7.836	38843 / 8.095	36670 / 8.350	34336 / 8.520	31840 / 8.574	29337 / 8.413	7-1/2	815	55
	47674 / 10.203	45714 / 10.489	43754 / 10.775	41794 / 11.061	39797 / 11.325	37648 / 11.488	35385 / 11.546	10	900	66
60	28479 / 2.264	23920 / 2.303	19370 / 2.184	13910 / 1.862	-	-	-	2	450	26
	33225 / 3.596	29133 / 3.675	25508 / 3.586	21380 / 3.471	16669 / 2.978	10364 / 2.639	-	3	525	33
	38288 / 5.502	35426 / 5.623	31547 / 5.597	28228 / 5.496	24575 / 5.311	20563 / 5.083	15845 / 4.517	5	605	41
	44301 / 8.523	40836 / 8.697	38290 / 8.708	35595 / 8.567	32709 / 8.512	29610 / 8.222	26232 / 7.869	7-1/2	700	53
48414 / 11.124	45118 / 11.338	42732 / 11.372	40389 / 11.315	37818 / 11.099	35137 / 11.120	32275 / 10.731	10	765	62	

Performance certified is for Installation Type A: Free inlet, Free outlet. BHP does not include transmission losses. The sound ratings shown are loudness values in fan sones at 5 ft. (1.5m) in a hemispherical free field calculated per AMCA Standard 301. Values shown are installation Type A: free inlet fan sone levels.



S&P USA Ventilation Systems, LLC., Div. of Soler & Palau Ventilation Group, certifies that the Models HREB-C shown herein are licensed to bear the AMCA Seal. The ratings shown are based on test and procedures performed in accordance with AMCA Publication 211 and AMCA Publication 311 and comply with the requirement of the AMCA Certified Ratings Program.



## PERFORMANCE DATA - HRED-C DIRECT DRIVE

Model HRED-C	CFM / BHP @ Static Pressure							HP	RPM	Sones @ 5 ft.
	0	1/8	1/4	3/8	1/2	5/8	3/4			
24	5991 / 0.541	5222 / 0.607	4453 / 0.617	2966 / 0.597	2203 / 0.609			1/2	870	16.1
	6908 / 0.867	6081 / 0.86	5194 / 0.854	3735 / 0.831	2780 / 0.842	1193 / 0.851		3/4	870	18
	5219 / 0.325	4327 / 0.384	3555 / 0.398	2526 / 0.381	1709 / 0.363			1/3	1160	19.7
	6390 / 0.570	5597 / 0.622	4739 / 0.627	3798 / 0.617	2572 / 0.617	1297 / 0.606		1/2	1160	21
	7394 / 0.892	6553 / 0.902	5687 / 0.893	4861 / 0.874	3918 / 0.884	2755 / 0.892	1715 / 0.983	3/4	1160	23
	8361 / 1.237	7480 / 1.247	6758 / 1.248	6041 / 1.239	5084 / 1.215	3481 / 1.239	2323 / 1.258	1	1160	24
	8800 / 1.662	8133 / 1.726	7560 / 1.746	6979 / 1.736	6254 / 1.710	4759 / 1.694	4216 / 1.694	1-1/2	1160	25
	7115 / 0.896	6567 / 1.021	5995 / 1.045	5406 / 1.102	4802 / 1.106	4138 / 1.114	3369 / 1.083	1	1750	31
	9535 / 1.697	8870 / 1.719	8189 / 1.728	7487 / 1.721	6759 / 1.714	5990 / 1.683	5159 / 1.686	1-1/2	1750	43
	10288 / 2.216	9673 / 2.306	9112 / 2.342	8574 / 2.349	8042 / 2.343	7494 / 2.346	6924 / 2.337	2	1750	37
30	8058 / 0.597	6645 / 0.627	5130 / 0.612	3974 / 0.570				1/2	870	16.9
	8885 / 0.852	7507 / 0.891	6113 / 0.888	5383 / 0.878	4050 / 0.838	2400 / 0.858		3/4	870	19.7
	10095 / 1.255	8508 / 1.256	7085 / 1.208	5837 / 1.185	4593 / 1.149	3590 / 1.140	2116 / 1.186	1	870	20
	11015 / 1.890	9970 / 1.890	8893 / 1.874	8361 / 1.849	7542 / 1.690	5640 / 1.721	4904 / 1.750	1-1/2	870	21
	12350 / 2.621	11159 / 2.505	9333 / 2.460	7529 / 2.408	8180 / 2.307	6815 / 2.642	5793 / 2.352	2	870	24
	9274 / 0.860	8023 / 0.886	6518 / 0.863	4673 / 0.820	2755 / 0.816			3/4	1160	25
	10694 / 1.267	9425 / 1.257	7878 / 1.231	6528 / 1.159	4811 / 1.140	2873 / 1.216		1	1160	29
	12020 / 1.923	10870 / 1.924	9633 / 1.896	8269 / 1.849	7103 / 1.815	6316 / 1.821	5272 / 1.778	1-1/2	1160	30
	12847 / 2.523	11665 / 2.545	10635 / 2.542	9601 / 2.517	8715 / 2.493	7782 / 2.446	6963 / 2.324	2	1160	33
	14635 / 3.789	13612 / 3.698	12046 / 3.592	10947 / 3.559	10069 / 3.537	9085 / 3.531	8146 / 3.391	3	1160	37
36	12938 / 2.463	12151 / 2.534	11337 / 2.536	10304 / 2.536	9364 / 2.532	8331 / 2.501	7503 / 2.464	2	1750	46
	15195 / 3.850	14454 / 3.896	13595 / 3.898	12668 / 3.900	11692 / 3.826	10813 / 3.791	9585 / 3.667	3	1750	54
	10708 / 0.780	9073 / 0.833	7377 / 0.845	5612 / 0.808				3/4	870	22
	12730 / 1.152	11041 / 1.200	9168 / 1.184	7346 / 1.169	5061 / 1.101			1	870	26
	13685 / 1.745	12339 / 1.718	10479 / 1.629	8588 / 1.591	6455 / 1.569	3906 / 1.606		1-1/2	870	30
	16374 / 2.409	14844 / 2.388	13309 / 2.392	11779 / 2.312	10037 / 2.191	7404 / 2.162	4676 / 2.102	2	870	28
	18199 / 3.466	16805 / 3.322	15502 / 3.285	14102 / 3.277	12081 / 3.118	9540 / 3.143	6836 / 3.268	3	870	32
	14053 / 1.744	12929 / 1.849	11650 / 1.865	10402 / 1.895	9167 / 1.882	7833 / 1.845	6471 / 1.769	1-1/2	1160	34
	14679 / 2.115	13505 / 2.186	12290 / 2.221	10972 / 2.206	9636 / 2.189	8405 / 2.172	7148 / 2.158	2	1160	35
	17582 / 3.577	16319 / 3.541	15067 / 3.534	13775 / 3.523	12491 / 3.523	11275 / 3.512	9950 / 3.487	3	1160	37
21936 / 5.769	20539 / 5.574	19232 / 5.503	17980 / 5.498	16773 / 5.523	15581 / 5.523	14152 / 5.480	5	1160	47	
15035 / 3.422	14138 / 3.515	13355 / 3.547	12613 / 3.550	11869 / 3.544	11060 / 3.555	10171 / 3.448	3	1750	74	
20465 / 5.422	19705 / 5.639	18927 / 5.770	18129 / 5.832	17312 / 5.843	16476 / 5.826	15609 / 5.903	5	1750	75	
24839 / 8.311	24078 / 8.482	23262 / 8.608	22392 / 8.685	21480 / 8.718	20544 / 8.716	19609 / 8.663	7-1/2	1750	81	

Performance shown is for Installation Type A: Free inlet, Free outlet. BHP does not include drive losses.



S&P USA Ventilation Systems, LLC., Div. of Soler & Palau Ventilation Group, certifies that the Models HRED-C shown herein are licensed to bear the AMCA Seal. The ratings shown are based on test and procedures performed in accordance with AMCA Publication 211 and comply with the requirement of the AMCA Certified Ratings Program.



**PERFORMANCE DATA - HRED-C DIRECT DRIVE cont.**

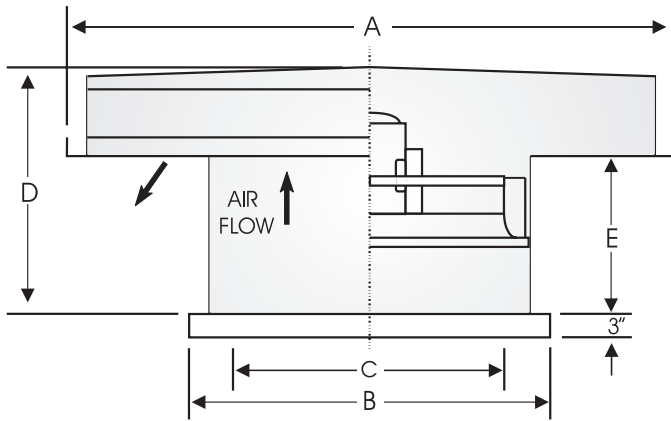
Model HRED-C	CFM / BHP @ Static Pressure							HP	RPM	Sones @ 5 ft.
	0	1/8	1/4	3/8	1/2	5/8	3/4			
42	6570 / 1.609	14167 / 1.551	11262 / 1.420	7973 / 1.426	-	-	-	1-1/2	870	33
	19940 / 2.305	17744 / 2.305	15655 / 2.306	13058 / 2.215	10682 / 2.153	-	-	2	870	37
	21640 / 3.95	19785 / 3.89	17763 / 3.81	15602 / 3.72	13345 / 3.67	11007/3.67	8532 3.73	3	870	41
	21966 / 3.308	20500 / 3.444	18953 / 3.489	17344 / 3.492	15718 / 3.518	14022 / 3.444	12180 / 3.312	3	1160	58
	26310 / 5.833	24753 / 5.770	23272 / 5.771	21656 / 5.642	19945 / 5.643	18332 / 5.356	16737 / 4.609	5	1160	59
	20253 / 5.745	19103 / 5.648	17959 / 5.619	16823 / 5.620	15703 / 5.493	14611 / 5.497	13403 / 5.297	5	1750	93
48	20688 / 2.317	19025 / 2.402	16940 / 2.418	15074 / 2.389	13092 / 2.184	10681 / 2.196	7827 / 2.224	2	870	41
	25857 / 3.483	23353 / 3.470	20843 / 3.448	18197 / 3.344	15375 / 3.114	12299 / 3.178	8647 / 2.975	3	870	44
	30637 / 5.760	28009 / 5.547	25382 / 5.505	22872 / 5.527	20457 / 5.573	17925 / 5.584	14299 / 5.353	5	870	48
	34585 / 8.315	33085 / 8.498	31514 / 8.610	29874 / 8.656	28175 / 8.648	26449 / 8.493	24689 / 8.506	7-1/2	870	50
	37488 / 11.819	35927 / 11.332	34497 / 11.090	32665 / 10.976	30613 / 10.985	28509 / 10.499	26495 / 10.506	10	870	56
	30735 / 5.883	28107 / 5.486	25346 / 5.411	22591 / 5.430	19994 / 5.239	17423 / 4.666	14714 / 4.779	5	1160	71
	34476 / 8.257	32589 / 8.222	30723 / 8.227	28848 / 8.230	26934 / 8.174	24944 / 7.914	22873 / 7.765	7-1/2	1160	79
	38005 / 11.916	35927 / 11.509	34081 / 11.356	32323 / 11.324	30562 / 11.337	28647 / 10.825	26258 / 10.795	10	1160	99
54	27942 / 3.470	25431 / 3.528	22691 / 3.539	19504 / 3.486	16154 / 3.296	12685 / 3.033	9565 / 2.570	3	870	43
	37098 / 4.879	34410 / 5.044	31722 / 5.209	29013 / 5.310	26232 / 5.322	23290 / 5.270	20389 / 5.119	5	870	58
	44330 / 8.857	41565 / 8.595	38801 / 8.333	36024 / 8.089	33088 / 8.026	29922 / 8.003	26445 / 7.749	7-1/2	870	67
	43655 / 11.930	40830 / 11.397	38170 / 11.216	35619 / 11.208	33151 / 11.013	30745 / 11.003	28251 / 10.863	10	870	69
	27088 / 5.860	25568 / 5.788	23941 / 5.772	22218 / 5.777	20425 / 5.606	18586 / 5.506	16718 / 5.340	5	1160	87
36365 / 8.495	34710 / 8.753	33103 / 8.897	31500 / 8.957	29856 / 8.955	28086 / 8.811	26063 / 8.824	7-1/2	1160	92	
60	48780 / 11.909	45778 / 11.745	42747 / 11.728	39680 / 11.667	36563 / 11.253	33414 / 10.753	30299 / 10.717	10	870	88

Performance shown is for Installation Type A: Free inlet, Free outlet. BHP does not include drive losses.

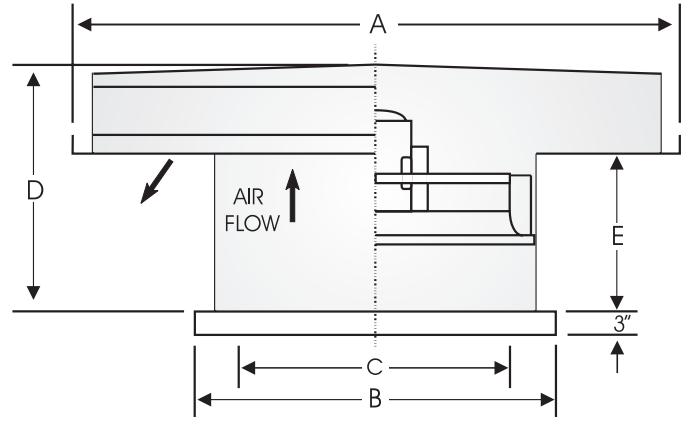


S&P USA Ventilation Systems, LLC, Div. of Soler & Palau Ventilation Group, certifies that the Models HRED-C shown herein are licensed to bear the AMCA Seal. The ratings shown are based on test and procedures performed in accordance with AMCA Publication 211 and comply with the requirement of the AMCA Certified Ratings Program.

# DIMENSIONS



**Model HREB-C Belt Drive**



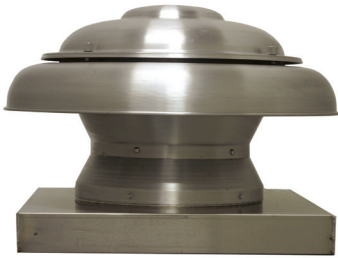
**Model HRED-C Direct Drive**

Size	Dimensions (Inches)						Metal Gauges				Avg. Wt.
	A	B	C	D	E	F	Hood Crown	Hood Side	Base	Curb Cap	
24	58	35	30	44	23	33-1/4	18	18	16	16	425
30	66	41	36	44	23	39-1/4	18	18	16	16	550
36	78	47	42	44	23	45-1/4	18	18	16	16	700
42	87	53	48	51	30	51-1/4	18	16	16	16	800
48	99	59	54	51	30	57-1/4	18	16	16	14	1100
54	111	65	60	51	30	63-1/4	18	16	14	14	1300
60	111	71	66	51	30	69-1/4	18	16	14	14	1550
60	123	71	66	51	30	69-1/4	18	16	14	14	1690

- A - Outside dimension of square hood.
- B - Inside dimension of square curb cap.
- C - Minimum inside dimension of curb or roof opening for rated performance.
- D - Height of unit above curb cap.
- E - Height of hood opening above curb cap.
- F - Outside dimension of prefab curb.

# MODELS ARE & ARS

## DOMED AXIAL POWER ROOF VENTILATORS (EXHAUST/SUPPLY)



### MODEL FEATURES

- Exhaust air up to 2,827 CFM in static pressure applications up to 3/4" w.g.
- Low profile attractive spun aluminum exterior
- Direct drive units have low sound levels and quiet operation
- AMCA Air & Sound Licensed
- UL 705 Listed

### CONSTRUCTION OPTIONS

MODEL NAME	DESCRIPTION
ARE	Dome Axial Power Roof Exhaust Fan
ARS	Dome Axial Power Roof Supply Fan

### MODEL OVERVIEW

The AR series offers powerful axial intake (ARS) or exhaust (ARE) performance in a roof mount design that is compact, lightweight and easy to install. Available in 4 sizes with a CFM range from 167 to over 2,827 CFM to 3/4" static pressure.

The direct drive design has no belts or fan bearings to maintain or adjust and consequently requires very little maintenance. The AR series is an excellent choice for factories, shops, restaurants, bathrooms, offices, schools and other similar applications where light to moderate static pressures are present. Equipped with explosion-proof motors, the AR series can be used in more severe applications. (Caution should be used to safely match the motor capabilities with the specific hazardous environment).

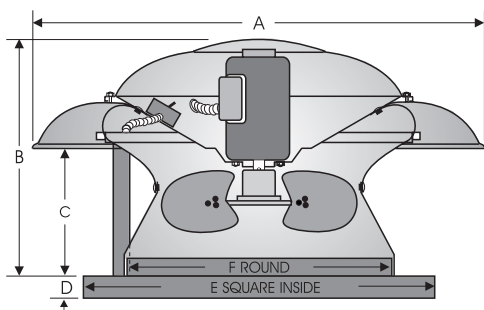
The low contour designs and all aluminum housing provides a modern, clean appearance in addition to excellent performance and durability.

Models ARE are available in our Quickship program. Sizes 10-20 are available for next day or 10-day shipping from stock.



**5 year fan housing warranty, 1 year motor warranty**

### DIMENSIONS



Size	Dimensions (Inches)						Avg. Ship weight (lbs.)
	A	B	C	D	E	F	
100A	21	13	7	2	20	13-3/4	25
120A-121A	28	16	8	3	24	15-3/4	42
160A-161A	32	18	8-1/2	3	28	19-3/4	55
201A	36	20	9-3/4	3	32	23-3/4	75

All specifications are subject to change without notice unless approved in submittal by S&P USA.



## CONSTRUCTION/SPECIFICATION CHECKLIST

### **Housing**

- Heavy-gauge all aluminum housing.
- Exclusive U-Spring suspension compensates for both radial and lateral movement and provides 44% better vibration isolation than rubber isolators.
- External wiring chase for easy connection.
- High point of discharge with low silhouette design.
- Quick access to motor compartment for easy maintenance.

### **Propellers**

- Attaches directly to fan shaft for maximum efficiency.
- Precision pitched. Heavy-gauge aluminum blades with steel hub. Blades are designed for specific exhaust or supply requirements.

### **Motors**

- Standard motors are single speed, speed controllable and drip-proof.
- All motors are rated for continuous duty.
- Disconnect is standard on ODP motors (except two speed and explosion proof).
- Motors are shipped assembled with factory test run assurance.

### **Certifications**

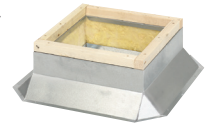
- UL-705 listing available as an option with standard motors.
- AMCA Air & Sound Licensed.

## OPTIONS/ACCESSORIES

**Solid State Speed Control:** S&P's solid state control is matched to allow smooth RPM variation and adjustment of airflow for system balancing. CFM is reduced in direct proportion to motor speed reduction. Speed controllers available for 115/1 or 230/1 operation. Fan performance can be controlled from the ventilated area.



**Roof Curb:** Prefabricated heavy-gauge galvanized steel, welded construction, 12" high (other heights are also available) with 1-1/2" wood nailer. Assures perfect fit of fan to roof opening. Options include burglar bars, single or double pitch construction and hinged curbs for easy duct access.



**Motor Operated Damper:** Motor operated aluminum damper for positive closure against backdraft.

**Automatic Damper:** Automatic aluminum damper for ease in installation and effective backdraft protection.



**Curb Hinge Arrangement:** The curb hinge arrangement provides easy access to the fan, backdraft damper, and duct for servicing and cleaning.

**Insect Screen:** Helps prevent insects, snow, airborne mist or water droplets from entering.

**Special Coatings:** For protective and decorative purposes. Available coatings include: Synthetic Resin, Epoxy, and Heresite (air-dried phenolic). Contact your representative or the factory for more information on available coatings and colors.



**PERFORMANCE**

**Model ARE (Exhaust)**

CFM / BHP @ Static Pressure / Sones										Catalog Number	HP	RPM														
0	1/10			1/8			1/4						3/8			1/2			5/8			3/4				
439	0.05	2.8	290	0.05	4.1	258	0.05	4.6	167	0.05	4.7	-	-	-	-	-	-	-	-	-	-	-	ARE 100A S	1/15	1190	
533	0.08	4.4	429	0.08	4.6	381	0.08	5.1	264	0.09	6.5	198	0.09	6.6	-	-	-	-	-	-	-	-	-	ARE 100A S	1/15	1445
627	0.13	6.1	540	0.14	6.3	520	0.14	6.3	373	0.14	8.7	297	0.15	8.6	242	0.15	8.5	178	0.16	8.8	-	-	-	ARE 100A *	1/15	1700
857	0.03	3.1	591	0.04	3.7	483	0.04	4.0	207	0.046	6.1	-	-	-	-	-	-	-	-	-	-	-	ARE 121A S	1/4	815	
1041	0.05	4.6	876	0.06	5.0	808	0.07	5.2	452	0.07	6.6	241	0.08	8.5	-	-	-	-	-	-	-	-	ARE 121A S	1/4	990	
1220	0.08	6.1	1082	0.10	6.4	1046	0.10	6.5	696	0.10	7.6	484	0.12	9.0	303	0.13	10.7	-	-	-	-	-	ARE 121A *	1/4	1160	
1261	0.07	5.9	1135	0.07	6.4	1103	0.08	6.5	780	0.08	7.5	521	0.09	9.1	-	-	-	-	-	-	-	-	ARE 120A S	1/4	1185	
1533	0.12	8.2	1426	0.13	8.7	1402	0.13	8.8	1247	0.14	9.4	934	0.14	10.3	703	0.15	11.8	543	0.16	13.4	-	-	ARE 120A S	1/4	1440	
1804	0.20	10.8	1710	0.21	11.3	1689	0.21	11.4	1583	0.22	12	1416	0.22	12.4	1154	0.22	13.3	912	0.24	14.6	763	0.25	16.0	ARE 120A *	1/4	1695
1245	0.04	3.9	953	0.05	4.6	817	0.05	5.4	455	0.06	5.5	-	-	-	-	-	-	-	-	-	-	-	ARE 161A S	1/4	800	
1517	0.07	5.7	1290	0.08	5.6	1230	0.09	6.1	802	0.10	7.7	548	0.10	7.8	-	-	-	-	-	-	-	-	ARE 161A S	1/4	975	
1782	0.11	7.6	1590	0.13	6.9	1542	0.13	7.2	1189	0.14	9.9	882	0.16	10.0	671	0.17	10.0	-	-	-	-	-	ARE 161A *	1/4	1145	
1827	0.09	6.4	1640	0.10	5.9	1589	0.11	6.0	1237	0.12	8.1	905	0.13	13.4	685	0.13	22.5	-	-	-	-	-	ARE 160A S	1/3	1160	
2220	0.16	8.8	2069	0.18	8.2	2030	0.18	8.1	1820	0.20	8.8	1487	0.21	11.4	1191	0.22	15.9	994	0.23	22.9	816	0.24	33.1	ARE 160A S	1/3	1410
2606	0.26	11.3	2479	0.28	10.8	2446	0.28	10.7	2274	0.31	10.6	2090	0.33	12.2	1788	0.34	14.5	1509	0.35	18.3	1309	0.37	23.8	ARE 160A *	1/3	1655
1990	0.08	6.3	1651	0.09	5.8	1555	0.09	6.2	986	0.10	7.0	584	0.11	7.5	-	-	-	-	-	-	-	-	ARE 201A S	1/4	725	
2415	0.15	8.8	2142	0.16	8.2	2070	0.16	8.0	1617	0.16	9.7	1177	0.18	9.7	845	0.19	10.1	-	-	-	-	-	ARE 201A S	1/4	880	
2827	0.24	11.3	2587	0.25	10.8	2532	0.25	10.7	2218	0.26	11.2	1768	0.26	12.8	1412	0.28	12.6	1122	0.29	13.0	844	0.30	13.7	ARE 201A *	1/4	1030

Performance certified is for installation type A – free inlet, free outlet.

The sound ratings shown are loudness values in fan sones @ 5' (1.5m) in a hemispherical free field calculated per AMCA Standard 301. Values shown are for: installation Type A: free inlet hemispherical sone levels.

\* Base Unit – Speed (RPM) shown is nominal. AMCA Seal does not apply to units with speed control.

\* - As run speed.

S - Requires speed control.

**Model ARS (Supply)**

CFM / BHP @ Static Pressure / Sones										Catalog Number	HP	RPM														
0	1/10			1/8			1/4						3/8			1/2			5/8			3/4				
466	0.05	4.3	297	0.05	4.8	245	0.06	5.0	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ARS 100A S	1/15	1175	
565	0.09	6.2	432	0.09	6.5	397	0.10	6.7	192	0.11	7.9	-	-	-	-	-	-	-	-	-	-	-	ARS 100A S	1/15	1425	
664	0.14	8.3	559	0.15	8.3	525	0.15	8.5	355	0.16	9.7	162	0.18	11.0	-	-	-	-	-	-	-	-	ARS 100A *	1/15	1675	
683	0.02	4.5	383	0.03	4.3	317	0.03	4.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ARS 121A S	1/4	820	
828	0.04	6.4	602	0.05	6.3	507	0.05	6.2	163	0.07	6.3	-	-	-	-	-	-	-	-	-	-	-	ARS 121A S	1/4	995	
974	0.07	8.4	808	0.08	8.2	749	0.08	8.3	462	0.09	8.2	-	-	-	-	-	-	-	-	-	-	-	ARS 121A *	1/4	1170	
1011	0.05	4.5	862	0.06	4.9	814	0.06	5.2	506	0.07	6.9	-	-	-	-	-	-	-	-	-	-	-	ARS 120A S	1/4	1200	
1222	0.09	6.4	1100	0.10	6.6	1068	0.10	6.9	817	0.11	8.1	594	0.13	10.1	323	0.15	13.0	-	-	-	-	-	ARS 120A S	1/4	1450	
1445	0.15	8.7	1347	0.16	8.6	1319	0.16	8.8	1173	0.17	9.9	907	0.18	11.2	738	0.20	13.2	561	0.22	15.9	206	0.26	20.0	ARS 120A *	1/4	1715
1229	0.05	7.3	945	0.06	6.8	858	0.06	7.2	442	0.07	7.3	-	-	-	-	-	-	-	-	-	-	-	ARS 161A S	1/4	785	
1488	0.09	10.0	1287	0.10	9.2	1230	0.10	9.2	853	0.11	10.0	494	0.13	10.1	-	-	-	-	-	-	-	-	ARS 161A S	1/4	950	
1754	0.15	13.3	1585	0.16	12.6	1540	0.16	12.5	1238	0.16	13.5	961	0.18	13.4	661	0.20	13.8	-	-	-	-	-	ARS 161A *	1/4	1120	
1411	0.06	10.1	1151	0.07	9.5	1079	0.07	9.7	751	0.09	10.7	303	0.10	13.0	-	-	-	-	-	-	-	-	ARS 160A S	1/3	1090	
1799	0.12	15.7	1654	0.14	14.6	1583	0.14	14.4	1280	0.15	14.8	1019	0.17	15.6	749	0.19	17.1	304	0.215	20.3	-	-	ARS 160A S	1/3	1390	
2187	0.21	21.9	2087	0.23	20.5	2052	0.24	20.3	1766	0.25	19.7	1547	0.27	20.3	1326	0.30	21.0	1123	0.32	21.9	889	0.35	23.3	ARS 160A *	1/3	1690
1850	0.07	9.1	1400	0.08	8.4	1273	0.08	8.2	-	-	-	-	-	-	-	-	-	-	-	-	-	-	ARS 201A S	1/4	750	
2245	0.13	12.6	1888	0.14	12.0	1789	0.14	11.8	1254	0.16	11.0	-	-	-	-	-	-	-	-	-	-	-	ARS 201A S	1/4	910	
2627	0.21	16.3	2342	0.22	15.8	2253	0.22	15.6	1815	0.24	14.8	1325	0.26	14.7	-	-	-	-	-	-	-	-	ARS 201A *	1/4	1065	

Performance certified is for installation type A – free inlet, free outlet.

The sound ratings shown are loudness values in fan sones @ 5' (1.5m) in a hemispherical free field calculated per AMCA Standard 301. Values shown are for: installation Type A: free inlet hemispherical sone levels.

\* Base Unit – Speed (RPM) shown is nominal. AMCA Seal does not apply to units with speed control.

\* - As run speed.

S - Requires speed control.



**Standard 705**  
(Optional)



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# MODEL UBS & UBS-P

## BELT DRIVE UPBLAST PROPELLER ROOF EXHAUSTER



### **MODEL FEATURES**

- Exhaust air up to 51,000 CFM in static pressure applications up to 1/2" w.g.
- Straight-through air flow design results in maximum exhaust efficiency
- Belt drives permit easy performance adjustments when needed
- cULus 705 Listed

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### **MODEL OVERVIEW**

Models UBS and UBS-P are high capacity roof mounted exhausters rated from 7,000 to 51,000 CFM. They are general ventilation units designed to economically remove large volumes of air, fumes and vapors from commercial and industrial buildings such as warehouses, manufacturing and assembly plants, chemical plants, foundries and paper mills.

Straight-through air flow design results in maximum exhaust efficiency. During operation, high air flow velocity opens butterfly dampers and prevents rain or snow from entering. Dampers close and cover the venturi opening when unit is not in use.

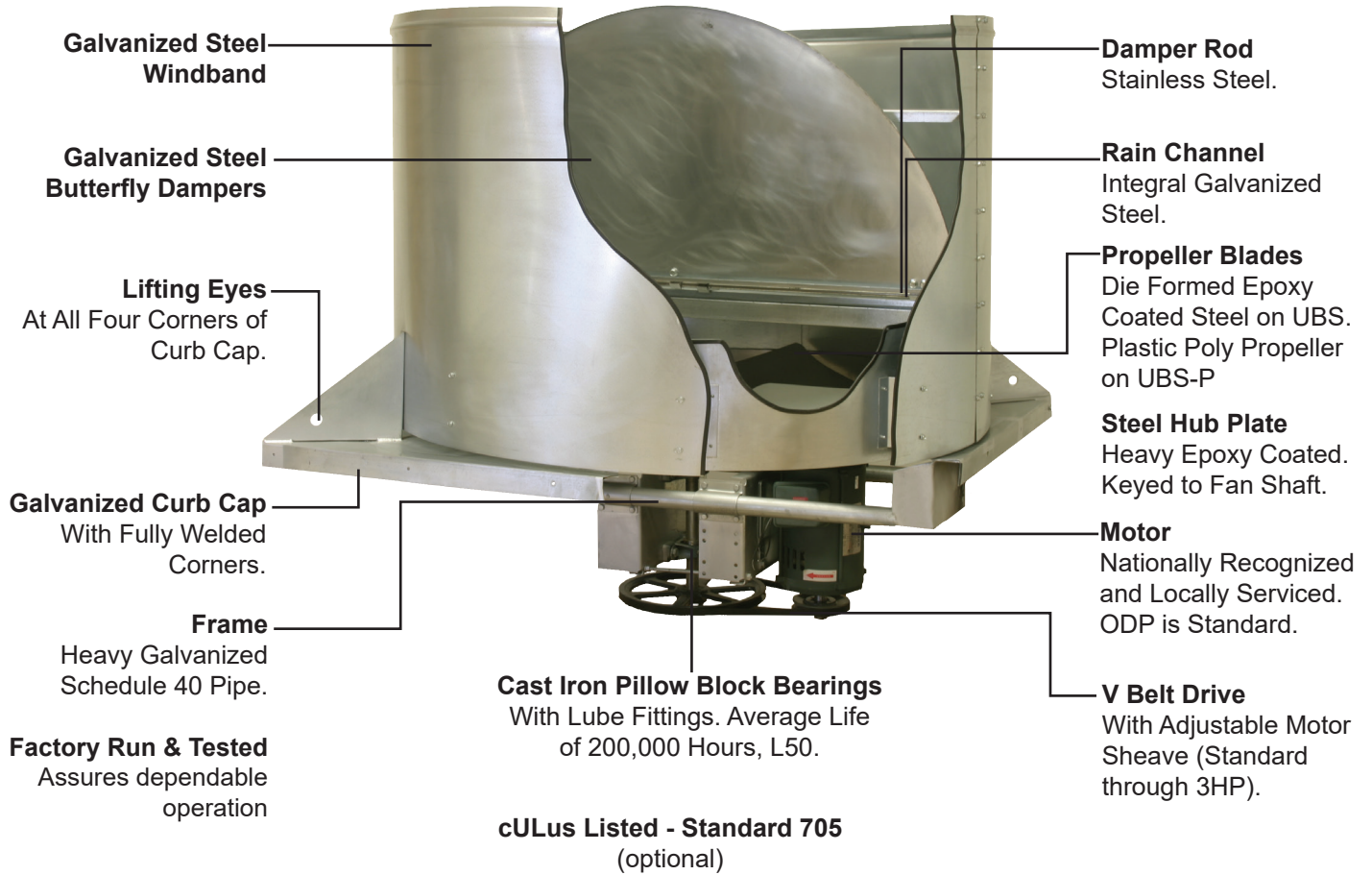
The roof mounted location eliminates interference with processes and equipment inside the building. It also permits locating the exhauster over a source of heated or contaminated air, allowing direct upward venting to the outside, unlike wall mounted exhausters which may move contaminated air through adjacent work spaces.

Belt drive units usually operate more quietly and afford easier performance adjustments, while direct drive models require less maintenance.

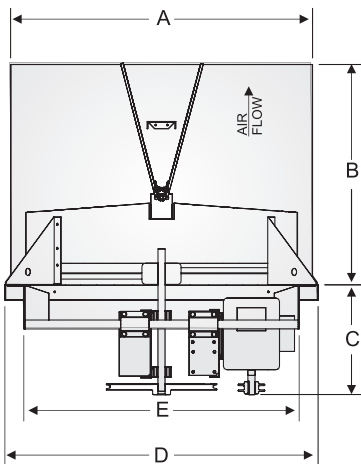
**2 year fan housing warranty, 1 year motor warranty**



## CONSTRUCTION FEATURES AND OPTIONS



## DIMENSIONAL DATA



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

- A** - Outside Diameter of Windband.
- B** - Height of Unit Above Curb Cap.
- C** - Maximum Depth of Unit Below Top of Curb, Actual Depth Varies with Motor Size.
- D** - Inside Dimension of Square Curb Cap.
- E** - Minimum Inside Dimension of Curb Opening Required for Adequate Clearance of Fan Frame.
- F** - Outside Dimension of Factory Built Prefab Curb.



## CONSTRUCTION/SPECIFICATION CHECKLIST

### Panel Assembly

- Heavy-gauge G90 galvanized steel panel on all sizes.
- One piece venturi for maximum efficiency.
- Welded and bolted support structure of schedule 40 galvanized pipe.
- Motor/bearing plates of heavy-gauge galvanized steel.
- Lifting eyes standard for ease of installation.

### Windband/Butterfly Dampers

- Heavy-gauge galvanized steel windband.
- Galvanized steel butterfly dampers standard.
- Galvanized rain channel drains water from damper area to roof.
- Corrosion resistant.

### Propeller (Model UBS)

- Steel hub plate with steel taper lock bushing.
- Die formed, heavy-gauge, epoxy coated, steel blades.

### Propeller (Model UBS-P)

- Plastic airfoil propeller
- Size 24 has a glass reinforced polyamide, industrial quality propeller
- Sizes 30-60 have a glass reinforced polypropylene propeller
- Blades are pitched for optimum efficiency

### Drives

- Sized for minimum 150% of drive horsepower.
- Single belt adjustable pitch sheaves through 3HP.
- Two belt fixed pitch sheaves on 5HP and 7 1/2HP units.
- Adjustable tension rods for belt adjustment.
- Nonstatic oil resistant V belts.
- Keyed, turned, ground and polished shafts coated with an anti-rust compound to resist corrosion.

### Bearings

- Bearings designed for minimum 200,000 hour life, L50.
- Cast iron self-aligning pillow block ball bearings.
- Bearings are sealed, prelubricated with relube fittings.

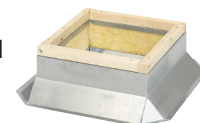
### Motors

- Brands are nationally recognized and locally serviced.
- Open drip-proof construction is standard.

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## OPTIONS/ACCESSORIES

**Roof Curb:** Prefabricated heavy-gauge galvanized steel, welded construction, 12" high with 1 - 1 / 2" wood nailer. Options include burglar bars, single and double pitch construction, and additional curb heights.



**Outlet Guard:** 1/2" x 1" wire mesh guard will prevent birds and other objects from entering fan.

**Disconnect Switch:** Nonfused safety disconnects are available for all motor sizes in open enclosures. Explosion proof, Nema4 and 4X are also available.

**Magnetic Latches:** Help reduce butterfly damper chatter when the units are not in operation.

**Cushion Close:** Allows butterfly damper doors to close quietly.

**Safety Basket Guard:** 1/2 x 1" galvanized wire. Guard extends into roof curb. **Important:** For all nonducted applications, the manufacturer recommends that a safety basket guard must be installed as a safety precaution for personnel below unit.



# PERFORMANCE



MODEL UBS	CFM @ STATIC PRESSURE					HP	RPM	Max. BHP	Sones @ .375
	0	1/8	1/4	3/8	1/2				
24	7079	6599	6023	5284	3732	3/4	1070	0.82	22
	7939	7511	7068	6461	5718	1	1200	1.10	27
30	10546	9463	7865	5230	3906	1	871	1.10	16.8
	12781	11952	10895	9435	7270	1-1/2	1055	1.65	23
	14388	13700	12782	11745	10346	2	1188	2.20	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	2.20	24
	19087	18221	17299	16291	15181	3	950	3.30	36
42	16307	14087	11400	7270	5386	1-1/2	510	1.65	16.4
	19184	17283	15281	12804	8980	2	600	2.20	22
	22382	20749	19150	17245	15170	3	700	3.30	31
48	25259	23813	22382	20885	19127	5	790	5.50	42
	22656	20052	16506	10504	7559	2	475	2.20	19.7
	27187	25018	25563	19410	14113	3	570	3.30	26
54	31480	29606	27732	25319	22538	5	660	5.50	33
	29460	25454	20962	14718	11910	3	485	3.30	19
60	36456	33013	30586	26237	19623	5	600	5.50	29
	44555	40707	36545	27962	22834	5	495	5.50	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 (1.5m) 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 refer to the Optimizer Selection Program.

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. Use Optimizer to see the exact BHP for your selection.

Model UBS-P	CFM @ Static pressure, HP Req											HP	RPM
	0	HP	1/8	HP	1/4	HP	3/8	HP	1/2	HP			
24	6610	0.587	6240	0.634	5890	0.685	5490	0.736	5010	0.781	3/4	1070	
	7420	0.828	7090	0.881	6760	0.936	6440	0.996	6060	1.05	1	1200	
30	10700	0.724	9550	0.764	8280	0.777	6430	0.784	3010	0.784	1	871	
	12900	1.29	12000	1.35	11000	1.37	9920	1.38	8450	1.36	1-1/2	1055	
	14600	1.84	13800	1.9	12900	1.94	12000	1.97	10900	1.96	2	1188	
36	12500	0.65	10800	0.701	8500	0.742	4550	0.79	2930	0.912	1	575	
	15300	1.2	13900	1.26	12400	1.31	10500	1.37	6630	1.4	1-1/2	705	
	17200	1.71	16000	1.79	14800	1.86	13300	1.91	11400	1.97	2	795	
	20600	2.93	19600	3	18600	3.1	17500	3.18	16200	3.23	3	950	
42	18200	1.07	15700	1.14	12400	1.22	6270	1.25	-	-	1-1/2	510	
	21400	1.66	19300	1.83	16800	1.91	13600	2.01	7620	2.02	2	600	
	25000	2.78	23200	2.87	21300	2.96	19100	3.07	16400	3.19	3	700	
	30000	4.86	28400	4.97	26700	5.06	24700	5.16	22600	5.27	5	790	
48	26200	1.86	23000	1.97	19300	2.1	10500	2.09	-	-	2	475	
	30400	2.89	27600	3.02	24500	3.14	20900	3.29	12200	3.24	3	550	
	36500	4.99	34200	5.17	31700	5.29	29100	5.45	26300	5.66	5	660	
54	34800	2.8	31200	2.96	26800	3.12	15400	3.14	-	-	3	425	
	41800	4.84	38800	5.02	35600	5.24	31500	5.41	26000	5.47	5	510	
60	50100	4.67	46600	4.78	42800	4.93	36800	4.87	25700	4.46	5	560	
	58500	7.48	55600	7.6	52500	7.75	48900	7.93	43700	7.87	7-1/2	655	

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.

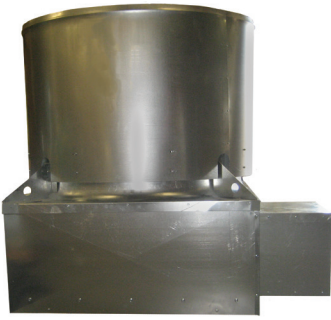
Sound ratings are loudness values in fan sones at 5 feet (1.5m) in a hemispherical free field calculated per AMCA Standard 301. Values are for installation type A: Free inlet fan sone levels. For additional sound data and for selections at other static pressures, please refer to the Optimizer Selection Program.

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. Use Optimizer to see the exact BHP for your selection.



# MODEL UBSRD

## REMOTE DRIVE UPBLAST PROPELLER ROOF EXHAUSTER



### **MODEL FEATURES**

- Exhaust air up to 52,000 CFM in static pressure applications up to 3/4" w.g.
- Motor and drives are located outside of the exhaust airstream
- Suited for removal of heated or contaminated air
- Capable of continuous operation exhausting air up to 200°F
- Belt drives permit easy performance adjustments when needed
- cULus 705 Listed

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### **MODEL OVERVIEW**

Model UBSRD units are high capacity, belt driven roof mounted exhausters rated from 4,900 to 52,000 CFM. The motor and drives are located outside of the exhaust airstream, making these units especially suited for the removal of heated or contaminated air from commercial and industrial buildings or processes where these conditions exist. All models are capable of continuous operation exhausting air to 200°F.

The remote drive construction allows for easy rooftop belt and motor access for maintenance. For increased air performance (in clean conditions) with the same easy maintenance access, the UBSRD is available without the belt and bearing enclosures.

Straight-through air flow design results in maximum exhaust efficiency. During operation, high air flow velocity opens butterfly dampers and prevents rain or snow from entering. Dampers close and cover the venturi opening when unit is not in use.

The roof mounted location eliminates interference with processes and equipment inside the building. It also permits locating the exhauster over a source of heated or contaminated air, allowing direct upward venting to the outside, unlike wall mounted exhausters which may move contaminated air through adjacent work spaces.

**2 year fan housing warranty, 1 year motor warranty**



## **CONSTRUCTION/SPECIFICATION CHECKLIST**

### **Panel Assembly**

- Heavy-gauge G90 galvanized steel panel, size 24-60.
- One piece venturi for maximum efficiency and strength.
- Motor mounting plates of heavy-gauge galvanized steel.
- Bearing mounting plates of heavy-gauge galvanized steel.
- Lifting eyes standard for ease of installation.

### **Windband/Butterfly Dampers**

- Heavy-gauge galvanized steel windband.
- Galvanized steel butterfly dampers standard.
- Galvanized rain channel drains water from damper area to roof.
- Galvanized damper shaft rotates in bronze bushing.

### **Propeller**

- Steel hub plate with steel taper lock bushing.
- Die formed, heavy-gauge, epoxy coated, steel blades.

### **Drives**

- Shielded from airstream by galvanized steel enclosure (Optional).
- Sized for minimum 150% of drive horsepower.
- Single belt adjustable pitch sheaves through 3HP.
- Two belt fixed pitch sheaves 5HP through 10HP.
- Adjustable pitch sheaves are optional above 3HP.
- Tilt motor base for belt adjustment.
- Nonstatic, oil resistant v-belts.
- Keyed, turned, ground and polished shafts.

### **Bearings**

- Bearings designed for minimum 200,000 hour life, L50.
- Cast iron self-aligning pillow block ball bearings.
- Bearings are sealed, prelubricated and furnished with relube fittings.

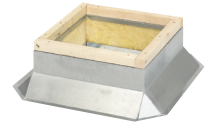
### **Motors**

- Located outside airstream under weather cover.
- Brands are nationally recognized and locally serviced.
- Open drip-proof construction is standard.



## OPTIONS/ACCESSORIES

**Roof Curb:** Prefabricated heavy-gauge galvanized steel, welded construction, 12" high with 1-1/2" wood nailer. Options include burglar bars, single and double pitch construction, and additional curb heights.



**Disconnect Switch:** Nonfused safety disconnects are available for all motor sizes in rain-tight or open enclosures.

**Magnetic Latches:** Help reduce damper chatter when the units are not in operation.

**Noninsulated Belt Cover (Belt Tube):** To isolate drive components from airstreams.

**Outlet Guard:** 1/2" x 1" wire mesh guard will prevent birds and other objects from entering fan.

**Propeller Blade Side Safety Guard:** 1/2 x 1" galvanized wire guard. **Important:** For all nonducted applications, the manufacturer recommends that a safety guard must be installed as a safety precaution for personnel below unit.

**Extended Grease Lines:** Extended grease lines allow fan bearings to be relubricated from the exterior.

**Special Coatings:** Powered roof exhausters often require special coatings for protective and decorative purposes. Available coatings include: Synthetic Resin, Epoxy, and Heresite (air-dried phenolic). Contact your representative or the factory for more information on available coatings and colors.

# MODELS UBSRD-HT & UBSRD-HT1

## REMOTE DRIVE UPBLAST PROPELLER ROOF EXHAUSTERS FOR HEAT AND SMOKE REMOVAL



### MODEL FEATURES

- Exhaust air up to 52,000 CFM in static pressure applications up to 3/4" w.g.
- Motor and drives are located outside of the exhaust airstream
- Designed and tested for emergency heat and smoke removal
- Successfully passed heat test of 1000°F for 15 minutes and 500°F for over 4 hours
- Belt drives permit easy performance adjustments when needed
- cULus 705 Listed

### MODEL OVERVIEW

Model UBSRD-HT/HT1 has been designed and tested for emergency heat and smoke removal. This design also lends itself to everyday nonemergency high capacity industrial and commercial roof exhaust applications. Model UBSRD-HT/HT1 successfully passed heat test of 1000°F for fifteen (15) minutes, and 500°F for over four (4) hours by an independent testing agency. Model UBSRD-HT/HT1 exceeds I.R.I (Industrial Risk Insurers) guidelines as "Power Ventilator for Smoke Control Systems."

Features	UBSRD-HT	UBSRD-HT1
165°F (74°C) Fusible Link and Spring Damper Lifters		•
Belt tube with heat shield	•	•
Dual Drives	•	•
High Temperature Bearing Grease	•	•

The heavy-gauge design allows for years of standard commercial use and the dependability required in a fire emergency. The upblast configuration exhausts heat and smoke high above the roof line aiding in the access and capabilities of firefighters. Unlike complete design dependence on gravity vents which are sometimes limited by air temperature and wind velocity, the UBSRD-HT/HT1 in conjunction with gravity vents, will more effectively remove smoke, hot air, and gases when used in a properly designed system. With the UBSRD-HT1 unit, in the event of electrical failure, the 165°F fusible link will activate the spring assisted damper doors to provide gravity ventilation. Fan CFM, sizing and location for both exhaust and supply air are an important part of the overall heat and smoke venting building design needs. Refer to I.R.I., NFPA (National Fire Protection Association), and local fire codes for help in proper system design. Final approval for the complete system design should be authorized by the local authority having jurisdiction.

Fan selections are available in 24, 30, 36, 42, 48, 54 and 60 inch sizes. Horsepower and CFM range to 52,000 CFM and 10HP. Units are tested in accordance with AMCA Standard 301 (sound) and AMCA 210 (air) in an AMCA certified laboratory. Every unit is completely assembled and factory tested for quality assurance prior to shipment.

**1 year fan housing warranty, 1 year motor warranty**



## CONSTRUCTION/SPECIFICATION CHECKLIST

1. Successfully heat tested by independent laboratory for;
  - (a) 1000°F for 15 minutes.
  - (b) 500°F for minimum 4 hours.
2. All ferrous construction in airstream.
3. 165°F fusible link in damper spring mechanism (HT1 unit only).
4. Motor out-of-airstream design.
5. Belt & bearings enclosed in ventilated housing.
6. Minimum dual groove drive/belt combination.
7. Shaft heat slinger.
8. Belt tube and cover standard.
9. Die formed, heavy-gauge, epoxy coated, steel blades.
10. High temp grease.

### **Drives**

Motors, bearings and belt are shielded from the airstream by a sheet metal enclosure, with cooling provided by fresh outside air. Drives are fixed, sized for a minimum 150% of drive horsepower. Drives are minimum dual groove sheaves. Adjustable sheaves are available as an option. Bearings are heavy-duty cast iron, pillow block with relubricable fittings. Standard bearings are designed for minimum 200,000 hour, L50 life. All shafts are turned, ground and polished steel coated with an anti-rust compound to resist corrosion.

### **Electrical Power**

Electrical power should be independent of the general building. Wiring requires special, heat resistant qualities as determined by local fire codes. Switching should always be arranged so that automatic start-up can be achieved through safety devices such as, but not limited to, sprinkler systems and smoke or heat sensors.

### **High Temperature Option**

**500°F (260°C) for a minimum of 4 hours**

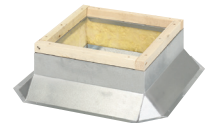
**1000°F (538°C) for a minimum of 15 minutes**

This construction exceeds specifications for IRI requirements of 500°F (260°C) air for a minimum of 4 hours and the SBCCI “Standard Fire Prevention Code” requirements of 1000°F (538°C) for a minimum of 15 minutes in emergency smoke removal applications. In addition, this construction exceeds British Standards 7346 Class B (250°C for 2 hours), Class C (300°C for 15 minutes), and Class D (300°C for 1 hour) temperature requirements. Temperature ratings tested in accordance to UL smoke control systems.

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## OPTIONS/ACCESSORIES

**Roof Curb:** Prefabricated heavy-gauge galvanized steel, welded construction, 12” high with 1-1/2” wood nailer. Options include burglar bars, single and double pitch construction, and additional curb heights.



**Disconnect Switch:** Nonfused safety disconnects are available for all motor sizes in rain-tight or open enclosures.

**Outlet Guard:** 1/2” x 1” wire mesh guard will prevent birds and other objects from entering fan.

**Propeller Blade Side Safety Guard:** 1/2 x 1” galvanized wire guard. **Important:** For all nonducted applications, the manufacturer recommends that a safety guard must be installed as a safety precaution for personnel below unit.

**Special Coatings:** Powered roof exhausters often require special coatings for protective and decorative purposes. Available coatings include: Synthetic Resin, Epoxy, and Heresite (air-dried phenolic). Contact your representative or the factory for more information on available coatings and colors.



**PERFORMANCE DATA**

Model	Motor HP	RPM	Max. BHP	Sones @ .375	CFM @ Static Pressure in Inches of Water											
					0.000	0.100	0.125	0.150	0.200	0.250	0.300	0.375	0.500	0.625	0.750	
24L	1/2	989	0.55	17	6153	5747	5645	5511	5244	4977						
	3/4	1123	0.82	22	6987	6629	6539	6435	6227	6019	5761	5373				
	1	1233	1.1	23	7671	7345	7263	7179	7012	6845	6614	6267	5580			
	1-1/2	1415	1.65	28	8800	8516	8445	8374	8231	8089	7920	7667	7163	6593		
30L	3/4	850	0.82	17	10257	9359	9134	8795	8118	7440						
	1	931	1.1	21	11224	10426	10227	9950	9396	8842	7950	6611				
	1-1/2	1065	1.65	25	12847	12189	12024	11814	11394	10974	10397	9531	7404			
	2	1180	2.2	29	14235	13675	13535	13350	12979	12608	12176	11529	10119			
30H	2	1286	2.2	34	13082	12604	12484	12364	12125	11886	11594	11156				
	3	1470	3.3	47	14959	14541	14436	14331	14122	13912	13690	13357	12706			
	5	1736	5.5	49	17664	17310	17221	17132	16955	16778	16601	16335	15874	15322	14697	
36L	1	641	1.1	21	13232	12196	11937	11622	10991	10361	6217					
	1-1/2	727	1.65	25	15018	14137	13917	13661	13148	12636	11969	10969				
	2	810	2.2	29	16726	15936	15738	15516	15071	14626	14145	13423				
	3	926	3.03	36	19128	18437	18264	18080	17713	17345	16943	16340	15239			
36H	3	1016	3.3	41	19050	18274	18080	17870	17449	17029	16556	15846	14267	12076		
	5	1205	5.5	57	22599	21945	21781	21615	21282	20950	20583	20032	19094	17763	16282	
42L	1	495	1.1	23	15823	13994	13537	12974	11847							
	1-1/2	562	1.65	28	17965	16347	15942	15487	14576	13666						
	2	623	2.2	35	19920	18453	18086	17707	16950	16192						
	3	711	3.3	38	22724	21438	21116	20801	20170	19539	18804	17702				
	5	784	4.5	42	25056	23890	23598	23310	22733	22157	21549	20638	18853			
42H	5	1004	5.5	50	26457	25702	25513	25288	24839	24389	23890	23141	21942	20643	18996	
	7-1/2	1155	7.88	53	30440	29784	29620	29454	29121	28788	28339	27665	26596	25568	24449	
48L	1-1/2	460	1.65	22	21919	19765	19227	18470	16957	15444						
	2	514	2.2	23	24507	22581	22100	21504	20311	19119						
	3	579	3.3	26	27616	25907	25480	25004	24053	23102	21872	20026				
	5	670	5.1	33	31937	30459	30090	29721	28982	28243	27308	25905	23195	20385		
48H	5	791	5.5	40	32797	30939	30474	30136	29461	28786	27950	26696	24225			
	7-1/2	908	8.25	48	37629	35906	35475	35172	34565	33958	33369	32486	30522	28440		
	10	970	10.1	50	40214	38602	38199	37896	37289	36682	36131	35305	33727	31778	29735	
54L	1-1/2	402	1.65	16	24586	21026	20136									
	2	442	2.2	17	27060	23788	22970	21627	18942	16256						
	3	504	3.3	19	30851	27673	26879	26109	24570	23031	20309	16227				
	5	600	5.5	25	36726	33989	33305	32818	31844	30870	29178	26640	20018			
54H	3	633	3.3	37	30726	28700	28194	27748	26856	25964	24765	22967				
	5	771	5.5	51	37430	35799	35391	34990	34187	33385	32652	31553				
	7-1/2	882	8.25	54	42804	41386	41032	40659	39912	39165	38537	37596	35925			
	10	939	10.5	57	45565	44233	43900	43553	42858	42163	41533	40589	39167	37334	35314	
60L	3	418	3.3	24	37362	33644	32715	31036	27677	24318	21876	18214				
	5	495	5.49	26	44233	41132	40357	39495	37771	36047	32622	27485	22405			
	7-1/2	555	8.15	35	50459	47741	47062	46356	44943	43530	41464	38364	30821	26382		
60H	3	564	3.3	37	36030	33791	33231	32388	30702	29016						
	5	664	5.5	47	42397	40441	39952	39405	38310	37216	35553	33058				
	7-1/2	744	8.25	51	47555	45805	45368	44965	44160	43354	41982	39924	36140	32640	27799	
	10	817	10.5	54	52173	50579	50180	49803	49048	48293	47339	45907	42619	39077	35879	

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.

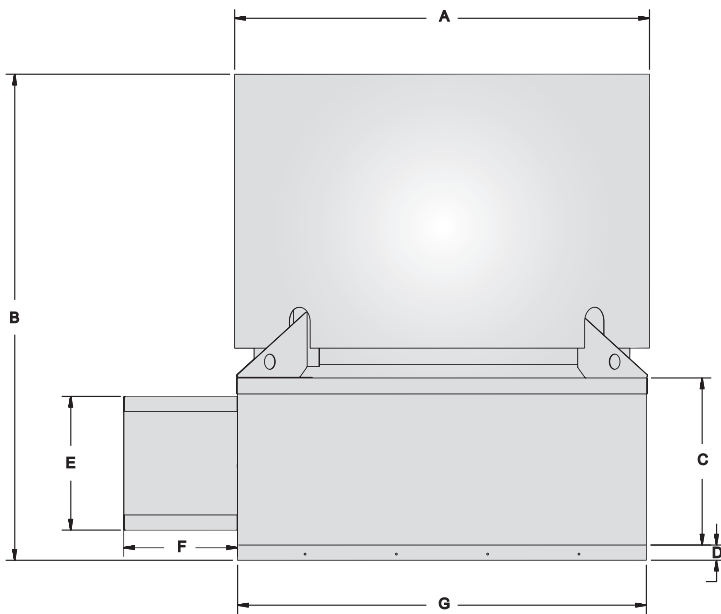
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## DIMENSIONS



**Model Number Code**  
 The model number code is designed to completely identify the fan. Below is a detailed explanation of the model number codes:

**UBS RD HT - 36 L**

Uplblast Propeller Roof Fan (UBS)  
 Motor out-of-airstream (RD)  
 Level of Construction (HT or HT1) (HT)  
 Fan Size (36)  
 Propeller Type (L)  
 L-Low  
 H-High

Model	A	B	C	D	E	F	G	H	I	Wt. (lbs)
24	30	49	22	2	17-1/2	15	29-1/2	28-1/2	25-1/2	310
30	36	52	22	2	17-1/2	15	35-1/2	34-1/2	31-1/2	340
36	42	58	22	2	17-1/2	15	41-1/2	40-1/2	37-1/2	430
42	48	61	22	2	17-1/2	15	47-1/2	46-1/2	43-1/2	490
48	54	64	22	2	17-1/2	15	53-1/2	52-1/2	49-1/2	640
54	60	67	22	2	17-1/2	15	59-1/2	58-1/2	55-1/2	840
60	66	70	22	2	17-1/2	15	65-1/2	64-1/2	61-1/2	1000

- A - Outside Diameter Windband
- B - Total Height of Unit
- C - Housing Height
- D - Curb Cap Depth
- E - Motor Cover Height
- F - Motor Cover Width
- G - Inside Dimension of Square Curb Cap
- H - OD of factory built prefab curb.
- I - Recommended roof opening (inside dimension of factory built prefab curb.)

Model	Windband (galv)	Curb Cap (Galv)	Butterfly Damper		Housing (galv)	Drive Support Channel	Channel Support	Motor Bracket	Drive Shaft Size	Max Motor Frame Size
			Galv	Alum	Front/Back					
24	20	14	20	0.04	18	12	12	10	1	145T
30	20	14	20	0.04	18	12	12	10	1	184T
36	20	14	20	0.04	18	12	12	10	1	184T
42	20	14	20	0.04	18	12	12	10	1-7/16	215T
48	20	14	20	0.04	18	12	12	10	1-7/16	215T
54	20	14	20	0.04	18	12	12	10	1-7/16	215T
60	20	14	20	0.04	18	12	12	10	1-7/16	215T

# **MODELS UBB & UBX**

## **UPBLAST PROPELLER ROOF EXHAUSTERS**

### **BELT AND DIRECT DRIVE**



#### **MODEL FEATURES**

- Exhaust air up to 78,000 CFM in static pressure applications up to 1/2" w.g.
- Straight-through air flow design results in maximum exhaust efficiency
- Belt drives permit easy performance adjustments when needed
- Direct drive units have low sound levels and quiet operation
- cULus 705 Listed

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#### **MODEL OPTIONS**

<b>MODEL NAME</b>	<b>DESCRIPTION</b>
<b>UBB</b>	Belt Drive Upblast Propeller Roof Exhauster
<b>UBX</b>	Direct Drive Upblast Propeller Roof Exhauster

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#### **MODEL OVERVIEW**

Models UBB and UBX are high capacity roof mounted exhausters rated from 5,900 to 78,000 CFM. They are general ventilation units designed to economically remove large volumes of air, fumes and vapors from commercial and industrial buildings such as warehouses, manufacturing and assembly plants, distribution centers, chemical plants, foundries and paper mills.

Straight-through air flow design results in maximum exhaust efficiency. During operation, high air flow velocity opens butterfly dampers and prevents rain or snow from entering. Dampers close and cover the venturi opening when unit is not in use.

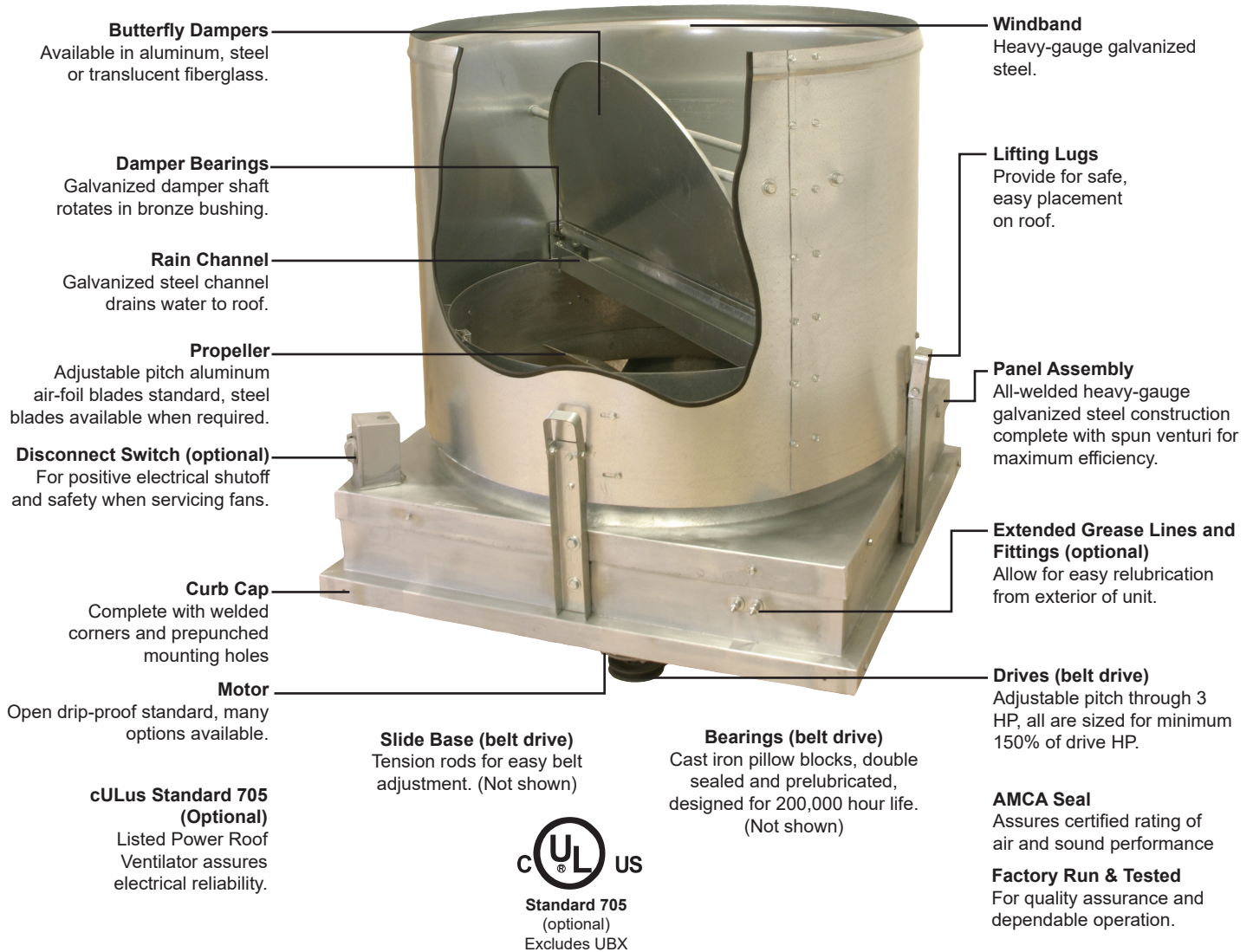
The roof mounted location eliminates interference with processes and equipment inside the building. It also permits locating the exhauster over a source of heated or contaminated air, allowing direct upward venting to the outside, unlike wall mounted exhausters which may move contaminated air through adjacent work spaces.

Belt drive units usually operate more quietly and afford easier performance adjustments, while direct drive models require less maintenance.

**2 year fan housing warranty, 1 year motor warranty**



# CONSTRUCTION FEATURES AND OPTIONS





## **CONSTRUCTION/SPECIFICATION CHECKLIST**

### **Panel Assembly**

- Heavy-gauge G90 galvanized steel panel on all sizes.
- One piece venturi for maximum efficiency.
- All welded support structure of schedule 40 galvanized pipe.
- Motor/bearing plates of minimum 10 gauge galvanized steel.

### **Windband/Butterfly Dampers**

- Heavy-gauge galvanized steel windband.
- Steel dampers standard (except on sizes 48-72).
- Translucent fiberglass dampers available on all sizes (standard on sizes 48-72).
- Galvanized rain channel drains water from damper area to roof.
- Galvanized damper shaft rotates in bronze bushing.

### **Propeller**

- Two, three, four or six airfoil aluminum blades.
- Steel hub plate with steel taper lock bushing.
- Adjustable pitch for optimum efficiency.
- Die formed steel blades are optional where required.

### **Drives (belt drive models)**

- Sized for minimum 150% of drive horsepower.
- Single belt adjustable pitch sheaves through 3HP.
- Two belt fixed pitch sheaves through 10HP.
- Three belt fixed pitch sheaves on 15 HP.
- Adjustable pitch sheaves are optional above 3HP.
- Adjustable tension rods for belt adjustment.
- Nonstatic oil resistant v-belts.
- Keyed, turned, ground and polished shafts.

### **Bearings**

- Bearings designed for minimum 200,000 hour life, L50.
- Cast iron self-aligning pillow block ball bearings.
- Bearings are sealed, prelubricated with relube fittings.

### **Motors**

- Brands are nationally recognized and locally serviced.
- Open drip-proof construction is standard.
- High-efficiency, explosion proof, totally enclosed fan cooled (TEFC) and corrosion duty motors can be specified.

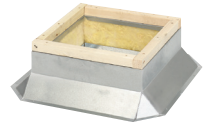
### **Certifications**

- AMCA Air & Sound Licensed.
- cULus 705 listed power roof ventilator assures electrical reliability (optional). Excludes UBX.



## **OPTIONS/ACCESSORIES**

**Roof Curb:** Prefabricated heavy-gauge galvanized steel, welded construction, 12” high with 1-1/2” wood nailer. Options include burglar bars, single and double pitch construction, and additional curb heights.



**Disconnect Switch:** Nonfused safety disconnects are available for all motor sizes in rain-tight or open enclosures.

**Magnetic Latches:** Help reduce damper chatter when the units are not in operation.

**Heat/Smoke Vent:** Opens damper doors when temperature exceeds 165°F. Allows heat and smoke to escape building without use of fan power.

**Outlet Guard:** 1/2” x 1” wire mesh guard will prevent birds and other objects from entering fan.

**Extended Grease Lines:** Extended grease lines allow fan bearings to be relubricated from the exterior.

**Aluminum Construction:** Optional aluminum construction available on windbands, curb caps, panel and blades.

**Special Coatings:** Powered roof exhausters often require special coatings for protective and decorative purposes. Available coatings include: Synthetic Resin, Epoxy, and Heresite (air-dried phenolic). Contact your representative or the factory for more information on available coatings and colors.



## PERFORMANCE

### UBB - Belt Drive

Model UBB	CFM @ Static Pressure					HP	RPM	Blades / Pitch	Max. BHP	Sones @ 5 ft.
	0	1/8	1/4	3/8	1/2					
24	7180	6500	5720	4800	-	3/4	1210	3	0.82	22
	7920	7300	6610	5880	-	1	1335	3	1.11	25
	9080	8550	7960	7340	6600	1-1/2	1525	3	1.65	32
	10000	9500	9000	8450	7900	2	1680	3	2.21	37
30	9398	8323	7039	5381	3254	1	960	3	1.14	25
	10670	9740	8685	7436	5389	1-1/2	1090	3	1.67	33
	11747	10910	9987	8941	7716	2	1200	3	2.23	39
	13411	12686	11907	11059	10118	3	1370	3	3.33	46
36	13279	11086	-	-	-	1	700	3	1.26	21
	15081	13170	11062	-	-	1-1/2	795	3	1.85	27
	16978	15289	13502	11351	-	2	895	3	2.64	32
	19349	17872	16345	14714	12675	3	1020	3	3.91	37
42	19800	16800	-	-	-	1-1/2	640	3	1.68	25
	22100	19300	16000	-	-	2	710	3	2.30	30
	25000	22600	19800	16800	-	3	805	3	3.35	37
	29700	27600	25300	23000	20300	5	950	3	5.51	45
48	26300	22500	17600	-	-	2	575	3	2.31	25
	30200	26700	22700	17800	-	3	655	3	3.41	34
	35500	32500	29400	25800	21500	5	770	3	5.54	45
	40600	38000	35300	32600	29300	7-1/2	880	3	8.27	54
54	44800	42500	40100	37500	34800	10	970	3	11.07	60
	35000	30200	24200	-	-	3	545	3	3.39	28
	41200	36900	32500	27000	-	5	640	3	5.49	40
	47200	43700	39800	35700	30900	7-1/2	735	3	8.32	50
60	51800	48500	45000	41300	37400	10	805	3	10.92	58
	48200	42600	36000	27800	-	5	550	3	5.50	38
	55200	50300	45000	38800	-	7-1/2	630	3	8.27	51
	61000	56600	51900	46700	40700	10	695	3	11.10	60
72	61700	51900	40500	-	-	5	410	3	5.47	31
	70700	62300	53200	-	-	7-1/2	470	3	8.24	42
	70800	62800	52800	53300	-	10	520	3	11.15	50



Performance shown is for installation type A: free inlet, free outlet Power Rating (BHP) does not include transmission losses.

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

The sound ratings shown are loudness values in fan sones at 1.5 m (5 ft) in a hemispherical free field calculated per AMCA International Standard 301. Values shown are for: Installation Type A: free inlet hemispherical sone levels. The AMCA ratings sound seal applies to sone ratings only.

### UBX - Direct Drive

Model UBX	CFM @ Static Pressure					HP	RPM	Blades / Pitch	Max. BHP	Sones @ 5 ft.
	0	1/8	1/4	3/8	1/2					
24	5900	5200	-	-	-	1/2	870	6	0.54	15
	6300	5400	-	-	-	1/2	1160	2	0.55	18
	6900	6300	5600	-	-	3/4	1160	3	0.81	22
	7400	6900	6400	5700	-	1	1160	6	1.10	23
	6600	6100	5500	4900	-	3/4	1750	2	0.82	30
	7500	7100	6500	5900	5200	1	1750	2	1.09	32
	9100	8500	7900	7300	6600	1-1/2	1750	2	1.63	36
	7700	7200	6800	6300	5800	2	1750	3	1.86	42
30	11200	10800	10400	10000	9700	3	1750	4	3.30	54
	10100	8700	-	-	-	3/4	870	4	0.83	21
	10600	9400	7900	-	-	1	870	6	1.11	22
	9800	8500	-	-	-	3/4	1160	2	0.81	27
	10900	9600	8300	-	-	1	1160	2	1.08	30
	12300	11300	10100	8600	-	1-1/2	1160	3	1.62	34
	13800	12900	11900	10700	-	2	1160	4	2.20	37
	10800	10000	9100	8200	9100	1-1/2	1750	2	1.65	44
	12800	12000	11200	10400	9500	2	1750	2	2.19	48
	15800	15000	14100	13200	12300	3	1750	2	3.30	58
	18600	17900	17200	16500	15600	5	1750	3	5.51	70



S&P USA Ventilation Systems, LLC., Div. of Soler & Palau Ventilation Group, certifies that the Models UBB and UBX shown herein are licensed to bear the AMCA Seal. The ratings shown are based on test and procedures performed in accordance with AMCA Publication 211 and AMCA Publication 311 and comply with the requirement of the AMCA Certified Ratings Program.

Performance certified 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 @ 5' (1.5m) in a hemispherical free field calculated per AMCA Standard 301. Values shown are for: Installation Type A: free inlet hemispherical sone levels Speed (RPM) shown is nominal. Performance is based on actual speed of test.



## UBX - Direct Drive (Cont.)

Model UBX	CFM @ Static Pressure					HP	RPM	Blades / Pitch	Max BHP	Sones @ 5 ft.
	0	1/8	1/4	3/8	1/2					
36	14200	12000	-	-	-	1	870	2	1.10	23
	15900	14300	12500	-	-	1-1/2	870	4	1.64	25
	17700	16200	14300	12400	-	2	870	4	2.17	33
	18900	17700	16300	14800	12700	3	870	6	3.24	36
	15700	14200	12400	-	-	1-1/2	1160	2	1.65	36
	17600	16000	14300	12200	-	2	1160	2	2.19	38
	20000	18400	16700	14900	12700	3	1160	2	3.32	42
	23000	22000	20700	19400	18000	5	1160	4	5.40	58
	17900	16700	15500	14300	13100	3	1750	2	3.26	75
	23700	22800	21700	20700	19500	5	1750	2	5.60	77
27400	26500	25300	24200	23100	7-1/2	1750	2	8.20	78	
42	20400	17800	14000	-	-	1-1/2	870	2	1.60	28
	22800	19800	16700	-	-	2	870	2	2.24	31
	25400	23500	21400	19100	15900	3	870	4	3.27	33
	20800	18700	16200	13300	-	2	1160	2	2.23	42
	25200	23200	20900	18300	15000	3	1160	2	3.18	44
	30800	28300	26000	23600	21500	5	1160	2	5.58	50
	34600	33300	31800	30200	28500	7-1/2	1160	4	8.20	58
	32800	30000	30000	28500	-	7-1/2	1750	2	8.15	92
48	26200	22800	19700	-	-	2	870	2	2.17	33
	30800	27200	23200	18600	-	3	870	2	3.35	38
	36300	33500	30500	27000	21500	5	870	3	5.60	42
	40300	37700	34800	31800	27600	7-1/2	870	3	8.27	48
	27900	25000	22100	19700	-	3	1160	2	3.40	49
	35900	33500	31000	28900	24300	5	1160	2	5.55	57
	41800	39300	36500	33900	30700	7-1/2	1160	2	8.23	67
	45800	43000	40200	37400	34500	10	1160	2	11.10	69
54	35700	31600	26700	19400	-	3	870	2	3.28	47
	43900	39200	34600	29300	21900	5	870	2	5.55	54
	48900	45500	41900	38100	33300	7-1/2	870	3	8.32	59
	38500	35200	31800	28300	25000	5	1160	2	5.55	68
	49200	46400	43000	39700	35700	7-1/2	1160	2	8.40	75
	55600	52500	49200	46400	41900	10	1160	2	11.20	77
60	57200	52600	47500	41800	35100	7-1/2	870	2	8.30	64
72	65500	59000	52000	44000	-	7-1/2	870	2	8.24	78

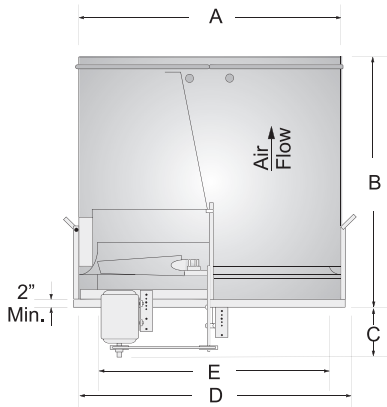
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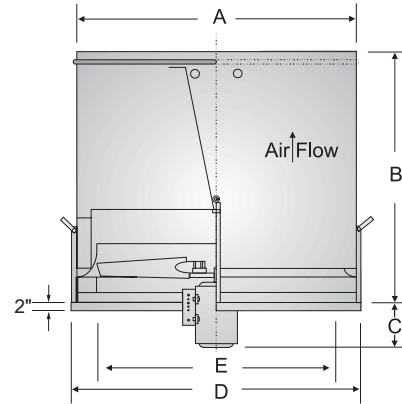
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**DIMENSIONS**



**Model UBB - Belt Drive**



**Model UBX - Direct Drive**

Size	Dimensions (Inches)							Metal Gauges			Avg. Wt.
	A	B	C	D Sq.	E Sq.	F Sq.	G Sq.	Wind-band	Curb Cap	Fan Panel	
24	30	33	16	32	24	31	28	18	16	16	310
30	36	36	17	38	30	37	34	18	16	16	340
36	42	38	17	44	36	43	40	18	16	16	430
42	48	41	18	50	42	49	46	18	16	16	490
48	54	44	22	56	48	55	52	18	14	16	640
54	60	47	22	62	54	61	58	18	14	14	840
60	66	50	22	68	60	67	64	18	14	14	1000
72	80	56	31	82	72	81	78	18	12	12	1550

**A** - Outside dimension of windband.

**B** - Height of unit above curb cap.

**C** - Maximum depth of unit below top of curb, actual depth varies with motor size.

**D** - Inside dimension of square curb cap.

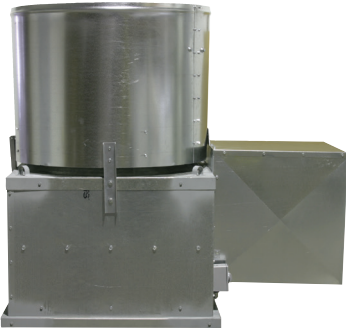
**E** - Minimum inside dimension of curb opening required for adequate clearance of fan frame.

**F** - Outside dimension of factory built pre-fab curb.

**G** - Recommended roof opening (inside dimension of factory built prefab curb.)

# MODEL UBRD

## REMOTE DRIVE UPBLAST PROPELLER ROOF EXHAUSTER



### **MODEL FEATURES**

- Exhaust air up to 72,000 CFM in static pressure applications up to 1/2" w.g.
- Straight-through air flow design results in maximum exhaust efficiency
- Motor and drives are located outside of the exhaust airstream
- Belt drives permit easy performance adjustments when needed
- cULus 705 Listed

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### **MODEL OVERVIEW**

Model UBRD units are high capacity belt driven roof mounted exhausters rated from 4,500 to 72,000 CFM. The motor and drives are located outside of the exhaust airstream, making these units especially suited for the removal of heated or contaminated air from commercial and industrial buildings or processes where these conditions exist. All models are capable of continuous operation exhausting air to 200°F.

The remote drive construction allows for easy rooftop belt and motor access for maintenance. For increased air performance (in clean conditions) with the same easy maintenance access, the UBRD is available without the belt and bearing enclosures.

Straight-through air flow design results in maximum exhaust efficiency. During operation, high air flow velocity opens butterfly dampers and prevents rain or snow from entering. Dampers close and cover the venturi opening when unit is not in use.

The roof mounted location eliminates interference with processes and equipment inside the building. It also permits locating the exhauster over a source of heated or contaminated air, allowing direct upward venting to the outside, unlike wall mounted exhausters which may move contaminated air through adjacent work spaces.

**2 year fan housing warranty, 1 year motor warranty**

## **CONSTRUCTION/SPECIFICATION CHECKLIST**

### **Panel Assembly**

- Heavy-gauge G90 galvanized steel panel, size 24-72.
- One piece venturi for maximum efficiency and strength.
- All welded support structure of schedule 40 galvanized pipe (minimum).
- Motor/bearing plates of minimum 10 gauge galvanized steel.

### **Windband/Butterfly Dampers**

- Heavy-gauge galvanized steel windband.
- Steel dampers standard (except on sizes 48-72).
- Translucent fiberglass dampers available on all sizes (standard on sizes 48-72).
- Galvanized rain channel drains water from damper area to roof.
- Galvanized damper shaft rotates in bronze bushing.

### **Propeller**

- Two, three, four or six airfoil aluminum blades.
- Steel hub plate with steel taper lock bushing.
- Adjustable pitch for optimum efficiency.
- Die formed steel blades are optional where required.

### **Drives**

- Shielded from airstream by galvanized steel enclosure.
- Sized for minimum 150% of drive horsepower.
- Single belt adjustable pitch sheaves through 3HP.
- Two belt fixed pitch sheaves through 10HP.
- Adjustable pitch sheaves are optional above 3HP.
- Adjustable tension rods for belt adjustment.
- Nonstatic oil resistant v-belts.
- Keyed, turned, ground and polished shafts.

### **Bearings**

- Bearings designed for minimum 200,000 hour life, L50.
- Cast iron self-aligning pillow block ball bearings.
- Bearings are sealed, prelubricated with relube fittings.

### **Motors**

- Located outside airstream under weather cover.
- Brands are nationally recognized and locally serviced.
- Open drip-proof construction is standard.
- High-efficiency, explosion proof, totally enclosed fan cooled (TEFC) and corrosion duty motors can be specified.

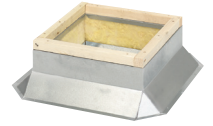
### **Certifications**

- cULus 705 listed power roof ventilator assures electrical reliability (optional).



## **OPTIONS/ACCESSORIES**

**Roof Curb:** Prefabricated heavy-gauge galvanized steel, welded construction, 12” high with 1-1/2” wood nailer. Options include burglar bars, single and double pitch construction, and additional curb heights.



**Disconnect Switch:** Nonfused safety disconnects are available for all motor sizes in rain-tight or open enclosures.

**Magnetic Latches:** Help reduce damper chatter when the units are not in operation.

**Heat/Smoke Vent:** Opens damper doors when temperature exceeds 165°F. Allows heat and smoke to escape building without use of fan power.

**Outlet Guard:** 1/2” x 1” wire mesh guard will prevent birds and other objects from entering fan.

**Extended Grease Lines:** Extended grease lines allow fan bearings to be relubricated from the exterior.

**Aluminum Construction:** Optional aluminum construction available on windbands, curb caps, panel and blades.

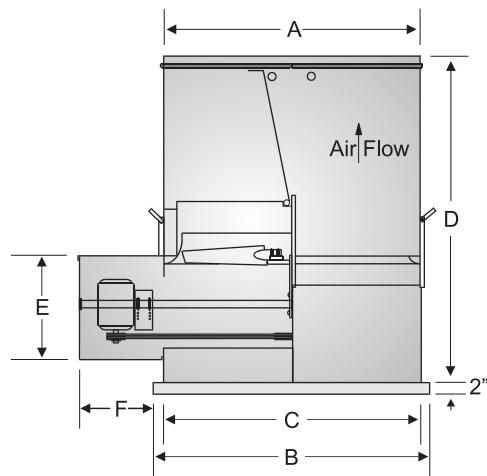
**Special Coatings:** Powered roof exhausters often require special coatings for protective and decorative purposes. Available coatings include: Synthetic Resin, Epoxy, and Heresite (air-dried phenolic). Contact your representative or the factory for more information on available coatings and colors.



# PERFORMANCE

Model UBRD	CFM @ Static Pressure					HP	RPM	Blades / Pitch	Max BHP	Sones @ 5 ft.
	0	1/8	1/4	3/8	1/2					
24	6605	5980	5262	4416	-	3/4	1210	3	0.82	20
	7286	6715	6081	5410	-	1	1335	3	1.11	23
	8353	7866	7323	6752	6127	1-1/2	1525	3	1.65	30
	9200	8740	8280	7774	7268	2	1680	3	2.21	35
30	10230	9114	7812	-	-	1	960	3	1.15	23
	11625	10602	9579	8370	-	1-1/2	1090	3	1.69	31
	12741	11904	10881	9858	8742	2	1200	3	2.25	37
	14508	13764	12927	12090	11160	3	1370	3	3.35	44
36	12861	10752	-	-	-	1	700	3	1.10	19
	14688	12768	10656	-	-	1-1/2	795	3	1.57	25
	16512	14880	12960	10848	-	2	895	3	2.30	30
	18816	17280	15744	14112	12192	3	1020	3	3.48	35
42	18414	15624	-	-	-	1-1/2	640	3	1.68	23
	20553	17949	14880	-	-	2	710	3	2.30	28
	23250	21018	18414	15624	-	3	805	3	3.35	35
	27261	25668	23529	21390	18879	5	950	3	5.51	43
48	24196	20700	16192	-	-	2	575	3	2.31	23
	27784	24564	20884	16376	-	3	655	3	3.41	32
	32660	29900	27048	23736	19780	5	770	3	5.54	43
	37352	34960	32476	29992	26956	7-1/2	880	3	8.27	52
54	41216	39100	36892	34500	32016	10	970	3	11.07	58
	33250	28690	22990	-	-	3	545	3	3.39	26
	39140	35055	30875	25650	-	5	640	3	5.49	38
	44840	41515	37810	33915	29335	7-1/2	735	3	8.32	48
60	49210	46075	42750	39235	35530	10	805	3	10.92	56
	44826	39618	33480	25854	-	5	550	3	5.50	36
	51336	46779	41850	36084	-	7-1/2	630	3	8.27	49
72	56730	52638	48267	43431	37851	10	695	3	11.10	58
	57381	48267	37665	-	-	5	410	3	5.47	29
	65751	57939	49476	-	-	7-1/2	470	3	8.24	40
	72726	65844	58404	49569	-	10	520	3	11.15	48

# DIMENSIONS



Model UBRD	Dimensions (Inches)						
	A	B	C	D	E	F	G
24	30	32	30	50	22	16	31
30	36	38	36	54	22	16	37
36	42	44	42	56	22	16	43
42	48	50	48	59	22	16	49
48	54	56	54	68	22	22	55
54	60	62	60	70	22	22	61
60	66	68	66	74	22	22	67
72	80	82	80	86	22	22	81

**A** - Outside dimension of windband.      **E** - Height of motor cover.  
**B** - Inside dimension of square curb cap.      **F** - Length of motor cover.  
**C** - Inside dimension of square fan base.      **G** - Outside dimension of factory built prefab curb.  
**D** - Height of unit above curb.



### **MODEL FEATURES**

- Exhaust air up to 60,116 CFM in static pressure applications up to 1" w.g.
- Straight-through air flow design results in maximum exhaust efficiency
- Motor and drives are located outside of the exhaust airstream
- Belt drives permit easy performance adjustments when needed
- cULus 705 Listed

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### **MODEL OVERVIEW**

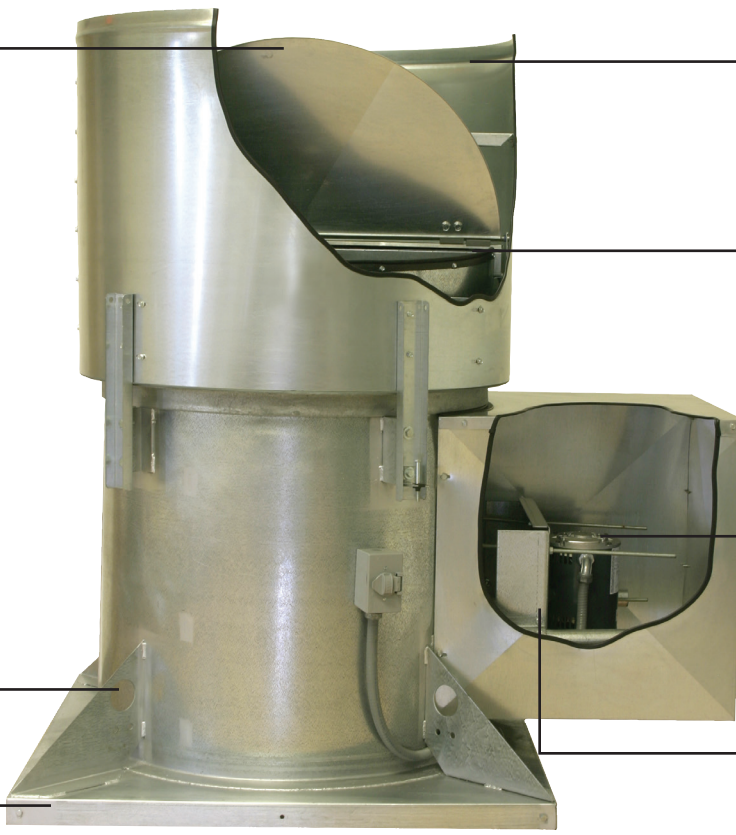
Model TUB is designed for high capacity industrial and commercial roof exhaust applications. The remote drive configuration of the TUB is especially suited for the removal of fumes, vapors, steam, dust, smoke and contaminated or heated air. Belt drive models are available for continuous operation in air temperatures to 200°F. For temperature ratings to 1000°F and/or IRI requirements refer to Model TUB-HT

Capacities range from 6,210 to 60,116 CFM and up to 1" static pressure. Fan selections are available in 24, 30, 36, 42, 48, 54 and 60 inch sizes. Horsepowers range from 3/4 to 15HP. Blade selections are available in aluminum, steel, or fiberglass reinforced polypropylene (see capacity charts for performances). Units are tested in accordance with AMCA 301 (sound) and AMCA 210 (air) in an AMCA certified laboratory. Every unit is completely assembled and factory tested for quality assurance prior to shipment.

**2 year fan housing warranty, 1 year motor warranty**



# CONSTRUCTION FEATURES AND OPTIONS



**Butterfly Dampers**

Available in steel or fiberglass.

**Windband**

Heavy-gauge galvanized steel.

**Blades**

Statically and dynamically balanced aluminum airfoil extrusion or polypropylene propellers for optimum performance. High temperature fans use steel blades.

**Rain Channel**

Galvanized metal channel section drains water out of the fan area when the damper doors are closed.

**Damper Bearings**

Damper doors pivot on a galvanized steel shaft rotating in two bronze bushings.

**Motors**

ODP, 2-speed, TEFC, corrosion duty, or explosion proof.

**Lift Points**

For easy, safe roof placement.

**Motor Slide Base**

For ease of belt adjustment.

**Curb Cap**

Heavy-gauge galvanize with integral inlet.

**Bearings & Shaft**

200,000 hour bearings and turned, ground and polished shafting.

**Factory Run & Tested**

Assures dependable operation.

**Drives**

Variable pitch through 3HP and fixed pitch sheaves 5HP and larger. High temperature fan uses minimum dual groove sheaves.

## **CONSTRUCTION/SPECIFICATION CHECKLIST**

### **Construction**

The TUB series is built with heavy-gauge steel to provide years of reliable service. Tubes 24-60" (to 10HP) are G-90 galvanized steel. Sizes 24-60" have rolled 2" flanged ends.

The TUB series is also available in aluminum construction sizes 24-48" with welded aluminum angle flanges on each end.

Upblast fans include a heavy-gauge galvanized steel windband with pressure operated damper doors. A galvanized channel section drains water out of the fan area when the damper doors are closed.

All fans are available in epoxy, heresite or polyester resin finishes. Special colors can be ordered. Contact you representative for the cost and finish best suited for your application.

### **Blades**

For versatility, blades are offered in special high-strength, adjustable pitch aluminum airfoil, or adjustable pitch fiberglass reinforced polypropylene. TUB units with special steel blades are available upon request. These styles were selected to provide optimum performance and strength at low to moderate noise levels. Refer to the performance tables for the best selection.

The adjustable pitch aluminum airfoil propeller performs over a wide range of static pressures. This blade's strength is derived from matching T-6061 extruded aluminum airfoil sections to a heavy steel plate hub. All S&P blades are statically and dynamically balanced.

The highly corrosive resistant polypropylene blade's efficiency is due to the uniform twisting of the airfoil section over its entire length, resulting in less turbulence. The operating parameters are -40°F to 185°F ambient temperatures. Hubs are produced from die cast aluminum resulting in a light weight, high strength factory adjustable pitch blade.

### **Drives**

This belt drive model comes with 200,000 hour L50 relubricable pillow block bearings and remote grease lines as a standard feature. Bearings and drives are isolated from the airstream by bolted, heavy-gauge galvanized belt tubes and bearing covers. Belt drive models through 3HP ship with variable pitch pulleys; over 3HP have fixed pulleys. The motor base slides for easy belt adjustment. All units are factory assembled and test run for quality assurance.

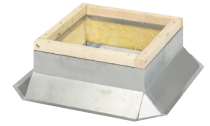
### **Motors**

Motors used in the TUB series are heavy-duty, nationally recognized, with nationwide service centers. Standard motors are open drip-proof (ODP). High efficiency, totally enclosed fan cooled (TEFC), explosion proof, and corrosion duty motors are available as an option.

Fan shafts shall be turned, ground and polished steel coated with an anti-rust compound to resist corrosion.

## OPTIONS/ACCESSORIES

**Roof Curb:** Prefabricated heavy-gauge galvanized steel, welded construction, 12” high with 1-1/2” wood nailer. Options include burglar bars, single and double pitch construction, and additional curb heights.



**Outlet Guard:** 1/2” x 1” wire mesh guard will prevent birds and other objects from entering fan.

**Inspection Door:** For inspection and blade service/cleaning.

**Magnetic Latches:** Helps reduce damper chatter when the unit is not in operation.

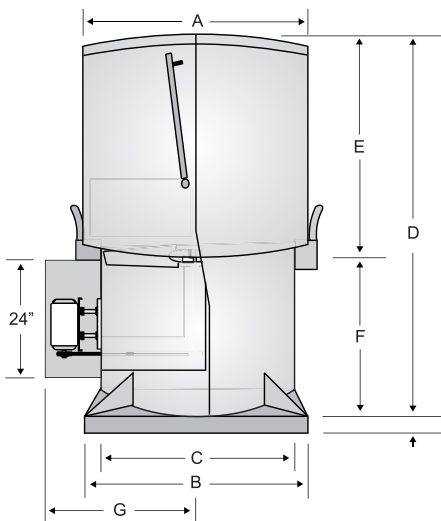
**Heat/Smoke Vent:** Opens damper doors when temperatures exceed 165°F. Allows heat and smoke to escape building without use of fan power.

**Disconnect Switch:** Nonfused safety disconnects are available for all motor sizes in rain-tight or open enclosures.

**Aluminum Construction:** Optional aluminum construction available on windbands, curb caps, panel and blades.

**Special Coatings:** Powered roof exhausters often require special coatings for protective and decorative purposes. Available coatings include: Synthetic Resin, Epoxy, and Heresite (air-dried phenolic). Contact your representative or the factory for more information on available coatings and colors.

## DIMENSIONS



Model TUB	Dimensions (Inches)						
	A O.D. Windband	B sq. I.D. Curb Cap	C sq. Min. I.D. Opg	D Height	E Windband Height	F Tube Height	G (Max.)
24	30	35	25-1/8	55-1/2	25	30-1/2	37
30	36	41	31-1/8	58-1/2	28	30-1/2	40
36	42	47	37-1/8	60-1/2	30	30-1/2	43
42	48	53	43-1/8	65-1/2	33	32-1/2	46
48	54	59	49-1/8	68-1/2	36	32-1/2	49
54	60	65	55-1/8	71-1/2	39	32-1/2	52
60	66	71	61-1/8	74-1/2	42	32-1/2	55

Model TUB	Metal Gauges			Average Weight
	Fan Housing	Wind Shroud	Curb Cap	
24	12	18	14	500
30	12	18	14	600
36	12	18	14	1000
42	12	18	14	1100
48	10	18	14	1300
54	10	18	14	1580
60	10	18	10	1700

**PERFORMANCE****Model TUB-A - Belt Drive - Aluminum Blade**

Model TUB	CFM / BHP @ Static Pressure								HP	RPM	No. of Blades	Max. BHP	Sones @ 5 ft.
	0	1/8	1/4	3/8	1/2	5/8	3/4	1					
24	6210	5807	5171	4321	-	-	-	-	3/4	1200	3	0.83	19
	6805	6443	5948	5201	4415	-	-	-	1	1315	3	1.09	24
	7840	7537	7162	6651	5979	5306	4519	-	1-1/2	1515	3	1.65	29
	8668	8398	8081	7688	7156	6544	5936	4531	2	1675	3	2.22	38
30	9035	8175	6911	-	-	-	-	-	3/4	915	3	0.83	23
	9973	9213	8219	6789	-	-	-	-	1	1010	3	1.11	24
	11405	10755	9989	8955	7664	6304	-	-	1-1/2	1155	3	1.65	32
	12590	12009	11351	10554	9495	8312	7079	-	2	1275	3	2.21	38
	14318	13813	13262	12642	11903	10974	9935	7778	3	1450	3	3.22	45
36	13854	12440	10596	-	-	-	-	-	1	815	3	1.10	20
	15894	14689	13275	11404	9161	-	-	-	1-1/2	935	3	1.66	26
	17424	16337	15110	13611	11713	9660	-	-	2	1025	3	2.19	30
	19719	18769	17734	16568	15162	13476	11652	-	3	1160	3	3.14	36
	23798	23021	22201	21324	20373	19306	18074	15197	5	1400	3	5.47	68
	27028	26347	25639	24897	24114	23277	22371	20220	7-1/2	1590	3	7.97	89
42	14588	-	-	-	-	-	-	-	3/4	550	4	0.84	22
	16046	14024	11621	-	-	-	-	-	1	605	4	1.04	23
	18300	16539	14632	12265	-	-	-	-	1-1/2	690	4	1.57	24
	20157	18561	16898	14949	12723	-	-	-	2	760	4	2.11	29
	23074	21682	20029	18749	16978	15038	12727	-	3	870	4	3.28	36
	27349	26140	24961	23751	22474	21049	19441	15994	5	1030	4	5.17	45
	32037	30976	29849	28647	27358	25974	24473	21207	7-1/2	1310	3	7.87	57
48	20266	16694	-	-	-	-	-	-	1	500	4	1.12	24
	23104	20044	16726	-	-	-	-	-	1-1/2	570	4	1.67	25
	25536	22821	19815	16733	-	-	-	-	2	630	4	2.25	26
	29184	26863	24237	21647	18899	14356	-	-	3	720	4	3.33	35
	34656	32749	30623	28375	26210	23907	21375	-	5	855	4	5.51	43
	39519	37871	36068	34141	32163	30271	28304	23692	7-1/2	975	4	7.88	51
54	45327	43576	41742	39672	37424	35052	32652	28246	10	1175	4	10.87	73
	31028	26996	23045	19851	-	-	-	-	3	600	4	3.09	33
	38951	35127	30055	26760	24164	18353	-	-	5	710	4	5.32	44
	44741	41411	37455	32829	29414	26206	20758	-	7-1/2	850	3	7.91	54
60	49215	46040	42878	38781	34681	31975	29019	18913	10	935	3	10.89	62
	33008	22992	-	-	-	-	-	-	3	485	3	3.15	38
	39133	31577	24734	-	-	-	-	-	5	575	3	5.18	39
60	44918	38963	30343	27344	-	-	-	-	7-1/2	660	3	8.15	51
	49342	44124	36563	31592	-	-	-	-	10	725	3	10.93	59

Contact factory for alternate selections if required.

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

Brake horsepower does not include drive losses.

Values are installation Type A, free inlet fan sone levels.

Performance shown is for types and units without inlet or outlet ducts.

**Model TUB-P - Belt Drive - Polypropylene Blade**

Model TUB	CFM / BHP @ Static Pressure								HP	RPM	No. of Blades	Max. BHP	Sones @ 10 ft.
	0	1/8	1/4	3/8	1/2	5/8	3/4	1					
24	6350	5962	5491	4980	-	-	-	-	3/4	1275	6	0.75	17
	6998	6680	6180	5755	5268	4595	-	-	1	1390	6	1.00	20
	8265	7943	7615	7267	6873	6421	5382	-	1-1/2	1615	6	1.50	26
	9246	8996	8697	8408	8190	7731	6942	5382	2	1800	6	2.00	36
	10626	10323	10121	9875	9619	9342	8731	8042	3	2050	6	3.00	39
30	8697	7942	6919	-	-	-	-	-	3/4	975	6	0.75	19
	9775	9121	8323	7321	-	-	-	-	1	1080	6	1.00	20
	11515	10920	10321	9646	8797	7870	-	-	1-1/2	1250	6	1.50	24
	12821	12222	11727	11224	10523	9719	7823	-	2	1375	6	2.00	26
	14525	14029	13623	13124	12628	12031	10741	8914	3	1550	6	3.00	34
	17514	17112	16694	16301	15913	15491	14631	13585	5	1850	6	5.00	52
36	14809	13921	12488	11222	8630	-	-	-	1-1/2	930	6	1.50	24
	16823	16002	14911	13692	12481	10275	-	-	2	1040	6	2.00	28
	19331	18540	17681	16791	15710	14722	11081	-	3	1180	6	3.00	34
	22940	22026	21560	20890	20018	19230	17450	15008	5	1385	6	5.00	39
	26230	25850	25120	24562	23900	23243	21900	20144	7-1/2	1585	6	7.50	50
	29020	28671	28028	27670	27016	26560	25048	24010	10	1750	6	10.00	71
42	17451	15670	13561	10019	-	-	-	-	1-1/2	750	6	1.50	20
	19563	17981	16195	14986	10126	8126	-	-	2	825	6	2.00	32
	22893	21562	20128	18673	16892	14457	-	-	3	950	6	3.00	33
	27670	26551	25253	24030	22968	21616	18018	12775	5	1130	6	5.00	39
	31120	30830	30039	29130	28312	27022	24790	21100	7-1/2	1300	6	7.50	50
	34310	33537	32610	31674	30880	29868	27986	25708	10	1420	6	10.00	53
48	20303	18249	15126	-	-	-	-	-	1-1/2	620	8	1.50	24
	21414	19321	16364	-	-	-	-	-	2	650	8	2.00	26
	25236	23381	21684	19291	16061	-	-	-	3	750	8	3.00	28
	30791	29108	27464	25852	24142	22122	15276	-	5	890	8	5.00	36
	35748	34126	32561	31213	29792	28382	24298	18203	7-1/2	1015	8	7.50	50
	39574	38235	36780	35453	34243	33033	30691	26405	10	1120	8	10.00	55
54	31896	28991	24252	-	-	-	-	-	3	600	6	3.00	26
	34454	33006	31283	28892	25962	22632	-	-	5	730	8	5.00	33
	40051	38596	37383	35663	33543	31323	25762	-	7-1/2	835	8	7.50	39
	44750	43544	42334	41124	39504	37683	33343	28192	10	925	8	10.00	43
	51252	50115	49105	48094	46974	45764	42334	38593	15	1040	8	15.00	56
60	44454	40914	37683	33704	28292	-	-	-	5	640	6	5.00	36
	52235	49105	46274	43344	40015	35963	-	-	7-1/2	735	6	7.50	39
	58295	55465	52735	50015	47484	44354	-	-	10	810	6	10.00	50
	60116	58695	57185	55565	54055	52535	49205	45164	15	926	8	15.00	56

Contact factory for alternate selections if required.

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

Brake horsepower does not include drive losses.

Values are installation Type A, free inlet fan sone levels.

Performance shown is for types and units without inlet or outlet ducts.

# MODEL TUB-HT

## TUBEAXIAL UPBLAST PROPELLER ROOF EXHAUSTER FOR HEAT AND SMOKE REMOVAL



### **MODEL FEATURES**

- Exhaust air up to 57,000 CFM in static pressure applications up to 3/4" w.g.
- Motor and drives are located outside of the exhaust airstream
- Designed and tested for emergency heat and smoke removal
- Successfully passed heat test of 1000°F for 15 minutes and 500°F for over 4 hours
- Belt drives permit easy performance adjustments when needed
- UL 793 Listed as Power Ventilator for Smoke Control Systems

### **MODEL OVERVIEW**

Model TUB-HT has been designed and tested for emergency heat and smoke removal. This design also lends itself to everyday nonemergency high capacity industrial and commercial roof exhaust applications. Model TUB-HT successfully passed heat test of 1000°F for fifteen (15) minutes, and 500°F for over four (4) hours by an independent testing agency. Model TUB-HT exceeds I.R.I (Industrial Risk Insurers) guidelines and is UL-793 Listed as "Power Ventilator for Smoke Control Systems."

The heavy-gauge design allows for years of standard commercial use and the dependability required in a fire emergency. The upblast configuration exhausts heat and smoke high above the roof line aiding in the access and capabilities of fire fighters. Unlike complete design dependence on gravity vents which are sometimes limited by air temperature and wind velocity, the TUB-HT in conjunction with gravity vents, will more effectively remove smoke, hot air, and gases when used in a properly designed system. In the event of electrical failure, the 165°F fusible link will activate the spring assisted damper doors to provide gravity ventilation. Fan CFM, sizing and location for both exhaust and supply air are an important part of the overall heat and smoke venting building design needs. Refer to I.R.I., NFPA (National Fire Protection Association), and local fire codes for help in proper system design. Final approval for the complete system design should be authorized by the local authority having jurisdiction.

Fan selections are available in 24, 30, 36, 42, 48, 54 and 60 inch sizes. Horsepower and CFM range to 57,000 CFM and 15HP. Units are tested in accordance with AMCA Standard 301 (sound) and AMCA 210 (air) in an AMCA certified laboratory. Every unit is completely assembled and factory tested for quality assurance prior to shipment.

**1 year fan housing warranty, 1 year motor warranty**



## CONSTRUCTION/SPECIFICATION CHECKLIST

1. Successfully heat tested by independent laboratory for:
  - (a) 1000°F for 15 minutes.
  - (b) 500°F for minimum 4 hours.
2. All ferrous construction in airstream.
3. 165°F fusible link in damper mechanism (heat & smoke vent).
4. Motor out-of-airstream design.
5. Belt & bearings enclosed in ventilated housing.
6. Minimum dual groove drive/belt combination.
7. Shaft heat slinger.
8. Extended lubrication lines.
9. UL-793 Listed Power Ventilator for Smoke Control Systems.
10. Meets UL-793 snow load test.

### **Drives**

Motors, bearings and belt are shielded from the airstream by a sheet metal enclosure, with cooling provided by fresh outside air. Drives are sized for a minimum 150% of drive horsepower. Drives are minimum dual groove sheaves through 10 horsepower and three-belt on 15HP. Adjustable sheaves are available as an option. Bearings are heavy-duty cast iron, pillow block with relubricable fittings. Standard bearings are fitted with remote relubricable fittings and designed for minimum 200,000 hour life. All shafts are turned, ground and polished steel coated with an anti-rust compound to resist corrosion.

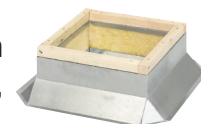
### **Electrical Power**

Electrical power should be independent of the general building. Wiring requires special, heat resistant qualities as determined by local fire codes. Switching should always be arranged so that automatic start-up can be achieved through safety devices such as, but not limited to, sprinkler systems and smoke or heat sensors.

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## OPTIONS/ACCESSORIES

**Roof Curb:** Prefabricated heavy-gauge galvanized steel, welded construction, 12” high with 1-1/2” wood nailer. Options include burglar bars, single and double pitch construction, and additional curb heights.



**Outlet Guard:** 1/2” x 1” wire mesh guard will prevent birds and other objects from entering fan.

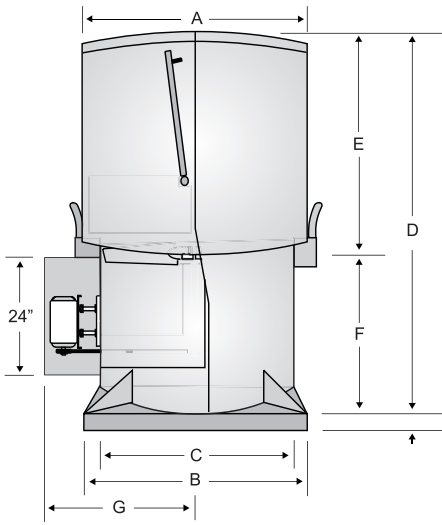
**Inspection Door:** For inspection and blade service/cleaning.

**Disconnect Switch:** Nonfused safety disconnects are available for all motor sizes in rain-tight or open enclosures.

**Special Coatings:** Powered roof exhausters often require special coatings for protective and decorative purposes. Available coatings include: Synthetic Resin, Epoxy, and Heresite (air-dried phenolic). Contact your representative or the factory for more information on available coatings and colors.



## DIMENSIONS



Model TUB-HT	Dimensions (Inches)						
	A O.D Windband	B sq. I.D. Curb Cap	C sq. Min. I.D. Opg	D Height	E Windband Height	F Tube Height	G (Max.)
24	30	35	25-1/8	55-1/2	25	30-1/2	37
30	36	41	31-1/8	58-1/2	28	30-1/2	40
36	42	47	37-1/8	60-1/2	30	30-1/2	43
42	48	53	43-1/8	65-1/2	33	32-1/2	46
48	54	59	49-1/8	68-1/2	36	32-1/2	49
54	60	65	55-1/8	71-1/2	39	32-1/2	52
60	66	71	61-1/8	74-1/2	42	32-1/2	55

Model TUB-HT	Metal Gauges			Average Weight
	Fan Housing	Wind Shroud	Curb Cap	
24	12	18	14	500
30	12	18	14	600
36	12	18	14	1000
42	12	18	14	1100
48	10	18	14	1300
54	10	18	14	1580
60	10	18	10	1700



# PERFORMANCE DATA

## TUB-HT - Belt Drive - Steel Blade

Model TUB-HT	CFM / BHP @ Static Pressure							HP	RPM	Max. BHP	Sones @ 5 ft.
	0	1/8	1/4	3/8	1/2	5/8	3/4				
24	6255	5297	4821	4035	-	-	-	3/4	1215	0.78	21
	6962	6547	6115	5446	-	-	-	1	1275	1.08	25
	7896	7272	6601	6216	5814	5248	-	1-1/2	1530	1.53	31
	8693	8109	7688	7265	6276	5409	-	2	1750	2.05	40
30	9631	8703	6835	6478	-	-	-	1	1180	1.06	26
	11324	10716	9408	7755	6574	-	-	1-1/2	1155	1.57	29
	11952	11272	10694	9776	8405	7824	-	2	1550	2.09	35
	13871	13059	12491	11234	10295	8173	-	3	1325	3.08	34
	16225	15983	15120	14730	12761	10576	8568	5	1560	5.13	42
36	14173	13128	11822	10471	-	-	-	1-1/2	1015	1.61	28
	15114	14353	13243	11988	10514	8772	7444	2	1160	2.11	32
	18020	16740	16186	14342	10549	9510	7865	3	1140	3.05	38
	20849	20157	19368	18978	16490	14118	11362	5	1245	5.12	53
42	18628	17503	15264	12855	11606	-	-	2	930	2.01	29
	22193	20384	18866	17337	15643	13574	-	3	1140	3.13	38
	25960	24822	23667	22374	20839	19521	18043	5	1140	5.07	48
	29490	28518	28186	26569	24926	23934	19623	7-1/2	1140	7.81	58
48	20302	18094	15044	11132	-	-	-	2	655	2.1	29
	27001	25050	22614	18159	12350	-	-	3	745	3.08	32
	29173	27591	25732	23625	21215	17472	-	5	840	5.16	42
	33418	31872	30249	28062	25682	22744	18678	7-1/2	860	7.6	51
	36776	35878	34984	34042	33014	31980	30940	10	1340	10.1	98
54	27348	24097	18041	-	-	-	-	3	530	3.15	29
	34050	31546	28811	24511	18272	-	-	5	640	5.4	39
	42632	40823	38562	36009	29864	23065	-	7-1/2	900	7.55	48
	47064	45427	43602	41604	38006	30622	-	10	860	10.08	52
	49325	48358	47390	45974	42307	37941	34800	15	780	15.71	62
60	35718	32721	24429	19438	-	-	-	3	530	3.11	28
	42487	40061	35933	30065	25302	22050	-	5	640	5.18	35
	48378	45938	43009	38690	35690	30406	-	7-1/2	800	7.59	47
	54617	50622	48428	45938	37363	29993	-	10	845	10.13	53
	57143	54850	52557	50264	47971	42759	35297	15	675	15.61	62

Contact factory for alternate selections if required.

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

Brake horsepower does not include drive losses.

Values are installation Type A, free inlet fan sone levels.

Performance shown is for types and units without inlet or outlet ducts.



Standard 793  
(optional)