



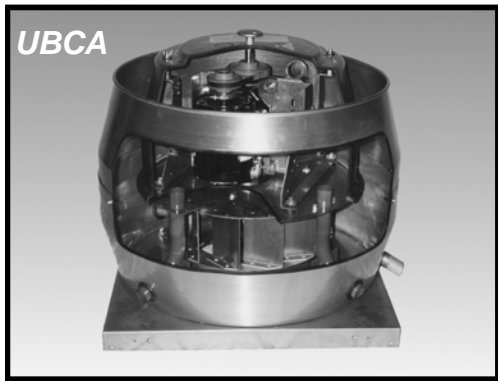
AMERICAN COOLAIR CORPORATION



Centrifugal Upblast Power Roof Ventilators

TYPE UBCA - BELT DRIVE
TYPE UDCA - DIRECT DRIVE

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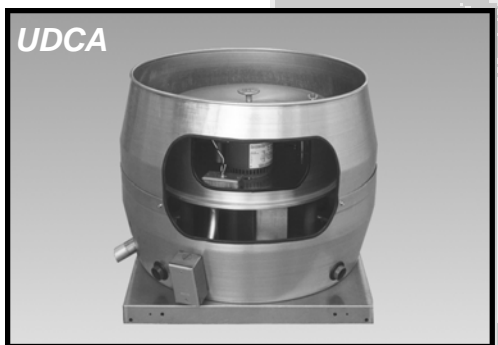
UBCA

*Sizes 06 to 44
Flow rates from
229 to 29,002 CFM
and 2" Static Pressure*

BELT DRIVE FANS

UBCA

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UDCA

*Sizes 12 to 15
Flow rates from
619 to 3,032 CFM
and 1-1/2" Static Pressure*

DIRECT DRIVE FANS

UDCA

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STANDARD FEATURES

UBCA and UDCA Units

Weather-resistant motor compartment cover of spun aluminum removes easily for access to motor and drive.

Out-of-airstream open motors are isolated for protection from exhaust airstream.

Overlapping wheel and deep-spun venturi minimize noise and air turbulence, increasing efficiency.

Built-in drain removes grease and water from fan housing.

Aluminum centrifugal wheel is a non-overloading, backward inclined design with state-of-the-art computerized balance.

Permanently affixed wheel balance weights assure vibration-free operation.

Wheel backplate fins cool the motor compartment, extending motor life.

AMCA Seal assures certified rating of air and sound performance.

UBCA

Safety disconnect switch is an available option.

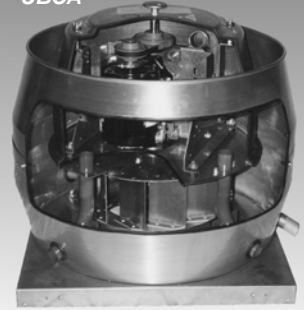
Belt drive with adjustable motor pulley for flexibility to match operating requirements.

Heavy duty pillow-block ball bearings with cast iron housing are self-aligning and relubricable.

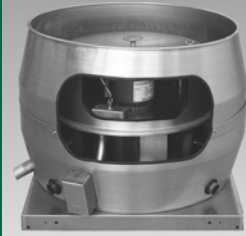
Hinged motor bracket with tensioning bolt(s) facilitates maintenance of belt tension.

UL Listed for Standard 705 and 762.

UBCA



UDCA



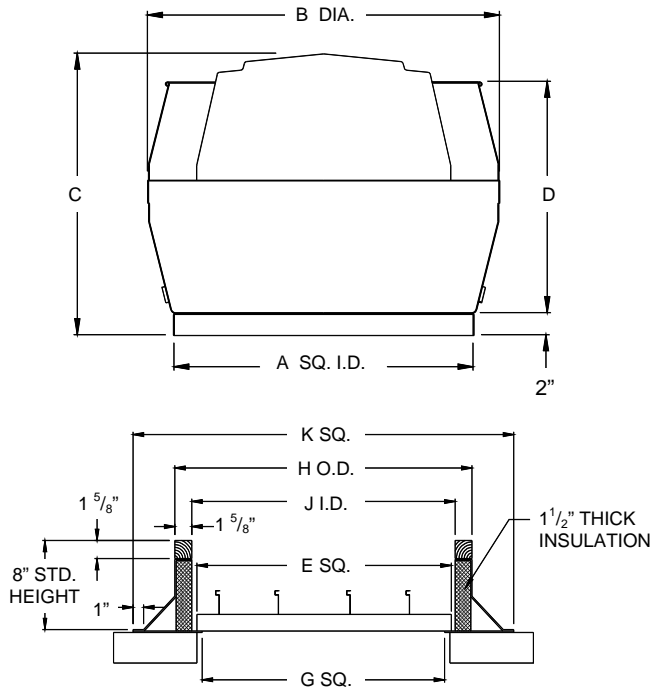
UDCA

Factory-wired disconnect device for standard motors.

Direct-drive assembly reduces maintenance and operating costs.

UL Listed for Standard 705 and 762.

UBCA and UDCA Ventilator, Roof Curb, and Damper Dimensions



Unit	Ventilator Dimensions				Roof Curb and Damper Dimensions				
	A	B	C	D	E	G	H	J	K
UBCA 06-10	18	23 3/4	22	11 1/4	12 1/2	11 1/4	16 1/2	13 1/4	24 1/2
UDCA 12-15	26	29 3/8	18 1/8	19 1/4	20 3/4	19 1/4	24 1/2	21 1/4	32 1/2
UBCA 12-15	26	29 3/8	24 1/2	19 1/4	20 3/4	19 1/4	24 1/2	21 1/4	32 1/2
UBCA 16, 18	30	35 3/8	26 1/2	21 5/8	24 3/4	23 1/4	28 1/2	25 1/4	36 1/2
UBCA 20	34	43 3/8	29 7/8	25 1/2	28 3/4	27 1/4	32 1/2	29 1/4	40 1/2
UBCA 24	34	43 3/8	34 1/4	25 1/2	28 3/4	27 1/4	32 1/2	29 1/4	40 1/2
UBCA 30	40	51 1/4	38 1/2	29 1/2	34 3/4	33 1/4	38 1/2	35 1/4	46 1/2
UBCA 36	46	62 5/8	45 7/8	37 1/2	40 3/4	39 1/4	44 1/2	41 1/4	52 1/2
UBCA 44	56	73	51 1/8	40	50 3/4	49 1/4	54 1/2	51 1/4	62 1/2

Dimensions in inches

UBCA

Belt Drive Centrifugal Upblast Power Roof Ventilators

Applications

The UBCA units are quiet, dependable upblast power roof ventilators for the exhaust of grease-laden air from restaurant range hoods, and general ventilation applications where vertical discharge of exhaust air is required. Applications include virtually all types of commercial and institutional kitchens, such as restaurant and cafeteria, fast food, hospital, hotel and motel, bakery, delicatessen, school and military.

UBCA units are specified where a roof-mounted location is desired to eliminate interference with other equipment or activities in the building. They permit the direct upward venting of overheated air.

The UBCA is listed under UL classification YZHW for Power Roof Ventilators for Restaurant Exhaust Systems. When properly installed, the UBCA also meets the requirements of National Fire Protection Association Standard NFPA 96. These units are particularly recommended for economical and efficient range hood ventilation where continuous operation under severe conditions may cause other power roof ventilators to fail.

Construction

Construction of UBCA units features heavy gauge steel structural support throughout consisting of steel base, motor compartment disc and support pipes, to maintain support and proper alignment of motor, wheel and drive during shipment, installation and operation. The spun aluminum motor compartment cover provides protection from weather and contaminated air and is easily removable for complete access to motor and drive.

UBCA models feature a housing of durable spun aluminum for optimum weather protection. The overlapping deep-spun venturi minimizes air turbulence and increases efficiency.

The aluminum centrifugal wheel is a non-overloading, backward-inclined type, selected for low noise levels. Backplate fins draw cool air through the motor compartment. The wheels are computer balanced on state-of-the-art equipment.

The UBCA wheel is secured to a machined aluminum hub with a line bore, which eliminates the need for bushings.

Drive Mechanism

The belt driven UBCA utilizes a standard V-belt drive design with a variable pitch cast iron motor pulley for adjusting fan speed. Drive shaft is turned, ground and polished. Motor support features a hinged motor bracket with belt tensioning bolt(s) for easy field adjustment.

Motors

The standard motor for UBCA models is open construction, located out of the airstream. Totally enclosed, energy efficient, two-speed and explosion-proof motors may also be available. Motor enclosure may affect UL Listing. All motor brands are recognized and serviced nationwide.

Bearings

Heavy duty pillow-block ball bearings with cast iron housing are self-aligning and relubricable.



UL705 - E39944

Type UBCA ventilators are UL705 Listed by Underwriters Laboratory Inc. to US and Canadian safety standards.



UL762 - MH9847

Type UBCA ventilators are UL762 Listed by Underwriters Laboratory Inc. to US safety standards.



American Coolair Corporation, ILG Industries certifies that the Type UBCA PRVs shown herein are licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 211 and AMCA Publication 311 and comply with the requirements of the AMCA Certified Ratings Program.

Guide Specifications

Upblast power roof ventilators shall be of the UBCA centrifugal type as manufactured by ILG Industries of American Coolair Corporation (individual models to be listed in fan schedule). Units shall meet UL Standard 705 or 762 as required and shall bear the AMCA Certified Ratings Seal for air and sound performance.

Bottom outer housing and venturi inlet shall be one piece heavy gauge spun aluminum with built-in grease drain. Wheel and venturi shall overlap for efficient operation. Motor compartment cover shall be heavy gauge spun aluminum construction and easily removable for access to motor and drive. Base, motor compartment disc and support pipes shall be heavy gauge steel.

Drive mechanism shall incorporate a V-belt drive with cast iron motor pulley. Drive shaft shall be turned, ground and polished. The centrifugal wheel shall be heavy gauge aluminum with backward-inclined, non-overloading blades and be computer balanced.

Bearings shall be self-aligning and have fittings for relubrication.

Motor shall be open drip-proof construction, NEMA design B with minimum service factor of 1.15. Motor compartment shall be cooled by a forced air ventilation system. Adjustable motor pulley shall be provided to allow for field adjustment and system balance. Motor shall be mounted on an adjustable steel mounting bracket. Motor shall be mounted with the shaft up to allow easy access to the cast iron variable pitch drive pulley.

(Safety disconnect switch, epoxy coating, roof curb and other accessories shall be listed in the fan schedule.)

Alternate Fan Constructions

Heat & Smoke Control

UBCA models, sizes 12-30 may be specified for Heat/Smoke Control (UL Standard 793)

- Heavy-duty galvanized steel impeller and inlet
- Engineered and tested to exhaust:

500° F air for 4 hours

400° C (752° F) air for 2 hours

1,000° F air for 20 minutes

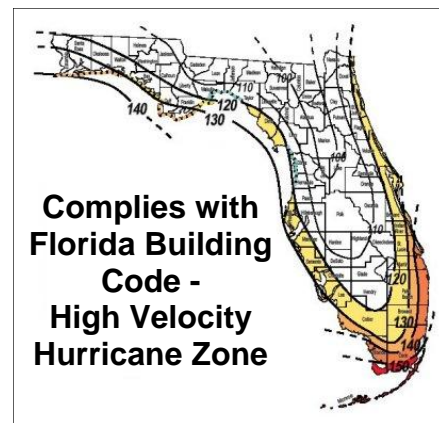


Type UBCA ventilators are UL793 Listed by Underwriters Laboratory Inc. to US and Canadian safety standards.

High Wind/Miami Dade

UBCA & UDCA models may be specified for High Wind Construction

- High-velocity impact tested
- Static air pressure force tested
- Florida High Velocity Hurricane Zone compliant
- Miami-Dade County Product Control



**Miami-Dade County
Product Control Approved**

UBCA06 Performance Data

CFM at Static Pressure																RPM Range			RPM					
0.00		.125		.250		.375		.500		.625		0.75		1.00		1.25		1.50		Motor HP				
BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	1/4 L	1/4 M	1/4 H
375		336		290																			1217	
0.04	6.2	0.04	5.5	0.05	5.0																			
397		361		319		255																	1288	
0.05	7.0	0.05	6.3	0.05	5.8	0.06	5.3																	
419		385		347		294		229															1360	
0.06	7.6	0.06	7.0	0.06	6.4	0.07	5.9	0.07	5.4															
441		409		373		328		264															1431	
0.07	8.2	0.07	7.6	0.07	7.0	0.08	6.5	0.08	6.0															
463		433		399		360		303															1503	
0.08	8.9	0.08	8.3	0.09	7.6	0.09	7.1	0.09	6.6															
485		456		425		389		341															1574	
0.10	9.6	0.10	9.0	0.10	8.3	0.10	7.8	0.10	7.3															
507		479		450		417		376															1646	
0.11	10.2	0.11	9.7	0.11	9.0	0.11	8.5	0.12	8.0															
529		502		474		444		408		359													1717	
0.12	11.0	0.12	10.4	0.13	9.7	0.13	9.2	0.13	8.7	0.13	8.2													
551		526		499		470		438		396													1789	
0.14	11.9	0.14	11.2	0.14	10.5	0.14	9.9	0.15	9.4	0.15	9.0													
573		549		523		496		466		430													1861	
0.16	12.9	0.16	12.2	0.16	11.5	0.16	10.8	0.17	10.4	0.17	9.8													
595		572		548		522		494		462		420											1933	
0.18	14.0	0.18	13.3	0.18	12.6	0.18	11.9	0.18	11.3	0.19	10.8	0.19	10.3											
617		595		571		547		521		491		455											2004	
0.20	15.0	0.20	14.4	0.20	13.7	0.20	12.9	0.20	12.3	0.21	11.8	0.21	11.3											
639		618		595		572		547		520		488											2076	
0.22	16.1	0.22	15.6	0.22	14.8	0.22	14.0	0.23	13.4	0.23	12.9	0.23	12.4											
661		640		619		596		573		547		518		440									2147	
0.24	17.2	0.24	16.7	0.24	16.0	0.25	15.3	0.25	14.6	0.25	14.0	0.26	13.4	0.26	12.5									
683		663		642		621		598		574		547		479									2219	
0.27	18.4	0.27	18.0	0.27	17.5	0.27	16.8	0.27	16.1	0.28	15.5	0.28	15.0	0.29	14.0									

Performance shown is for Type A: free inlet, free outlet. Performance ratings do not include the effects of appurtenances (accessories). Power rating (BHP) does not include transmission losses. Bearing losses are included.

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

UBCA10 Performance Data

CFM at Static Pressure																RPM Range			RPM					
0.00		.125		.250		.375		.500		.625		0.75		1.00		1.25		1.50		Motor HP				
BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	1/4 L	1/4 M	1/4 H
697		640		572		498																		1217
0.05	7.2	0.06	6.6	0.06	6.2	0.07	5.6																	
738		684		622		553																		1288
0.07	8.0	0.07	7.4	0.07	7.0	0.08	6.5																	
779		728		671		607																		1360
0.08	8.7	0.08	8.1	0.09	7.7	0.09	7.3																	
820		772		718		659		595																1431
0.09	9.4	0.09	8.8	0.10	8.4	0.10	8.0	0.11	7.5															
861		816		765		710		650																1503
0.10	10.1	0.11	9.5	0.11	9.1	0.12	8.7	0.12	8.3															
902		858		811		759		703		645														1574
0.12	10.8	0.12	10.2	0.13	9.8	0.14	9.4	0.14	9.1	0.14	8.6													
943		902		857		808		756		701														1646
0.14	11.6	0.14	11.0	0.15	10.6	0.15	10.2	0.16	9.8	0.16	9.4													
984		944		902		856		807		755														1717
0.15	12.3	0.16	11.8	0.17	11.3	0.17	11.0	0.18	10.6	0.18	10.2													
1025		987		947		903		857		808		757												1789
0.17	13.2	0.18	12.7	0.19	12.3	0.19	11.9	0.20	11.6	0.20	11.2	0.21	10.8											
1066		1030		992		950		906		860		812												1861
0.20	14.2	0.20	13.6	0.21	13.2	0.22	12.9	0.22	12.6	0.23	12.2	0.23	11.8											
1108		1073		1036		997		955		911		865												1933
0.22	15.3	0.23	14.7	0.23	14.3	0.24	13.9	0.25	13.5	0.25	13.2	0.26	12.9											
1148		1115		1079		1042		1003		961		917		826										2004
0.25	16.5	0.25	16.0	0.26	15.5	0.27	15.0	0.27	14.7	0.28	14.3	0.28	14.0	0.29	13.1									
1190		1157		1123		1088		1050		1010		969		882										2076
0.27	17.8	0.28	17.3	0.29	16.8	0.30	16.4	0.30	16.0	0.31	15.7	0.31	15.3	0.32	14.5									

Performance shown is for Type A: free inlet, free outlet. Performance ratings do not include the effects of appurtenances (accessories).

Power rating (BHP) does not include transmission losses. Bearing losses are included.

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

Values shown are for installation Type A: free inlet hemispherical sone levels.

UBCA15 Performance Data

CFM at Static Pressure																RPM Range				RPM					
0.00		.125		.250		.375		.500		.750		1.00		1.25		1.50		2.00			1/3	1/2	3/4	1	
BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone				
2188		2101		1967		1835		1722		1395															
0.27	10.1	0.29	9.4	0.31	9.5	0.32	9.2	0.33	8.5	0.33	8.2													1119	
2280		2197		2077		1939		1835		1533															
0.31	10.8	0.33	10.2	0.35	10.3	0.36	10.1	0.37	9.3	0.38	9.1													1166	
2370		2291		2183		2041		1940		1667		1361													
0.35	11.6	0.37	10.9	0.39	11.0	0.40	10.9	0.42	10.3	0.42	9.8	0.42	9.4											1212	
2462		2386		2288		2148		2045		1804		1512													
0.39	12.5	0.41	11.8	0.43	11.8	0.45	11.8	0.46	11.3	0.48	10.5	0.47	10.0											1259	
2552		2479		2388		2255		2147		1937		1649													
0.44	13.4	0.46	12.7	0.48	12.6	0.50	12.7	0.51	12.3	0.53	11.2	0.53	11.1											1305	
2644		2574		2489		2365		2251		2062		1787		1511											
0.48	14.3	0.50	13.6	0.53	13.5	0.55	13.6	0.56	13.4	0.59	12.1	0.59	12.3	0.59	11.8									1352	
2736		2668		2589		2476		2356		2179		1923		1664											
0.54	15.4	0.56	14.5	0.58	14.3	0.60	14.5	0.62	14.4	0.65	13.2	0.65	13.3	0.65	12.4									1399	
2826		2761		2686		2583		2460		2286		2058		1802		1514									
0.59	16.3	0.61	15.6	0.63	15.3	0.66	15.4	0.68	15.5	0.71	14.3	0.72	14.0	0.72	13.7	0.70	14.0							1445	
2917		2854		2784		2690		2569		2393		2194		1940		1693									
0.65	17.4	0.67	16.6	0.70	16.3	0.72	16.4	0.74	16.5	0.78	15.6	0.79	14.7	0.79	15.0	0.79	14.2							1492	
3009		2948		2881		2795		2679		2498		2323		2077		1842									
0.72	18.4	0.74	17.6	0.76	17.3	0.78	17.3	0.81	17.5	0.85	16.9	0.87	15.7	0.87	16.2	0.87	15.2							1539	
3099		3040		2976		2896		2788		2600		2442		2211		1981									
0.78	19.5	0.80	18.7	0.83	18.3	0.85	18.3	0.88	18.4	0.92	18.1	0.94	16.8	0.95	17.0	0.95	16.6							1585	
3191		3134		3072		2998		2898		2704		2555		2349		2119									
0.85	21	0.88	19.8	0.90	19.3	0.93	19.3	0.95	19.4	1.00	19.3	1.03	18.1	1.04	17.7	1.03	17.9							1632	
3281		3225		3166		3096		3004		2806		2662		2481		2252	1790								
0.93	22	0.95	21	0.98	20	1.00	20	1.03	21	1.08	21	1.11	19.4	1.13	18.5	1.12	19.1	1.11	18.7					1678	

Performance shown is for Type A: free inlet, free outlet. Performance ratings do not include the effects of appurtenances (accessories).

Power rating (BHP) does not include transmission losses. Bearing losses are included.

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

Values shown are for installation Type A: free inlet hemispherical sone levels.

UBCA18 Performance Data

CFM at Static Pressure																		RPM Range					RPM	
0.00		.125		.250		.375		.500		.750		1.00		1.25		1.50		2.00		Motor HP				
BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	1/2	3/4	1	1 1/2	2
3344	3153	2924	2757	2568	2061																			918
0.43	10.6	0.45	10.1	0.46	9.5	0.47	9.4	0.48	9.2	0.46	8.4													
3476	3296	3067	2906	2725	2319																			954
0.48	11.3	0.50	10.8	0.51	10.2	0.52	10.2	0.54	10.1	0.53	9.3													
3610	3441	3214	3055	2887	2533	1802																		991
0.54	12.1	0.56	11.6	0.57	11.0	0.58	11.0	0.60	10.9	0.60	10.3	0.53	9.1											
3745	3585	3363	3202	3047	2715	2127																		1028
0.60	13.1	0.63	12.4	0.64	12.0	0.65	11.8	0.66	11.9	0.67	11.3	0.62	10.2											
3876	3723	3509	3344	3200	2879	2410																		1064
0.67	14.0	0.70	13.4	0.71	12.9	0.72	12.7	0.73	12.8	0.75	12.3	0.72	11.4											
4011	3865	3660	3490	3353	3043	2674	1948																	1101
0.74	15.0	0.77	14.3	0.78	13.8	0.79	13.6	0.80	13.6	0.83	13.3	0.81	12.6	0.72	11.2									
4146	4006	3812	3636	3503	3204	2892	2284																	1138
0.82	16.0	0.85	15.3	0.86	14.8	0.87	14.5	0.88	14.6	0.92	14.4	0.91	13.7	0.84	12.5									
4277	4143	3959	3778	3646	3362	3074	2575	1781																1174
0.90	17.0	0.93	16.4	0.95	15.9	0.96	15.6	0.97	15.5	1.00	15.5	1.00	14.9	0.95	13.8	0.80	12.5							
4412	4283	4109	3925	3792	3524	3246	2853	2181																1211
0.99	18.0	1.02	17.4	1.04	16.9	1.05	16.6	1.06	16.5	1.09	16.6	1.10	16.0	1.07	15.2	0.96	13.6							
4612	4490	4331	4147	4009	3762	3490	3198	2662																1266
1.13	19.7	1.16	19.0	1.18	18.5	1.19	18.1	1.20	17.9	1.24	18.1	1.26	17.7	1.25	17.1	1.17	15.9							
4747	4629	4479	4297	4155	3919	3652	3390	2951																1303
1.23	21	1.26	20	1.29	19.7	1.30	19.2	1.31	19.0	1.34	19.2	1.38	18.9	1.37	18.3	1.31	17.3							
4882	4768	4625	4448	4301	4072	3814	3565	3219	1845															1340
1.33	22	1.37	21	1.40	21	1.41	20	1.42	20	1.45	20	1.49	20	1.49	19.6	1.46	18.8	1.13	16.4					
5020	4910	4774	4604	4452	4226	3980	3737	3454	2314															1378
1.45	23	1.49	23	1.52	22	1.54	22	1.55	21	1.57	21	1.62	21	1.63	21	1.60	20	1.37	17.4					
5155	5048	4919	4755	4600	4375	4142	3900	3652	2674															1415
1.57	24	1.61	23	1.64	23	1.66	22	1.67	22	1.70	22	1.74	22	1.76	22	1.75	21	1.57	18.7					
5290	5186	5062	4906	4749	4522	4302	4062	3832	2993															1452
1.70	25	1.74	24	1.77	24	1.79	23	1.80	23	1.83	23	1.87	23	1.90	23	1.90	22	1.76	20					
5425	5324	5205	5056	4899	4668	4460	4223	4002	3288															1489
1.83	26	1.87	25	1.91	25	1.93	24	1.94	24	1.97	24	2.01	24	2.05	24	2.05	23	1.94	21					
5563	5465	5351	5210	5054	4817	4618	4390	4171	3574															1527
1.98	27	2.02	26	2.05	26	2.08	25	2.09	25	2.12	24	2.15	25	2.20	25	2.22	24	2.14	23					

Performance shown is for Type A: free inlet, free outlet. Performance ratings do not include the effects of appurtenances (accessories).

Power rating (BHP) does not include transmission losses. Bearing losses are included.

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

Values shown are for installation Type A: free inlet hemispherical sone levels.

UBCA24 Performance Data

CFM at Static Pressure																			RPM Range							RPM	
0.00		.125		.250		.375		.500		.750		1.00		1.25		1.50		2.00		Motor HP							
BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	1/3	1/2	3/4	1	1 1/2	2	3	
4154		3809		3351		2712																				551	
0.30	7.7	0.31	7.2	0.32	6.7	0.31	6.4																				
4440		4122		3725		3243																					589
0.36	8.8	0.38	8.3	0.39	7.8	0.39	7.4																				
4749		4456		4121		3675		3023																			630
0.44	10.0	0.47	9.6	0.48	9.0	0.48	8.5	0.47	8.3																		
5028		4755		4449		4030		3584																			667
0.53	11.1	0.56	10.8	0.57	10.2	0.57	9.7	0.57	9.3																		
5277		5019		4729		4350		3966																			700
0.61	12.3	0.64	12.0	0.65	11.5	0.65	10.8	0.66	10.4																		
5526		5282		5005		4678		4297																			733
0.70	13.5	0.74	13.2	0.74	12.7	0.75	12.1	0.76	11.6																		
5805		5575		5311		5032		4651	3674																		
0.81	14.8	0.85	14.6	0.86	14.2	0.87	13.6	0.87	13.0	0.85	12.4																
6068		5850		5600		5345		4990	4230																		
0.92	16.1	0.97	15.9	0.98	15.5	1.00	15.0	1.00	14.4	0.99	13.7																
6340		6132		5895		5654		5348	4679																		
1.05	17.4	1.10	17.3	1.12	16.9	1.13	16.4	1.14	15.8	1.14	15.0																
6634		6437		6213		5982		5725	5089	4073																	
1.21	18.9	1.26	18.7	1.28	18.4	1.29	18.0	1.31	17.4	1.31	16.5	1.25	16.0														
6898		6709		6496		6273		6044	5429	4672																	
1.36	20	1.41	20	1.44	19.9	1.45	19.4	1.47	18.8	1.47	17.7	1.45	17.2														
7192		7012		6810		6595		6383	5801	5202	3951																
1.54	22	1.60	22	1.63	22	1.63	21	1.65	21	1.66	19.2	1.67	18.4	1.54	18.1												
7501		7329		7138		6933		6730	6201	5662	4760																
1.75	23	1.81	24	1.84	24	1.85	23	1.87	23	1.88	21	1.90	19.9	1.83	19.5												
7825		7661		7481		7285		7089	6629	6091	5443																
1.98	25	2.05	25	2.09	25	2.10	25	2.11	25	2.14	23	2.15	22	2.13	21												
8254		8100		7931		7749		7561	7172	6636	6144	5303															
2.33	28	2.40	28	2.45	28	2.46	28	2.47	28	2.51	26	2.51	24	2.53	23	2.45	23										
8669		8522		8364		8193		8014	7660	7171	6707	6138															
2.69	30	2.77	31	2.83	31	2.85	31	2.86	31	2.90	29	2.90	27	2.92	26	2.91	25										
9099		8959		8810		8650		8480	8145	7738	7255	6811	5004														
3.12	33	3.20	34	3.26	34	3.29	35	3.30	34	3.34	33	3.37	30	3.36	28	3.38	28	3.12	27								

Performance shown is for Type A: free inlet, free outlet. Performance ratings do not include the effects of appurtenances (accessories). Power rating (BHP) does not include transmission losses. Bearing losses are included. The sound ratings shown are loudness values in hemispherical sones at 5 ft. (1.5 m) in a hemispherical free field calculated per AMCA Standard 301. Values shown are for installation Type A: free inlet hemispherical sone levels.

UDCA

Direct Drive Centrifugal Upblast Power Roof Ventilators

Applications

The UDCA units are quiet, dependable upblast power roof ventilators for the exhaust of grease-laden air from restaurant range hoods, and general ventilation applications where vertical discharge of exhaust air is required. Applications include virtually all types of commercial and institutional kitchens, such as restaurant and cafeteria, fast food, hospital, hotel and motel, bakery, delicatessen, school and military.

UDCA units are specified where a roof-mounted location is desired to eliminate interference with other equipment or activities in the building. They permit the direct upward venting of overheated air.

The UDCA is listed under UL classification YZHW for Power Roof Ventilators for Restaurant Exhaust Systems. When properly installed, the UDCA also meets the requirements of National Fire Protection Association Standard NFPA 96. These units are particularly recommended for economical and efficient range hood ventilation where continuous operation under severe conditions may cause other power roof ventilators to fail.

Construction

UDCA models feature a housing of durable spun aluminum for optimum weather protection. The overlapping deep spun venturi minimizes air turbulence and increases efficiency.

The aluminum centrifugal wheel is a non-overloading, backward-inclined type, selected for low noise levels. Backplate fins draw cool air through the motor compartment. The wheels are computer balanced on state-of-the-art equipment. The hub features a line bore, which eliminates the need for bushings.

The motor compartment cover is easily removable for complete access to the motor, and a factory wired safety disconnect device is standard.

Drive Mechanism

UDCA models have all the advantages of a direct drive assembly. There are no belts, pulleys, or bearings to consume power or require maintenance.

Motors

The standard motor for UDCA models is open construction, located out of the airstream. Totally enclosed, energy efficient, two-speed and explosion-proof motors may also be available. Motor enclosure may affect UL Listing. All motor brands are recognized and serviced nationwide.



LISTED

UL762 - MH9847

Type UDCA ventilators are UL762 Listed by Underwriters Laboratory Inc.



American Coolair Corporation, ILG Industries certifies that the Type UDCA PRVs shown herein are licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 211 and AMCA Publication 311 and comply with the requirements of the AMCA Certified Ratings Program.

Guide Specifications

Upblast power roof ventilators shall be of the UDCA centrifugal type as manufactured by ILG Industries of American Coolair Corporation (individual models to be listed in fan schedule). Units shall meet UL Standard 762 as required and shall bear the AMCA Certified Ratings Seal for air and sound performance.

Bottom outer housing and venturi inlet shall be one piece heavy gauge spun aluminum with built-in grease drain. Wheel and venturi shall overlap for efficient operation. Motor compartment cover shall be heavy gauge spun aluminum construction and easily removable for access to motor and drive. Motor compartment disc and support pipes shall be heavy gauge steel.

Drive mechanism shall be of direct-drive design. The line bore hub shall be mounted onto the backplate of the centrifugal wheel. The centrifugal wheel shall be heavy gauge aluminum with backward-inclined, non-overloading blades and be computer balanced.

Motor shall be open construction, NEMA design B. Optional variable speed control allows for field adjustment and system balance. The unit shall be equipped with a wired and mounted safety disconnect device.

(Epoxy coating, roof curb and other accessories shall be listed in the fan schedule.)

UDCA12-UDCA13 Performance Data

UDCA12															CFM at Static Pressure					RPM RANGE	RPM
0.00		.125		.250		.375		.500		.625		.750		1.00		1.25		1.50		UDCA12J16	
BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	1/2 HP	
970		844		709																	850
0.05	4.2	0.05	3.8	0.06	3.4																
1056		939		821		670															925
0.06	5.0	0.07	4.6	0.08	4.3	0.08	4.0														
1142		1033		926		803		619													1000
0.08	5.8	0.09	5.6	0.09	5.3	0.10	4.9	0.09	4.6												
1227		1125		1027		920		787													1075
0.10	6.8	0.11	6.6	0.11	6.3	0.12	5.9	0.12	5.6												
1313		1217		1126		1030		920		771											1150
0.12	7.8	0.13	7.7	0.14	7.3	0.14	6.9	0.15	6.6	0.14	6.4										
1399		1308		1222		1134		1038		923		758									1225
0.14	8.9	0.15	8.8	0.16	8.4	0.17	8.1	0.18	7.6	0.18	7.4	0.17	7.1								
1484		1398		1318		1236		1149		1052		931									1300
0.17	10.1	0.18	10.0	0.19	9.6	0.20	9.3	0.21	8.8	0.21	8.4	0.21	8.3								
1570		1488		1412		1335		1255		1169		1070									1375
0.20	11.5	0.22	11.4	0.23	11.0	0.24	10.5	0.24	10.1	0.25	9.7	0.25	9.4								
1656		1578		1505		1433		1358		1279		1193		965							1450
0.24	12.8	0.25	12.7	0.26	12.4	0.27	11.9	0.28	11.6	0.29	11.1	0.30	10.7	0.29	10.4						
1741		1667		1597		1529		1459		1386		1308		1121							1525
0.27	14.2	0.29	14.1	0.30	13.7	0.32	13.3	0.32	12.9	0.33	12.4	0.34	12.0	0.34	11.5						
1827		1756		1689		1624		1558		1490		1418		1256		1028					1600
0.32	15.2	0.33	15.2	0.35	14.9	0.36	14.4	0.37	14.1	0.38	13.7	0.39	13.3	0.40	12.7	0.39	12.4				
1930		1862		1798		1736		1674		1611		1545		1403		1225					1690
0.37	16.7	0.39	16.5	0.41	16.3	0.42	16.0	0.43	15.7	0.44	15.4	0.45	15.1	0.47	14.4	0.47	14.0				

UDCA13															CFM at Static Pressure					RPM RANGE	RPM
0.00		.125		.250		.375		.500		.625		.750		1.00		1.25		1.50		UDCA13J15	
BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	1/2 HP	
1157		1026		894																	800
0.06	5.2	0.07	4.5	0.07	4.1																
1265		1146		1026		883															875
0.08	6.2	0.09	5.7	0.09	5.3	0.10	5.0														
1374		1264		1153		1038		879													950
0.10	7.4	0.11	6.9	0.12	6.5	0.12	6.2	0.12	5.9												
1482		1380		1278		1176		1051		881											1025
0.12	8.6	0.13	8.2	0.14	7.9	0.15	7.5	0.16	7.2	0.15	6.9										
1590		1495		1401		1305		1204		1073											1100
0.15	10.1	0.16	9.7	0.17	9.4	0.18	9.0	0.19	8.6	0.19	8.4										
1699		1609		1522		1432		1343		1236		1104									1175
0.18	11.7	0.20	11.3	0.21	11.0	0.22	10.6	0.23	10.2	0.23	9.9	0.23	9.6								
1807		1723		1641		1556		1473		1385		1276									1250
0.22	13.3	0.24	13.1	0.25	12.7	0.26	12.3	0.27	11.9	0.28	11.6	0.28	11.2								
1952		1874		1798		1720		1642		1565		1481		1259							1350
0.28	15.1	0.29	14.8	0.31	14.5	0.32	14.1	0.33	13.8	0.35	13.4	0.35	13.0	0.36	12.5						
2060		1986		1914		1841		1767		1694		1619		1433							1425
0.33	16.3	0.34	16.0	0.36	15.7	0.37	15.4	0.39	15.0	0.40	14.7	0.41	14.4	0.42	13.8						
2169		2098		2030		1961		1890		1820		1751		1592		1384					1500
0.38	17.6	0.40	17.3	0.42	17.0	0.43	16.7	0.45	16.3	0.46	16.0	0.47	15.7	0.49	15.2	0.49	14.7				
2277		2210		2144		2079		2012		1945		1879		1740		1562		1324			1575
0.44	19.0	0.46	18.6	0.48	18.3	0.49	18.0	0.51	17.7	0.53	17.4	0.54	17.1	0.56	16.5	0.57	16.1	0.55	15.6		

Performance shown is for Type A: free inlet, free outlet. Performance ratings do not include the effects of appurtenances (accessories). The sound ratings shown are loudness values in hemispherical sones at 5 ft. (1.5 m) in a hemispherical free field calculated per AMCA Standard 301. Values shown are for installation Type A: free inlet hemispherical sone levels. AMCA Certified Ratings apply only to the UDCA Roof Ventilator constant speed fans and not variable speed fan.

UDCA15 Performance Data

CFM at Static Pressure																		RPM RANGE	RPM		
0.00		.125		.250		.375		.500		.625		.750		1.00		1.25		1.50		UDCA15K15	
BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP		Sone	3/4 HP
1565		1411		1240		1014															800
0.10	5.7	0.11	5.3	0.12	4.7	0.12	4.5														875
1712		1583		1413		1231		1023													950
0.13	6.8	0.14	6.3	0.16	6.1	0.16	5.6	0.16	5.4												1025
1858		1747		1579		1443		1247		1049											1100
0.17	7.9	0.18	7.3	0.20	7.3	0.20	6.5	0.20	6.5	0.20	6.4										1175
2005		1905		1747		1625		1464		1286		1086									1250
0.21	8.9	0.23	8.2	0.24	8.2	0.25	7.7	0.26	7.3	0.26	7.1	0.25	7.5								1325
2152		2061		1922		1793		1674		1503		1341									1400
0.26	9.9	0.28	9.2	0.29	9.2	0.31	8.9	0.32	8.2	0.32	8.3	0.32	7.9								1475
2299		2215		2097		1959		1856		1722		1560		1211							1550
0.32	11.0	0.34	10.3	0.35	10.4	0.37	10.2	0.38	9.5	0.39	9.2	0.39	9.3	0.38	9.3						
2445		2368		2267		2128		2026		1923		1778		1487							
0.38	12.3	0.40	11.6	0.42	11.6	0.44	11.6	0.45	11.1	0.46	10.4	0.47	10.4	0.46	10.4						
2592		2519		2431		2301		2192		2101		1992		1710		1409					
0.46	13.8	0.48	13.1	0.50	12.9	0.52	13.1	0.53	12.8	0.55	12.1	0.55	11.6	0.55	11.6	0.55	11.7				
2739		2671		2590		2478		2359		2270		2182		1927		1670					
0.54	15.4	0.56	14.6	0.58	14.4	0.60	14.5	0.62	14.5	0.64	13.9	0.65	13.3	0.65	13.3	0.65	13.3				
2885		2821		2748		2651		2529		2436		2355		2145		1893		1636			
0.63	17.0	0.65	16.2	0.67	15.9	0.70	16.0	0.72	16.1	0.74	15.8	0.75	15.2	0.77	15.2	0.76	14.5	0.76	14.6		
3032		2971		2904		2819		2704		2603		2523		2353		2110		1879			
0.73	18.6	0.75	17.9	0.78	17.5	0.80	17.6	0.82	17.7	0.85	17.6	0.86	17.2	0.89	17.2	0.89	15.9	0.89	16.4		

Performance shown is for Type A: free inlet, free outlet. Performance ratings do not include the effects of appurtenances (accessories).
 The sound ratings shown are loudness values in hemispherical sones at 5 ft. (1.5 m) in a hemispherical free field calculated per AMCA Standard 301
 Values shown are for installation Type A: free inlet hemispherical sone levels
 AMCA Certified Ratings apply only to the UDCA Roof Ventilator constant speed fans and not variable speed fan:

Installation

Most models are shipped fully assembled and ready for installation. Always inspect equipment for transit damage before accepting delivery to assure a valid claim. Special handling and storage procedures are required if unit is to remain idle for a long time prior to installation.

Placement

All belt-driven units must be accessibly installed for maintenance of belts, bearings, motors and pulleys and routine cleaning.

Mounting

Satisfactory operation of roof ventilators requires mounting on adequately designed and constructed roof curbs. Prefabricated curbs for convenience in installation are available from ILG. Install with base of unit horizontal. Provide adequate caulking, flashing or other weatherproofing means. Duct connections are made below the unit.

Inspection

Check centrifugal wheel for free rotation.

Check belt for proper tension (UBCA).

Check bearings for proper and secure locking to drive shaft (UBCA).

Check motor and fan sheave faces for proper alignment (UBCA).

Check circuit phase, voltage and wiring connection against that shown on motor nameplate.

Check direction of fan rotation for proper air flow.

Check belt after one week of operation for proper tension (UBCA).

Maintenance

Units should be checked monthly for the first two or three months and periodically thereafter.

Cleaning

Units should be cleaned of grease and material buildup every three months or when necessary, depending on the condition of air being exhausted and frequency of use. Grease trough, drain and container should be checked and emptied as required to prevent grease overflow, as often as every one or two weeks with heavy grease applications such as char-broilers. Units should also be checked for eroded parts which should be replaced to avoid structural damage and possible failure.

Lubrication

Proper lubrication is the most important maintenance requirement. On UBCA units, fan bearings should be lubricated annually or more frequently based on usage and operating conditions. For best results, use a #2 consistency lithium based grease such as Shell Alvania #2 or equivalent lubricant. Motor bearings should be lubricated according to the motor manufacturer's instructions.

Adjustment of Variable Pitch Pulley and Belt (UBCA Only)

Variable pitch pulley may be adjusted within catalog RPM range to alter performance. However, adjustment beyond catalog RPM range may cause motor overload and possible premature motor failure. Pulley alignment and belt tension should be adjusted if necessary. Both motor and driven pulleys should be at right angles to the shafts, and the V-grooves should be aligned with each other. Inspection of drive components every 6 to 12 months is recommended.

<u>WARNING</u>	<u>CAUTION</u>
	<p>DO NOT INSTALL FAN WITH MOVING PARTS WITHIN 8 FEET OF FLOOR OR GRADE LEVEL WITHOUT A GUARD THAT COMPLIES WITH OSHA REGULATIONS. DO NOT USE UNLESS ELECTRICAL WIRING COMPLIES WITH ALL APPLICABLE CODES. DO NOT WIRE WITHOUT PROVIDING FOR A POWER SOURCE DISCONNECT AT THE FAN ITSELF. DO NOT SERVICE EXCEPT BY A QUALIFIED MAINTENANCE TECHNICIAN AND ONLY AFTER DISCONNECTING THE POWER SOURCE. FAILURE TO OBSERVE THESE PRECAUTIONS CAN RESULT IN SERIOUS INJURY OR DEATH.</p>

To convert air performance (CFM and SP) and power (BHP) to metric units, multiply CFM x .000472 to obtain cubic meters per second (m³/s). Multiply SP x 248.36 to obtain pascals (Pa). Multiply BHP x .7457 to obtain kilowatts (kW).

Example: 3904 CFM x .000472 = 1.8427 m³/s
0.125 SP x 24.36 = 31.05 Pa
0.886 BHP x .7457 = 0.661 kW

UBCA/UDCA Options and Accessories

Grease Extraction Application Accessories

Prefabricated Roof Curbs

Roof curbs for grease extraction UBCA and UDCA models meet NFPA 96 system requirements for minimum PRV discharge height above the roof line. Curb height for sizes 18 and below is 20", and for sizes 20 and above is 18". Curbs with venting on two or four sides are also available. All curbs are insulated, feature a weather-resistant, continuous welded construction and provide convenience in installation of PRV units for both insulated and non-insulated roof decks.

Safety Disconnects

Safety disconnects cut power to motor for servicing of unit. A factory mounted and wired disconnect is an option for UBCA units with the UL 762 designation. The disconnect may either be interior with an external weather-proof junction box (all units), or external (units up to 2 hp only). Wiring is completed from the motor to the exterior box. Factory mounted and wired interior disconnect switches are standard for all UDCA models.

Grease Collector

Grease pans collect grease drained from the fan. An integral baffle contains the grease while allowing water to flow from the pan. The grease collector should be attached to the curb below the standard drain.

General Ventilation Accessories

Prefabricated Roof Curbs

Insulated roof curbs with weather-resistant continuous welded construction are available for convenience in installation for both insulated and non-insulated roof decks.

Safety Disconnects

Safety disconnects cut power to motor for servicing of unit. A disconnect switch is an accessory available on UBCA units used for general ventilation, and is shipped loose for field installation. An optional wiring harness is available to connect the motor to the switch at the internal junction box. Factory mounted and wired internal disconnect switches are standard for all UDCA models.

Backdraft Dampers

Gravity or motor operated backdraft dampers are available. They are aluminum construction and designed for installation in prefabricated roof curbs.

Birdguards

Wire birdguards are available to prevent entry of birds or other potentially damaging objects.

Speed Controller (UDCA models only)

Solid state speed controller provides capability to change performance and speed ranging from 50% to 100% of fan capacity. This permits adjustment for fine tuning and balancing the ventilation system (see performance tables).

General Options and Accessories

Hinged Base Kits

Hinged bases are specifically designed to provide easy access for cleaning and servicing the lower parts of UBCA and UDCA units.

Roof Handle

Aluminum handle facilitates removal of the roof. A roof handle is standard for units with the UL762 designation.

Special Motors

Two-speed, totally enclosed, energy efficient and explosion-proof motors for hazardous locations may be available for many models. Motor requirements may affect UL listings.

Protective Coatings

Fan units are not recommended for exhausting air of a corrosive nature. However, special protective coatings are available where units may be exposed to corrosive exterior conditions. Parts requiring painting are processed through the American Coolair five-stage pretreatment system prior to the application of any coatings to insure maximum finish adhesion. These parts use a thermosetting epoxy powder paint with an average thickness of 3 mils and baked at 400° F to a smooth, hard continuous finish. Consult your ILG Industries representative for available coatings.

UBCA Specification Checklist

- Units provide grease-laden vapor extraction and general exhaust with vertical discharge for low, medium and high air volumes, especially in commercial and institutional kitchens.
- Centrifugal design has advantages of compact, attractive appearance, quiet operation and performance against higher static pressures.
- Variable pitch belt drive allows for speed adjustment.
- Adjustable hinged motor bracket facilitates maintenance of belt tension.
- Weatherproof heavy duty aluminum housing and motor compartment cover resist corrosion, maintaining appearance.
- Deep-spun, overlapping, one-piece venturi/bottom outer housing minimizes noise, reduces air turbulence and improves efficiency.
- Aluminum centrifugal wheel is quiet, non-overloading, backward-inclined design and is computer balanced.
- Standard open drip-proof motor is out of the airstream for protection.
- The motor is mounted with the shaft up for convenient access to the variable pitch cast iron motor pulley.
- The motor compartment is cooled by a forced air ventilation system, extending motor life.
- Units have the UL Label for the removal of grease-laden vapors and fumes (UL 762), for general ventilation (UL 705), or for high temperature operation (UL793).
- AMCA Seal assures certified rating of air and sound performance.
- Heavy duty pillow-block bearings are self-aligning and relubricable.

Limited Warranty

In the sale of its products, American Coolair Corporation agrees to correct, by repairs or replacement, any defects in workmanship or material that may develop under proper and normal use during the period of one year from the date of shipment from the factory. Any product or part proving, upon American Coolair's examination, to be defective during limited warranty period will be repaired or replaced, at American Coolair's option, f.o.b. factory, without charge.

Deterioration or wear caused by chemicals, abrasive action or excessive heat shall not constitute defects.

Motors are guaranteed only to the extent of the manufacturer's warranty. American Coolair's limited warranty does not apply to any of its products or parts that have been subject to accidental damage, misuse by the user, unauthorized alterations, improper installation or electrical wiring, or lack of proper lubrication or other service requirements as established by American Coolair.

Repairs or replacements provided under the above terms shall constitute fulfillment of all American Coolair's obligations with respect to limited warranty.

THE LIMITED WARRANTY STATED HEREIN IS IN LIEU OF ALL OTHER WARRANTIES, EXPRESS, STATUTORY OR IMPLIED, INCLUDING WITHOUT LIMITATION THAT OF MERCHANTABILITY AND FITNESS.

NO LIABILITY FOR REINSTALLATION COST OR FOR ANY SPECIAL, INDIRECT OR CONSEQUENTIAL DAMAGES OF ANY NATURE IS ASSUMED OR SHALL BE IMPOSED UPON AMERICAN COOLAIR.



AMERICAN COOLAIR CORPORATION

JACKSONVILLE, FLORIDA 32203-2300 ~ P.O. BOX 2300 ~ (904) 389 3646 ~ FAX (904) 387 3449 ~ E-MAIL – info@coolair.com ~ WEBSITE - coolair.com
VANE AXIAL FANS ~ TUBE AXIAL FANS ~ PROPELLER FANS ~ POWER ROOF VENTILATORS ~ CENTRIFUGAL VENTILATORS
MEMBER OF AMCA

UDCA Specification Checklist

- Units provide grease-laden vapor extraction and general exhaust with vertical discharge for low and medium air volumes, especially in commercial and institutional kitchens.
- Centrifugal design has advantages of compact, attractive appearance, quiet operation and performance against higher static pressures.
- Direct-drive has advantages of minimal maintenance and operating costs.
- Safety disconnect switch allows power to be cut off for servicing of unit.
- Weatherproof heavy duty aluminum housing and motor compartment cover resist corrosion, maintaining appearance.
- Deep-spun, overlapping, one-piece venturi/bottom outer housing minimizes noise, reduces air turbulence and improves efficiency.
- Aluminum centrifugal wheel is quiet, non-overloading, backward-inclined design and is computer balanced.
- Standard open motor is out of the airstream for protection.
- The motor compartment is cooled by a forced air ventilation system, extending motor life.
- Units have the UL Label for the removal of grease-laden vapors and fumes (UL 762).
- AMCA Seal assures certified rating of air and sound performance.

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