



AMERICAN COOLAIR CORPORATION



Centrifugal Wall Exhaust Fans

**TYPE CWBA - BELT DRIVE
TYPE CWDA - DIRECT DRIVE**

CWBA



Sizes 12 to 20
711 to 5709 CFM
Static Pressure to 2"
AMCA Licensed Ratings for
Sound and Air

Safety disconnect switch is optional.

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

Single bolt adjustment facilitates maintenance of belt tension.

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CWDA



Sizes 06 to 20
133 to 4942 CFM
Static Pressure to 1"
AMCA Licensed Ratings for
Sound and Air

Safety disconnect device is standard.

Direct drive assembly reduces maintenance and operating costs.

Line bore hub eliminates the need for a bushing, and has wheel puller provisions.

DIRECT DRIVE FANS

CWDA

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STANDARD FEATURES CWBA and CWDA Units

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

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.

Aluminum centrifugal wheel is a non-overloading, backward-inclined design and is computer balanced.

Permanently affixed wheel balance weights assure vibration-free operation.

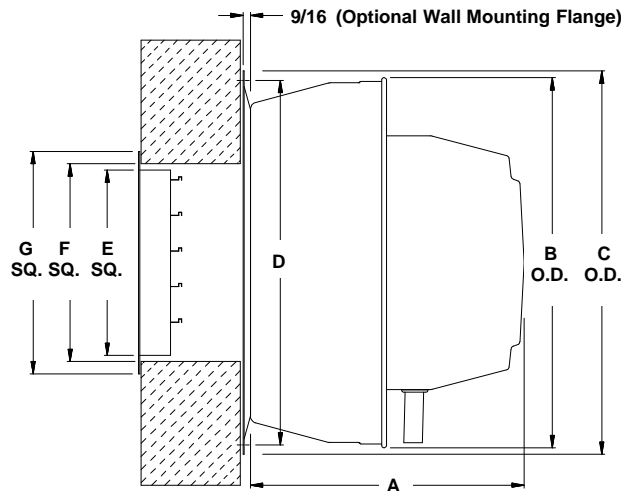
Wheel backplate fins cool the motor compartment, extending motor life.

Birdscreen is 1/2" x 1/2" galvanized wire mesh.

AMCA Seal assures certified rating of air and sound performance.

UL Listed for Standard 705.

CWBA and CWDA Dimensions

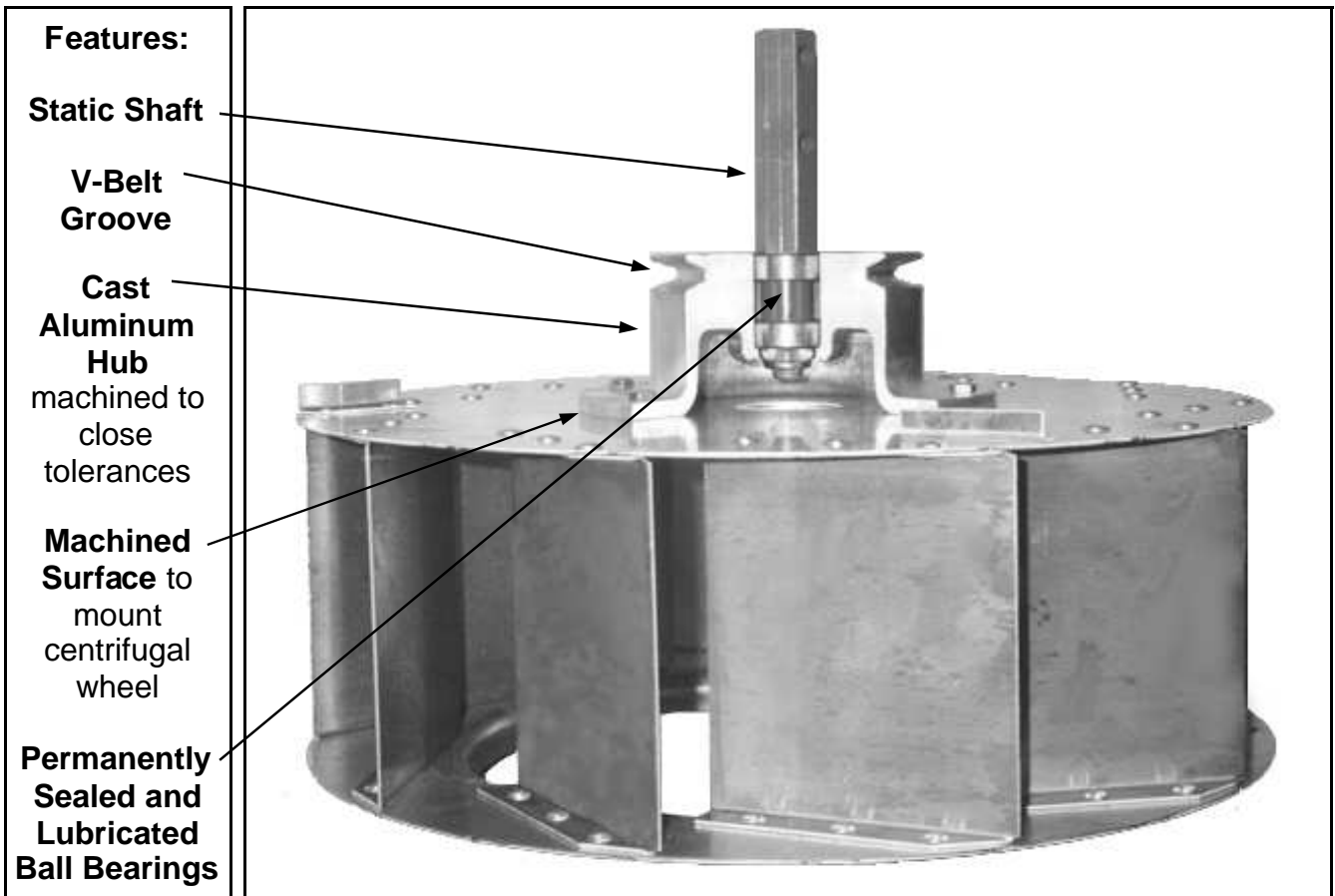
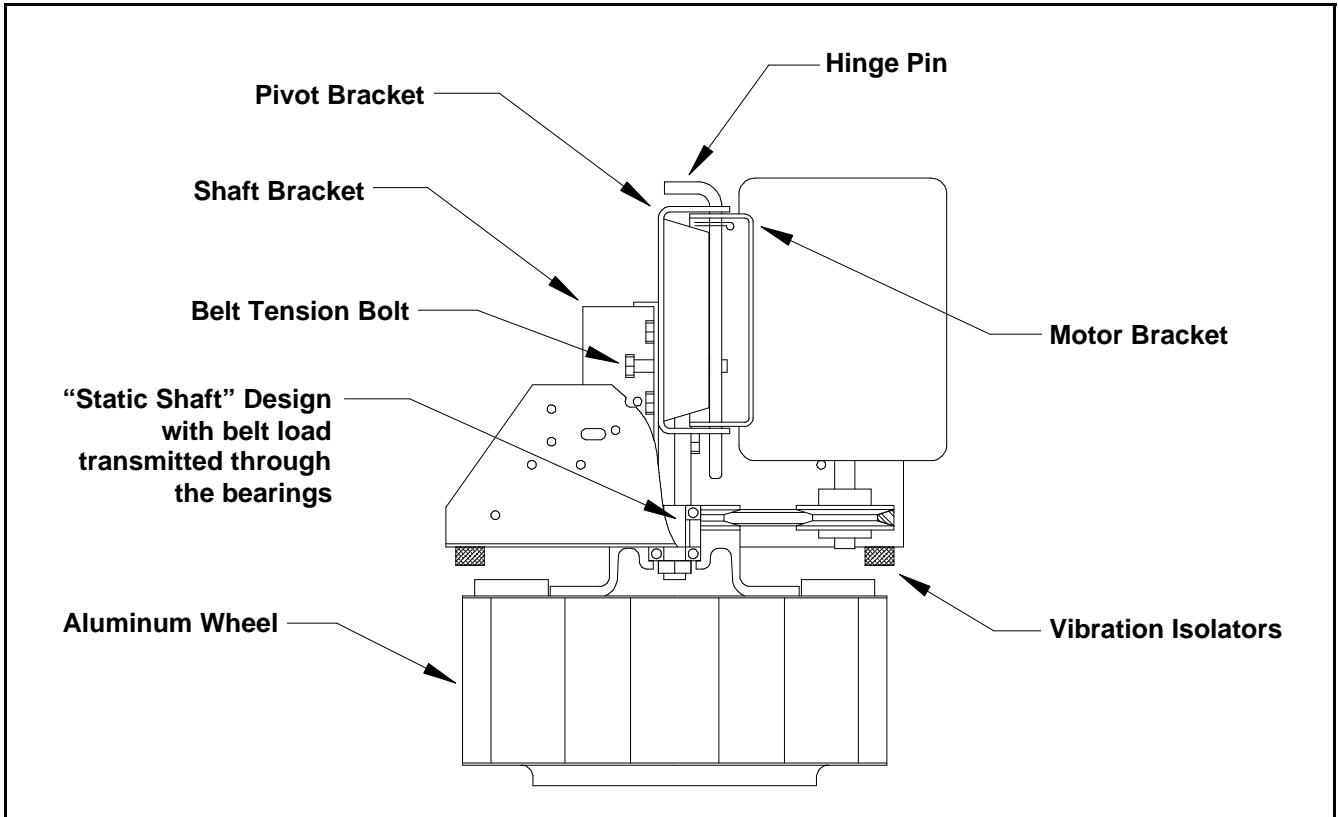


Unit	Ventilator Dimensions				Damper Dimensions		
	A	B	C	D	E	F	G
CWDA 06, 08, 10	12 1/8	23 3/4	25 1/4	24 1/8	10	10 3/4	12 1/2
CWDA 12E10, 12J16, 13F11, 13J15, 15H10, 15K15	17	29 7/8	31	29 1/2	15	15 3/4	17 1/2
CWDA 12J17, 13K17, 15L17 CWBA 12, 13, 15	22 1/8	29 7/8	31	29 1/2	15	15 3/4	17 1/2
CWDA, CWBA 16, 18, 20	24 3/8	35 7/8	36	34 1/2	22	22 3/4	24 1/2

Dimensions in inches

ILG's "C-Drive"

Available Exclusively on CWBA Units Sizes 12 - 20



CWBA

Belt Drive Centrifugal Wall Exhaust Fans

Applications

The CWBA units are quiet, dependable exhaust wall fans recommended for a wide range of general exhaust applications where low and medium ranges of air volume and pressure are specified. Applications include virtually all types of light manufacturing, commercial and institutional buildings such as shopping centers, hospitals, schools, hotels, office and apartment buildings, warehouses, airports, bus terminals and many others.

CWBA units are specified where a wall-mounted location is desired to eliminate interference with other equipment or activities in the building. They permit the direct outward venting of overheated air. CWBA units may be used with or without ducts.

The advantages of a CWBA belt drive over a direct drive exhaust wall fan include quieter operation, adjustable performance to suit operating needs and extended service life using the "C-Drive" bearing arrangement.

Construction

CWBA 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 wheel is secured to the machined aluminum "C-Drive" disc, and computer balanced on state-of-the-art equipment.

Neoprene vibration isolators to reduce noise and wear, and a birdscreen are all standard.

Drive Mechanism

The belt driven CWBA utilizes a unique bearing/shaft arrangement that has been designated the "C-Drive". This "C-Drive" is patterned after American Coolair's unique static shaft drive design that has been in existence for over seventy years serving the general ventilation markets with reliable propeller products. This type of drive uses a captured bearing arrangement inside a cast aluminum disc assembly locked to a short, large diameter shaft. The shaft is held stationary and the centrifugal wheel/disc assembly rotates on the shaft instead of the entire assembly rotating.

This design accomplishes several real and identifiable points of value. As a result of reduction of radial loading of the bearings, the calculated L10 bearing life exceeds 1,000,000 hours or an average bearing life of 5,000,000 hours. Most other manufacturers' turning shaft drive designs result in a cataloged average bearing life of 150,000-200,000 hours. Additionally, the machined surface of the "C-Drive" provides a rigid backplate for the centrifugal wheel. Electrical connections on the end of the motor face outwards making field connections rapid and simple. This compact drive assembly provides more room in the motor compartment area and the single bolt, V-belt adjustment makes for a very serviceable unit.

Motors

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



UL705 - E39944

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



American Coolair Corporation certifies that the Type CWBA units 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

Wall mounted exhaust fans shall be of the CWBA 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 and shall bear the AMCA Certified Ratings Seal for air and sound performance. Housing and venturi inlet shall be one piece heavy gauge spun aluminum with wheel and venturi overlapping for efficient operation. Motor compartment cover shall be heavy gauge spun aluminum construction and easily removable for access to motor and drive.

Drive construction shall be of the ILG "C-Drive" design consisting of static shaft/bearing arrangement mounted in a machined cast aluminum disc assembly. The disc assembly 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.

Bearings shall have a calculated L10 bearing life in excess of 1,000,000 hours.

Motor shall be open drip-proof construction, NEMA design B with minimum service factor of 1.15. Adjustable motor pulley shall be provided to allow for field adjustment and system balance. Motor shall be mounted on a steel mounting bracket with single bolt adjustment. Motor shall be mounted with the shaft down to allow easy access to the electrical wiring terminal board/circuit box.

(Safety disconnect switch, backdraft damper, epoxy coating, wall mounting flange and other accessories shall be listed in the fan schedule).

CWBA15 Performance Data

CFM at Static Pressure																	RPM Range					RPM			
0.00		.125		.250		.375		.500		.750		1.00		1.25		1.50		2.00		1/4	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						
2013	1917	1817	1712	1597	1289																				1072
0.24	9.1	0.26	8.4	0.27	8.2	0.28	8.7	0.29	8.3	0.28	7.9														
2102	2009	1914	1815	1709	1437																				1119
0.28	9.8	0.29	9.1	0.31	8.9	0.32	9.3	0.32	9.4	0.33	8.7														
2190	2101	2010	1916	1817	1575	1249																			1166
0.31	10.5	0.33	9.8	0.34	9.5	0.35	9.7	0.36	10.4	0.37	9.6	0.37	9.5												
2276	2191	2104	2014	1920	1701	1403																			1212
0.35	11.2	0.37	10.5	0.38	10.2	0.40	10.4	0.41	11.3	0.42	10.4	0.41	10.3												
2364	2283	2199	2113	2024	1823	1556																			1259
0.39	12.0	0.41	11.2	0.43	11.0	0.44	11.1	0.45	11.9	0.46	11.4	0.46	11.2												
2451	2372	2291	2209	2124	1937	1698	1401																		1305
0.44	12.8	0.46	12.0	0.47	11.7	0.49	11.9	0.50	12.3	0.52	12.2	0.52	11.8	0.51	11.8										
2539	2463	2386	2306	2225	2049	1835	1559																		1352
0.49	13.7	0.51	12.9	0.53	12.6	0.54	12.7	0.55	12.9	0.57	13.2	0.58	12.5	0.57	12.4										
2627	2554	2479	2403	2325	2159	1963	1712	1421																	1399
0.54	14.6	0.56	13.8	0.58	13.5	0.60	13.6	0.61	13.8	0.63	14.2	0.64	13.3	0.63	13.1	0.63	13.0								
2714	2643	2570	2497	2421	2263	2082	1857	1588																	1445
0.60	15.5	0.62	14.7	0.64	14.4	0.65	14.4	0.67	14.6	0.69	15.0	0.70	14.1	0.70	13.8	0.70	13.7								
2802	2733	2663	2592	2520	2369	2200	1995	1744																	1492
0.66	16.5	0.68	15.7	0.70	15.3	0.72	15.3	0.73	15.5	0.76	15.8	0.77	15.1	0.78	14.6	0.77	14.5								
2890	2824	2756	2687	2617	2472	2314	2127	1897																	1539
0.72	17.5	0.74	16.7	0.76	16.3	0.78	16.3	0.80	16.5	0.83	16.6	0.84	16.0	0.85	15.4	0.84	15.3								
2977	2912	2846	2780	2712	2572	2422	2249	2040																	1585
0.79	18.6	0.81	17.7	0.83	17.2	0.85	17.2	0.87	17.4	0.90	17.5	0.92	17.0	0.93	16.3	0.93	16.1								
3065	3002	2939	2874	2808	2674	2531	2370	2179	1706																1632
0.86	19.6	0.88	18.7	0.91	18.2	0.93	18.2	0.94	18.4	0.97	18.5	1.00	18.0	1.01	17.4	1.02	17.1	1.00	16.9						
3151	3090	3029	2966	2902	2772	2635	2484	2308	1865																1678
0.93	21	0.96	19.7	0.98	19.3	1.00	19.2	1.02	19.3	1.05	19.5	1.08	18.9	1.10	18.4	1.11	18.0	1.09	17.9						

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

Power ratings (BHP) do not include transmission losses. Bearing losses are included.

The sound ratings shown are loudness values in fan 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 fan sone levels.

CWBA18 Performance Data

CFM at Static Pressure																		RPM Range					RPM		
0.00		.125		.250		.375		.500		.750		1.00		1.25		1.50		2.00		1/2	3/4	1		1 1/2	2
BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone						
3248		3011		2893		2767		2612		2161															918
0.42	11.3	0.44	10.3	0.46	10.1	0.48	9.9	0.49	9.5	0.48	8.6														
3375		3140		3024		2908		2764		2386		1658													954
0.47	12.0	0.50	11.0	0.52	10.7	0.54	10.7	0.55	10.3	0.55	9.5	0.48	8.4												
3506		3272		3158		3049		2918		2590		2018													991
0.53	12.8	0.56	11.8	0.58	11.5	0.60	11.4	0.61	11.1	0.62	10.5	0.57	9.3												
3637		3404		3292		3189		3068		2771		2285													1028
0.59	13.5	0.62	12.6	0.64	12.3	0.66	12.2	0.68	12.0	0.69	11.4	0.66	10.4												
3764		3532		3421		3322		3211		2936		2521	1822												1064
0.65	14.3	0.68	13.4	0.71	13.0	0.73	13.0	0.75	12.9	0.77	12.3	0.75	11.4	0.66	10.3										
3895		3664		3554		3458		3355		3099		2752	2198												1101
0.72	15.1	0.76	14.2	0.78	13.8	0.80	13.8	0.83	13.8	0.85	13.3	0.84	12.5	0.77	11.3										
4026		3796		3687		3593		3497		3258		2958	2477	1554											1138
0.80	15.9	0.83	15.0	0.86	14.6	0.88	14.6	0.91	14.7	0.94	14.3	0.94	13.6	0.88	12.5	0.73	11.5								
4153		3925		3815		3724		3633		3409		3137	2717	2097											1174
0.88	16.8	0.91	15.9	0.94	15.4	0.96	15.5	0.99	15.6	1.03	15.2	1.03	14.6	1.00	13.6	0.90	12.5								
4284		4056		3948		3858		3771		3562		3310	2955	2449											1211
0.96	17.7	1.00	16.8	1.03	16.3	1.05	16.4	1.08	16.5	1.12	16.3	1.13	15.7	1.11	14.8	1.03	13.7								
4479		4252		4144		4056		3974		3785		3555	3273	2845											1266
1.10	19.1	1.14	18.1	1.17	17.7	1.20	17.7	1.22	17.9	1.27	17.8	1.29	17.3	1.29	16.6	1.23	15.5								
4610		4384		4276		4190		4109		3932		3715	3462	3087											1303
1.20	20	1.24	19.1	1.27	18.7	1.30	18.7	1.33	18.8	1.38	18.8	1.41	18.3	1.41	17.7	1.37	16.8								
4741		4516		4408		4322		4244		4077		3871	3637	3320	2227										1340
1.30	21	1.35	20	1.38	19.7	1.41	19.6	1.44	19.8	1.49	19.9	1.53	19.4	1.54	18.9	1.51	18.0	1.31	16.0						
4875		4652		4543		4459		4381		4223		4029	3810	3538	2651										1378
1.42	22	1.46	21	1.49	21	1.53	21	1.56	21	1.61	21	1.65	21	1.67	20	1.66	19.3	1.50	17.1						
5006		4783		4675		4591		4515		4363		4182	3973	3731	2958										1415
1.54	23	1.58	22	1.61	22	1.65	21	1.68	21	1.74	22	1.78	21	1.81	21	1.80	20	1.67	18.2						
5137		4915		4807		4723		4649		4502		4331	4132	3910	3219										1452
1.66	24	1.71	23	1.74	23	1.77	22	1.81	22	1.87	23	1.92	22	1.95	22	1.95	21	1.85	19.4						
5268		5047		4939		4856		4782		4640		4479	4289	4081	3463										1489
1.79	25	1.84	24	1.87	24	1.91	23	1.94	23	2.00	23	2.06	23	2.10	23	2.11	22	2.04	21						
5402		5183		5075		4991		4918		4780		4629	4448	4251	3708										1527
1.93	26	1.98	25	2.02	25	2.05	24	2.09	24	2.15	24	2.21	24	2.25	24	2.27	23	2.23	22						

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

Power ratings (BHP) do not include transmission losses. Bearing losses are included.

The sound ratings shown are loudness values in fan 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 fan sone levels.

CWBA20 Performance Data

CFM at Static Pressure																		RPM Range				RPM			
0.00		.125		.250		.375		.500		.750		1.00		1.25		1.50		2.00		3/4	1		1 1/2	2	
BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone				
3753		3595		3438		3263		3045		2550		1543												881	
0.56	11.9	0.59	11.5	0.61	11.2	0.63	11.0	0.63	10.8	0.63	9.9	0.52	9.3												
3911		3759		3608		3447		3247		2803		2021												918	
0.64	12.8	0.67	12.4	0.69	12.2	0.70	12.0	0.72	11.8	0.72	10.9	0.64	10.2												
4064		3919		3773		3622		3440		3026		2416												954	
0.71	13.7	0.75	13.3	0.77	13.1	0.79	12.9	0.80	12.7	0.81	12.0	0.76	11.1												
4222		4082		3942		3799		3634		3240		2745		1816										991	
0.80	14.6	0.84	14.3	0.86	14.0	0.88	13.9	0.89	13.7	0.91	13.1	0.89	12.2	0.75	11.7										
4380		4244		4109		3973		3822		3448		3021		2279										1028	
0.89	15.6	0.93	15.3	0.96	15.1	0.98	14.9	0.99	14.7	1.01	14.2	1.00	13.4	0.90	12.7										
4533		4402		4272		4141		4000		3647		3262		2675										1064	
0.99	16.5	1.03	16.3	1.06	16.1	1.08	15.9	1.10	15.7	1.12	15.3	1.12	14.5	1.05	13.7										
4759		4634		4510		4386		4256		3937		3584		3140		2389								1117	
1.15	18.0	1.19	17.8	1.22	17.6	1.24	17.4	1.26	17.2	1.29	16.9	1.30	16.3	1.27	15.4	1.14	14.8								
4917		4796		4675		4556		4432		4137		3797		3410		2811								1154	
1.26	19.1	1.31	18.9	1.34	18.6	1.37	18.4	1.39	18.3	1.42	18.0	1.43	17.5	1.42	16.6	1.33	15.9								
5074		4957		4841		4724		4606		4333		4003		3656		3170								1191	
1.39	20	1.43	19.9	1.47	19.7	1.50	19.6	1.52	19.4	1.55	19.0	1.57	18.7	1.57	17.9	1.52	17.1								
5236		5123		5010		4897		4783		4529		4213		3890		3481								1229	
1.53	21	1.57	21	1.61	21	1.64	21	1.67	21	1.70	20	1.73	19.9	1.73	19.2	1.70	18.3								
5394		5284		5174		5064		4955		4716		4416		4107		3749		2466						1266	
1.67	22	1.72	22	1.76	22	1.79	22	1.81	22	1.85	21	1.88	21	1.89	20	1.88	19.6	1.61	18.5						
5551		5444		5338		5231		5125		4899		4618		4317		3994		2914						1303	
1.82	23	1.87	23	1.91	23	1.94	23	1.97	23	2.01	22	2.05	22	2.06	22	2.06	21	1.84	19.4						
5709		5605		5501		5398		5294		5078		4817		4523		4224		3324						1340	
1.98	24	2.03	24	2.07	24	2.11	24	2.14	23	2.18	23	2.22	23	2.24	23	2.24	22	2.09	20						

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

Power ratings (BHP) do not include transmission losses. Bearing losses are included.

The sound ratings shown are loudness values in fan 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 fan sone levels.

CWDA

Direct Drive Centrifugal Wall Exhaust Fans

Applications

The CWDA units are quiet, dependable exhaust wall fans recommended for a wide range of general exhaust applications where low and medium ranges of air volume and pressure are specified. Applications include virtually all types of light manufacturing, commercial and institutional buildings such as shopping centers, hospitals, schools, hotels, office and apartment buildings, warehouses, airports, bus terminals and many others.

CWDA units are specified where a wall-mounted location is desired to eliminate interference with other equipment or activities in the building. They permit the direct outward venting of overheated air. CWDA units may be used with or without ducts.

The advantages of a CWDA direct drive over a belt drive exhaust wall fan include lower maintenance requirements, reduced risks of lower performance levels as a result of loosened belts, and lower operating costs.

Construction

CWDA 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 wheel is secured to the machined aluminum hub, and computer balanced on state-of-the-art equipment. The hub features a line bore, which eliminates the need for bushings.

Neoprene vibration isolators to reduce noise and wear, a birdscreen, and a safety disconnect device with a mounted and wired junction box are all standard.

Drive Mechanism

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

Motors

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



UL705 - E39944

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



American Coolair Corporation certifies that the Type CWDA units 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

Wall mounted exhaust fans shall be of the CWDA 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 and shall bear the AMCA Certified Ratings Seal for air and sound performance. Housing and venturi inlet shall be one piece heavy gauge spun aluminum with wheel and venturi overlapping for efficient operation. Motor compartment cover shall be heavy gauge spun aluminum construction and easily removable for access to motor.

Drive construction shall be of the 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 on some models allows for field adjustment and system balance. The unit shall be equipped with a safety disconnect device.

(Backdraft damper, epoxy coating, wall mounting flange and other accessories shall be listed in the fan schedule).

CWDA06 - CWDA10 Performance Data

CWDA06										CFM at Static Pressure						RPM RANGE OF SELECTED MODELS			RPM	
0.00		.125		.250		.375		.500		.625		.750		1.00		CWDA06A11	CWDA06C16	CWDA06E16		
BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	1/25 HP	1/13 HP	1/10 HP
183																				550
0.00	0.6																			
266		180																		800
0.01	2.3	0.01	1.3																	
315		251		141																950
0.01	3.4	0.01	2.6	0.01	2.1															
365		309		235		133														1100
0.02	4.7	0.02	4.2	0.02	3.6	0.02	3.2													
415		364		315		226		137												1250
0.03	6.5	0.03	6.1	0.03	5.5	0.03	5.1	0.03	4.7											
465		420		377		320		234												1400
0.04	7.8	0.04	7.3	0.04	6.7	0.04	6.4	0.04	6.1											
531		493		453		415		360		283										1600
0.05	10.1	0.05	9.4	0.06	8.8	0.06	8.1	0.06	7.9	0.06	7.6									
548		511		471		436		388		315										1650
0.06	10.8	0.06	10.1	0.06	9.4	0.07	8.8	0.07	8.6	0.07	8.2									

CWDA08										CFM at Static Pressure						RPM RANGE OF SELECTED MODELS			RPM	
0.00		.125		.250		.375		.500		.625		.750		1.00		CWDA08A11	CWDA08C15	CWDA08E16		
BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	1/25 HP	1/13 HP	1/10 HP
233																				550
0.00	0.5																			
339		256																		800
0.01	2.2	0.01	1.3																	
402		332		222																950
0.01	3.4	0.01	2.5	0.02	2.2															
466		408		342		209														1100
0.02	4.6	0.02	4.1	0.02	3.9	0.02	3.7													
530		480		424		342		215												1250
0.03	6.3	0.03	5.9	0.03	5.8	0.04	5.6	0.03	5.4											
593		549		498		452		360		244										1400
0.04	7.6	0.04	7.2	0.05	7.0	0.05	6.8	0.05	6.7	0.04	6.5									
657		617		574		529		480		390										1550
0.06	8.9	0.06	8.6	0.06	8.1	0.06	8.2	0.07	8.0	0.07	7.9									
688		650		611		565		527		451		366								1625
0.06	9.8	0.07	9.4	0.07	8.8	0.07	8.9	0.08	8.7	0.08	8.6	0.08	8.5							

CWDA10										CFM at Static Pressure						RPM RANGE OF SELECTED MODELS			RPM	
0.00		.125		.250		.375		.500		.625		.750		1.00		CWDA10A11	CWDA10C15	CWDA10E15		
BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	1/25 HP	1/13 HP	1/10 HP
299																				550
0.00	0.5																			
435		350																		800
0.01	1.8	0.01	1.1																	
517		450		344																950
0.02	2.9	0.02	2.5	0.02	1.8															
598		546		472		355														1100
0.03	4.7	0.03	4.4	0.03	3.6	0.03	3.1													
680		637		575		501		386												1250
0.04	6.8	0.04	6.5	0.05	5.9	0.05	5.2	0.05	4.8											
762		725		673		616		540		434										1400
0.05	8.1	0.05	7.8	0.06	7.4	0.07	6.6	0.07	6.2	0.07	5.7									
816		783		737		684		625		542										1500
0.06	8.9	0.07	8.7	0.07	8.4	0.08	7.7	0.08	7.2	0.08	6.7									
857		826		784		734		681		613		523								1575
0.07	9.7	0.08	9.4	0.08	9.2	0.09	8.5	0.09	8.0	0.09	7.6	0.09	7.0							

Performance certified 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 fan 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 fan sone levels. AMCA Certified Ratings apply to the CWDA Wall Ventilator constant speed fans and not variable speed fans.

CWDA12 - CWDA13 Performance Data

CWDA12														CFM at Static Pressure						RPM RANGE OF SELECTED MODELS			RPM
0.00		.125		.250		.375		.500		.625		.750		1.00		CWDA12E10	CWDA12J16	CWDA12J17*					
BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	1/8 HP	1/2 HP	1/2 HP			
566		393																		550			
0.01	1.8	0.01	1.3																				
669		531																		650			
0.02	2.7	0.02	2.7																				
772		657		510																750			
0.03	3.8	0.03	3.8	0.04	3.0																		
874		774		658		488														850			
0.04	5.0	0.05	4.9	0.05	4.5	0.05	3.8																
977		888		791		676														950			
0.06	6.1	0.06	5.9	0.07	6.0	0.07	5.2																
1054		972		885		784		654												1025			
0.07	6.9	0.08	6.8	0.09	7.0	0.09	6.4	0.09	5.7														
1183		1109		1035		951		858		740										1150			
0.10	8.4	0.11	8.2	0.12	8.4	0.12	8.3	0.13	7.6	0.13	7.0												
1337		1272		1207		1139		1061		980		884								1300			
0.15	10.2	0.16	10.0	0.17	10.2	0.17	10.5	0.18	10.1	0.19	9.4	0.19	8.9										
1492		1433		1374		1315		1253		1182		1109		926						1450			
0.20	12.4	0.21	12.1	0.22	12.3	0.23	12.6	0.24	12.7	0.25	12.3	0.26	11.7	0.26	10.7								
1646		1593		1540		1487		1432		1374		1310		1176						1600			
0.27	14.7	0.28	14.5	0.30	14.5	0.31	14.8	0.32	15.1	0.33	15.2	0.34	14.9	0.35	13.9								
1739		1688		1638		1588		1537		1484		1427		1302						1690			
0.32	16.3	0.33	16.0	0.35	16.0	0.36	16.3	0.37	16.6	0.38	16.9	0.39	16.8	0.41	15.8								
1775		1725		1676		1627		1577		1526		1471		1349						1725			
0.34	16.9	0.35	16.6	0.37	16.6	0.38	16.8	0.39	17.2	0.40	17.5	0.41	17.5	0.43	16.6								

CWDA13														CFM at Static Pressure						RPM RANGE OF SELECTED MODELS			RPM
0.00		.125		.250		.375		.500		.625		.750		1.00		CWDA13F11	CWDA13J15	CWDA13K17*					
BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	1/5 HP	1/2 HP	3/4 HP			
763		566																		550			
0.02	1.9	0.02	1.0																				
936		784		580																675			
0.03	3.1	0.04	2.4	0.04	1.8																		
1109		977		845		641														800			
0.06	4.5	0.07	3.7	0.07	3.3	0.07	2.9																
1248		1129		1020		873		663												900			
0.08	5.6	0.09	4.9	0.10	4.6	0.10	4.2	0.10	3.8														
1387		1279		1180		1073		924		716										1000			
0.11	6.7	0.12	6.2	0.13	5.8	0.14	5.6	0.14	5.2	0.13	4.9												
1560		1463		1372		1287		1182		1048		888								1125			
0.16	8.3	0.17	8.0	0.19	7.5	0.20	7.4	0.20	7.1	0.20	6.7	0.19	6.4										
1733		1646		1562		1484		1405		1307		1186		821						1250			
0.22	10.2	0.24	9.9	0.25	9.4	0.26	9.1	0.27	9.1	0.27	8.8	0.27	8.4	0.24	7.8								
1872		1791		1712		1638		1567		1490		1393		1160						1350			
0.28	11.9	0.29	11.7	0.31	11.2	0.33	10.8	0.33	10.7	0.34	10.6	0.34	10.3	0.34	9.5								
2045		1971		1898		1829		1763		1698		1626		1436						1475			
0.36	13.6	0.38	13.4	0.40	13.0	0.42	12.5	0.43	12.2	0.44	12.2	0.44	12.1	0.45	11.5								
2184		2114		2046		1980		1916		1855		1794		1641						1575			
0.44	14.9	0.46	14.8	0.48	14.4	0.50	13.9	0.52	13.6	0.53	13.4	0.54	13.4	0.54	13.0								
2427		2363		2302		2241		2182		2126		2071		1958						1750			
0.61	17.5	0.63	17.4	0.65	17.1	0.67	16.6	0.69	16.2	0.71	15.9	0.72	15.8	0.74	15.7								

Performance certified 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 fan 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 fan sone levels
 * - These models are not compatible with variable speed control
 AMCA Certified Ratings apply to the CWDA Wall Ventilator constant speed fans and not variable speed fans

CWDA15 - CWDA 20 Performance Data

CWDA15														CFM at Static Pressure			RPM RANGE OF SELECTED MODELS			RPM
.000		.125		.250		.375		.500		.625		.750		1.000		CWDA15H11	CWDA15K15	CWDA15L17*		
BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	1/3 HP	3/4 HP	1 HP
1019		818																		550
0.03	2.7	0.04	1.7																	
1204		1048		826																650
0.06	3.9	0.06	3.0	0.06	2.6															
1390		1260		1092		874														750
0.08	5.1	0.09	4.3	0.10	3.8	0.10	3.5													
1575		1462		1325		1167		959												850
0.12	6.4	0.13	5.7	0.14	5.2	0.15	5.0	0.14	4.6											
1760		1660		1549		1411		1260		1071										950
0.17	7.9	0.18	7.1	0.20	6.8	0.20	6.4	0.20	6.3	0.20	5.9									
2038		1952		1862		1757		1636		1514		1353								1100
0.27	10.4	0.28	9.7	0.30	9.2	0.31	8.9	0.31	8.6	0.32	8.5	0.31	8.3							
2131		2048		1963		1868		1753		1640		1503		1152						1150
0.31	11.4	0.32	10.6	0.34	10.2	0.35	9.9	0.36	9.5	0.36	9.4	0.36	9.3	0.34	8.8					
2316		2240		2163		2081		1984		1877		1773		1502						1250
0.39	13.3	0.41	12.6	0.42	12.2	0.44	11.9	0.45	11.5	0.46	11.2	0.46	11.2	0.46	10.8					
2501		2431		2360		2286		2205		2110		2011		1800						1350
0.49	14.9	0.51	14.2	0.53	13.7	0.55	13.4	0.56	13.1	0.57	12.8	0.58	12.5	0.58	12.5					
2640		2574		2507		2438		2364		2280		2186		2001						1425
0.58	16.2	0.60	15.5	0.62	14.9	0.64	14.6	0.65	14.3	0.67	14.0	0.67	13.8	0.69	13.6					
2872		2811		2750		2687		2622		2552		2473		2301						1550
0.75	18.4	0.77	17.6	0.79	17.1	0.81	16.8	0.83	16.5	0.85	16.3	0.86	16.0	0.87	15.5					
3196		3142		3086		3031		2974		2915		2853		2708						1725
1.03	22	1.05	21	1.07	21	1.10	20	1.12	19.8	1.14	19.6	1.16	19.4	1.19	18.8					

CWDA16														CFM at Static Pressure			RPM OF SELECTED MODELS			RPM
.000		.125		.250		.375		.500		.625		.750		1.000		CWDA16J8*	CWDA16L11*	CWDA16N17*		
BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	1/2 HP	1 HP	2 HP
2187		2037		1884		1708		1523		1082										825
0.20	8.4	0.21	7.4	0.23	6.7	0.23	6.6	0.23	6.2	0.21	5.8									
3075		2967		2862		2755		2644		2517		2394		2125						1160
0.55	15.9	0.57	15.0	0.60	14.1	0.62	13.3	0.63	12.9	0.64	12.9	0.65	12.9	0.65	12.0					
4640		4568		4496		4426		4356		4286		4216		4072						1750
1.90	30	1.93	29	1.96	29	1.99	28	2.03	27	2.06	27	2.09	26	2.14	25					

CWDA18														CFM at Static Pressure			RPM OF SELECTED MODELS		RPM	
.000		.125		.250		.375		.500		.625		.750		1.000		CWDA18J8*	CWDA18L11*			
BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	1/2 HP	1 HP			
2919		2679		2550		2389		2194		1888		1422								825
0.30	9.8	0.33	8.6	0.34	8.4	0.36	8.0	0.36	7.6	0.34	7.0	0.31	6.6							
4104		3875		3765		3673		3580		3473		3350		3069						1160
0.85	18.6	0.88	17.1	0.91	16.4	0.93	16.1	0.96	16.0	0.98	15.5	0.99	15.0	0.99	14.3					

CWDA20														CFM at Static Pressure			RPM OF SELECTED MODEL	RPM
.000		.125		.250		.375		.500		.625		.750		1.000		CWDA20M11*		
BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	BHP	Sone	1-1/2 HP		
4942		4822		4702		4583		4461		4326		4169		3830			1160	
1.28	22	1.33	20	1.36	19.0	1.39	19.2	1.41	19.6	1.43	19.4	1.44	18.9	1.46	18.8			

Performance certified 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 fan sones at 5 ft. (1.5m) in a hemispherical free field calculated per AMCA Standard 301. Values shown are for installation Type A: free inlet fan sone levels

* - These models are not compatible with variable speed control
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Installation

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 and servicing of belts, motors and pulleys. Vertical wheel operation only is recommended to assure satisfactory damper operation.

Mounting

Satisfactory operation of wall mounted exhaust fans requires mounting on adequately designed and constructed wall openings. Wall mounting flanges for convenience in installation are available from ILG. Install with base of unit vertical. Provide adequate caulking, flashing or other weather-proofing means.

Inspection

Check centrifugal wheel for free rotation.

Check belt for proper tension. (CWBA)

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

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. (CWBA)

Maintenance

Units should be checked monthly for the first two or three months and periodically thereafter. Units should be cleaned periodically and checked for eroded parts which should be replaced to avoid structural damage and possible failure. Proper motor lubrication is the most important maintenance requirement. Motor bearings should be lubricated according to motor manufacturer's instructions. "C-Drive" bearings are permanently sealed and require **no** lubrication.

Adjustment of Variable Pitch Pulley and Belt (CWBA)

Variable pitch pulley may be adjusted within catalog RPM range to alter performance without motor overload. 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. Inspection every 6 to 12 months is recommended.

Options & Accessories

Wall Mounting Flange

Wall mounting flanges are available for convenience in installation.

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 Listing.

Speed Controller (for selected CWDA 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 for compatible models (see performance tables for compatible models).

Backdraft Dampers

Backdraft dampers are recommended to prevent air flow through the fan when power supply is off. Aluminum dampers are available as automatic (gravity-operated) or motor-operated for positive opening and closing action.

Safety Disconnects

Safety disconnects cut power to motor for servicing of unit. A disconnect device with a factory mounted and wired junction box is standard for all CWDA units. A disconnect switch is an accessory available for CWBA units, 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.

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.

WARNING

CAUTION

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.



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 248.36 = 31.05 Pa
0.886 BHP x .7457 = 0.661 kW

CWBA Specification Checklist

- Units provide general exhaust for low to medium air volumes in commercial, institutional and light manufacturing buildings.
- 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 with single bolt adjustment facilitates maintenance of belt tension.
- Weatherproof heavy duty aluminum housing and motor compartment cover resist corrosion, maintaining appearance.
- Deep-spun, overlapping, one-piece venturi minimizes noise, reduces air turbulence and improves efficiency.
- Unique "C-Drive" design reduces radial bearing loads, providing a calculated L10 bearing life in excess of 1,000,000 hours.
- 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 electrical terminal board out for convenient electrical connection and servicing.
- Motor compartment is cooled by a forced air ventilation system, extending motor life.
- Units have the UL Label for general ventilation (UL 705).
- AMCA Seal assures certified rating of air and sound performance.
- Birdscreen prevents entry of birds or other potentially damaging objects.
- Heavy duty neoprene isolators eliminate metal-to-metal contact, reducing vibration and sound.

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

CWDA Specification Checklist

- Units provide general exhaust for low to medium air volumes in commercial, institutional and light manufacturing buildings.
- Centrifugal design has advantages of compact, attractive appearance, quiet operation and performance against higher static pressures.
- Spun aluminum housing for durable weather protection and attractive appearance.
- Direct drive has advantages of minimal maintenance and operating costs.
- Safety disconnect device allows power to be cut off for servicing of the unit.
- Deep-spun, overlapping, one piece venturi 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.
- Motor compartment is cooled by a forced air ventilation system, extending motor life.
- Units have the UL Label for general ventilation (UL 705).
- Birdscreen prevents entry of birds or other potentially damaging objects.
- Units are factory run and tested prior to shipment for dependable operation.
- AMCA Seal assures certified rating of air and sound performance.
- Heavy duty neoprene isolators eliminate metal-to-metal contact, reducing vibration and sound.

REPRESENTED BY:

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VANE AXIAL FANS ~ TUBE AXIAL FANS ~ PROPELLER FANS ~ POWER ROOF VENTILATORS ~ CENTRIFUGAL VENTILATORS
MEMBER OF AMCA

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