

Ventilation Guide

DAY IN. DAY OUT.™

Dayton®

**Centrifugal & Axial
Downblast, Exhaust
& Supply Ventilators**

**Belt & Direct Drive
Accessories**

Available exclusively at

GRAINGER®
FOR THE ONES WHO GET IT DONE

Centrifugal Downblast Exhaust Ventilators

Construction Features

The Centrifugal Downblast Ventilators are designed for situations requiring a steady exhaust or supply of air under low-to-high static pressures. These ventilators are used to exhaust general clean air in industrial and commercial applications. Rugged and reliable construction makes the fan capable of withstanding severe operating conditions. Both belt and direct drive ventilators are in stock, in a location near you.

1 CURB CAP with an integral spun venturi is constructed of a single piece of aluminum to prevent corrosion and provide weather tight fit. Prepunched mounting holes on the curb cap ensure proper attachment to the roof.

2 WHEEL is an aluminum backward inclined non-overloading centrifugal wheel balanced both statically and dynamically. The wheel cone is matched to the venturi providing higher efficiencies and minimal sound.

3 MOTOR COOLING is achieved by drawing fresh air in and under the motor cover. Fins located on top of the wheel create a negative pressure inside the motor compartment maximizing cooling and motor life.

4 INTERNAL CONDUIT CHASE provides a path for the electrician to easily guide electrical wiring through the curb cap into the motor compartment.

5 JUNCTION BOX is factory mounted on all ventilator sizes. NEMA-1 disconnect switches are available separately.

6 BEARINGS are air-handling pillowblocks selected for a minimum L10 life of 100,000 hours (L50 of 500,000).

7 MOTOR COVER is made with drawn aluminum construction and stainless steel hardware to allow easy access and weather protection to the motor compartment.

8 FAN SHAFT is sized, ground, and polished to put the first critical speed at least 25% above the maximum operating speed. Close tolerances between the shaft and bearings provide longer bearing life.

9 DRIVE ASSEMBLY has static-free, heat-resistant, and oil-resistant belts. Pulleys are machined, cast, and adjustable for final balancing. Belts, pulleys, and keys are oversized to 150% of the driven horsepower.

10 MOTOR is mounted inside the motor compartment out of the exhaust air stream.

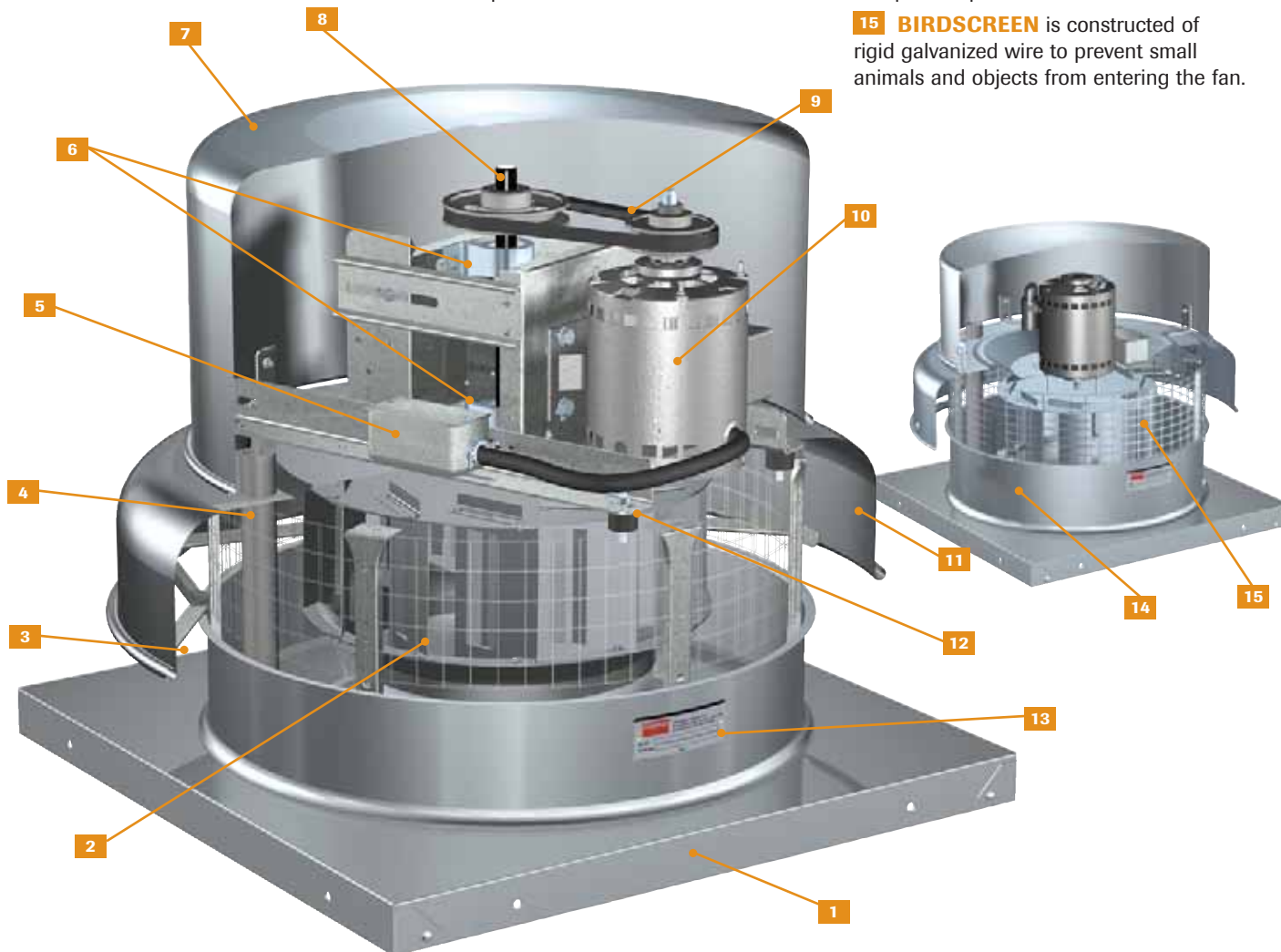
11 FAN SHROUD is constructed of heavy gauge aluminum used to direct exhausted air. A rolled bead around the outside edge of the shroud and shroud braces provide additional strength and stability.

12 VIBRATION ISOLATION is achieved by using neoprene isolators (no steel-to-steel contact) when securing the drive assembly to the mounting plate. This is done to extend life of the fan and minimize noise and vibration transmission.

13 NAME PLATE contains the stock number and serial number stamped into an aluminum plate which is permanently attached to the fan for future identification.

14 LOWER WINDBAND is formed out of heavy gauge aluminum to add strength and provide protection from the weather.

15 BIRDSCREEN is constructed of rigid galvanized wire to prevent small animals and objects from entering the fan.



Centrifugal Downblast Exhaust Ventilators

Dimensions and Specifications

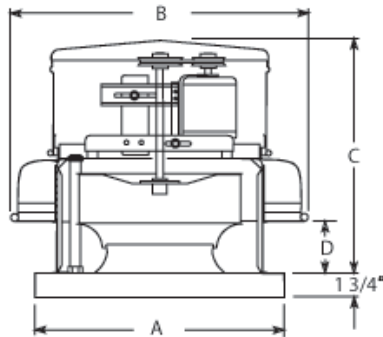


Figure 1

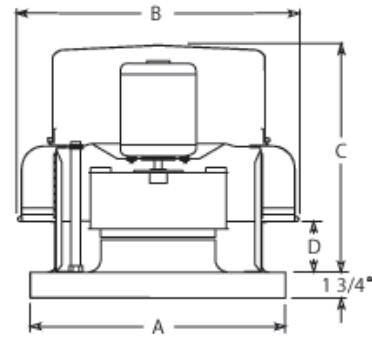


Figure 2

Belt Drive Roof (See Figure 1)

Stock Number	Wheel Dia.	Shaft Dia.	A	B	C	D	Recommended Roof Opening	Recommended Damper Size
4YU92	11"	3/4"	19"	24 3/8"	24 1/2"	4 3/8"	14 1/2" x 14 1/2"	12" x 12"
4YU93	11	3/4	22	24 3/8	24 1/2	4 3/8	17 1/2 x 17 1/2	15 x 15
4YU94	13 1/2	3/4	22	24 3/8	24 1/2	4 3/8	17 1/2 x 17 1/2	15 x 15
4YU95	14 1/2	3/4	26	28 3/8	25 1/2	4	21 1/2 x 21 1/2	19 x 19
4YU96	16 1/2	3/4	26	28 3/8	27 1/2	4	21 1/2 x 21 1/2	19 x 19
4YU97, 3GY70, 3GY66	18 1/2	3/4	30	35 1/2	34 1/2	5 1/2	25 1/2 x 25 1/2	23 x 23
4YU98, 3GY71, 3GY67	21 1/2	3/4	30	35 1/2	34 1/2	5 1/2	25 1/2 x 25 1/2	23 x 23
4YU99, 3GY68	24 1/2	1	34	42 3/8	38 1/2	5 1/2	29 1/2 x 29 1/2	27 x 27
4YY10, 3GY69	30 1/2	1	42	50	36	8 1/2	37 1/2 x 37 1/2	35 x 35
4YY11	36	1 1/4	46	58 3/8	38 1/2	8 1/2	41 1/2 x 41 1/2	39 x 39
4YY12	50	1 1/4	64	83	50 1/2	14 1/2	52 1/2 x 52 1/2	50 x 50

Direct Drive Roof (See Figure 2)

Stock Number	Wheel Dia.	Shaft Dia.	A	B	C	D	Recommended Roof Opening	Recommended Damper Size
4YC64, 4YC65	8 1/4"	5/16"	19"	19 3/8"	12 1/2"	3"	14 1/2" x 14 1/2"	—
4YC66, 4YC67	10 1/2	1/2	19	21 3/8	14 1/2	4	14 1/2 x 14 1/2	12" x 12"
4YC68, 4YC69	12 1/2	1/2	22	24 3/8	20	5 1/8	17 1/2 x 17 1/2	15 x 15
4YC70	14 1/2	1/2	22	28 3/8	20	5 1/8	17 1/2 x 17 1/2	15 x 15
4YC71	14	1/2	22	28 3/8	20	5 1/8	17 1/2 x 17 1/2	15 x 15
4YC72, 4YC73	16	1/2	26	35 1/2	21 1/2	4	21 1/2 x 21 1/2	19 x 19
4YY75	18	5/8	30	35 1/2	21 1/2	5 1/2	25 1/2 x 25 1/2	23 x 23
4YC76, 4YC77	19 1/2	5/8	30	35 1/2	22 1/2	6 1/8	25 1/2 x 25 1/2	23 x 23

All dimensions are in inches.

Centrifugal Belt Drive Downblast Exhaust Ventilators

Performance Table

Wheel Dia. (In)	Fan RPM	HP	Max BHP	Sones @ .250 SP	CFM Air Delivery @ Static Pressure Shown										'Assembled		'Unassembled		*Stock Number	
					.000" SP	.125" SP	.250" SP	.375" SP	.500" SP	.625" SP	.750" SP	1.00" SP	1.25" SP	Single Phase 115/230V	3-Phase 208-220/440V	Single Phase 115/230V	3-Phase 208-220/440V			
11"	1401	1/6	0.14	10.0	1062	991	920	846	767	683	-	-	-	-	-	-	7A547	-	4YU92	
	1710	1/4	0.25	13.2	1296	1238	1180	1122	1062	999	567	785	-	-	-	-	7A548	-	4YU92	
11	1635	1/4	0.25	10.4	1386	1326	1269	1215	1162	1095	1020	793	-	-	-	-	7A549	-	4YU93	
	1800	1/3	0.33	12.5	1526	1471	1419	1368	1321	1270	1209	1065	793	-	-	-	7A550	-	4YU93	
13%	1395	1/4	0.27	12.3	1692	1625	1557	1484	1404	1315	1214	907	-	-	-	-	7A551	-	4YU94	
	1550	1/3	0.36	14.3	1880	1820	1759	1696	1629	1555	1475	1289	974	-	-	-	7A552	-	4YU94	
	1725	1/2	0.50	17.0	2093	2038	1984	1928	1871	1810	1743	1600	1426	-	-	-	7A553	7A649	4YU94	
14%	1075	1/4	0.26	9.4	1994	1882	1771	1647	1490	1266	-	-	-	-	-	-	7A554	-	4YU95	
	1170	1/3	0.34	10.8	2170	2067	1966	1859	1734	1575	1356	-	-	-	-	-	7A555	-	4YU95	
	1360	1/2	0.53	13.9	2523	2433	2347	2259	2166	2062	1943	1602	-	-	-	-	7A556	7A650	4YU95	
	1545	3/4	0.78	17.4	2866	2787	2710	2634	2556	2476	2384	2177	1890	-	-	-	7A557	7A651	4YU95	
	1705	1	1.05	20	3163	3091	3020	2952	2883	2811	2739	2574	2370	-	-	-	7A558	7A652	4YU95	
16%	945	1/3	0.34	11.5	2791	2612	2434	2236	2010	1692	-	-	-	-	-	-	7A559	-	4YU96	
	1100	1/2	0.54	14.1	3249	3095	2943	2787	2615	2429	2198	-	-	-	-	-	7A560	7A653	4YU96	
	1250	3/4	0.79	17.0	3692	3557	3422	3289	3149	2997	2838	2444	-	-	-	-	7A561	7A654	4YU96	
	1375	1	1.04	19.6	4062	3938	3815	3694	3571	3444	3304	3007	2609	-	-	-	7A562	7A655	4YU96	
18%	810	1/3	0.35	8.7	3150	2997	2832	2624	2375	2053	-	-	-	-	-	-	7A563	-	4YU97	
	940	1/2	0.55	12.0	3655	3527	3388	3234	3052	2844	2601	-	-	-	-	-	7A564	7A656	4YU97	
	1055	3/4	0.77	14.9	4102	3990	3867	3742	3596	3432	3252	2811	-	-	-	-	7A565	7A657	4YU97	
	1185	1	1.10	17.8	4608	4508	4401	4290	4179	4046	3900	3575	3178	3GY70	3GY66	7A566	7A658	4YU97		
	1335	1 1/2	1.57	21	5191	5102	5010	4913	4814	4716	4599	4344	4052	-	-	-	7A567	7A659	4YU97	
	1460	2	2.05	24	5677	5596	5514	5425	5336	5246	5155	4938	4699	-	-	-	7A568	7A660	4YU97	
21%	665	1/3	0.36	8.5	3680	3378	3085	2706	2087	-	-	-	-	-	-	-	7A568	-	4YU98	
	770	1/2	0.55	10.7	4261	4013	3744	3477	3141	2643	-	-	-	-	-	-	7A569	7A661	4YU98	
	860	3/4	0.77	12.9	4759	4548	4289	4068	3811	3504	3085	-	-	-	-	-	7A570	7A662	4YU98	
	965	1	1.09	15.4	5340	5158	4927	4720	4520	4285	4015	3240	-	-	-	-	7A571	7A663	4YU98	
	1090	1 1/2	1.57	18.9	6032	5870	5682	5473	5301	5124	4925	4450	3751	3GY71	3GY67	7A572	7A664	4YU98		
	1200	2	2.09	23	6640	6494	6336	6145	5969	5813	5651	5274	4829	-	-	-	7A573	7A665	4YU98	
24%	505	1/3	0.35	6.9	4637	4242	3761	3060	-	-	-	-	-	-	-	-	7A573	-	4YU99	
	585	1/2	0.55	9.1	5371	5031	4666	4195	3562	2112	-	-	-	-	-	-	7A574	7A666	4YU99	
	660	3/4	0.79	11.8	6060	5757	5449	5094	4636	4073	3217	-	-	-	-	-	7A575	7A667	4YU99	
	730	1	1.06	14.3	6702	6428	6158	5861	5507	5007	4568	-	-	-	-	-	7A576	7A668	4YU99	
	825	1 1/2	1.54	17.7	7575	7332	7092	6844	6574	6261	5901	5002	-	-	-	-	7A577	7A669	4YU99	
	910	2	2.06	21	8355	8135	7916	7700	7467	7215	6933	6240	5388	-	3GY68	-	7A670	7A670	4YU99	
	910	3	2.06	21	8355	8135	7916	7700	7467	7215	6933	6240	5388	-	-	-	7D492	7A670	4YU99	
30%	420	1/2	0.54	7.0	6803	6222	5537	4641	-	-	-	-	-	-	-	-	7A578	7A671	4YY10	
	475	3/4	0.78	9.6	7694	7197	6616	5955	5095	-	-	-	-	-	-	-	7A579	7A672	4YY10	
	530	1	1.08	12.2	8585	8150	7640	7094	6456	5668	4195	-	-	-	-	-	7A580	7A673	4YY10	
	600	1 1/2	1.56	14.9	9719	9334	8907	8446	7952	7388	6721	-	-	-	-	-	7A581	7A674	4YY10	
	665	2	2.13	17.7	10772	10425	10060	9648	9228	8773	8269	7025	-	-	-	-	-	7A675	7A675	4YY10
	760	3	3.18	21	12311	12007	11704	11357	10997	10629	10242	9369	8293	-	3GY69	-	7A676	7A676	4YY10	
	890	5	5.10	28	14416	14157	13898	13639	13335	13028	12716	12073	11379	-	-	-	7A677	7A677	4YY10	
36	365	3/4	0.80	8.9	9763	9024	8109	7013	-	-	-	-	-	-	-	-	7A582	7A678	4YY11	
	410	1	1.13	11.9	10966	10330	9558	8686	7641	-	-	-	-	-	-	-	7A583	7A679	4YY11	
	460	1 1/2	1.59	14.8	12304	11737	11085	10360	9568	8607	7096	-	-	-	-	-	7A584	7A680	4YY11	
	505	2	2.11	17.3	13507	12991	12431	11795	11096	10368	9473	-	-	-	-	-	-	7A681	7A681	4YY11
	580	3	3.19	22	15513	15064	14614	14077	13523	12917	12289	10813	-	-	-	-	-	7A682	7A682	4YY11
	685	5	5.26	29	18322	17941	17560	17179	16711	16243	15774	14710	13535	-	-	-	-	7A683	7A683	4YY11
50	214	1	1.06	8.7	17245	14939	12242	-	-	-	-	-	-	-	-	-	7A585	7A684	4YY12	
	245	1 1/2	1.59	11.0	19743	17749	15481	12983	-	-	-	-	-	-	-	-	7A586	7A685	4YY12	
	269	2	2.10	13.2	21677	19873	17857	15752	-	-	-	-	-	-	-	-	-	7A686	7A686	4YY12
	308	3	3.15	16.9	24820	23263	21627	19752	17903	15284	-	-	-	-	-	-	-	7A687	7A687	4YY12
	366	5	5.29	21	29494	28188	26834	25429	23831	22310	20688	-	-	-	-	-	-	7A688	7A688	4YY12
	419	7 1/2	7.94	27	33764	32624	31467	30265	29015	27607	26276	23486	-	-	-	-	-	7A689	7A689	4YY12

¹Drive Package is assembled on the unit.

²Drive Package is separate from the unit.

³Drive Package is not included with the unit.



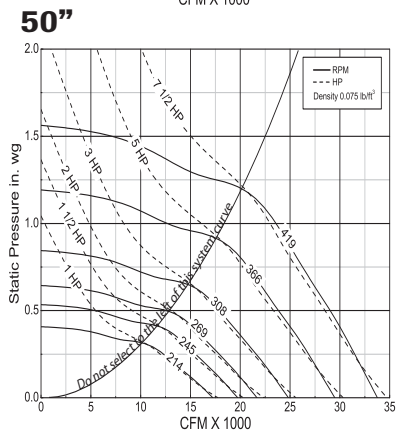
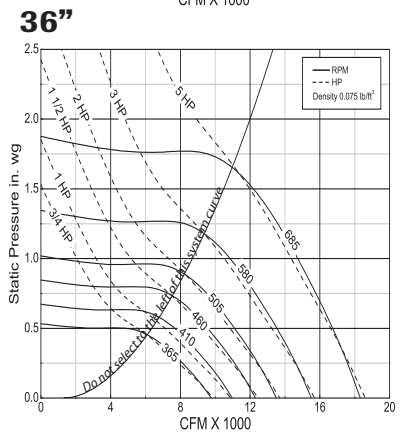
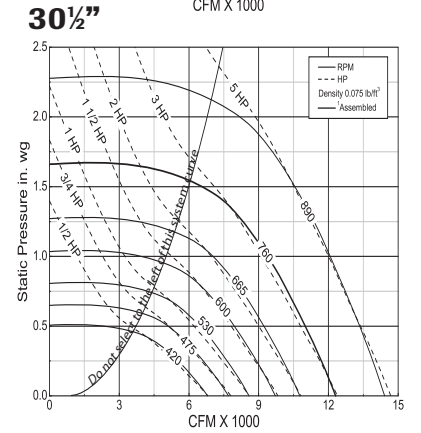
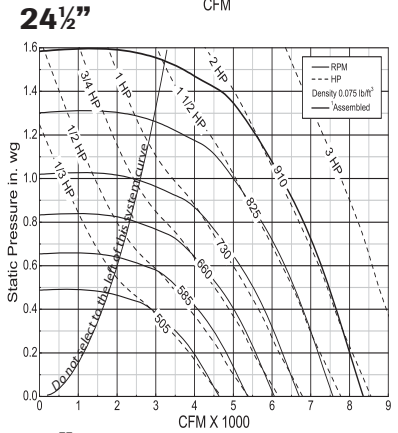
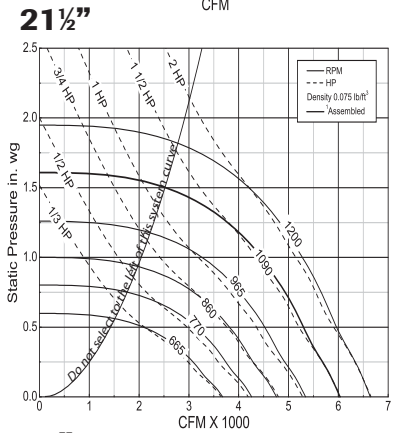
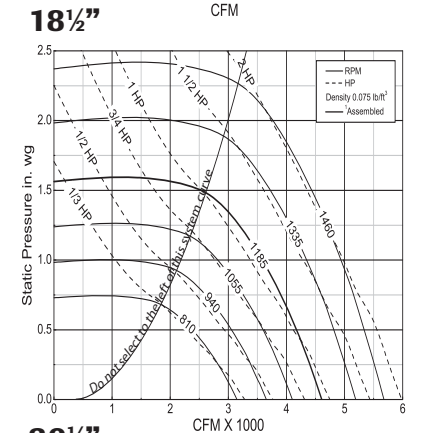
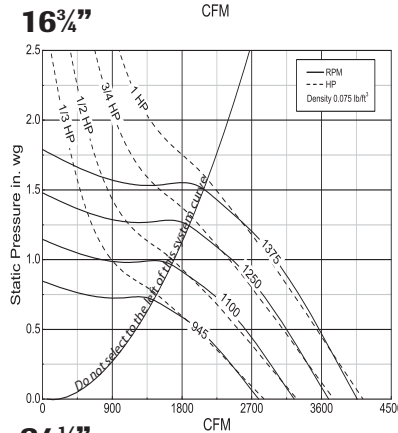
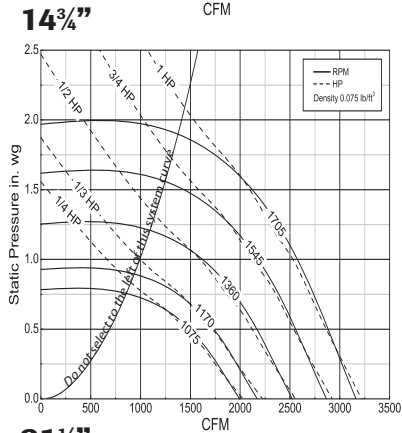
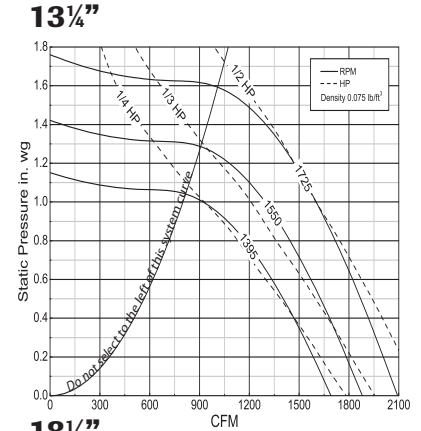
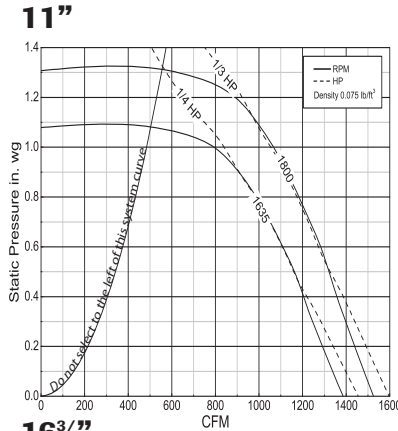
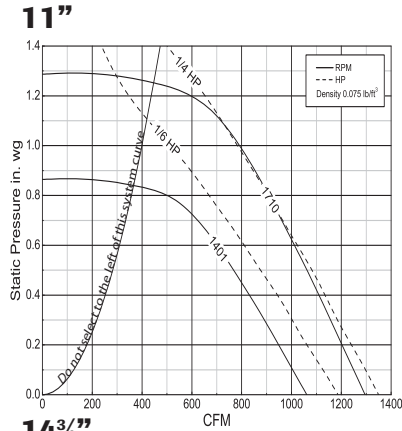
Performance certified is for installation type A: Free inlet, Free outlet. Power rating (BHP) does not include transmission losses. Performance ratings do not include the effects of appurtenances (accessories).

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. The AMCA Certified Ratings Seal applies to sone ratings only.

Dayton Electric Mfg. Co. certifies that the model shown herein is licensed to bear the AMCA Seal. The ratings 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.

Centrifugal Belt Drive Downblast Exhaust Ventilators

Performance Charts



¹Drive Package is assembled on the unit.



Performance certified 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 (accessories).

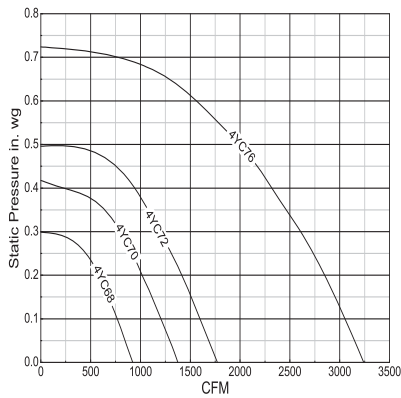
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Centrifugal Direct Drive Downblast Exhaust Ventilators

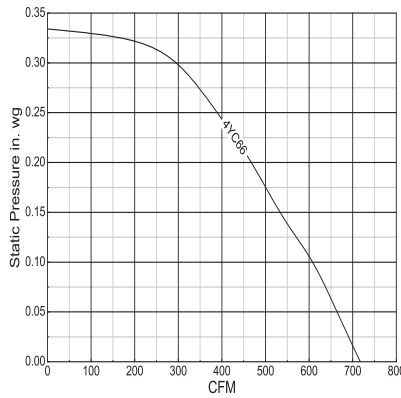
Performance Table and Charts

Wheel Dia. (In)	Fan RPM	HP	Max BHP	Sones@ .250 SP	CFM Air Delivery @ Static Pressure Shown										'Stock Number
					.000" SP	.125" SP	.250" SP	.375" SP	.500" SP	.625" SP	.750" SP	.875" SP	1.00" SP		
8"	1300	1/60	0.02	2.6	314	257	171	-	-	-	-	-	-	-	4YC64
8"	1550	1/25	0.04	4.9	438	377	309	214	-	-	-	-	-	4YC65	
10 1/2"	1050	1/30	0.04	4.5	717	570	389	-	-	-	-	-	-	4YC66	
10 1/2"	1550	1/8	0.12	8.8	1059	968	863	745	623	474	-	-	-	4YC67	
12 1/2"	860	1/8	0.04	5.2	922	723	450	-	-	-	-	-	-	4YC68	
12 1/2"	1725	1/4	0.30	13.8	1849	1753	1659	1560	1453	1341	1223	1094	910	4YC69	
14"	1725	1/2	0.45	18.4	2393	2327	2225	2127	2030	1931	1817	1692	1188	4YC71	
14 1/2"	860	1/8	0.07	6.4	1376	1161	919	489	-	-	-	-	-	4YC70	
16"	860	1/8	0.13	7.4	1772	1553	1304	1005	-	-	-	-	-	4YC72	
16"	1140	1/4	0.29	11.1	2349	2185	2017	1836	1628	1397	1114	-	-	4YC73	
18"	1140	1/3	0.32	13.1	2662	2489	2319	2135	1933	1697	1411	788	-	4YY75	
19 1/2"	860	1/3	0.33	12.5	3240	3002	2733	2390	1978	1438	-	-	-	4YC76	
19 1/2"	1140	3/4	0.77	19.3	4295	4121	3933	3731	3509	3241	2971	2632	2246	4YC77	

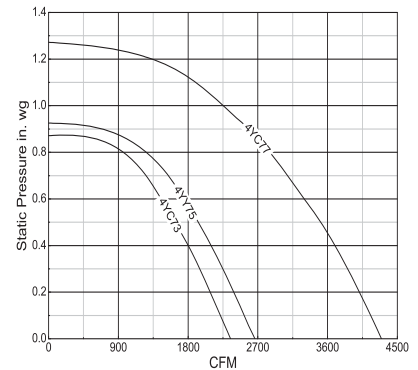
860 RPM



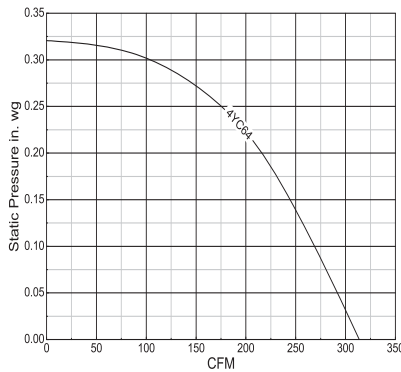
1050 RPM



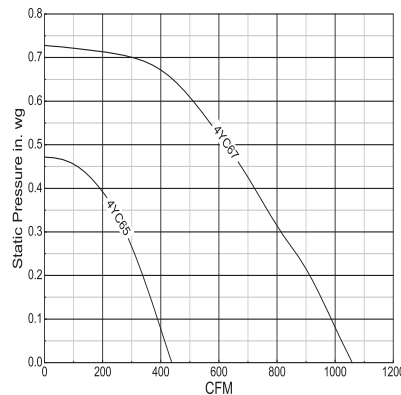
1140 RPM



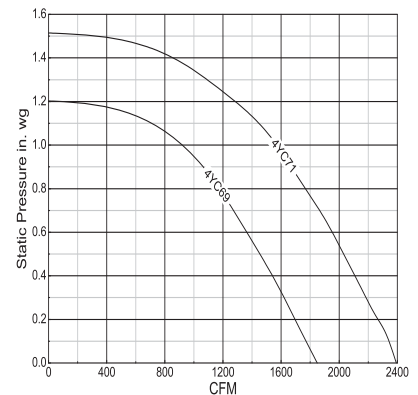
1300 RPM



1550 RPM



1725 RPM



*Motor is assembled on the unit.



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

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Axial Downblast Exhaust and Supply Ventilators

Construction Features

The Axial Downblast Ventilators are designed for situations requiring a steady exhaust or supply of air under low-to-moderate static pressures. These ventilators are used to exhaust or supply clean air in industrial and commercial applications. Both belt and direct drive ventilators are in stock, in a location near you.

1 INTERNAL CONDUIT CHASE provides a path for the electrician to easily guide electrical wiring through the curb cap into the motor compartment.

2 CURB CAP with an integral spun venturi is constructed of a single piece of aluminum to prevent corrosion and provide weather tight fit. Prepunched mounting holes on the curb cap ensure proper attachment to the roof.

3 NAME PLATE contains the stock number and Serial number stamped into an aluminum plate and permanently attached to the fan for future identification.

4 BIRDSCREEN is constructed of rigid galvanized wire to prevent small animals and objects from entering the fan.

5 SHROUD BRACES add additional strength and rigidity to the fan shroud.

6 MOTOR is matched to fan load and mounted in the air stream.

7 JUNCTION BOX is factory mounted on all ventilator sizes. NEMA-1 disconnect switches are available separately.

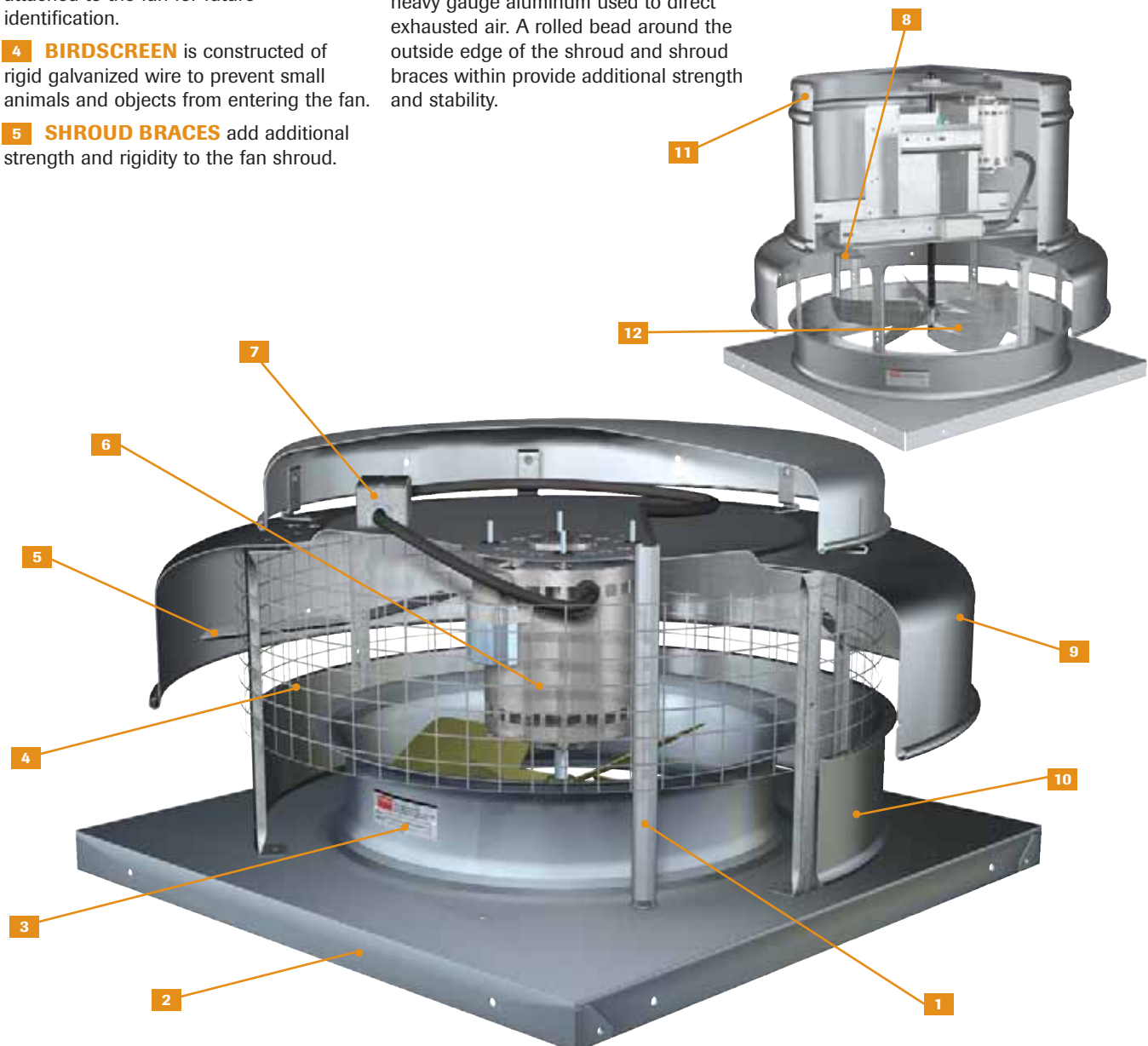
8 VIBRATION ISOLATION is achieved by using neoprene isolators (no steel to steel contact) when securing the drive assembly to the mounting plate. This is done to extend life of the fan and minimize noise and vibration transmission.

9 FAN SHROUD is constructed of heavy gauge aluminum used to direct exhausted air. A rolled bead around the outside edge of the shroud and shroud braces within provide additional strength and stability.

10 LOWER WINDBAND is formed out of heavy gauge aluminum to add strength and provide protection from the weather.

11 MOTOR COVER is made with drawn aluminum construction and stainless steel hardware to allow easy access and weather protection to the motor compartment.

12 PROPELLER is aluminum with steeply pitched blades allowing the fan to move more air at lower speeds and sound levels. Each propeller is statically and dynamically balanced.



Axial Downblast Exhaust and Supply Ventilators

Dimensions and Specifications

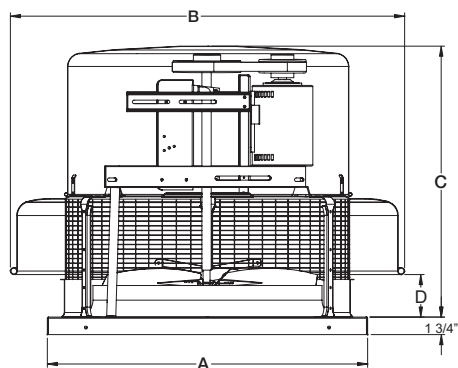


Figure 1

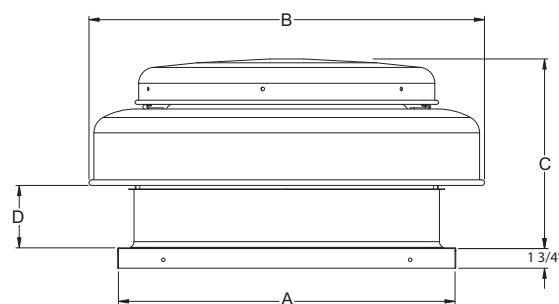


Figure 2

Belt Drive Roof (See Figure 1)

Stock Number	Prop. Dia.	Shaft Dia.	A	B	C	D	Recommended Roof Opening	Recommended Damper Size
4YU88	20"	3/4"	30"	35 1/4"	28 3/4"	5 1/2"	25 1/2" x 25 1/2"	23" x 23"
4YU89	24	1	34	42 1/4"	29	4 1/4"	29 1/2" x 29 1/2"	27 x 27
4YU90	30	1	42	47 1/2"	34 1/4"	4 1/4"	37 1/2" x 37 1/2"	35 x 35
4YU91	36	1 1/4"	46	58 1/4"	41 1/4"	6"	41 1/2" x 41 1/2"	39 x 39

Direct Drive Roof (See Figure 2)

Stock Number	Prop. Dia.	Shaft Dia.	A	B	C	D	Recommended Roof Opening	Recommended Damper Size
4YC86	10"	1/2"	19"	24 3/4"	15 1/4"	5 1/2"	14 1/2" x 14 1/2"	12" x 12"
4YC87, 4YC88, 4YC91, 4YC92	12	1/2	22	28 3/4"	16 1/4"	6"	17 1/2" x 17 1/2"	15 x 15
4YC89, 4YC90, 4YC93, 4YC94	14	1/2	22	28 3/4"	16 1/4"	6"	17 1/2" x 17 1/2"	15 x 15
4YC48, 4YC49 4YC56, 4YC57	16	1/2	26	35 1/4"	17 1/4"	6"	21 1/2" x 21 1/2"	19 x 19
4YC50, 4YC51 4YC58, 4YC59	18	5/8	30	35 1/4"	17 1/4"	6"	25 1/2" x 25 1/2"	23 x 23
4YC52, 4YC53 4YC60, 4YC61	20	5/8	34	42	17 1/4"	6"	29 1/2" x 29 1/2"	27 x 27
4YC54, 4YC55 4YC62, 4YC63	24	5/8	34	42	17 1/4"	6"	29 1/2" x 29 1/2"	27 x 27

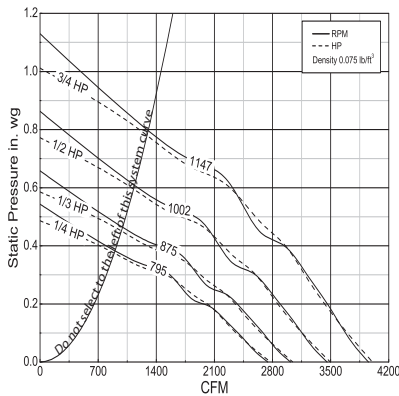
All dimensions are in inches.

Axial Belt Drive Downblast Exhaust Ventilators

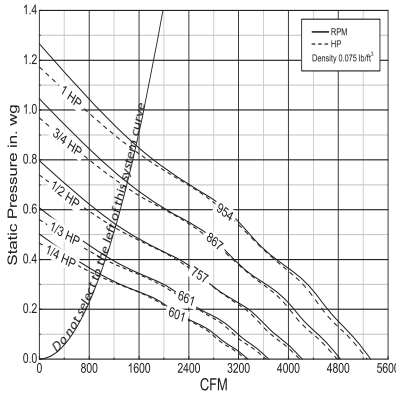
Performance Table and Charts

Prop. Dia. (In)	Fan RPM	HP	Max BHP	CFM Air Delivery @ Static Pressure Shown										Unassembled		Stock Number	
				.000"	.125"	.250"	.375"	.500"	.625"	.750"	.875"	1.00"	Single Phase	3-Phase			
				SP	SP	SP	SP	SP	SP	SP	SP	SP	115/230V	208-220/440V			
20"	795	1/4	0.26	2742	2296	1725	960	-	-	-	-	-	-	-	7A398	-	4YU88
	875	1/3	0.34	3018	2610	2109	1612	-	-	-	-	-	-	-	7A399	7A415	4YU88
	1002	1/2	0.52	3456	3092	2743	2228	1795	-	-	-	-	-	-	7A400	7A416	4YU88
	1147	3/4	0.78	3957	3625	3337	3012	2532	2219	1546	-	-	-	7A401	7A417	4YU88	
24"	601	1/4	0.26	3351	2663	1777	-	-	-	-	-	-	-	7A402	7A418	4YU89	
	661	1/3	0.35	3686	3076	2293	1352	-	-	-	-	-	-	7A403	7A419	4YU89	
	757	1/2	0.52	4221	3679	3045	2391	1488	-	-	-	-	-	7A404	7A420	4YU89	
	867	3/4	0.78	4834	4366	3894	3232	2688	1903	-	-	-	-	7A405	7A421	4YU89	
	954	1	1.04	5320	4905	4472	3946	3386	2848	2132	-	-	-	7A406	7A422	4YU89	
30"	551	1/2	0.48	5073	4292	3337	2349	-	-	-	-	-	-	7A407	7A423	4YU90	
	631	3/4	0.80	5810	5139	4369	3571	2631	1685	-	-	-	-	7A408	7A424	4YU90	
	695	1	1.06	6399	5792	5130	4327	3704	2777	1921	-	-	-	7A409	7A425	4YU90	
	795	1 1/2	1.60	7320	6788	6239	5618	4901	4373	3581	2851	2068	-	7A410	7A426	4YU90	
	875	2	2.08	8056	7572	7087	6559	5955	5320	4840	4150	3448	-	7A411	7A427	4YU90	
36"	493	3/4	0.79	8261	7052	5729	4398	2580	-	-	-	-	-	7A412	7A428	4YU91	
	542	1	1.06	9082	7972	6861	5569	4405	2640	-	-	-	-	7A413	7A429	4YU91	
	621	1 1/2	1.57	10406	9425	8502	7424	6316	5299	3733	-	-	-	7A414	7A430	4YU91	

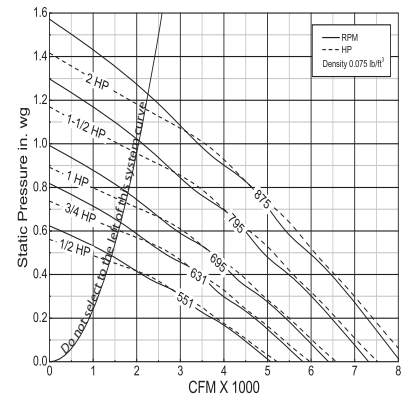
20"



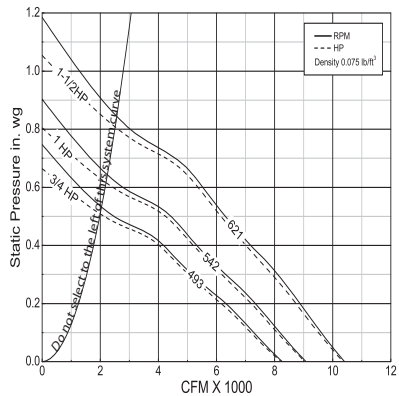
24"



30"



36"



Performance Charts

For a ventilator, every flow rate (CFM - Cubic Feet per Minute) corresponds to a specific resistance to flow (SP = Static Pressure). The series of CFM, SP points for a fan at a constant RPM is called a fan curve. The fan curves represent the performance for each of the Dayton Centrifugal Upblast Exhaust Ventilators.

Looking at the 24" curve running at 661 fan RPM, at 0.25" SP, this ventilator will deliver 2293 CFM. If pressure increases, CFM decreases, but if the pressure decreases, CFM will increase. At 867 RPM, the operating point will slide along the fan curve as static pressure changes, but it will never lie off the curve. In order for a fan to perform at a point off the curve, the RPM must be changed.

The 13 1/2" fan curve illustrates how fan RPM affects the fan curve. Notice that the general shape of the curves are the same. Changing RPM simply moves the curve outward or inward.

¹Drive Package is separate from the unit. ²Drive Package is not included with the unit.



Performance certified is for installation type A: Free inlet, Free outlet. Power rating (BHP) does not include transmission losses. Performance ratings include the effects of appurtenances (accessories). Performance ratings include the effects of a birdscreen.

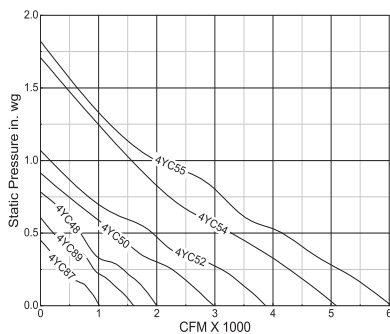
Dayton Electric Mfg. Co. certifies that the model shown herein is licensed to bear the AMCA Seal. The ratings are based on tests and procedures performed in accordance with AMCA Publication 211 and comply with the requirements of the AMCA Certified Ratings Program.

Axial Direct Drive Downblast Exhaust and Supply Ventilators

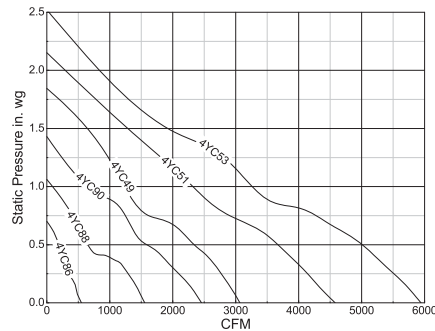
Exhaust Performance Table and Charts

Prop. Dia. (In)	Fan RPM	HP	Max BHP	Sones @ .250 SP	CFM Air Delivery @ Static Pressure Shown										'Stock Number
					.000" SP	.125" SP	.250" SP	.375" SP	.500" SP	.625" SP	.750" SP	.875" SP	1.00" SP		
10"	1750	1/8	0.05	13.2	550	465	347	255	189	-	-	-	-	-	4YC86
12	1140	1/6	0.05	7.4	1014	803	376	144	-	-	-	-	-	4YC87	
	1750	1/4	0.19	8.9	1556	1437	1291	1055	672	538	386	231	-	4YC88	
14	1140	1/6	0.12	8.4	1601	1311	925	626	273	-	-	-	-	4YC89	
	1750	1/2	0.42	16.2	2457	2298	2093	1875	1603	1381	1244	984	716	4YC90	
16	1140	1/6	0.14	8.4	1999	1764	1418	904	682	-	-	-	-	4YC48	
	1750	1/2	0.52	16.1	3068	2928	2771	2590	2339	2112	1686	1398	1257	4YC49	
18	1140	1/3	0.35	11.4	2982	2645	2264	1669	1276	881	499	-	-	4YC50	
	1750	1	1.12	29	4578	4349	4141	3908	3660	3357	2935	2579	2327	4YC51	
20	1140	1/2	0.38	11.7	3871	3531	3100	2301	1925	1313	-	-	-	4YC52	
	1750	1½	1.35	23	5943	5745	5507	5260	5007	4650	4246	3592	3295	4YC53	
24	1140	1/2	0.71	13.6	5091	4703	4277	3813	3279	2700	2252	1891	1583	4YC54	
	1140	1	1.17	20	6042	5626	5137	4619	4146	3476	3136	2682	2028	4YC55	

1140 RPM



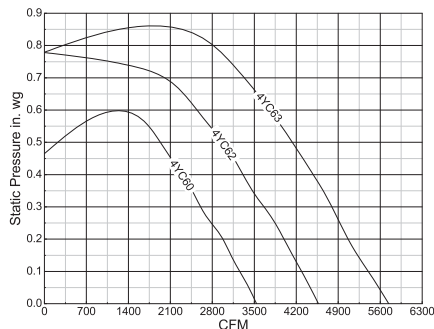
1750 RPM



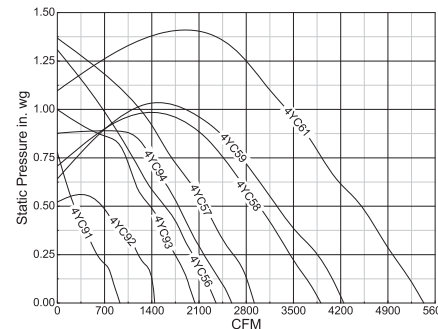
Supply Performance Table and Charts

Prop. Dia. (In)	Fan RPM	HP	Max BHP	Sones @ .250 SP	CFM Air Delivery @ Static Pressure Shown										'Stock Number
					.000" SP	.125" SP	.250" SP	.375" SP	.500" SP	.625" SP	.750" SP	.875" SP	1.00" SP		
12"	1750	1/4	0.07	14.3	929	812	594	415	261	-	-	-	-	-	4YC91
	1750	1/4	0.15	12.2	1444	1400	1203	953	641	-	-	-	-	-	4YC92
14	1750	1/4	0.25	15.9	2041	1912	1741	1567	1380	1155	1018	-	-	-	4YC93
	1750	1/2	0.46	19.9	2586	2395	2176	1971	1799	1588	1380	-	-	-	4YC94
16	1750	1/2	0.32	19.6	2353	2195	2008	1819	1597	1330	1121	903	664	4YC56	
	1750	3/4	0.52	20	2920	2802	2602	2376	2188	1965	1693	1475	1200	4YC57	
18	1750	3/4	0.77	27	3906	3690	3454	3228	2990	2725	2454	2097	-	4YC58	
	1750	1	1.01	30	4247	4076	3846	3526	3259	2998	2724	2392	1779	4YC59	
20	1140	1/2	0.33	18.4	3488	3125	2715	2315	1847	-	-	-	-	4YC60	
	1750	1½	1.18	34	5355	5137	4886	4648	4408	4073	3830	3575	3272	4YC61	
24	1140	1/2	0.5	23	4569	4215	3841	3392	2958	2422	180	-	-	4YC62	
	1140	1	1.19	24	5742	5315	4929	4556	4131	3650	3066	-	-	4YC63	

1140 RPM



1750 RPM



*Motor is assembled on the unit

Speed (RPM) shown is nominal. Performance is based on actual speed of test. Performance certified is for installation type A: Free inlet, Free outlet. Performance ratings include the effects of appurtenances (accessories). Performance ratings include the effects of a birdscreen.

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.

Dayton Electric Mfg. Co. certifies that the model shown herein is licensed to bear the AMCA Seal. The ratings 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.



Downblast Exhaust and Supply Ventilators



Accessories

Non-Ventilated Curbs (Fixed & Adjustable)

All curbs have canted surfaces for leak-proof installation, the canted surface accommodates roofing material up the side and over the top of the curb. Shutter flanges are included.

Fixed curbs mount the flat flange directly to the roof surface. Each curb has 16-gauge galvanized steel construction with welded corners. The top flange surface includes a 1½" wide wood nailer.

Adjustable curbs accept several ventilator sizes and speed installation while providing uniformity to the entire job. Each curb has 22-gauge galvanized steel construction with 24-gauge steel center supports. The fiberglass insulation deadens sound and minimizes heat loss. Curbs are shipped unassembled.



No. 4HX39
Fixed Curb

Fixed Non-Ventilated Curbs

Inside Square Dim. (In.)	Outside Square Dim. (In.)	For use with Dayton Downblast Ventilator Nos.	8" Height Stock No.	12" Height Stock No.
11½"	15"	-	3TZ53	-
14	17½	4YC64-67, 4YC86, 4YU92	4HX38	4HX46
17	20½	4YC68-71, 4YC87-94, 4YU93-94	4HX39	4HX47
21	24½	4YC48-49, 4YC56-57, 4YC72-73, 4YU95-96	4HX40	4HX48
25	28½	3GY66-67, 3GY70-71, 4YC50-51, 4YC58-59, 4YC76-77, 4YU88, 4YU97-98, 4YY75	4HX41	4HX49
29	32½	3GY68, 4YC52-55, 4YC60-63, 4YU89, 4YU99	4HX42	4HX50
37	40½	3GY69, 4YU90, 4YY10	4HX43	4HX51
41	44½	4YU91, 4YY11	4HX44	4HX52
52	55½	-	4HX45	4HX53
59	62½	4YY12	4YY76	4YY77

Adjustable Non-Ventilated Curbs

Outside Square Dim. (In.)	For use with Dayton Downblast Ventilator Nos.	6½" Height Stock No.	12½" Height Stock No.
14½" to 23"	4YC64-71, 4YU92-94	4C453	4C670
23½ to 32	3GY66-67, 3GY70-71, 4YC72-73, 4YC76-77, 4YU95-98, 4YY75	4C454	3C437
32½ to 41	3GY68-69, 4YU99, 4YY10	4C455	3C438
41 to 49½	4YY11	3C597	3C598
50 to 58½	-	3C216	3C439
64 to 72½	-	-	1VN43

Hinge Kits

Hinge kits make maintenance easier by allowing ventilators to hinge open. This allows access to wheel and ductwork for cleaning and inspection.

Wheel/prop Dia. (In.)	For use with Dayton Downblast Ventilator Nos.	Stock No.
8¾" to 21¾"	3GY66-67, 3GY70-71, 4YC48-53, 4YC56-61, 4YC86-94, 4YC64-73, 4YC76-77, 4YU92-98, 4YU88, 4YY75	4HX79
24½	3GY68, 4YC54-55, 4YC62-63, 4YU89-99	4YY84
30½	3GY69, 4YU90, 4YY10	4YY85
36	4YU91, 4YY11	4YY86

No. 4HX79
Hinge Kit



Speed Controls

Variable speed controls permit adjustment between 50 and 100% air performance and are rated 120V, 60Hz. Can be used to operate multiple fans, if total amp draw does not exceed control's amp rating. Controls are suitable and intended only for use with specified ventilators as listed. UL Listed when used in combination with fan as listed.

Max Amps	For use with Dayton Downblast Ventilator Nos.	Stock No.
3	4YC48, 4YC64-66, 4YC70-72, 4YC86-87, 4YC89	4YC44
6	4YC56-57, 4YC67-69, 4YC73, 4YC88, 4YC90-94	4YC46
10	4YC49-50, 4YC54, 4YC71, 4YC75-76	4YC45



No. 4YC44
Speed Controls

Dampers

Damper Size (In)	Outside Flange (In)	For use with Dayton Downblast Ventilator Nos.	Stock No.
12" X 12"	14" X 14"	4YC66 - 4YC67, 4YC86, 4YC92	4HX64
15 X 15	17 X 17	4YC68 - 4YC71, 4YC87 - 4YC94, 4YU93, 4YU94	4HX65
19 X 19	21 X 21	4YC48 - 4YC49, 4YC56 - 4YC57, 4YC72, 4YC73, 4YU95, 4YU96	4HX66
23 X 23	25 X 25	4YC50, 4YC51, 4YC58, 4YC59, 4YU88, 4YU87, 4YU98, 3GY70, 3GY71, 3GY66, 3GY67, 4YY75 - 4YY76	4HX67
27 X 27	27 X 27	4YC52 - 4YC55, 4YC60 - 4YC63, 4YU89, 4YU99, 3GY68	4HX68
35 X 35	37 X 37	4YU90, 3GY69, 4YY10	4HX69
39 X 39	39 X 39	4YU91, 4YY11	4HX70
50 X 50	52 X 52	4YY12	4HX71



No. 4HX64
Damper

Downblast Exhaust and Supply Ventilators

Typical Installation

Dayton exhaust fans are designed to meet the needs of general clean air applications. Tests were conducted to assure safe, rugged and reliable fans capable of withstanding severe exhaust conditions.

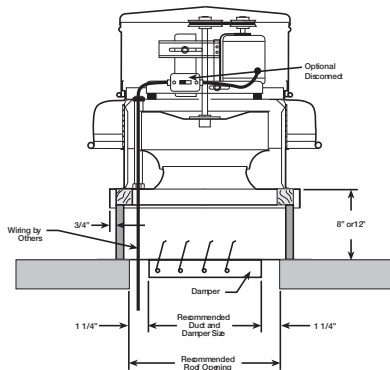
Due to the varying air streams encountered in commercial ventilation, system designers must be aware of national, state, and local codes and guidelines governing these installations. Local code authorities should be consulted before proceeding with any ventilation project.

When roofing materials extend to the top of the curb, roof curbs should be 1-1/2 inches (3/4 inches on a side) less than the unit curb cap to allow for roofing and flashing.

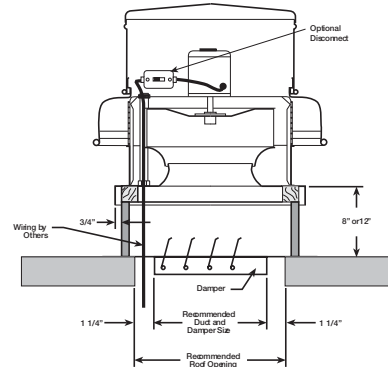
For recommended damper size and roof opening dimensions, refer to the dimensions and specifications pages.

Installation must include a means for inspecting, cleaning and servicing the exhaust fan.

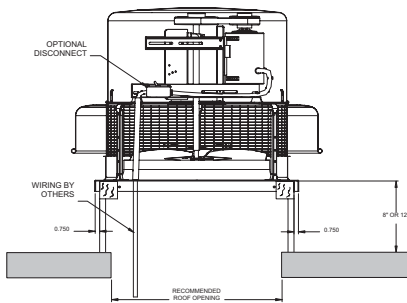
Centrifugal Belt Drive



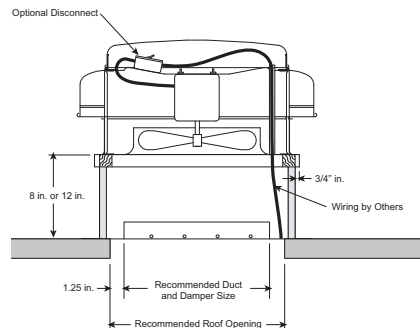
Centrifugal Direct Drive



Axial Belt Drive



Axial Direct Drive



Dayton®

Reliability, dependability, availability. They all add up to a better value, at a price to fit your budget.

Better Reliability.

You can count on Grainger for:

1. Heavy-duty component construction
2. Demanding tolerances that meet tough industry standards
3. Design functionality to fit commercial through industrial applications

Better Dependability.

Whatever you're faced with today, a Dayton product is up for the task. Dayton products are reviewed every year through a continuous improvement process in order to provide dependability.

Better Availability.

Downtime kills productivity. When you need it fast, Dayton products are readily available exclusively through your Grainger network.

Ventilation manuals are available online

Help is just a click away – Download useful HVAC/R installation and maintenance guides of Grainger's PRVs, exhaust fans, blowers, heaters and agricultural fans for quick and easy reference. See grainger.com/dayton

Register at Grainger.com/contractor

Visit grainger.com/contractor for information, technical articles and industry links to keep you better informed on trade issues and how Grainger can help grow your business.

DAY IN. DAY OUT.™



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Product Suitability: Many states and localities have codes and regulations governing sales, construction, installation, and/or use of products for certain purposes, which may vary from those in neighboring areas. While Dayton attempts to assure that its products comply with such codes, it cannot guarantee compliance, and cannot be responsible for how the product is installed or used. Before purchase and use of a product, please review the product application, and national and local codes and regulations, and be sure that the product, installation, and use will comply with them.