

Ventilation Guide

DAY IN. DAY OUT.™

Dayton®

**Centrifugal Upblast
Exhaust Ventilators**

**Belt & Direct Drive
Accessories**

Available exclusively at

GRAINGER®
FOR THE ONES WHO GET IT DONE

Centrifugal Upblast Exhaust Ventilators

Construction Features

The Centrifugal Upblast and Sidewall Exhaust Ventilators are designed to direct contaminated air, in both industrial and commercial applications, directly away from the roof or wall surface. Most sizes are listed UL-762 for commercial kitchen applications. Both belt and direct drive ventilators are in stock, in a location near you.

1 LEAKPROOF CONSTRUCTION is achieved through welding the windband, curb cap, and drain trough on all centrifugal upblast exhaust ventilators.

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 DRAIN TROUGH provides drainage of water, grease, and other residues that enter the fan.

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

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

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

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

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

11 WINDBAND is a single piece of heavy gauge aluminum used to direct contaminated air away from the building. A rolled bead around the outside edge provides additional strength.

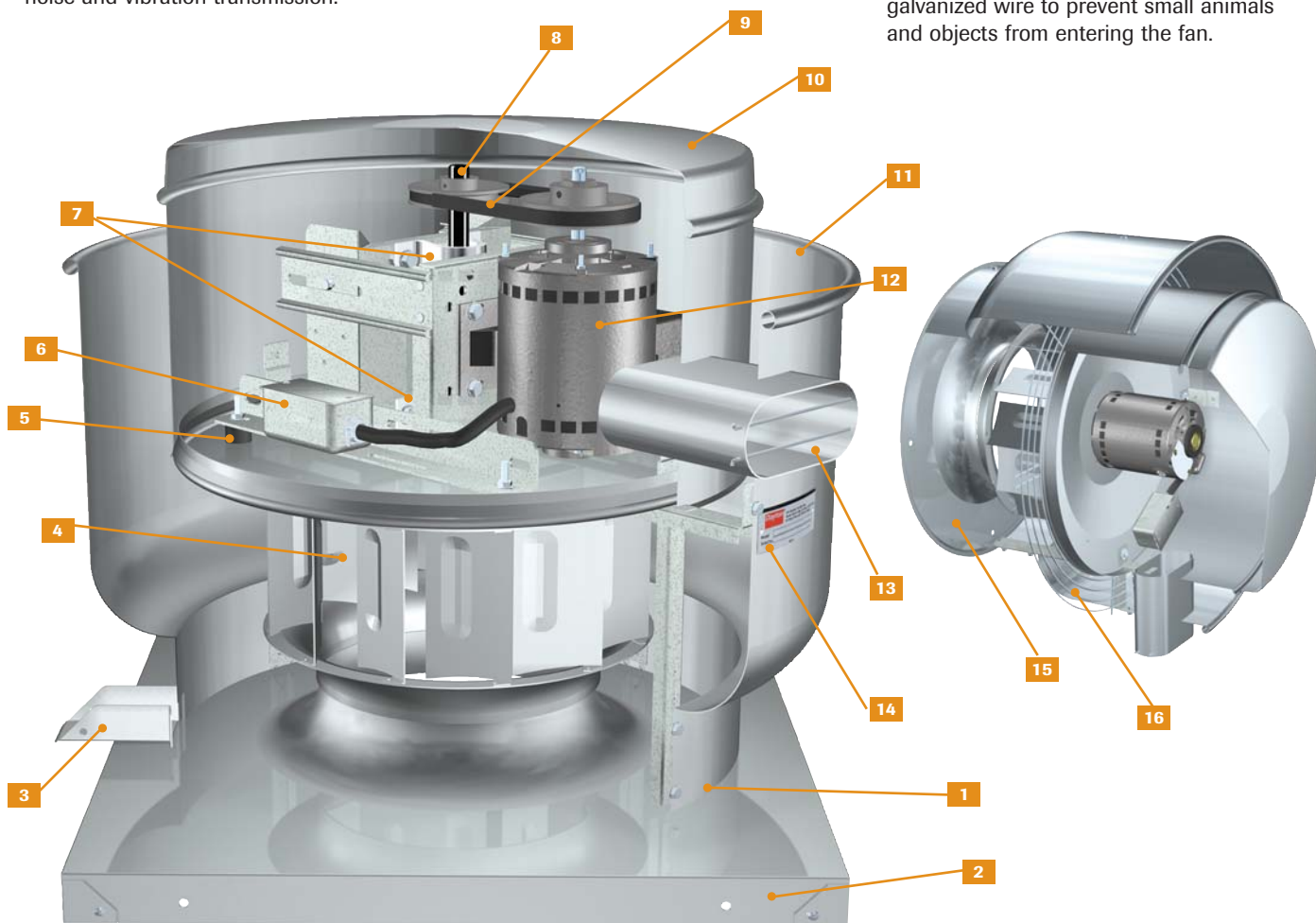
12 MOTOR is mounted inside the motor compartment out of the exhaust air stream.

13 MOTOR COOLING is achieved by circulating fins on top of the fan wheel that move fresh air throughout the motor compartment drawn through a large external breather tube. This positive cooling maximizes motor life.

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

15 MOUNTING PLATE is the base of a sidewall unit that can be mounted and sealed before attaching the entire unit to provide an easier installation.

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



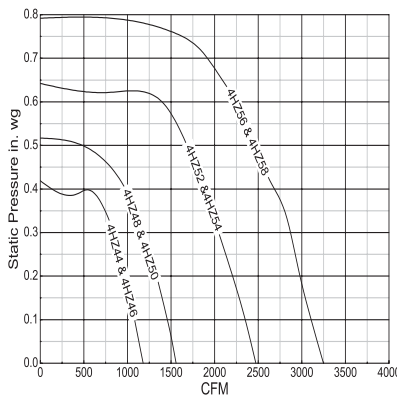
Centrifugal Direct Drive Upblast Exhaust Ventilators

Performance Tables and Charts

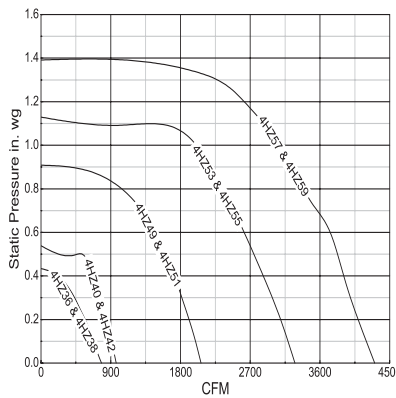
Wheel Dia. (In)	Fan RPM	Max HP	Sones @ .250 SP	CFM Air Delivery @ Static Pressure Shown										'Stock Number		
				.000" SP	.100" SP	.125" SP	.250" SP	.375" SP	.500" SP	.625" SP	.750" SP	1.00" SP	Roof	Wall		
8 1/4"	1550	1/30	0.028	4.1	266	231	222	172	95	-	-	-	-	-	4HZ32	4HZ34
8 1/2"	1550	1/25	0.039	4.9	424	372	359	291	204	-	-	-	-	-	4HZ33	4HZ35
11"	1140	1/6	0.06	8.3	780	682	656	502	294	-	-	-	-	-	4HZ36	4HZ38
11"	1725	1/4	0.20	13.0	1180	1109	1094	1017	929	824	712	586	-	-	4HZ37	4HZ39
11"	1140	1/6	0.08	6.5	970	913	897	806	707	-	-	-	-	-	4HZ40	4HZ42
11"	1725	1/4	0.29	12.5	1468	1431	1422	1373	1315	1255	1195	1129	970	-	4HZ41	4HZ43

Wheel Dia. (In)	Fan RPM	Max HP	Sones @ .250 SP	CFM Air Delivery @ Static Pressure Shown										'Stock Number		
				.000" SP	.125" SP	.250" SP	.375" SP	.500" SP	.750" SP	1.00" SP	1.25" SP	1.50" SP	Roof	Wall		
13 1/4"	860	1/8	0.07	7.7	1180	1057	914	675	-	-	-	-	-	-	4HZ44	4HZ46
13 1/2"	1725	3/4	0.60	18.4	2366	2305	2244	2183	2122	1994	1838	1646	1365	-	4HZ45	4HZ47
14 1/4"	860	1/8	0.12	7.1	1558	1427	1264	1034	-	-	-	-	-	-	4HZ48	4HZ50
14 1/2"	1140	1/4	0.29	11.0	2065	1973	1864	1745	1605	1167	-	-	-	-	4HZ49	4HZ51
16 1/2"	860	1/4	0.25	9.9	2472	2315	2126	1918	1680	-	-	-	-	-	4HZ52	4HZ54
16 1/2"	1140	3/4	0.58	14.8	3277	3161	3035	2896	2745	2421	1983	-	-	-	4HZ53	4HZ55
18 1/2"	860	1/2	0.40	11.1	3249	3074	2922	2732	2474	-	-	-	-	-	4HZ56	4HZ58
18 1/2"	1140	1	0.93	16.5	4307	4173	4045	3927	3822	3470	3072	2477	-	-	4HZ57	4HZ59

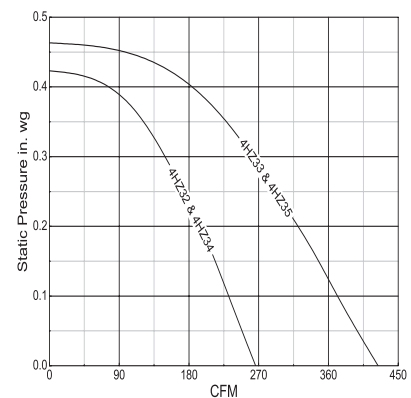
860 RPM



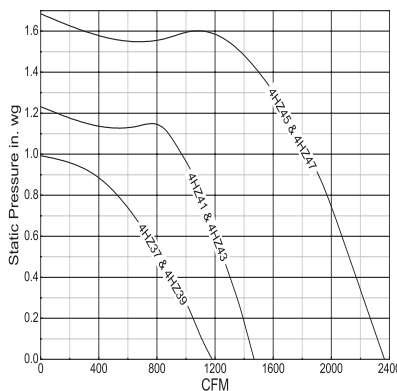
1140 RPM



1550 RPM



1725 RPM



No. 4YC44 Speed Controls

Dayton 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. Do not use speed controls in NFPA96 installations.

Max Amps	For use with Dayton Centrifugal Upblast Ventilators	Stock No.
3	4HZ32-36, 4HZ38, 4HZ40, 4HZ42, 4HZ44, 4HZ46, 4HZ48, 4HZ50	4YC44
10	4HZ53	4YC45
6	4HZ37, 4HZ39, 4HZ41, 4HZ43, 4HZ49, 4HZ51	4YC46

*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).

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 Upblast Exhaust 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.

Ventilated Curbs (Fixed & Adjustable)

All curbs are 16-gauge galvanized steel ventilated curbs for use in commercial kitchen applications. The curbs are self-flashing and the flat mounting flange fastens directly to the roof deck. Stamped louvers, located on curb sides, ventilate hot exhaust ducts to protect the building and roof members. Top flange surface is 1½" wide; base mounting flange surface is 4" on fixed curbs and 5" on adjustable curbs.

The adjustable curbs accept several ventilator sizes and allow for quick ventilator installation and uniformity throughout the entire job.



No. 4HX39
Fixed Curb



No. 4HX61
Adj. Ventilated Curb

Fixed Non-Ventilated Curbs

Inside Square Dim. (In.)	Outside Square Dim. (In.)	For use with Dayton Centrifugal Upblast Ventilators	8" Height Stock No.	12" Height Stock No.
11½"	15"	-	3TZ53	-
14	17½	4YY13, 4HZ32-33, 4HZ36-37	4HX38	4HX46
17	20½	4YY12-15, 4HZ40-41, 4HZ44-45	4HX39	4HX47
21	24½	4YY16-17, 4HZ48-49, 4HZ52-53, 5PV06	4HX40	4HX48
25	28½	4YY18-19, 4HZ56-57, 5PV07-08	4HX41	4HX49
29	32½	4YY20, 3GY73	4HX42	4HX50
37	40½	4YY21, 3GY74	4HX43	4HX51
41	44½	4YY22	4HX44	4HX52
52	55½	-	4HX45	4HX53
59	62½	-	4YY76	4YY77

Fixed Ventilated Curbs

Curb Height (In.)	Inside Square Dim. (In.)	Outside Square Dim. (In.)	For use with Dayton Centrifugal Upblast Ventilators	Stock No.
24"	14"	17½"	4YY13, 4HZ36-37	4HX54
24	17	20½"	4YY14-15, 4HZ40-41, 4HZ44-45	4HX55
24	21	24½"	4YY16-17, 4HZ48-49, 4HZ52-53, 5PV06	4HX56
24	25	28½"	4YY18-19, 4HZ56-57, 5PV07-08	4HX57
18	29	32½"	4YY20, 3GY73	4HX58
18	37	40½"	4YY21, 3GY74	4HX59
18	41	44½"	4YY22	4HX60

Adjustable Non-Ventilated Curbs

Outside Square Dim. (In.)	For use with Dayton Centrifugal Upblast Ventilators	6½" Height Stock No.	12½" Height Stock No.
14½" to 23"	4YY13-15, 4HZ32-33, 4HZ36-37, 4HZ40-41, 4HZ44-45	4C453	4C670
23½ to 32	4YY16-19, 4HZ48-49, 4HZ52-53, 4HZ56-57, 5PV06-08	4C454	3C437
32½ to 41	4YY20-21, 3GY73-74	4C455	3C438
41 to 49½	4YY22	3C597	3C598
50 to 58½	-	3C216	3C439
64 to 72½	-	-	1VN43

Adjustable Ventilated Curbs

Curb Height (In.)	Inside Square Dim. (In.)	Outside Square Dim. (In.)	For use with Dayton Centrifugal Upblast Ventilators	Stock No.
24"	14½" to 18"	17½" to 22"	4YY13-15, 4HZ32-33, 4HZ36-37, 4HZ40-41, 4HZ44-45	4HX61
24	21 to 26	24 to 29	4YY16-19, 4HZ48-49, 4HZ52-53, 4HZ56-57, 5PV06-08	4HX62
18	28 to 43	31 to 46	4YY20-22, 3GY73-74	4HX63



No. 4HX78
Grease Collector Box

NFPA 96 Required Grease Collector Box

Diverts and traps heavy residual grease while protecting the roof surface. Fasten directly to curb underneath ventilator. Connection from ventilator drain to grease box included.

Description	Length (In.)	Width (In.)	Height (In.) Less Mounting Flange	Stock No.
Small Collector	14"	5"	4"	1RL34
Large Collector	24"	7"	5"	4HX78

No. 4HX79
Hinge Kit



NFPA 96 Required 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 Dia. (In.)	For use with Dayton Centrifugal Upblast Ventilators	Stock No.
8½" to 21½"	4YY13-15, 4HZ32-33, 4HZ36-37, 4HZ40-41, 4HZ44-45, 4HZ48-49, 4HZ52-53, 4HZ56-57, 5PV06-08	4HX79
24½	4YY20, 3GY73	4YY84
30½	4YY21, 3GY74	4YY85
36	4YY22	4YY86

Birdscreens

Zinc plated birdscreen protects the fans discharge from birds, debris and other small objects. These screens have successfully passed a 24-hour salt spray test. They are concentric and precisely sized to eliminate rattling.

Wheel Dia. (In.)	For use with Dayton Centrifugal Upblast Ventilators	Stock No.
8½"	4HZ32-35	4ZA27
11 to 13½	4YY13-15, 4HZ36-47	4YY78
14½ to 16½	4YY16-17, 4HZ48-55, 5PV06	4YY79
18½ to 21½	4YY18-19, 5PV07-08, 4HZ56-59	4YY80
24½	4YY20, 3GY73	4YY81
30½	4YY21, 3GY74	4YY82
36	4YY22	4YY83