



Supply Or Make-Up Air Ventilation

The total amount of air supplied is approximately 100% of the air exhausted. Insufficient make-up air in the kitchen can create hood capture problems. There are two general types of make-up air, untempered and tempered. Here are some things to consider when selecting the supply portion of your kitchen ventilation system.

- A slight negative pressure is desirable in a kitchen to keep odors out of the dining room (should not exceed 0.02" static pressure)
- Make-up air must be supplied at $\pm 10^\circ\text{F}$ from air in the space
- Use non-directional perforated diffusers (4-way diffusers are not recommended in kitchen applications)

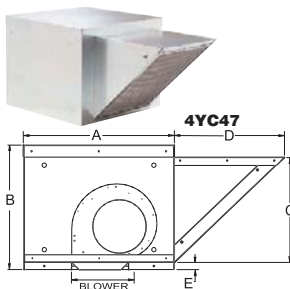
Untempered filtered supply ventilators are the most economical solution if heating or cooling is required and all codes can be met. Untempered air should be supplied near the hood at low velocities so it can be exhausted quickly without mixing in the space, causing discomfort and increasing heating/cooling costs.

Tempered direct-fired make-up air heaters provide the best comfort in the kitchen. Supply tempered air through a source that will distribute air throughout the kitchen to increase comfort. Northern climates almost always require heated make-up air.

INSTALLATION

NFPA 96

- Intake must be a minimum of 10 ft. from exhaust ventilator,
- Or
- Exhaust ventilator discharge must be a minimum of 36" higher than intake



Centrifugal Belt-Drive Filtered Supply Ventilators



- Max. inlet air temp.: 120°F
- UL 705 Listed for Power Ventilators
- Air handling-quality bearings meet min. L10-100,000 hr.
- Bearings: sealed pillow block (20 1/2" units are regreasable pillow block)

Supply untempered, filtered makeup air to commercial and institutional buildings, or in commercial kitchen applications. Heavy-gauge galvanized steel construction. Neoprene isolators, lifting lugs, and weather hood with removable 1" aluminum washable filters. 4YC82 and 4YC47 can be wall- or roof-mounted. 4YC83, 5AU56, and 5AU57 are roof-mount only. Motor, belts, and sheaves are packed separately when complete ventilator with drive package is ordered.

Disconnect Type	No. of Poles	Max. HP	Item No.	BLOWER OPENING					RECOMMENDED ROOF CURBS						
				Wheel Dia. (in.)	Discharge Length (in.)	Discharge Width (in.)	A (sq.)	B	C	D	E	Fixed 8"H Item No.	Fixed 12"H Item No.	Adj. 6 3/4"H Item No.	Adj. 12"H Item No.
NEMA 1	2	2 @ 115/230V	1H400	11 1/2 in	11 1/2 in	13 3/8 in	30	25	21 1/4	22	1 1/2	4HX41	2RB79	4C454	2ZV83
	3	7 1/2 @ 230V, 10 @ 460V	1H401	13 1/4 in	13 3/4 in	15 5/8 in	34 1/2	32	27 1/2	29 1/4	2	4HX42	2RB80	4C455	2ZV84
NEMA 4	2	2 @ 115/230V	1H408	15 1/2 in	16 in	18 1/8 in	34 1/2	32	27 1/2	29 1/4	2	4HX42	2RB80	4C455	2ZV84
	3	7 1/2 @ 230V, 10 @ 460V	1H409	18 1/2 in	19 1/8 in	22 1/4 in	42	36	30 3/4	32	2	4HX43	2RB81	3C597	2ZV85
				20 1/2 in	25 5/8 in	23 in	46	48	43 3/4	36	2	4HX44	2RB82	3C597	2ZV85

Wheel Dia. (in.)	CFM Air Delivery @ Static Pressure Shown*					Motor HP	Max. BHP†	SP @ 5 ft. #	COMPLETE WITH DRIVE PACKAGE**			WITHOUT DRIVE PACKAGE**
	0.125"	0.250"	0.375"	0.500"	0.750"				1.00"	Open Dripproof, 1-Phase Motor, 115/230V, 60 Hz	Totally Enclosed, 1-Phase Motor, 115/230V, 60 Hz	
11 1/2	735	—	—	—	—	1/2	0.04	—	7D493	7HY73	—	—
	1,435	1,106	—	—	—	3/4	0.18	11.3	7D494	7HY74	—	—
	1,722	1,472	1,115	—	—	1	0.28	11.4	7D495	7HY75	—	—
	1,949	1,730	1,471	1,048	—	1 1/4	0.39	12.8	7D496	7HY76	—	4YC82
	2,293	2,100	1,899	1,667	—	1 1/2	0.61	15.9	7D497	7HY77	7D510	—
	2,661	2,485	2,324	2,140	1,661	1 3/4	0.92	20	7D498	7HY79	7D511	7HY78
13 1/4	2,959	2,804	2,651	2,500	2,142	1,585	1	24	7D499	7HY81	7D512	7HY80
	2,254	1,760	—	—	—	—	1/2	0.3	7D500	7HY83	—	—
	2,714	2,414	1,916	—	—	—	3/4	0.5	7D501	7HY84	7D513	7HY85
	3,139	2,902	2,562	2,117	—	—	1	0.75	7D502	7HY86	7D514	7HY87
	3,557	3,353	3,119	2,747	—	—	1 1/4	1.06	7D503	7HY88	7D515	7HY89
	3,948	3,762	3,565	3,314	2,607	—	1 1/2	1.43	7D504	7HY90	7D516	7HY91
15 1/2	3,102	2,708	2,109	1,065	—	—	1/2	0.54	7D505	7HY92	7D517	7HY93
	3,587	3,280	2,831	2,293	—	—	3/4	0.81	7D506	7HY94	7D518	7HY95
	4,049	3,760	3,456	2,985	1,591	—	1	1.13	7D507	7HY96	7D519	7HY97
	4,560	4,304	4,048	3,719	2,854	—	1 1/2	1.58	7D508	7HY98	7D520	7HY99
	5,066	4,837	4,601	4,371	3,650	2,681	2	2.13	—	—	7D521	7H200
	6,220	5,814	5,296	4,740	3,134	—	1 1/2	1.66	7D509	7HZ01	7D522	7H202
18 1/2	6,874	6,531	6,075	5,604	4,431	—	2	2.2	—	—	7D523	7H203
	7,926	7,604	7,275	6,858	5,995	4,894	3	3.3	—	—	7D524	7H204
	9,474	9,168	8,913	8,643	7,935	7,218	5	5.52	—	—	7D525	7H205
	11,502	11,080	10,676	10,160	9,004	7,781	5	5.5	—	—	7D526	7H206
20 1/2	13,229	12,848	12,491	12,137	11,208	10,161	7 1/2	8.26	—	—	7D527	7H207
	14,602	14,255	13,920	13,597	12,841	11,952	10	11.03	—	—	7D528	7H208

* Performance certified is for installation type B: free inlet, ducted outlet. † Power rating (BHP) does not include transmission losses. Performance ratings include the effects of a filter. # 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 in Type A: free inlet hemispherical sone levels. ** Drive package consists of appropriate motor, belts, and sheaves to obtain performance listed.

NFPA 96 Required Accessories



4HX61

Curb Height (in.)	Outside Square (in.)	Inside Square (in.)	Use w/Dayton Ventilators	Item No.
Adjustable Ventilated Roof Curbs, 5 in Flashing				
24 in	17 1/2 to 22	14 1/2 to 18	Sq. Base 19 to 20 1/2"	4HX61
24 in	24 to 29	21 to 26	Sq. Base 25 1/2 to 27 1/2"	4HX62
18 in	31 to 46	28 to 43	Sq. Base 32 1/2 to 44 1/2"	4HX63
Fixed Ventilated Roof Curbs, 4 in Flashing				
24 in	17 1/2 in	14 in	19" Sq. Base	4HX54
24 in	20 1/2 in	17 in	22" Sq. Base	4HX55
24 in	24 1/2 in	21 in	26" Sq. Base	4HX56
24 in	28 1/2 in	25 in	30" Sq. Base	4HX57
18 in	32 1/2 in	29 in	34" Sq. Base	4HX58
18 in	40 1/2 in	37 in	42" Sq. Base	4HX59
18 in	44 1/2 in	41 in	46" Sq. Base	4HX60

Ventilated Roof Curbs—Ventilate hot exhaust ducts in commercial kitchen applications, protecting buildings and roof members. Galvanized steel curbs allow for quick ventilator installation and uniformity throughout the job. Fixed curbs are 18 ga.; adjustable curbs are 16 ga. Flat-flashing flange mounts directly to roof surface. Top flange surface is 1 3/4" wide. For use with NFPA 96, UL 705, and UL 762 applications.

Grease Collector Box—Diverts and collects heavy grease residue while protecting roof surface. Fastens directly to curb underneath ventilator and includes connection from ventilator drain to Grease Box. Required for NFPA 96 and UL 762.

Hinge Kits—Allow ventilators to swing back to expose the entire fan for cleaning and inspection, making maintenance easier. Includes retaining cable and hardware kit. Upblast Hinge Kits are required for NFPA 96 and UL 762.

Clean-Out Port Kit—Retrofits ventilator with a cleanout port for access to the ventilator wheel through the windband. Required for NFPA 96. Includes removable plug and hardware. Required for NFPA 96 and UL 762.

H (in.)	L (in.)	W (in.)	For Use With Dayton Roof-Mounted Centrifugal Ventilators	Item No.	H (in.)	L (in.)	W (in.)	For Use With Dayton Roof-Mounted Centrifugal Ventilators	Item No.
Grease Collector Box									
6	12	5	Upblast	48C174	Hinge Kits - Downblast				
—	—	—	—	—	—	34	34	Downblast, 34" Sq. Base	20CK47
—	—	—	—	—	—	40	40	Downblast, 40" Sq. Base	20CK48
—	—	—	—	—	—	42	42	Downblast, 42" Sq. Base	20CK49
—	34	34	Upblast, 34" Sq. Base	20CK53	—	46	46	Downblast, 46" Sq. Base	20CK50
—	40	40	Upblast, 40" Sq. Base	20CK54	—	52	52	Downblast, 52" Sq. Base	20CK51
—	42	42	Upblast, 42" Sq. Base	20CK55	—	64	64	Downblast, 64" Sq. Base	20CK52
—	46	46	Upblast, 46" Sq. Base	20CK56	Clean-Out Port Kit				
7	—	7	Upblast	3ATV9					