

HIGH EFFICIENCY • LOW COST MAINTENANCE • LOW COST INSTALLATION
IDEALLY SUITED FOR POULTRY, SWINE, DAIRY AND GREENHOUSE APPLICATIONS

FEATURES

- Heavy Duty Fiberglass Injection Molded Housing
- Performance enhancing cone included
- All fans are fully tested before shipping.
- Designed with smooth inside and outside for improved cleaning.
- Self draining, sloped housing is quick & easy to clean reducing maintenance costs.
- Belt or direct drive options available
- All fans have smooth operating, easy to clean poly shutters.
- Available in 54" size

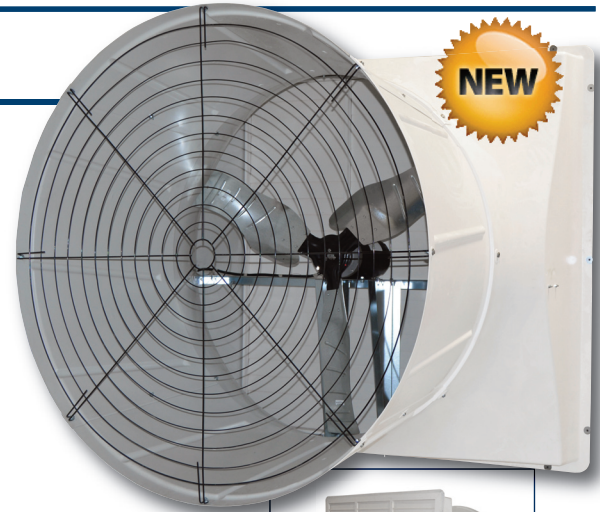
OPTIONS

- HE, EC or AC motor.
- 3 phase motor 208-230/460 volt option available on some units.
- FRP board winter inserts available with unique double seal.

WARRANTY

- 10 years on housings • 1 year on balance of fan

SPECIFICATIONS



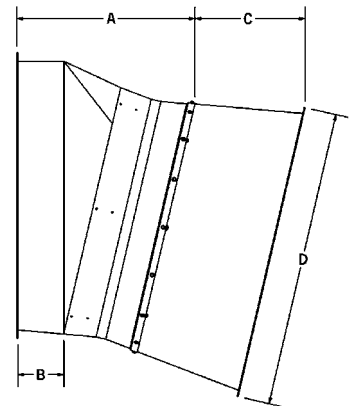
		Specifications					Model Number	TESTED AT	Performance											
		motor				blade mat'l			rpm	DbA	cone	0.00"SP			0.05"SP			0.10"SP		
		type	speed	hp	hz							cfm	cfm/w	amps	cfm	cfm/w	amps	cfm	cfm/w	amps
DIRECT DRIVE	36"	EC	Vari	3/4	50/60	galv.	FGC36W-EC	CANARM	850	75	Y	14240	22	2.5	13260	19.5	2.61	12580	16.8	2.79
		AC	Single	1	60	galv.	FGC36W23G31	CANARM	850	75	Y	14510	18.1	3.55	13450	15.8	3.69	13020	14.8	3.81
		AC	Single	1/2	60	galv.	FGC36W40G31	CANARM	850	75	Y	11400	20.1	2.6	10600	17.6	2.63	9800	15.9	2.7
DIRECT DRIVE	54"	HE	Vari	2	50	galv.	FGC54W-HE	CANARM	600	70	Y	29670	23	3.9	28130	20.5	4.1	26560	18.5	4.3
									524		Y	25820	28.5	3	24010	25	3.3	22120	22	3.4
BELT DRIVE	54"	AC	ON/OFF	2	60	galv.	FGC54	CANARM	575	75	Y	28490	18.5	6.9	26890	17	7.1	25340	16	7.3

Note: Wind has a significant effect on exhaust fans. A 10 mph wind creates a 0.05" pressure against the fan. A 20 mph wind creates 0.20" pressure and 30 mph a 0.45" pressure. These pressures are in addition to the static pressure in the building.

• The DbA (Noise Level) on 54" Panel Fan is approximately 80 DbA. Variable speed option available. New EC motor 1h (P1174-AEC) Fan model # (PF54-AEC-2022), control needs to be a 0-10v control. For a stand alone system we offer the (Phason CNSSV-DC) or any 0-10v control. The Cyclones are controlled by a VFD and 0-10v controller as well.

DIMENSIONS

FAN SIZE	FRAMING DIMENSIONS						
	FAN		CONE		WIDTH	HEIGHT	
	A	B	C	D	All Walls	4" & 6" Wall	9" Wall
36"	27"	8"	24"	42"	45.5"	45.5"	45.5"
54"	25"	8"	32"	63.5"	63.75"	63.75"	64.25"





FIBERGLASS EXHAUST FANS

The MAX-AIR® PLUS is a superior output and high efficiency fiberglass exhaust fan. The MAX-AIR® PLUS 72 fan produces UP TO 49,167 CFM. The thick fiberglass housing is strong, corrosion resistant and easy to clean.

MAX-AIR® PLUS fiberglass discharge cone does not stick out as far as conventional exhaust fans. This reduces the wind scoop effect of the large cones which significantly affects the performance of the fan when wind blows against the fan. Most roofs overhangs extend over MAX-AIR® PLUS fans, as opposed to other cones sticking out, thus putting them at risk of shear-off or damage from falling snow or heavy rain.

APPLICATIONS

- Ideal for tunnel and exhaust ventilation in dairy, poultry, swine, greenhouse and industrial applications.
- MAX-AIR® PLUS large volume output means fewer fans are required, thus reducing installation cost.
- When using the optional variable frequency drive, the MAXAIR® PLUS fan can be run with variable speed meeting both minimum and maximum ventilation requirements for large buildings.



ACCESSORIES

WINTER INSERTS WI2-FG72

Insulated 78" - 2 piece winter door to protect against heat loss. (78"x39" x 2pc).



VFD - LENZE SERIES - ESV222N2YXC

Flexible, simple and economical. The SMVector is a highly competitive AC drive. Its performance, simplicity and flexibility make it an attractive solution for a broad range of applications including: Conveying, Agricultural and HVAC systems. Requires a VFD compatible AC motor.



TECHNICAL SPECIFICATIONS

All belt drive. Available motors: 50 or 60 HZ

MODEL	SIZE	HP	VOLTS	AMPS	HZ	PH	RSO
FG72-33	72"	3	208-230 / 416-460 / 480	8.2-7.6 / 4.1-3.8 / 3.6	60	3	78.5" x 78.5"
FG72-13	72"	3	208-230	8.2 - 7.6	60	1	78.5" x 78.5"

RPM	@ 0" SP		@ 0.05" SP		@ 0.1" SP		@ 0.125" SP		@ 0.15" SP		SOUND (dB)
	cfm	cfm/watt	cfm	cfm/watt	cfm	cfm/watt	cfm	cfm/watt	cfm	cfm/watt	
297	44,408	26.80	42,003	23.75	39,470	21.05	36,500	17.80	35,536	17.45	84
306	45,589	25.70	43,257	22.88	41,124	20.60	39,000	18.14	36,549	16.70	
329	49,167	22.57	46,871	20.26	44,603	18.12	43,000	16.54	41,975	16.23	87

NOTE: 88" wall space required per fan.

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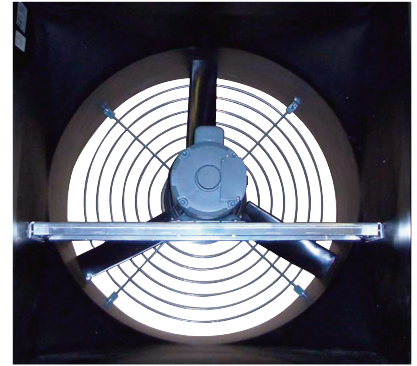
GOOD PERFORMANCE • DEPENDABLE • GREAT VALUE

IDEALLY SUITED FOR SWINE AND POULTRY BUILDINGS

NOW AVAILABLE WITH
EC MOTORS
for energy savings



PLATFORM MOUNT

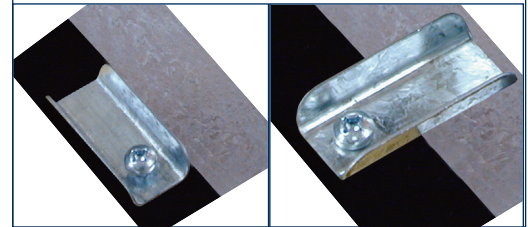


FEATURES

- 12" to 36" Sizes.
- Molded impact resistant black polyethylene housings with UV prohibitors.
- Standard base mount motors are easily replaced.
- Easy to remove shutter with welded steel frame and aerodynamic PVC louvers are held in place by a stainless spring steel pin and is virtually indestructible.
- Powder coated exhaust guard.
- Corrosion proof airfoil polypropylene blades on 12" to 24" sizes.
- 36" fan has a galvanized blade.
- Heavy duty motors are totally enclosed, ball bearing, high efficiency dual voltage, single phase, 60 Hz (PLF36-H is 230 volt only).
- Also available with EC motor.

EASILY REMOVABLE SHUTTERS

Flip latch open to release shutter



ACCESSORIES

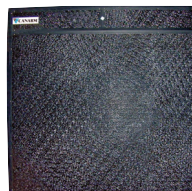
CONES

Performance enhancing cones in durable black polyethylene are available for 24" and 36" fans.



WINTER INSERTS

Insulated 16" to 36" winter inserts. R8 insulation value and unique double seal protect against heat loss.



HOODS

Low air restriction 12" to 24" weather hoods. Most hoods restrict 20 to 35% of air flow, our design restricts less than 10%.



WARRANTY

- 5 years on plastic housing
- 1 year on all other components

SPECIFICATIONS

	Specifications										Performance							Rough Opening Required			
	Motor				Shutter Frame	Blade mat'l	Model	TESTED AT	Test Code	rpm	DbA	Cone	0.00" SP		0.05" SP				0.10" SP		AFR
	type	spd	volt	hp									cfm	cfm/w	cfm	cfm/w	amps		cfm	cfm/w	
DIRECT	12"	Leeson	variable	1/4	Stainless Steel	Plastic	PLF12-EVDL		210336V	1625	65	N	1300	7.1	1150	6.5	1.06	600	3.6	0.30	15" Sqr
	16"	Leeson					PLF16-EVDL		210365V	1625	72	N	2600	9.3	2350	8.7	1.39	2150	8.0	0.54	19.25" Sqr
	18"	Leeson					PLF18-FVDL		210389V	1625	75	N	3450	10.1	3150	9.5	1.69	2900	8.7	0.65	21.25" Sqr
	24"	Leeson	115/230 dual voltage	1/3			PLF24-M		210473V	1100	75	N	5300	13.1	4800	11.9	1.79	4250	10.7	0.66	27.25" Sqr
		Leeson																			
	24"	Leeson	1/2	PLF24-GVDL				210461V	1625	81	N	5800	10.7	5400	10.0	2.41	4900	9.2	0.75	40.25" Sqr	
Leeson		210467V			Y	6200															
36"	Canarm	single	230	1.0	Galvanized	Galvanized	PLF36-MP		210557	850	75	N	11050	19.8	10150	17.0	2.92	9250	14.6	0.70	
	Canarm						210558	Y	11700												21.7
	Canarm							02198*	850	75	N	14320	14	13500	13.0	4.53	12500	11.9	0.79		
Canarm	02199*	Y	15920	16.4	15170	15.3	4.36	14100												13.8	0.78

Notes: AFR is the airflow ratio. Higher AFR indicates better performance under static pressure and against wind. It is calculated by dividing fan cfm at 0.20 static pressure by cfm at 0.05 sp.

Test results are complete with cone where indicated. All tests completed with shutters installed.

Amps indicated are actual at 230 volts. When determining amp load for variable speed, add 20% to listed numbers.

Amp loads for 115 volt supply will be approximately double.

* Certified performance by BESS Labs, University of Illinois



Note: Wind has a significant effect on exhaust fans. A 10 mph wind creates a 0.05" pressure against the fan. A 20 mph wind creates 0.20" pressure and 30 mph a 0.45" pressure. These pressures are in addition to the static pressure in the building. Wind blocks or hoods should be included in all designs where fans will be subjected to winds above 10 mph.

GUARANTEED PERFORMANCE

Canarm guarantees the performance of our fans. All fans with test numbers will perform as indicated when properly maintained (reports are available upon request). Our fans are tested in our AMCA fig 15 test chamber. The test chamber was designed and built to exacting AMCA/ASHRE standards for Canarm. A regimented calibration and verification schedule is followed. Be assured, Canarm fans provide the performance you require and expect.

HIGH PERFORMANCE • LOW COST MAINTENANCE • LOW COST INSTALLATION
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FEATURES

- The patented design provides excellent performance without a cone.
- All fans are supplied completely assembled and are tested before shipping.
- Chop & Spray design with smooth inside for improved cleaning.
- Self draining, sloped housing is quick and easy to clean reducing maintenance costs.
- T-Mount belt drive system provides quick, easy access to motor & blade.
- Belt drive units are supplied complete with belt tensioner and easily accessible, high quality rubber belt.
- All fans have smooth operating, easy to clean, tie-bar poly shutters with stainless steel frame.
- 36" and 50" belt drive fans.
- 18", 24" and 36" direct drive fans.
- Also available with EC motor.

NOW AVAILABLE WITH
EC MOTORS
for energy savings



OPTIONS

- Special order black housings available.
- 3 phase motor 208-230/460 volt option available on some units.

ACCESSORIES

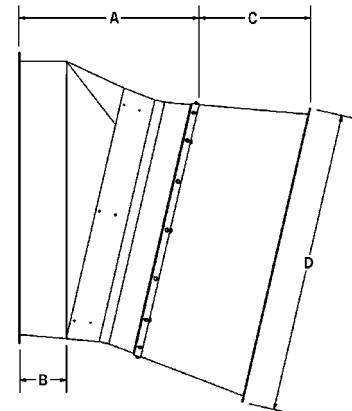
- Performance enhancing cone on 24" and larger fans.
- FRP board winter inserts with unique double seal.
- 240V cord kit accessory available.

BACK VIEW



DIMENSIONS

FAN SIZE	FAN		CONE		FRAMING DIMENSIONS		
	A	B	C	D	WIDTH	HEIGHT	
					All Walls	4" & 6" Wall	9" Wall
18"	28	9	-	-	24.75	24.75	25.25
24"	31	9	19	33	31	31	31.5
36"	34	9	21	47	43	43	43.5
50"	44	9	25	64	57	57	57.5



WARRANTY

- 10 years on housings
- 1 year on balance of fan







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SPECIFICATIONS

	Specifications							Model Number Specify * bulk pak or single	TESTED AT	Test Code	Performance												
	motor						blade mat'l				rpm	DbA	cone	0.00" SP		0.05" SP			0.10" SP		test code & report	test code	AFR
	type	speed	hp	voltage	phs	hz								cfm	cfm/w	cfm	cfm/w	amps	cfm	cfm/w			
BELT DRIVE 50"	high eff.	single	1.0	230	1	60	galv.	FG50B		00071	610	77	Y	28000	25.2	26500	22.1	5.50	24800	19.5	B00071	B	0.78
										00072			N	25900	22.5	24400	20.0	5.70	22800	17.7	B00072	B	0.79
	high eff.	single	1.0	230	1	60	galv.	FG50		00066	578	-	Y	25900	27.1	24100	23.5	-	22400	20.5	00066		0.75
										00773			N	24500	24.5	22900	21.4	-	21100	18.9	00773		0.75
	high eff.	single	1.5	115/230	1	60		FG50H		00061	630	-	Y	28200	22.7	26700	20.3	-	25200	18.1	00061	B	0.81
										00056			N	26800	20.0	25300	18.1	-	24000	16.4	00056	B	0.82
DIRECT DRIVE 36"	high eff.	single	1.0	230	1	60	galv.	FG36H		02201	850	80	Y	17010	18.5	16200	17.5	4.90	15340	15.6	02201		0.79
										02200			N	16000	16.6	15210	15.2	5.00	14400	14.0	02200		0.80
	high eff.	single	1/2	115/230	1	60	galv.	FG36		00080	850	75	Y	12300	26.1	11300	22.5	2.47	10500	19.5	B00080	B	0.71
										00075			N	11400	22.5	10600	19.4	2.63	9800	17.2	B00075	B	0.71
	high eff.	vari	1/3	115/230	1	50/60	6-poly	FG24CV		210114V	1100	75	Y	6350	15.3	6000	14.2	1.92	5750	13.3	C210114V	C	0.80
										210107V			N	5850	13.6	5600	13.0	1.93	5200	12.3	C210107V	C	0.70
18"	vari	1/3	115/230	1	60	6-poly	FG18CV		--	1075	65	Y	cone is not available										
									--			N	TBA										

Model Codes: 3 =three phase, A=aluminum blade, B=Blue Ribbon, H=high output, BD=36"belt drive, BD4=3/4"hp 36" belt, V=variable speed, C=corrosion resistant
Notes: AFR is the airflow ratio. Higher AFR indicates better performance under static pressure or against wind. It is calculated by dividing fan cfm at 0.20 static pressure by cfm at 0.05 sp.

Sound level measured 5 ft. in front of fan discharge.
 Amps measured at highest voltage. Amps at lower voltage approximately doubled.
 * Request 200 volt motor for 208 volt 3 phase applications.
 ** Fan was tested at 230 volts with 4.20 amps, at 460 volts it will be 2.10 amps.



Where Indicated

Note: Wind has a significant effect on exhaust fans. A 10 mph wind creates a 0.05" pressure against the fan. A 20 mph wind creates 0.20" pressure and 30 mph a 0.45" pressure. These pressures are in addition to the static pressure in the building. Wind blocks or hoods should be included in all designs where fans will be subjected to winds above 10 mph.

GUARANTEED PERFORMANCE

Canarm guarantees the performance of our fans. All fans with test numbers will perform as indicated when properly maintained (reports are available upon request). Our fans are tested in our AMCA fig 15 test chamber. The test chamber was designed and built to exacting AMCA/ASHRE standards for Canarm. A regimented calibration and verification schedule is followed. Be assured, Canarm fans provide the performance you require and expect.

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THE FIRST AND ONLY MOTOR OF ITS KIND IN THE AGRICULTURAL INDUSTRY

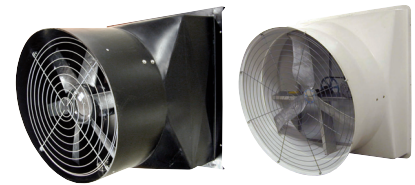
Our ECsmart Motor is an Electronically Commutated Motor. EC motors are electric motors that have permanent magnets on the rotor and use electronics to control the voltage and current applied to the motor.

Canarm brings you our latest innovation - the ECsmart motor featuring patent pending electronics. The result is an ENERGY EFFICIENT motor that runs COOLER than any other in the industry.



FEATURES

- The First EC motor that can be varied with existing 0-10v signal.
- Provides feedback for ventilation management.
- Can be retrofitted in any existing fan.
- Can be controlled by existing controls.
- Testing has confirmed power savings of 25-75%.
- ECsmart motors run cooler, virtually eliminating winding failures and increasing lifespan on the motor.
- Tested at BESS labs in our PLF and FG series fans.



PLF & FG models now available with EC motors.
See back page for details.

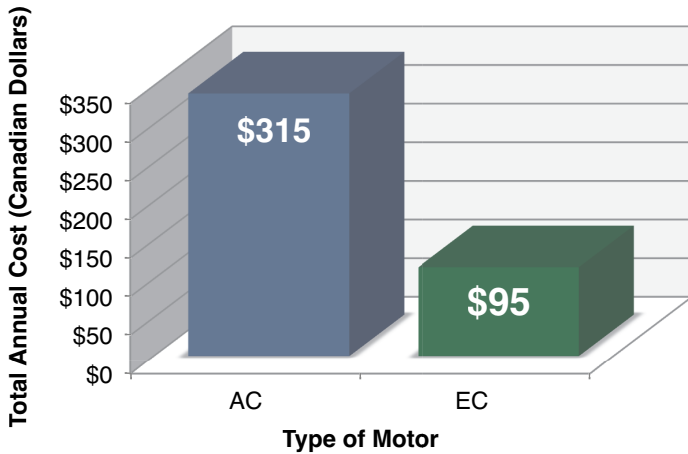
WARRANTY

Comes with a 1 year warranty.

EC VS. REGULAR MOTOR

Cost Savings (running at 60% speed)

Results show cost savings of a typical 24" fan using a regular motor vs a 24" fan using the ECsmart motor over a period of 365 days.



	FULL SPEED	60% SPEED
Typical AC Motor	536 W	324 W
ECsmart Motor	462 W	98 W
Input Cost of kWh	\$0.19	\$0.19
Input # hours per day	14 hrs/day	14 hrs/day
Total Annual Cost AC Motor	\$520.40	\$314.57
Total Annual Cost ECsmart Motor	\$448.56	\$95.15
Annual Savings by switching to ECsmart	\$71.84	\$219.42

Costs shown in Canadian dollars



PLF-EC SERIES

- Roto-molded impact resistant black polyethylene housings with UV prohibitors.
- Platform mount
- Easy to remove shutter assembly, complete with aerodynamic tie-bar poly louvers with stainless steel shutter frame and louver pin.
- Corrosion proof airfoil polypropylene blades on 12" to 24" sizes.
- Warranty: 5 years on plastic housing.
- Also available with our standard motor.

NOW AVAILABLE WITH
EC MOTORS
for energy savings



For complete product information, please see PLF Fans in Exhaust Fan section.

	Specifications						Model	TESTED AT	Test Code	Performance																Rough Opening Required		
	Motor				Shutter Frame	Blade mat'l				0.05"SP								0.1"SP										
	type	spd	volt	hp						Running @ 100%				Running @ 60%				Running @ 100%				Running @ 60%						
										rpm	cfm	cfm/w	amps	rpm	cfm	cfm/w	amps	rpm	cfm	cfm/w	amps	rpm	cfm	cfm/w	amps			
Direct	18"	Variable	230	1/3	Stainless Steel	Plastic	PLF18-EC	Certified by BESS LAB University of Illinois	16722	N	1850	3270	9.6	2.8	1004	730	11.5	0.60	1850	3000	9.2	2.7	1004	410	6.1	0.65	21.25" Sqr	
	24"			1/2							PLF24-EC	Certified by BESS LAB University of Illinois	16725	N	1846	6390	9.6	5.06	983	2080	21.2	0.93	1846	6090	9.2	5.04	983	1230
Direct	36"	Variable	230	3/4	Stainless Steel	Galvanized	PLF36-EC	Certified by BESS LAB University of Illinois	16731	N	900	12850	14.3	6.56	564	6400	22.0	2.44	900	11530	13	6.46	564	4640	14.2	2.68	40.25" Sqr	
											Y	900	14700	16.2	6.66	564	6680	25.2	2.25	900	13430	14.7	6.68	557	5070	16.2	2.59	

FG-EC SERIES

- The patented design provides excellent performance without a cone.
- Chop & Spray design with smooth inside for improved cleaning and air flow.
- Self draining, sloped housing is quick and easy to clean reducing maintenance costs.
- All fans have smooth operating, easy to clean, tie-bar poly shutters with stainless steel frame.
- Platform mount.
- Corrosion proof airfoil polypropylene blades on 12" to 24" sizes.
- Warranty: 10 years on housings
- Also available with our standard motor.

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For complete product information, please see FG Fans in Exhaust Fan section.

	Specifications						Model	TESTED AT	Test Code	Performance																Rough Opening Required		
	Motor				Shutter Frame	Blade mat'l				0.05"SP								0.1"SP										
	type	spd	volt	hp						Running @ 100%				Running @ 60%				Running @ 100%				Running @ 60%						
										rpm	cfm	cfm/w	amps	rpm	cfm	cfm/w	amps	rpm	cfm	cfm/w	amps	rpm	cfm	cfm/w	amps			
Direct	18"	Variable	230	1/3	Stainless Steel	Plastic	FG18-EC	Certified by BESS LAB University of Illinois	16729	N	1400	3330	10.8	2.5	820.0	780	12.6	0.59	1400	3110	10.4	2.5	820.0	560	8.8	0.61	24.75" Sqr	
	24"			1/2							FG24-EC	Certified by BESS LAB University of Illinois	16727	N	1250	5660	8.9	4.77	652	1870	22.5	0.82	1250	5360	8.7	4.61	652	1090
Direct	36"	Variable	230	3/4	Stainless Steel	Galvanized	FG36-EC	Certified by BESS LAB University of Illinois	16730	N	900	14940	16.5	6.56	564	7920	31.1	2.17	900	14060	15.2	6.69	564	6040	21.1	2.38	43" Sqr	
											Y	900	15860	18.1	6.44	564	8200	33.3	2.10	900	15010	16.5	6.56	564	6190	23.1	2.29	

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May not be as shown



FRONT VIEW

Canarm/LFI's standard fans follow a tradition of quality in design, materials and construction. All our standard fans are developed to be efficient and economically priced. Fans are now available with EC motors allowing you to **save up to 70% on energy costs.**

To determine the proper Canarm/LFI fan for your applications, use the following formula.

$$\text{Number of cubic feet in room} / \text{Number of minutes per air change} = \text{Required C.F.M. Capacity}$$

EXAMPLE: A general office, (see chart) which requires an air change every ten minutes, would require the following fan capacity.

$$\text{If office is } 100' \times 40' \times 10' = 40,000 \text{ cubic ft}$$

$$40,000 \text{ cubic ft} / 10 \text{ minutes per air change} = 4000 \text{ Required C.F.M.}$$

From the chart, you would select a fan that is rated at 4000 C.F.M. at 1/8" S.P. (Static Pressure)

FEATURES

- Available in 8" to 36" sizes
- High efficiency totally enclosed EC motor
- Rugged steel welded box housing with durable powder coat finish
- Osha guard on intake side of fan
- Shipped completely assembled.

Application	Minutes per Air Change	Application	Minutes per Air Change	Application	Minutes per Air Change	Application	Minutes per Air Change
Assembly Hall	7	Church	15	Foundry	4	Pressing Room	1
Attic	2	Classroom	6	Garage	5	Projection Booth	2
Auditorium	10	Dance Hall	5	General Office	10	Summer Cooling	1
Barber Shop	6	Department Store	6	Gymnasium	8	Toilet	3
Basement	8	Dry Cleaning	5	Laundry	2	Transformer Room	1
Battery Room	4	Engine Room	6	Locker Room	3	Warehouse	12
Boiler Room	1	Factory	6	Machine Shop	8	Welding Shop	2
Bowling Alley	5	Forge Room	3	Plating Room	3		

8" - 24" sizes: Now upgrade with tiebar shutters and magnets for quieter operation and superior seal

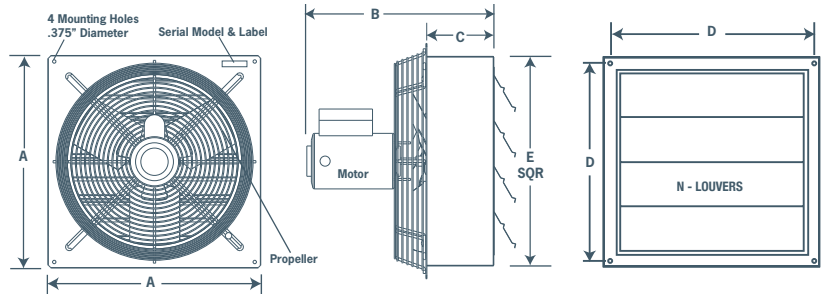
PERFORMANCE SPECIFICATIONS

MODEL	SPEED	BLADE DIAMETER	RPM	HP	VOLTAGE	AMPS (FLA)	WEIGHT (LBS)	dB(A) @5 ft	CFM @ STATIC PRESSURE				FRAMING DIMENSIONS
									0.00"	0.10"	0.125"	0.25"	
SD8-ECV	Variable	8"	1800	1/4	115/208-280	2.8/1.7-1.3	12	48	360	270	230	0	11" X 11"
SD10-ECV	Variable	10"	1800	1/4	115/208-280	2.8/1.7-1.3	13	56	690	590	570	0	13" X 13"
SD12-EC	Variable	12"	1800	1/4	115/208-280	2.8/1.7-1.3	32	60	1650	1540	1510	1390	15" X 15"
SD14-EC	Variable	14"	1800	1/4	115/208-280	2.8/1.7-1.3	34	65	2180	2080	2060	1890	17" X 17"
SD16-EC	Variable	16"	1800	1/4	115/208-280	2.8/1.7-1.3	36	63	2370	2270	2210	2063	19" X 19"
SD18-EC	Variable	18"	1800	1/2	115/208-280	3.5/2.2-1.7	37	73	3200	3090	3040	2920	21" X 21"
SD20-EC	Variable	20"	1800	1/2	115/208-280	5.3/3.3-2.6	45	77	3440	3240	3180	2930	23" X 23"
SD24-EC	Variable	24"	1200	1/2	115/208-280	5.7/3.5-2.8	56	70	5050	4910	4810	4400	27" X 27"
SD30-EC	Variable	30"	1000	3/4	115/208-280	9.5/5.2-4.2	72	82	8000	7000	6000	5000	33" X 33"
SD36-EC	Variable	36"	1000	3/4	115/208-280	9.5/5.2-4.2	88	84	10000	8500	8000	6200	39" X 39"

PLEASE NOTE: The above is subject to change without notice as these are still in development.

DIMENSIONS

FAN SIZE	A X A SQUARE	B	C	D (c/c)	E	N
8"	13 1/4"	13 1/2"	4"	12"	10 3/4"	2
10"	15 1/4"	13 1/2"	4"	14"	12 3/4"	2
12"	17 1/4"	16 1/2"	6"	16"	14 3/4"	3
14"	19 1/4"	16 1/2"	6"	18"	16 3/4"	3
16"	21 1/4"	16 1/2"	6"	20"	18 3/4"	4
18"	23 1/4"	16 1/2"	6"	22"	20 3/4"	4
20"	25 1/4"	17	6 3/4"	24"	22 3/4"	5
24"	29 1/4"	18"	6 3/4"	28"	26 3/4"	5
30"	35 1/4"	19"	6"	34"	32 3/4"	16
36"	41 1/4"	19"	6"	40"	38 3/4"	20



ACCESSORIES

- Grey plastic weather hood
- Galvanized metal hood
- 0V to 10V Control

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EFFICIENT • LOW MAINTENANCE • EASY INSTALLATION



8" & 10" MODELS
FRONT VIEW



8" & 10" MODELS
BACK VIEW



12" to 24" MODELS
FRONT VIEW



30", 36", 42" & 48"
MODELS WITH ALUMINUM
LOUVERS



12" to 48" MODELS
BACK VIEW

Canarm's standard fans follow a tradition of quality in design, materials and construction. All our standard fans are developed to be efficient and economically priced. Fans are available in single, two and variable speed models. All variable speed standard fans use an energy efficient variable speed, dual voltage motor and blade combination. To determine the proper Canarm fan for your applications, use the formula and table shown on back of page.

FEATURES

8" & 10" Models

- Smooth, quiet, reliable, maintenance-free operation.
- Durable steel construction with grey powder coat finish.
- 2 speed fan with high efficiency Euro design external rotor motor.
 - Totally enclosed with sealed ball bearings.
 - Pull chain speed control.
 - 9 foot cord with 115 volt, 3-prong plug.
- Swept back, high efficiency, low noise blade design.
- Quiet, aluminum shutters with tie bar to maximize airflow and a magnet to prevent flapping and provide a superior seal.
- Zinc plated OSHA guard.
- Fans shipped completely assembled.
- Easy to install! Mount fan using four screws, plug it in and turn it on.

8" - 24" sizes: Now upgraded with tiebar shutters and magnets for quieter operation and superior seal

12" to 48" Models

- Single, two and variable speed models are available.
- All fans use a totally enclosed, thermally protected motor.
- Rugged steel welded box housing has a durable powder coated finish.
- Aluminum louver shutters are supported by long life nylon bushings (30", 36", 42" & 48" have aluminum louvers).
- 12" - 24" models have heavy wire chrome plated OSHA guards on intake side of fan. 30", 36", 42" & 48" models have grey powder coated guards.
- All fans are shipped completely assembled.



SPECIFICATIONS

MODEL	SPEED	BLADE DIAMETER	RPM	HP	VOLTAGE	AMPS (FLA)	WEIGHT (LBS)	dB(A) @5 ft	CFM @ STATIC PRESSURE				FRAMING DIMENSIONS				
									0.00"	0.10"	0.125"	0.25"					
SD08	Two	8"	1600/1300	25W	115	0.2	13	48	360/292	270/150	230/110	--	11" X 11"				
SD10	Two	10"	1480/1150	60W	115	0.5	15	55	500/388	420/300	400/250	--	13" X 13"				
S12-E1	Single	12"	1625	1/4	115	2.7	28	63	1640	1540	1510	1390	15" X 15"				
S12-E2	Two	12"	1725/1140	1/4	115	3.4	32	64	1650/1090	1550/950	1520/930	1390/0	15" X 15"				
S12-EVD	Variable	12"	1625	1/3	115/230	5.0/2.5	32	60	1650	1540	1510	1390	15" X 15"				
S14-E1	Single	14"	1625	1/4	115	2.7	30	67	2170	2070	2030	1860	17" X 17"				
S14-E2	Two	14"	1725/1140	1/4	115	3.4	34	65	2180/1350	2080/1190	2060/1160	1890/0	17" X 17"				
S16-E1	Single	16"	1625	1/4	115	2.7	33	68	2370	2270	2210	2060	19" X 19"				
S16-E2	Two	16"	1725/1140	1/4	115	3.4	36	69	2380/1640	2280/1490	2230/1430	2070/0	19" X 19"				
S16-EVD	Variable	16"	1625	1/3	115/230	5.0/2.5	36	63	2370	2270	2210	2063	19" X 19"				
S18-F1	Single	18"	1625	1/3	115	4.1	37	73	3200	3090	3040	2920	21" X 21"				
S18-F2	Two	18"	1725/1140	1/3	115	5.5/2.9	43	74	3200/2100	3090/1890	3040/1820	2920/0	21" X 21"				
S18-FVD	Variable	18"	1625	1/3	115/230	3.8/1.9	45	74	3150	3050	2980	2860	21" X 21"				
S20-F1	Single	20"	1625	1/3	115	4.1	41	77	3420	3220	3170	2920	23" X 23"				
S20-F2	Two	20"	1725/1140	1/3	115	5.5/2.9	45	77	3440/2300	3240/2000	3180/1950	2930/0	23" X 23"				
SD24-F1	Single	24"	1100	1/3	115	3.6	46	70	5000	4500	4300	3600	27" X 27"				
SD24-GVD	Variable	24"	1075	1/3	115/230	4.4/2.2	56	72	5050	4910	4810	4400	27" X 27"				
SD30-G1D	Single	30"	1075	1/3	115/230	4.4/2.2	72	82	8000	7000	6000	5000	33" X 33"				
SD36-G1D	Single	36"	850	1/2	115/230	6.6/3.3	88	72	10000	8500	8000	6200	39" X 39"				
SD42-H1D	Single	42"	850	1	230	5	122	83	BHP	FEI	BHP	FEI	BHP	FEI	BHP	FEI	45" X 45"
									0.85	1.35	0.87	1.45	0.87	1.45	0.92	1.41	
SD48-H1D	Single	48"	850	1	230	5	140	84	12860	11580	11090	9029					
									BHP	FEI	BHP	FEI	BHP	FEI	BHP	FEI	
									0.82	1.56	0.84	1.67	0.84	1.69	0.83	1.48	
									14470	12610	12200	8400					



Some models are available with explosion proof motors. Please see Explosion Proof Standard Fans.

AIR CHANGES PER MINUTE

To determine the proper Canarm/LFI fan for your applications, use the following formula.
 Number of cubic feet in room / Number of minutes per air change = Required C.F.M. Capacity

EXAMPLE: A general office, (see chart) which requires an air change every ten minutes, would require the following fan capacity.
 If office is 100' x 40' x 10' = 40,000 cubic ft; 40,000 cubic ft / 10 minutes per air change = 4000 Required C.F.M.

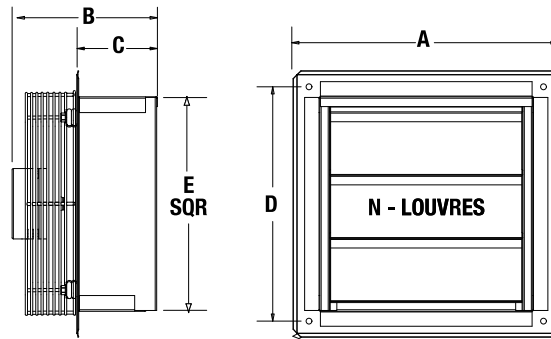
From the chart, you would select a fan that is rated at 4000 C.F.M. at 1/8" S.P. (Static Pressure)

Application	Minutes per Air Change	Application	Minutes per Air Change	Application	Minutes per Air Change	Application	Minutes per Air Change
Assembly Hall	7	Church	15	Foundry	4	Pressing Room	1
Attic	2	Classroom	6	Garage	5	Projection Booth	2
Auditorium	10	Dance Hall	5	General Office	10	Summer Cooling	1
Barber Shop	6	Department Store	6	Gymnasium	8	Toilet	3
Basement	8	Dry Cleaning	5	Laundry	2	Transformer Room	1
Battery Room	4	Engine Room	6	Locker Room	3	Warehouse	12
Boiler Room	1	Factory	6	Machine Shop	8	Welding Shop	2
Bowling Alley	5	Forge Room	3	Plating Room	3		

DIMENSIONS

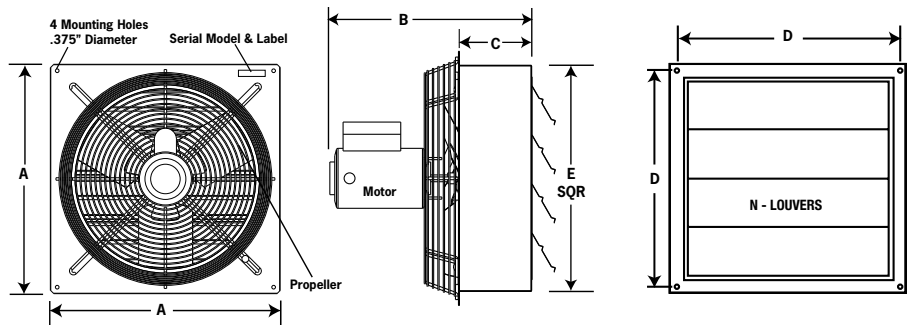
8" & 10" Models

FAN SIZE	A	B	C	D (c/c)	E	N
8"	13 1/4"	7 9/16"	4"	12"	10 3/4"	2
10"	15 1/4"	7 7/8"	4"	14"	12 3/4"	3



12" to 48" Models

FAN SIZE	A	B	C	D (c/c)	E	N
12"	17 1/4"	17"	6"	16"	14 3/4"	3
14"	19 1/4"	17"	6"	18"	16 3/4"	3
16"	21 1/4"	17"	6"	20"	18 3/4"	4
18"	23 1/4"	18"	6"	22"	20 3/4"	4
20"	25 1/4"	18"	6 3/4"	24"	22 3/4"	5
24"	29 1/4"	18"	6 3/4"	28"	26 3/4"	5
30"	35 1/4"	18"	6"	34"	32 3/4"	16
36"	41 1/4"	18"	6"	40"	38 3/4"	20
42"	47 1/4"	18"	6 3/4"	46"	44 3/4"	24
48"	53 1/4"	19"	6 3/4"	52"	50 5/8"	26

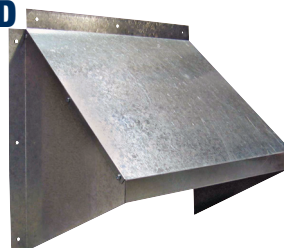


ACCESSORIES

GREY PLASTIC HOOD



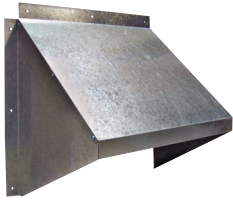
GALVANIZED METAL HOOD



MC TYPE CONTROL 240V MC5

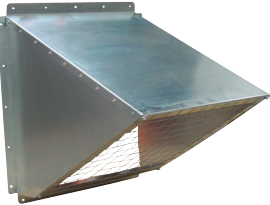


GH GALVANIZED HOODS



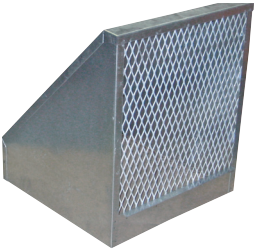
- Economical shipping.
- Easy to assemble, galvanized hood.
- No screens.

GH KNOCK DOWN HOODS



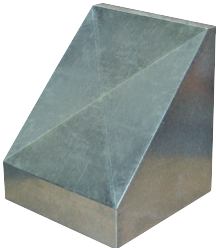
- Easy to assemble, galvanized hood.
- Includes bird screen.

WHA HOODS



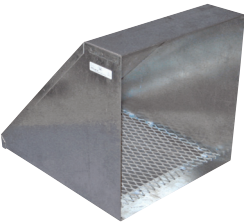
- For AX fans.
- Shipped fully assembled.
- 18 gauge galvanized weather hoods complete with bird screen.

WHP HOODS



- Optional insect screen available. Consult factory.
- For Panel fans.

INTAKE & EXHAUST HOODS



- Shipped fully assembled.
- 18 gauge galvanized weather hoods complete with bird screen.

PLASTIC HOODS



- Rugged, grey plastic hood.
- No screens.

HOOD MODEL	DIMENSIONS		APPROX. WEIGHT (LBS)	FANS THAT WILL FIT
	INSIDE DIMENSIONS	OUTSIDE DIMENSIONS		
GH GALVANIZED HOODS				
GH-XF12-M	14.75"W X 14.0"H	18"W X 15.75"H	4	XF12 / XB12 / SD8 / SD10 / AX8 / AX10 / AX12
GH-XF16-M	18.75"W 17.75"H	22"W X 19.75"H	7	XF16 / XB12 / HV12 / HVA12 / ADD12 / DDP12 / DDS12 / SD12-14 / AX14-16
GH-XF20-M	22.75"W X 22"H	26"W X 23.75"H	9	XF20 / XB14 / XB16 / HV14-16 / HVA14-16 / ADD14-16 / DDP14-16 / DDS14-16 / SD16-18 / AX18-20
GH-XF24-M	26.75"W 26"H	29"W X 27.25"H	12	XFS24

HOOD MODEL	DIMENSIONS		APPROX. WEIGHT (LBS)	FANS THAT WILL FIT
	INSIDE DIMENSIONS	OUTSIDE DIMENSIONS		
GH KNOCKDOWN HOODS				
GH-KD24	31.65"W X 31.85"H	34.65"W X 34.83"H	31	XB24 / HV24 / HVA24 / ADD24 / DDP24 / DDS24 / SD24 / AX24
GH-KD36	43.62"W X 43.93"H	46.62"W X 46.82"H	75	XB30-36 / HV30-36 / HVA30-36 / ADD30-36 / DDS30-36 / SD30-36 / AX30-36 / AX42
GH-KD48	55.62"W X 55.25"H	58.62"W X 58.82"H	TBA	XB42-48 / HV42-48 / HVA42-48 / ADD42-48 / DDS42-48 / SD42 / AX42
GH-KD60	69.76"W X 69.92"H	72.76"W X 72.95"H	TBA	XB54-60 / HV54-60 / HVA54-60 / ADD54-60

HOOD MODEL	DIMENSIONS		APPROX. WEIGHT (LBS)	FANS THAT WILL FIT
	INSIDE DIMENSIONS	OUTSIDE DIMENSIONS		
WHA HOODS				
WHA8-10	12.11"W X 12.11"H		13	AX08-10, SD8
WHA12	14.05"W X 14.05"H		16	AX12, SD10
WHA14	16.11"W X 16.11"H		22	AX14, SD12
WHA16	18.11"W X 18.11"H		26	AX16, SD14
WHA18	20.11"W X 20.11"H		29	AX18, SD16
WHA20	22.05"W X 22.05"H		31	AX20, SD18
WHA24	26.05"W X 26.05"H		47	AX24
WHA30	33.05"W X 33.05"H		59	AX30
WHA36	39.11"W X 39.11"H		76	AX36

HOOD MODEL	DIMENSIONS		APPROX. WEIGHT (LBS)	FANS THAT WILL FIT
	INSIDE DIMENSIONS	OUTSIDE DIMENSIONS		
WHP HOODS				
WH8-10P	14.45"W x 14.45"H		20	P08 / P10
WH12P	17.40"W X 17.40"H		16	P12
WH14P	19.20"W X 19.20"H		24	P14
WH16P	21.20"W X 21.20"H		26	P16
WH18P	23.20"W X 23.20"H		29	P18
WH20P	25.20"W X 25.20"H		44	P20
WH24P	29.15"W X 29.15"H		44	P24
WH30P	35.65"W X 35.65"H		60	P30
WH36P	41.65"W X 41.65"H		77	P36

HOOD MODEL	DIMENSIONS		APPROX. WEIGHT (LBS)	FANS THAT WILL FIT
	INSIDE DIMENSIONS	OUTSIDE DIMENSIONS		
EXHAUST / INTAKE / WEATHER HOODS				
EH12	16.55"W X 16.55"H		9	XF12 / SD8-12 / AX8-14 / XB12 / HV12 / HVA12 / ADD12 / DDP12 / DDS12
EH14	18.60"W X 18.60"H		15	XB14 / HV14 / HVA14 / ADD14 / DDP14 / DDS14 / SD14 / XF16 / AX16
EH16	20.60"W X 20.60"H		20	AX18 / SD16 / XB16 / HV16 / HVA16 / ADD16 / DDP16 / DDS16
EH18	22.55"W X 22.55"H		31	SD18 / XB18 / HV18 / HVA18 / ADD18 / DDP18 / DDS18 / XF20 / AX20
EH20	24.55"W X 24.55"H		44	SD20 / XB20 / XF24 / HV20 / HVA20 / ADD20 / DDP20 / DDS20
EH24	30.05"W X 30.05"H		60	SD24 / AX24 / XB24 / ADD24 / HV24 / HVA24 / DDP24 / DDS24
EH30	36.35"W X 36.35"H		72	SD30 / AX30 / XB30 / HV30 / HVA30 / ADD30 / DDS30 / JFHVA24
EH36	42.30"W X 42.30"H		104	SD36 / AX36 / XB36 / HV36 / HVA36 / ADD36 / DDS36 / JFHVA30
EH42	48.63"W X 48.63"H		163	XB42 / HV42 / HVA42 / ADD42 / DDS42 / JFHVA36 / SD42 / AX42
EH48	54.64"W X 54.64"H		TBA	XB48 / HV48 / HVA48 / ADD48 / DDS48 / JFHVA42
EH54	61.20"W X 61.20"H		TBA	XB54 / HV54 / HVA54 / ADD54 / JFHVA48
EH60	69.39"W X 69.39"H		TBA	XB60 / HV60 / HVA60 / ADD60

HOOD MODEL	DIMENSIONS		APPROX. WEIGHT (LBS)	FANS THAT WILL FIT
	INSIDE DIMENSIONS	OUTSIDE DIMENSIONS		
PLASTIC HOODS				
HFP-18G	21.50"W X 21.75"H		9	S8 / S10 / S12 / S14 / S16 / S18V / AX08 / AX10 / AX12 / AX14 / AX16 / AX18
HFP-24G	27.50"W X 27.75"H		13	S20 / S24 AX20 / AX24

EFFICIENT • LOW COST MAINTENANCE • EASY INSTALLATION

Canarm LFI's explosion proof fans follow a tradition of quality in design, materials and construction. Using our quality "Standard Fan" housing and motor mount as the basis for design, we have developed an efficient, economically priced Explosion Proof Fan. All Explosion Proof Fans have a single speed, dual voltage explosion proof motor that meets and conforms to all the standards that are listed below.



FRONT VIEW

CLASS I, GROUP C

Atmospheres containing ethyl ether, ethylene, gases or vapors of equivalent hazard.

CLASS I, GROUP D

Atmospheres such as acetone, ammonia, benzene, butane, cyclopropane, ethanol, gasoline, hexane, methane, natural gas, naphtha, propane, or gasses or vapors of equivalent hazard.

CLASS II GROUP F

Atmospheres containing carbonaceous dust, including carbon black, charcoal, coal, or coke dusts that have more than 8% total entrapped volatiles, or dusts that have been sensitized by other materials so that they present an explosion hazard.

CLASS II GROUP G

Atmospheres containing combustible dusts not included in group E or F, including flour, grain, wood, plastic and chemicals.

FEATURES

- Totally enclosed, ball bearing motor with thermal overload protection.
- The fan blades are well-balanced, heavy gauge aluminum.
- The rugged steel welded box housing has a durable powder coated finish.
- Aluminum louver shutters are supported by long life nylon bushings.
- Heavy wire chrome plated OSHA guards on intake side of fan.
- All fans are shipped completely assembled.



BACK VIEW

PERFORMANCE DATA & SPECIFICATIONS

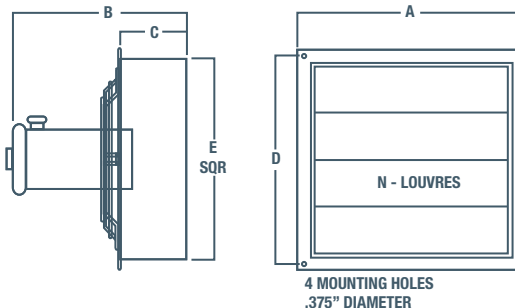
MODEL	FAN SIZE	HP	VOLTS	AMPS	SPEED	RPM	AIRFLOW CAPACITY - CFM				FRAMING DIMENSIONS	WEIGHT (LBS)
							0" SP	.05" SP	.10" SP	.25" SP		
SD08-XPf	8"	1/3	115/230	6.6/3.3	Single	1625	320	280	240	-	11" X 11"	38
SD10-XPf	10"	1/3	115/230	6.6/3.3	Single	1625	620	575	530	-	13" X 13"	39
SD12-XPf	12"	1/3	115/230	6.6/3.3	Single	1625	1,640	1,600	1,540	1,390	15" x 15"	42
SD18-XPf	18"	1/3	115/230	6.6/3.3	Single	1625	3,200	3,150	3,090	2,920	21" x 21"	60
SD24-XPf	24"	1/3	115/230	6.6/3.3	Single	1625	5,500	5,400	5,310	5,100	27" x 27"	72

NOTE: RPM Min (Minimum) is determined when louvres are opened one inch.

Note: Wind has a significant effect on exhaust fans. A 10 mph wind creates a 0.05" pressure against the fan. A 20 mph wind creates 0.20" pressure and 30 mph a 0.45" pressure. These pressures are in addition to the static pressure in the building. Wind blocks or hoods should be included in all designs where fans will be subjected to winds above 10 mph.

DIMENSIONS

FAN SIZE	A X A SQUARE	B	C	D c/c	E	N
8"	13 1/4"	17 1/2"	4"	12"	10 3/4"	2
10"	15 1/4"	17 1/2"	4"	14"	12 3/4"	2
12"	17 1/4"	20 1/2"	6"	16"	14 3/4"	3
18"	23 1/4"	20 1/2"	6"	22"	20 3/4"	4
24"	29 1/4"	20 1/2"	6"	28"	26 3/4"	5



ACCESSORIES

- Hoods.

WARRANTY

- 1 year on all components.

FOR USE IN GARAGES, SHEDS, WORKSHOPS AND MORE!

Canarm's XFS series wall exhaust fans are ideal for commercial applications. They feature smooth, quiet, reliable, maintenance free operation. Available in 12" to 36" sizes - fans are single, 2 or 3 speeds with OFF and come complete with a 9' cord and grounded plug. The fans have a durable steel construction with powder coat black finish and quiet, aluminum shutters with tie bar to maximize airflow. Installation is easy - simply mount the fan with 4 screws, plug it in and turn it on!

FEATURES

- Smooth, quiet, reliable, maintenance free operation.
- Available in 12" to 36" sizes.
- 12" and 16" models are 3 speed
- 20" to 30" models are 2 speed.
- 36" model is single speed.
- Durable steel construction with powder coat black finish.
- Swept back, high efficiency, low noise blade design.
- Shutters have a small magnet to prevent flapping and provide a superior seal.
- Quiet, aluminum shutters with tie bar to maximize airflow.
- Strong powder coated OSHA guarding inside.
- ETL certified
- Euro design outside rotor motor for higher efficiency.
 - Totally enclosed with sealed ball bearings
 - Pull chain speed control
 - 9 foot cord with 115 volt, 3-prong plug
- Fans shipped totally assembled.

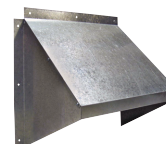
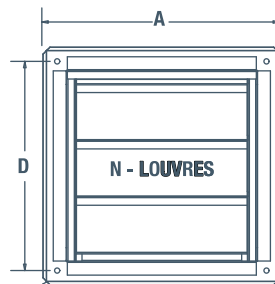
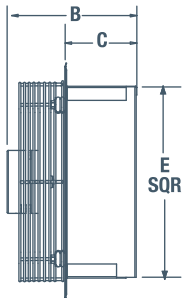


PERFORMANCE DATA & SPECIFICATIONS

MODEL	FAN SIZE	MOTOR HP	SPEED	VOLTS	NET WEIGHT	FAN RPM	CFM at 1/8" SP	HIGH SPEED SOUND LEVEL dB(A)	MAX AMPS	MAX AMBIENT TEMP
XFS12	12"	1/12	3	115	19 lbs	1600/1420/1150	1100/900/800	58	0.8/0.8/0.7	90°C/194°F
XFS16	16"	1/8	3	115	27 lbs	1630/1450/1330	2300/2000/1800	58	2.0/1.8/1.6	74°C/158°F
XFS20	20"	1/4	2	115	40 lbs	1140/1050	3300/2900	68	2.3/2.0	70°C/158°F
XFS24	24"	1/2	2	115	56 lbs	1140/1070	4700/3800	72	5.0/4.3	70°C/158°F
XFS30	30"	1/2	2	115	72 lbs	1080/980	6400/5000	71/68	4.9/4.3	70°C/158°F
XFS36	36"	1	1	115	88 lbs	943	6339	76	7.2	70°C/158°F

DIMENSIONS

MODEL	A X A SQUARE	B	C	D (c/c)	E SQR	N (# OF LOUVRES)	FRAMING	CARTON DIMENSIONS		
								Length	Height	Width
XFS12	16 7/8"	8 3/8"	5"	14 7/8"	13 1/2"	3	14" x 14"	20"	20"	12"
XFS16	20 7/8"	9 1/2"	5"	18 7/8"	17 1/2"	4	18" x 18"	25"	25"	13"
XFS20	24 7/8"	9 1/2"	5"	22 7/8"	21 1/2"	5	22" x 22"	28"	28"	13"
XFS24	28 7/8"	11 1/8"	5"	26 7/8"	25 1/2"	6	26" x 26"	32"	32"	15"
XFS30	34 7/8"	12 1/2"	5"	32 7/8"	31 1/2"	7	34" x 34"	38"	38"	15.75"
XFS36	40 7/8"	14 1/2"	5"	38 7/8"	37 1/2"	8	40" x 40"	44"	44"	17"



Tie bar aluminum shutters



Pull chain switch

ACCESSORIES

Optional galvanized weather hood.

OPTIONAL WEATHER HOOD	
FAN SIZES	HOOD #
12"	GH-XF12
16"	GH-XF16
20"	GH-XF20
24"	GH-XF24

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To determine the proper XFS Fan for your applications, use the following formula.
Number of cubic feet in room / Number of minutes per air change = Required CFM Capacity

EXAMPLE: A general office, (see chart) which requires an air change every ten minutes, would require the following fan capacity.

If office is 100' x 40' x 10' = 40,000 cubic ft;
40,000 cubic ft / 10 minutes per air change = 4000 Required CFM

From the chart, you would select a fan that is rated at 4000 CFM at 1/8" S.P. (Static Pressure)

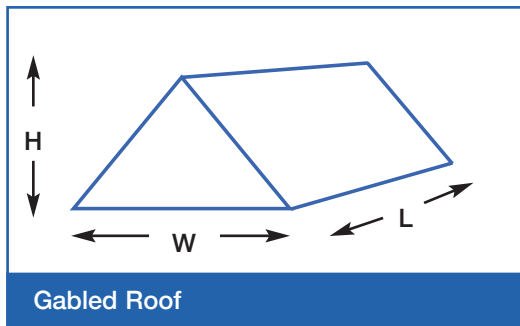


Application	Minutes per Air Change	Application	Minutes per Air Change	Application	Minutes per Air Change	Application	Minutes per Air Change
Assembly Hall	7	Church	15	Foundry	4	Pressing Room	1
Attic	2	Classroom	6	Garage	5	Projection Booth	2
Auditorium	10	Dance Hall	5	General Office	10	Summer Cooling	1
Barber Shop	6	Department Store	6	Gymnasium	8	Toilet	3
Basement	8	Dry Cleaning	5	Laundry	2	Transformer Room	1
Battery Room	4	Engine Room	6	Locker Room	3	Warehouse	12
Boiler Room	1	Factory	6	Machine Shop	8	Welding Shop	2
Bowling Alley	5	Forge Room	3	Plating Room	3		

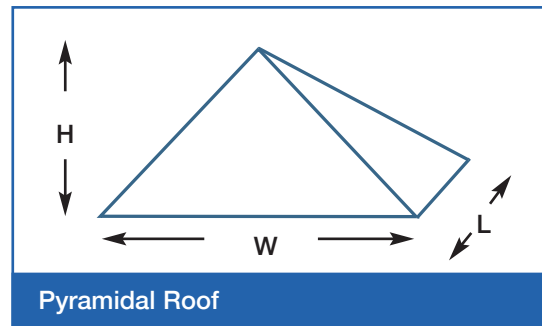
ATTIC VENTILATION

CAUTION!

Attic temperatures can get very high and exceed the high temperature protection device, shutting down the fan if there is not enough air change to keep the attic at a temperature below 120 °F.



$$\text{Volume} = L \times W \times 1/2 H$$



$$\text{Volume} = L \times W \times 1/3 H$$

Recommended air changes in an attic are about 2-3 minutes per air charge (MIN/AC) to keep the temperatures down. (2 minutes in southern climates and 3 minutes in northern climates.)

Using 2 minutes, required exhaust CFM = $\frac{\text{Total Volume}}{2 \text{ MIN/AC}}$

This provides your required CFM of the exhaust fan, BUT there must be enough venting to supply fresh air to the attic space. A good rule of thumb is 1.5 ft² for every 1000 CFM of airflow.

EXAMPLE:

Southern Climate $\frac{6000 \text{ ft}^3}{2} = 3000 \text{ CFM}$
Use XFS20

Southern climate inlet opening = $3000 \times \frac{1.5}{1000} = 4.5 \text{ ft}^2$

Northern Climate $\frac{6000 \text{ ft}^3}{3} = 2000 \text{ CFM}$
Use XFS16

Northern climate inlet opening = $2000 \times \frac{1.5}{1000} = 3 \text{ ft}^2$

RECOMMENDED VENTILATION RATES FOR VARIOUS TYPES OF LIVESTOCK

Ventilation Rates

TYPE OF ANIMAL		VENTILATION RATE CFM/ANIMAL	
		COLD WEATHER	WARM WEATHER
BEEF	Beef Calves <3 months	10 ^a	120
	Veal Calves	12 ^a	175
	Beef Feeder	15	300
	Beef Cow (450 kg)	20	400
CHICKENS	Laying Hens	0.3	6.0 ^b
	Replacement Pullets	0.08-0.30	5
	Broiler Breeders	0.40	8.0 ^c
	Broiler Chickens	0.08-0.80	7.0 ^c
DAIRY	Calves <1 month	10 ^a	100
	Calves 1-3 months	12 ^a	120
	Heifers 3-12 months	15 ^a	150
	Heifers 12-24 months	20	200
	Small Framed Cow (e.g. Jersey)	25	400
	Large Framed Cow (e.g. Holstein)	40	600
GOATS	Mature Does & Bucks	8 ^a	120
	Kids	2 ^a	25
HORSES	Small Framed <400 kg	20 ^a	200
	Large Framed >400 kg	30 ^a	300
RABBITS	Doe & Litter	0.5 ^a	15
	Market Rabbits	0.1 ^a	10
SHEEP	Ewes & Rams	10 ^a	120
	Feeder Lambs	3 ^a	40
SWINE	Breeding/Gestating Sow	10	200
	Farrowing Sow with Litter	15	400
	Nursery Pigs 4-25 kg	1.0-3.0 ^a	15-35 ^d
	Grower Pigs 25-60 kg	4.0-6.0	50-70
	Finishing Pigs 60-120 kg	6.0-8.0	70-90
TURKEYS	Breeders	1.0-2.0	25-35 ^c
	Broiler Turkeys 0-8 kg	0.08-0.60	20 ^c
	Heavy Broilers 8-12 kg.	0.60-1.0	25 ^c
	Heavy Turkey Toms 18-24kg.	1.0-1.5	30 ^c

- To have reasonably good air quality, this minimum winter ventilation rate may need to be increased to ensure at least 3 and preferably 4 room air changes per hour.
- This summer ventilation rate may need to be increased to ensure at least 1.5 or preferably 2 air changes per minute during hot summer weather.
- Ensure the summer ventilation rate is at least 1 air change per minute.
- Limit the maximum summer air changes to 1 per minute for sensitive livestock.

IMPROVE AIR QUALITY • SAVE ENERGY • CONTROL HUMIDITY



The heat recovery ventilator is an easy and effective solution for rooms and smaller areas, and provides innovative ventilation for fresh air intake and stale air exhaust. Perfect for horse stalls, calf penning and chicken coops.

FEATURES

- Fresh air supply.
- Heating cost savings during winter.
- Indoor humidity control.
- One Breathe-Right HRV can ventilate up to 343 sq. ft.
- Units can operate independently or can be wired for master-slave operation.
- Air filtration.
- Anti-bacterial air treatment.
- Polluted air extract.
- 5 Year Warranty.

BENEFITS

PLUG-&-PLAY INSTALLATION

- No special skills required.
- No balancing needed.
- Through the wall installation.
- Compact unit design.

MULTIFUNCTIONAL WIRELESS REMOTE CONTROL

- Almost no maintenance required.
- Washable filter and core.
- MERV6 air purification.
- Antibacterial treatment of ERV core and filters.

ALUMINUM OUTER HOOD

- Modern design that fits any interior and exterior.
- 100% corrosion proof.

EC MOTOR

- Efficacy 5.7 CFM/W – Twice as high as the Energy Star requirement
- Whisper quiet operation, as low as 0.1 SONES.

PATENT PENDING ON CERAMIC ERV CORE

External rotor motor on ball bearing with thermal protection ensures long life of the fans.

VENTILATION APPLICATION EXAMPLE

One Breathe-Right HRV unit can serve areas up to 343 SQ. FT.

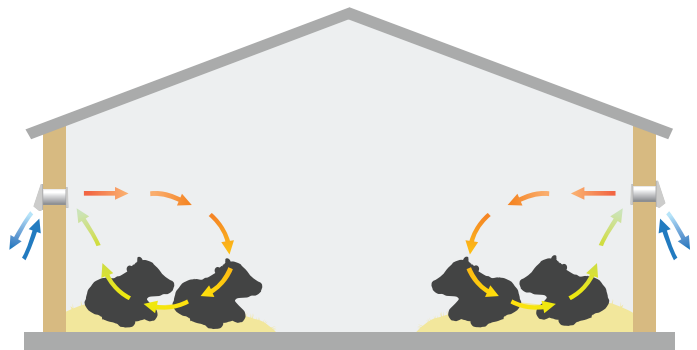
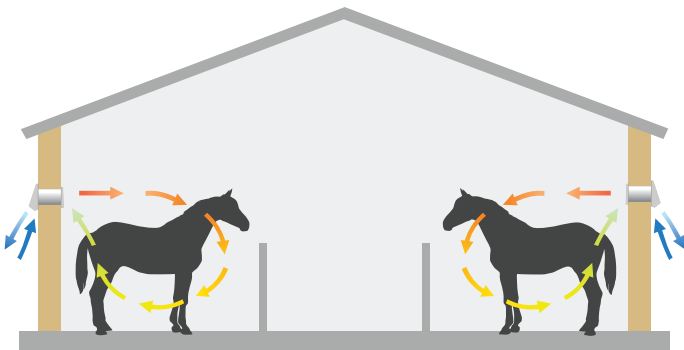
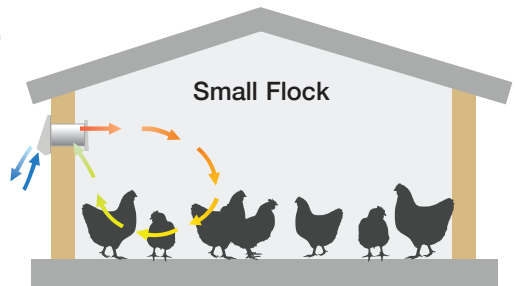
To arrange a ventilation system based on Breathe-Right HRV ventilators, install one unit in each stall. Units can operate independently or can be wired for master-slave operation.

One Breathe-Right HRV unit can ventilate an area for:

1 horse
2 calves

10 goat kids
10 lambs

40 chickens



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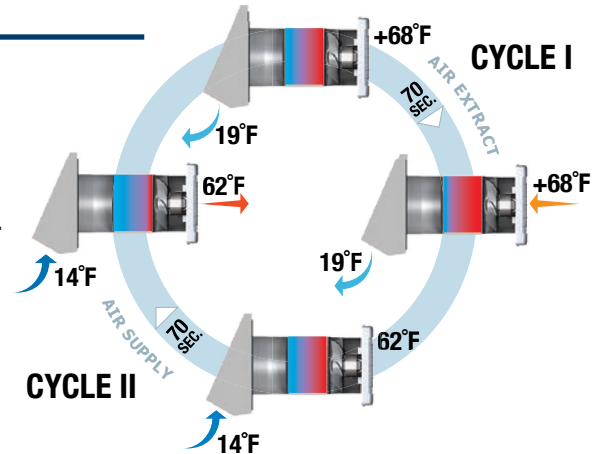
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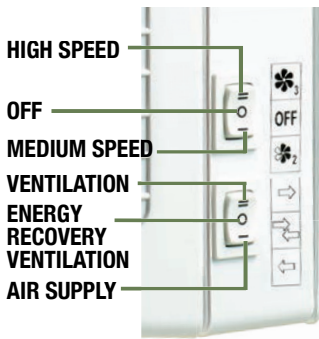
OPERATION OF BREATHE-RIGHT HRV

The ventilator is designed for both extract and supply ventilation with energy recovery function.

- **CYCLE I.** While warm, stale air is extracted from a room it passes through the ceramic energy core where the heat and moisture is being accumulated. After the ceramic core heats up, the ventilator automatically switches to supply mode.
- **CYCLE II.** As the clean, fresh air from outside passes through the ceramic energy core, it absorbs moisture and it warms up due to the accumulated heat. As temperature of the accumulator drops down, the fan switches to extract mode and the cycle is renewed. The ventilator changes its operation mode for supply or extract ventilation every 70 seconds.



BREATHE-RIGHT HRV CONTROL AND OPERATION MODES

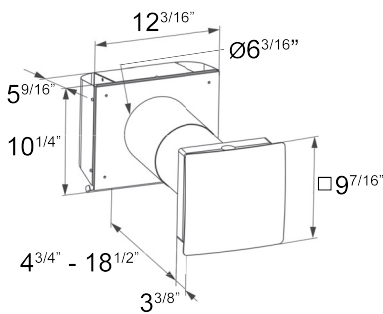


- POWER** Turn ventilator on/off
- SPEED SWITCH**
- PASSIVE AIR SUPPLY**
The louvre shutters are opened, but the fan stands still.
- VENTILATION**
All the ventilators in the network operate in permanent air extract or air supply mode.



- NIGHT MODE**
The ventilator is switched to low speed on a signal from built-in light sensor. (Not recommended for animal use.)
- SUPPLY MODE**
The fan continuously supplies fresh air to the room.
- VENTILATION WITH ENERGY REGENERATION**
The ventilator switches from supply and extract modes and vice versa in a set time period to enable the transfer of heat energy in winter and control of moisture in summer.

DIMENSIONS

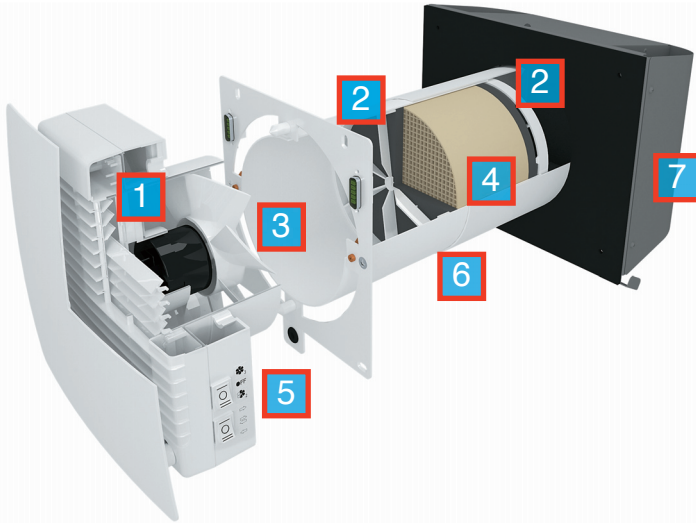


- HUMIDITY CONTROL MODE SELECTION**
The ventilator automation enables setting one of three humidity set points (45%, 55% or 65%). The ventilator will operate to increase or decrease the indoor humidity level to maintain comfortable environment for you.

SPECIFICATIONS

MODEL	SPEED	VOLTAGE (V)	POWER (W)	CURRENT (A)	AIR CAPACITY (CFM)	ROTATION SPEED (MIN-1)	SONES	EFF @32' F	TRANSPORTED AIR TEMP (°F)	INGRESS PROTECTION RATING
RA1-50-2	1	120/60 HZ	3.8	0.024	8	610	0.1	91%	FROM -13 UP TO 122	IP 32
	2		3.96	0.026	16	800	0.3			
	3		5.61	0.039	32	1450	1.0			

BREATHE-RIGHT HRV DESIGN



- 1 FRONT GRILLE WITH AUTOMATIC SHUTTERS**
Easy access for filter cleaning or replacement. The front grille is made of high quality snow-white ABS plastic.
- 2 MERV6 AIR FILTER. ANTIBACTERIAL TREATMENT**
Two G3 built-in filters provide fresh air free of dust, pollen, insects.
- 3 REVERSIBLE AXIAL EC FAN**
The latest EC-motor technology ensures low energy costs. The motor has integrated overheating protection and ball bearings for longer service life.
- 4 CERAMIC ERV CORE**
The ventilator includes a high-tech polymer ceramic energy accumulator with ARE 90% @ 32 F. Antibacterial treatment. No defrost needed.
- 5 CONTROL**
- 6 TELESCOPIC DUCT - DIAMETER 6"**
- 7 OUTER HOOD**
The exterior is constructed of aluminum covered with a special polymer coating to ensure long-lasting protection from the elements. A grill protects water and foreign objects from entering the unit.



REDUCE HUMIDITY IN YOUR TACK ROOM

The Breathe-Right HRV is perfect for controlling the humidity in your tack room. Just set the ventilator to one of three humidity settings (45%, 55% or 65%) to increase or decrease the indoor humidity level.



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