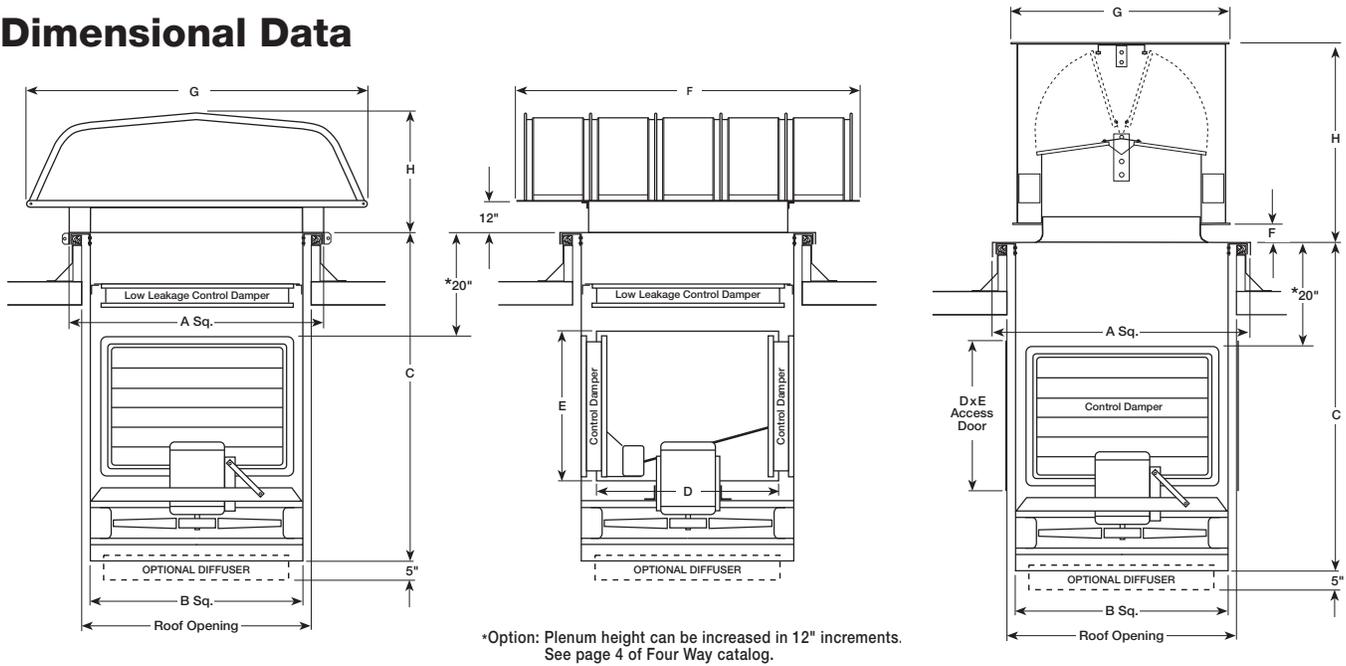




Models ERD/ESRMD/ESRMDF
Direct Drive - Four Way Fans
Exhaust/Supply/Recirculate/Mix

Installation, Operation and Maintenance Manual

Dimensional Data



Models ESRMD & ESRMDF

Model ERD

Size	A	B	C*	Top Damper VCD-2120	Recirc. Damper VCD-1020	Access Doors		Roof Opening
						D	E	
24	40	32	58 ¹ / ₂	29x29	27w x 26h	21	20	34 ¹ / ₂
30	46	38	63	35x35	33w x 30h	27	20	40 ¹ / ₂
36	52	44	71 ⁵ / ₈	41x41	39w x 38h	33	22	46 ¹ / ₂
42	58	50	75 ³ / ₄	47x47	44w x 42h	38	36	52 ¹ / ₂
48	64	56	82 ⁵ / ₈	53x53	50w x 48h	44	36	58 ¹ / ₂
54	70	62	91	59x59	56w x 54h	50	36	64 ¹ / ₂

Size	Non-Filtered Hood			Filtered Hood			Upblast Hood			Approximate Unit Weights					
	ESRMD Hood Size			ESRMDF Hood Size			ERD Hood Size			ESRDM		ESRMDF		ERD	
	F	G	H	F	G	H	F	G	H	Alum	Galv	Alum	Galv	Alum	Galv
24	63	66	30	63	66	30	2 ¹ / ₄	31 ³ / ₈	26 ¹ / ₄	570	650	670	750	400	480
30	75	74	32	75	78	32	3 ¹ / ₂	37 ³ / ₈	30 ³ / ₈	760	900	860	1000	490	630
36	87	76	33	87	94	33	4 ¹ / ₂	43 ³ / ₄	33 ³ / ₄	1040	1200	1170	1330	715	875
42	99	86	36 ¹ / ₂	99	100	36 ¹ / ₂	4 ¹ / ₂	50	38 ¹ / ₂	1200	1400	1330	1530	850	1050
48	111	100	36 ¹ / ₂	111	112	36 ¹ / ₂	5 ¹ / ₂	56 ¹ / ₄	41	1470	1700	1620	1850	1110	1340
54	111	112	39	112	124	39	5 ¹ / ₂	63 ³ / ₈	45	1770	2000	1920	2150	1405	1635

Installation

Greenheck Model ESRMD & ERD fans are thoroughly inspected and test run at the factory, however damage may occur during handling and shipping. Consequently, it is important that the fan be carefully inspected for visible and concealed damage before installation. Report any damaged or missing items to the shipper immediately.

Follow the installation sequence shown below. Attach the plenum and hood to the roof curb using a suitable fastener in each of the prepunched mounting holes. Care must be taken not to bend or distort the plenum and fan components during installation.

Installation Sequence

1. The roof curb is mounted and secured over the roof opening to the roof structurals.
2. The plenum (factory assembled) is lowered through the curb and roof opening until its mounting channels rest on the roof curb. Lifting Lugs are provided. (Fig. 1)
3. The hood is lowered onto the curb/plenum assembly. (Fig. 1)
4. The hood and plenum are secured to the roof curb. (Fig. 2)

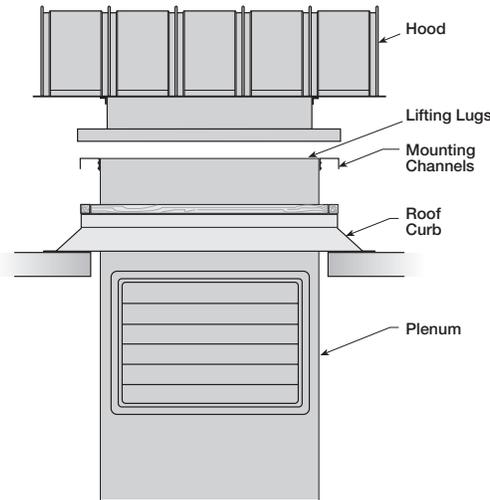


Fig. 1

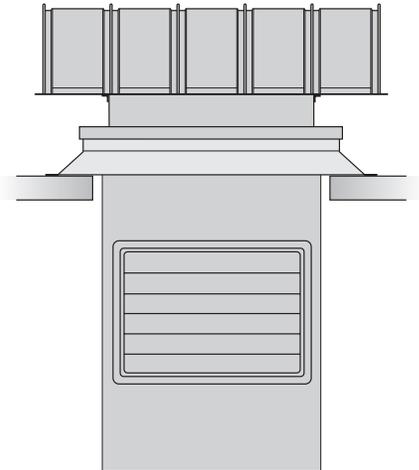


Fig. 2

Electrical Connections

Before electrical connections are made, the supply voltage, phase and ampere capacity must be checked for compatibility with the fan motor. In addition, the supply wiring must be properly fused and conform to local and national electrical codes.

If fan is to be wired to a control center, which is available through Greenheck, the control center wiring instructions must be followed.

Pre-Starting Checks

Check all fasteners and set screws for tightness. The propeller should rotate freely and not rub on the fan panel. The unit was aligned and test run at the factory prior to shipment, however movement of various components may occur during shipment. Proper propeller rotation should be determined by momentarily energizing the fan in the exhaust mode. If the rotation in the exhaust mode is for supply the motor wiring between the fan and the controls should be changed. For 3 phase units, simply interchange any two of the three electrical supply leads. Single phase units should not rotate the wrong direction, since the fan has been pre-run at the factory.

Guards

Guards are required to protect the fan and nearby personnel. If guards are not ordered with the fan, they must be supplied by the installer. When ordered with the fan, the guard is attached to the bottom of the double venturi panel.

Damper Plenum Linkage Adjustments

Plenum dampers should open to 45° from closed position. Consult factory before adjusting damper linkages.

Routine Maintenance

WARNING

Disconnect and secure to the "OFF" position all electrical power to the fan prior to inspection or servicing. Failure to comply with this safety precaution could result in serious injury or death.

Once the fan has been put into operation, periodic maintenance should be performed on the following items:

1. Motors

Greasing of motors is intended only when fittings are provided. Many fractional horsepower motors are lubricated for life and require no further lubrication. Motors supplied with grease fittings should be greased in accordance with the motor manufacturer's directions given on the motor nameplate.

2. Removal of Dust and Dirt

Model ESRMD fans require periodic cleaning to maintain proper air performance and reliability. Dirt left to accumulate on propeller blades may cause an unbalanced condition resulting in excessive vibration and premature failure of the fan.

Dust and dirt should also be cleaned from the exterior surface of the fan motor and damper actuator(s). Dirt accumulation on the motor/actuator(s) can block ventilation holes and prevent proper cooling. Motors and actuators should never be sprayed directly with water, steam or solvents.

3. Filter Maintenance (Model ESRMDF)

Aluminum mesh filters should be cleaned on a regular basis for optimum fan efficiency. The frequency of cleaning depends upon the cleanliness of the incoming air.

To remove filters in fan sizes 24-30, first remove the hood. This is accomplished by removing the two fasteners on one side of the hood and loosening the other two fasteners in the other side of the hood. Hinge the hood over onto the roof deck; DO NOT prop the hood up, the hood could come down accidentally causing injury. The filters can then be pulled from the slide-out racks.

On sizes 36 to 54, access panels are provided in the ends of the hood which allow the filters to be removed without removing the hood.

Filters should be washed with a mild detergent in warm water. After the filters are dry, an adhesive spray available at most filter distributors may be applied to increase filter efficiency.

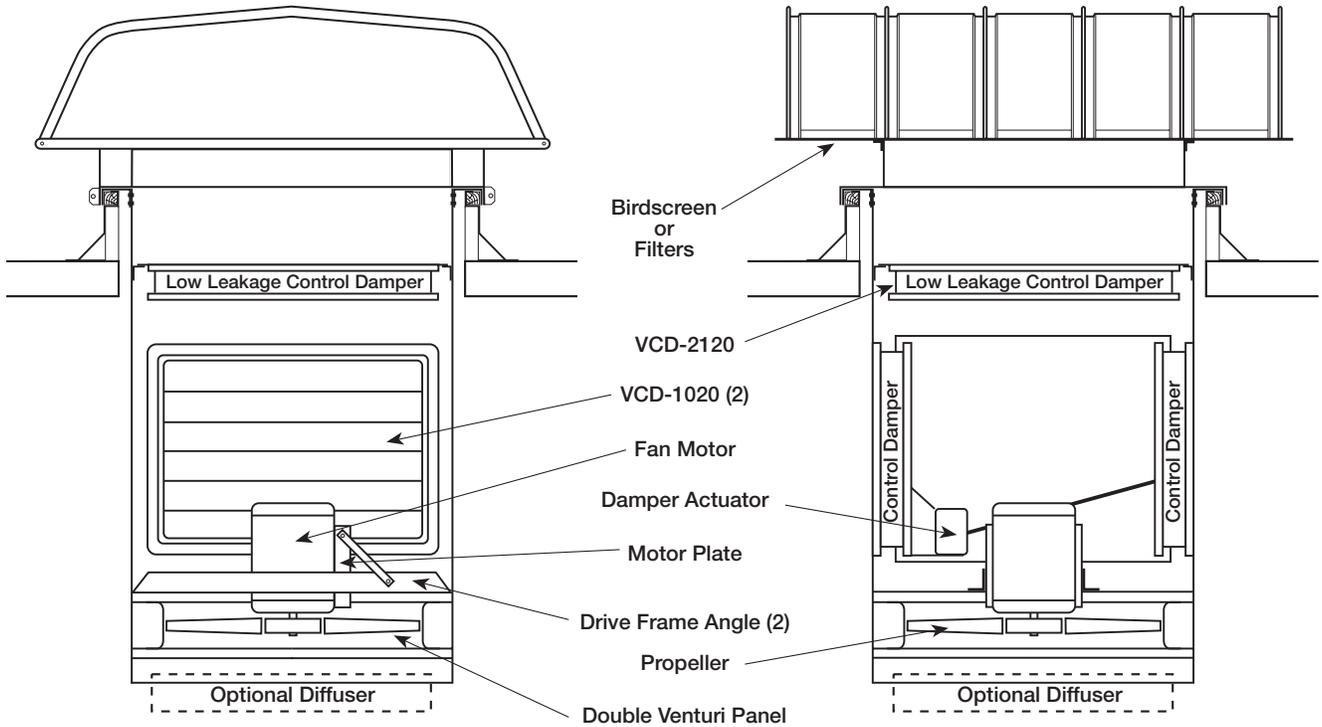
4. Fasteners

Fan vibration has a tendency to loosen mechanical fasteners. Periodic inspection should include checking all fasteners for tightness. Particular attention should be paid to fasteners attaching the propeller to the motor shaft and the motor to the motor plate.

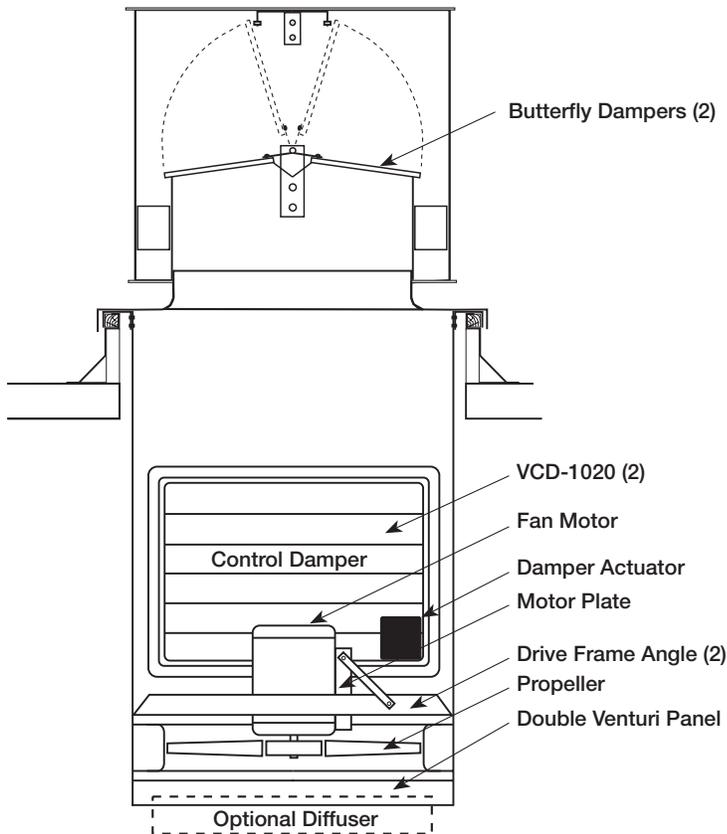
5. Damper Plenum Linkage Adjustments

Plenum dampers should open to 45° from closed position. Consult factory before adjusting damper linkages.

Parts List



Model ESRMD & ESRMDF



Model ERD

Warranty

Greenheck warrants this equipment free from defects in material and workmanship for a period for one year from the purchase date.

Any units or parts which prove to be defective during the warranty period will be replaced at our option when returned to our factory, transportation prepaid.

Motors are warranted by the motor manufacturer for a period of one year. Should motors furnished by Greenheck prove defective during this period, they should be returned to the nearest authorized motor service station. Greenheck will not be responsible for any installation or removal costs.



IOM ERD/ESRMD/ESRMDF FS

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