



## OPERATING INSTRUCTIONS AND REPLACEMENT PARTS

### Models:

**CVF-8AC, CVF-8AC50, CVF-6ACAN, CVF-15ACAN, CVF-25ACAN  
CVF-8DC, CVF-6DCAN, CVF-15DCAN, CVF-25DCAN**



### WARNING

This manual must be read carefully and followed by all persons who have or will have the responsibility for using or servicing this equipment. This equipment will perform as designed only if used according to the instructions. Otherwise it could fail to perform as designed, causing personal injury or death.



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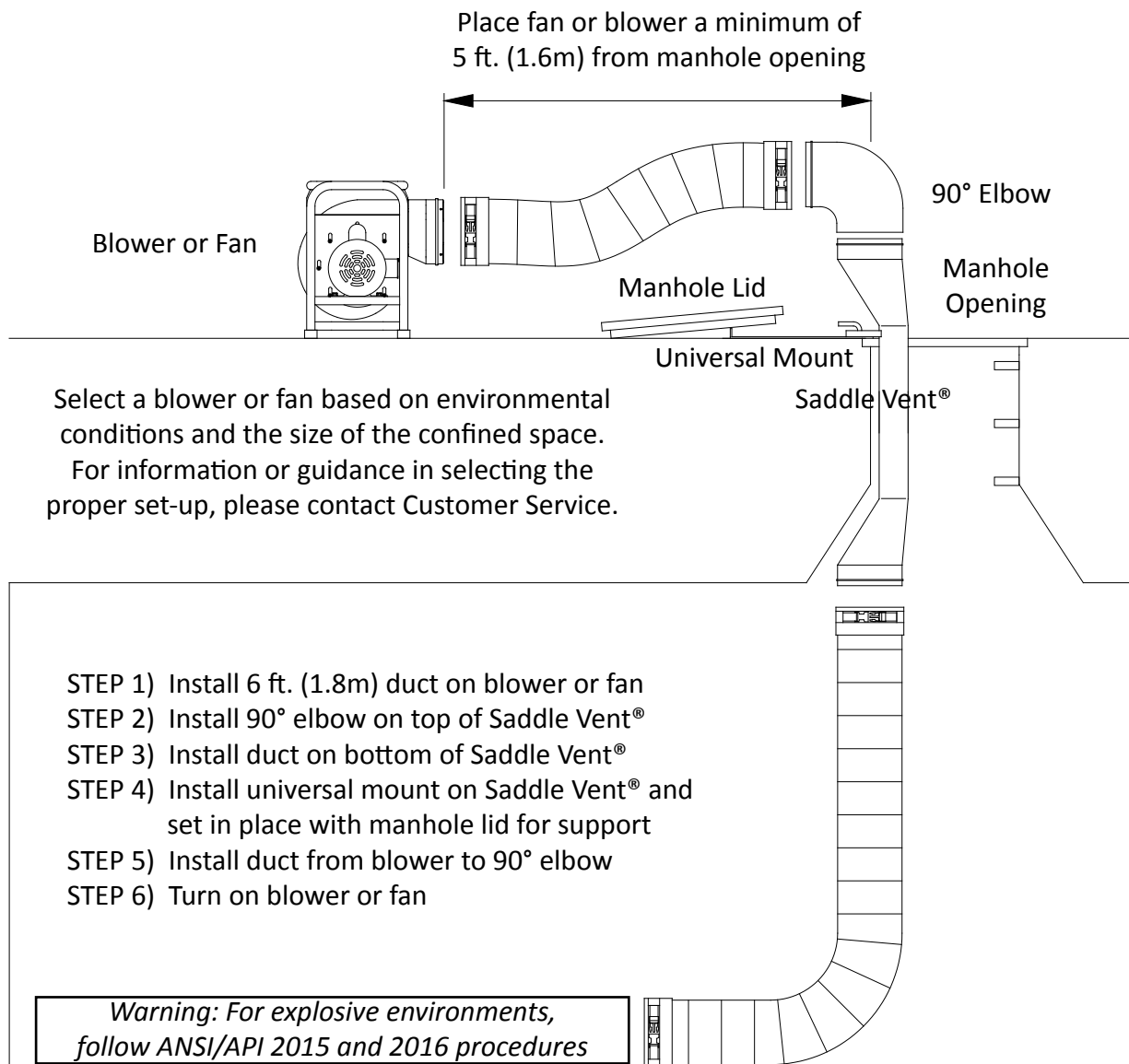
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# The Saddle Vent® Ventilation System

## Typical Saddle Vent® Setup Procedure





### **WARNING: HAZARDOUS LOCATION OPERATIONS**

Use an explosion-proof or intrinsically safe blower or fan, conductive ducting, and The Conductive Saddle Vent® System. Attach all grounding wires and assure a complete circuit to the blower or fan in order to remove static charges.

 **SAFETY PRECAUTIONS**   
**READ AND FOLLOW ALL INSTRUCTIONS BELOW**

All ventilation procedures should comply with federal, state, and local regulations. Air quality should be tested prior to ventilating a confined space. A purge chart is provided in this manual help assist in estimating the approximate time needed to ventilate confined spaces. Air quality should be tested continuously during confined space occupancy to ensure a stable atmosphere and worker safety because atmospheric conditions can change rapidly. Additional procedures and recommendations are available from federal, state, and local agencies. **DO NOT** operate these fan unit in a vertical position or with the flange or guards removed.

 **WARNING**   
Fan and blower models with the “EX” or “X” designation are the only models approved for use in hazardous locations.

If volatile or explosive vapors are suspected, use Air Systems’ explosion proof electric blower, Model No. SVB-E8EXP, explosion proof in-line fan, Model No. SVF-10EXP, explosion proof contractors fan, Model No. CVF-8EXP or Air Systems’ intrinsically safe pneumatic blower, Model No. SVB-A8.

**Note:** For confined space ventilation in non-hazardous locations, use Air Systems’ confined space ventilation kit, Model SV-CUP. For hazardous locations use ventilation kit, Model SV-CUPCND along with one of the above explosion proof blowers or fans.

## General Set-Up and Operation

### For CVF-8AC, CVF-8AC50, and CVF-8DC Models

- 1) Place fan in a clean fresh air environment.
- 2) Air quality of the confined space should be tested prior to ventilation. If air quality of the confined space is unacceptable, consult a trained professional.
- 3) Inspect fan for damaged or worn parts and ducting for air leaks prior to fan operation.
- 4) Install duct cuff to exhaust flange and secure. Keep bends and kinks in ducting to a minimum to maximize air flow. If canister model is used, secure canister with connect straps, open lid and pull out ducting. Inspect for air leaks.
- 5) Set fan upwind from the work location and a minimum of 5 ft. from the manhole opening.
- 6) Connect fan to power source.

AC versions require 115 VAC/60Hz, 15 amp service or 220 VAC/50Hz.

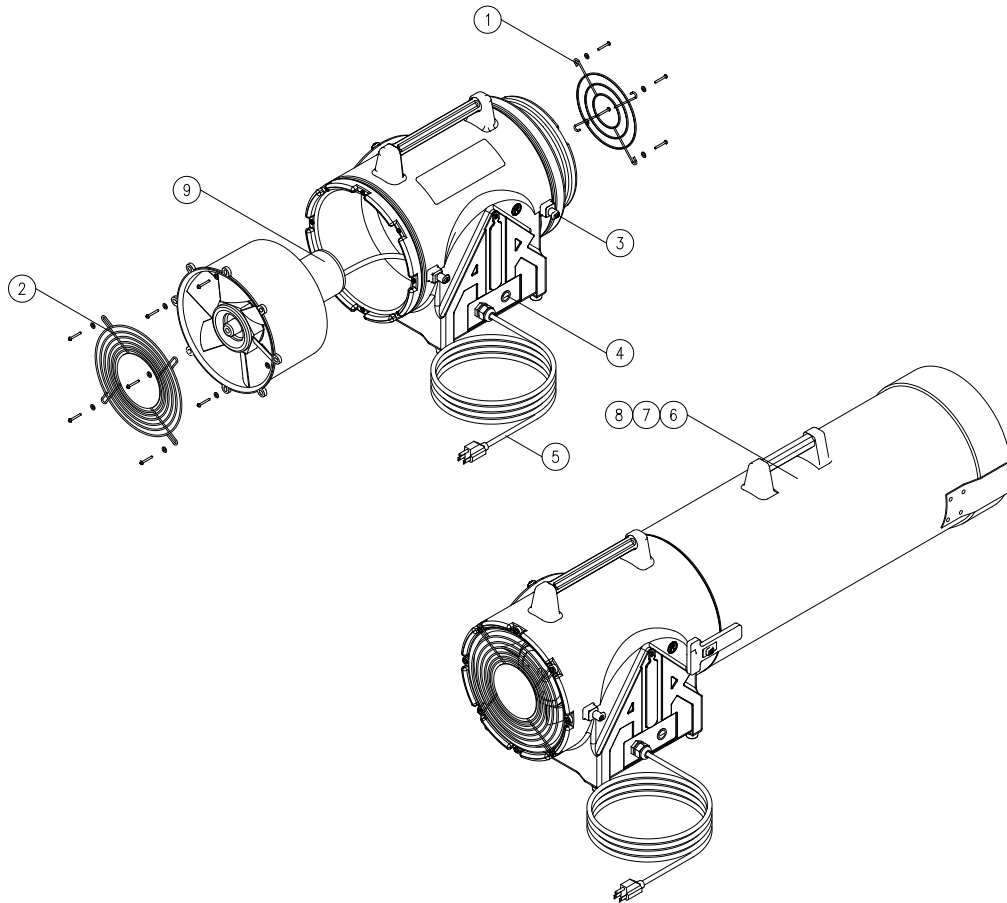
**Note: If an extension cord is required, the minimum recommended size is 14 AWG up to 25 ft. For further information refer to the National Electric Code Tables, Article 400.**

- 7) Push ON/OFF switch to "I" position on CVF-8AC and CVF-8DC models.

## Troubleshooting

PROBLEM	POSSIBLE CAUSE	SOLUTION
Excessive vibration	Air intake blocked	Turn fan off and clear debris from intake.
	Possible internal damage	Turn off and inspect fan blades, shaft, and housing for debris, damage, and loose screws. Note: Never run fan for extended periods without installing duct on the exhaust flange.
	Possible external damage	Turn fan off and inspect for loose guards, broken welds, etc.
Circuit breaker trips CVF-8AC series only	Voltage output insufficient	Test outlet with volt meter.
	Extension cord improperly sized	Use 14 AWG extension cord up to 25 ft.
Fan will not run CVF-8DC only	Blown fuse (DC version only)	Check and replace. Use only a 20A/32 VDC slow blow fuse.
	Battery connection	Ensure proper connection from battery clips to battery terminal posts. On battery pack units, recharge battery.

## System Components - AC Voltage Contractor Fans Models: CVF-8AC Series



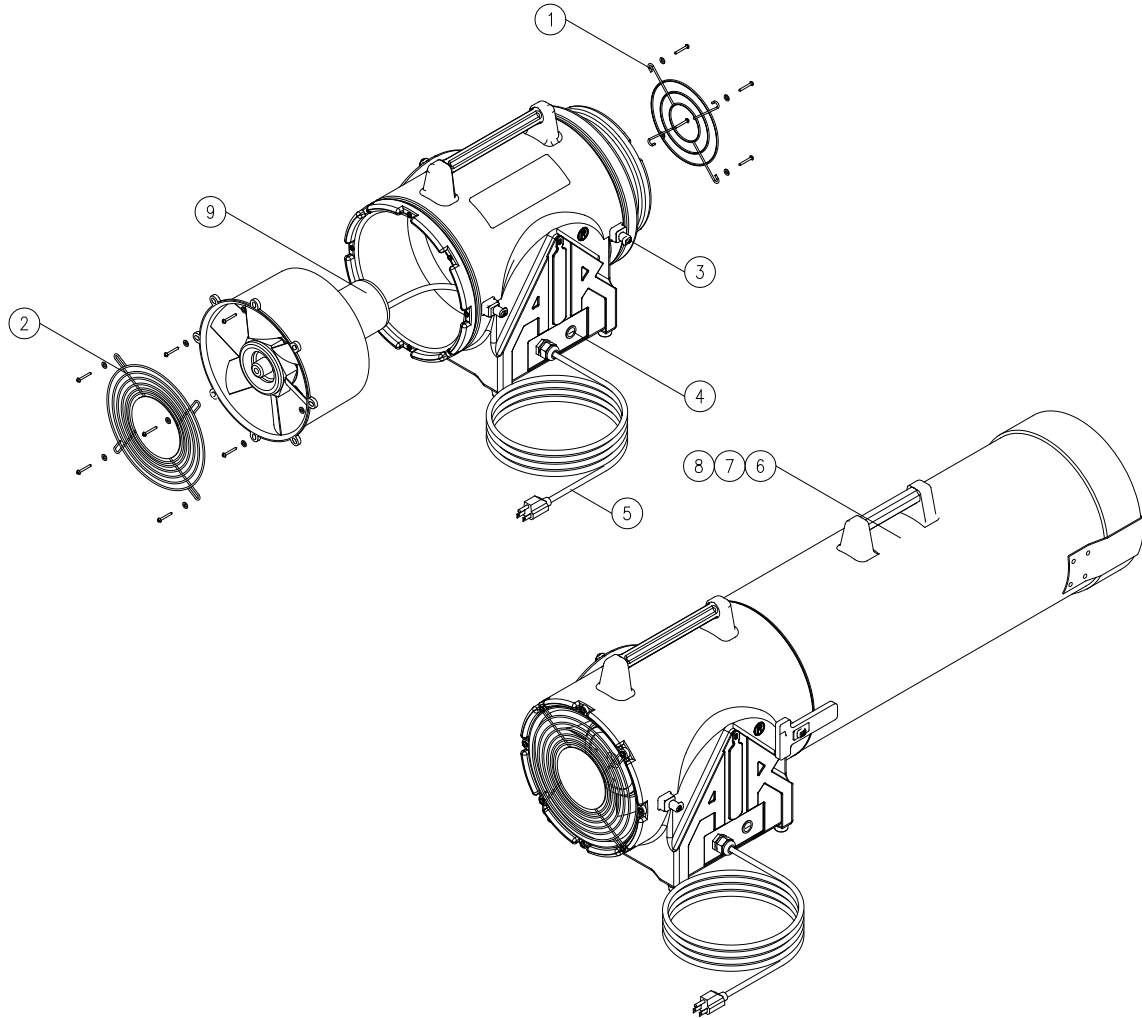
ITEM #	DESCRIPTION	PART #
1	DISCHARGE GUARD	CVF-FG
2	INTAKE GUARD	CVF-RG
3	DUCT CANISTER LATCHING POST	CVF-POST
4	ON/OFF SWITCH	CVF-SWITCH
5	POWER CORD	ELCB012
6	DUCT CANISTER WITH 6' OF DUCT	CVF-CAN6
7	DUCT CANISTER WITH 15' OF DUCT	CVF-CAN15
8	DUCT CANISTER WITH 25' OF DUCT	CVF-CAN25
9	115 VAC/60Hz MOTOR	MTR043CN

An optional GFI (Ground Fault Interrupter) plug can be supplied to comply with the 1996 NEC code requirement: Section 305-6. Order P/N ELCB013. This part number includes both the GFI plug and a 7' power cord.

### Specifications

MOTOR TYPE	1/3 HP (2.47 kw) electric, 115 VAC/60Hz, 2.6 amps, Single Speed, 3450 RPM, Thermally Protected, Max. Ambient Temperature: 104° Fahrenheit
OUTLET SIZE	8" Diameter (203mm)
FLOW RATES	Free Air: 974 cfm 15 ft. duct with one 90° bend: 786 cfm 15 ft. duct with two 90° bends: 661 cfm

## System Components - AC Voltage Contractor Fans Models: CVF-8AC50 Series

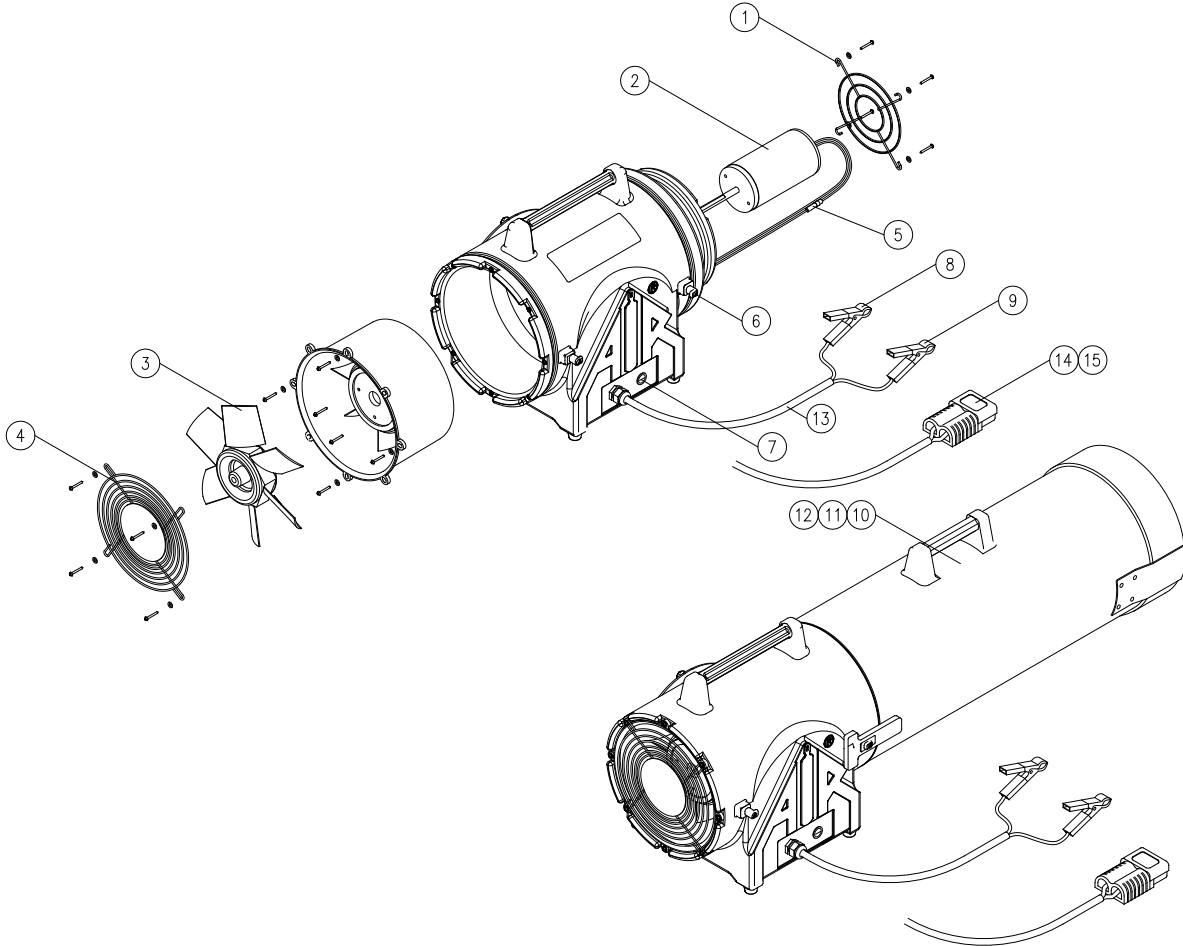


ITEM #	DESCRIPTION	PART #
1	DISCHARGE GUARD	CVF-FG
2	INTAKE GUARD	CVF-RG
3	DUCT CANISTER LATCHING POST	CVF-POST
4	ON/OFF SWITCH	CVF-SWITCH
5	CVF-8AC50 POWER CORD ("E+F" STYLE PLUG)(CEE 7/7)	ELCB012EF
5A	CVF-8AC50G POWER CORD ("G" STYLE PLUG)(BS1363 UK)	ELCB012G
6	DUCT CANISTER WITH 6' OF DUCT	CVF-CAN6
7	DUCT CANISTER WITH 15' OF DUCT	CVF-CAN15
8	DUCT CANISTER WITH 25' OF DUCT	CVF-CAN25
9	220 VAC/50Hz MOTOR	MTR043CN50

### Specifications

MOTOR TYPE	1/3 HP (2.47 kw) electric, 220 VAC/50Hz, 1.2 amps, Single Speed, 3450 RPM, Thermally Protected, Max. Ambient Temperature: 104° Fahrenheit
OUTLET SIZE	8" Diameter (203mm)
FLOW RATES	Free Air: 870 cfm 15 ft. duct with one 90° bend: 725 cfm 15 ft. duct with two 90° bends: 715 cfm

## System Components - DC Voltage Contractor Fans Models: CVF-8DC Series

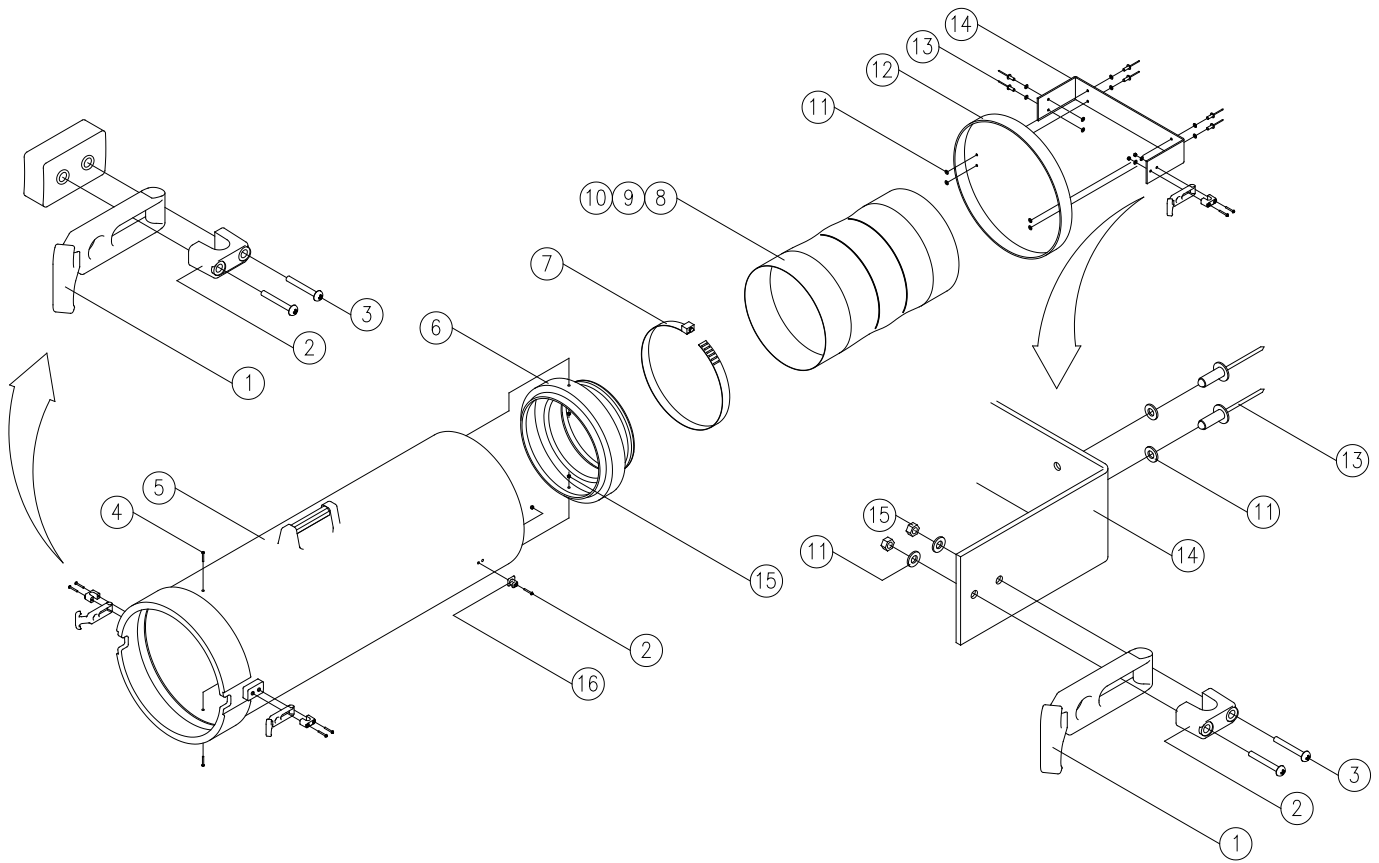


ITEM #	DESCRIPTION	PART #
1	DISCHARGE GUARD	CVF-FG
2	12 VDC ELECTRIC MOTOR	MTR044CN
3	FAN BLADE ASSEMBLY	CVF-FAN
4	INTAKE GUARD	CVF-RG
5	20 AMP SLOW BLOW FUSE	ELF022
6	DUCT CANISTER LATCHING POST	CVF-POST
7	ON/OFF SWITCH	CVF-SWITCH
8	RED BATTERY CLAMP	ELA083R
9	BLACK BATTERY CLAMP	ELA083B
10	DUCT CANISTER WITH 6' OF DUCT	CVF-CAN6
11	DUCT CANISTER WITH 15' OF DUCT	CVF-CAN15
12	DUCT CANISTER WITH 25' OF DUCT	CVF-CAN25

## Specifications

MOTOR TYPE	12 VDC, 1/4 HP, Thermally Protected, 3450 RPM, 20 amp/32 VDC Slow Blow Fuse
OUTLET SIZE	8" Diameter (203mm)
FLOW RATES	Free Air: 848 cfm 15 ft. duct with one 90° bend: 702 cfm 15 ft. duct with two 90° bends: 590 cfm

## System Components - Non-Conductive Duct Canister Models: CVF-CAN Series



ITEM #	DESCRIPTION	PART #
1	RUBBER LATCH	CVF-RHOOK
2	RUBBER LATCH SECURING HOOK	CVF-UPOST
3	10-32 X 1" SCREW	FS1032X100
4	10-32 X 1/2" SCREW	FS1032X050
5	RED DUCT CANISTER, NON-CONDUCTIVE	CVF-CAN-ND
6	RED DUCT ADAPTER, NON-CONDUCTIVE	CVF-CANA
7	8" HOSE CLAMP	SV-HC8
8	6' NON-CONDUCTIVE DUCT	SVH-6
9	15' NON-CONDUCTIVE DUCT	SVH-15
10	25' NON-CONDUCTIVE DUCT	SVH-25
11	#10 STAINLESS STEEL FLATWASHER	FW#10SS
12	RED DUCT CANISTER LID, NON-CONDUCTIVE	CVFCANL
13	3/16" POP RIVET	FR3/16XMAL
14	DUCT CANISTER LID STRAP	CVF-BELT
15	10-32 NUT WITH NYLON INSERT	FN1032ESN
16	PLASTIC LATCHING POST	CVF-POST



## Warranty

Air Systems' manufactured equipment is warranted to the original user against defects in workmanship or materials under normal use for one year from the date of purchase. Any part which is determined by Air Systems to be defective in material or workmanship will be, as the exclusive remedy, repaired or replaced at Air Systems' option. This warranty does not apply to electrical systems or electronic components. Electrical parts are warranted, to the original user, for 90 days from the date of sale. During the warranty period, electrical components will be repaired or replaced at Air Systems' option.

**NO OTHER WARRANTY, EXPRESSED OR IMPLIED, AS TO DESCRIPTION, QUALITY, MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE, OR ANY OTHER MATTER IS GIVEN BY AIR SYSTEMS IN CONNECTION HERewith. UNDER NO CIRCUMSTANCES SHALL THE SELLER BE LIABLE FOR LOSS OF PROFITS, ANY OTHER DIRECT OR INDIRECT COSTS, EXPENSES, LOSSES, OR DAMAGES ARISING OUT OF DEFECTS IN, OR FAILURE OF THE PRODUCT OR ANY PART THEREOF.**

The purchaser shall be solely responsible for compliance with all applicable Federal, State and Local OSHA and/or MSHA requirements. Although Air Systems International believes that its products, if operated and maintained as shipped from the factory and in accordance with our "operations manual", conform to OSHA and/or MSHA requirements, there are no implied or expressed warranties of such compliance extending beyond the limited warranty described herein. Product designs and specifications are subject to change without notice. Rev. 2, 12/98

Air leaks are not covered under warranty except when they result from a defective system component, i.e. an on/off valve or regulator or upon initial delivery due to poor workmanship. Air leaks due to poor delivery or damage will be covered under delivery claims. Minor air leaks are part of routine service and maintenance and are the responsibility of the customer just as are filters and oil changes.







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