



## OPERATING INSTRUCTIONS AND REPLACEMENT PARTS

**Models: CVF-12AC, CVF-12AC50  
CVF12CAN15, CVF12CAN25**



### 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.



### AIR SYSTEMS INTERNATIONAL, INC.

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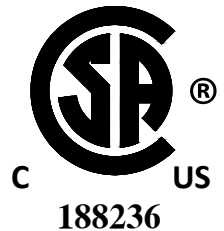
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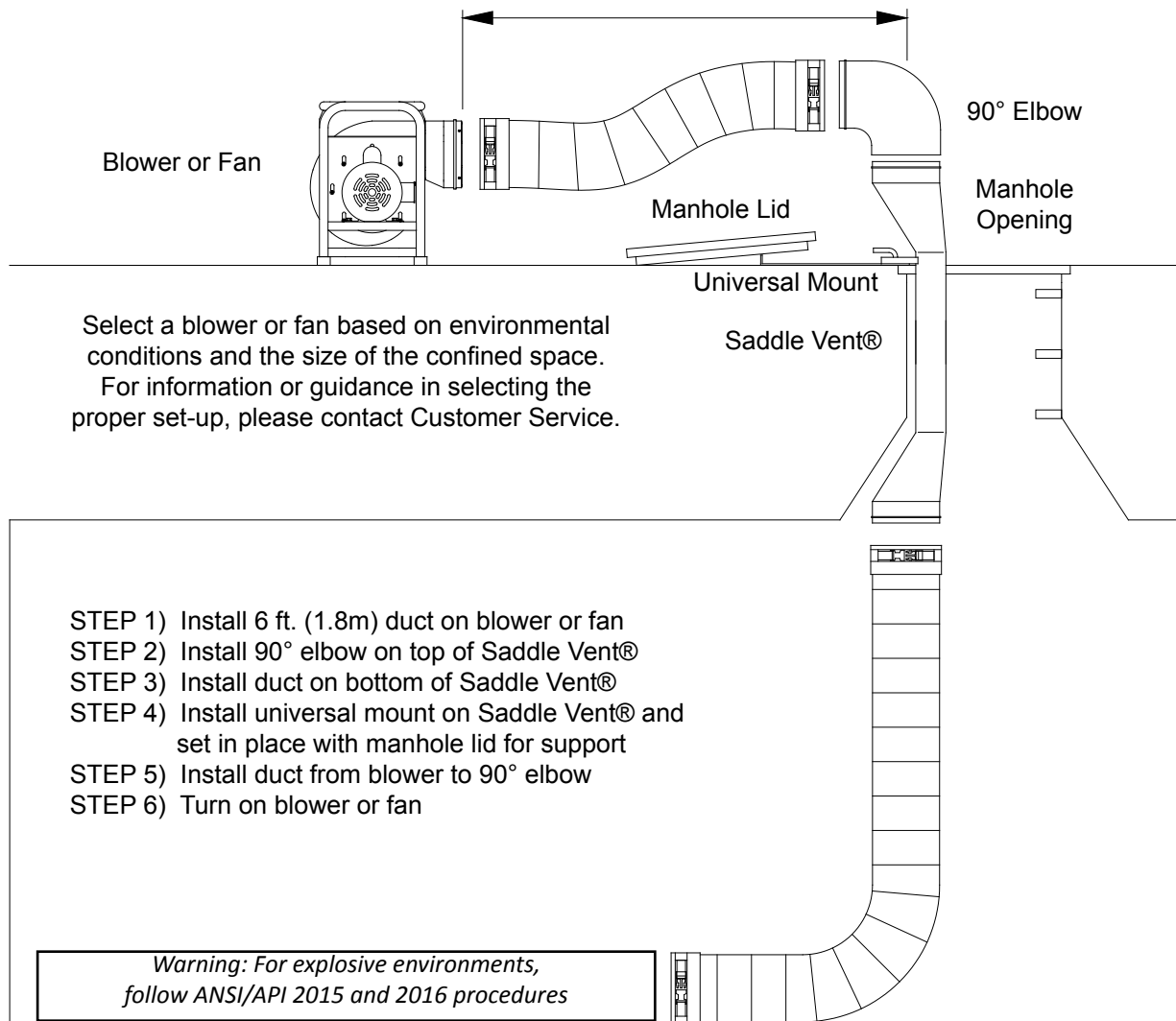
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## The Saddle Vent® Ventilation System

### Typical Saddle Vent® Setup Procedure



Place fan or blower a minimum of  
5 ft. (1.6m) from manhole opening





### 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.

The Saddle Vent® is a registered trademark of Air Systems International, Inc.  
The Conductive Saddle Vent® is covered by U.S. and Foreign Patents

 **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 on our website, [www.airsystems.com](http://www.airsystems.com), 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. These models are **NOT** approved for use in mines.

**Note:** 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.

## Specifications - Model: CVF-12AC

MOTOR TYPE	1.0 HP (.75 kw) electric, 115 VAC, 60 Hz, 8.3 amps, Single Speed, 3450 RPM, Thermally Protected, Max. Ambient Temperature: 122° Fahrenheit (50° Celcius)
OUTLET SIZE	12" Diameter (305mm)
FLOW RATES	Free Air: 1866 cfm (3170 cmh) 15 ft. duct with one 90° bend: 1497 cfm (2458 cmh) 15 ft. duct with two 90° bends: 1282 cfm (2178 cmh)

## Specifications - Model: CVF-12AC50

MOTOR TYPE	1.0 HP (.75 kw) electric, 220 VAC, 50 Hz, 6.9 amps, Single Speed, 2875 RPM, Thermally Protected, Max. Ambient Temperature: 122° Fahrenheit (50° Celcius)
OUTLET SIZE	12" Diameter (305mm)
FLOW RATES	Free Air: 1555 cfm (2642 cmh) 15 ft. duct with one 90° bend: 1248 cfm (2120 cmh) 15 ft. duct with two 90° bends: 1068 cfm (1815 cmh)

## General Set-Up And Operation

- 1) Place fan in a clean fresh air environment. Do not operate this fan in the vertical position.
- 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 rubber 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. (1.5m) from the manhole opening.
- 6) Connect CVF-12AC to power source, 115 VAC / 60 Hz / 15 amp. Use only GFCI protected receptacles. Connect CVF-12AC50 to power source, 220 VAC / 50 Hz / 15 amp.
- 7) Push ON/OFF switch to "I" position to start.

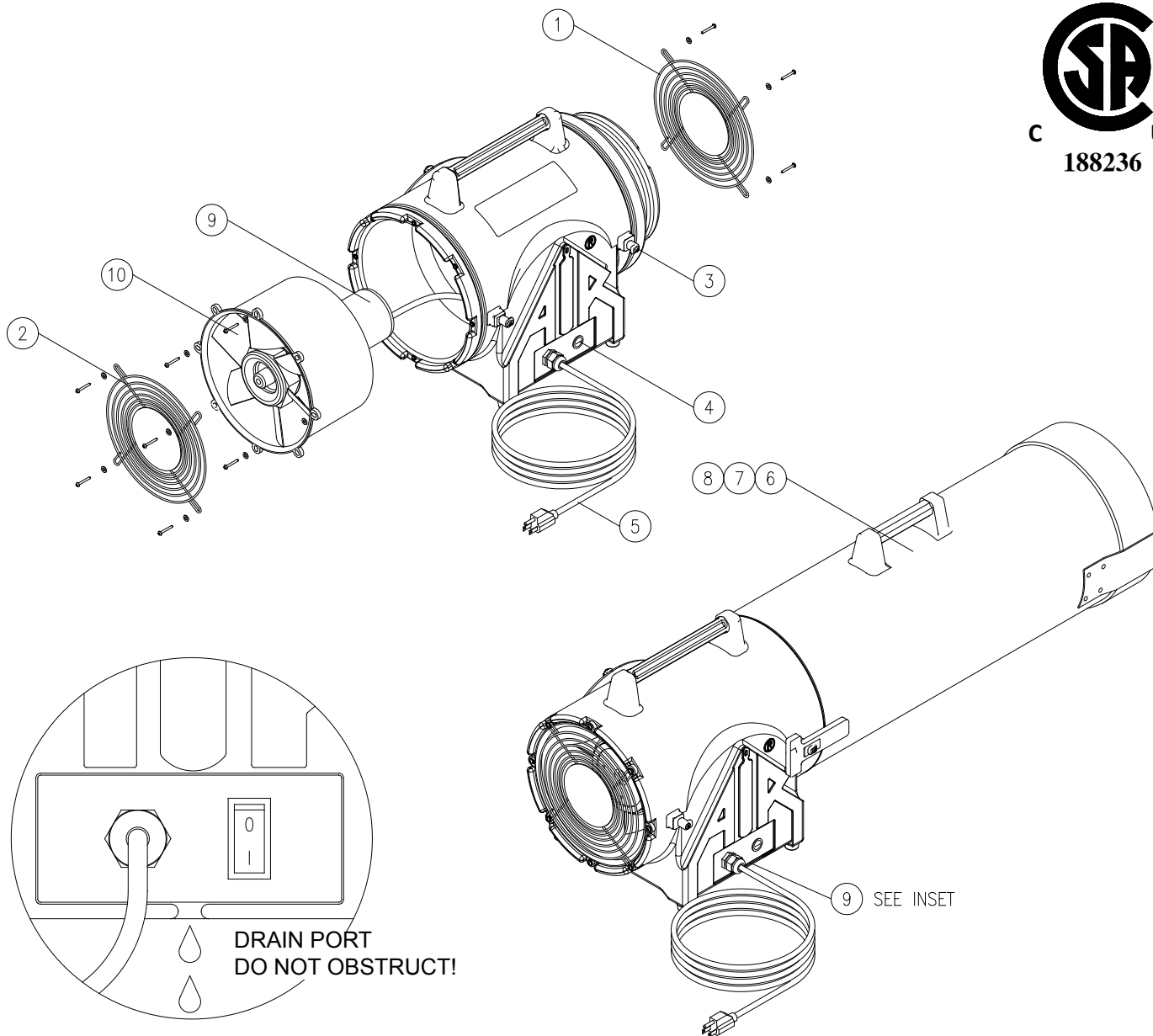
## To Convert The Ventilation Fan To A Stationary Ventilator Follow The Steps Below:

- 1) Remove the rubber isolation feet and screws from the metal inserts.
- 2) Install a threaded stud (male/male thread) into the 4 metal inserts.
- 3) Affix the fan to a location that will allow nuts to be installed on the threaded studs.
- 4) Put a threaded nut on each stud and tighten. The fan is now stationary.

## Troubleshooting

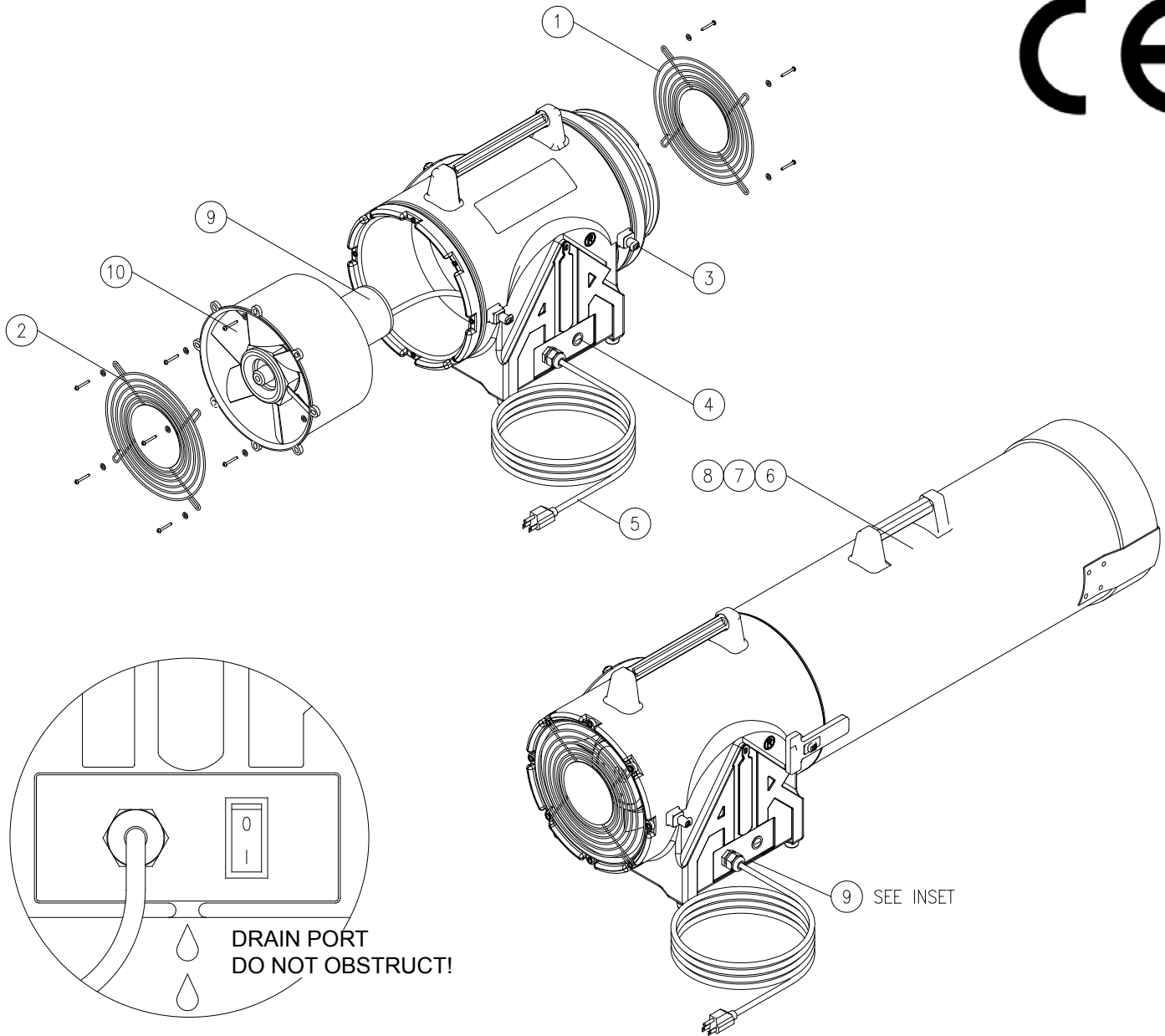
PROBLEM	POSSIBLE CAUSE	SOLUTION
Excessive vibration	Air intake blocked	Turn fan off and clear debris from intake.
	Possible internal damage	Turn off and inspect fan blades, shaft, and housing for debris, damage, and loose screws. Note: Never run fan for extended periods without installing duct on the exhaust flange.
	Possible external damage	Turn fan off and inspect for loose guards, broken welds, etc.
Circuit breaker trips	Voltage output insufficient	Test outlet with volt meter.
	Motor Overheated	Once motor cools, it will restart automatically

# System Components - Model: CVF-12AC



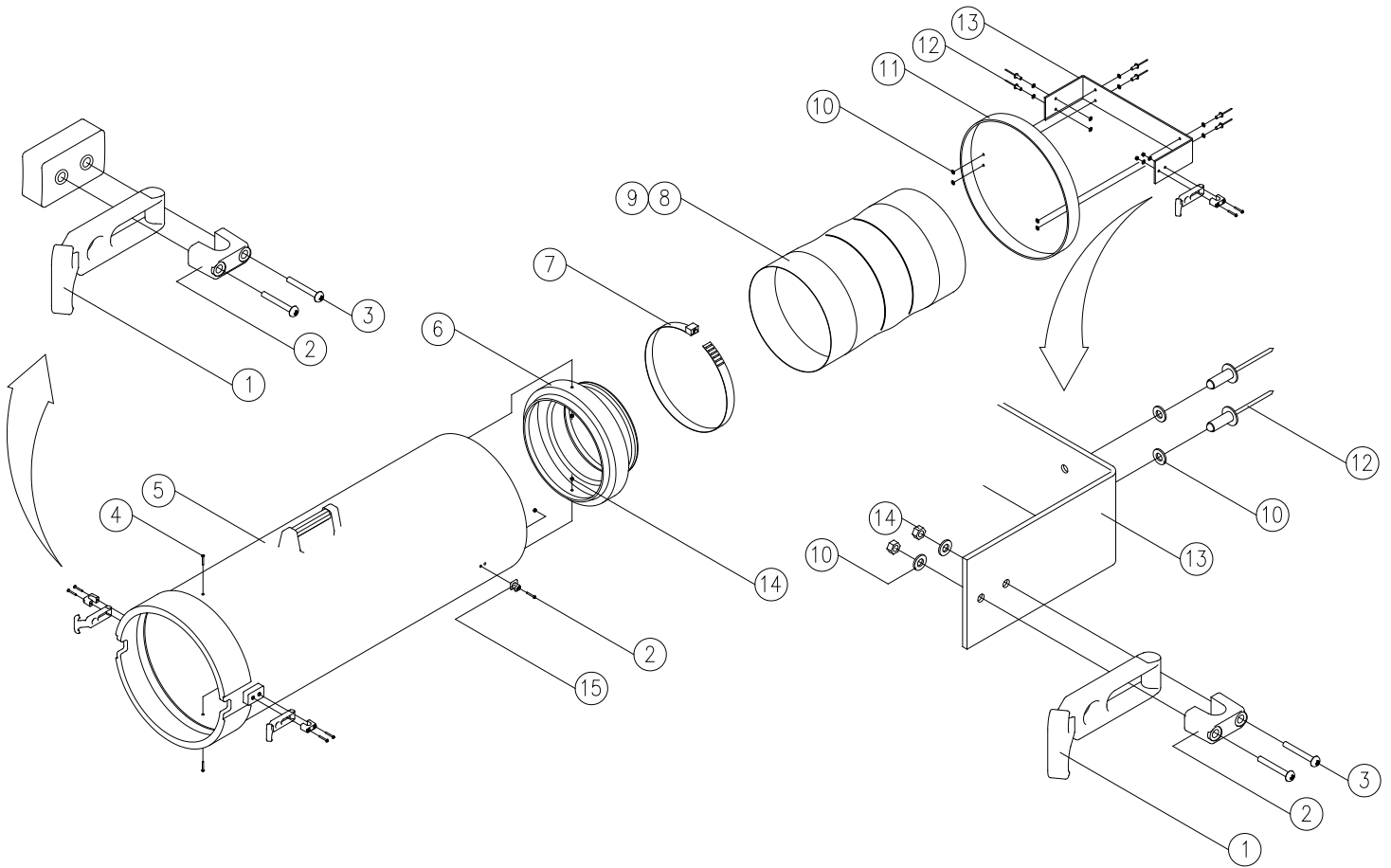
ITEM #	DESCRIPTION	PART #
1	DISCHARGE GUARD	CVF-FG12
2	INTAKE GUARD	CVF-RG12
3	DUCT CANISTER LATCHING POST	CVF-POST
4	ON/OFF SWITCH	CVF-SWITCH
5	POWER CORD	ELCB013
6	DUCT CANISTER WITH 15' OF DUCT	CVFCAN1215
7	DUCT CANISTER WITH 25' OF DUCT	CVFCAN1225
8	115 VAC / 60Hz MOTOR	MTR076CN
9	ELECTRICAL COMPARTMENT DRAIN HOLE	N/A

# System Components - Model: CVF-12AC50



ITEM #	DESCRIPTION	PART #
1	DISCHARGE GUARD	CVF-FG12
2	INTAKE GUARD	CVF-RG12
3	DUCT CANISTER LATCHING POST	CVF-POST
4	ON/OFF SWITCH	CVF-SWITCH
5	POWER CORD	ELCB012EF
6	DUCT CANISTER WITH 15' OF DUCT	CVFCAN1215
7	DUCT CANISTER WITH 25' OF DUCT	CVFCAN1225
8	220 VAC / 50Hz MOTOR	MTR076CN50
9	ELECTRICAL COMPARTMENT DRAIN HOLE	N/A

## Replacement Parts - Non-Conductive Duct Canister Model: 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	ORANGE DUCT CANISTER, NON-CONDUCTIVE	CVFCAN12ND
6	ORANGE DUCT ADAPTER, NON-CONDUCTIVE	CVF-CANA12
7	12" HOSE CLAMP	SV-HC12
8	12" X 15' NON-CONDUCTIVE DUCT	SVH-1215
9	12" X 25' NON-CONDUCTIVE DUCT	SVH-1225
10	#10 STAINLESS STEEL FLATWASHER	FW#10SS
11	ORANGE DUCT CANISTER LID, NON-CONDUCTIVE	CVFCANL12
12	3/16" POP RIVET	FR3/16XMAL
13	DUCT CANISTER LID STRAP	CVF-BELT
14	10-32 NUT WITH NYLON INSERT	FN1032ESN
15	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.