OPERATING MANUAL
MODELS:

SVF-8AC  SVF-8DC
SVF-6ACAN  SVF-6DCAN
SVF-15ACAN  SVF-15DCAN
SVF-25ACAN  SVF-25DCAN
The Saddle Vent® Ventilation System

Typical Saddle Vent® Setup Procedure

Select a blower or fan based on environmental conditions and the size of the confined space. For information or guidance in selecting the proper set-up, please contact Customer Service.

**STEP 1)** Install 6 ft. (1.8m) duct on blower or fan

**STEP 2)** Install 90° elbow on top of Saddle Vent®

**STEP 3)** Install duct on bottom of Saddle Vent®

**STEP 4)** Install universal mount on Saddle Vent® and set in place with manhole lid for support

**STEP 5)** Install duct from blower to 90° elbow

**STEP 6)** Turn on blower or fan

Warning: For explosive environments, follow ANSI/API 2015 and 2016 procedures

**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
All ventilation procedures should comply with federal, state, and local regulations. Air quality should be tested prior to ventilating a confined space. Air quality should be tested continuously during confined space occupancy to ensure a stable atmosphere and worker safety as atmospheric conditions can change rapidly. Additional procedures and recommendations are available from federal, state, and local agencies. **DO NOT** operate these fan units in a vertical position or with the flange or guards removed.

**SAFETY PRECAUTIONS**

READ AND FOLLOW ALL INSTRUCTIONS BELOW

**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 SVB-E8EXP, explosion proof in-line fan, Model SVF-10EXP, explosion proof contractors fan, Model CVF-8EXP or Air Systems’ intrinsically safe pneumatic blower, Model 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.

**WARNING**

Explosion proof models should be fitted with an approved explosion proof plug. The plug should **NOT** be connected or disconnected in an explosive environment when the blower is energized. The use of conductive ducting is recommended when operating in potentially explosive environments. Install grounding cable from blower to a grounded source.
GENERAL SET-UP AND OPERATION
FOR SVF-8AC AND SVF-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 inspect 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.

   Note: Maximum recommended duct hose length is 25 ft.

5) Set fan upwind from the work location and a minimum of 5 ft. from the manhole opening.
6) Connect fan to power source.

   DC versions require 12 VDC. Attach the red connector to the positive (+) terminal and the black connector to the negative (-) terminal. This unit must be run in the positive pressure mode as this model is not approved for extracting (sucking) air. DO NOT REVERSE WIRING.

   WARNING: Vehicle electrical systems must be able to handle 15 amp service or electrical damage may occur.

   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.

TROUBLESHOOTING

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<tr>
<th>PROBLEM</th>
<th>POSSIBLE CAUSE</th>
<th>SOLUTION</th>
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<tr>
<td>Excessive vibration</td>
<td>Air intake blocked</td>
<td>Turn fan off and clear debris from intake.</td>
</tr>
<tr>
<td></td>
<td>Possible internal damage</td>
<td>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.</td>
</tr>
<tr>
<td></td>
<td>Possible external damage</td>
<td>Turn fan off and inspect for loose guards, broken welds, etc.</td>
</tr>
<tr>
<td>Circuit breaker trips</td>
<td>Voltage output insufficient</td>
<td>Test outlet with volt meter.</td>
</tr>
<tr>
<td>SVF-8AC series only</td>
<td>Extension cord improperly sized</td>
<td>Use 14 AWG extension cord up to 25 ft.</td>
</tr>
<tr>
<td></td>
<td>Faulty Capacitor</td>
<td>Check and Replace with P/N MTRA089</td>
</tr>
<tr>
<td>Fan will not run</td>
<td>Blown fuse (DC version only)</td>
<td>Check and replace. Use only a 20A/32 VDC slow blow fuse.</td>
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<tr>
<td>SVF-8DC only</td>
<td>Battery connection</td>
<td>Ensure proper connection from battery clips to battery terminal posts. On battery pack units, recharge battery.</td>
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</tbody>
</table>
REPLACEMENT PARTS - AC VOLTAGE FANS

An optional GFI (Ground Fault Interrupter) cord/plug can be supplied to comply with the 1996 NEC Code requirement: Section 305-6. Order P/N ELCB013.

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<tr>
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<th>DESCRIPTION</th>
<th>PART #</th>
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<td>INTAKE GUARD</td>
<td>MGDAXFAN1</td>
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<tr>
<td>2</td>
<td>FAN</td>
<td>SV-FAN-8MM</td>
</tr>
<tr>
<td>3</td>
<td>HANDLE</td>
<td>HDWR056</td>
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<td>4</td>
<td>ELECTRIC MOTOR WITH CAPACITOR</td>
<td>SVF-8AC-MA</td>
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<td>5</td>
<td>DISCHARGE GUARD</td>
<td>MGDAXFAN2</td>
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<tr>
<td>6</td>
<td>ON/OFF SWITCH</td>
<td>ELSW038R</td>
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<td>7</td>
<td>POWER CORD</td>
<td>ELCB012</td>
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<tr>
<td>8</td>
<td>CAPACITOR</td>
<td>MTR043CNC</td>
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<td>9</td>
<td>RUBBER FOOT</td>
<td>HDWR026</td>
</tr>
<tr>
<td>10A</td>
<td>8” DIA. X 6’ LONG DUCT</td>
<td>SVF-H6</td>
</tr>
<tr>
<td>10B</td>
<td>8” DIA. X 15’ LONG DUCT</td>
<td>SVF-H15</td>
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<tr>
<td>10C</td>
<td>8” DIA. X 25’ LONG DUCT</td>
<td>SVF-H25</td>
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<tr>
<td>11</td>
<td>DUCT CANISTER</td>
<td>SVF-CAN</td>
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SPECIFICATIONS

| MOTOR TYPE | 1/3 HP (.23 kw) electric, 115 VAC/60 Hz, 2.6 amps, Capacitor Start, Single Speed, 3200 RPM, CSA Approved |
| OUTLET SIZE | 8” Diameter (203mm) |
| FLOW RATES | Free Air: 1395 cfm 15 ft. duct with one 90° bend: 840 cfm 15 ft. duct with two 90° bends: 750 cfm |
### REPLACEMENT PARTS - DC VOLTAGE FANS

**ITEM #** | **DESCRIPTION** | **PART #**
---|---|---
1 | INTAKE GUARD | MGDAXFAN1
2 | FAN | SV-FAN-8MM
3 | HANDLE | HDWR056
4 | 12 VDC ELECTRIC MOTOR WITH INLINE FUSE/FUSE HOLDER | MTR044CN
5 | 20A 32 VDC IN-LINE FUSE | ELF022
6 | DISCHARGE GUARD | MGDAXFAN2
7 | ON/OFF SWITCH | ELSW038R
8 | POWER CORD | ELCB045
9 | RED BATTERY CLAMP | ELA083R
10 | BLACK BATTERY CLAMP | ELA083B
11A | BATTERY CONNECTOR FOR OPTIONAL BATTERY PACK (P/N BP-950) | ELA127
11B | 1 PAIR OF CONTACTS FOR ELA127 | ELA126
12 | RUBBER FOOT | HDWR026
13A | 8” DIA. X 6’ LONG DUCT | SVF-H6
13B | 8” DIA. X 15’ LONG DUCT | SVF-H15
13C | 8” DIA. X 25’ LONG DUCT | SVF-H25
14 | DUCT CANISTER | SVF-CAN

### SPECIFICATIONS

| MOTOR TYPE | 1/6 HP, 13.5 VDC, 15 amps, Single Speed, 4200 RPM, 20 amp/32 VDC Slow Blow Fuse |
| OUTLET SIZE | 8” Diameter (203mm) |
| FLOW RATES | 1170 cfm |

Free Air: 1170 cfm

15 ft. duct with one 90° bend: 815 cfm

15 ft. duct with two 90° bends: 796 cfm
WIRING SCHEMATIC - SVF-8AC-MA
WARRANTY DISCLAIMER

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.