

Thank you for purchasing this fan from SHURflo. Please take a few minutes to read this entire manual before attempting installation. If you have any questions, please contact your nearest dealer or SHURflo. This unit will work from super low to refreshingly high speeds in automatic or manual modes at a wide range of temperature settings. Automatic dome-sensing control allows it to work with most vent covers. Automatic shut-off when it's raining and motor thermal protection are just a couple of the exciting safety features of this fan.

Standard & Optional Features

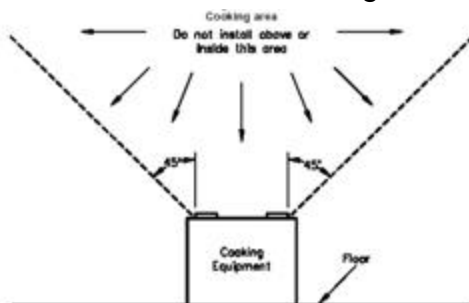
- Variable Speed Fan
- Easy-Remove Screen
- Fits Standard 14" x 14" Roof Openings
- Thermally Protected Motor
- High-Amp Dome Safety Control
- Remote-Control
- Intake & Exhaust Operation
- Motorized Dome
- Automatic Rain Sensor
- Auto-Temp Control from 55°F – 105°F

Contents

- 1 Comfort Air™ Fan Unit, including
 - 1 upper unit
 - 1 internal flange & 4 screws
 - See specifications on page 6 for trim model # and sizes
- 1 Remote Control
- 1 Remote Wall Mount & 2 screws
- 1 9-Volt DC Remote Control Battery
- 1 Installation and Operation Manual

! Location

- Fan must be installed with the hinge facing the direction of travel.
- Locate bi-directional fan at least 3 feet from any exhaust vent.
- Do not install fan in cooking area shown.



! Important Information

- SHURflo recommends professional installation.
- Please read the entire manual before attempting installation.
- This unit requires **12 VDC Power** only.
- This fan uses **4 Amps max.**
- 5 Amp fuse recommended.
- Follow all local building / electrical codes.
- Black wire is negative ground [-].
- Red wire is positive power [+].
- **Never reverse polarity. Reverse polarity can damage circuit board.**

! WARNING Moving blades can cut or crush

- **Never turn the fan on with the screen removed.**
- **Always turn off power before removing screen.**
- **Never place any objects in moving blade path.**
- **This unit is not intended for operation during wet conditions, such as rainy weather or washing the RV exterior. Operation in wet conditions may damage the product. Unless equipped with rain sensor option, the warranty will be void if operated in rainy or wet conditions.**

Tools and Materials Required

- #2 Philips screwdriver
- Scraper
- Wire stripper/crimp tool
- Butyl sealing tape (1/8" x 1" x 6')
- 18 Gauge or larger copper stranded wire
- Insulated wire connectors
- 5-Amp Power
- All weather Silicone sealant
---Rubber roofs require Rubber Roof sealant
- 3/4" or 1" x #8 selftapping screws [28] for roof mounting. Screws removed from old unit can be used.

COMFORT AIR™ FAN REMOTE COMMANDER (shown with all features)

Fan High (Fan Speed Increase +)

Press this button to increase fan speed.

Fan Off (Fan Stop & Power Off)

Press this button to stop the fan in Manual.

Press this button to exit Auto Mode.

Fan will stop and dome will close.

Fan Low (Fan Speed Decrease –)

Press this button to decrease fan speed.

Dome Open

Press this button to open the dome.

Dome Stop

Press this button to stop the dome.

Dome Close

Press this button to close the dome.

Exhaust / Intake*

Press this button to change fan direction.

Thermostat Control & LED Light Bank*

Adjust fan temperature from 55°F to 105°F.

Remote Reset

Left green light is used to reset the remote.

See Section on Resetting The Remote.

❄️ Cooler (Auto Mode)*

Press this button to set fan in Auto mode and to lower the thermostat temperature setting.

☀️ Warmer (Auto Mode)*

Press this button to set fan in Auto mode and to raise the thermostat temperature setting.

Battery Compartment (Rear of Remote)

Slide open rear compartment to replace 9V battery.

Quick-Look Instructions (Rear of Remote)

Fan operation and remote reset instructions.

* If equipped with these features

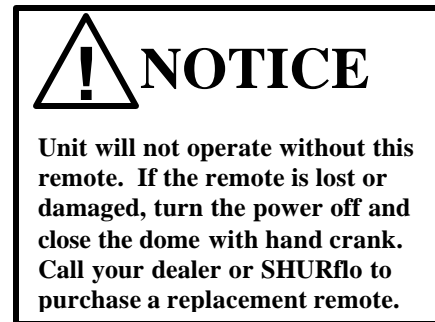
Resetting The Remote

Never reset remote control with screen removed.

It may be necessary at times to reset the remote to match the Comfort Air™ unit. This would be done to make one remote work for 2 fans, to make 2 fans operate from different remotes, or when purchasing a new remote for an installed unit.

To reset the remote to a fan unit:

1. Press and hold **FAN OFF**, until green light blinks [about 10 seconds].
2. **WITHOUT RELEASING FAN OFF** Button, press the **Reset Button** on the fan unit [see fan picture].
3. Hold buttons until fan motor goes into high speed. Fan unit is now reset to this remote.



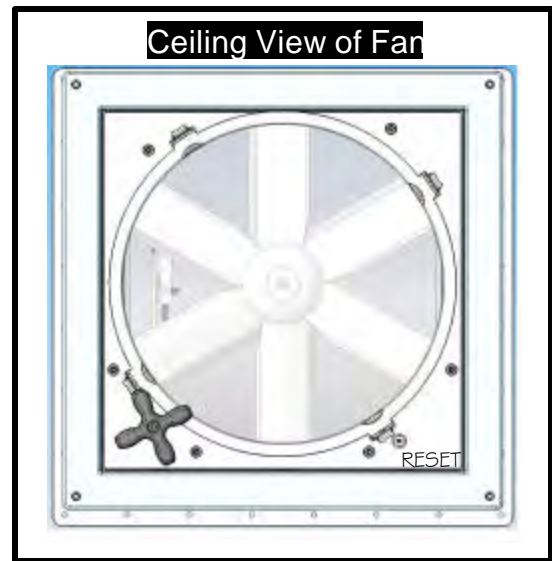
Installation

1. Turn off all power to fan.
2. If it is a new installation, cut and frame out a 14" x 14" hole. Prepare all wiring and fusing per specifications.
3. Remove old fan inside and out.
4. Carefully remove all old roof sealant. Surface must be clean and dry.
5. Check fit of new fan inside and out.
 - Hinge must face toward front of the RV.
 - Verify correct wiring size and length.
 - Check inside ceiling flange clearance.
 - To cut trim, see page 4 or call SHURflo.
 - Holes in roof exterior can be filled with wood putty or sealant to ensure a better seal later.
6. Apply 1" Butyl putty tape around mounting hole pattern on roof side of fan chassis.
 - Center the tape over the mounting holes.
7. Place unit on roof and check alignment inside and outside.
 - Hinge must be to the front of the RV.
8. Screw unit to roof with 28 screws.
 - Install screws slowly. Torque = 10-15 in-lb.
 - Screws from previous unit can be used.
9. Seal all edges and screws with silicone sealant, or use EPDM Rubber roof sealant for rubber roofs.
 - Do not allow sealant to contact dome hinge or rain sensor.
10. Check wire polarity and connect wires inside of coach. Coach wires are either black (-) and red (+) or white (-) and black (+).
 - Fan red wire is positive (+). Coach (+) wire may be red or black.
 - Fan black wire is negative (--). Coach (--) wire may be black or white.
 - Polarity must be correct! Check polarity with voltmeter before attaching wires.
11. Test hand crank by pulling down on crank and turning CW to open dome.
 - Crank must be in upper position for power operation.
 - Dome motor must be stopped before moving hand crank in or out.
12. Place lower trim in place and secure with 4 screws provided. See page 4 for trim cut tips.
13. Turn on main power to unit.
14. Place 9V battery in Fan Remote if not installed.
15. Test unit. See Resetting The Remote.

Fan and Remote Cleaning

Turn off all power, and remove screen by unsnapping 4 fan clips. Wipe fan and remote with damp rag with mild detergent only. Dry unit after wiping. Do not immerse fan or remote in water. To replace screen, align clips and snap into place.

NEVER OPERATE FAN WITH SCREEN REMOVED!



Operation

HAND DOME OPERATION

Pull down on manual crank and turn to open or close the dome by hand. Push crank up to lock gears for power dome operation.

MANUAL MODE

Press Fan High or Fan Low buttons or Dome Open, Stop or Close buttons to operate in Manual Mode.

Changing Fan Direction

Press Exhaust/Intake button to change direction.

AUTO MODE

Press Cooler button or Warmer button on the remote to lower or raise thermostat temperature setting. Dome will open and fan will start only above selected operating temperature. When temperature drops 5° F below set point, dome will close and fan will shut off. Dome will automatically open and fan will restart when temperature set point is reached.

Wait for dome to stop before re-setting temperature.

Changing Fan Direction

Press Exhaust/Intake button to change fan direction.

Adjusting Fan Speed or Dome Opening

Press Fan High button or Low button to adjust fan speed. Press Dome Open button or Close button to adjust dome opening. Press Dome Stop button 5 to stop dome in desired position.

To Exit Auto Mode

To exit Auto Mode press Fan Off button. Dome will close and fan will power off.

Rain Sensor

This unit is equipped with a rain sensor to automatically shut off the fan **when rain is detected in Auto Mode and Manual Mode.**

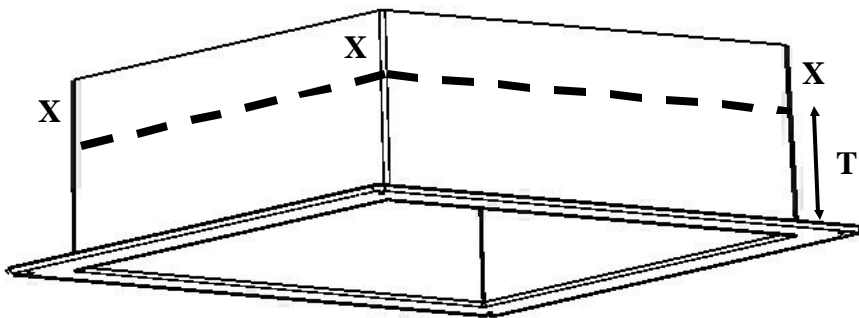
When rain sensor is activated, dome will close and unit will turn off. Fan will not restart when rain sensor dries out. Fan unit must be restarted in Manual or Auto Modes.

Trim Ring Modification

SHURflo provides 3 different sized trim rings to fit a multitude of RV roof thicknesses. The three styles and the roof thicknesses for each size are:

Model #	Roof Size
21-1316-00	2" to 3-1/2"
21-1316-01	3-1/2" to 5-1/4"
21-1316-02	5-1/4" to 6-1/4"

The trim rings can be cut to adjust height by either measuring the desired height T and cutting the entire circumference dotted line, or measuring the desired height T, cutting down at each corner X, scoring the trim ring with a razor blade [dotted lines] and snapping off the portion to be removed. Snap off plastic by wiggling portion to be removed back and forth. Be sure to file off any burrs before installing the trim ring. The cuts and scores do not have to be perfectly straight, because these cuts will be hidden by the fan chassis.



Typical
hacksaw

1. Measure T [Roof Thickness]
2. Mark dotted line
3. Cut dotted line; or cut X on all 4 corners, score dotted line and snap off.
4. Remove burrs



SERVICE PARTS KITS

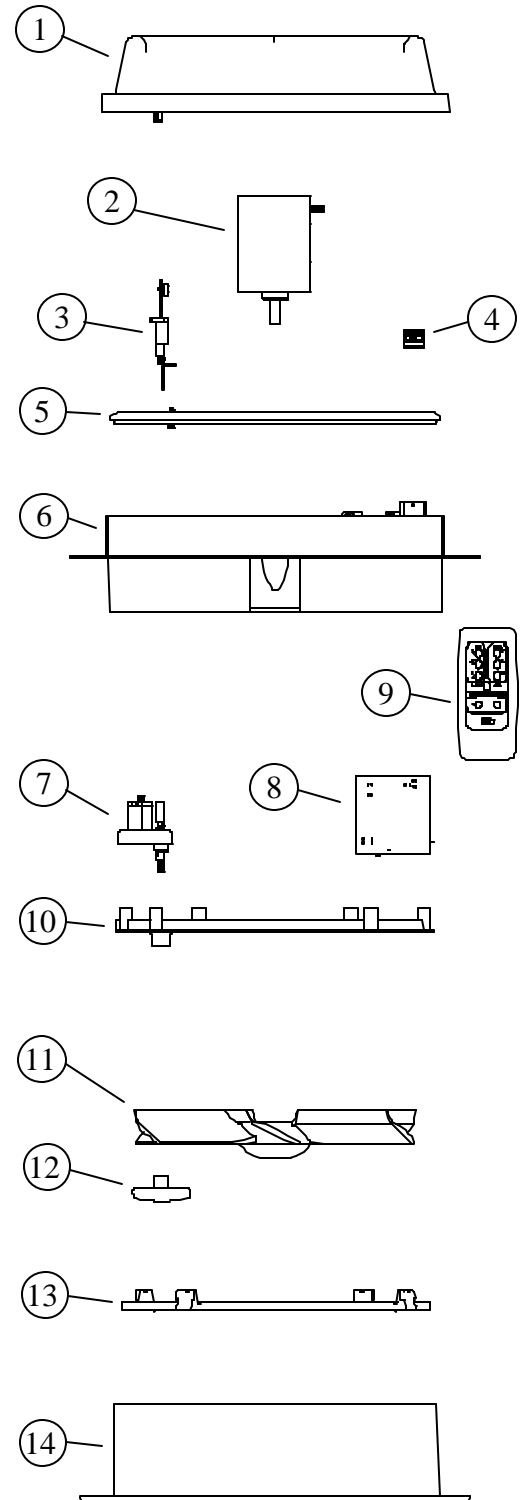
All kits contain necessary mounting screws & hardware.

ITEM DESCRIPTION

PARTS KIT

1	Vent Lid, Smoke with Hinge	94-073-00
1	Vent Lid, White with Hinge	94-073-01
2	Universal Fan Motor	94-073-02
3	Universal Lift Arm Assembly	94-073-03
4	Universal Rain Sensor	94-073-04
5	Universal Chassis Gasket	94-073-05
6	Chassis, Ceiling Control	N/A
6	Chassis, Remote Control	N/A
7	Universal Lift Motor	94-073-08
8	Circuit Board Assembly, Remote	94-073-09
8	Circuit Board Assembly, Ceiling, Exhaust Only	94-073-10
8	Circuit Board Assembly, Ceiling, Bi-Directional	94-073-11
9	Remote Control	94-073-12
10	Interior Panel, Remote Control	94-073-16
10	Interior Panel, Ceiling Exhaust Only	94-073-17
10	Interior Panel, Ceiling Bi-Directional	94-073-18
11	Universal Fan Blade	94-073-19
12	Knob Kit (Dome crank and fan speed knob)	94-073-20
13	Universal Screen Ring	94-073-21
14	Trim Expansion Ring, Small (2" to 3-1/2" roof)	94-073-22
14	Trim Expansion Ring, Medium (3-1/2" to 5-1/4" roof)	94-073-23
14	Trim Expansion Ring, Large (5" to 6-1/4" roof)	94-073-24
N/S	Bi-Directional Switch, Ceiling Control	94-073-25
N/S	Motorized Dome Switch, Ceiling Control	94-073-26

TYPICAL PARTS VIEW



Questions? Please contact your local dealer, go on-line at www.shurflo.com or call SHURflo Customer Service directly at (800) 854-3218 or (800) 762-8094.

When calling, please have the following information from the labels located under the dome:

Fan Model Name or Number _____

Fan Date of Manufacture _____

Fan Date of Purchase _____

Fan Serial Number _____

Specifications

Voltage	10 - 14 Volt DC
Maximum Amps	4 Amps Dome Motor Fuse: 0.5 Amp
Hole Size	14" x 14" Standard [13.75" to 14.25" square]
Roof Thickness	
2" to 3-1/2"	Trim # 21-1316-00
3-1/2" to 5-1/4"	Trim # 21-1316-01
5" to 6-1/4"	Trim # 21-1316-02
Maximum CFM	
Intake	910 CFM
Exhaust	980 CFM
Thermostat Range	55°F to 105°F
Remote Control	Model 84-940-xx
Remote Battery	9 Volt DC
Dimensions	17" x 17" x 4-1/4" closed 17" x 17" x 12-1/2" open
Materials	ABS and Polycarbonate
Wire	12" Red (+) Black (-) 18 AWG

Troubleshooting

PROBLEM	POSSIBLE SOLUTIONS
Fan remote does not work	Check main power, fuse, polarity and battery. Reset remote.
Fan & dome buttons do not work with fan off and dome closed	Unit in Auto Mode: press Fan Off to exit Auto Mode
Unit shuts off and closes	Preset temperature reached in Auto Mode, Rain sensor activated: Adjust Thermostat to turn fan on. Press fan Off to exit Auto Mode.
Dome will not open or close, but dome motor is running	Push hand crank up to actuate dome motor gears. Dome motor will turn off after 3 to 5 minutes if gear is not engaged.
Dome starts to open or close and then stops. If motor continues to run: If motor will not reverse or run after stopping	Dome hitting object. Check dome path for obstruction. Push up crank gear to engage. Check 0.5 Amp fuse at dome motor [under heat shrink].

INSTRUCTION TO THE USER**FCC Statement FCC ID: TLC-84-941-XX**

This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna
- Increase the separation between the equipment and the receiver
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

In order to maintain compliance with FCC regulations, shielded cables must be used with this equipment. Operation with non-approved equipment or unshielded cables is likely to result in interference to radio and TV reception. The user is cautioned that changes and modifications made to the equipment without the approval of the manufacturer could void the user's authority to operate this equipment.

Operation is subject to the following two conditions:

- (1) this device may not cause interference, and
- (2) this device must accept any interference, including interference that may cause undesired operation of the device.

IC: Remote IC: 6088A-84941XX Main Assy. IC: 6088A-275RXXX

THIS CLASS B DIGITAL APPARATUS COMPLIES WITH CANADIAN ICES-003. CET APPAREL NUMERIQUE DE LA CLASSE B EST CONFORME A LA NORME NMB-003 DU CANADA.

Limited Warranty Information

SHURflo Pump Manufacturing Co. (SHURflo) warrants this product to be free from defects in material or workmanship to the original owner for personal or family use, for a period of 2 years, 5 years warranty on exterior Dome and Screen from original date purchase. This product is warranted for 90 days from original date of purchase when used for commercial or business application. The warranty may provide for repair, including labor or exchange or replacement of unit, or parts as necessary.

An owner having a part or unit believed to be defective should contact a local RV dealer, or contact the nearest SHURflo office.

SHURflo will not accept the return of parts or units, will not send out parts or units or allow for the repair or replacement of parts or units under this warranty without giving their prior expressed authorization and without proof of date of purchase.

If SHURflo finds the unit or part to be defective and is the subject of a valid warranty claim, SHURflo will pay the dealer a labor allowance and supply repair part(s) or a replacement unit as applicable.

This warranty does not extend to parts or units which if, in the judgment of SHURflo, have been damaged or rendered defective by misuse, negligence, accident, improper installation, unreasonable use or if the unit or part has been tampered with or altered in any manner.

In no event, whether as a result of breach of contract, tort (including negligence) or otherwise, shall SHURflo be liable to any owner of a unit for any special damages arising out of the use, or inability to use that unit, nor for any claim against the owner by another party. Some states and provinces do not allow limitations on how long an implied warranty shall last or do not allow the exclusion or limitation of incidental or consequential damages. So the above limitation or exclusion may not apply to you.

This warranty gives you specific legal rights, and you may also have other rights that may vary from state to state.



SHURflo reserves the right to update specifications, prices, or make substitutions

SHURflo, LLC Headquarters

5900 Katella Ave.
Cypress, CA 90630
Phone (562) 795-5200 Toll Free (800) 854-3218
FAX (562) 795-7554

SHURflo East

52748 Park Six Court
Elkhart, IN 46514-5427
Phone (562) 795-5200 Toll Free (800) 854-3218
FAX (574) 264-2169

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SHURflo Europe, Middle East, Africa

Pentair Water Belgium bvba,
Industriepark Wolfstee, Toekomstlaan 30
B-2200 Herentals, Belgium
Phone +32-14-283500
Fax +32-14-283505