



# TJERNLUND PRODUCTS, INC.

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## SURE DRY™ SHOWER DRYING SYSTEM MODEL SD140

**READ OWNERS INSTRUCTIONS CAREFULLY PRIOR TO INSTALLATION. THESE INSTRUCTIONS MUST REMAIN WITH EQUIPMENT. DO NOT DESTROY.**



### DESCRIPTION

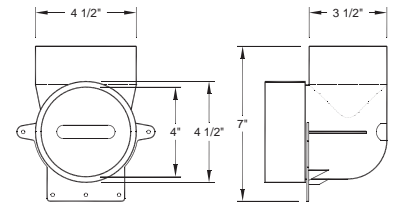
The Sure Dry™ SD140 Shower drying system quietly circulates dry air from an adjoining room into the shower enclosure to efficiently dry caulk, grout, tile and glass surfaces. Sure Dry Systems minimize mold/mildew growth and grout damage by accelerating surface drying time up to 80%.

### SPECIFICATIONS & COMPONENTS

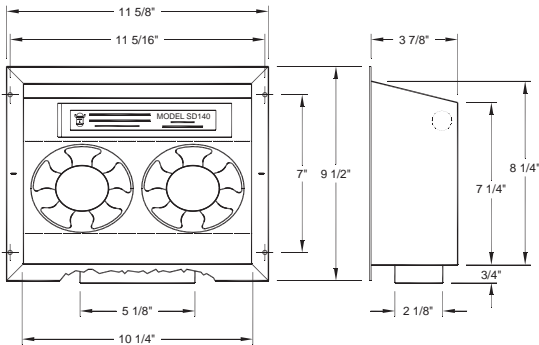
#### MODEL SD140

- Blower: 140 cfm
- Motor: 120 Volts ~ 60 Hz; 0.45 amps
- Rough In: Blower rough opening: 8 1/4" Height x 10 1/4" Width  
Supply Elbow rough opening through tile: 4 3/4" diameter
- Digital Timer: Decorator switch plate style fits single or multi-gang boxes, 5 settings - White

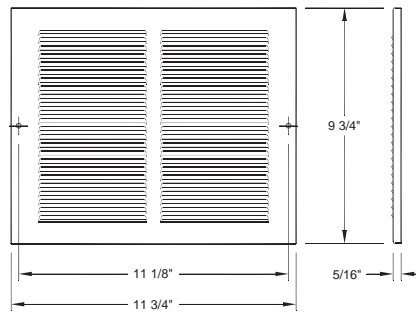
#### SHOWER SUPPLY ELBOW



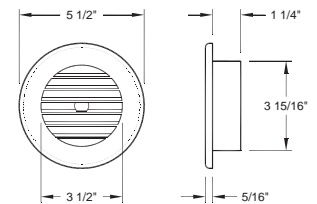
#### SD140 BLOWER HOUSING



#### SD140 INTAKE GRILLE - WHITE



#### SHOWER SUPPLY GRILLE WHITE - (COLOR OPTIONS AVAIL.)



### GENERAL INFORMATION

Every Tjernlund Sure Dry™ fan is electrically factory line tested before shipment.

After opening carton, inspect thoroughly for shipping damage. Impellers should rotate freely and all electrical wires and connections should be secured. If any damage is found, notify freight carrier and your distributor immediately and file a concealed damage claim.

### INSTALLATION RESTRICTIONS

The Sure Dry™ System must be installed by a qualified installer in accordance with these instructions and all local codes or in their absence in accordance with the latest editions of the International Residential Code and International Electrical Code. Improper installation can create a hazardous condition such as fire, electric shock or personal injury. To reduce these risks significantly, use this device only in the manner intended by the manufacturer. If you have questions about proper usage of this device, call Tjernlund Products at 800-255-4208 or email us at fanmail@tjfans.com.

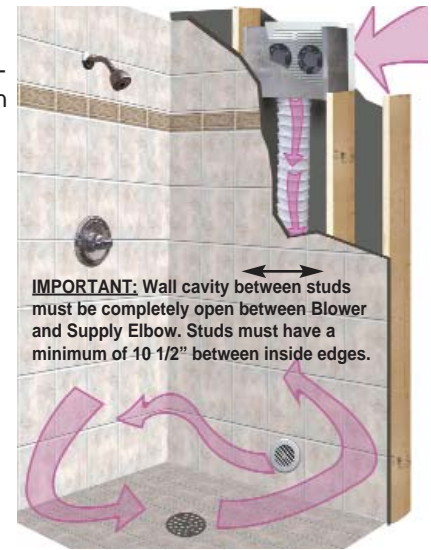
Always disconnect the Sure Dry™ Fan or timer from its power source before installation and servicing.

**IMPORTANT:** An in depth investigation of the wall layout is required prior to installation. Avoid a stud wall section that is a path for plumbing supply lines, drains and vents. Avoid a stud wall section that is insulated or being used as a return air duct for a forced air system. Pick the best location based on clear routing of the supply duct, sound transfer concerns, electrical supply routing and air drying paths. Make sure the wall cavity is at least 10 1/2" wide between inside stud edges.

**⚠ WARNING**

- The Sure Dry™ may not be used to exhaust hazardous or explosive materials or vapors.
- The Sure Dry™ may not be installed in a ceiling.
- The Sure Dry™ may not be installed in an outside wall.
- The Sure Dry™ may not be installed in a wall rated as a "fire wall."
- The Sure Dry™ may not be used to move air from one floor (story) to another floor.
- The Sure Dry™ may not be used in a window.

FIGURE A



**⚠ WARNING**

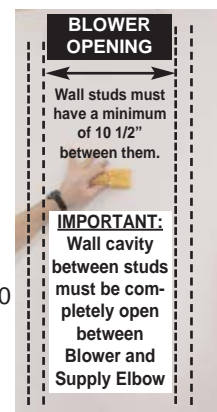
**Disrupt power at circuit breaker to outlets & switches from the electrical power source you will be working with.**

When manually sawing through sheetrock stop if you detect the saw blade coming in contact with any wiring or plumbing. Investigate further to determine if it is possible to safely continue to use this wall cavity space. Switch to another stud wall cavity if necessary.

**BEFORE YOU START:**

Determine the stud wall section that you want to use to mount the SD140 in. **IMPORTANT: Wall studs must be spaced a minimum of 10 1/2" between inside edges, (See Diagram A).** **NOTE:** If attempting to install the SD140 with an existing shower and not performing a complete remodel or retrofit, mark inside edges of studs the Sure Dry™ will be installed between and verify there is at least 10 1/2" between the inside edges. Slide a stud finder down the wall between the studs to verify the stud wall cavity is completely open, (See Diagram B).

FIGURE B



**TOOLS REQUIRED**

Sheetrock Saw   Drill   Tin Snips   Phillips & Straight Screwdrivers   Level   Tape Measure   Utility Knife or Scissors   Wire Stripper

**REMODEL OR NEW CONSTRUCTION INSTALLATION**

1. When installing the SD140, locate possible installation locations by examining the inside and outside shower areas for non-obstructed wall stud cavities. Avoid wall stud cavities that have plumbing or electrical wires within them. Pick the best location based on clear routing of flex duct, sound transfer concerns, electrical supply routing. Make sure the wall cavity is at least 10 1/2" wide between inside stud edges, (See Figures A & B).
2. On the shower side of the wall before any materials have been fastened to the studs, define where the shower air Supply Grille will be located. Make sure the height of the Shower Grille is above the highest water level obtainable in the shower. Mount the gray & white Supply Elbow between 2 studs within the wall cavity chosen in Step 1. Make sure the oval end of elbow points up. The use of an additional wall framing piece (2 x 4 or 2 x 6) or is required to solidly mount elbow. Mount Supply Elbow above maximum water level, (See Figure C).
3. In the wall cavity where the supply elbow has been mounted, define a location for the Blower. This location should be towards the top of the wall cavity but no closer than 3" from the ceiling on the other side of the wall. Once a target location has been determined, find the center point between the studs and poke a small hole thru the wall and verify the location is acceptable from the other side of the wall, (See Figure D).

FIGURE C



FIGURE D

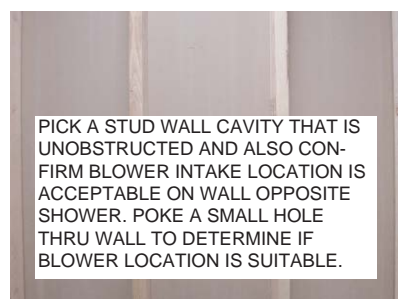


FIGURE E

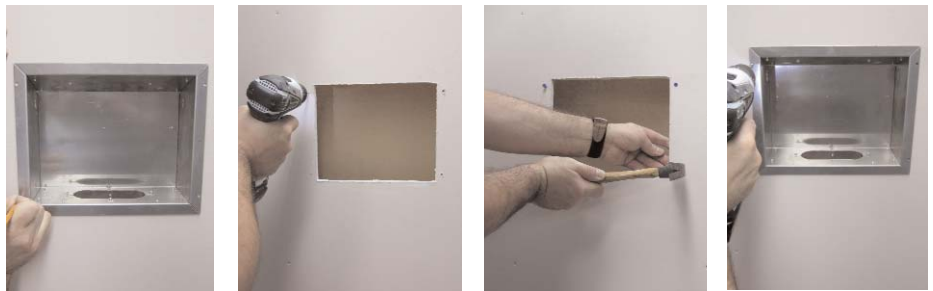


- From the Blower side of the wall, locate the small hole created in Step 3 and if ok, position the SD140 Blower cut out template. Top line of Blower template should not be closer than 3" to the ceiling. Level and tape the template to the wall, (See Figure E). Use a sheetrock saw with caution to remove sheetrock between template lines, (See Figure F).
- Remove the Fan assembly from the Blower housing by using a screw driver to pry top flang over 2 Blower case extruded dimples and set aside for later use. Insert the Blower housing into the hole with the oval supply duct connection facing down and mark the (4) corner holes with a pencil. Drill out holes with 3/16" bit, carefully tap in wall anchors and secure housing to the wall with screws provided, (See Figure G).

FIGURE F



FIGURE G



- Install the provided flexible oval duct with (2) 1/4 x 3/8" sharper point self tapping screws on oval Blower housing flange making sure that screw head is below and pinches metal ring in flex duct on both sides. Stretch flex duct down to Supply Elbow and cut to length with a metal snips. Make sure the duct is stretched and is as straight a run as possible. Excessive flex duct material and bends will reduce fan performance and lengthen shower drying times. Install the flexible oval duct with (2) 1/4 x 3/8" duller point self tapping screws on Supply Elbow making sure that screw head is above and pinches metal ring in flex duct on both sides, (See Figure H).

FIGURE H



## SHOWER SIDE FINISHING

- Finish remodeling the shower including sealing the area around where the elbow enters the shower. Excess pipe from the elbow into the shower is acceptable at this point. Make sure all tiling and grouting has been completed before moving forward. Place the provided sheet metal protection plate over the supply elbow extension and tape to tile wall, (See Figure I).
- Use a reciprocating saw, grinder, dremmel tool, etc., to cut off the elbow extension until it is flush with the metal plate and remove, (See Figure J). Once metal plate is removed, careful cleanup on Supply Elbow can be done so it is flush with tile.
- Test fit the Shower Grille. Make sure it can be installed flush to the shower tile surface and make adjustments on Supply Elbow with grinder or dremmel tool if necessary. Silicone seal the Shower Grille in place using high quality silicone bath caulk. Place large beads of silicone bath caulk on inlet leading edge of Shower Grille and on outside flange of Shower Grille and insert in Supply Elbow. Smooth excess caulk bead around Supply Grille and tile, (See Figure K). Rotate Shower Grille louvers in desired direction.

FIGURE I



FIGURE J



FIGURE K



## WIRING

### ⚠ WARNING

The following steps involve electrical wiring and should only be performed by a licensed electrician and / or adhere to all local, state and national electrical codes.

Locate and install the timer switch preferably by existing exhaust and light switches, while following all local, state and national electrical codes. The fan unit consumes less than 50 watts when operating so use of existing power circuit for the lights in the shower area is often times acceptable. **MAKE SURE THE POWER CIRCUIT IS OFF BEFORE CONTINUING. A GFI CIRCUIT IS REQUIRED.**

1. Route the switched power load wiring from the switch to the Blower housing. Use one of the (4) provided knockouts in the Blower housing. Route a minimum of 12" of wire inside the Blower housing. If using 14 gauge nonmetallic sheathed cable (Romex or equivalent), strain relief the wiring at the Blower housing using the provided black plastic nonmetallic cable strain relief. If using some other wire type, strain relief the wire at the Blower housing using an approved strain relief method, (See Figure L).
2. Install the dual Fan assembly into the Blower housing making sure to route all wires thru the access hole in the front of the Fan assembly. To install the Fan assembly, hook the top edge of the Fan assembly under the 2 extruded dimples located on the top of the Blower housing. Push the Fan assembly into the Blower housing until the assembly snaps into place, (See Figure M).
3. Wire the Fan assembly to the Timer switch wiring as defined in the wiring diagram below. Once complete, install Fan assembly electrical coverplate with the screw provided and Timer switch cover plate. Install the white Intake Grille over the Blower housing with the provided white headed screws. The grille louvers should face upwards so fans can not be viewed through the grille, (See Figure N).

FIGURE L



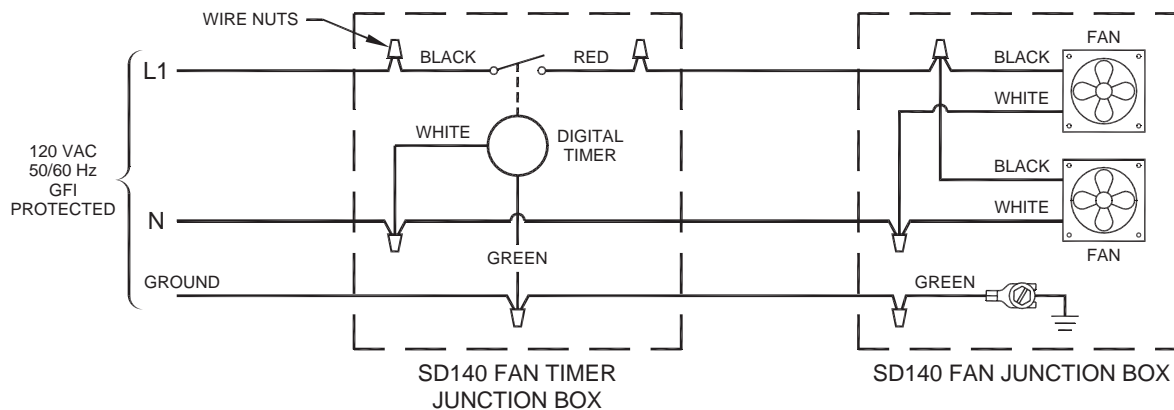
FIGURE M



FIGURE N



### SURE DRY™ MODEL SD140 FAN & TIMER WIRING CONNECTIONS



### MAINTENANCE

The Sure Dry™ fan compartment should be inspected annually and carefully cleaned or vacuumed with a bristle brush head if necessary. The motors are permanently lubricated and require no maintenance.

### REPLACEMENT PARTS AND WARRANTY

Component	Part Number	Component	Part Number
Digital Timer - White	950-9300	SD140 Dual Fan Assembly	950-9310
Intake Grille - White	950-9320	Shower Supply Grille - White	950-9321

### TJERNLUND LIMITED ONE YEAR WARRANTY

Tjernlund Products, Inc. warrants to the original purchaser of this product that the product will be free from defects due to faulty material or workmanship for a period of (1) year from the date of original purchase or delivery to the original purchaser, whichever is earlier. Remedies under this warranty are limited to repairing or replacing, at our option, any product which shall, within the above stated warranty period, be returned to Tjernlund Products, Inc. at the address listed below, postage prepaid. THERE ARE NO WARRANTIES WHICH EXTEND BEYOND THE DESCRIPTION ON THE FACE HEREOF, AND TJERNLUND PRODUCTS, INC. EXPRESSLY DISCLAIMS LIABILITY FOR INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING FROM THE USE OF THIS PRODUCT. THIS WARRANTY IS IN LIEU OF ALL OTHER EXPRESS WARRANTIES AND NO AGENT IS AUTHORIZED TO ASSUME FOR US ANY LIABILITY ADDITIONAL TO THOSE SET FORTH IN THIS LIMITED WARRANTY. IMPLIED WARRANTIES ARE LIMITED TO THE STATED DURATION OF THIS LIMITED WARRANTY. Some states do not allow limitation on how long an implied warranty lasts, so that limitation may not apply to you. In addition, some states do not allow the exclusion or limitation of incidental or consequential damages, so that above limitation or exclusion may not apply to you. This warranty gives you specific legal rights and you may also have other rights which may vary from State to State. Send all inquiries regarding warranty work to Tjernlund Products, Inc. 1601 9th Street, White Bear Lake, MN 55110-6794. Phone (651) 426-2993 • (800) 255-4208 • Fax (651) 426-9547 • Email fanmail@tjfans.com.