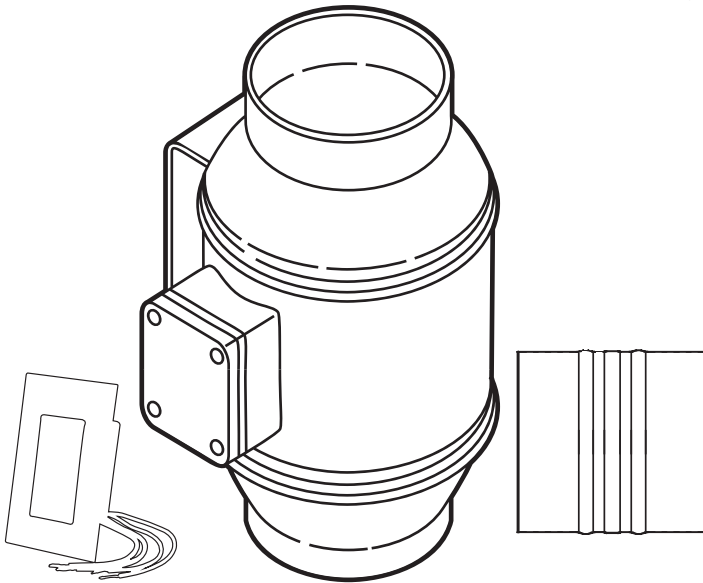




OUTSIDE AIR KIT-125 (OSAK-125)

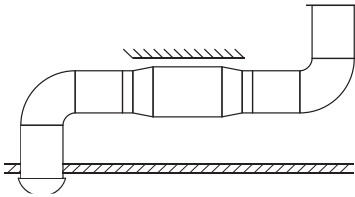
INCLUDES TD-125, CAR-125, FT247



INSTALLATION AND WIRING INSTRUCTIONS
READ AND SAVE THESE INSTRUCTIONS

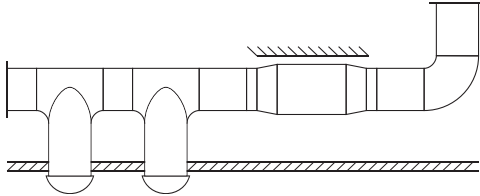
Figure 1. Typical Applications: TD-125

- Single Point Exhaust System



Note:
- Seal joints with tape
- Use round elbows

- Multi-Point Exhaust System



Note:
- Seal joints with tape
- Use round elbows

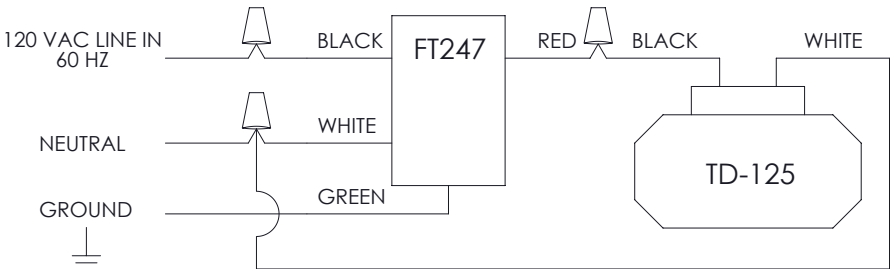
Figure 2. Installing: TD-125

1. To install the TD - MIXVENT models the fan motor/wheel assembly must first be removed. Unlock the two flanges around the casing and remove.
2. Secure the mounting bracket / fan flange assembly to a fixed structure.
3. Replace the fan motor / wheel assembly and tighten the two flanges to secure the product.

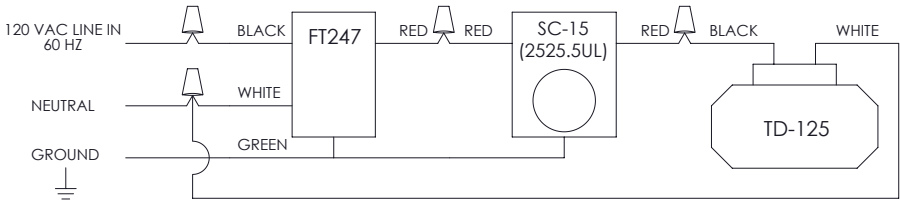
Figure 3. Electrical Wiring: OSAK-125

- TD-125 and FT247 without Speed Controller

IMPORTANT: Model TD-125 is double insulated and is not provided with external ground wire



• TD-125 and FT247 with Speed Controller



ENGLISH

TD - MIXVENT SERIES

The TD - MIXVENT mixed flow range of in-line duct exhaust fans have been manufactured in accordance with the rigorous standards of production as defined by the International Quality Standards ISO 9001. All the components have been checked and tested at the end of the manufacturing process.

We recommend that you check the following after receiving this product:

1. The correct size has been received
2. The correct model has been received
3. The details on the rating label correspond to the electrical supply: voltage, frequency etc.

Remove the unit from packaging and inspect for shipping damage within 15 days of receipt. If the product is found to be damaged, immediately contact your local authorized supplier. **DO NOT OPERATE THE UNIT IF DAMAGED.**

These instructions should be considered as a supplement to EPA standard practices, as well as all state and local building code regulations.

ENVIRONMENT

The TD-Mixvent series of fans are suitable for operation within indoor environments only, except the TD-250 and 315x which are UL approved for outdoor use. The TD-Mixvent units are suitable for the exhaust or supply of both conditioned and unconditioned airstreams within the temperature ranges (inclusive of duct airstream's temperature) of -40°C up to +40°C for models TD-100,-100X, -125 & -150; and -40°C up to +60°C for models TD-200, -200X,-250 & -315.

INSTALLATION, TD-125

WARNING: TO REDUCE THE RISK OF FIRE OR ELECTRIC SHOCK, OR INJURY TO PERSONS, OBSERVE THE FOLLOWING:

- (a) Use this unit only in the manner intended by the manufacturer. If you have any questions contact the manufacturer.
- (b) Before servicing or cleaning the unit, switch the power off at the service panel and lock the service disconnecting means to prevent power from being switched on accidentally. When the service disconnecting means

cannot be locked; securely fasten a prominent warning device such as a tag to the service panel.

- (c) Installation work and electrical wiring must be done by qualified person(s) in accordance with all applicable codes & standards including fire rated construction.
- (d) Sufficient air is needed for proper combustion and exhausting of gases through the flue (chimney) of fuel burning equipment to prevent back drafting. Follow the heating equipment manufacturers guideline and safety standards such as those published by the National Fire Protection Association (NFPA) and the American Society For Heating, Refrigeration and Air Conditioning Engineers (ASHRAE) and the local code authorities.
- (e) When cutting or drilling into wall or ceiling, do not damage electrical wiring and other hidden utilities.
- (f) Ducted fans must always be vented to the outdoors.
- (g) If this unit is to be installed over a tub or a shower, it must be marked as appropriate for the application and connected to a GFCI (Ground Fault Circuit Interrupter) - protected branch circuit.
- (h) Never place a switch where it can be reached from a tub or shower.
- (i) CAUTION: For General Ventilating Use Only. Do Not Use To Exhaust Hazardous Or Explosive Materials And Vapors.
- (j) CAUTION: MOUNT WITH THE LOWEST MOVING PARTS AT LEAST 2.4 M (8 FEET) ABOVE THE FLOOR OR GRADE LEVEL.
- (k) All units are suitable for use with solid-state speed control.

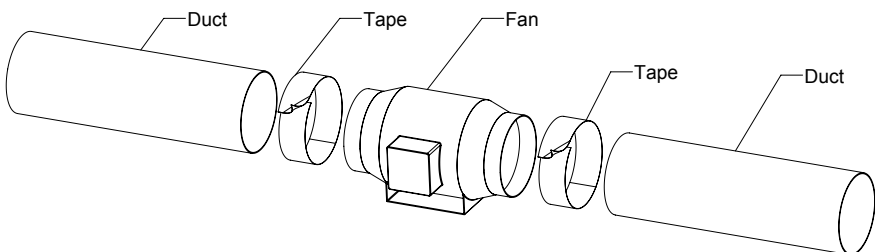
The TD - MIXVENT series can be mounted in any orientation, horizontal or vertical, and is suitable for numerous types of applications. See **Figure (1)**. Illustration of some typical applications.

If the installation is made to rigid or flexible ducting, then we would recommend the correct diameter ducting is used to couple to the fan flanges. If it is necessary to bend the duct at the discharge of the fan, then the bend radius should be as large as possible. When rigid duct is used, make sure to use round elbows.

Before installing the product check the following points: (1) the fan impeller turns freely and (2) there are no obstructions to the airflow.

All models include a robust mounting bracket which enables easy and quick installation of the fan. See **Figure (2)** Installation Diagrams For TD - MIXVENT Duct Fans.

Ductwork connection should be made with duct tape or duct fast-clamps (available through your local distributor) to ensure a good seal and secure connection.



To ensure quiet operation of ENERGY STAR qualified inline and remote fans, each fan shall be installed using sound attenuation techniques appropriate for the installation. For bathroom and general ventilation applications, at least 8 feet of insulated flexible duct shall be installed between the exhaust or supply grille(s) and the fan. For remote ventilation applications, where metal duct is generally required by code, a metal sound attenuator shall be installed between the hood and the fan.

ELECTRICAL CONNECTION

All TD - MIXVENT series fans operate from a standard 120V 60Hz A.C electrical supply. All wiring must be carried out in accordance with National Electrical Code and all applicable state and local buildings codes.

Electrical connections should be made in accordance with the following diagrams:

Figure (3) Electrical Wiring.

MAINTENANCE

IMPORTANT: BEFORE CARRYING OUT ANY MAINTENANCE OR SERVICING, ENSURE THE UNIT IS DISCONNECTED FROM THE MAIN ELECTRICAL SUPPLY.

All TD - MIXVENT series exhaust fans incorporate sealed for life bearings and therefore do not require any lubrication. We would recommend inspection of the product at least once every twelve (12) months to avoid the excessive accumulation of dust and dirt on the impeller. To inspect the unit disconnect from electrical supply and remove from ducting. If any debris is evident on the impeller clean with a damp (not wet) cloth. **DO NOT USE** any detergents or abrasive materials for cleaning.

WARRANTY

S&P USA - S&P Canada warrant that the TD - MIXVENT series exhaust fan will be free from defective materials and workmanship for the period of (5) years from the date of original purchase. In the event that we find any part is defective the product will be repaired or, in the Company's discretion, replaced without charge provided that the product has been installed in accordance with the enclosed instructions and all applicable EPA Standards and state and local building codes. S&P TD Bath Kits have an extended warranty period of (7) years from the date of original purchase.

IF CLAIMING UNDER WARRANTY

Please return the complete product, freight paid, to you local authorized distributor. All returns must be accompanied by a valid Bill Of Sale. All returns must be clearly marked "Warranty Claim," with an accompanying description stating the nature of the fault.

THE FOLLOWING WARRANTIES DO NO APPLY

Damages from shipping, either concealed or visible. Claim must be filed with the carrier.

Damages resulting from improper wiring or installation

Damages caused by acts of nature, or resulting from improper consumer procedures such as: Improper Maintenance; Misuse; Negligence; Alteration; Abuse; Abnormal Use; or Accident or Incorrect Electrical Voltage and Current.

Removal or alteration to the S&P USA - S&P Canada data plate label.

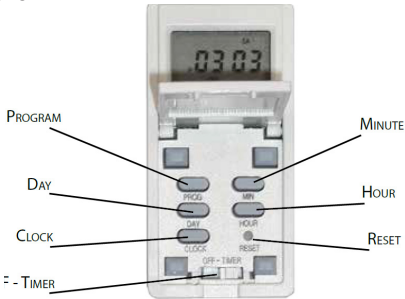
WARRANTY VALIDATION

The end user must keep a copy of the Bill of Sale to verify purchase date.

THE ABOVE FIVE (5) YEAR WARRANTY IS EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES, EXPRESSED, WRITTEN OR IMPLIED, INCLUDING THE WARRANTIES OF MERCHANTABILITY AND FITNESS FOR USE. IN NO EVENT SHALL SOLER & PALAU USA - SOLER & PALAU CANADA BE LIABLE FOR ANY SPECIAL, CONSEQUENTIAL, OR INCIDENTAL DAMAGES, INCLUDING LOSS OF PROPERTY, REVENUES, LOST PROFITS, COSTS OF REMOVAL, INSTALLATION OR REINSTALLATION.

INSTALLATION, FT247

Figure 4. FT247



SPECIFICATIONS:

Ratings:

cULus

120VAC, 60Hz 1HP

15A Resistive 15A Tungsten

Use as replacement for standard indoor wall box toggle switch to provide automatic control of outdoor or indoor lighting, fans, pumps, office machines, and other types of circuits rated at 120 VAC.

This device requires installation by a licensed electrician or qualified professional. Use of voltage detector or meter is recommended. (Wiring diagram provided for reference.)

1. Turn OFF the main power
2. Remove the existing switch.
3. Connect the wires of Timer and wall box as followed by using the wire nuts provided.
 - a. Connect the Hot/Live wire of main power to the Black wire from Timer.
 - b. Connect both the Neutral wires of main power and load to the White wire from Timer.
 - c. Connect the Hot/Live wire of Load to the Red wire from Timer.
 - d. Connect the Earth (Ground) wire to the Yellow/Green wire from Timer.

Note: Be sure that all the wire nuts are secure.

4. Tuck the wires into the wall box leaving room for the Timer.
5. Using the screws provided, place through the big hole on the mounting yoke of Timer to mount the Timer to the wall box.

Operation Instructions

Power Up Sequence:

1. Lift up the bottom of the door using a small slotted screwdriver.
2. Position the slide switch to TIMER.
3. Press the "RESET" button using a paper clip.
4. The display should flash 12:00 AM on Monday.

NOTE: In the event that the screen is blank, check the following:

1. The OFF/TIMER switch located at the bottom may be in the OFF position. Slide it to the TIMER position using a small screwdriver.
2. Check LOAD connected to the FT247.
3. Check the 120VAC power source.

Setting Current Time: Press and HOLD the “CLOCK” key during this procedure.

1. Press the “HOURL” key to advance the hours.
2. Press the “MIN” key to advance the minutes.
3. Press the “DAY” key to advance the day.
4. If any keys are pressed for a prolonged period, the display will advance rapidly.
5. Release the “CLOCK” key once the time and day have been entered.

The timer is operating and ready to program. The colon “:” after the hours will continuously flash indicating that the time is advancing.

Programming “ON/OFF” Events:

1. Press the “PROG” key once. TIMER 1 ON -- : -- appears. Using the “HOURL” and “MIN” keys enter the desired ON time. When complete press the PROG key once.
2. Timer OFF -- : -- will be displayed. Using the “HOURL” and “MIN” keys enter the desired OFF time. When complete press the PROG key once.
3. If complete press the “CLOCK” key to return to current time and day. A total of 7-ON and 7-OFF events can be programmed. (See Figure 5 to program the FT247 to run the TD-125 to meet the 2015 IRC TABLE M1507.3.3(1) CONTINUOUS WHOLE-HOUSE MECHANICAL VENTILATION SYSTEM AIRFLOW RATE REQUIREMENTS.
4. Close door when programming completed.

NOTE: It is necessary to press “MIN” at least once to display “OO” for minutes (ex. 9:00 AM). By default all days are indicated.

Figure 5. Programming TD-125 & FT247 to IRC 2015 Requirements (Refer to IRC 2015 Section M1507.3.3 for full documentation of requirements.)

Dark Gray shading indicates CFM outside the requirements

2015 IRC-CH.15 Exhaust Systems					
TABLE M1507.3.3(1) CONTINUOUS WHOLE-HOUSE MECHANICAL VENTILATION SYSTEM AIRFLOW RATE REQUIREMENTS					
DWELLING UNIT FLOOR AREA (square feet)	NUMBER OF BEDROOMS				
	0 - 1	2 - 3	4 - 5	6 - 7	> 7
	Airflow in CFM				
< 1,500	30	45	60	75	90
1,501 - 3,000	45	60	75	90	105
3,001 - 4,500	60	75	90	105	120
4,501 - 6,000	75	90	105	120	135
6,001 - 7,500	90	105	120	135	150
> 7,500	105	120	135	150	165

2015 IRC-CH.15 Exhaust Systems						
TABLE M1507.3.3(2) INTERMITTENT WHOLE-HOUSE MECHANICAL VENTILATION RATE FACTORS						
RUN-TIME PERCENTAGE IN EACH 4-HOUR SEGMENT	25%	33%	50%	66%	75%	100%
Factor	4	3	2	1.5	1.3	1.0

This table shows what airflows the OSAK-125 kit can meet if you choose to program the FT247 to run 25% of every 4 hour period.

25%					
DWELLING UNIT FLOOR AREA (square feet)	NUMBER OF BEDROOMS				
	0 - 1	2 - 3	4 - 5	6 - 7	> 7
	Airflow in CFM				
< 1,500	120	180	240	300	360
1,501 - 3,000	180	240	300	360	420
3,001 - 4,500	240	300	360	420	480
4,501 - 6,000	300	360	420	480	540
6,001 - 7,500	360	420	480	540	600
> 7,500	420	480	540	600	660

This table shows what airflows the OSAK-125 kit can meet if you choose to program the FT247 to run 33% of every 4 hour period.

33%					
DWELLING UNIT FLOOR AREA (square feet)	NUMBER OF BEDROOMS				
	0 - 1	2 - 3	4 - 5	6 - 7	> 7
	Airflow in CFM				
< 1,500	90	135	180	225	270
1,501 - 3,000	135	180	225	270	315
3,001 - 4,500	180	225	270	315	360
4,501 - 6,000	225	270	315	360	405
6,001 - 7,500	270	315	360	405	450
> 7,500	315	360	405	450	495

This table shows what airflows the OSAK-125 kit can meet if you choose to program the FT247 to run 50% of every 4 hour period.

50%					
DWELLING UNIT FLOOR AREA (square feet)	NUMBER OF BEDROOMS				
	0 - 1	2 - 3	4 - 5	6 - 7	> 7
	Airflow in CFM				
< 1,500	60	90	120	150	180
1,501 - 3,000	90	120	150	180	210
3,001 - 4,500	120	150	180	210	240
4,501 - 6,000	150	180	210	240	270
6,001 - 7,500	180	210	240	270	300
> 7,500	210	240	270	300	330

This table shows what airflows the OSAK-125 kit can meet if you choose to program the FT247 to run 66% of every 4 hour period.

66%					
DWELLING UNIT FLOOR AREA (square feet)	NUMBER OF BEDROOMS				
	0 - 1	2 - 3	4 - 5	6 - 7	> 7
	Airflow in CFM				
< 1,500	45	67.5	90	112.5	135
1,501 - 3,000	67.5	90	112.5	135	157.5
3,001 - 4,500	90	112.5	135	157.5	180
4,501 - 6,000	112.5	135	157.5	180	202.5
6,001 - 7,500	135	157.5	180	202.5	225
> 7,500	157.5	180	202.5	225	247.5

This table shows what airflows the OSAK-125 kit can meet if you choose to program the FT247 to run 75% of every 4 hour period.

75%					
DWELLING UNIT FLOOR AREA (square feet)	NUMBER OF BEDROOMS				
	0 - 1	2 - 3	4 - 5	6 - 7	> 7
	Airflow in CFM				
< 1,500	39	58.5	78	97.5	117
1,501 - 3,000	58.5	78	97.5	117	136.5
3,001 - 4,500	78	97.5	117	136.5	156
4,501 - 6,000	97.5	117	136.5	156	175.5
6,001 - 7,500	117	136.5	156	175.5	195
> 7,500	136.5	156	175.5	195	214.5

This table shows what airflows the OSAK-125 kit can meet if you choose to program the FT247 to run 100% of every 4 hour period.

75%					
DWELLING UNIT FLOOR AREA (square feet)	NUMBER OF BEDROOMS				
	0 - 1	2 - 3	4 - 5	6 - 7	> 7
	Airflow in CFM				
< 1,500	30	45	60	75	90
1,501 - 3,000	45	60	75	90	105
3,001 - 4,500	60	75	90	105	120
4,501 - 6,000	75	90	105	120	135
6,001 - 7,500	90	105	120	135	150
> 7,500	105	120	135	150	165

Block Programming: When programming “ON/OFF” events, all days are indicated by default. To change the day selection; simply keep pressing the “Day” key and the display will change as follows: Individual Day (MON, TUE, etc.); MON~FRI; SAT~SUN; MON~SAT; MON~SUN; MON-WEDFRI; TUE-THU-SAT; MON-WED; THU-SAT. Follow the steps above to complete programming.

Reviewing Programs: To review entered programs; simply press and release the “PROG” key. Each time you do this you will be able to scroll thru the programs. Any program can be edited simply by pressing the HOUR, MIN, and DAY keys. Then press the PROG key in order to accept the changes. When complete press the “CLOCK” key to return to current time and day.

MEMORY BACKUP: The FT247 is equipped with a rechargeable Ni-Mh battery which will protect your programs during power failure for up to 30 days. No need to replace battery. Note that the screen blanks during a power failure.

Deleting Programs: To delete a particular program press the PROG key until the desired program is displayed. Then press the HOUR and MIN keys until - - : - - is displayed. Then press the PROG key in order to delete the program. When complete press the “Clock” key to return to current time and day. Manual Override: Pressing the FT247 cover while closed will alternate the unit ON or OFF.

Disable Function: The FT247 has a disable function whereby the programs do not execute. It’s ideal during Holidays of vacation period where the unit is not to perform any function. Simply slide bottom slide switch of OFF.

Initial Startup: When you initially program the unit it may be necessary to press the manual override key as the unit will not look back to determine if it should be ON. Example: the current time is 2:00PM and you just programmed the unit to turn “ON” at 1:00PM, press the manual override key to turn the unit “ON”. Thereafter, the unit will resume normal automatic operation.



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