

## **MODELS TR & TRC**

TOTAL RECOVERY FOR ALL CLIMATES
RESIDENTIAL OR COMMERCIAL APPLICATIONS

With S&P's TR & TRC (total recovery) Series for all climates, stale room air is exhausted and fresh outdoor air is brought back into the house. These two air streams are directed through a highly developed "air-to-air" energy exchange core. The air streams are physically separated by many layers of "plates" so there is no mixing or contamination of the fresh air. The plates are made of an engineered "resin" material that simultaneously transfers heat by conduction and humidity by attracting and moving water vapor from one air stream to the other.

S&P's TR & TRCs moderate extremes in both temperature and humidity, creating a comfortable indoor environment. The unique moisture transfer capability of the S&P core also eliminates condensation and frost build up in most applications. Unlike other ERVs on the market no mechanical or electrical defrost systems are needed, which means higher heat recovery efficiencies, easier installation and more reliable operation.

### **Contractor Benefits**

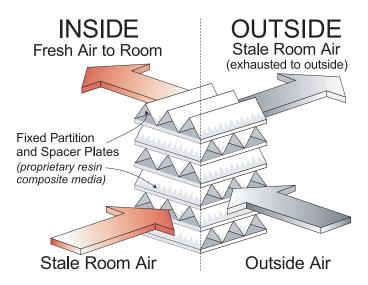


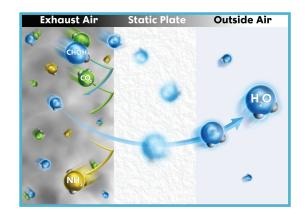
- Models compatible to any HVAC equipment
- Simple installation
- Mount in any orientation
- May be installed in unconditioned locations like attics and garages
- Easy-to-access field support
- Elimination of callbacks
- "Green Building" compliant

### The CORE

- Efficient transfer of heat and moisture
- No liquid is accumulated; no drain pan or defrost mechanism is required!
- Industry best 10-year warranty

## 5th Generation Core





 Contaminated air is exhausted from the building, while the static plate core regulates extremes in humidity

### The Warranty

An S&P TR or TRC is protected by a 10-year core warranty with a 5-year warranty on balance of the TR unit and 2-year warranty on balance of the TRC unit. This commitment - twice as long as coverage on the best wheel products - means with S&P you can just fit and forget.



## (S&P)

### **MODEL TR AND TRC SIZING**

### Choosing the Right Size TR by Square Footage

Choosing the correct size TR for your structure is easy, all you need to know is the square footage.

If you structure is up to:

1500 Sq. Ft. you need a TR90/TR90G

2700 Sq. Ft. you need a TR130

4000 Sq. Ft. you need a **TR200** 

6000 Sq. Ft. you need a TR300



### Choosing the Right Size TR or TRC by Air Handler Load

For each ton of air handling capacity, 120 CFM of Energy Recovery Ventilation is recommended.

Ton	Capacity 30% Outside Air Fraction in CFM	Model Needed
1.0	120	TR130
1.5	180	TR200
2.0	240	TR300
2.5	300	TR300
3.0	360	TRC500
3.5	420	TRC500
4.0	480	TRC500
5.0	600	TRC800
6.5	780	TRC800
8.0	960	TRC1200
12	1,440	TRC1200
13.5	1,620	TRC1600





Model TR90/TR90G



Models TR130, TR200 and TR300



**Model TRC500** 



**Model TRC800** 



Model TRC1200



**Model TRC1600** 







#### **MODEL FEATURES**

- MERV-8 filters
- Less than 1 watt stand-by power consumption
- Transformer/relay package allowing simple on/off control
- Plastic double collars for 6 or 8" direct duct connection (TR300 is 8" only)
- 3' power cord
- Integral mounting flange and hanging bracket system
- Fully insulated case
- Large cores for high efficiency
- · No condensate pan or drain required

#### MODEL OVERVIEW

To protect the two most valuable investments of your life, your home and your family, improving indoor air quality is key. With S&P's TR (total recovery) Series for all climates, stale room air is exhausted and fresh outdoor air is brought back into the house. With this line of ERVs (Energy Recovery Ventilators) these two air streams are directed through a highly developed "air-to-air" energy exchange core. The air streams are physically separated by many layers of "plates" so there is no mixing or contamination of the fresh air. The plates are made of an engineered "resin" material that simultaneously transfers heat by conduction and humidity by attracting and moving water vapor from one air stream to the other.

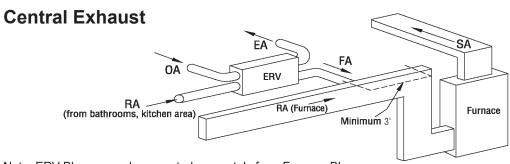
S&P's TRs moderate extremes in both temperature and humidity, creating a comfortable indoor environment. The unique moisture transfer capability of the S&P core also eliminates condensation and frost build up in most applications. Unlike other ERVs on the market no mechanical or electrical defrost systems are needed, which means higher heat recovery efficiencies, easier installation and more reliable operation.

10-year industry best core warranty. 5-year warranty on balance of unit.



#### STANDARD SPECIFICATIONS AND FEATURES

- MERV-8 filters
- Less than 1 watt stand-by power consumption
- Transformer/relay package allowing simple on/off control
- Plastic double collars for 6 or 8" direct duct connection (TR300 is 8" only)
- TR90, TR130, TR300 have painted case, low voltage controls, 3' Power cord
- TR90G has galvanized case, line voltage and no line cord
- · Integral mounting flange and hanging bracket system
- Fully insulated case
- · Large cores for high efficiency
- · No condensate pan or drain required
- 10-year industry best core warranty
- 5-year warranty on balance of unit



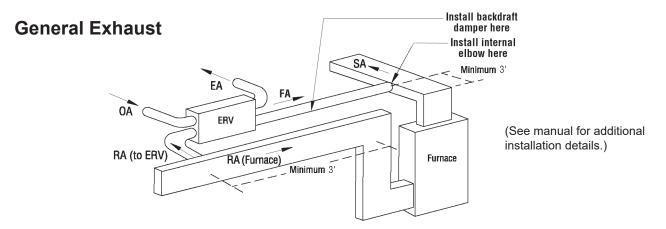
EA: Exhaust Air to outdoors

OA: Outdoor Air intake

RA: Room Air to be exhausted

FA: Fresh Air to inside

Note: ERV Blower may be operated separately from Furnace Blower



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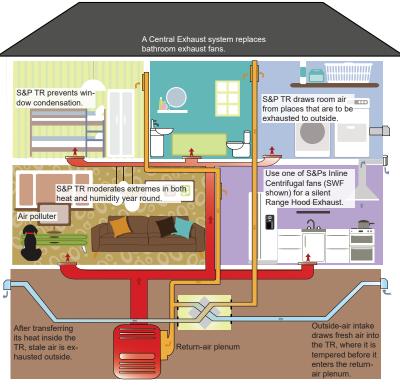
### **TR APPLICATIONS**

#### Central Exhaust

Your BEST choice for green ventilation, Series TR exhausts stale air, brings in fresh air and saves energy year-round.

#### Series TR

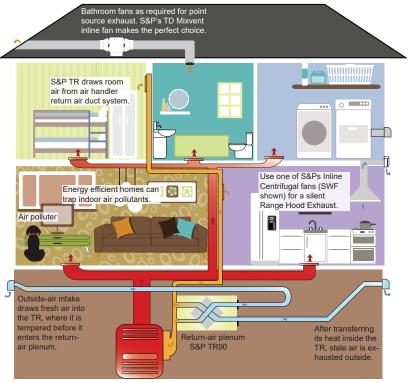
- · Replaces bathroom exhaust fans
- 20 CFM continuous per bathroom
- 50 CFM intermittent per bathroom
- Meets ASHRAE 62.2 when used with one of S&P's Percentage Timer Controls
- Other possible exhaust locations: kitchen area (cannot exhaust range hood), utility room, smoking room, hobby room, etc.
- Small duct work system to collect air from each exhaust location
- Fresh air may be supplied to furnace (AC) return air duct
- Optional automatic proportional runtime control and push button control available



### **General Ventilation**

Bathroom exhaust fans are required with this application





#### **CONTROLS**





#### **SPTL - Percentage Timer Control**

- Primary control for TR90, TR130, TR200 and TR300
- Runs unit an adjustable amount of time each hour
- Two wire, low voltage connection to TR
- Meets ASHRAE 62.2 continuous ventilation standards



#### **SPBL - Push Button Point-of-Use Control**

- Push button control turns on unit from bathrooms or other intermittent exhaust locations
- 20 minute run-time with one touch
- Push 2x for 40 or 3x for 60 minutes
- Two wire, low voltage connection to SPTL



#### SFM - Percentage Timer Control with Furnace Interlock

- Alternate primary control for TR90, TR130, TR200 and TR300
- Wires to TR unit and either thermostat or furnace control to turn on furnace blower
- Six wire, low voltage connection
- Meets ASHRAE 62.2 continuous ventilation standards



#### SHW-20 - Dehumidistat

- Rotary dial dehumidistat
- Turn the dial to set desired humidity level
- Designed for convenient installation in bathrooms, kitchen or laundry room
- Dehumidifies when inside air is more humid than the set point
- Caution: the outside air must be less humid than the indoor air for this to work.

### **TR90/TR90G**











### **Specifications**

Number Motors: Two, 0.03 HP each, totally enclosed, thermally protected, 0.35A

V	Hz	Phase	Input Watts	FLA	
120	60	Single	94 @ 69 CFM	0.16	
Control Voltage: 115 VAC					

Filters: MERV 8, spun polyester media. 7-12" x 10-1/2" x 1"

Weight: 36 lbs (unit), 41 lbs (in carton)

Shipping Dimensions: 28-1/2" L x 21-1/2" W x 14-3/4" H

Options (for TR90 only, not compatible with TR90G):

SPTL - Percentage Timer Control

SPBL - Push Button Point-of-Use Control

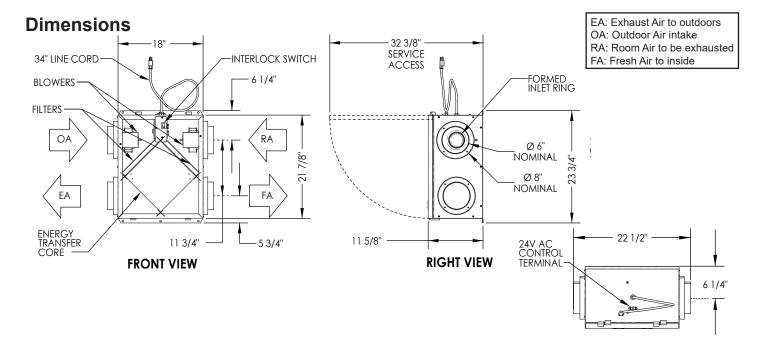
SFM Percentage Timer Control with Furnace Interlock

SHW-20 - Dehumidistat Control

#### **Performance**

Airflow CFM	Temp EFF%	Temp Winter%*	Total EFF% Summer*
113	61	55	42
98	64	58	46
85	67	61	49
73	69	33	53
58	72	66	57
40	76	70	61

<sup>\*</sup> Contact Factory for HVI certification report for complete certified rating.



**TOP VIEW** 













Airflow CFM	ESP in H <sub>2</sub> O	Temp EFF%	Total EFF% Winter/Summer*
79	0.60	78	73/60
104	0.50	75	69/55
126	0.40	72	66/50
137	0.30	71	64/48
153	0.20	68	61/45
165	0.10	67	59/43

<sup>\*</sup> Contact Factory for HVI certification report for complete certified rating.

### **Specifications**

Ventilation Type: Static Plate, Heat and Humidity Transfer Typical Airflow Range: 50-140 CFM

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Unit may be mounted in any orientation

Number Motors: One, 0.1 hp

V	Hz	Phase	Input Watts	FLA
120	60	Single	102 @ 130 CFM	1.2

Control Voltage: 24 VAC transformer / relay package with

switched dry contacts

Filters: MERV 8, spun polyester media. 10-1/2" x 10-1/2" x 1"

Weight: 49 lbs (unit), 60 lbs (in carton)

Shipping Dimensions: 32" L x 21" W x 17-1/2" H (in carton)

Options:

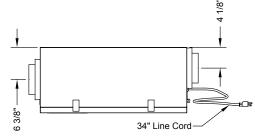
SPTL - Percentage Timer Control

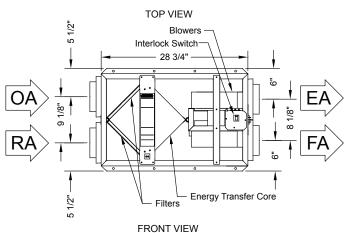
SPBL - Push Button Point-of-Use Control

SFM Percentage Timer Control with Furnace Interlock

SHW-20 - Dehumidistat Control

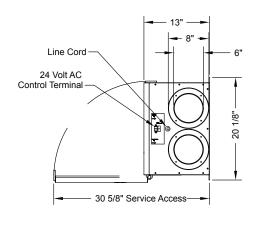
### **Dimensions**





EA: Exhaust Air to outdoors
OA: Outdoor Air intake
RA: Room Air to be exhausted

FA: Fresh Air to inside



RIGHT VIEW













Airflow CFM	ESP in H <sub>2</sub> O	Temp EFF%	Total EFF% Winter/Summer*
122	0.70	81	77/64
149	0.60	79	75/61
168	0.50	78	73/59
176	0.40	78	72/59
186	0.30	77	72/58
192	0.20	77	71/57
207	0.10	76	70/56

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### **Specifications**

Ventilation Type: Static Plate, Heat and Humidity Transfer

Typical Airflow Range: 100-200 CFM

Unit may be mounted in any orientation

Number Motors: One, 0.1 hp

V	Hz	Phase	Input Watts	FLA
120	60	Single	157 @ 181 CFM	1.5

Control Voltage: 24 VAC transformer / relay package with

switched dry contacts

Filters: MERV 8, spun polyester media. 10-1/2" x 21-3/4" x 1"

Weight: 70 lbs (unit), 82 lbs (in carton)

Shipping Dimensions: 32" L x 21-1/2" W x 29" H (in carton)

Options:

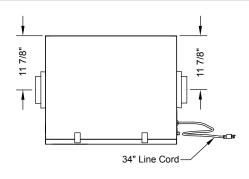
SPTL - Percentage Timer Control

SPBL - Push Button Point-of-Use Control

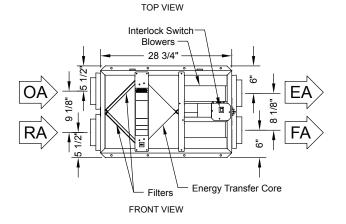
SFM Percentage Timer Control with Furnace Interlock

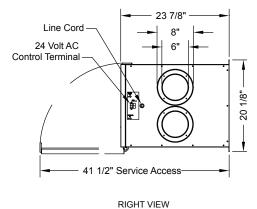
SHW-20 - Dehumidistat Control

### **Dimensions**



EA: Exhaust Air to outdoors
OA: Outdoor Air intake
RA: Room Air to be exhausted
FA: Fresh Air to inside















### **Performance**

Airflow CFM	ESP in H <sub>2</sub> O	Temp EFF%	Total EFF% Winter/Summer*
170	1.0	78	73/59
191	0.9	77	71/57
215	0.8	75	69/55
256	0.7	73	66/51
277	0.6	71	65/49
295	0.5	70	63/47
311	0.4	69	62/46

\* Contact Factory for HVI certification report for complete certified rating.

### **Specifications**

Ventilation Type: Static Plate, Heat and Humidity Transfer

Typical Airflow Range: 150-300 CFM Unit may be mounted in any orientation

Number Motors: One, 0.2 hp

V	Hz	Phase	Input Watts	FLA
120	60	Single	315 @ 297 CFM	3.3

Control Voltage: 24 VAC transformer / relay package with

switched dry contacts

Filters: MERV 8, spun polyester media. 10-1/2" x 21-3/4" x 1"

Weight: 72 lbs (unit), 85 lbs (in carton)

Shipping Dimensions: 32" L x 21-1/2" W x 29" H (in carton)

#### Options:

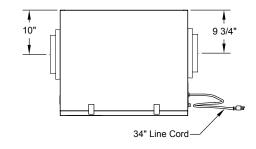
SPTL - Percentage Timer Control

SPBL - Push Button Point-of-Use Control

SFM Percentage Timer Control with Furnace Interlock

SHW-20 - Dehumidistat Control

### **Dimensions**



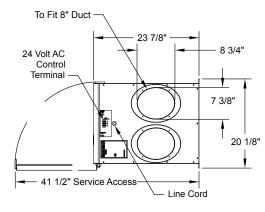
TOP VIEW Interlock Switch Blowers 28 3/4" 9 1/8" **Energy Transfer Core** FRONT VIEW

EA: Exhaust Air to outdoors

OA: Outdoor Air intake

RA: Room Air to be exhausted

FA: Fresh Air to inside



RIGHT VIEW