

TReN90

ENERGY RECOVERY VENTILATOR EC MOTORIZED IMPELLER



NEW! INDOOR UNIT



(TReN90 shown)

MODELS: TReN90, TReN90H

Note: There are multiple control options designed to address individual climate conditions. Please consult your local installer for the best installation controls for your climate.

SPECIFICATIONS

Ventilation Type:
Static plate, heat and humidity transfer

Typical Airflow Range: 30–130 CFM

Unit is HVI Tested/Certified per CSA C439 Protocol:
Using one L-30-G5 Core

Standard Features:
White painted cabinet
Line-cord power supply or hard wired to junction box (H)
Low-voltage circuit for controls
Unit may be mounted in any orientation
Constant volume airflow setpoints (5 CFM increments)
Manual balance and airflow adjustments
Cross-core differential pressure ports
Variable speed
2 speeds: low and high/boost-mode
Switched terminals for: furnace/AC interconnect or auxiliary NO (x1) or NC (x1) outputs, independent low and high-speed activation, damper controls (x2)
ERV status/fault LEDs:
Filter monitoring, replacement, indication, and reset

Controls:
Onboard digital controller with independent variable speeds, Easy connect terminal strip
**Touchscreen Control: (ERVC+) accessory is required for unit setup, optional for operation

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

Unit Weight: 32 lbs.
designed for indoor ductwork installation only

Max. Shipping Dimensions & Weight (in carton):
30" L x 22" W x 15" H
38 lbs.

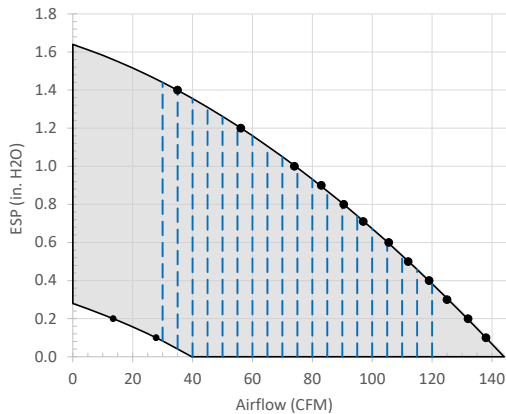
Units Per Pallet: 10

Motor(s):
Qty. 2, 120V EC motorized impellers

Optional Accessories:

Backdraft damper: 6", 8"
Automatic balancing damper: 4", 5", 6"
Motorized Dampers: 6", 8"
Concentric Vent: 6" (141178: CV6-110)
Louvered wall vent 6": white, brown
Louvered wall vent 8": taupe vinyl, galvanized, paintable galvalneal
Louvered wall vent with 8" round duct connection: 12" W x 8" H
Hooded wall vent 8": galvanized, paintable
Digital time clock: wall mount (STC7D-W),
Carbon dioxide sensor/control: wall mount (SCO2-W),
Motion occupancy sensor/control: ceiling mount (SMC-C), wall mount (SMC-W)
BACnet fan control: wall mount (BACNETFC-W)
MERV 13 filter: OA airstream (shipped loose)
Touchscreen Control: (ERVC+), required for unit setup and 2025 CEC Title 24, Part 6 FID compliance and IECC-2024
Countdown timer control (LVCT)
Percentage timer control (LVPT)

EC MOTORIZED IMPELLER OPERATING RANGE AND CORE PERFORMANCE



● = Actual tested sample points

| = Manual operating curves, airflow is held constant as static pressure varies

| = Constant airflow setpoints in 5 CFM increments can be achieved between 30–120 CFM

Factory settings

1. High speed set to max constant airflow setpoint
2. Low speed set to 75 CFM constant airflow setpoint

Airflow (CFM)	External Static Pressure (Inches Water Column)	Unit Power Consumption (Watts)	Sensible EFF%	Total EFF% Winter/Summer
Max. Speed				
138	0.10	137	62	54/36
131	0.20	136	64	55/38
125	0.30	134	65	57/40
119	0.40	133	66	58/41
112	0.50	133	67	60/43
106	0.60	130	68	61/45
97	0.70	128	70	63/48
91	0.80	124	71	65/49
83	0.90	121	73	67/52
74	1.00	116	75	69/54
56	1.20	98	78	73/59
35	1.40	85	82	78/65
Min. Speed				
28	0.10	13	83	79/67
13	0.20	12	86	83/71

Notes:

1. Watts is for the entire unit.
2. Airflow performance includes effect of clean, standard filter supplied with unit.
3. Refer to CORES for specific operating point electrical data.
4. These are core-only ratings and are not HVI certified. Total EFF% calculated at 35/33wb OA and 70/58wb RA (winter) and 95/78wb OA and 75/63wb RA (summer). HVI ratings apply to complete units only. This unit is HVI certified. Refer to RenewAire's Residential HVI Ratings Guide.

ELECTRICAL DATA

Watts	Volts	Hz	Phase	FLA per motor	Minimum Circuit Amps	Max Overcurrent Protection Device
53	120	60	1	0.85	15	15



HVI TESTED/CERTIFIED

PER CSA C439



TRen90/TRen90H, TRe90/TRe90H: Ventilation Performance							
External Static Pressure		Net Supply Airflow		Gross Airflow			
				Supply		Exhaust	
Pa	in. wg	L/s	CFM	L/s	CFM	L/s	CFM
25	0.1	65	138	69	146	68	144
50	0.2	62	131	65	138	64	136
75	0.3	59	125	62	131	61	129
100	0.4	56	119	59	125	57	121
125	0.5	53	112	56	119	54	114
150	0.6	50	106	52	110	50	106
175	0.7	46	97	49	104	46	97
200	0.8	43	91	45	95	42	89
225	0.9	39	83	41	87	37	78
250	1	35	74	37	78	32	68

TRen90/TRen90H, TRe90/TRe90H: Energy Performance							
Supply Temperature		Net Airflow		Average Power Watts	Sensible Recovery Efficiency %	Adjusted Sensible Recovery Efficiency %	Net Moisture Transfer %
C°	F°	L/s	CFM				
Heating							
0°	32°	24	51	28	74	77	58
0°	32°	36	76	48	69	73	49
0°	32°	48	102	78	66	71	42
Cooling					Total Recovery Efficiency %	Adjusted Total Recovery Efficiency %	
35°	95°	24	51	32	60	63	

SOUND DATA

Actual sound levels in living spaces will vary and be dependent on installation conditions including unit location, duct type, duct size, and duct run length. Sones calculated using HVI 915 method from Lw values.

Testing Method: Testing conducted per the following standards: AHRI 230 and 260, ISO 9614-1 and 9614-2. Testing conducted internally at RenewAir.

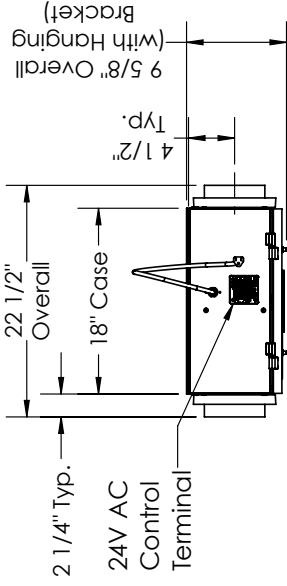
TRen90/TRen90H, TRe90/TRe90H

Source	CFM	Sound Power Level (dB)								Lw (dB)	LwA (dBA)	Sones
		62.5 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz			
Case Radiated	39	62	49	38	47	37	27	20	18	63	46	0.6
	125	72	58	55	56	44	36	26	20	72	55	2.2
	172	75	63	60	53	45	30	28	28	76	56	2.6
Room Inlet (SA)*	38	69	67	68	68	69	66	62	58	76	73	3.0
	132	78	76	76	70	69	64	64	65	82	75	4.0
	180	80	78	77	71	71	68	67	65	84	76	4.8
Room Outlet (RA)*	38	56	49	49	50	51	49	44	38	59	55	0.1
	126	59	57	55	55	55	55	54	55	65	62	1.2
	181	57	57	59	60	60	58	56	56	67	65	1.9
Room Inlet (SA)**	40	51	48	40	35	36	37	35	33	53	43	0.0
	127	55	54	51	50	47	47	46	46	60	54	0.1
	173	57	56	55	54	53	52	50	48	63	59	0.4
Room Outlet (RA)**	40	51	49	46	45	46	44	38	36	56	50	0.0
	127	54	53	53	52	52	53	53	51	62	59	0.5
	172	56	56	57	57	57	56	54	52	65	62	0.7

Notes: *Hard ducted 1m to measurement area.

**Insulated flex duct 5' to measurement area.

TReN90 ENERGY RECOVERY VENTILATOR, EC MOTORIZED IMPELLER



TOP VIEW

ABBREVIATIONS

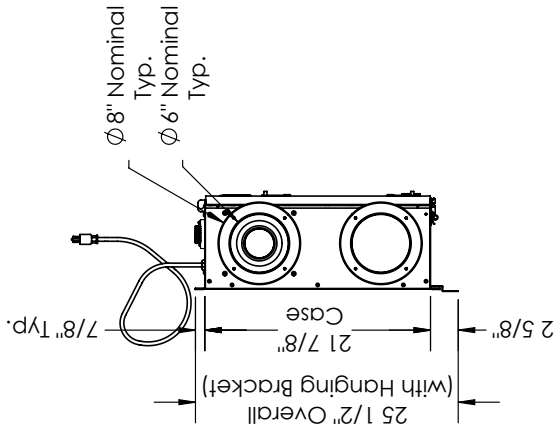
- EA: Exhaust Air To outside
- OA: Outside Air Intake
- RA: Room Air to be exhausted
- SA: Supply Air to inside

INSTALLATION ORIENTATION

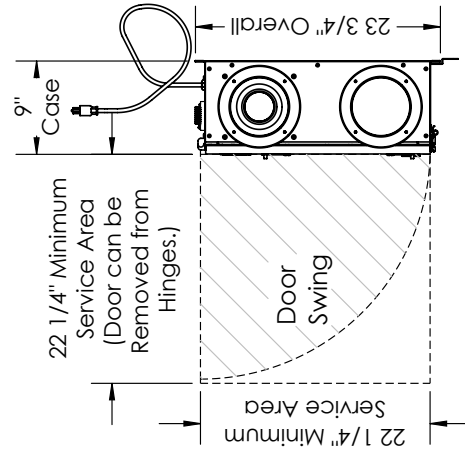
Unit may be installed in any orientation.

NOTE

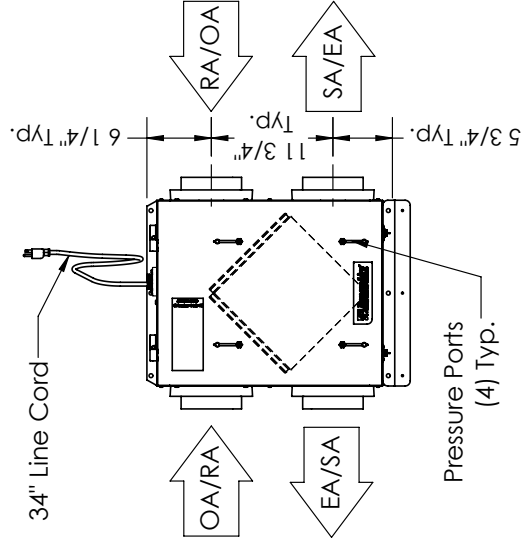
1. UNLESS OTHERWISE SPECIFIED, DIMENSIONS ARE ROUNDED TO THE NEAREST EIGHTH OF AN INCH.
2. SPECIFICATIONS MAY BE SUBJECT TO CHANGE WITHOUT NOTICE.



LEFT VIEW



RIGHT VIEW



FRONT VIEW

AIRFLOW ORIENTATION

Available as shown in dimension drawing.

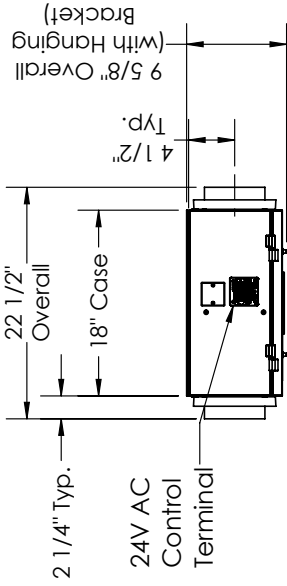


UNIT MOUNTING & APPLICATION

Can be mounted in any orientation. RA/EA airstream can be switched with OA/SA airstream.



TReN90H ENERGY RECOVERY VENTILATOR, EC MOTORIZED IMPELLER

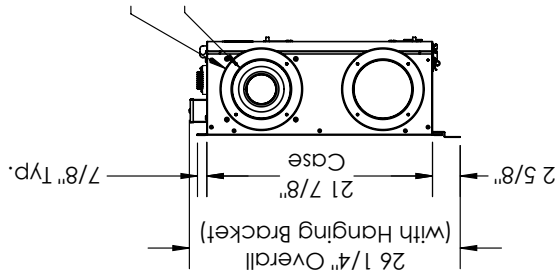


TOP VIEW

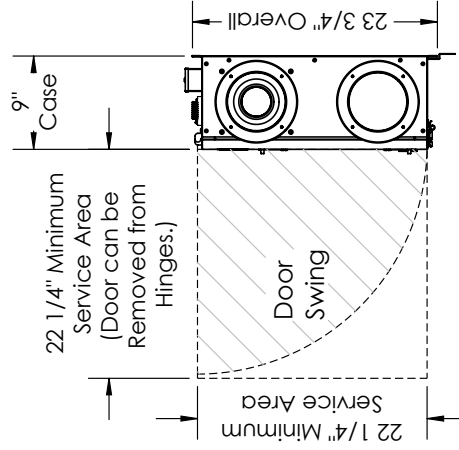
ABBREVIATIONS
EA: Exhaust Air to outside
OA: Outside Air intake
RA: Room Air to be exhausted
SA: Supply Air to inside

INSTALLATION ORIENTATION
Unit may be installed in any orientation.

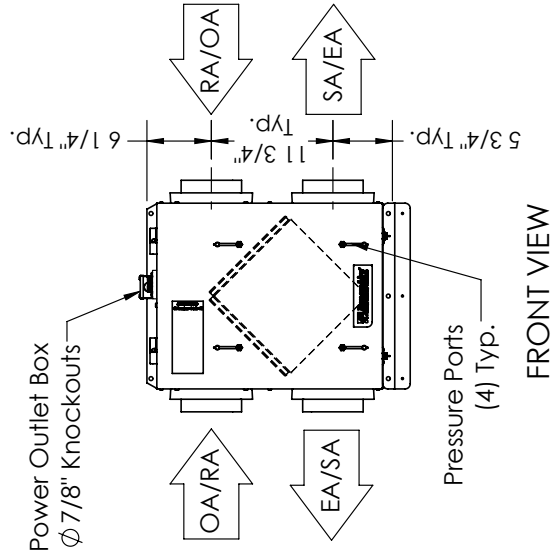
NOTE
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2. SPECIFICATIONS MAY BE SUBJECT TO CHANGE WITHOUT NOTICE.



LEFT VIEW



RIGHT VIEW



FRONT VIEW

AIRFLOW ORIENTATION
Available as shown in dimension drawing.



UNIT MOUNTING & APPLICATION
Can be mounted in any orientation. RA/EA airstream can be switched with OA/SA airstream.

