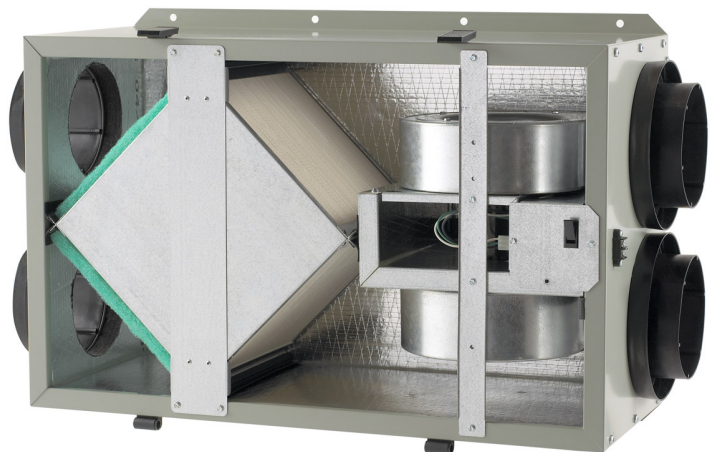




TRANE[®]

FreshEffects™ Energy Recovery Ventilator

TERVR100A9P00A
TERVR200A9P00A
TERVR300A9P00A



PUB. NO. 22-1776-04



General Features

General Features

Energy Recovery Ventilator (ERV)

Product Description

Packaged static plate enthalpic-energy recovery ventilator. Energy transfer core is constructed of static plates in a cross flow arrangement with no moving parts. The unit is capable of operating in summer and winter conditions without generating condensate. No condensate drain pan or drain line is required. The ERV ships with cleanable polyester air filters in the exhaust and fresh air streams to protect the energy transfer core.

Product Certification

ERV models are listed under UL 1812 Standard for Ducted Air to Air Heat Exchangers and are certified by the Home Ventilating Institute (HVI) per CSA 439. Both a heating and cooling test are run to demonstrate year round energy recovery.

Energy Transfer

ERV's are capable of transferring both heat and moisture between airstreams. Moisture transfer is achieved by direct water vapor transfer from one air stream to the other.

Passive Frost Control

The energy transfer core performs without condensing or frosting under normal operating conditions (defined as outside temperatures above -10F and inside relative humidity below 40%). Occasional extreme conditions will not affect the usual function or performance of the element. A condensate drain is not required.

Continuous Ventilation

FreshEffects™ ERV's have the capacity to operate continuously without the need for bypass, recirculation, pre-heaters or defrost cycles under normal operating conditions.

Positive Airstream Separation

Water vapor transfer is achieved through molecular transport by hygroscopic resin and shall not be achieved by "porous plate" mechanisms. Exhaust and fresh air travel in separate passages at all times, and airstreams do not mix.

Laminar Flow

Airflow through the energy transfer core is laminar, avoiding deposit of particulates on the interior of the energy exchange plate material.

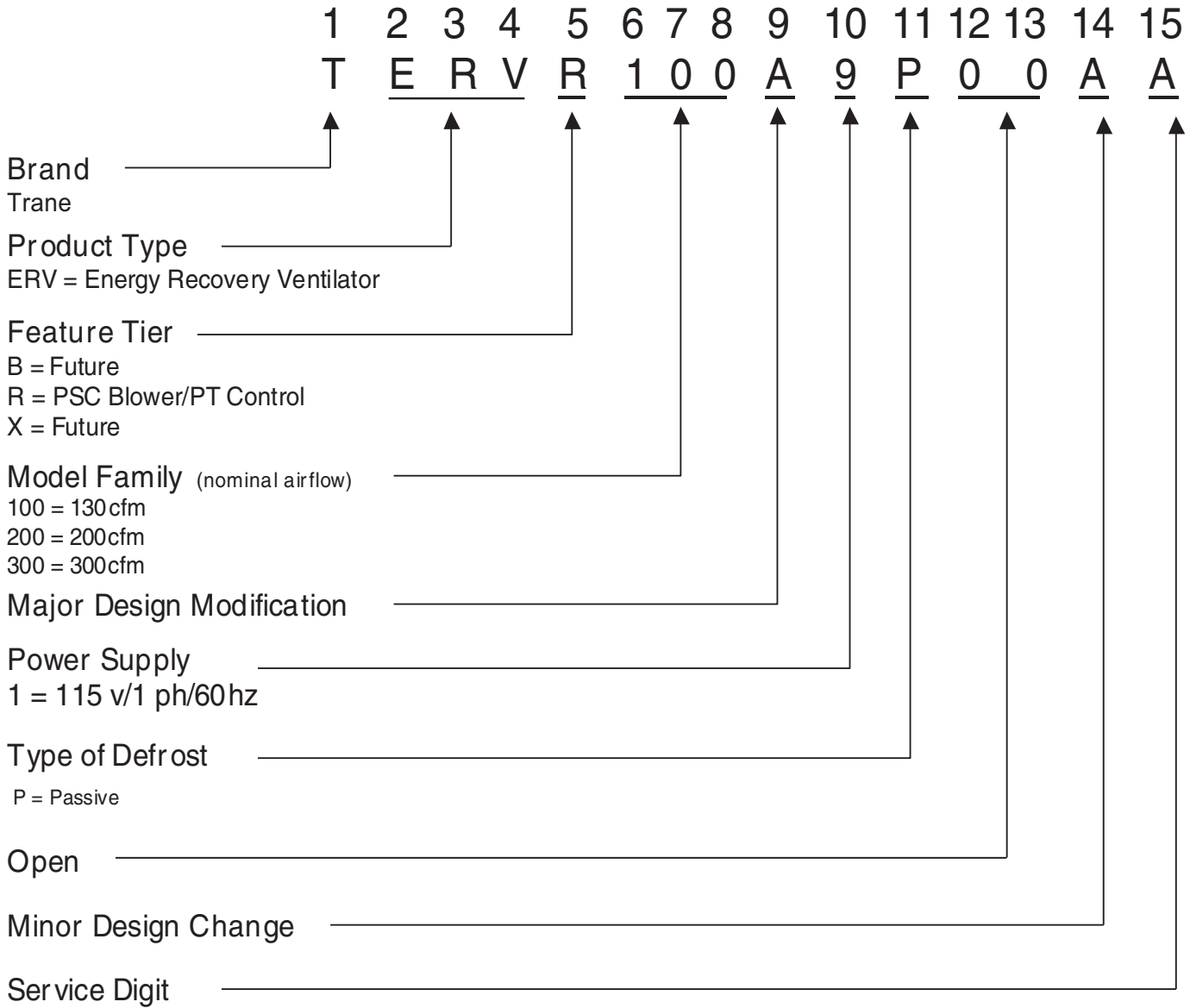


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ERV Model Nomenclature





Features and Benefits

Features and Benefits

Features:

- FreshEffects™ ERV technology for all seasons and climates
- Static plate energy transfer core for efficient transfer of heat and moisture
- Passive defrost does not require condensate drain and provides lower installed cost and improves reliability
- Multi position mounting for installation flexibility
- FreshEffects™ ERV airflow design does not require installation of balancing dampers reducing installation and start up time
- Percent Timer (PT) control included with ERV for simple, automatic operation
- Optional push button control accessory provides manual override at point of use
- Cam action latches and hinged access doors provide quick access for maintenance and service.
- Heavy gauge, powder painted steel cabinet provides durability and matches the system appearance
- Permanently lubricated motor bearings for long life
- Standard 34" power cord with ground plug for easy installation
- Double duct collars (6" & 8") for connection of flexible or rigid ductwork for TERVR100 and 200
- 8" round compatible duct connection for TERVR300
- Cabinet wall and doors have 1" cleanable, foil face, high density board insulation, with 1/4" foam insulation on access panel for thermal and sound insulation
- ERV cabinet / door color: Polyslate Gray/ Tarpaulin Gray
- 5 year limited warranty on parts
- 10 year limited warranty on energy transfer core
- **Optional 5 and 10 year extended warranties**

OPTIONAL ACCESSORIES

Point of Use Push Button Control for use with ERV models 100, 200, 300	TCONTV10APBC0A []
Filters - 2 per pack, for use with ERV model 100	BAYFLT10A1010A []
Filters - 2 per pack, for use with ERV model 200 & 300	BAYFLT20A1020A []
6 inch White Vinyl Ventilation Hood	BAYWHT10AVENTA []
6 inch Brown Vinyl Ventilation Hood	BAYBRN10AVENTA []
8 inch Galvanized Ventilation Hood	BAYGLV10AVENTA []



General Data

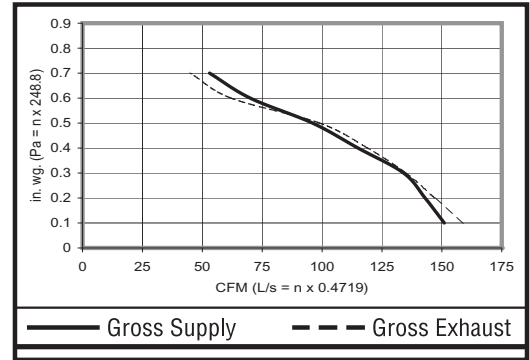
MODEL	TERVR100A9P00A	TERVR200A9P00A	TERVR300A9P00A
RATINGS ①	See Note ①	See Note ①	See Note ①
AIRFLOW RANGE (cfm)	50-130	100-210	150-320
BLOWER ASSEMBLY			
Diameter x Width	6.32" x 2.01"	6.75" x 1.89"	7.67" x 1.89"
No. Blower Wheels Used	2	2	2
Speeds ②	1	1	1
No. Motors — H.P.	1 - 0.09	1 - 0.09	1 - 0.25
Nominal Motor Speed (R.P.M.)	1750	1750	1550
POWER CONNECTIONS			
Volts/Ph/Hz	120/1/60	120/1/60	120/1/60
Ampacity (in Amps)	15	15	15
Fuse Size - Max (Amps)	15	15	15
F.L. Amps	1.3	1.5	3.3
FILTER			
Filter Furnished?	Yes	Yes	Yes
Type Recommended	Cleanable Polyester	Cleanable Polyester	Cleanable Polyester
No.-Size-Thickness	2 - 10.5" x 10.5"	2 - 10.5" x 21.75"	2 - 10.5" x 21.75"
Defrost	Passive	Passive	Passive
Duct Connections	See Note ②	See Note ②	8" oval connection for flex or rigid
Heat Exchanger	See Note ③	See Note ③	See Note ③
Insulation - Thermal/Sound	See Note ④	See Note ④	See Note ④
DIMENSIONS			
	H x W x D	H x W x D	H x W x D
Crated (In.)	21-1/2 x 32 x 17-1/2	21-1/2 x 32 x 28-1/2	21-1/2 x 32 x 28-1/2
Uncrated (In.) (Not including duct collars)	20-1/8 x 28-3/4 x 13	20-1/8 x 28-3/4 x 23-7/8	20-1/8 x 28-3/4 x 23-7/8
WEIGHT			
Shipping (Lbs.) / Net (Lbs) Including collars)	65 / 58	91 / 78	95 / 82

① Certified HVI 2100 PER CSA 439 and listed under UL standard UL 1812.
 ② Insulating double collars with 6" and 8" round connections for flex or rigid duct.
 ③ Cross flow - fixed plate enthalpic energy transfer core. Transfers heat and moisture.
 ④ Cabinet - 1" cleanable foil face fiberglass high density board insulation. Access door - 1/4" foam insulation over 1" fiberglass board insulation.



Performance Data

*ERVR100 - Ventilation Performance							
Ext. Static Pressure		Net Supply Airflow		Gross Airflow			
				Supply		Exhaust	
Pa	in. wg	L/S	CFM	L/S	CFM	L/S	CFM
25	0.1	77	165	79	168	79	168
50	0.2	72	153	73	156	73	156
75	0.3	64	137	66	140	66	140
100	0.4	59	126	61	129	61	129
125	0.5	49	104	50	106	50	106
150	0.6	37	79	38	81	38	81

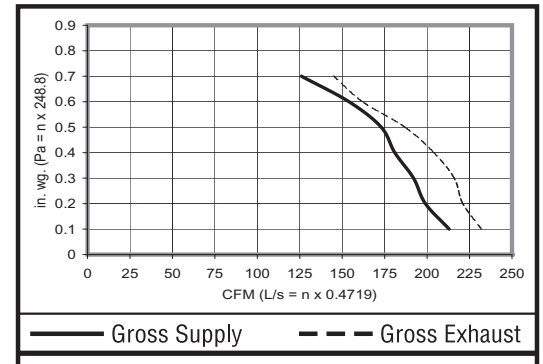


Electrical Requirements Volts 120 Amps 1.3

Exhaust Air Transfer Ratio = 2% @ 0.2 in. wg (50 PA) and 2% @ 0.4 in. wg (100 PA)

*ERVR100 - Energy Performance							
Supply Temperature		Net Airflow		Average Power Watts	Sensible Recovery Efficiency %	Apparent Sensible Effectiveness %	Net Moisture Transfer %
C°	F°	L/S	CFM				
Heating							
0°	32°	61	130	102	71	77	53
Cooling							Total Recovery Efficiency %
35°	95°	61	130	102			48

*ERVR200 - Ventilation Performance							
Ext. Static Pressure		Net Supply Airflow		Gross Airflow			
				Supply		Exhaust	
Pa	in. wg	L/S	CFM	L/S	CFM	L/S	CFM
25	0.1	97	207	100	213	109	232
50	0.2	90	192	93	199	104	221
75	0.3	88	186	90	192	101	216
100	0.4	83	176	85	181	96	204
125	0.5	79	168	81	173	88	187
150	0.6	70	149	72	154	76	162
175	0.7	57	122	59	126	68	145



Electrical Requirements Volts 120 Amps 1.5

Exhaust Air Transfer Ratio = 3% @ 0.2 in. wg (50 PA) and 3% @ 0.4 in. wg (100 PA)

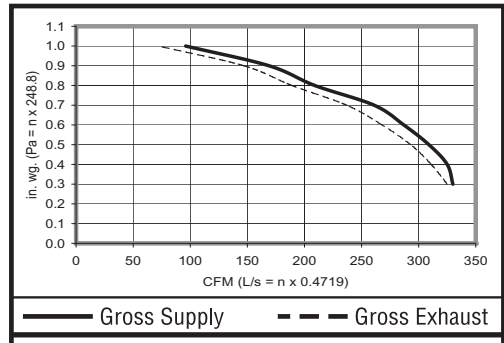
*ERVR200 - Energy Performance							
Supply Temperature		Net Airflow		Average Power Watts	Sensible Recovery Efficiency %	Apparent Sensible Effectiveness %	Net Moisture Transfer %
C°	F°	L/S	CFM				
Heating							
0°	32°	85	181	157	78	85	62
Cooling							Total Recovery Efficiency %
35°	95°	85	180	155			52

*May be "A" or "T"



Performance Data

*ERVR300 - Ventilation Performance							
Ext. Static Pressure		Net Supply Airflow		Gross Airflow			
				Supply		Exhaust	
Pa	in. wg	L/S	CFM	L/S	CFM	L/S	CFM
100	0.4	147	311	150	317	143	303
125	0.5	139	295	142	301	133	283
150	0.6	131	277	133	282	125	265
175	0.7	121	256	123	261	108	230
200	0.8	101	215	103	219	94	198
225	0.9	90	191	92	195	74	156
250	1.0	80	170	82	174	47	99



Electrical Requirements Volts 120 Amps 3.3

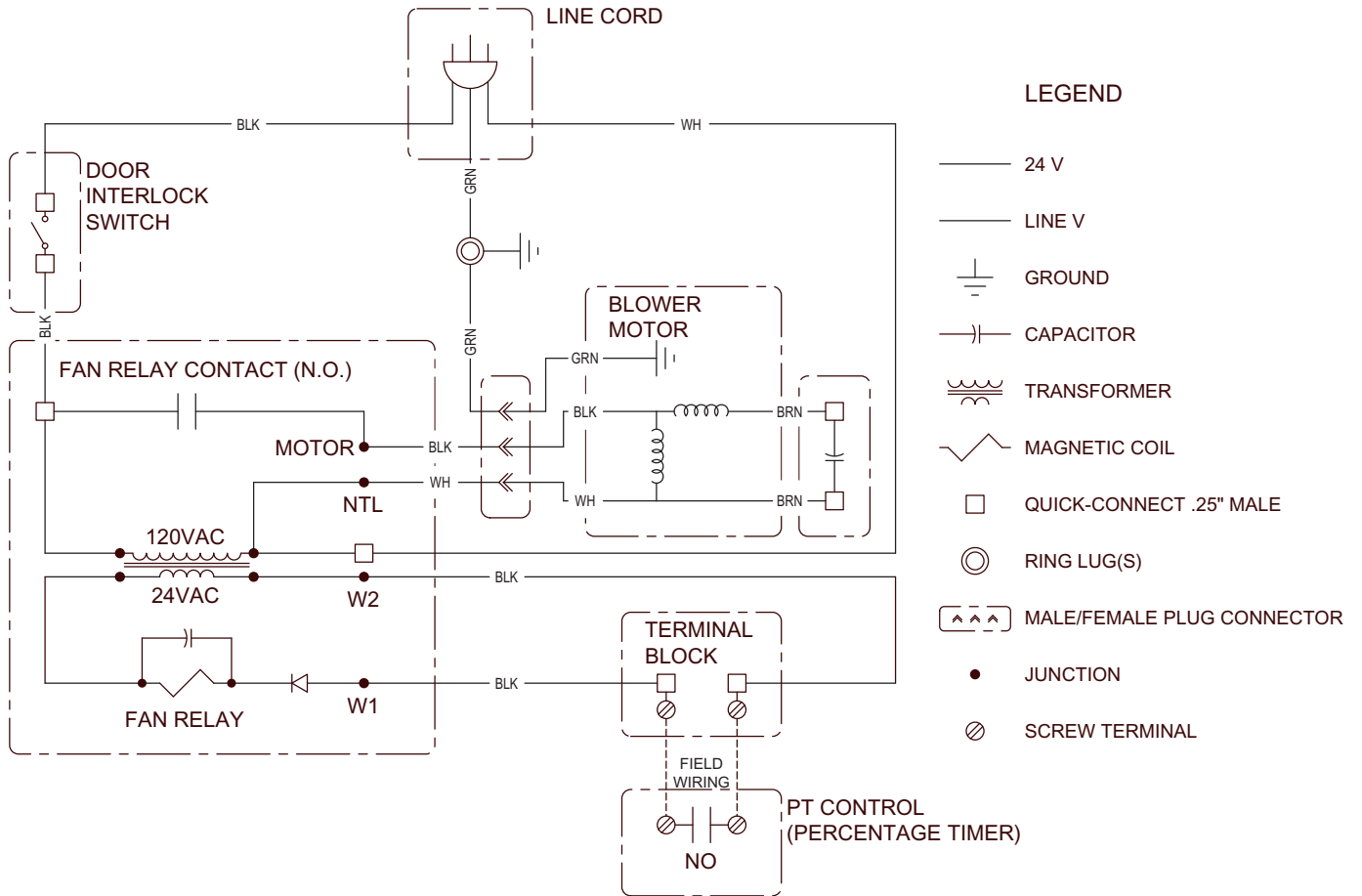
Exhaust Air Transfer Ratio = 3% @ 0.4 in. wg (50 PA)

*ERVR300 - Energy Performance							
Supply Temperature		Net Airflow		Average Power Watts	Sensible Recovery Efficiency %	Apparent Sensible Effectiveness %	Net Moisture Transfer %
C°	F°	L/S	CFM				
Heating							
0°	32°	139	297	315	67	74	54
Cooling							Total Recovery Efficiency %
35°	95°	138	294	313			46

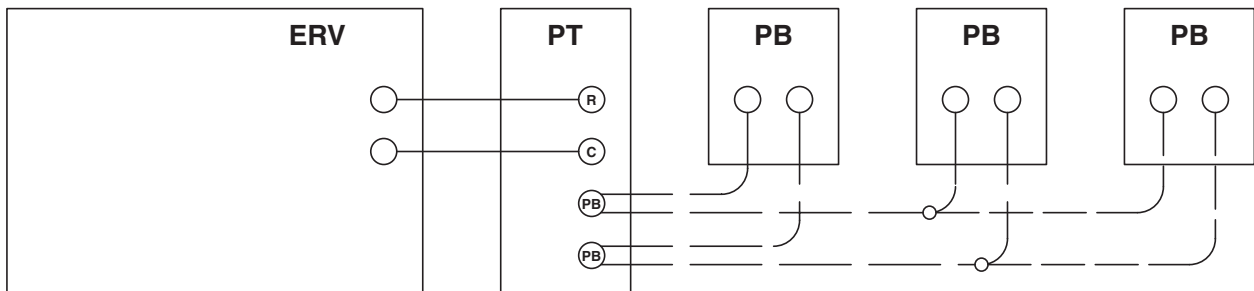
*May be "A" or "T"

* Refer to HVI Directory (Home Ventilation Institute) for definitions of column headings

Electrical Data



Optional PB Controls

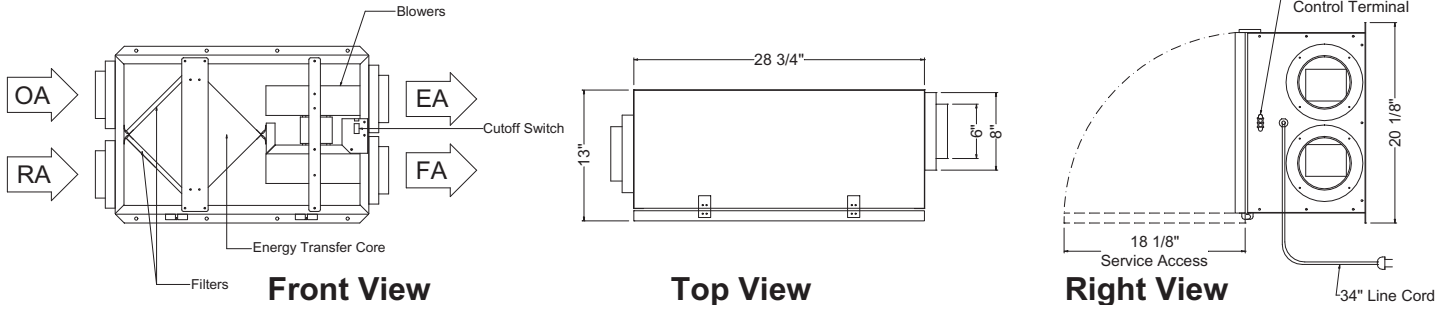


(2) PB controls can be directly connected to the PT control
 Up to (6) PB controls, wired in parallel, may be used.

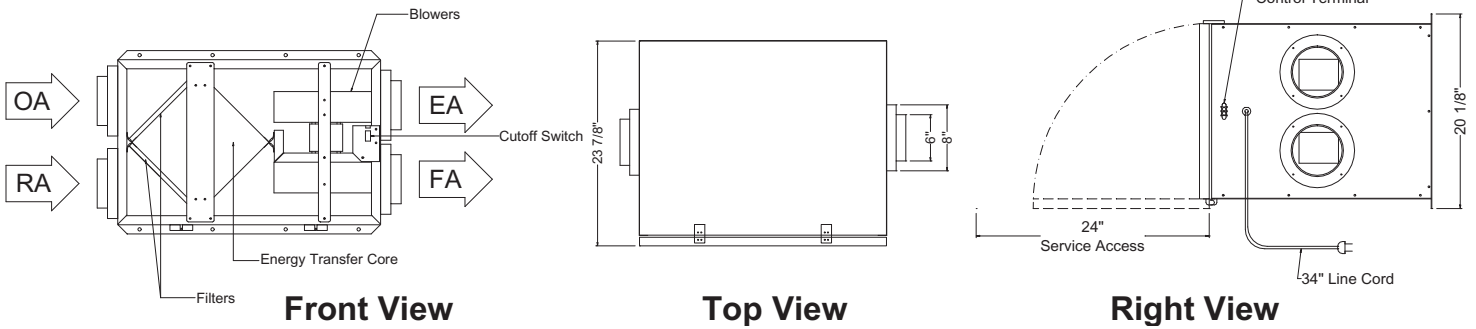


Dimensions

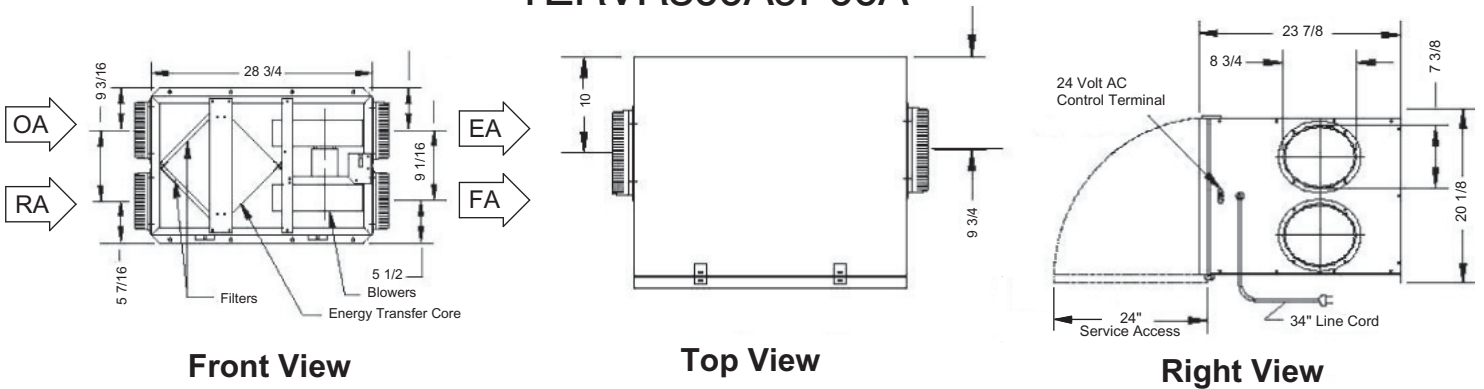
TERVR100A9P00A



TERVR200A9P00A



TERVR300A9P00A





Notes



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Since Trane has a policy of continuous product improvement, it reserves the right to change design and specifications without notice.