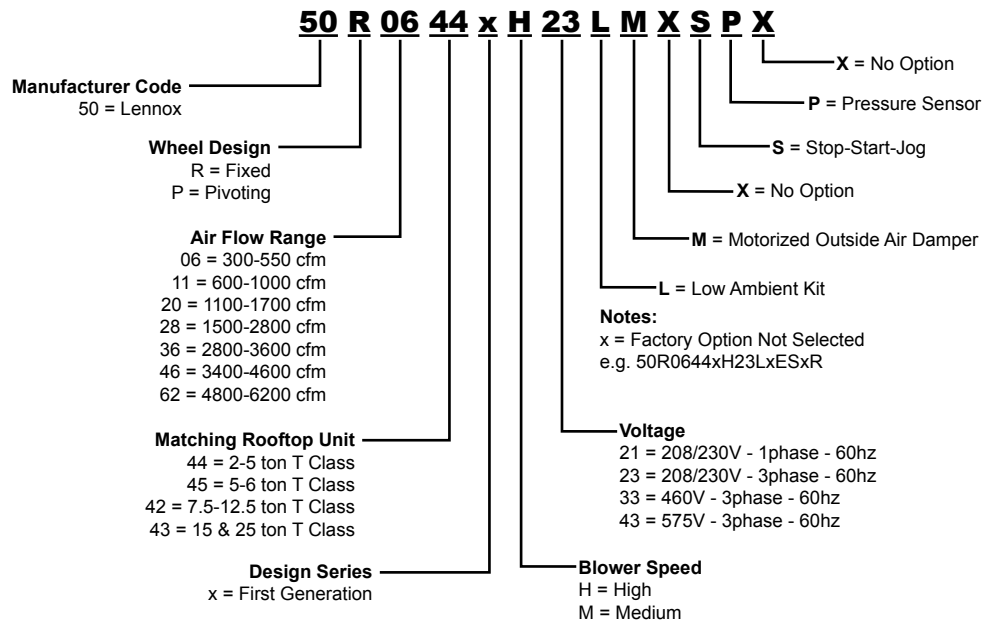




300 to 6200 cfm Capacity

MODEL NUMBER IDENTIFICATION



FEATURES

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APPROVALS

Rated in accordance with AHRI standard 1060-2005. To obtain a copy of the Standard or to view Lennox' latest certified data, please visit the AHRI website at <http://www.ahrinet.org/>.

ETL Certified per UL 1995 and CSA/CAN C22.2 No. 236.

WARRANTY

Recovery Wheel - limited warranty for five years.

All other covered components - one year limited warranty.

APPLICATIONS

The Lennox Energy Recovery System (ERS) is a constant volume, energy recovery ventilator that is directly coupled with Lennox T CLASS™ rooftop units. Its primary function is to increase overall HVAC system efficiency and to reduce long-term energy costs.

This is accomplished by capturing both sensible and latent energy from either the exhaust or intake air stream and transferring it to the other, resulting in reduced cooling loads at design temperatures up to four tons per 1000 cfm of outside air and reduced heating loads up to 12,000 Btuh per 400 cfm of outside air.

The recovery wheel provides sensible and latent energy exchange between the entering and exhaust air streams of a building allowing a substantial amount of the energy, which is normally lost in the exhaust air stream, to be returned into the entering air.

Each unit factory test operated to ensure proper operation.

OPERATION

The enthalpy wheel contains parallel layers of a polymeric material that is physically imbedded with a silica gel (desiccant).

The wheel is located in the intake and exhaust air streams of the ventilation equipment.

As the wheel rotates through each air stream, the wheel surface captures sensible and latent energy.

In the heating mode, the wheel rotates to provide a constant transfer of heat from the exhaust air stream to the colder intake air stream. During the cooling season, the process is reversed.

When used in conjunction with a rooftop unit equipped with an economizer, on pivoting models, the wheel pivots out of the air stream to allow the economizer to operate normally for "free cooling" when outdoor temperature and humidity is acceptable.

By pivoting the wheel out of the air stream, the system can utilize 100% of the rooftop unit's blower capabilities. During economizer operation, the exhaust blower continues to run, providing power exhaust for the system. The intake blower is de-energized during economizer operation.

ERS SELECTION

Step One - Determine the air conditioning load requirements using the required amount of outside air *without* an ERS.

Step Two - Select the proper ERS for the outside air requirements and calculate the tonnage reduction.

Select the rooftop unit required by reducing the load determined in step one by the reduction in step two. (Example: If the load in Step 1 was 10 tons, and the reduction in Step 2 was 2.5 tons, select a 7.5 ton unit).

Select the proper ERS based on the selected unit.

NOTE - The height of the roof top unit curb **MUST** correspond with the required curb height needed for the ERS. See Specifications Table.

SYSTEM FEATURES

Low-voltage logic board used to control frost protection and motorized outside air damper.

Low-voltage terminal strip.

Barometric relief dampers provided standard on all ERS units.

Balancing dampers provided standard on all fixed wheel ERS units.

Metal-mesh, mist-eliminator-type filters provided in intake air hood.

Separate, fused power supply.

Continuous operation down to 10°F without defrost at indoor relative humidity up to 40%. For temperatures below 10°F an optional, factory installed Low Ambient Control Kit is required.

RECOVERY WHEEL

AirXchange Enthalpy Wheels. Capable of both sensible and latent heat recovery. Dry energy transfer. Moisture in supply air stream is transferred to exhaust air stream in vapor state, eliminating condensate plumbing in the ventilator.

Constructed of lightweight polymer material and coated with a desiccant silica gel that will not dissolve or liquify in the presence of water or high humidity.

Wheels 25 in. and larger in diameter are segmented for easy removal. Wheels less than 25 in. in diameter are removed from cabinet in a slide-out cassette.

Patented, pivoting-wheel option allows unit to operate in true economizer mode when the outside temperature is suitable for cooling. Pivoting the wheel out of the air stream during economizer mode allows efficiencies to be maximized by reducing demand on the supply fan motor.

BLOWERS

Centrifugal, forward curved blowers provided for high-static capability and low sound levels.

Belt-drive blowers have permanently lubricated ball bearings, overload protection, and adjustable sheaves for blower speed adjustment.

FEATURES

CABINET

Fully insulated with non-hygroscopic fiberglass insulation. Constructed of galvanized steel and finished with electrostatically bonded powdered enamel coating to withstand 1000 hour salt-spray test per ASTM B117. Attaches directly to the rooftop unit. All mounting hardware is provided. Adjustable support legs are provided.

OPTIONS / ACCESSORIES

FACTORY INSTALLED

Low Ambient Control Kit

Prevents frost formation on energy wheel heat transfer surfaces by terminating the intake blower operation when discharge air temperature falls below a field-selectable temperature setting.

Intake blower operation resumes after temperature rises above the adjustable temperature differential. Kit includes temperature sensor.

Motorized Outside Air Damper

Damper mounts behind the outside air intake hood. Damper opens when the ERS is energized and closes when de-energized.

Stop-Start-Jog (Fixed Models Only)

Control option that allows intermittent operation of the enthalpy wheel during mild outdoor conditions to provide cycling and cleaning of the wheel.

Pressure Sensor

Measures the amount of outside airflow across the enthalpy wheel.

FIELD INSTALLED

ERS Support

8 inch high base for support of the exhaust and intake end of the ERS.

Available in 48, 60, and 76 inch lengths.

See Page 12 for model numbers.

ERS Roof Curb

Used to support RTU and raise them to the correct height for mounting.

See Page 12 for model numbers.

NOTE - Contact your local Lennox Commercial Sales Representative for ordering information.

OPTIONAL ACCESSORIES - MUST BE ORDERED EXTRA

Model No.	Fixed Wheel	50R0644xH	50R2842xM	50R3642xH	50R6243xM
		50R0645xH	50R2843xM	50R3643xH	50R6243xH
		50R1144xH	50R2842xH	50R4643xH	
		50R1145xH	50R2843xH		
	Pivot Wheel	50R2042xH			
		50R2045xH	50P1144xH	50P2842xM	50P3642xH
			50P1145xH	50P2843xM	50P3643xH
			50P2042xH	50P2842xH	50P4643xH
			50P2045xH	50P2843xH	50P6243xM
					50P6243xH
ERS Support	48 in. length	X	X		
	60 in. length		X	X	
	76 in. length				X
Low Ambient Kit		O	O	O	O
Motorized Outdoor Air Damper Kit		O	O	O	O
¹ Stop-Start-Jog Kit		O	O	O	O
Pressure Sensor Kit		O	O	O	O

O - Configure to Order (Factory Installed)

X - Field Installed.

¹NOTE - Available on Fixed Wheels only.

SPECIFICATIONS - FOR 2 TO 5 TON T CLASS MODELS

General Data	Model Number Fixed Wheel Model Number Pivoting Wheel Nominal Air Volume - cfm Matching Units	² 50R0644xH --- 300-550 T Class 024 through 060 models	50R1144xH 50P1144xH 600-1000					
Required Height of Rooftop Unit Curb - in.		14	14					
Fresh Air Blower	Motor - hp	0.2	1/2					
	Wheel Size (diameter x width) - in	6-1/4 x 6-1/2	10 x 6					
	Motor Speed - rpm	1780	1120					
	Motor Speed(s)	2	3					
	Bearing Type	Sleeve	Sleeve					
Exhaust Air Blower	Motor Type	PSC	PSC					
	Motor - hp	1/4	1/2					
	Pivoting Wheel	---	1/2					
	Wheel Size (diameter x width) - in	6-1/4 x 6-1/2	10 x 6					
	Motor Speed - rpm	1780	1120					
	Motor Speed(s)	2	3					
	Bearing Type	Sleeve	Sleeve					
Recovery Wheel	Wheel Depth x Diameter - in	2 x 19-1/4	3 x 25-1/4					
	Motor Speed - rpm	1050	1050					
Electrical Data - Line Voltage - 60hz		² 208/230V-1ph, 208/230V-3ph, 460V-3ph, and 575V-3ph	208/230V-3ph, 460V-3ph, and 575V-3ph					
Enthalpy Wheel Airflow Data	Nominal Airflow		500 cfm at 0.6 in. w.c.	900 cfm at 1 in. w.c.				
	EATR - Exhaust Air Transfer Ratio	at minus 1 in. w. c.	9.90%	9.30%				
		at 0 in. w.c.	0.20%	0.70%				
		at 1 in. w.c.	0.00%	0.00%				
	OACF - Outdoor Air Correction Factor	at minus 1 in. w. c.	1.02%	0.97%				
		at 0 in. w.c.	1.33%	1.19%				
		at 1 in. w.c.	1.59%	1.34%				
¹Thermal Ratings at 0 in. w.c. Pressure Differential	Total Effectiveness	100% Airflow Heating	Sensible 68%	Latent 60%	Total 65%	Sensible 76%	Latent 68%	Total 73%
		75% Airflow Heating	73%	65%	70%	81%	73%	78%
		100% Airflow Cooling	68%	60%	64%	76%	68%	72%
		75% Airflow Cooling	73%	65%	69%	81%	73%	76%
	Net Effectiveness	100% Airflow Heating	68%	60%	65%	76%	68%	73%
		75% Airflow Heating	73%	65%	70%	81%	73%	78%
		100% Airflow Cooling	68%	60%	64%	76%	68%	72%
		75% Airflow Cooling	73%	65%	69%	81%	73%	76%
Weights	Shipping Weight - lbs.		198			318		
	Net Weight - lbs.		155			245		

¹Rated in accordance with AHRI Standard 1060-2005. For further information, please reference AHRI 1060-2005 Standard for Rating Air-to-Air Heat Exchangers For Energy Recovery Ventilation Equipment.

²A unit step-down transformer is provided, 208/230/460/575V primary, 120V secondary.

SPECIFICATIONS - FOR 5 TO 6 TON T CLASS MODELS

General Data		Model Number Fixed Wheel	² 50R0645xH			50R1145xH			50R2045xH		
		Model Number Pivoting Wheel	---			50P1145xH			50P2045xH		
		Nominal Air Volume - cfm	300-550			600-1000			1100-1700		
		Matching Units	T Class 060 through 072 models								
Required Height of Rooftop Unit Curb - in.			14			14			24		
Fresh Air Blower	Motor - hp		0.2			1/2			1		
	Wheel Size (diameter x width) - in		6-1/4 x 6-1/2			10 x 6			9 x 9		
	Motor Speed - rpm		1780			1120			1725		
	Motor Speed(s)		2			3			Adjustable Sheave		
	Bearing Type		Sleeve			Sleeve			Ball		
Exhaust Air Blower	Motor Type		PSC			PSC			Belt Drive		
	Fixed Wheel		1/4			1/2			1		
	Motor - hp	Pivoting Wheel	---			1/2			1-1/2		
	Wheel Size (diameter x width) - in		6-1/4 x 6-1/2			10 x 6			9 x 9		
	Motor Speed - rpm		1780			1120			1725		
	Motor Speed(s)		2			3			Adjustable Sheave		
	Bearing Type		Sleeve			Sleeve			Ball		
Recovery Wheel	Wheel Depth x Diameter - in		2 x 19-1/4			3 x 25-1/4			3 x 30-5/16		
	Motor Speed - rpm		1050			1050			1050		
Electrical Data - Line Voltage - 60hz			² 208/230V-1ph, 208/230V-3ph, 460V-3ph, and 575V-3ph			208/230V-3ph, 460V-3ph, and 575V-3ph			208/230V-3ph, 460V-3ph, or 575V-3ph		
Enthalpy Wheel Airflow Data	Nominal Airflow		500 cfm at 0.6 in. w.c.			900 cfm at 1 in. w.c.			1600 cfm at 0.95 in. w.c.		
	EATR - Exhaust Air Transfer Ratio	at minus 1 in. w.c.	9.90%			9.30%			7.80%		
		at 0 in. w.c.	0.20%			0.70%			0.40%		
		at 1 in. w.c.	0.00%			0.00%			0.00%		
	OACF - Outdoor Air Correction Factor	at minus 1 in. w.c.	1.02%			0.97%			0.97%		
		at 0 in. w.c.	1.33%			1.19%			1.16%		
at 1 in. w.c.		1.59%			1.34%			1.29%			
¹Thermal Ratings at 0 in. w.c. Pressure Differential	Total Effectiveness	100% Airflow Heating	Sensible	Latent	Total	Sensible	Latent	Total	Sensible	Latent	Total
		75% Airflow Heating	68%	60%	65%	76%	68%	73%	68%	61%	65%
		100% Airflow Cooling	73%	65%	70%	81%	73%	78%	72%	67%	71%
		75% Airflow Cooling	68%	60%	64%	76%	68%	72%	68%	61%	64%
	Net Effectiveness	100% Airflow Heating	73%	65%	69%	81%	73%	76%	72%	67%	70%
		75% Airflow Heating	68%	60%	65%	76%	68%	73%	68%	61%	65%
		100% Airflow Cooling	73%	65%	70%	81%	73%	78%	72%	67%	71%
		75% Airflow Cooling	68%	60%	64%	76%	68%	72%	68%	61%	64%
Weights	Shipping Weight - lbs.	198			318			425			
	Net Weight - lbs.	155			245			345			

¹Rated in accordance with AHRI Standard 1060-2005. For further information, please reference AHRI 1060-2005 Standard for Rating Air-to-Air Heat Exchangers For Energy Recovery Ventilation Equipment.

²A unit step-down transformer is provided, 208/230/460/575V primary, 120V secondary.

SPECIFICATIONS - FOR 7.5 TO 12.5 TON T CLASS MODELS

General Data		Model Number Fixed Wheel	50R2042xH	50R2842xM	50R2842xH	50R3642xH		
Model Number Pivoting Wheel		50P2042xH	50P2042xH	50P2842xM	50P2842xH	50P3642xH		
Nominal Air Volume - cfm		1100-1700	1500-2200	2200-2800	2800-3600			
Matching Units		T Class 090 through 150 models						
Required Height of Rooftop Unit Curb - in.		14	14	14	24			
Fresh Air Blower	Belt-Drive Motor - hp	1	1-1/2	1-1/2	2			
	Wheel Size (diameter x width) - in.	9 x 9	10 x 10	10 x 10	12 x 9			
	Motor Speed - rpm	1725	1725	1725	1725			
	Motor Speed(s)	Adjustable Sheave						
Bearing Type		Ball						
Exhaust Air Blower	Belt-Drive Motor - hp	1	1-1/2	1-1/2	2			
	Fixed Wheel	1-1/2	3	3	3			
	Pivoting Wheel	9 x 9	10 x 10	10 x 10	12 x 9			
	Wheel Size (diameter x width) - in.	1725	1725	1725	1725			
	Motor Speed - rpm	Adjustable Sheave						
Motor Speed(s)		Ball						
Bearing Type		Ball						
Recovery Wheel	Wheel Depth x Diameter - in	3 x 30-5/16	3 x 37-3/4	3 x 37-3/4	3 x 41-13/16			
	Motor Speed - rpm	1050	1725	1725	1725			
Electrical Data - Line Voltage - 60hz		208/230V-3ph, 460V-3ph, or 575V-3ph						
Enthalpy Wheel Airflow Data	Nominal Airflow		1600 cfm at 0.95 in. w.c.	1500 cfm at 0.67 in. w.c.	2600 cfm at 0.95 in. w.c.	3100 cfm at 0.9 in. w.c.		
	EATR - Exhaust Air Transfer Ratio	at minus 1 in. w. c.	7.80%	6.10%	6.10%	4.90%		
		at 0 in. w.c.	0.40%	4.00%	4.00%	1.30%		
		at 1 in. w.c.	0.00%	0.00%	0.00%	0.30%		
	OACF - Outdoor Air Correction Factor	at minus 1 in. w. c.	0.97%	0.98%	0.98%	0.99%		
		at 0 in. w.c.	1.16%	1.13%	1.13%	1.07%		
at 1 in. w.c.		1.29%	1.23%	1.23%	1.12%			
¹Thermal Ratings at 0 in. w.c. Pressure Differential	Total 100% Airflow Heating		Sensible 68%	Latent 61%	Total 65%	Sensible 68%	Latent 60%	Total 65%
	Effectiveness 75% Airflow Heating		72%	67%	71%	74%	67%	71%
	100% Airflow Cooling		68%	61%	64%	68%	60%	63%
	Effectiveness 75% Airflow Cooling		72%	67%	70%	74%	67%	70%
	Net 100% Airflow Heating		68%	61%	65%	68%	60%	65%
	Effectiveness 75% Airflow Heating		72%	67%	71%	74%	67%	71%
	100% Airflow Cooling		68%	61%	64%	68%	60%	63%
	Effectiveness 75% Airflow Cooling		72%	67%	70%	74%	67%	70%
Weights	Shipping Weight - lbs.		425	470	470	470		
	Net Weight - lbs.		345	395	395	395		

¹Rated in accordance with AHRI Standard 1060-2005. For further information, please reference AHRI 1060-2005 Standard for Rating Air-to-Air Heat Exchangers For Energy Recovery Ventilation Equipment.

SPECIFICATIONS - FOR 15 TO 25 TON T CLASS MODELS

General Data		Model Number Fixed Wheel	50R2843xM	50R2843xH	50R3643xH
		Model Number Pivoting Wheel	50P2843xM	50P2843xH	50P3643xH
		Nominal Air Volume - cfm	1500-2200	2200-2800	2800-3600
		Matching Units	T Class 180 through 300 models		
Required Height of Rooftop Unit Curb - in.			14	14	14
Fresh Air Blower	Belt-Drive Motor - hp		1-1/2	1-1/2	2
	Wheel Size (diameter x width) - in		10 x 10	10 x 10	12 x 9
	Motor Speed - rpm		1725	1725	1725
	Motor Speed(s)		Adjustable Sheave		
	Bearing Type		Ball		
Exhaust Air Blower	Belt-Drive Motor - hp	Fixed Wheel	1-1/2	1-1/2	2
		Pivoting Wheel	3	3	3
		Wheel Size (diameter x width) - in	10 x 10	10 x 10	12 x 9
		Motor Speed - rpm	1725	1725	1725
		Motor Speed(s)		Adjustable Sheave	
	Bearing Type		Ball		
Recovery Wheel	Wheel Depth x Diameter - in		3 x 37-3/4	3 x 37-3/4	3 x 41-13/16
	Motor Speed - rpm		1725	1725	1725
Electrical Data - Line Voltage - 60hz			208/230V-3ph, 460V-3ph, or 575V-3ph		
Enthalpy Wheel Airflow Data		Nominal Airflow	1900 cfm at 0.7 in. w.c.	2600 cfm at 0.95 in. w.c.	3100 cfm at 0.9 in. w.c.
	EATR - Exhaust Air Transfer Ratio	at minus 1 in. w. c.	6.10%	6.10%	4.90%
		at 0 in. w.c.	4.00%	4.00%	1.30%
		at 1 in. w.c.	0.00%	0.00%	0.30%
	OACF - Outdoor Air Correction Factor	at minus 1 in. w. c.	0.98%	0.98%	0.99%
		at 0 in. w.c.	1.13%	1.13%	1.07%
at 1 in. w.c.		1.23%	1.23%	1.12%	
¹Thermal Ratings at 0 in. w.c. Pressure Differential	Total Effectiveness	100% Airflow Heating	Sensible 68%	Latent 60%	Total 65%
		75% Airflow Heating	74%	67%	71%
		100% Airflow Cooling	68%	60%	63%
		75% Airflow Cooling	74%	67%	70%
	Net Effectiveness	100% Airflow Heating	68%	60%	65%
		75% Airflow Heating	74%	67%	71%
		100% Airflow Cooling	68%	60%	63%
		75% Airflow Cooling	74%	67%	70%
Weights	Shipping Weight - lbs.		470	470	571
	Net Weight - lbs.		395	395	475

¹Rated in accordance with AHRI Standard 1060-2005. For further information, please reference AHRI 1060-2005 Standard for Rating Air-to-Air Heat Exchangers For Energy Recovery Ventilation Equipment.

SPECIFICATIONS - FOR 15 TO 25 TON T CLASS MODELS

General Data		Model Number Fixed Wheel	50R4643xH	50R6243xM	50R6243xH
Model Number Pivoting Wheel		50P4643xH	50P6243xM	50P6243xM	50P6243xH
Nominal Air Volume - cfm		3400-4600	4800-5600	5500-6200	5500-6200
Matching Units		T Class 180 through 300 models			
Required Height of Rooftop Unit Curb - in.		24	24	24	24
Fresh Air Blower	Belt-Drive Motor - hp	3	5	5	5
	Wheel Size (diameter x width) - in	12 x 12	12 x 12	12 x 12	12 x 12
	Motor Speed - rpm	1725	1725	1725	1725
	Motor Speed(s)	Adjustable Sheave			
	Bearing Type	Ball			
Exhaust Air Blower	Belt-Drive Motor - hp	3	5	5	5
	Fixed Wheel Pivoting Wheel	5	2 each - 5	2 each - 5	2 each - 5
	Wheel Size (diameter x width) - in	12 x 12	12 x 12	12 x 12	12 x 12
	Motor Speed - rpm	1725	1725	1725	1725
	Motor Speed(s)	Adjustable Sheave			
Bearing Type	Ball				
Recovery Wheel	Wheel Depth x Diameter - in	3 x 46-3/4	3 x 52	3 x 52	3 x 52
	Motor Speed - rpm	1150	1075	1075	1075
Electrical Data - Line Voltage - 60hz		208/230V-3ph, 460V-3ph, or 575V-3ph			
Enthalpy Wheel Airflow Data	Nominal Airflow	3900 cfm at 0.95 in. w.c.	5500 cfm at 0.95 in. w.c.	5500 cfm at 0.95 in. w.c.	5500 cfm at 0.95 in. w.c.
	EATR - Exhaust Air Transfer Ratio	at minus 1 in. w.c.	4.40%	4.00%	4.00%
		at 0 in. w.c.	1.10%	1.00%	1.00%
		at 1 in. w.c.	0.20%	0.20%	0.20%
	OACF - Outdoor Air Correction Factor	at minus 1 in. w.c.	0.99%	0.99%	0.99%
		at 0 in. w.c.	1.06%	1.06%	1.07%
		at 1 in. w.c.	1.11%	1.10%	1.12%
¹Thermal Ratings at 0 in. w.c. Pressure Differential			Sensible	Latent	Total
	Total Effectiveness	100% Airflow Heating	68%	60%	65%
		75% Airflow Heating	73%	67%	71%
		100% Airflow Cooling	68%	60%	63%
		75% Airflow Cooling	73%	67%	70%
	Net Effectiveness	100% Airflow Heating	68%	60%	65%
		75% Airflow Heating	73%	67%	71%
		100% Airflow Cooling	68%	60%	63%
75% Airflow Cooling		73%	67%	70%	
Weights	Shipping Weight - lbs.	920	1250	1250	1250
	Net Weight - lbs.	805	1075	1075	1075

¹Rated in accordance with AHRI Standard 1060-2005. For further information, please reference AHRI 1060-2005 Standard for Rating Air-to-Air Heat Exchangers For Energy Recovery Ventilation Equipment.

ELECTRICAL DATA - 60HZ

Model No.		² 50R0644xH	50R1144xH	50R2045xH	50P2045xH	50R2842xM	50P2842xM
		² 50R0645xH	50R1145xH 50P1144xH 50P1145xH	50R2042xH	50P2042xH	50R2843xM 50R2842xH 50R2843xH	50P2842xH 50P2843xM 50P2843xH
Fresh Air Blower Motor Full load amps	208/230V-1ph	3.8	---	---	---	---	---
	208/230V-3ph	3.8	3.4	3.8	3.8	5.6	5.6
	460V-3ph	3.8	1.5	1.9	1.9	2.8	2.8
	575V-3ph	3.8	1.5	1.4	1.4	2.0	2.0
Exhaust Blower Motor Full load amps	208/230V-1ph	3.8	---	---	---	---	---
	208/230V-3ph	3.8	3.4	3.8	5.6	5.6	9
	460V-3ph	3.8	1.5	1.9	2.8	2.8	4.4
	575V-3ph	3.8	1.5	1.4	2.0	2.0	3.6
Wheel Drive Motor - Full load amps		0.6	0.6	0.6	0.6	1.1	1.1
Maximum Overcurrent Protection (amps)	115V-1ph	10	---	---	---	---	---
	208/230V-3ph	---	10	12	15	20	25
	460V-3ph	---	6	6	8	10	12
	575V-3ph	---	6	5	6	7	10
¹ Minimum Circuit Ampacity	115V-1ph	8.7	---	---	---	---	---
	208/230V-3ph	---	8.25	9.15	11.4	13.7	18.0
	460V-3ph	---	4.4	4.9	6	7.4	9.4
	575V-3ph	---	4.4	3.8	4.5	5.6	7.6

¹Refer to National or Canadian Electrical Code manual to determine wire, fuse and disconnect size requirements.

²A unit step-down transformer is provided, 208/230/460/575V primary, 120V secondary.

ELECTRICAL DATA - 60HZ

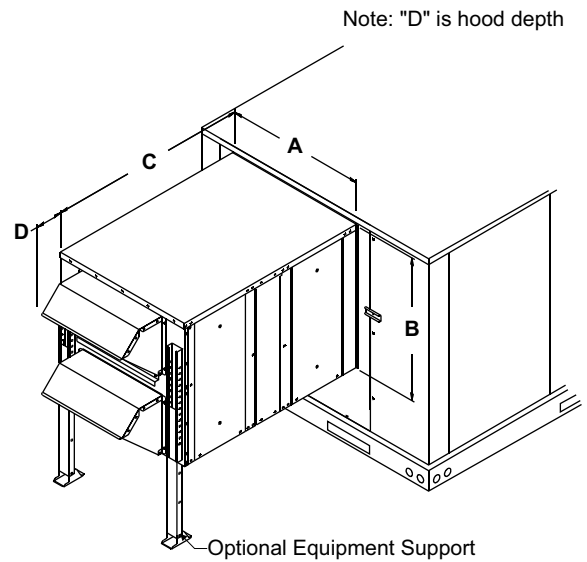
Model No.		50R3642xH	50P3642xH	50R4643xH	50P4643xH	50R6243xM	50P6243xM
		50R3643xH	50P3643xH			50R6243xH	50P6243xH
Fresh Air Blower Motor Full load amps	208/230V-3ph	6.6	6.6	9	9	15	15
	460V-3ph	3.3	3.3	4.4	4.4	7.4	7.4
	575V-3ph	2.4	2.4	3.4	3.4	5.8	5.8
Exhaust Blower Motor Full load amps	208/230V-3ph	6.6	9.4	9	14.8	14.8	14.8
	460V-3ph	3.3	4.3	4.3	7	7	7
	575V-3ph	2.4	3.2	3.2	5.1	5.1	5.1
Wheel Drive Motor - Full load amps		1.2	1.2	1.2	1.2	1.2	1.2
Maximum Overcurrent Protection (amps)	208/230V-3ph	20	25	30	40	50	50
	460V-3ph	12	15	15	20	25	25
	575V-3ph	9	10	12	15	20	20
¹ Minimum Circuit Ampacity	208/230V-3ph	16.1	19.6	22	28.7	34.8	34.8
	460V-3ph	8.6	9.9	11	14.4	17.5	17.5
	575V-3ph	6.6	7.6	8.7	11	13.6	13.6

¹Refer to National or Canadian Electrical Code manual to determine wire, fuse and disconnect size requirements.

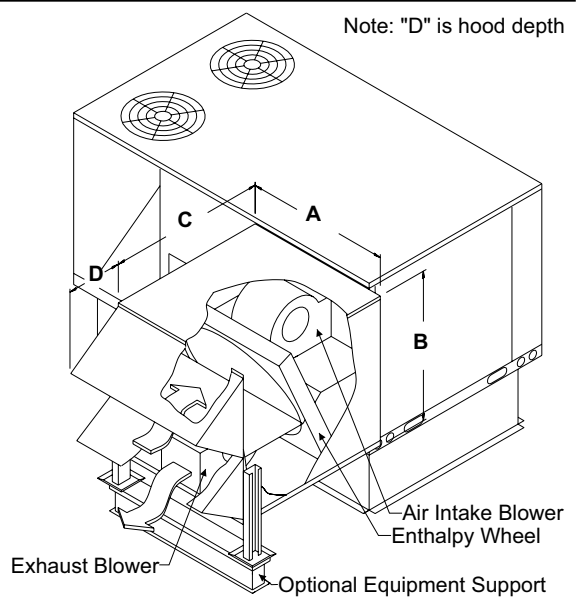
²A unit step-down transformer is provided, 208/230/460/575V primary, 120V secondary.

DIMENSIONS - INCHES (MM)

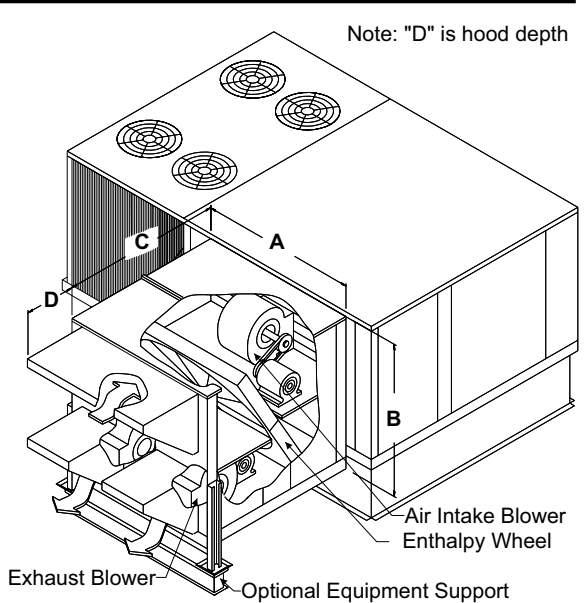
Model No.	A	B	C	D
50R0644xH	24-3/4 (629)	24-5/8 (625)	34-9/16 (876)	8 (203)
50R1144xH 50P1144xH	32-1/8 (816)	33-1/2 (851)	44-3/4 (1138)	11 (279)
50R0645xH	24-3/4 (629)	24-5/8 (625)	34-9/16 (876)	8 (203)
50R1145xH 50P1145xH	32-1/8 (816)	33-1/2 (851)	44-3/4 (1138)	11 (279)
50R2045xH 50P2045xH	37-1/4 (946)	37-1/2 (951)	54-3/8 (1381)	20-5/16 (517)



Model No.	A	B	C	D
50R2042xH 50P2042xH	37-1/4 (946)	37-1/2 (953)	54-3/8 (1381)	20-5/16 (516)
50R2842xM 50R2842xH 50P2842xM 50P2842xH	42-5/8 (1083)	43-9/16 (1106)	52-1/4 (1327)	18-5/16 (465)
50R3642xH 50P3642xH	46-11/16 (1186)	57-3/8 (1457)	60 (1524)	18-5/16 (465)



Model No.	A	B	C	D
50R2843xM 50R2843xH 50P2843xM 50P2843xH	42-5/8 (1083)	43-9/16 (1106)	52-1/4 (1327)	18-5/16 (465)
50R3643xH 50P3643xH	46-11/16 (1186)	57-3/8 (1457)	60 (1524)	18-5/16 (465)
50R4643xH 50P4643xH	52-11/16 (1338)	57-3/8 (1457)	60 (1524)	18-5/16 (465)
50R6243xM 50R6243xH 50P6243xM 50P6243xH	58-7/8 (1496)	57-3/8 (1457)	60 (1524)	18-5/16 (465)



GUIDE SPECIFICATIONS

Prepared for the guidance of architects, consulting engineers and mechanical contractors.

General

- Unit shall be a constant volume, energy recovery system used in conjunction with packaged rooftop equipment.
- Unit shall be directly coupled to the rooftop packaged unit to form a unitized system.
- Unit shall be performance rated in accordance with AHRI standards and in compliance with ASHRAE or DOE standards.
- Unit shall be certified to the applicable safety standards for the installed country.
- In addition, manufacturer shall test operate system at the factory before shipment.

Approval

- All models shall be certified in accordance with AHRI Standard 1060-2005, Air-to-Air Energy Recovery Ventilation Equipment and Standard for Safety for Heating and Cooling Equipment ANSI/UL1995, CAN CSA - 22.2 No. 236-05

Equipment Warranty

- Energy Recovery wheel shall have a limited warranty for five years.
- All other covered components have a limited warranty for one year.

Cabinet

- Shall be designed to attach directly to the rooftop unit.
- Shall be constructed of G90 galvanized steel with a powdered enamel paint finish electrostatically bonded to the metal.
- Metal shall be salt spray tested for 1000 hours per ASTM B-117.
- Cabinet panels shall be fully insulated with non-hygroscopic fiberglass insulation. Insulation shall have an R-Value of 3.7 and shall be flame resistant per UL-723. Insulation shall be in accordance with NFPA 90A and tested to meet UL 181 erosion requirements.
- Full perimeter base rail with top mounted rigging holes and fork truck access from three sides shall be provided.
- Test ports shall be provided so airflow can be measured across the energy recovery wheel.

Energy Recovery Wheel

- Wheel shall be of the enthalpy type for both sensible and latent heat recovery.
- Energy transfer ratings shall be certified in accordance with AHRI Standard 1060-2000.
- Wheel shall be constructed of a lightweight polymer material and shall be coated with a desiccant silica gel that will not dissolve or liquify in the presence of water or high humidity.
- The wheel shall be easily cleanable with standard coil cleaning solution.
- The wheel shall be available in both fixed and pivoting configurations.

OPTIONAL ACCESSORIES

Low Ambient Kit

- Low Ambient Kit shall be factory installed to prevent frost formation on the energy recovery wheel.
- Frost is prevented controlling the intake blower operation when discharge temperature is below a selectable temperature setting.

Motorized Outside Air Damper Assembly with Hood

- Shall be factory installed to provide motorized operation of intake air requirements.
- Damper assembly shall be installed behind the ERS outside air intake hood.

Performance

- The complete line of units shall have a cfm range of 300 to 1700.
- Individual units shall be available in ranges of 300-550, 600-1000, and 1100-1700 cfm.
- Unit shall operate to 10°F without the need for frost protection.
- Unit shall have up to 73% net effectiveness per AHRI tests. Application effectiveness shall be higher.

Control Operation

- Operation shall be controlled by a low voltage logic board.
- Logic board shall control low ambient kit and motorized outside air damper.

Access Doors

- All components shall be accessible through removable access doors.
- All energy recovery wheels shall be designed to be removed from the unit for ease of inspection and maintenance, 25 inch and larger wheels shall be segmented for easy removal.

Filters

- Unit shall be provided with mist eliminator type filters in the intake air hood.

Blowers

- Intake/exhaust air blowers shall be direct drive on ERS of 1000 cfm or less.
- Belt drive intake/exhaust air blowers shall be used on ERS over 1000 cfm.

Motors

- Blower motors on belt drive ERS shall have permanently lubricated ball bearings. Motors shall have thermal overload protection and shall have adjustable sheaves for blower speed adjustment.
- Blower motors on direct drive ERS shall be PSC type with multiple speeds.
- Intake and exhaust motors shall be individually controlled.
- Motor efficiency shall meet requirements of U.S. Energy Policy Act of 1992 (EPACT).

Electrical

- Units shall have single power point connection.
- A low voltage terminal strip shall be available.

Balancing Dampers

- Shall be provided for all fixed wheel units and shall be mounted inside the rooftop unit.

Barometric Relief Dampers

- Pressure operated dampers shall be provided for all ERS units.

Stop-Start-Jog

- Shall be a factory installed option for fixed wheel units only. Matching rooftop unit should not have an economizer.

Pressure Sensor

- Shall be a factory installed option to provide the amount of outside airflow across the enthalpy wheel.

OPTIONAL ACCESSORIES

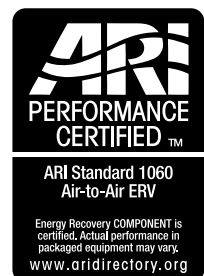
ERS Model No.	Roof Curb Model No.	Equipment Support Model No.
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50R1144xH	502014414	012104808
50P1144xH	502014414	012104808
50R0645xH	502014414	012104808
50R1145xH	502014414	012104808
50R2045xH	502014414	012104808
50P1145xH	502014414	012104808
50P2045xH	502014414	012104808
50R2042xH	502013114	012104808
50R2842xH	502013114	012106008
50R2842xM	502013114	012106008
50R3642xH	502013124	012106008
50P2042xH	502013114	012104808
50P2842xH	502013114	012106008
50P2842xM	502013114	012106008
50P3642xH	502013124	012106008
50R2843xH	502013214	012106008
50R2843xM	502013214	012106008
50R3643xH	502013224	012106008
50R4643xH	502013224	012107608
50R6243xH	502013224	012107608
50R6243xM	502013224	012107608
50P2843xH	502013214	012106008
50P2843xM	502013214	012106008
50P3643xH	502013224	012106008
50P4643xH	502013224	012107608
50P6243xH	502013224	012107608
50P6243xM	502013224	012107608



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