



FIRST CO.
P.O. BOX 270969 - DALLAS, TEXAS 75227
PH. (214) 388-5751 | FAX (214) 388-2255
WWW.FIRSTCO.COM

eco series

FRESH-PAK™

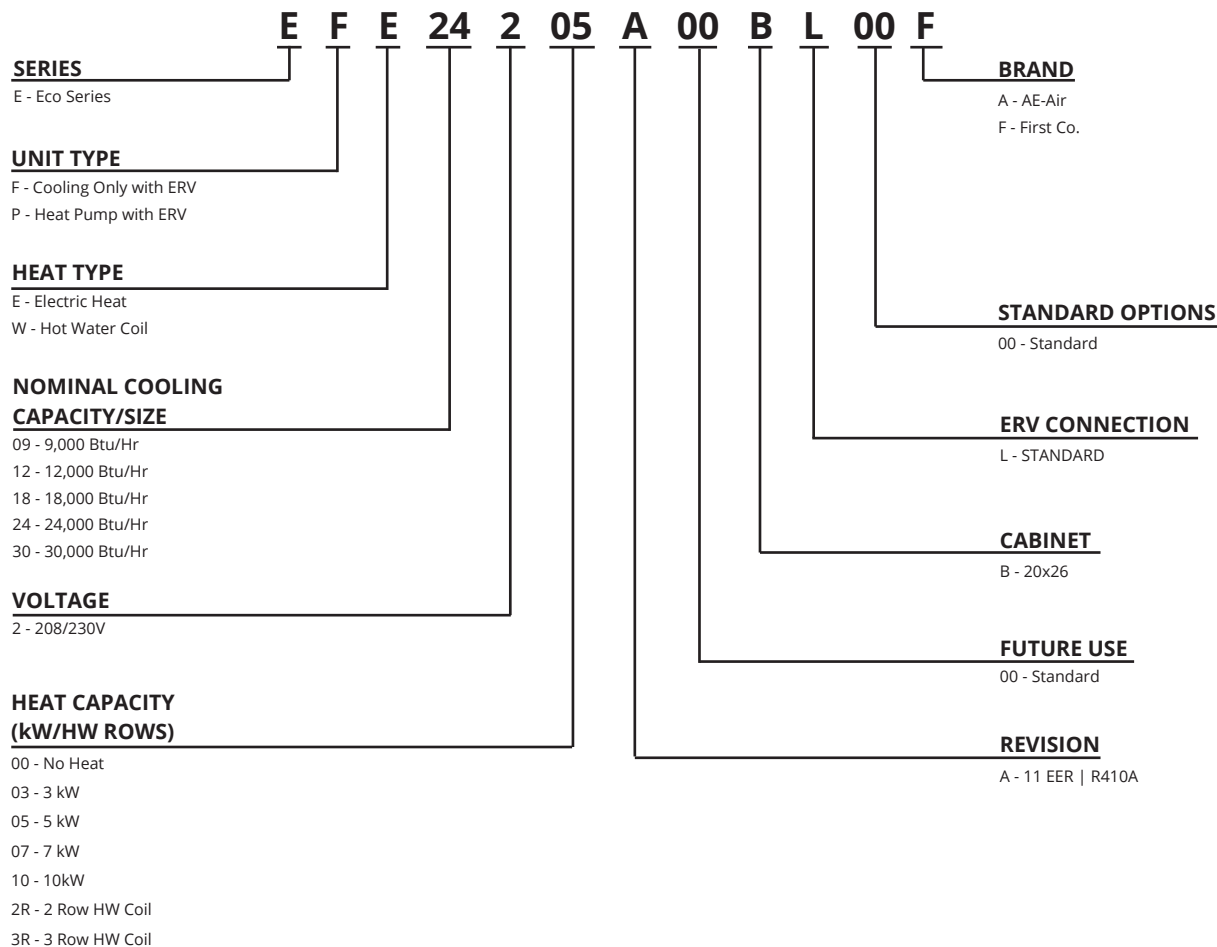
Single Package Vertical Unit with fully integrated ERV

Straight Cool (EFE), Heat Pump (EPE)
or Hydronic Heating (EFW)

- .75 through 2.5 tons
- Up to 10 kW Electric Heat
- Up to 47,800 BTUH Hydronic Heat
- Up to 12.0 EER & 3.5 COP



Nomenclature



UNIT DESCRIPTION

- Compact, through the wall single package vertical HVAC unit that delivers conditioned air to multiple rooms
- Easily installs into a closet or mechanical room on an exterior wall, utilizing a minimal amount of floor space

APPLICATIONS

Hospitality, Apartments/Condominiums, Assisted Living/Memory Care, Student Housing, Senior Living and Modular/Prefabricated Buildings

STANDARD UNIT FEATURES (refer to page 3 for additional information)

- Completely insulated cabinet for sound attenuation and weather infiltration
- Completely pre-charged with environmentally friendly R-410A refrigerant
- Shipped ready for top supply duct connection and front non-ducted return with optional ducted return
- Filter brackets and disposable filter shipped with unit for field installation; No tool needed to replace filter
- Easy access for in-place service of most components
- Fully integrated ERV module with washable core
- Multi-function microprocessor control board
- Service disconnect for service convenience and maintenance

REQUIRED ACCESSORIES (refer to page 4 for additional information)

- Single piece weight bearing wall sleeves with integrated fresh air intake and exhaust ports for various wall thicknesses from 5" to 20" Flush type exterior louver with finish and paint options
- Digital wall mount thermostats with high and low temperature limits
- WLAN service stick

OPTIONAL ACCESSORIES (refer to pages 4, 8-10 for additional information)

- Louvered and solid interior access panels
- ERV Sensors (Humidity and Carbon Dioxide) – field provided
- ERV Accessories (Outside air damper, egg timer (analog), digital timer switch – field provided)

Standard Unit Features

Ducted Return Air (Figure 1) - If required by code, return air can be ducted to the unit. NOTE: If ducted return is utilized, the filter will need to be relocated to a suitable location outside the cabinet for ease of service.

Filter Rack - Filter Brackets and a disposable MERV filter ship with each unit to be field installed over the evaporator coil. **NOTE:** Do not use filters which will cause the total external static pressure, including ducts, grilles, registers, and filters to exceed 0.5 in. w.c.

Solid State Circuit Board - Incorporates the following control features:

- **Evaporator coil low temperature protection** – During the cooling mode, should the evaporator coil experience either a low temperature condition that could result in ice buildup on the coil or a reduced air flow situation, a temperature sensor attached to the coil will de-energize the unit. The sensor will re-energize the unit when the coil warms back up.
- **Low ambient lockout** – Locks out compressor when the sensor registers temperatures of 40°F and below to extend compressor life.
- **Random restart** – When power is turned on after a power outage, a built-in random restart of 3-4 minutes, which prevents all compressors from restarting simultaneously.
- **Compressor restart delay** – This delay ensures that system pressures are allowed to equalize before a compressor restart, which extends compressor life.
- **Fan delay** – A fan delay allows the evaporator blower to continue running for up to 45 seconds after the thermostat is satisfied, which maximizes cooling performance.
- **Low voltage fuse protection** - Disconnects the live circuit when the current exceeds a predetermined value.

Service Pullout - Provides a visible disconnecting means when performing maintenance

Integrated Energy Recovery Ventilator (ERV) (Figure 4 - 6)

- **Core Enclosure:** Insulated one piece molded enclosure, made from mold/mildew resistant material. Completely sealed providing noise and air leakage reduction
- **Core:** Full enthalpy core made from polymer material that is removable for servicing & cleaning
- **Core Filters:** Filtration of Fresh Air & Return Air with MERV 5 washable and disposable filters

Required Accessories

Fresh-Pak Wall Sleeve (Figure 7, 8, & 10) - Wall sleeves with built in fresh air intake and exhaust ports are provided for installation during rough-in and, when ready, the unit is simply slid into the wall sleeve and the ductwork and electrical connected. The wall sleeve is a weight bearing sleeve that supports the entire weight of the unit and provides a weather tight seal against wind and water infiltration. A 3/4" male NPT fitting is provided in the bottom of the sleeve for field connection to a condensate riser. Four wall sleeve depths are available to accommodate wall thickness from 5" to 20". Each sleeve includes a factory installed weather guard to cover the sleeve opening and a debris guard to cover wall sleeve base and drain during construction

Unique Wall Sleeve Drain Condensate System (Figure 3) - Factory installed drain line connects the evaporator drain pan to a vertical pipe connection in the unit base pan. Evaporator condensate is delivered from the unit to a catch tray in the wall sleeve and exits the sleeve through the 3/4" male NPT fitting. This design allows the plumber to completely pipe the drain to a condensate riser during the rough-in stage, thus eliminating condensate connection problems usually encountered when trying to connect the HVAC drain to the riser after the HVAC unit is installed in the closet. This features also allows the unit to be removed for service without disconnecting the condensate piping. This configuration does not require any additional closet space to make the drain connection, as do some competitive products.

Secondary Overflow - If for any reason the primary condensate riser becomes clogged, water will fill the catch tray and then be diverted through the sleeve to the exterior of the building, rather than be allowed to overflow into the closet or living area. Rain water entering the sleeve is automatically diverted to the 3/4" sleeve drain.

Flush Style Louver (Figure 2) - An attractive extruded aluminum louver that attaches to the outside face of the wall sleeve. The blades of this unique louver recess into the wall sleeve for a neat, flush appearance. Louver attachment screws are tightened from inside of the wall sleeve. Do not install the unit into the sleeve before installing the louver and tightening attachment screws.

Thermostat (Refer to page 10) - Unit is controlled by a standard low voltage wall thermostat. Low voltage wires are stubbed out on the left side of the cabinet.

ERV Programming via WLAN service stick: Must purchase one stick per project. Required to program ERV board through the ABT GO app or ABT windows program for laptop

OPTIONAL ERV ACCESSORIES (Refer to page 9 & 10 for additional information)

ERV SENSORS: Field provided

- Humidity Sensors: Measures temperature and air humidity, signals ERV board to bring on ventilation
- Carbon Dioxide (CO2) Sensor: Used for determining ventilation necessity and to manage the amount of fresh outdoor air supplied to maintain acceptable levels of CO2 in the space

ERV ACCESSORIES: Field provided

- Outside air damper
- Egg timer (analog)
- Digital timer switch

What is ERV?

ERV (Energy Recovery Ventilator) is a device that uses waste/stale air to precondition outside incoming fresh air for ventilation.

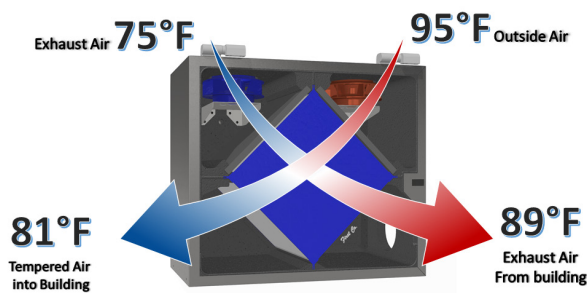
ERV uses a plate heat exchanger to transfer temperature (sensible energy) and moisture (latent energy) from waste air to incoming ventilation air. It will cool the air in the warmer months and warm the air in the coldest months.

Modern/tighter construction requirements that create better seals to prevent drafts result in stale moist air buildups and lack of fresh air within spaces. The ERV offers the solution to bring in fresh air while removing stale moist air from the inside.

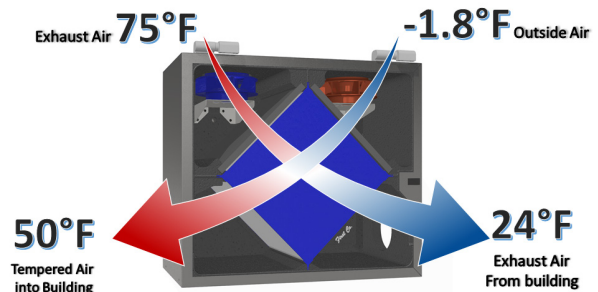
Defrost – The ERV will sense when the exhaust drops below the set temperature and will activate the built-in multistage defrost mode. The first stage will reduce the fan speed to help warm up the core and prevent freezing. The second stage will, if optional, activate the 3rd party field installed preheater.

The ERV will cycle between defrost and normal operation until the temperature rises to the set point. It can be field configured so that the supply fan can be switched off while the exhaust runs to warm up the core.

How it works during summer months



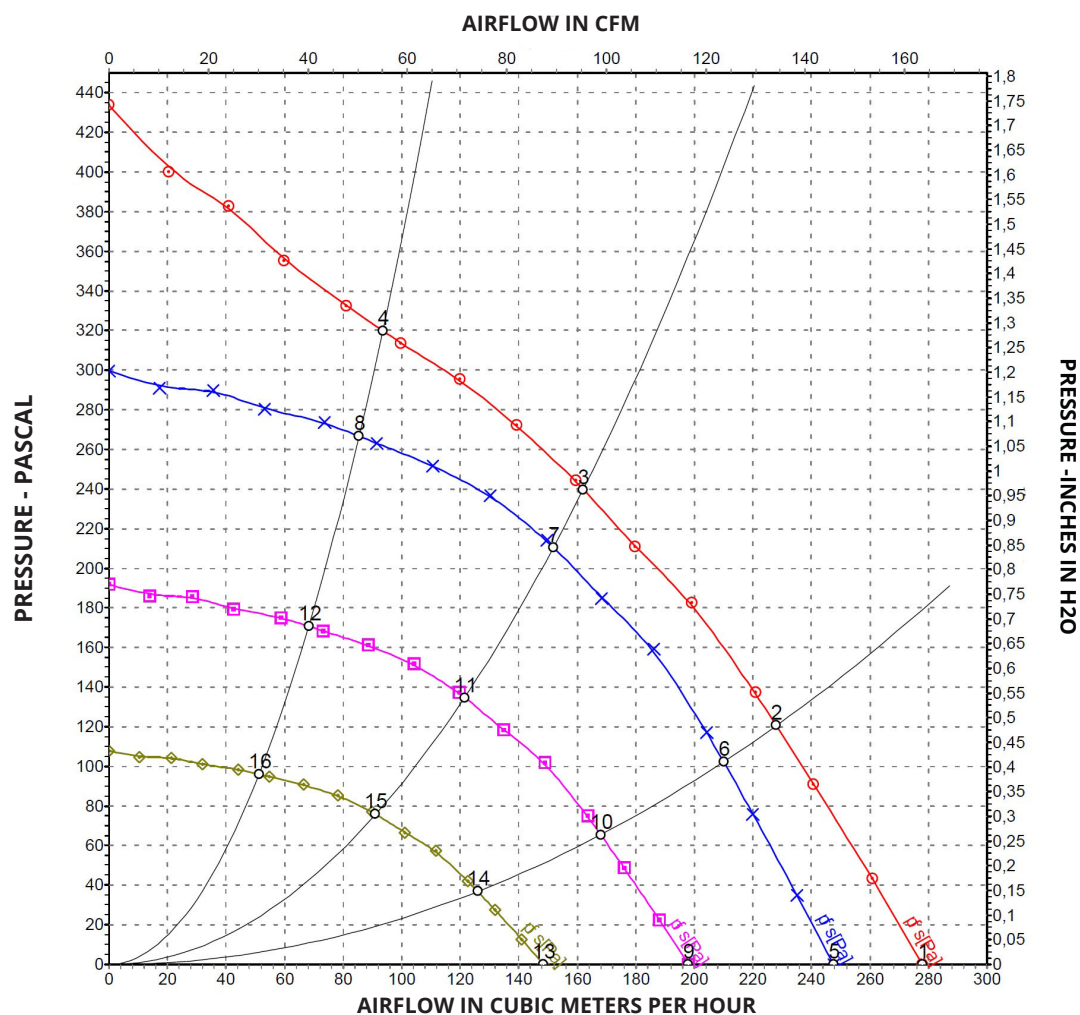
How it works during winter months



ERV Data

ERV FAN CURVE

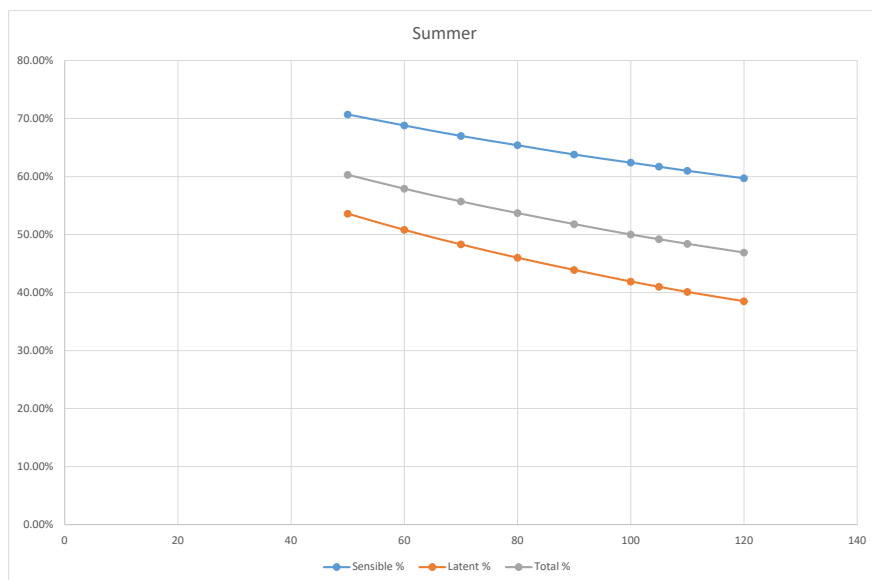
AIR FLOW AT 60HZ



	Voltage	Frequency Hz	Speed (Rev/min)	Power (Watts)	Current (Amps)	Airflow (m ³ /h)	Pressure (Pa)	Airflow (CFM)	Pressure (IN H2O)
1	230	60	3930	24	0.23	280	0	165	0.00
2	230	60	3800	26	0.26	230	120	136	0.48
3	230	60	3770	27	0.27	160	240	95	0.96
4	230	60	3835	26	0.25	95	320	56	1.28
5	230	60	3500	17	0.16	250	0	148	0.00
6	230	60	3500	20	0.2	210	102	124	0.41
7	230	60	3500	22	0.22	150	211	89	0.85
8	230	60	3500	19	0.19	85	267	51	1.07
9	230	60	2800	8.5	0.08	200	0	118	0.00
10	230	60	2800	10	0.1	170	66	101	0.26
11	230	60	2800	11	0.11	120	135	71	0.54
12	230	60	2800	9.9	0.1	70	171	42	0.69
13	230	60	2100	3.6	0.04	150	0	89	0.00
14	230	60	2100	4.4	0.04	125	37	74	0.15
15	230	60	2100	4.8	0.05	90	76	53	0.31
16	230	60	2100	4.2	0.04	50	96	30	0.39

ERV Data

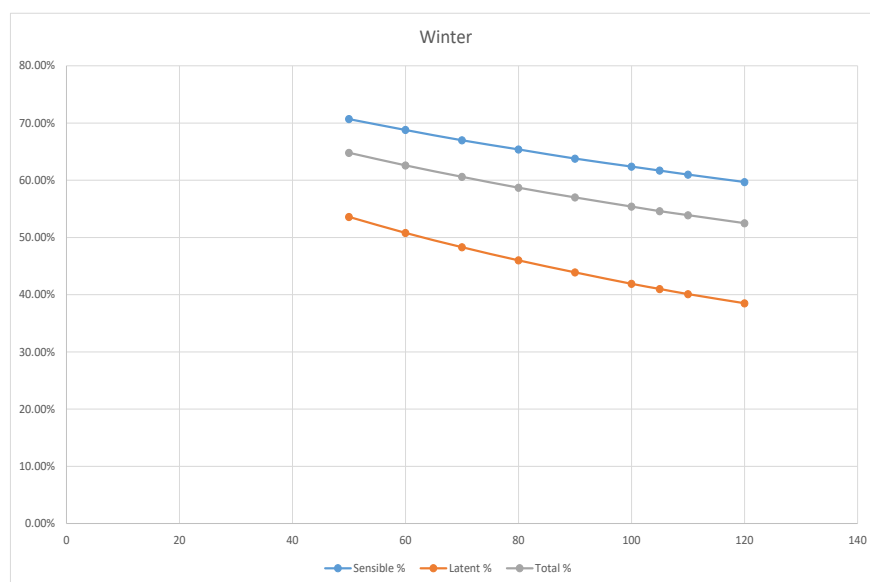
SUMMER



Summer			
Outdoor		Return	
db	rh	db	rh
95	46.5%	75	51.17%

	Summer		
CFM	Sensible %	Latent %	Total %
50	70.70%	53.60%	60.30%
60	68.80%	50.80%	57.90%
70	67.00%	48.30%	55.70%
80	65.40%	46.00%	53.70%
90	63.80%	43.90%	51.80%
100	62.40%	41.90%	50.00%
105	61.70%	41.00%	49.20%
110	61.00%	40.10%	48.40%
120	59.70%	38.50%	46.90%

WINTER



Winter			
Outdoor		Return	
db	rh	db	rh
35	81.69%	70	47.88%

	Winter		
CFM	Sensible %	Latent %	Total %
50	70.70%	53.60%	64.80%
60	68.80%	50.80%	62.60%
70	67.00%	48.30%	60.60%
80	65.40%	46.00%	58.70%
90	63.80%	43.90%	57.00%
100	62.40%	41.90%	55.40%
105	61.70%	41.00%	54.60%
110	61.00%	40.10%	53.90%
120	59.70%	38.50%	52.50%

Required Accessories

Wall sleeve, louver and thermostat are required for each installation

ACCESSORY	DESCRIPTION	DIMENSIONS (H x W x D)	PART #
FRESH-PAK INTEGRATED TOP PORTS	For 5" - 8" thick walls	43-1/4 x 26-1/2 x 37-1/4	999-21B-E
	For 8" - 12" thick walls	43-1/4 x 26-1/2 x 41-1/4	999-22B-E
	For 12" - 15" thick walls	43-1/4 x 26-1/2 x 44-1/4	999-23B-E
	For 15" - 20" thick walls	43-1/4 x 26-1/2 x 50-1/4	999-24B-E
FRESH-PAK INTEGRATED SIDE PORTS	For 5" - 8" thick walls	43-1/4 x 26-1/2 x 37-1/4	999-41B-E
	For 8" - 12" thick walls	43-1/4 x 26-1/2 x 41-1/4	999-42B-E
	For 12" - 15" thick walls	43-1/4 x 26-1/2 x 44-1/4	999-43B-E
	For 15" - 20" thick walls	43-1/4 x 26-1/2 x 50-1/4	999-44B-E

All wall sleeves are shipped two (2) per carton, fully assembled.

ACCESSORY	DESCRIPTION	DIMENSIONS (H x W x D)	PART #
ALUMINUM LOUVERS	Field Painted	43-1/2 x 26-1/8	G8502PPA
	Anodized Clear Coat	43-1/2 x 26-1/8	G8501A
	Custom Painted	43-1/2 x 26-1/8	G8503S*

*S indicates custom color, to be provided by customer. Minimum order quantity is 15 per color, if less than 15 set up fees will be applied

*BONE WHITE (24)	*DARK BRONZE (75)	*PORTLAND STONE (49)	*STONE GRAY (78)	*MEDIUM BRONZE (72)
*LIGHT STONE (43)	*SHELBURNE (69)	*FOREST GREEN (36)	*SAHARA TAN (65)	*ASCOT WHITE (19)
*SANDSTONE (67)	*HERRINGBONE (37)	*CORONADO RED (34)	*BLACK (89)	*TAUPE (52)

THERMOSTATS			
BRAND	DESCRIPTION	PART NUMBER	IMAGE
Honeywell	Programmable 7-day/5-2/5-1-1 3H/2C HP 2H/2C Conv. 24v Hardwired, C-wire only, Wi-Fi, w/ventilation control	TH6320WF2003	
Honeywell	Programmable 7-day/5-2/5-1-1 3H/2C HP 2H/2C Conv. 24v Hardwired, C-wire only, Wi-Fi, aux heat lockout w/ ventilation control	THX321WFS2001W	

WLAN SERVICE STICK			
BRAND	DESCRIPTION	PART NUMBER	IMAGE
ABT	Must purchase one stick per project. Required to program ERV board through the ABT GO app or ABT windows program for laptop	USB-300	

Optional Accessories

COMPONENT	DESCRIPTION	FRAME (A x C)	OPENING (B x D)	PART NUMBER	SHIPPING WEIGHT LBS.
RETURN AIR PANEL	LOUVERED (1)	87 X 37	84 X 34	931-20	55
ACCESS PANEL	SOLID	87 X 37	84 X 34	931-16	55

(1) No filter provided, requires unit mounted filter

Both panels are insulated for sound reduction and have tamperproof screws

Panels are shipped ten per carton

A solid door or panel with a side wall return air grille will result in lower sound levels

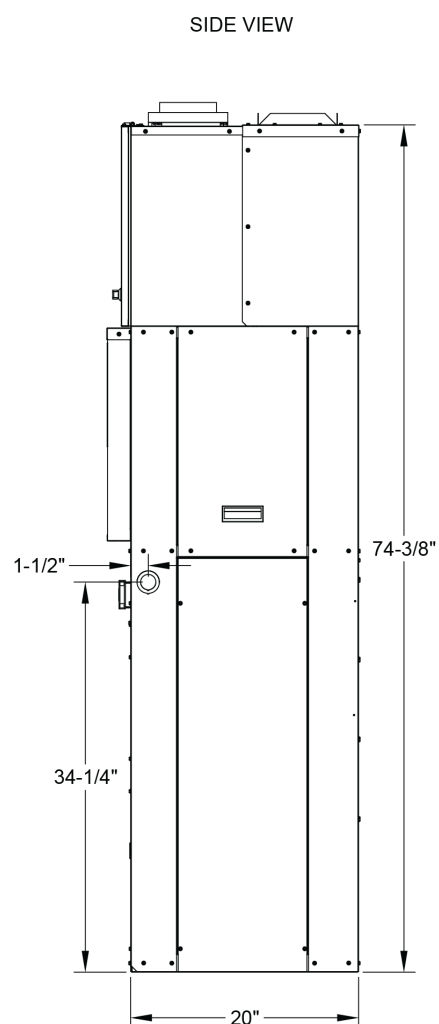
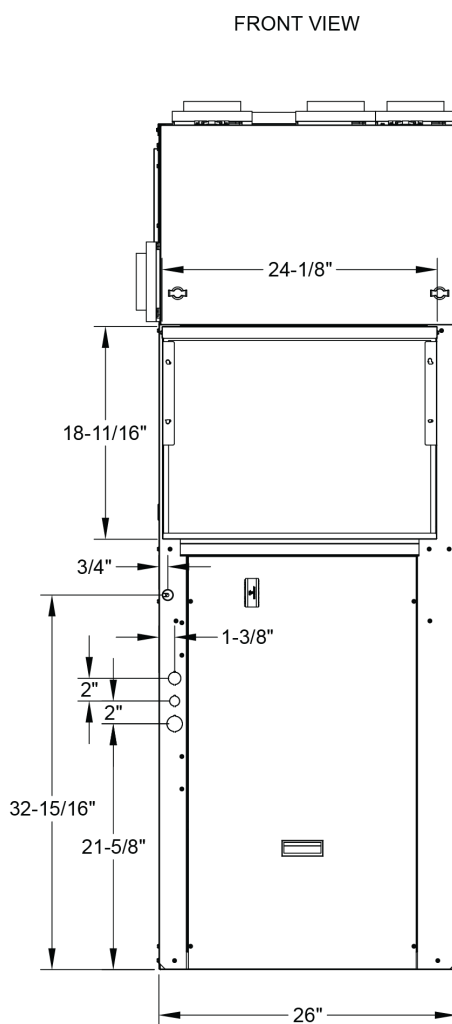
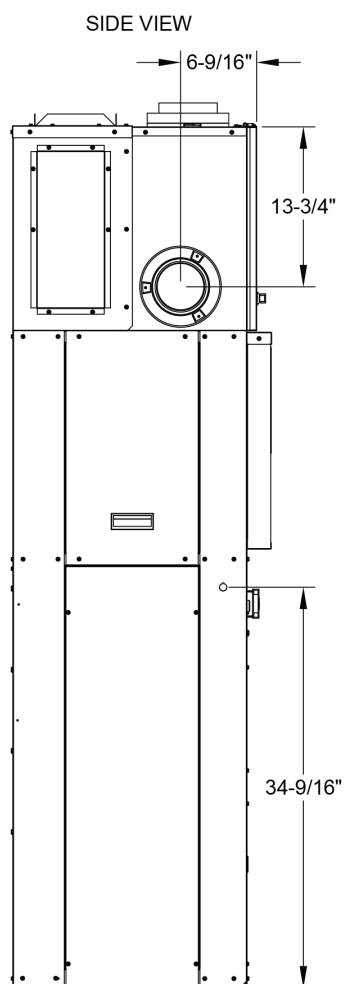
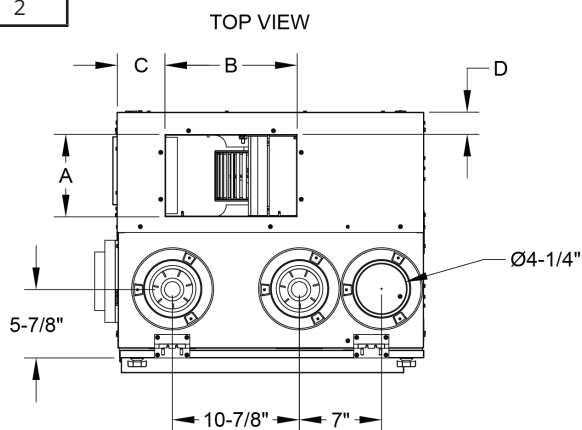


Optional Sensors

ERV SENSORS			
BRAND	DESCRIPTION	PART NUMBER	IMAGE
Honeywell	Carbon Dioxide (CO2) Sensor Duct mounted no display	C7232	
Honeywell	Carbon Dioxide (CO2) Sensor wall mounted sensor with LED light display	C7233	
Honeywell	Carbon Dioxide (CO2) Sensor wall mounted sensor with digital display	C7263	
PCE	Humidity Sensor wall mounted 4 - 20 mA output	PCE-P18	
Honeywell	Humidistat wall mounted HumidiPRO Digital Humidity Control	H6062	

Dimensions

UNIT PHYSICAL DATA				
UNIT	A	B	C	D
9	4	9.61	5.17	3.55
12	4	9.61	5.17	3.55
18	7	11.25	4.125	2
24	7	11.25	4.125	2
30	7	11.25	4.125	2



Cooling with Electric Heat (EFE)

Electrical & Physical Data

ELECTRICAL DATA (208/230V-1PH-60Hz)											
MODEL NUMBER	BLOWER DATA		CONDENSER DATA				MINIMUM CIRCUIT AMPACITY (MCA)		MAXIMUM CIRCUIT PROTECTION (MOP)		SHIPPING WEIGHT
	INDOOR MOTOR		COMPRESSOR		OUTDOOR MOTOR						
	AMPS	HP	RLA	LRA	FLA	HP	208V	240V	208V	240V	LBS.
EFE09 - 0	2.3	1/4	4.4	20	2.3	1/4	11	11	10	10	245
EFE09 - 2		1/5				1/5	12	13	10	10	
EFE09 - 3		1/6				1/6	16	19	20	20	
EFE09 - 4		1/7				1/7	21	24	25	25	
EFE12 - 0	2.3	1/4	4.7	26	2.3	1/4	12	12	15	15	245
EFE12 - 2							12	13	15	15	
EFE12 - 3							16	19	20	20	
EFE12 - 4							21	24	25	25	
EFE12 - 5							25	29	30	30	
EFE18 - 0	2.8	1/3	9.0	56	2.8	1/3	18	18	25	25	255
EFE18 - 2							18	18	25	25	
EFE18 - 3							18	19	25	25	
EFE18 - 4							22	24	25	25	
EFE18 - 5							26	30	30	30	
EFE18 - 6							31	35	35	35	
EFE18 - 8							40	45	40	50	
EFE18 - 10							49	56	50	60	
EFE24 - 0	2.8	1/3	10.1	62	2.8	1/3	20	20	25	25	295
EFE24 - 3							20	20	25	25	
EFE24 - 4							22	24	25	25	
EFE24 - 5							26	30	25	30	
EFE24 - 6							31	35	35	35	
EFE24 - 8							40	45	40	50	
EFE24 - 10							49	56	50	60	
EFE30 - 0	4.1	1/2	12.8	65	2.8	1/3	25	25	35	35	325
EFE30 - 3							25	25	35	35	
EFE30 - 4							25	26	35	35	
EFE30 - 5							28	31	35	35	
EFE30 - 6							32	36	35	40	
EFE30 - 8							41	47	45	50	
EFE30 - 10							50	57	55	60	

Cooling with Electric Heat (EFE)

Cooling & Heating Performance

COOLING			ELECTRIC HEAT					
MODEL NUMBER	COOLING CAPACITY (BTUH) (1)	EFFICIENCY EER (2)	240V			208V		
			kW	BTUH	HEATING AMPS	kW	BTUH	HEATING AMPS
EFE09 -0	9500	12.0	0.0	0	0.0	0.0	0	0.0
EFE09 -2			2.0	6800	8.3	1.5	5100	7.2
EFE09 -3			3.0	10200	12.5	2.25	7700	10.8
EFE09 -4			4.0	13600	16.7	3.0	10200	14.4
EFE12 -0	11500	12.0	0.0	0	0.0	0.0	0	0.0
EFE12 -2			2.0	6800	8.3	1.5	5100	7.2
EFE12 -3			3.0	10200	12.5	2.25	7700	10.8
EFE12 -4			4.0	13600	16.7	3.0	10200	14.4
EFE12 -5			4.5	15400	20.8	3.38	11500	18.0
EFE18 -0	17500	11.5	0.0	0	0.0	0.0	0	0.0
EFE18 -2			2.0	6800	8.3	1.5	5100	7.2
EFE18 -3			3.0	10200	12.5	2.25	7700	10.8
EFE18 -4			4.0	13600	16.7	3.0	10200	14.4
EFE18 -5			4.5	15400	20.8	3.38	11500	18.0
EFE18 -6			6.0	20500	25.0	4.5	15400	21.6
EFE18 -8			8.0	27300	33.3	6.0	20500	28.8
EFE18 -10			9.0	30700	37.5	6.75	23000	36.1
EFE24 -0	24600	11.2	0.0	0	0.0	0.0	0	0.0
EFE24 -3			3.0	10200	12.5	2.25	7700	10.8
EFE24 -4			4.0	13600	16.7	3.0	10200	14.4
EFE24 -5			4.5	15400	20.8	3.38	11500	18.0
EFE24 -6			6.0	20500	25.0	4.5	15400	21.6
EFE24 -8			8.0	27300	33.3	6.0	20500	28.8
EFE24 -10			9.0	30700	37.5	6.75	23000	36.1
EFE30 -0	27000	11.0	0.0	0	0.0	0.0	0	0.0
EFE30 -3			3.0	10200	12.5	2.25	7700	10.8
EFE30 -4			4.0	13600	16.7	3.0	10200	14.4
EFE30 -5			4.5	15400	20.8	3.38	11500	18.0
EFE30 -6			6.0	20500	25.0	4.5	15400	21.6
EFE30 -8			8.0	27300	33.3	6.0	20500	28.8
EFE30 -10			9.0	30700	37.5	6.75	23000	36.1

(1) 95°F DB/75°F WB outdoor - 80°F DB/67°F WB indoor.

(2) Tested in accordance with AHRI Standard 390.

Cooling with Electric Heat (EFE)

Blower Performance

UNIT MODEL	BLOWER SPEED TAP	CFM vs EXTERNAL STATIC PRESSURE									
		0.1		0.2		0.3		0.4		0.5	
		CFM	WATTS	CFM	WATTS	CFM	WATTS	CFM	WATTS	CFM	WATTS
EFE09	T1	329	30	317	35	305	39	291	44	273	47
	T2 (H & C)	397	54	385	58	372	63	358	68	340	71
	T3	489	80	477	84	464	89	450	94	433	97
EFE12	T1	356	42	344	46	332	51	318	56	300	59
	T2 (H & C)	433	64	421	68	409	73	395	78	377	81
	T3	506	85	494	90	482	94	468	99	450	102
EFE18	T1	561	71	536	75	505	80	474	84	449	89
	T2 (H & C)	649	99	624	103	593	108	563	112	537	117
	T3	702	120	677	124	646	128	615	133	590	137
	T4	718	127	693	131	662	135	632	140	606	144
	T5	757	145	732	149	701	153	670	158	645	163
EFE24	T1	718	127	693	131	662	135	632	140	606	144
	T2 (H & C)	824	184	799	188	768	192	738	197	712	201
	T3	904	241	879	245	848	249	818	254	792	258
	T4	937	266	912	270	881	274	851	279	825	284
	T5	999	309	974	313	943	317	912	322	887	327
EFF30	T1	850	217	837	220	821	224	799	227	774	229
	T2 (H & C)	936	273	923	277	907	281	885	284	859	285
	T3	1063	347	1050	351	1034	354	1012	357	986	359
	T4	1162	379	1149	383	1132	387	1111	390	1085	391
	T5	1285	389	1272	393	1256	397	1234	400	1209	401

Factory Settings: (H) = Heating, (C) = Cooling

Airflow data shown is with dry coil at 70°F DB EAT with standard 1" air filter

Heat Pump with Electric Heat (EPE)

Electrical & Physical Data

ELECTRICAL DATA (208/230V-1PH-60Hz)											
MODEL NUMBER	BLOWER DATA		CONDENSER DATA				MINIMUM CIRCUIT AMPACITY (MCA)		MAXIMUM CIRCUIT PROTECTION (MOP)		SHIPPING WEIGHT
	INDOOR MOTOR		COMPRESSOR		OUTDOOR MOTOR						
	AMPS	HP	RLA	LRA	FLA	HP	208V	240V	208V	240V	LBS.
EPE09 - 2	2.3	1/4	4.4	20	2.3	1/4	12	14	15	15	245
EPE09 - 3							17	19	20	20	
EPE09 - 4							21	24	25	25	
EPE12 - 2	2.3	1/4	4.7	26	2.3	1/4	12	14	15	15	245
EPE12 - 3							17	19	20	20	
EPE12 - 4							21	24	25	25	
EPE12 - 5							26	29	30	30	
EPE18 - 2	2.8	1/3	9.0	56	2.8	1/3	17	17	25	25	255
EPE18 - 3							18	20	25	25	
EPE18 - 4							22	25	25	25	
EPE18 - 5							27	30	30	30	
EPE18 - 6							31	35	35	35	
EPE18 - 8							40	46	40	50	
EPE18 - 10							45	51	45	60	
EPE24 - 3	2.8	1/3	10.1	62	2.8	1/3	19	20	25	25	295
EPE24 - 4							22	25	25	25	
EPE24 - 5							27	30	25	30	
EPE24 - 6							31	35	35	35	
EPE24 - 8							40	46	40	50	
EPE24 - 10							45	51	45	60	
EPE30 - 3	4.1	1/2	12.8	65	2.8	1/3	23	23	35	35	325
EPE30 - 4							24	26	35	35	
EPE30 - 5							28	32	35	35	
EPE30 - 6							33	37	35	40	
EPE30 - 8							42	47	45	50	
EPE30 - 10							46	52	50	60	

Heat Pump with Electric Heat (EPE)

Cooling & Heating Performance

COOLING			HEAT PUMP		ELECTRIC HEAT					
MODEL NUMBER	COOLING CAPACITY (BTUH) (1)	EFFICIENCY EER (3)	HEATING CAPACITY (BTUH) (2)	COP (3)	240V			208V		
					kW	BTUH	AMPS	kW	BTUH	AMPS
EPE09 -2	9500	12.0	9000	3.5	2.0	6800	8.3	1.5	5100	7.2
EPE09 -3					3.0	10200	12.5	2.25	7700	10.8
EPE09 -4					4.0	13600	16.7	3.0	10200	14.4
EPE12 -2	11500	12.0	10500	3.5	2.0	6800	8.3	1.5	5100	7.2
EPE12 -3					3.0	10200	12.5	2.25	7700	10.8
EPE12 -4					4.0	13600	16.7	3.0	10200	14.4
EPE12 -5					4.5	15400	20.8	3.38	11500	18
EPE18 -2	17500	11.5	16200	3.4	2.0	6800	8.3	1.5	5100	7.2
EPE18 -3					3.0	10200	12.5	2.25	7700	10.8
EPE18 -4					4.0	13600	16.7	3.0	10200	14.4
EPE18 -5					4.5	15400	20.8	3.38	11500	18
EPE18 -6					6.0	20500	25	4.5	15400	21.6
EPE18 -8					8.0	27300	33.3	6.0	20500	28.8
EPE18 -10					9.0	30700	37.5	6.75	23000	36.1
EPE24 -3	24600	11.2	23600	3.4	3.0	10200	12.5	2.25	7700	10.8
EPE24 -4					4.0	13600	16.7	3.0	10200	14.4
EPE24 -5					4.5	15400	20.8	3.38	11500	18
EPE24 -6					6.0	20500	25	4.5	15400	21.6
EPE24 -8					8.0	27300	33.3	6.0	20500	28.8
EPE24 -10					9.0	30700	37.5	6.75	23000	36.1
EPE30 -3	27000	11.0	25000	3.3	3.0	10200	12.5	2.25	7700	10.8
EPE30 -4					4.0	13600	16.7	3.0	10200	14.4
EPE30 -5					4.5	15400	20.8	3.38	11500	18
EPE30 -6					6.0	20500	25	4.5	15400	21.6
EPE30 -8					8.0	27300	33.3	6.0	20500	28.8
EPE30 -10					9.0	30700	37.5	6.75	23000	36.1

(1) Tested at 95°F DB/75°F WB outdoor and 80°F DB/67°F WB indoor

(2) Tested at 47°F DB outdoor

(3) Tested in accordance with AHRI Standard 390

Heat Pump with Electric Heat (EPE)

Blower Performance

UNIT MODEL	BLOWER SPEED TAP	CFM vs EXTERNAL STATIC PRESSURE									
		0.1		0.2		0.3		0.4		0.5	
		CFM	WATTS	CFM	WATTS	CFM	WATTS	CFM	WATTS	CFM	WATTS
EPE09	T1	329	30	317	35	305	39	291	44	273	47
	T2 (H & C)	397	54	385	58	372	63	358	68	340	71
	T3	489	80	477	84	464	89	450	94	433	97
EPE12	T1	356	42	344	46	332	51	318	56	300	59
	T2 (H & C)	433	64	421	68	409	73	395	78	377	81
	T3	506	85	494	90	482	94	468	99	450	102
EPE18	T1	583	83	553	83	528	85	501	88	472	90
	T2 (H & C)	653	112	623	112	599	114	572	117	543	119
	T3	696	134	666	134	642	136	615	139	586	141
	T4	710	141	681	141	656	143	629	146	600	149
	T5	746	161	717	161	692	163	665	166	636	168
EPE24	T1	710	141	681	141	656	143	629	146	600	149
	T2 (H & C)	821	202	792	202	767	204	740	207	711	210
	T3	923	261	893	261	868	263	842	265	812	268
	T4	956	284	926	284	901	286	875	288	845	291
	T5	976	316	946	316	921	318	895	321	865	323
EPE30	T1	838	212	811	210	791	213	765	213	736	210
	T2 (H & C)	931	268	904	267	884	270	858	270	829	267
	T3	996	315	969	313	949	316	923	316	894	313
	T4	1033	346	1006	345	986	348	961	348	932	344
	T5	1048	361	1021	359	1001	362	975	362	946	359

Factory Settings: (H) = Heating, (C) = Cooling

Airflow data shown is with dry coil at 70°F DB EAT with standard 1" air filter

Cooling with Hot Water Heat (EFW)

Electrical & Physical Data

ELECTRICAL DATA 208/230V - 1PH - 60Hz											
MODEL NUMBER	BLOWER DATA		CONDENSER DATA				MINIMUM CIRCUIT AMPACITY (MCA)		MAXIMUM CIRCUIT PROTECTION (MOP)		SHIPPING WEIGHT
	INDOOR MOTOR		COMPRESSOR		OUTDOOR MOTOR						
	AMPS	HP	RLA	LRA	FLA	HP	208V	230V	208V	230V	LBS.
EFW09	2.3	1/4	4.4	20	2.3	1/4	11	11	15	15	256
EFW12	2.3	1/4	4.7	26	2.3	1/4	11	11	15	15	256
EFW18	4.1	1/2	9	56	2.8	1/3	19	19	25	25	266
EFW24	4.1	1/2	10.1	62	2.8	1/3	20	20	25	25	306
EFW30	4.1	1/2	12.8	65	2.8	1/3	23	23	35	35	336

Cooling with Hot Water Heat (EFW)

Cooling & Heating Performance

COOLING			HOT WATER HEATING					
MODEL NUMBER	COOLING CAPACITY (BTUH) (1)	EFFICIENCY EER (3)	AIR FLOW (CFM)	GPM	PRESSURE DROP (FT. WATER)	BTUH (1000) @ ENTERING WATER TEMPERATURE		
						120°F	140°F	180°F
EFW0922RA**	9500	12.0	300	2.00	1.80	11.20	15.80	25.00
				2.50	2.80	11.60	16.30	25.70
				3.00	3.90	11.90	16.60	26.30
EFW0923RA**	9500	12.0	300	2.00	2.60	13.30	18.70	29.40
				2.50	3.90	13.70	19.20	30.20
				3.00	5.40	13.90	19.50	30.80
EFW1222RA**	11500	12.0	400	2.00	1.80	13.60	19.20	30.30
				2.50	2.80	14.20	19.90	31.50
				3.00	3.90	14.60	20.50	32.40
EFW1223RA**	11500	12.0	400	2.00	2.60	16.30	22.90	36.20
				2.50	3.90	17.00	23.80	37.60
				3.00	5.40	17.40	24.50	38.60
EFW1822RA**	17500	11.5	600	2.00	1.90	17.30	24.30	38.60
				2.50	2.80	18.30	25.80	40.80
				3.00	3.90	19.00	26.80	42.40
EFW1823RA**	17500	11.5	600	2.00	2.60	20.90	29.40	46.50
				2.50	3.90	22.20	31.20	49.40
				3.00	5.50	23.10	32.50	51.40
EFW2422RA**	24600	11.2	800	2.00	1.90	20.00	28.20	44.70
				2.50	2.80	21.40	30.20	47.90
				3.00	3.90	22.40	31.60	50.10
EFW2423RA**	24600	11.2	800	2.00	2.60	24.30	34.20	54.10
				2.50	3.90	26.20	36.90	58.30
				3.00	5.50	27.60	38.80	61.40
EFW3022RA**	27000	11.0	900	2.00	1.90	21.10	29.70	47.20
				2.50	2.80	22.70	32.00	50.80
				3.00	3.90	23.90	33.60	53.40
EFW3023RA**	27000	11.0	900	2.00	2.60	25.60	36.10	57.00
				2.50	3.90	27.80	39.10	61.90
				3.00	5.50	29.40	41.40	65.50

Note: Use 3 GPM capacities when First Co. Flow Control Module (Part Number 940-3CV) is used

Cooling with Hot Water Heat (EFW)

Blower Performance

UNIT MODEL	BLOWER SPEED TAP	CFM vs EXTERNAL STATIC PRESSURE									
		0.1		0.2		0.3		0.4		0.5	
		CFM	WATTS	CFM	WATTS	CFM	WATTS	CFM	WATTS	CFM	WATTS
EFW09	T1	329	30	317	35	305	39	291	44	273	47
	T2 (H & C)	356	42	344	46	332	51	318	56	300	59
	T3	397	54	385	58	372	63	358	68	340	71
EFW12	T1	405	56	394	61	381	65	367	70	349	73
	T2 (H & C)	405	56	394	61	381	65	367	70	349	73
	T3	489	80	477	84	464	89	450	94	433	97
EFW18	T1	607	104	574	107	554	109	533	108	503	105
	T2 (H & C)	607	104	574	107	554	109	533	108	503	105
	T3	683	127	650	130	629	132	608	131	578	128
	T4	711	137	678	140	658	141	636	141	606	138
	T5	777	162	744	166	724	167	702	166	672	164
EFW24	T1	802	173	769	177	749	178	727	177	697	174
	T2 (H & C)	802	173	769	177	749	178	727	177	697	174
	T3	893	217	860	221	840	222	818	222	788	219
	T4	944	246	911	250	890	251	869	251	839	248
	T5	990	275	957	279	937	280	915	280	885	277
EFW30	T1	903	223	870	227	850	228	829	227	799	225
	T2 (H & C)	963	258	930	262	909	263	888	262	858	260
	T3	1101	356	1068	359	1048	361	1027	360	997	357
	T4	1128	378	1095	381	1075	382	1054	382	1024	379
	T5	1168	411	1135	415	1114	416	1093	415	1063	413

Factory Settings: (H) = Heating, (C) = Cooling

Airflow data shown is with dry coil at 70°F DB EAT with standard 1" air filter

Figures

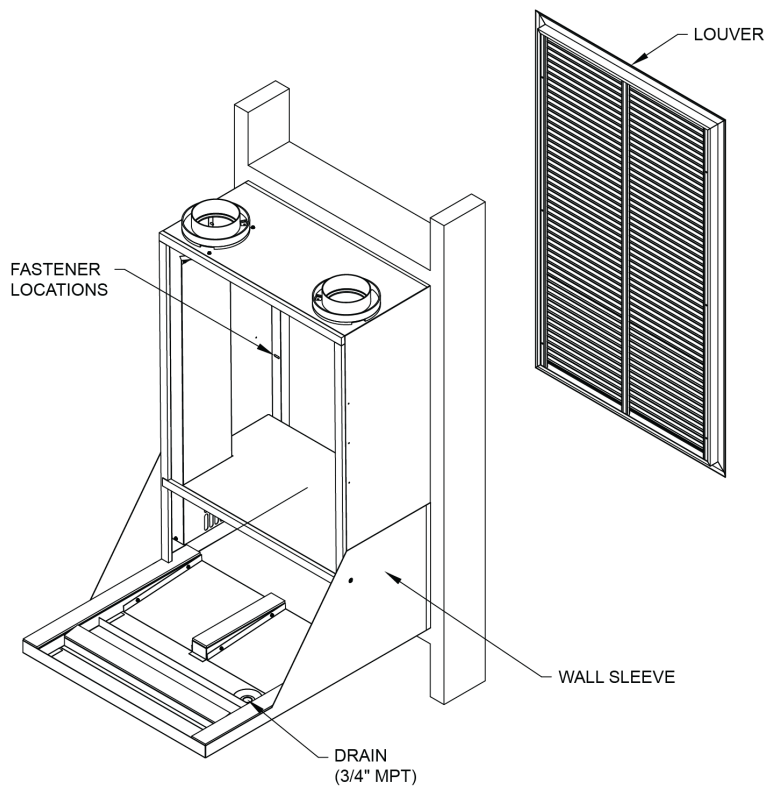


FIGURE 1 - GENERAL ASSEMBLY FOR WALL SLEEVE AND LOUVER

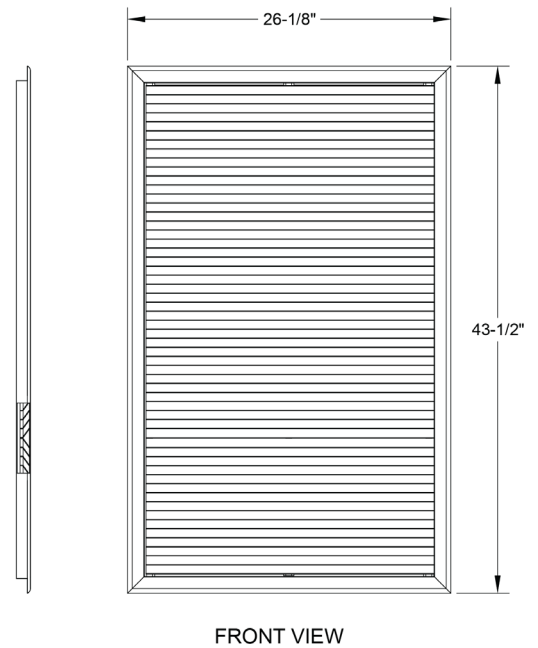


FIGURE 2 - ARCHITECTURAL LOUVER

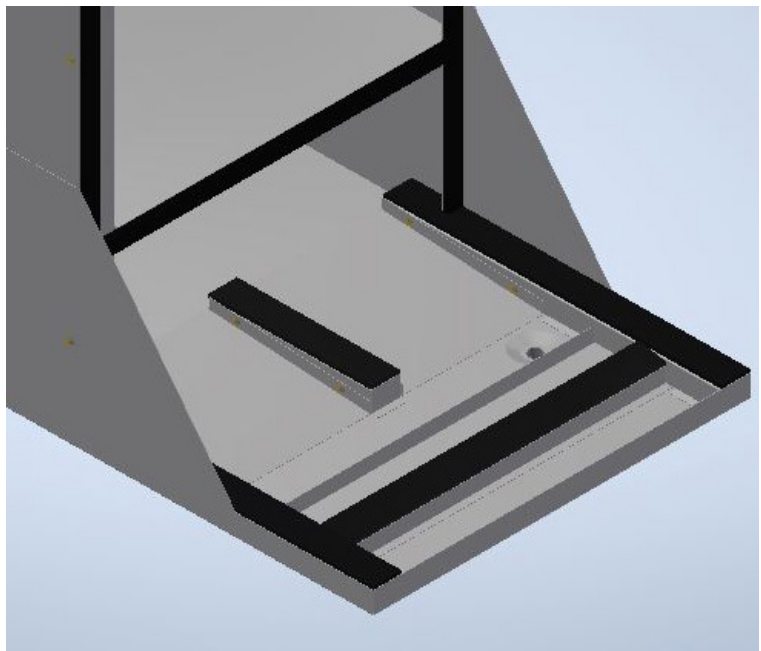
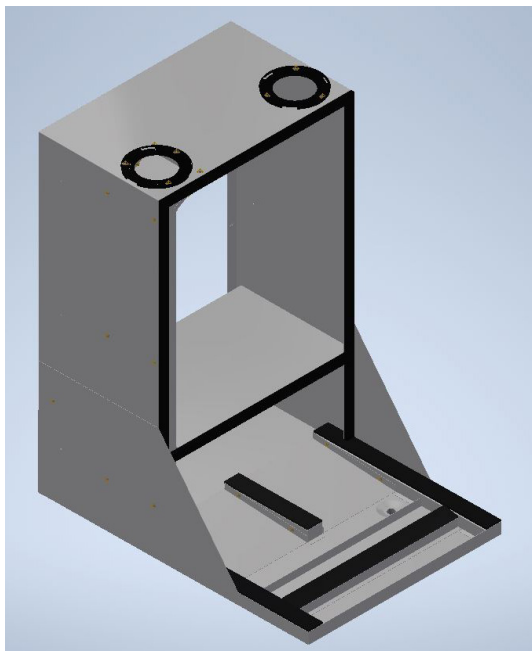


FIGURE 3 - WALL SLEEVE CONDENSATE DRAIN

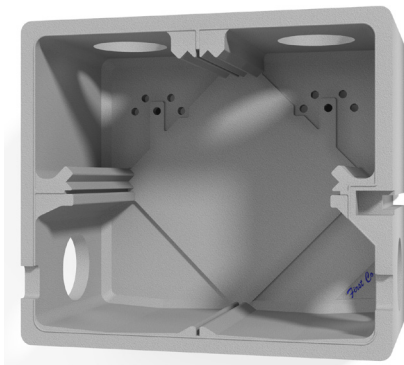


FIGURE 4 - ERV CORE ENCLOSURE

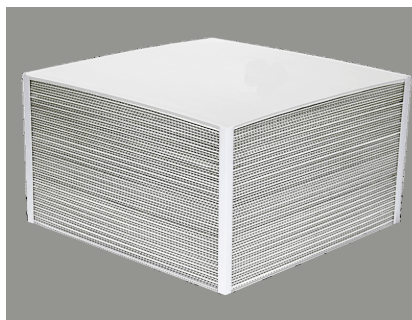


FIGURE 5 - ERV CORE

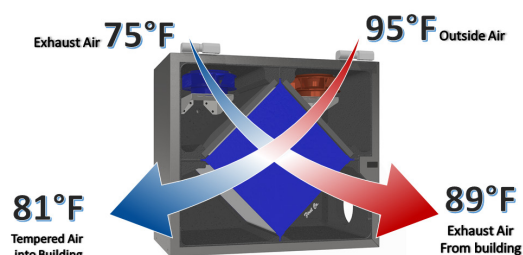


FIGURE 6 - ERV DIAGRAM

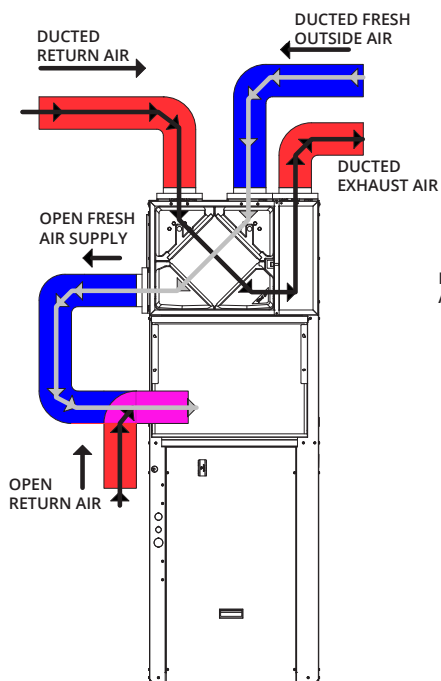
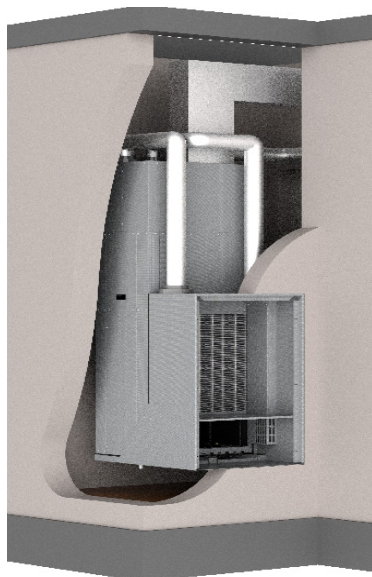


FIGURE 7 - TOP DUCTED INSTALLATION

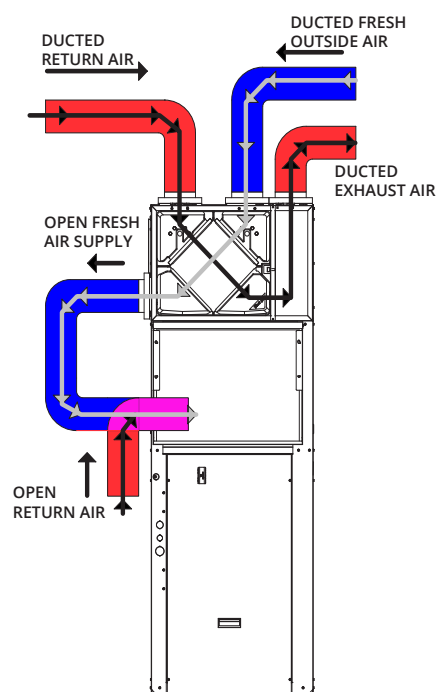
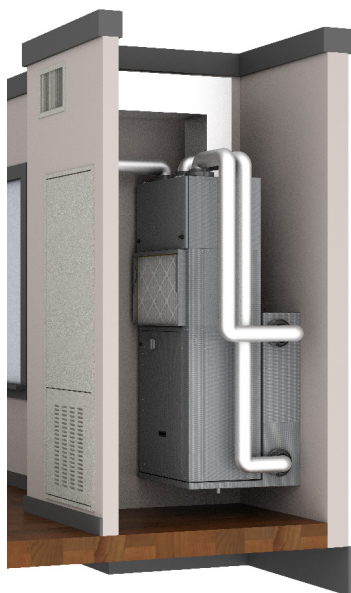


FIGURE 8 - SIDE DUCTED INSTALLATION

Figures

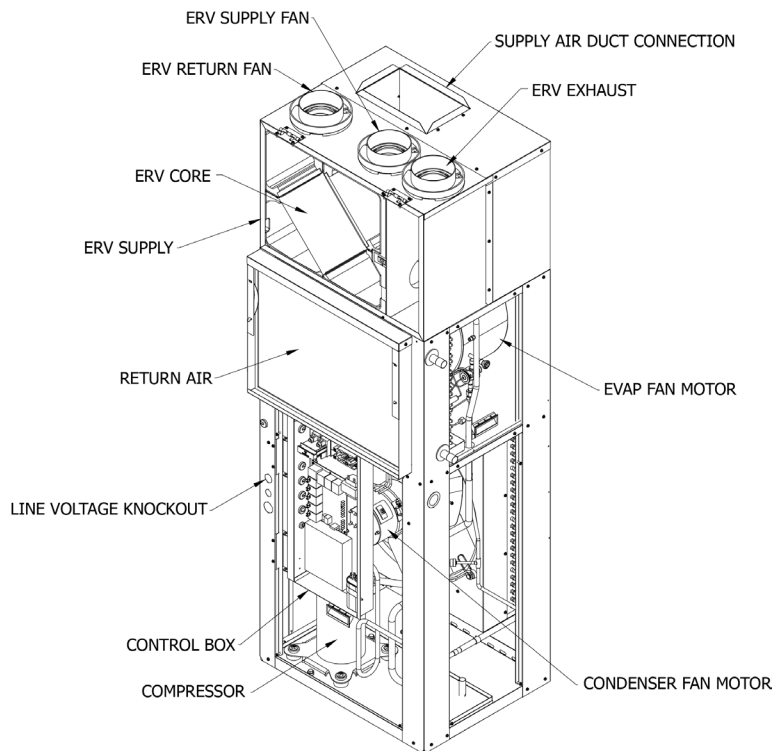


FIGURE 9 - MAJOR COMPONENTS

UNIT / SLEEVE DIMENSIONS Fresh-Pak Sleeve					
PART NUMBER					
REAR INSTALL	PORTS	FITS WALL THICKNESS	A	B	C
999-21B-E	TOP	5" - 8" wall	16-3/4"	20-15/16"	37-11/16"
999-22B-E	TOP	8" - 12" wall	20-3/4"	20-15/16"	41-11/16"
999-23B-E	TOP	12" - 15" wall	23-3/4"	20-15/16"	44-11/16"
999-24B-E	TOP	15" - 20" wall	29-3/4"	20-15/16"	50-11/16"
999-41B-E	SIDE	5" - 8" wall	16-3/4"	20-15/16"	37-11/16"
999-42B-E	SIDE	8" - 12" wall	20-3/4"	20-15/16"	41-11/16"
999-43B-E	SIDE	12" - 15" wall	23-3/4"	20-15/16"	44-11/16"
999-44B-E	SIDE	15" - 20" wall	29-3/4"	20-15/16"	50-11/16"

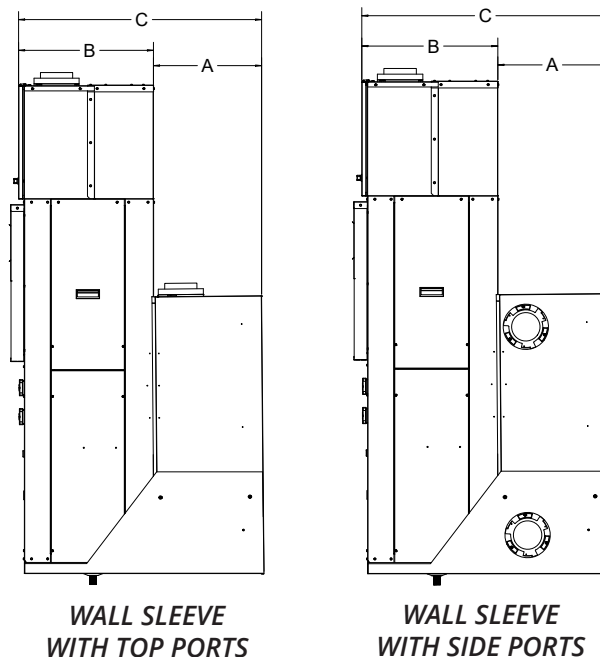


FIGURE 10 - WALL SLEEVES



FIRST CO. P.O. BOX 270969 - DALLAS, TEXAS 75227
PH. (214) 388-5751 | FAX (214) 388-2255
WWW.FIRSTCO.COM