SPACE PAK®

Product Information Guide

Small Duct High Velocity Air Distribution System







Inverter Air-to-Water Heat Pumps & Hydronic Solutions







SPACE PAK® *Product Guide*

Small Duct High Velocity Air Distribution System

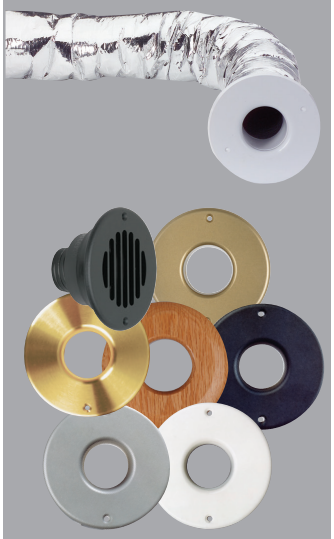
K Series DX Fan Coils 4



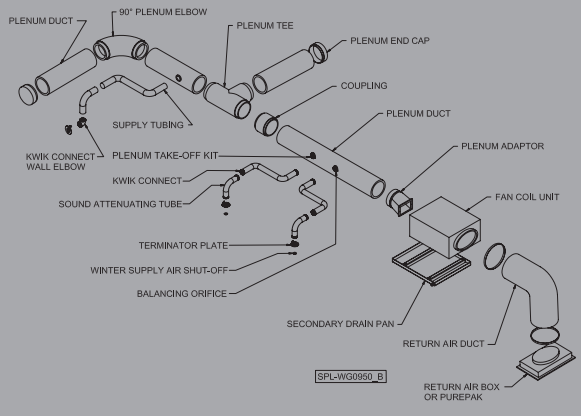
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SPACE PAK® *Preserving Aesthetics and Architectural Integrity*

At Home in Historical Houses and New Construction

SpacePak is the original, small duct cooling/heating solution for older homes not equipped for central air (heated with hot water, steam or electric heat) and new homes featuring hydronic heating systems, including radiant floor heating.

SpacePak's successful track record includes thousands of residential and light commercial installations and opens up opportunities for installations that fall outside of the normal cookie cutter applications. Ease of installation and quiet, efficient operation make SpacePak the number one choice of quality-conscious contractors, homeowners and building owners.

No Major Remodeling, Speeds and Simplifies Installation

SpacePak is designed to be installation friendly. Fan Coil units are small enough to fit in attics, basements, crawl spaces and closets. Conditioned air is distributed through flexible, pre-insulated 2 in (51 mm) diameter ductwork (SDHV) that weaves through wall structures and around obstructions. No large, cumbersome ductwork is required, saving time while reducing installation costs and maintaining architectural integrity.

SpacePak is ultra quiet and works through the principle of aspiration. Air in the duct is under 5 to 6 times higher pressure than conventional systems.







K Series Air Handler

Horizontal/Vertical DX Fan Coil Units

Features

- A2L Refrigerant Sensors (R-32/R-454B)
- Red K Series Control Board Indicates A2L Refrigerant Compliance
- ElectroFin® Coated Refrigerant Coil
- Unit Will Operate with R-32 or R-454B Refrigerants (No Adjustment or Rework Required)
- 2 Line Display for Easier Setup
- High Efficiency EC Integrated Motor/Blower Assembly
- Mode Specific Adjustable Speed Control
- Heat Pump Compatible
- Chatleff Thermal Expansion Valve
- 6-Row Copper/Aluminum Evaporator Coil
- Slide Out Blower
- Sweat-Type Refrigerant Connections
- 24V 50/60hz Transformer
- Industry Leading Corrosion Resistant Cabinet
- Float Switch
- Mold Resistant Primary Drain Pan
- Anti-Vibration Foam Strips
- 230v/1ph/60hz (Field conversion kit provided for 115V supply voltage)

Our compact air handling unit is small enough to fit in a closet, attic, basement, or crawlspace yet powerful enough to deliver the level of cooling or heating needed by even the largest of homes.









Horizontal Fan Coil Unit Dimensions

Model	Height	Width	Length	Ship Wt.
ESP2430K	14-1/8" (359 mm)	24-1/4" (616 mm)	29-3/8" (747 mm)	105 lbs (47.6 kg)
ESP3642K		33-1/4" (845 mm)		123 lbs (55.8 kg)
ESP4860K		43-1/4" (1099 mm)		144 lbs (65.3 kg)

Vertical Fan Coil Unit Dimensions

Model	Height	Width	Length	Ship Wt.
ESP2430KV	33" (838mm)	24" (610 mm)	16-1/8" (410 mm)	135 lbs (61.2 kg)
ESP3642KV		33" (838 mm)		170 lbs (77.1 kg)
ESP4860KV		43" (1093 mm)		210 lbs (95.3 kg)

Specifications

Model	Nominal System Capacity		Std. CFM @ 1.2" W.C.	Std. m³/hr @ 299 Pa	F.L. Amps (115V/230V)	Motor HP	Connections	
	Nom. Tons	Cool MBH (kW)					Suction Line	Liquid Line
ESP2430K/V	2	24 (7.03)	440	748	5.6/2.8	3/4	7/8"	3/8"
	2-1/2	30 (8.79)	550	935				
ESP3642K/V	3	36 (10.55)	660	1121	7.6/3.8	3/4	7/8"	3/8"
	3-1/2	42 (12.31)	850	1444				
ESP4860K/V	4	48 (14.07)	880	1495	10.6/5.3	3/4	7/8"	3/8"
	5	60 (17.58)	1150	1954				

All accessories listed in this brochure are approved for use with K series air handlers using A2L refrigerants.

Click or Scan for More Info

Humidity Removal and Uniform Comfort

30% Better Humidity Removal than Conventional Air Conditioning

ASHRAE Psychrometric Chart No. 1
Normal Temperature
Barometric Pressure
29.921 Inches of Mercury
Sea Level

SpacePak fan coil units move approximately half the air (250 CFM (425 m³/hr) vs 400 (680 m³/hr) CFM per ton of cooling) than a traditional system at higher pressure. SpacePak coils are a more robust 6 row design allowing for a greater temperature drop (24 to 28°F/-4.4 to -2.2°C) versus a competitors (15 to 20°F/-9.4 to -6.7°C), resulting in more moisture (humidity) removal. The drier air allows SpacePak systems to be set at higher temperatures with no sacrifice in comfort while saving substantial energy.

A simple adjustment of 2° in the thermostat setting from 70°F/21.1°C to 72°F/22.2°C can result in up to 15% savings on annual cooling costs.



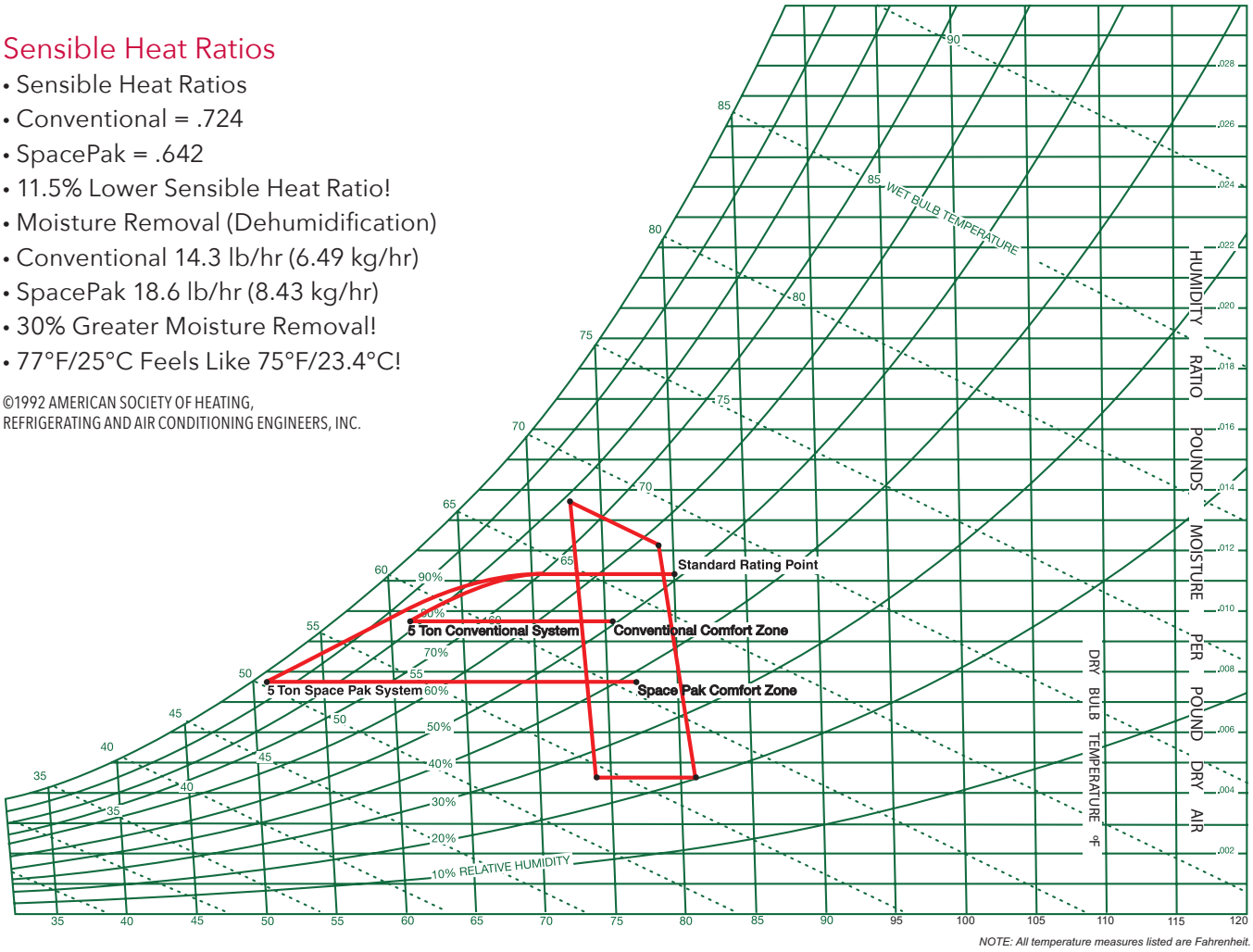


SpacePak systems eliminate hot and cold spots through the process of aspiration. The air exits the pressurized duct at a higher velocity it expands as it is released into the occupied space, creating a uniform floor to ceiling circulation of the air providing even temperatures across the space.

Sensible Heat Ratios

- Sensible Heat Ratios
- Conventional = .724
- SpacePak = .642
- 11.5% Lower Sensible Heat Ratio!
- Moisture Removal (Dehumidification)
- Conventional 14.3 lb/hr (6.49 kg/hr)
- SpacePak 18.6 lb/hr (8.43 kg/hr)
- 30% Greater Moisture Removal!
- 77°F/25°C Feels Like 75°F/23.4°C!

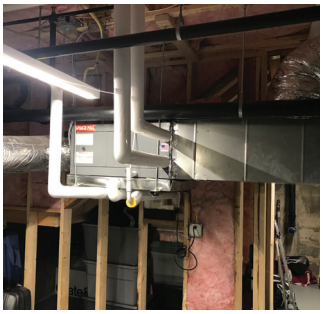
©1992 AMERICAN SOCIETY OF HEATING,
REFRIGERATING AND AIR CONDITIONING ENGINEERS, INC.



NOTE: All temperature measures listed are Fahrenheit.

Typical Installation

Easy to Install System

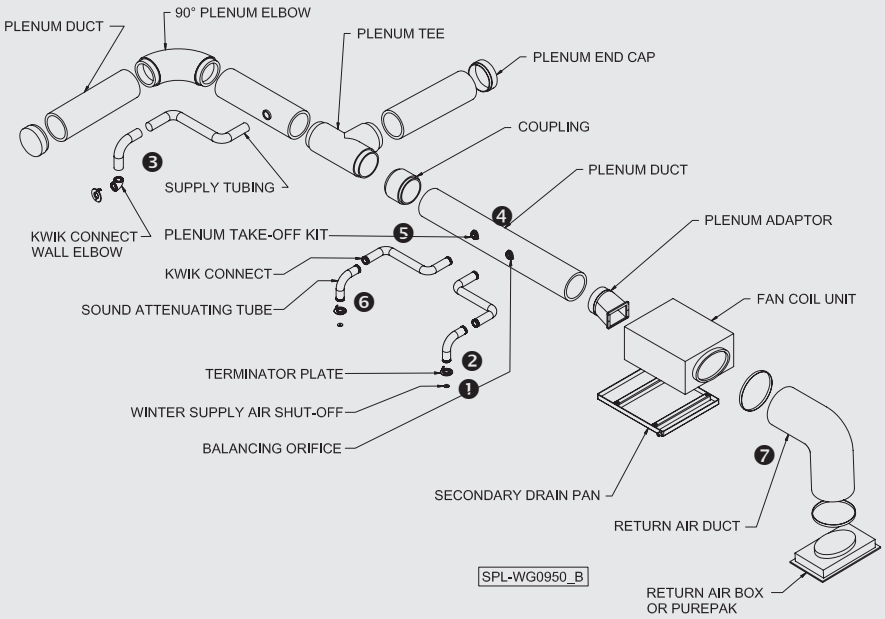






The SpacePak system has been designed to reduce installation time and cost for installing contractors. Small diameter, flexible tubing weaves around construction obstacles and eliminates the need for large, cumbersome ductwork and major structural renovations. Fittings simply snap securely into place with no tools required. The typical installation diagram and guidelines listed below provide a quick reference to ensure successful installation and operation of the system. More detailed and comprehensive information is available on our website at **www.spacepak.com**.

Click or Scan for Installer Training Videos



1. **Outlets –** The most important rule of thumb when installing a SpacePak system is having the proper number of outlets. Six (6) to Seven (7) outlets per ton are recommended for optimal 35-40 CFM (59.5-68.0 m³/hr) airflow from each outlet under normal conditions to maximize aspiration.
2. **Outlet Placement –** Outlets should be placed in the room where they will create the least disturbance (floors, ceilings, walls) and not infringe upon inhabitants with turbulent air. Traffic patterns, drapes and bed placement are all factors to consider.
3. **Supply Duct –** Ideally, all runs should be as equal in length as possible. Keep the 2 in/51 mm duct length between 9 ft/2.74 m and 30 ft/9.14 m for best performance. The longer the run, the lower the CFM capacity. See performance chart in IOM.
4. **Main Trunk/Plenum –** Maximize use of the main trunkline in order to minimize the lengths of 2 in/51 mm duct. It will allow for an easier installation and better performing, balanced system if 2 in/51 mm duct lines are minimized.
5. **Locating Take-Offs –** Distribute takeoffs as evenly as possible along the main trunkline – no closer than 6 in/153 mm away from one another. This will assure better balanced airflow.
6. **Sound Attenuators –** The last 3 ft/0.91 m of every run should use a fully-fabricated SpacePak sound attenuator to reduce outlet air sound.
7. **Return Air Duct –** Minimize potential fan noise and maximize performance of this acoustically lined duct by incorporating a 90-degree bend between the air handler and return grille.

Heating Options

Model EEH Electric Duct Heater

SpacePak's Duct Heaters are designed for easy installation and reliability. They are specifically engineered not to exceed safe operating temperatures. These heaters can provide a great economical heating source and are available in a variety of configurations.



Features

- 2 to 20 Nominal kW Output
- Direct Mount to Horizontal and Vertical Air Handlers
- Single or Dual Power Supply
- Internal Safeties
- Internal Staging Controls
- Simple Wiring
- Simple On/Off Light Indicator
- A2L Refrigerant Compatible, approved for use with K Series Air Handlers



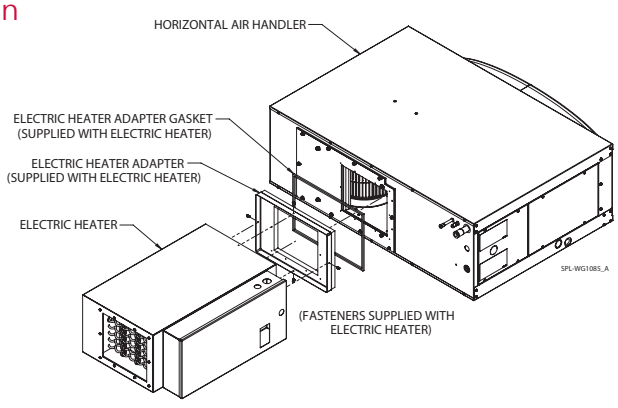


Specifications

	Model	EEH-020	EEH-050	EEH-075	EEH-100	EEH-150	EEH-200
Performance	Nominal Output (kW)	2	5	7.5	10	15	20
	Nominal Output (BTU's)	6,830	17,076	25,614	34,152	51,228	68,304
	Min Airflow (CFM / m³/hr)*	100 / 170	200 / 340	300 / 510	500 / 850	600 / 1020	800 / 1359
Dimensions	L x W x H (in/mm) Incl Electrical Panel	26 x 19 x 10.5 / 660 x 483 x 267				28 x 19 x 10.5 / 711 x 483 x 267	
	Shipping L x W x H (in/mm)	29 x 23 x 13.25 / 737 x 585 x 337				31 x 23 x 13.25 / 788 x 585 x 337	
	Shipping Weight (lbs/kg)	37 / 16.8		38 / 17.2		46 / 20.9	47 / 21.3
Electrical***	Power Supply (v/ph/hz)	240/1/60					
	Control Volts (VDC)	24					
	Heater Amps (Ckt #1)**	8.3	20	30	40	20	40
	Heater Amps (Ckt #2)**	N/A				40	40
	Min Wire Gauge Dual (AWG)	N/A				#8 / #6	#6 / #6
	Min Wire Gauge Single (AWG)	#10	#8	#6	#6	#4	#2
	Stages	1				2	
Air Handler Applicable	ESP/WCSP 2430J(V)	Yes	Yes	Yes	Yes	No	No
	ESP/WCSP 3642J(V)					Yes	
	ESP/WCSP 4860J(V)						Yes

*Based upon 70°F/21.1°C entering air and discharge not to exceed 160°F/71.1°C
**@ 240VAC
***To achieve FLA value, air handler amp rating (found on data plate) needs to be added.

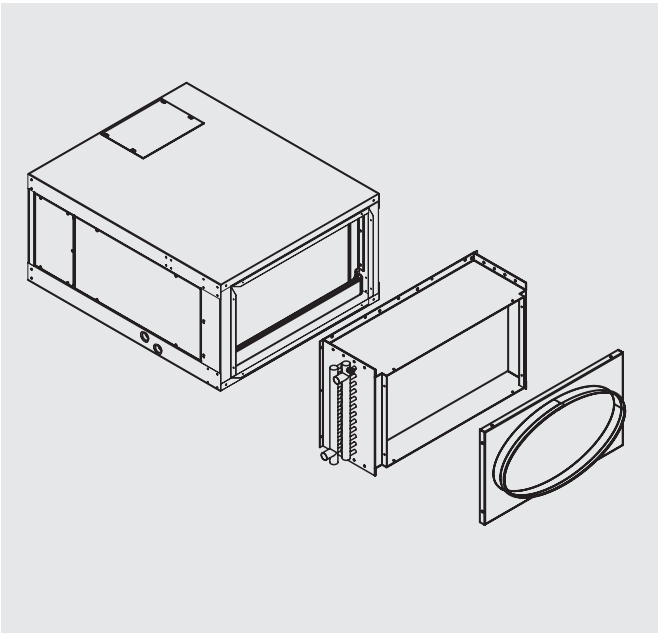
Typical Heater Installation



Heating Options

Model WPAK Hydronic Coil

WPAK Hydronic heating coil is designed for use with SpacePak fan coil units in conjunction with a boiler or other hot water heating supply equipment. Easily mount to the inlet of the fan coil unit. Use the chart below to match the proper hydronic coil with the SpacePak fan coil unit.



Water Pressure Drop (ft/m @ 180°F/82.2°C)

GPM (l/min)	AC-WPAK-60	AC-WPAK-90	AC-WPAK-120
2 (7.8)	0.4 / 0.12	0.4 / 0.12	0.5 / 0.15
4 (15.1)	1.4 / 0.43	1.6 / 0.49	1.7 / 0.52
6 (22.7)	3.0 / 0.91	3.3 / 1.0	3.7 / 1.1
8 (30.3)	5.2 / 1.6	5.7 / 1.7	6.3 / 1.9
10 (37.9)	7.9 / 2.4	8.7 / 2.7	9.6 / 2.9

A2L Refrigerant Compatible, approved for use with K Series Air Handlers

Heating Capacity MBH/kW

CAUTION:
Areas shaded in **RED** can exceed 160°F leaving air temperature. To prevent injury or damage, do not install floor outlets when the system is operating in this range.

Model AC-WPAK-60 for ESP 2430

	Entering Water Temperature °F / °C				
GPM (l/min)	120 / 48.9	140 / 60	160 / 71.1	180 / 82.2	200 / 93.3
2 (7.8)	20.5 / 6.00	30.0 / 8.79	39.1 / 11.5	48.1 / 14.1	57.2 / 16.8
4 (15.1)	25.2 / 7.39	35.6 / 10.4	46.1 / 13.5	56.6 / 16.6	67.1 / 19.7
6 (22.7)	26.6 / 7.80	37.4 / 11.0	48.3 / 14.2	59.2 / 17.3	70.2 / 20.6
8 (30.3)	27.2 / 7.97	38.2 / 11.2	49.3 / 14.4	60.4 / 17.7	71.6 / 21.0
10 (37.9)	27.5 / 8.06	38.7 / 11.3	49.9 / 14.6	61.1 / 17.9	72.3 / 21.2

At 550 CFM / 934 m³/hr and 70°F / 21.1°C Entering Air Temperature

Model AC-WPAK-90 for ESP 3642

	Entering Water Temperature °F / °C				
GPM (l/min)	120 / 48.9	140 / 60	160 / 71.1	180 / 82.2	200 / 93.3
2 (7.8)	28.8 / 8.44	39.2 / 11.5	51.6 / 15.1	63.4 / 18.6	75.2 / 22.0
4 (15.1)	36.0 / 10.6	50.8 / 14.9	65.7 / 19.3	80.8 / 23.7	95.8 / 28.1
6 (22.7)	39.0 / 11.4	54.9 / 16.1	70.9 / 20.8	87.0 / 25.5	103.1 / 30.2
8 (30.3)	40.4 / 11.8	56.8 / 16.6	73.3 / 21.5	89.9 / 26.3	106.5 / 31.2
10 (37.9)	41.2 / 12.1	57.9 / 17.0	74.7 / 21.9	91.5 / 26.8	108.4 / 31.8

At 850 CFM / 1444 m³/hr and 70°F / 21.1°C Entering Air Temperature

Model AC-WPAK-120 for ESP 4860

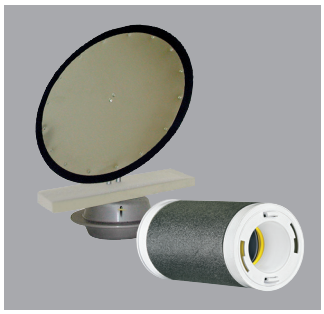
	Entering Water Temperature °F / °C				
GPM (l/min)	120 / 48.9	140 / 60	160 / 71.1	180 / 82.2	200 / 93.3
2 (7.8)	31.7 / 9.29	46.2 / 13.5	61.2 / 17.9	75.1 / 22.0	89.0 / 26.1
4 (15.1)	45.6 / 13.4	64.2 / 18.8	83.0 / 24.3	102.0 / 29.9	120.9 / 35.4
6 (22.7)	50.6 / 14.8	71.2 / 20.9	92.0 / 27.0	112.9 / 33.1	133.8 / 39.2
8 (30.3)	53.1 / 15.6	74.7 / 21.9	96.4 / 28.3	118.2 / 34.6	140.1 / 41.1
10 (37.9)	54.6 / 16.0	76.7 / 22.5	98.9 / 29.0	121.2 / 35.5	143.6 / 42.1

At 1150 CFM / 1954 m³/hr and 70°F / 21.1°C Entering Air Temperature
*To calculate Leaving Air Temperature (LAT) use the following formula: LAT=[BTUH/(1.08XCFM)] +70

ZonePak®

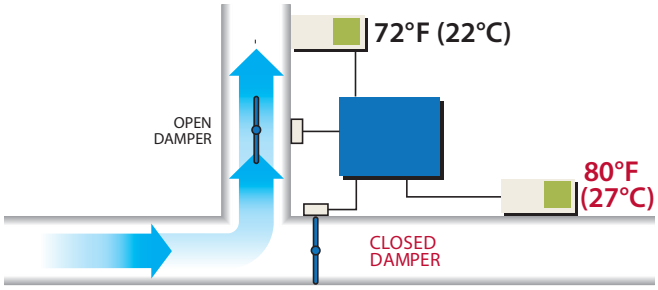
Optional Damper System

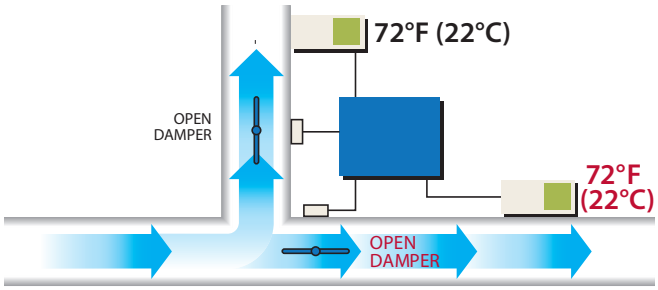






The ZonePak Difference





ZonePak's control panel interacts with up to three different thermostats to direct conditioned air from the fan coil unit to whichever zone needs it. The use of branch dampers, with or without plenum dampers, offers even more flexibility.

ZonePak® – A unique air-driven damper system – allows for the effortless installation of up to three custom comfort zones working off three independent thermostats. The addition of zoning to the SpacePak system gives installing professionals a tremendous opportunity to offer even more precise comfort to a large segment of the demanding residential and commercial market. ZonePak addresses the unique comfort needs of historical buildings, architecturally challenging structures and anywhere radiant, steam or hot water heat is installed. By delivering conditioned air only where it's wanted, when it's wanted, the needs of all occupants are met while energy costs are reduced.

Benefits of Zoning*

- Greater Occupant Comfort
- Allows for Decreases in System Capacity Demand
- Increased Installation Flexibility
- Reduced Energy Consumption

Standard Features

- 2 or 3 Zones with One Fan Coil Unit
- Controls Integrate with Any Secondary Heat Source
- Reliable Operation Provided by Air-Driven Dampers
- Simple 24 Volt Wiring
- Quiet Operation
- Pre-Programmed Controls
- Convenient Packaged Systems

The advanced control used on J and K Series Air Handlers makes zoning even easier by slowing the blower down or speeding up depending on Zone demands and targeted static pressure.

*ZonePak to only be used when system utilizes a staged or inverter type condenser.

PurePak

Optional Recessed Air Cleaner

Most families don't realize that, according to the EPA, indoor air is on average 7-10 times more polluted than outdoor air, even if you live in a city. Harmful airborne particles and chemicals including odors, VOCs, molds, bacteria, allergens, fine dust, smoke, and pollen have been linked to a number of health problems such as allergies, asthma, fatigue, respiratory ailments, flu and other maladies.

The PurePak system is the key to cleaner, healthier air. Unlike typical ionic air cleaners and electrostatic precipitators, PurePak does not create ozone, lose efficiency as media loads, or require large, noisy fans to overcome airflow restrictions of dense media.

Features

- Protects you and your family from airborne allergens, bacteria, molds, pollen, smoke, fine dust particles and VOCs
- 97% capture efficiency of contaminants down to .3 microns
- Safe, patented operation does not create ozone
- Easy, low-cost maintenance
- 5-year powerhead warranty

Keeps Homes Cleaner, Healthier and Fresher

PurePak turns your SpacePak system into a wholehouse air cleaner, quickly and economically. PurePak does not create charged particles that cling to grounded or charged surfaces such as TV screens.

Dimensional Data

Model	Outside Dimensions		Inside Dimensions		System Size
	Length	Width	Length	Width	
AC-RBC-2	27-5/8 in (702 mm)	16-5/8 in (422 mm)	25-3/8 in (645 mm)	14-5/16 in (364 mm)	2430
AC-RBC-3	32-5/8 in (829 mm)		30-3/8 in (772 mm)		3642
AC-RBC-5	38-5/8 in (981 mm)		36-3/8 in (924 mm)		4860



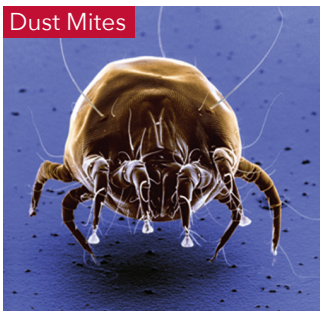




Up to 98% of airborne particles are 1 micron in size or smaller. These are the most damaging to the lungs. The PurePak system effectively rids the air of these particles.









PurePak eliminates these harmful particles as well as other chemicals and VOCs from the air you breathe.

SmartSeal

Optional System Duct

SmartSeal, SpacePak's spiral metal duct system (9 in/229 mm ID) provides homeowners and commercial building owners increased energy efficiency and improved indoor air quality.

The unique slip-fit joint seal of the SmartSeal utilizes patent pending technology and installs without the use of special tools or messy sealants. SmartSeal is 100% leak resistant to 10" W.C. and all duct lengths and fittings come standard with R8 insulating sleeves.

SmartSeals' factory installed gaskets are included on all fittings and couplings and are built for easy and quick installation when compared to most conventional duct systems.

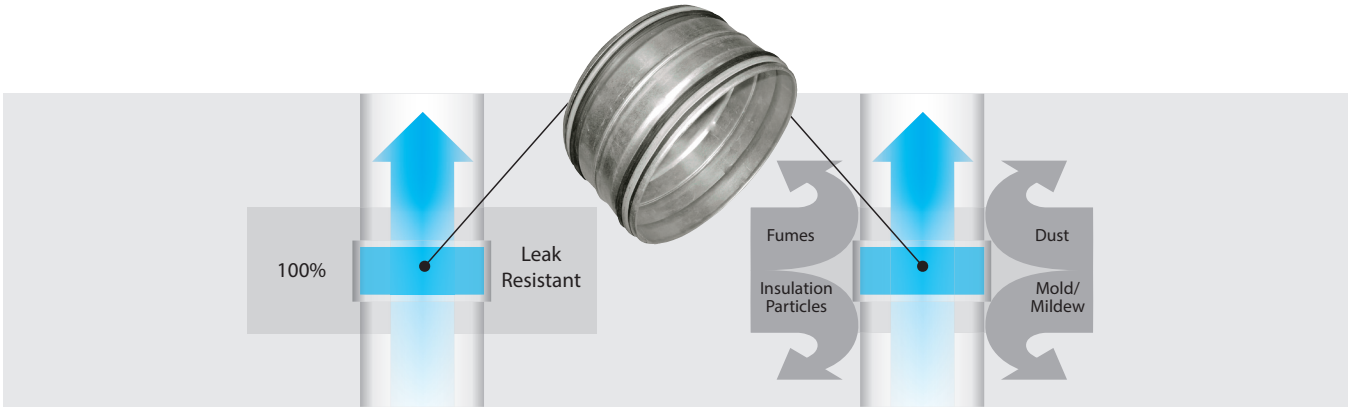






Features

- Approved to SMACNA Duct Construction Standards and Leakage Class 3
- 100% Leak Resistant (to 10" W.C./2.49 kPa)
- Fittings & Couplings Have Factory Installed Gasket
- Operating Temperature Range -20°F to 212°F (-28.9°C to 100°C)
- Gasket is on Leading Edge of Fittings, Allowing Substantial Space for Screw Insertion
- Recyclable Material
- Contains up to 58% Recycled Materials
- Eligible for LEED Points
- Significantly Reduced Installation Time
- SmartSeal Spiral Duct Lengths are 26 gauge Galvanized Steel
- SmartSeal Fittings are 24 gauge Galvanized Steel
- Fittings & Couplings Have Hemmed Edge for Strength, Rigidity, and Maintaining Tolerances
- Smoke & Flame Spread Rating is 0/0 (in accordance with ASTM E-84-91A)



System Accessories

Outlets - Blend with Any Décor

SpacePak offers the widest variety of Outlets and Covers to blend with any décor. From finished aluminum and brass to natural wood grain. Wood outlets are pre-assembled with SpacePak Kwik Connects for easier installation.

Linear Slot Outlet

Linear slot outlet is designed for installation in both new construction and retrofit applications. The fully integrated outlet requires no additional mounting hardware and is supplied with a trim plate that boasts a slim profile less than 1/8" (3 mm).

Rough-In Bracket

Serves as a reference point for sheetrock outlet locations during the framing portion of new construction.

BasePak Secondary Drain Pans For Horizontal Fan Coil Units

SpacePak has designed a series of secondary drain pans specifically sized for use with all horizontal fan coil units. Exclusive built-in supports raise the unit off the bottom of the drain pan. Installed with threaded rod, the unique pan construction fully supports the fan coil unit. For use with all ESP or WCSP series coil units.

Kwik Connect Wall Elbow

Kwik Connect wall elbows simply snap into place for fast, easy installation in 2 x 4 construction.

Kwik Connect Extension

Designed for installations using wall thicknesses above 1/2" (13 mm).

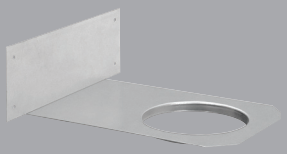
Round Outlets



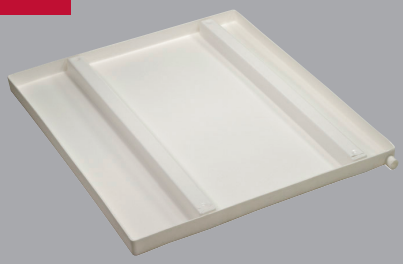
Linear Slot Outlet



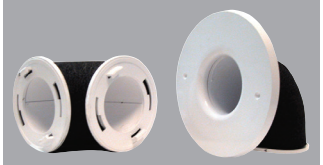
Rough-In Bracket



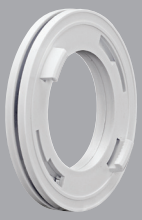
BasePak



Kwik Connect Wall Elbow



Kwik Connect Extension



SPACE PAK solstice® HEAT PUMPS

Future Proof Your Comfort

Environmentally Friendly Heating & Cooling with Inverter Air-to-Water Heat Pumps & Hydronic Fan Coils



Carbon Free Hydronic Comfort

Any heating expert will tell you that low-temperature hydronic radiant floor heating is the "gold standard" of comfort and efficiency. Instead of using a fossil fueled boiler as its heat source, you can cut out carbon by using an air-to-water heat pump.

Solstice air-to-water heat pumps serve as an ultra-efficient, all-electric energy source able to provide both heating and cooling for residential and light commercial settings, without the use of fossil fuels.

Solstice air-to-water heat pumps provide a promising solution for both new and existing hydronic applications that are aiming to reduce energy consumption, energy costs, and environmental impact.

- The physics that make water ideal for conveying heat also make it ideal for cooling.
- All the advantages of a hydronic (water) distribution system without the use of fossil fuels.
- Energy savings up to 47% greater than a typical high efficiency natural gas condensing boiler.
- Up to 70% less electricity use than electric baseboard.
- In comparison to geothermal, installation costs are significantly less, and comparable operating efficiencies are achieved.
- 30% more efficient than traditional air-source heat pumps.
- In comparison to traditional DX (refrigeration based) systems, it's both safer and more efficient to pump water than refrigerant through a living space.

Solstice Heat Pumps
Industry Leading Air-to-Water Technology

- High efficiency hydronic heat pumps that supply low temperature water for heating & chilled water for cooling
- Combines the performance of modern air-source heat pump technology with the unsurpassed comfort of hydronics
- Thousands of installations across the US and Cananda
- Industry proven Solstice technology
- Eligible for rebates

Extended warranty for SpacePak Certified Contractors:

- Industry leading 10-year compressor warranty
- 5-year parts warranty

NESEA INDUSTRY LEADER
NORTHEAST SUSTAINABLE ENERGY ASSOCIATION

R32 Series

Cold Climate Air-to-Water Heat Pump

R454B Series

High-Temp Air-to-Water Heat Pump







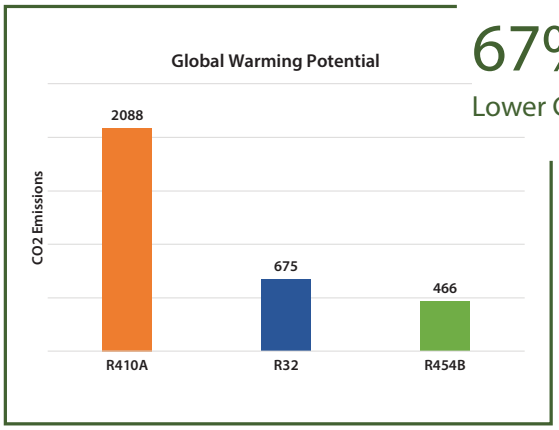
Solstice® air-to-water heat pumps combine the advantages of air-source heat pump technology with the unsurpassed comfort and flexibility of hydronic heating and cooling.

No other heat transport material provides the versatility, safety, reliability, energy efficiency or environmental compatibility of water.

Unlike traditional air-source systems that circulate refrigerant indoors to transfer thermal energy, hydronic heat pumps harness the clean, efficient properties of water, making them the ideal choice for promoting health, comfort, and safety.

Unlike the split-type air source heat pump systems, forward-thinking Solstice sourced hydronic systems are sure to remain safe and compatible as regulations continue to evolve.

LOW GWP R32 AND R454B REFRIGERANT



67%
Lower GWP

Features

- Heating, Cooling, and Domestic Hot Water from Same Outdoor Unit
- High Performance Heating Down to -22°F (-30°C)
- Max Suggested Water Temperatures of 140°F (60°C) - R32 Series and 150°F (65°C) -R454B Series
- Available in 1.5-, 3-, and 5-ton Models for the R32 Series and 3-, and 5-ton Models for the R454B Series
- Quietest Unit on the Market (41dB(a) @ 3 feet/1 meter)
- Reliable Panasonic Inverter Driven EVI Compressor
- Eco-Safe and Future-Proof Monobloc Design
- Advanced Flexible Internal Controls
  - User-Friendly Color Touch Screen
  - Intelligent Defrost
  - Outdoor Air reset
  - Modbus Compatible
- Freeze Protection
- R32/R454B Refrigerant Features
- Zero Ozone Depletion Potential (ODP = 0)
- Low Global Warming Potential (R32 GWP = 675 and R454B GWP=466)
- Meets the AIM Act Regulations
- Rebate Eligible

R32 Series

Cold Climate Air-to-Water Heat Pump

solstice® HEAT PUMPS

Specifications

		Units	CC32-18	CC32-40	CC32-60
Cooling	Capacity Range	BTU/hr (kW)	8,400 - 22,800 (2.5 - 6.7)	15,600 - 39,600 (4.6 - 11.6)	21,600 - 57,600 (6.3 - 16.9)
	Efficiency Range	EER	8.12 - 8.67	6.82 - 8.98	7.77 - 8.99
	Efficiency	IPLV	16.81	16.75	14.46
	Delivered Water Temp Range	°F (°C)		41 - 77 (5 - 25)	
	Ambient Temp Range	°F (°C)		50 - 109 (10 - 43)	
Heating	Capacity Range	BTU/hr (kW)	3,600 - 23,000 (1.1 - 6.7)	8,000 - 42,000 (2.3 - 12.3)	12,000 - 72,000 (3.5 - 21.1)
	Efficiency Range	COP	0.95 - 8.64	0.99 - 9.09	0.98 - 9
	Delivered Water Temp Range	°F (°C)		95-140(35-60)	
	Ambient Temp Range	°F (°C)		-22 -110(-30-43.3)	
CEC Data	Cooling Capacity*	BTU/hr (kW)	17183 (5.04)	35120 (10.29)	52001 (15.24)
	Cooling Efficiency*	EER	10.43	9.9	8.85
	Heating Capacity**	BTU/hr (kW)	18919 (5.54)	35424 (10.38)	62760 (18.39)
	Heating Efficiency**	COP	3.07	2.9	3.13
	Heating Capacity***	BTU/hr (kW)	10189 (2.99)	26222 (7.68)	42700 (12.51)
	Heating Efficiency***	COP	1.52	2.23	2.06
Electrical	Power	V/Ph/Hz		208-230/1/60	
	Fan Motor	A		0.8	2 x 0.8
	Compressor Motor	A	12.2	21	33.5
	MCA	A	17	28	44
	MOPD	A	25	45	70
	SCCR	kA		5kA	
Refrigerant	Type			R32	
	Factory Charge	lbs. (kg)	2.43 (1.1)	3.97 (1.8)	4.41 (2)
Fan	Quantity		1	1	2
	Power Input	W	150	170	75 (x2)
	Type			DC	
	Max Speed	RPM		600	
Sound (@1meters)	Maximum	dBA	41	43	46
Hydronic	Rated Flow	GPM	4.4	7.5	12.8
	Max Water Temp	°F (°C)		140 (60)	
	Piping Connections	inch (mm)		1 (2.54)	
	Rated Pressure Drop	ft W.C. (kPa)	6.7 (20.0)	10.2 (30.5)	15 (44.8)
Compressor	Type			Rotary	
	Speed Range	Hz		30-90	
	Brand			Panasonic	
	Quantity			1	
Dimensions	Net Dimensions (L x W x H)	inch (mm)	46x16x32 (1169x407x813)	51x18x37 (1295x457x940)	50x22x53 (1270x559x1346)
	Shipping Dimensions (L x W x H)	inch (mm)	54x22x39 (1372x559x991)	59x24x46 (1499x610x1169)	58x26x60 (1473x661x1524)
	Net Weight	lbs. (kg)	200 (90)	292 (132)	459 (208)
	Shipping Weight	lbs. (kg)	304 (138)	391 (178)	535 (243)

CEC is California Energy Commission. Data is tested in accordance with AHRI 550/590

* 44°F(6.7°C) LWT 54°F(12.2°C) EWT @3.75 at CC32-18/6.17 at CC32-40/11.45 at CC32-60 GPM & 95°F(35°C) DB Ambient

** 20°F(48.9°C) LWT 107°F(41.7°C) EWT @4.4 at CC32-18/7.5 at CC32-40/12.8 at CC32-60 GPM & 47°F(8.3°C) DB Ambient

*** 20°F(48.9°C) LWT 110°F(43.3°C) EWT @4.4 at CC32-18/7.5 at CC32-40/12.8 at CC32-60 GPM &17°F(-8.3°C) DB Ambient

CC32 Manual

Click or Scan for More Info

R32 Performance

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SPACE PAK®

R454B Series

High-Temp Air-to-Water Heat Pump

solstice® HEAT PUMPS

Specifications

		Units	HT454B-40	HT454B-60
Cooling	Capacity Range	BTU/hr (kW)	12,650 -42,500 (3.7 - 12.5)	14,000 - 56,000 (4.1 - 16.4)
	Efficiency Range	EER (BTU/Wh)	9.80-11.67	8.46 - 13.00
	Efficiency	IPLV (BTU/Wh)	19.18	18.63
	Delivered Water Temp Range	°F (°C)	41 to 77 (5 to 25)	
	Ambient Temp Range	°F (°C)	5 to 113 (-15 to 45)	
Heating	Capacity Range	BTU/hr (kW)	16,500 - 55,700 (4.8 - 16.3)	18,400 - 73,500 (5.4 - 21.5)
	Efficiency Range§§	COP	3.42 to 4.40	3.02 to 4.64
	Delivered Water Temp Range	°F (°C)	95 to 150 (35 to 66)	
	Ambient Temp Range	°F (°C)	-22 to 77 (-30 to 25)	
CEC Data	Cooling Capacity*	BTU/hr (kW)	41,056	47,843
	Cooling Efficiency*	EER	9.83	8.54
	Heating Capacity**	BTU/hr (kW)	41,051	61,962
	Heating Efficiency**	COP	3.04	3.43
	Heating Capacity***	BTU/hr (kW)	41,919	51,051
	Heating Efficiency***	COP	2.3	2.39
Domestic Water	Capacity Range	BTU/hr (kW)	18,700 to 62,800 (2.3 to 136)	19,400 to 75,700 (5.7 to 22.7)
	Efficiency Range	COP	3.15 to 4.35	3.15 to 4.50
	Delivered Water Temp Range	°F (°C)	95 to 150 (35 to 66)	
	Ambient Temp Range	°F (°C)	-22 to 77 (-30 to 25)	
Electrical	Power	V/Ph/Hz	208-230/1/60****	
	Fan Motor	A	0.8	2 x 1.0
	Compressor Motor	A	19.5	19.5
	MCA (@240V)	A	41	42
	MOPD (@240V)	A	70	70
	SCCR	kA	5kA	
Refrigerant	Type		R454B	
	Factory Charge	lbs. (kg)	5.7 (2.6)	6.2 (2.8)
Fan	Quantity		1	2
	Power Input	W	170	75 (x2)
	Type		DC	
	Max Speed	RPM	700	
Sound (@3ft/1m)	Maximum	dBA	43	46
Hydronic	Rated Flow	GPM (l/min)	8.2 (31)	10.9 (41.3)
	Piping Connections	NPT (mm)	1" (25)	
	Rated Pressure Drop	psi/ft WC. (kPa)	2.0/6.7 (20)	2.6/8.4 (25)
Compressor	Type		Rotary	
	Speed Range	Hz	25 to 84	25 to 102
	Brand		Mitsubishi	
	Quantity		1	
Dimensions	Net Dimensions (L x W x H)	inch (mm)	51 x 18 x 37 (1295 x 457 x 940)	50 x 22 x 53 (1270 x 559 x 1346)
	Shipping Dimensions (L x W x H)	inch (mm)	59 x 24 x 46 (1499 x 610 x 1169)	58 x 26 x 60 (1473 x 661 x 1524)
	Net Weight	lbs. (kg)	340 (155)	400 (181)
	Shipping Weight	lbs. (kg)	380 (173)	440 (200)

CEC is California Energy Commission. Data is tested in accordance with AHRI 550/590
*44°F Supply, 53°F Return (4.4°C, 9.4°C) at, HT454B-40, 8.2 gpm (31 l/min) HT454B-60 10.9 GPM (41.3 l/min) 95°F (35°C) Ambient Temp
**120°F Supply, 110°F Return (48.9°C, 43.3°C) at, [8.2 gpm (31 l/min) HT454B-40], [8.2 gpm (31 l/min) HT454B-60], 47°F (8.3°C) Ambient Temp
***120°F Supply, 110°F Return (48.9°C, 43.3°C) at, [8.2 gpm (31 l/min) HT454B-40], [8.2 gpm (31 l/min) HT454B-60], 17°F (-8.3°C) Ambient Temp
****= All capacity date as based upon 230V supply. For 208V, derate capacity by 4%, efficiency is not significantly affected.
§§ Heating efficiency accounts for typical winter defrost operation. Values may be higher or lower in exceptional conditions.
DHW Note:140°F Supply, 131°F Return (60°C, 55°C) at, [8.2gpm (31 l/min) HT454B-40], [8.2gpm (31 l/min) HT454B-60], 68°F (20°C) Ambient Temp

HT454B Manual

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WCSP Hydronic Air Handler

Horizontal/Vertical Hydronic Fan Coil Units







Features

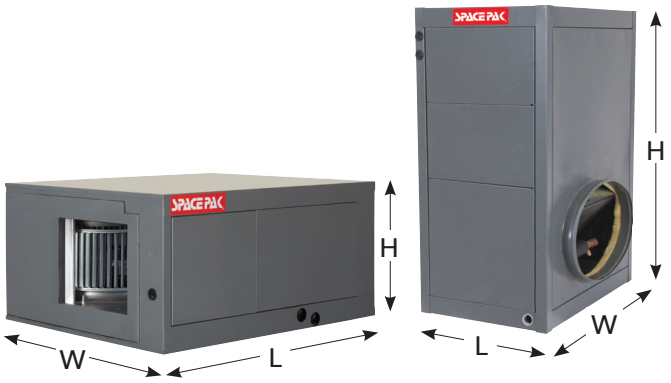
- J+ Advanced Control with digital display
- High Efficiency EC Integrated Motor/Blower Assembly
- 230V Standard Configuration Optional 115V Conversion
- 6-Row Copper/Aluminum Evaporator Coil
- Industry Leading Corrosion Resistant Cabinet
- Primary Drain Pan w/Integrated Float Switch
- Anti-Vibration Foam Strips
- Condensate Trap
- Slide out Blower
- 24 V 50/60hz Transformer
- Sweat-Type Connections
- 5-Year Warranty for Certified Contractors

Horizontal Fan Coil Unit Dimensions

Model	Height	Width	Length	Ship Wt.
WCSP-2430J	14-1/8 in (359 mm)	24-1/4 in (616 mm)	29-3/8 in (746 mm)	105 lbs (47.6 kg)
WCSP-3642J		33-1/4 in (845 mm)		123 lbs (55.8 kg)
WCSP-4860J		43-1/4 in (1099 mm)		144 lbs (65.3 kg)

Vertical Fan Coil Unit Dimensions

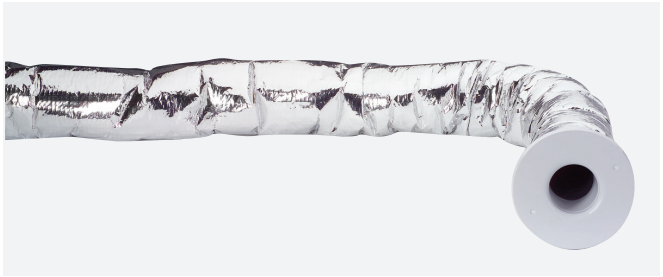
Model	Height	Width	Length	Ship Wt.
WCSP-2430JV	34 in (864 mm)	24 in (610 mm)	16-1/8 in (410 mm)	108 lbs (49.0 kg)
WCSP-3642JV		33 in (838 mm)		130 lbs (59.0 kg)
WCSP-4860JV		43 in (1092 mm)		152 lbs (68.9 kg)



Specifications

Model	Nominal System Capacity		Std. CFM (m³/hr) @ 1.2" W.C. (299 Pa)	F.L. Amps (115V/230V)	Motor HP	Connections (CTS)	
	Nominal Tons	Cool MBH (kW)*				Water In Line	Water Out Line
WCSP2430J(V)	2	24 (7.03)	440 (748)	5.6/2.8	3/4	7/8"	7/8"
	2-1/2	30 (8.79)	550 (934)				
WCSP3642J(V)	3	36 (10.55)	660 (1121)	7.6/4.0	3/4	7/8"	7/8"
	3-1/2	42 (12.31)	850 (1444)				
WCSP-4860J(V)	4	48 (14.07)	880 (1495)	10.6/5.4	3/4	7/8"	7/8"
	5	60 (17.58)	1150 (1954)				

* Capacities based on 45°F entering water temperature at 5 G.P.M.



Pre-insulated two-inch flexible ducts can weave through existing walls, ceilings, and floors for discreet, nearly invisible installations that seamlessly blend with any decor.

WCSP Manual

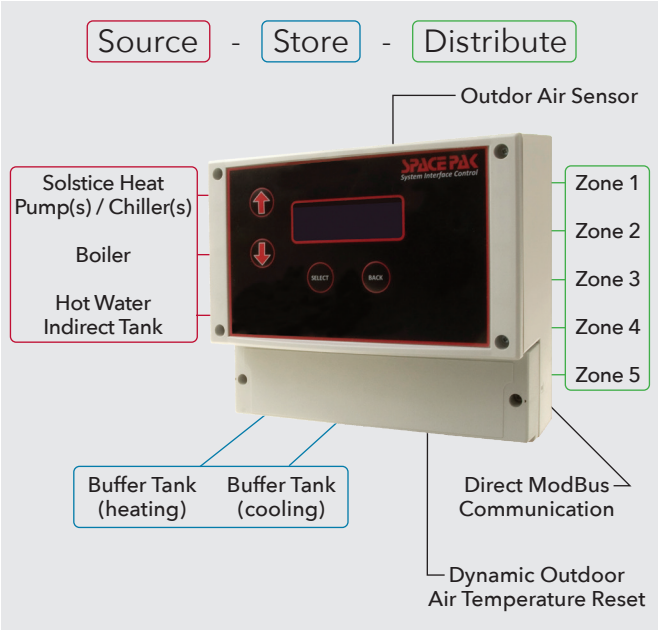
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Intertek

SSIC

Heat Pump System Integrated Control

The SpacePak System Interface Control (SSIC) is a uniquely flexible external control module that enables the interface, control, and communication of the individual components in hydronic heating and cooling systems using Solstice air-to-water heat pumps.



Features

- Outdoor Air, Water, & Buffer Tank Temperature Sensors
- Backup Heat/Boiler Helper Mode
- Outdoor Air Switchover
- Outdoor USB Upgradeable
- Buffer Tank Priority
- Direct Modbus Communication
- Dynamic Outdoor Air Reset Control
- Staging and Unit Rotation for up to 20 Units
- Load Matching and Runtime Sharing
- Simultaneous Control of Heating/Domestic Hot Water and Cooling Tanks
- Directly Supports 2 Tanks at Two Different Temperatures

Multiple Run Modes

OA Switchover | Buffer Tank Priority | Boiler Help | Master Zone | First on Priority

Multi-Zone Systems with up to 5 Inputs

Radiant Floors/Panels | Ducted Air Handlers/Fan Coils | Ductless Fan Coils | Panel Radiators | Baseboard | Convectors

SSIC Manual

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Electric Boiler

Features

- Available in 3 sizes from 20,000-60,000 BTU/hr
- Designed to supplement our heat pump offering
- Quick, basic installation, smaller than a wall hung boiler
- Simple and reliable
- Small enough to ship standard UPS



Specifications

Model	EB20 (B-6TMB)	EB36 (B-11TMB)	EB60 (B-18UFFB)
kW	6	11	18
BTU/h	20,472	37,532	61,416
Total Amps	25	45.8	75
Breaker Size	1 x 40A	1 x 60A	1 x 60A
			1 x 50A

Capacity and Amp Draw at Voltage												
	208V			220V			230V			240V		
Model	BTU/hr	kW	A	BTU/hr	kW	A	BTU/hr	kW	A	BTU/hr	kW	A
EB20	15354	4.5	21.6	17060	5	22.7	18766	5.5	23.9	20472	6	25
EB36	28320	8.3	39.9	31732	9.3	42.3	34461	10.1	43.9	37532	11	45.8
EB60	46062	13.5	64.9	51521	15.1	68.6	56639	16.6	72.2	61416	18	75

Minimum Hydronic Flow Rate						
Propylene Glycol Percentage						
Model	0	10	20	30	40	50
EB20	2.0 (7.6)	2.1 (7.9)	2.1 (7.9)	2.3 (8.7)	2.4 (9.1)	2.5 (9.5)
EB36	3.7 (14)	3.8 (14.4)	3.9 (14.8)	4.1 (15.5)	4.3 (16.3)	4.5 (17)
EB60	6.1 (23.1)	6.3 (23.8)	6.4 (24.2)	6.8 (25.7)	7.1 (26.9)	7.4 (28)

Gallons per minute (Liters per minute)

Maximum Flow Rate @ 15 psi (104 kPa)	
Maximum Flow Rate US Gallons / Min (liters / min)	Pipe Diameter (Type L Copper)
4.3 (16.3)	3/4"
10.1 (38.2)	1"
17.3 (65.5)	1-1/4"

Click or Scan for More Info

HighWall Fan Coil Low Temperature

Hydronic Heating and Cooling

HighWall fan coils are the perfect indoor complement to our Solstice heat pumps. HighWall fan coils provide optimum heating and cooling in one classic design. HighWall fan coils are designed for higher volume flow for primary heating in colder climates.

All HighWall fan coils feature high efficiency EC motors with step-less speed modulation which operate from 50-70% more efficient than traditional on/off motors.







Features

- Heating / Cooling Operation
- Hydronic Based - No Refrigerant
- High Efficiency EC Motor w/Step-Less Speed Modulation
- Simplified Control with Direct Thermostat Input
- Whisper Quiet Operation (33-58 dB)
- Stainless Steel Flexible Hose Connections
- Can Operate with Water Temperatures as Low as 120°F (48.9°C) for Heating and as High as 50°F (10°C) for Cooling
- 5-Year Warranty for Certified Contractors

Specifications

Model	Output BTU/hr (kW)						Dimensional Data in (mm)			Ship Wt. lbs (kg)
	Heating			Cooling						
	Entering Water Temperature									
	120°F (48.9°C)	140°F (60°C)	160°F (71.1°C)*	45°F (7.2°C)	47°F (8.3°C)	50°F (10°C)	Length	Width	Height	
HW-06-ECMB	8123 (2.38)	11331 (3.32)	14266 (4.18)	7300 (2.14)	6416 (1.88)	5085 (1.48)	34-7/16 (875)	8-2/3 (220)	11-13/16 (300)	28 (12.7)
HW-15-ECMB	11843 (3.47)	16553 (4.85)	20853 (6.11)	10614 (3.11)	9420 (2.76)	7475 (2.19)				30 (13.6)
HW-18-ECMB	14641 (4.29)	20444 (5.99)	25734 (7.54)	13106 (3.84)	11638 (3.41)	9249 (2.71)				32 (14.5)

* 160°F (71.1°C) is max water temperature. Applying higher can cause damage to unit.

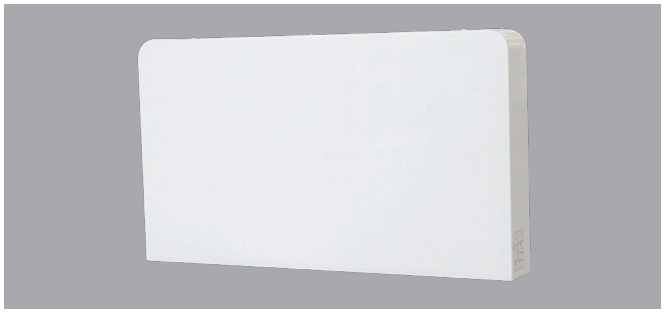
Intertek

ThinWall Fan Coil Low Temperature

Hydronic Heating and Cooling







ThinWall fan coils are the ultra-sleek alternative to HighWall fan coils or can be used in conjunction with a HighWall unit for optimum flexibility.

Perfectly conditioned air is quietly distributed through a tangential blower for even air distribution across the coil. ThinWall units offer versatility for both heating and cooling while operating up to 30% more efficient than traditional emitters.

Features

- Heating / Cooling Operation
- Hydronic Based - No Refrigerant
- Whisper Quiet, Modern Space-Saving Design
- Cross-Flow Blower Configuration with Integrated Airguiding Technology
- ECM Blower
- Touch Screen Display/Remote Control
- Can Operate with Water Temperatures as Low as 120°F (48.9°C) for Heating and as High as 50°F (10°C) for Cooling
- 5-Year Warranty for Certified Contractors

Specifications

Model	Output BTU/hr (kW)						Dimensional Data in (mm)			Ship Wt. lbs (kg)
	Heating			Cooling						
	Entering Water Temperature									
	120°F (48.9°C)	140°F (60°C)	160°F (71.1°C)*	45°F (7.2°C)	47°F (8.3°C)	50°F (10°C)	Length	Width	Height	
HTW-87	4600 (1.35)	6939 (2.03)	8700 (2.55)	3400 (1.00)	2846 (0.83)	2505 (0.73)	28 (711)	5-1/4 (133)	24-1/4 (616)	41 (18.6)
HTW-135	8500 (2.49)	10710 (3.14)	13500 (3.96)	6500 (1.90)	5442 (1.59)	4789 (1.40)	35-1/4 (895)			52 (23.6)
HTW-196	11400 (3.34)	15606 (4.57)	19600 (5.74)	8500 (2.49)	7116 (2.09)	6262 (1.84)	43 (1092)			60 (27.2)

* 160°F (71.1°C) is max water temperature. Applying higher can cause damage to unit.

Stainless Steel Buffer Tanks

Thermal Storage with Electric Backup

SpacePak stainless steel hydronic buffer tanks are used as both hydraulic separators and hydronic buffer tanks.

As a hydraulic separator, buffer tanks separate the energy source loop (heat pump/boiler) from the hydronic flow in the distribution system (air handlers/ emitters). Hydraulic separation is used primarily in systems where flow rates from the source to the distribution vary or with applications utilizing variable speed pumps. The heating or cooling source can be hydraulically decoupled from the distribution system.

Buffer tank's are used as hydronic buffer tanks in systems having several low BTU cooling or heating loads calling at different times or systems operating below the design load condition.







Features

- Hydronic Thermal Storage for Hot and Chilled Water
- Encouraged for Most Systems Using SpacePak Solstice Heat Pumps
- Offered in 13, 26, 40, 80, and 119 Gallon Capacities (50, 100, 150, 300, and 450 Liter Capacities)
- Inner Tank 304 Stainless, Outer Galvanized Steel Jacket
- Polyurethane Resin Foam with R12 Insulation Valve
- Four-Port Open Tank Design
- Electric Elements Standard
- Standard 10-Year Warranty

Specifications

Model		BT13-H	BT26-H	BT40-H	BT80-H	BT119-H
Diameter	in	18-1/2	18-1/2	18-1/2	23-5/8	27-3/4
	mm	470	470	470	600	700
Height	in	29-1/6	45	60	64-1/8	67-7/8
	mm	741	1143	1524	1629	1723
Capacity	Gal	13	26	40	80	119
	l	49	98	151	303	450
Max Water Flow	GPM	36	36	36	48	60
	l/min	136	136	136	182	225
Ship Weight	lbs	40	84	104	130	148
	kg	18.14	38.1	47.17	58.97	64
Empty Weight	lbs	38	77	97	125	143
	kg	17.24	34.93	44.00	56.70	66
Full Weight	lbs	148	304	446	805	993
	kg	67.13	137.89	202.3	365.14	450
Min Circuit Ampacity	Amp	15	30	30	30	30

BT Manual

Click or Scan for More Info

Certification Training, Extended Warranty, Sales Support

SpacePak Offers Factory Authorized Trainings for Certification on:

- Small Duct High Velocity Equipment
- Air-to-Water Heat Pump & Hydronic Equipment

Certification Training Methods:

- Online Webinar Training
- Local Field Training
- Corporate Headquarter Factory Training

Benefits of Becoming a SpacePak Certified Contractor:

- Local Leads
- Listed on SpacePak Website
- Pre-Sale Application Support and Load Calculations
- Marketing Support
- Extended Warranty



Extended Warranty for SpacePak Certified Contractors as Follows:

- **Inverter Air-to-Water Heat Pumps**
  Five (5) year parts and a ten (10) year compressor warranty
- **Small Duct High Velocity, Hydronic Fan Coils and Associated Equipment**
  Five (5) year parts warranty
- **Buffer Tanks**
  Standard Ten (10) year warranty

To Be Eligible for Extended Warranties:

- Project/equipment must be registered via the Product Registration portal on the SpacePak website.
- Installation must have been performed by a SpacePak Certified Contractor in good standing at the time of installation.

Click or Scan

Contact your local SpacePak Manufacturer's Representative!

SPACE PAK®

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