NEW 3/4 AND 1 TON MODELS!

First Co.®

WSVC Series
WATER SOURCE HEAT PUMP
Vertical - R-410A
3/4 thru 5 Tons

HydroTech™
R-410A Water Source Heat Pump

First Co. is pleased to introduce the all-new series **Hydro** HydroTech water source heat pump. Designed *by* contractors, *for* contractors, the HydroTech is the most feature-packed product available today.

The HydroTech includes many standard features found only in higher priced products, plus a number of **unique features**, including:

- **2-speed blower operation** in the summer: The HydroTech removes more moisture from the air by operating on a lower speed for up to 10 minutes before quietly switching to a higher speed. An even higher speed is also available for high static applications.
- Having the **smallest footprint** of any product in its class ensures a perfect fit when replacing older models in tight closets (even the 036 model is only 21.5 wide by 21.5 deep!).
- **Blower assemblies are field-reversible** 180 degrees. This option can improve airflow when the units are installed in closets with very little room for supply plenums.
- Optional **Vacated Premises Control** (VPC) kit with reset feature: Ensures that the unit will operate a minimum of one or two hours per day during extended periods of unoccupancy. This option also includes an automatic reset feature. If a fault occurs, the system will shut down, but then automatically reset every 24 hours. If the same fault exists each day, the unit will lockout on the fourth day and have to be manually reset.
- **Superior insulation:** Fully insulated with ¾" Tuf-Skin RX™, which offers greater sound absorption and better thermal efficiency. The insulation has a special acrylic coating that's formulated with an EPA registered anti-microbial agent.
- **Removable discharge flange:** Provides additional installation clearance.
- **Tool-less filter rack installation:** Can be installed after the unit is in the closet, providing additional installation clearance.
- State-of-the-art **Digital Control Module** (see p. 2)

Additional Standard Features -

- **100% Factory Tested!**
- **R-410A Refrigerant -** All units operate with environmentally friendly R-410A refrigerant.
- **Non-corrosive Thermoplastic Condensate Pan-** Sloped for positive drainage
- **High and Low pressure Service Ports**
- **Refrigerant Filter-drier and Discharge Muffler**
- **Panel-mounted FPT Water Connections -** No back-up wrench needed.
- **Removable Panels for Service**
- **50 VA Transformer**
- **1" Throwaway Filter**

Optional Features -

- Cupronickel Coaxial Heat Exchanger
- Vacated Premises Control
- E-Coated Air Coil Corrosion Protection
- Compressor Cover: A heavy duty, insulated compressor cover that reduces unwanted compressor noise (must be field installed on the **WSVC** unit before the unit is installed in the closet).
  - Part No. **K3821332** (fits WSVC18-42)
  - Part No. **K4251** (fits WSVC48/60)
- Evaporator Temperature Sensor

FIRST CO. - P.O. Box 270969 - Dallas, Texas 75227 - Ph. (214) 388-5751 - Fax (214) 388-2255 - www.firstco.com

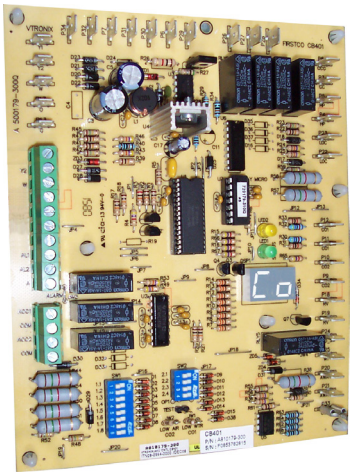
Digital Control Module - Controls unit operation and monitors all safety controls. (Patent Pending)

Standard Features -

- Digital Diagnostic Display - A two-digit display indicates either the current operational mode or a fault code
- 24V Status LED - Green light indicates 24V power to the control module
- VPC (Vacated Premises Control) - Allows the unit to operate for either 1 or 2 hours per day (total) during extended periods of unoccupancy (requires optional kit).
- Nuisance Trip Protection - Unit will attempt to start up to three times with a fault signal. If the fault continues, the unit locks out.
- Condensate Overflow Lockout
- High and Low Pressure Controls
- Water Coil Low Temperature Protection
- Over / Under Voltage Protection
- Random Re-start Timer
- Anti-short Cycle Timer
- Test Mode With LED Indicator - Speeds up control timers for service personnel
- Alarm Relay - Activated if the unit locks out
- Conformal Coating (both sides) for humidity and condensation protection

Dip Switches (field selectable settings):

- 5 Second Compressor Delay - Blower starts before the compressor, which helps attenuate compressor start up sound.
- 45 Second Blower-off Delay - Increases cooling efficiency.
- Continuous Dehumidification Mode - Selects continuous low speed fan operation for increased humidity removal.
- VPC Switch - Selects either one or two hour daily operation (requires optional kit)
- Lower Water and Air Coil Temperature Cutout Options - Optional 10 degree F. cutouts for applications where water temperature is below 50 degrees F. (requires antifreeze solution).
- Two Accessory Relays - The relays can cycle with either the fan or compressor. In addition, relay number one can be configured for use with slow opening water valves (60 second pre-compressor initialization) and relay number 2 can be configured for a 30 second post fan delay.



Digital Control Module

Thermoplastic Drain Pan

Optional Vacated Premises Selector Switch
(Kit# 9WS01)

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ELECTRICAL DATA							
MODEL NUMBER	VOLTAGE	COMPRESSOR		BLOWER		MIN. CIRCUIT AMPACITY	MAX. CIRCUIT PROTECTION
		RLA	LRA	FLA	HP		
WSVC009	208/230V-1-60	3.7	22	0.6	1/12	6	15
WSVC012	208/230V-1-60	4.7	25	0.7	1/10	7	15
WSVC018	208/230V-1-60	7.1	43	0.9	1/8	10	15
WSVC024	208/230V-1-60	8.3	43	1.6	1/6	13	20
WSVC030	208/230V-1-60	10.6	54	3.1	1/2	17	25
WSVC036	208/230V-1-60	13.1	74	3.1	1/2	20	30
WSVC042	208/230V-1-60	15.7	88	3.1	1/2	26	40
WSVC048	208/230V-1-60	21.8	117	3.5	1/2	29	50
WSVC060	208/230V-1-60	26.4	134	5.7	3/4	39	60

PERFORMANCE DATA - AT STANDARD OPERATING CONDITIONS							PERFORMANCE DATA - CERTIFIED AT AHRI/ISO 13256-1 CONDITIONS						
MODEL	NOM. CFM	GPM	WATER LOOP (entering Water Temperature)				MODEL	NOM. CFM	GPM	WATER LOOP (entering Water Temperature)			
			85 Deg.F		70 Deg.F					86 Deg.F		68 Deg.F	
			COOLING	EER	HEATING	COP				COOLING	EER	HEATING	COP
WSVC009	300	2.3	7,600	13.4	9,300	4.30	WSVC009	300	2.6	7,500	13.30	9,200	4.30
WSVC012	340	3.0	11,600	13.4	13,400	4.30	WSVC012	340	3.0	11,500	13.30	13,200	4.30
WSVC018	550	5.0	17,200	13.1	22,300	4.30	WSVC018	550	5.0	17,100	13.00	22,100	4.30
WSVC024	680	6.0	22,700	13.1	28,280	4.30	WSVC024	680	6.0	22,500	13.00	28,000	4.30
WSVC030	930	7.5	28,050	13.2	34,230	4.30	WSVC030	930	7.5	27,800	13.00	33,900	4.30
WSVC036	970	9.1	33,150	13.2	42,300	4.30	WSVC036	970	9.1	33,000	13.00	41,900	4.30
WSVC042	1250	10.7	40,970	13.1	49,600	4.30	WSVC042	1250	10.7	40,500	13.00	49,000	4.30
WSVC048	1400	12.0	47,610	13.6	55,550	4.30	WSVC048	1400	12.0	47,100	13.60	54,900	4.30
WSVC060	1760	15.0	56,610	13.4	70,120	4.30	WSVC060	1760	15.0	56,000	13.30	69,400	4.30

Note:
Tabulated performance data is at noted entering water temperature and entering air conditions of 80 degree DB / 67 degree WB for cooling and 70 degree DB for heating at 208V CFM.

Note:
Tabulated performance data is at noted entering water temperature and entering air conditions of 80.6 degree DB / 66.2 degree WB at ARI / ISO 13256-1 rated 208V CFM.

BLOWER DATA								FACTORY BLOWER SETTINGS		
MODEL NUMBER	FAN SPEED	CFM vs EXTERNAL STATIC PRESSURE (inches of water)						CLG		HTG
		0.1	0.2	0.3	0.4	0.5	0.6	1-10 MINS	10+ MINS	
WSVC009	HIGH	440	390	310	---	---	---			
	MED	330	300	220	---	---	---			
WSVC012	HIGH	490	460	430	400	---	---			
	MED	370	350	330	310	---	---			
WSVC018	HIGH	835	790	730	670	610	540			
	MED	710	670	620	560	510	---		X	X
	LOW	580	535	490	---	---	---	X		
WSVC024	HIGH	910	860	800	730	650	560			
	MED	800	770	720	660	590	---		X	X
	LOW	650	620	590	550	490	---	X		
WSVC030	MED-HIGH	1160	1100	1030	950	870	780			
	MED-LOW	1080	1030	960	890	820	---		X	X
	LOW	1000	950	890	830	760	---	X		
WSVC036	HIGH	1300	1230	1160	1090	1010	930			
	MED-HIGH	1220	1160	1100	1040	960	---		X	X
	MED-LOW	1100	1060	1010	950	890	---	X		
WSVC042	HIGH	1750	1720	1680	1620	1550	1460			
	MED-HIGH	1530	1510	1480	1450	1390	---		X	X
	MED-LOW	1260	1250	1240	1220	1200	---	X		
WSVC048	HIGH	1810	1780	1740	1660	1580	1490			
	MED	1680	1660	1640	1590	1530	---		X	X
	LOW	1560	1550	1540	1510	1460	---	X		
WSVC060	HIGH	2160	2090	2010	1940	1830	1730			
	MED	2030	1970	1900	1830	1750	---		X	X
	LOW	1830	1800	1740	1680	1610	---	X		

Note:
For superior dehumidification in the summer, all models operate at a slightly lower speed for a maximum of ten minutes before shifting to a higher speed. An optional "High" speed is available for higher static applications.

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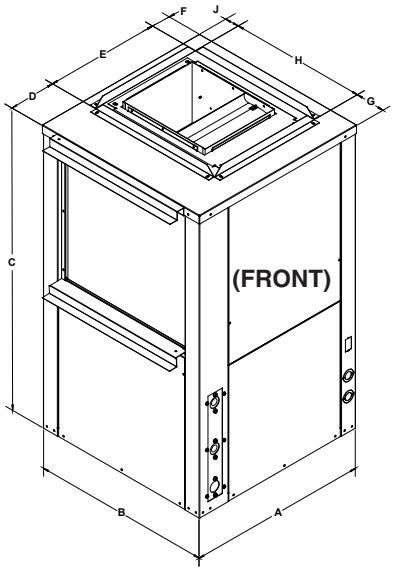
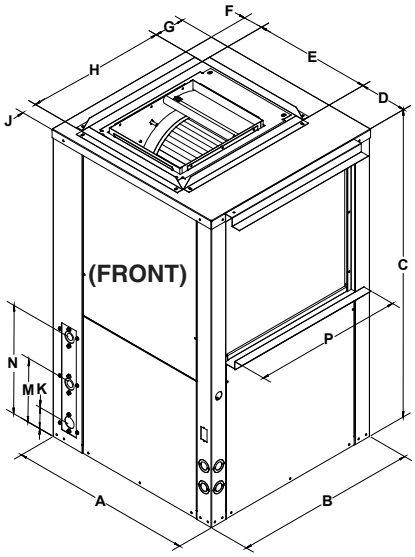
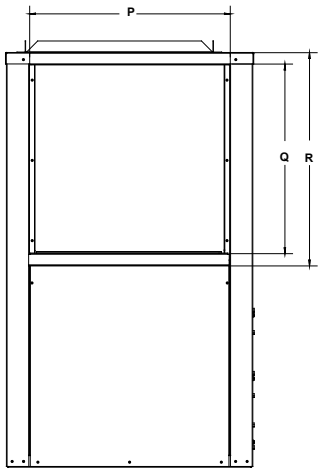


Left Hand Unit



Right Hand Unit



SIDE VIEW

	DIMENSIONS																		
MODEL NUMBER	A Width	B Depth	C Height	D	E Duct	F	G	H Duct	J	K Water In	M Condensate Drain	N Water Out	P R/A Duct Flange Width	Q R/A Duct Flange Height	R Filter Rack Height	Condenser Water Connections	Condensate Connections	Nom. Filter Size	Ship WT.
WSVC009	21.50	21.50	28.25	9.38	8.00	4.25	4.38	13.00	4.25	2.75	7.25	12.75	17.50	8.25	10.25	3/4" F.P.T.	3/4" F.P.T.	10 X 18 X 1	200
WSVC012	21.50	21.50	28.25	9.38	8.00	4.25	4.38	13.00	4.25	2.75	7.25	12.75	17.50	8.25	10.25	3/4" F.P.T.	3/4" F.P.T.	10 X 18 X 1	200
WSVC018	21.50	21.50	36.25	5.50	13.75	2.25	3.63	16.25	1.75	2.75	7.25	12.75	17.50	16.00	18.00	3/4" F.P.T.	3/4" F.P.T.	18 X 20 X 1	205
WSVC024	21.50	21.50	36.25	5.50	13.75	2.25	3.63	16.25	1.75	2.75	7.25	12.75	17.50	16.00	18.00	3/4" F.P.T.	3/4" F.P.T.	18 X 20 X 1	215
WSVC030	21.50	21.50	39.25	5.50	13.75	2.25	3.63	16.25	1.75	2.75	7.25	12.75	17.50	18.00	20.00	3/4" F.P.T.	3/4" F.P.T.	20 X 20 X1	230
WSVC036	21.50	21.50	39.25	5.50	13.75	2.25	3.63	16.25	1.75	2.75	7.25	12.75	17.50	18.00	20.00	3/4" F.P.T.	3/4" F.P.T.	20 X 20 X 1	240
WSVC042	21.50	26.00	43.25	5.00	15.75	0.75	5.00	16.25	4.75	2.75	7.25	12.75	22.00	22.00	24.00	3/4" F.P.T.	3/4" F.P.T.	24 X 24 X 1	265
WSVC048	26.00	26.00	43.25	7.12	17.88	1.00	5.00	17.88	3.13	2.75	6.25	10.75	22.00	28.00	30.00	1" F.P.T.	3/4" F.P.T.	24 X 30 X 1	305
WSVC060	26.00	26.00	43.25	7.12	17.88	1.00	5.00	17.88	3.13	2.75	6.25	10.75	22.00	28.00	30.00	1" F.P.T.	3/4" F.P.T.	24 X 30 X 1	325

Notes: 1. Right Hand and Left Hand return air is determined by facing the front of the unit.

WATER SOURCE HEAT PUMP
MODEL NOMENCLATURE

WSVC 030 C - 2 LH

SERIES:
WSVC - VERTICAL

NOMINAL CAPACITY:
009 - 9,000 BTUH
012 - 12,000 BTUH
018 - 18,000 BTUH
024 - 24,000 BTUH
030 - 30,000 BTUH
036 - 36,000 BTUH
042 - 42,000 BTUH
048 - 48,000 BTUH
060 - 60,000 BTUH

HEAT EXCHANGER MATERIAL:
C - COPPER
N - CUPRONICKEL

VOLTAGE DESIGNATION:
2 - 208-230/1/60

RETURN AIR LOCATION:
LH - LEFT HAND
RH - RIGHT HAND

In keeping with its policy of continuous progress and product improvement, First Co. reserves the right to make changes without notice. Maintenance for all First Co. products is available under "Product Maintenance" at www.firstco.com.