

14+ EER  
(except 040 model!)



## WSVX Series WATER SOURCE HEAT PUMP Vertical - R-410A 1-1/2 thru 5 Tons

WITH ECM MOTOR!!

### HydroTech™ R-410A Water Source Heat Pump



First Co. is pleased to introduce the all-new **WSVX** series **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 (except model 040). 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 3/4" 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 **WSVX** unit before the unit is installed in the closet).
  - Part No. **K3821332** (fits WSVX18-42)
  - Part No. **K4251** (fits WSVX48/60)
- Evaporator Temperature Sensor

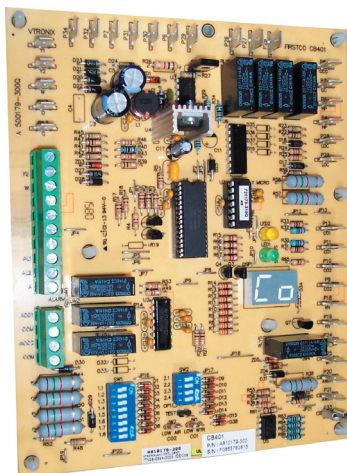
**Digital Control Module** - Controls unit operation and monitors all safety controls. (Patent Pending)

**Standard Features -**

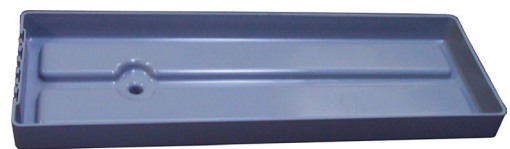
- Digital Diagnostic Display - A two-digit display indicates either the current operational mode or a fault code
- 24V Status LED - Green light indicates 24V power to the control module
- VPC (Vacated Premises Control) - Allows the unit to operate for either 1 or 2 hours per day (total) during extended 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)

# WSVX Series

## WATER SOURCE HEAT PUMP



| ELECTRICAL DATA |               |            |     |        |     |                       |                         |
|-----------------|---------------|------------|-----|--------|-----|-----------------------|-------------------------|
| MODEL NUMBER    | VOLTAGE       | COMPRESSOR |     | BLOWER |     | MIN. CIRCUIT AMPACITY | MAX. CIRCUIT PROTECTION |
|                 |               | RLA        | LRA | FLA    | HP  |                       |                         |
| WSVX018         | 208/230V-1-60 | 7.1        | 43  | 2.8    | 1/3 | 12                    | 15                      |
| WSVX024         | 208/230V-1-60 | 8.1        | 43  | 2.8    | 1/3 | 15                    | 20                      |
| WSVX030         | 208/230V-1-60 | 10.6       | 54  | 4.1    | 1/2 | 18                    | 25                      |
| WSVX036         | 208/230V-1-60 | 13.1       | 74  | 4.1    | 1/2 | 21                    | 30                      |
| WSVX040         | 208/230V-1-60 | 15.7       | 88  | 4.1    | 1/2 | 27                    | 40                      |
| WSVX042         | 208/230V-1-60 | 15.7       | 88  | 4.1    | 1/2 | 27                    | 40                      |
| WSVX048         | 208/230V-1-60 | 20.2       | 117 | 7.6    | 1   | 33                    | 50                      |
| WSVX060         | 208/230V-1-60 | 26.4       | 134 | 7.6    | 1   | 41                    | 60                      |



| PERFORMANCE DATA - AT STANDARD OPERATING CONDITIONS |      |      |   |       |          |     | PERFORMANCE DATA - CERTIFIED AT ARI/ISO 13256-1 CONDITIONS |      |      |   |      |          |      |
|---|------|------|---|-------|----------|-----|--|------|------|---|------|----------|------|
| MODEL   | CFM  | GPM  | WATER LOOP (entering Water Temperature) |       |          |     | MODEL  | 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  |
| WSVX018   | 550  | 5.0  | 17,110                                  | 14.1  | 21,210   | 4.3 | WSVX018  | 550  | 5.0  | 17,000                                  | 14.0 | 21,000   | 4.25 |
| WSVX024   | 745  | 6.1  | 23,620                                  | 14.4  | 28,260   | 4.3 | WSVX024  | 745  | 6.1  | 23,400                                  | 14.2 | 28,000   | 4.25 |
| WSVX030   | 930  | 9.0  | 28,250                                  | 14.2  | 33,120   | 4.4 | WSVX030  | 930  | 9.0  | 28,000                                  | 14.0 | 32,800   | 4.30 |
| WSVX036   | 950  | 10.0 | 33,350                                  | 14.1  | 42,510   | 4.4 | WSVX036  | 950  | 10.0 | 33,000                                  | 14.0 | 42,100   | 4.25 |
| WSVX040   | 970  | 10.1 | 37,320                                  | 13.2  | 46,620   | 4.3 | WSVX040  | 970  | 10.1 | 36,900                                  | 13.0 | 46,100   | 4.20 |
| WSVX042   | 1280 | 10.5 | 40,980                                  | 14.2  | 48,120   | 4.5 | WSVX042  | 1280 | 10.5 | 40,500                                  | 14.0 | 47,500   | 4.40 |
| WSVX048   | 1400 | 12.5 | 47,600                                  | 14.1  | 54,480   | 4.3 | WSVX048  | 1400 | 12.5 | 47,100                                  | 14.0 | 53,800   | 4.25 |
| WSVX060   | 1760 | 15.5 | 56,590                                  | 14.42 | 70,000   | 4.3 | WSVX060  | 1760 | 15.5 | 56,000                                  | 14.0 | 69,300   | 4.25 |

**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.

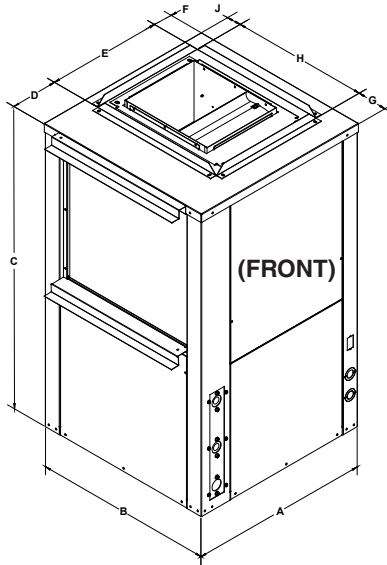
| BLOWER DATA  |             |                    |   |      |      |      |      |      | FACTORY BLOWER SETTINGS |          |     |
|--------------|-------------|--------------------|---|------|------|------|------|------|-------------------------|----------|-----|
| MODEL NUMBER | FAN SPEED   | MOTOR TERMINAL NO. | 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 |     |
| WSVX018      | HIGH STATIC | 4                  | ---   | ---  | 720  | 690  | 640  | 580  |                         |          |     |
|              | HIGH        | 3                  | 620   | 590  | 540  | 500  | 460  | ---  |                         | X        | X   |
|              | LOW         | 2                  | 540   | 490  | 450  | 390  | 360  | ---  | X                       |          |     |
| WSVX024      | HIGH STATIC | 4                  | ---   | ---  | 1000 | 930  | 850  | 750  |                         |          |     |
|              | HIGH        | 3                  | 790   | 760  | 720  | 690  | 650  | ---  |                         | X        | X   |
|              | LOW         | 2                  | 630   | 590  | 540  | 500  | 460  | ---  | X                       |          |     |
| WSVX030      | HIGH STATIC | 4                  | ---   | ---  | 1050 | 960  | 890  | 750  |                         |          |     |
|              | HIGH        | 3                  | 970   | 950  | 920  | 890  | 850  | ---  |                         | X        | X   |
|              | LOW         | 2                  | 820   | 780  | 750  | 720  | 690  | ---  | X                       |          |     |
| WSVX036      | HIGH STATIC | 4                  | ---   | ---  | 1040 | 970  | 910  | 750  |                         |          |     |
|              | HIGH        | 3                  | 1050  | 1020 | 990  | 940  | 870  | ---  |                         | X        | X   |
|              | LOW         | 2                  | 920   | 890  | 860  | 830  | 790  | ---  | X                       |          |     |
| WSVX040      | HIGH STATIC | 4                  | ---   | ---  | 1140 | 1110 | 1080 | 850  |                         |          |     |
|              | HIGH        | 3                  | 1080  | 1050 | 1030 | 990  | 960  | ---  |                         | X        | X   |
|              | LOW         | 2                  | 950   | 920  | 890  | 860  | 820  | ---  | X                       |          |     |
| WSVX042      | HIGH STATIC | 4                  | ---   | ---  | 1460 | 1430 | 1400 | 1340 |                         |          |     |
|              | HIGH        | 3                  | 1370  | 1340 | 1310 | 1280 | 1250 | ---  |                         | X        | X   |
|              | LOW         | 2                  | 1060  | 1030 | 1000 | 960  | 920  | ---  | X                       |          |     |
| WSVX048      | HIGH STATIC | 4                  | ---   | ---  | 1840 | 1820 | 1790 | 1740 |                         |          |     |
|              | HIGH        | 3                  | 1530  | 1500 | 1470 | 1440 | 1410 | ---  |                         | X        | X   |
|              | LOW         | 2                  | 1190  | 1160 | 1130 | 1100 | 1070 | ---  | X                       |          |     |
| WSVX060      | HIGH STATIC | 4                  | ---   | ---  | 1950 | 1920 | 1890 | 1840 |                         |          |     |
|              | HIGH        | 3                  | 1880  | 1860 | 1840 | 1820 | 1790 | ---  |                         | X        | X   |
|              | LOW         | 2                  | 1530  | 1500 | 1470 | 1440 | 1410 | ---  | 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.

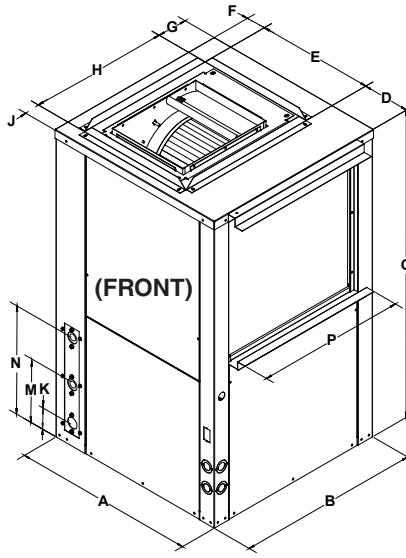
All models factory wired for speed taps 1, 2 and 3.

# WSVX Series

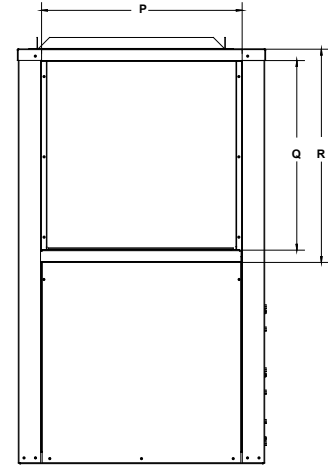
## WATER SOURCE HEAT PUMP



Left Hand Unit



Right Hand Unit

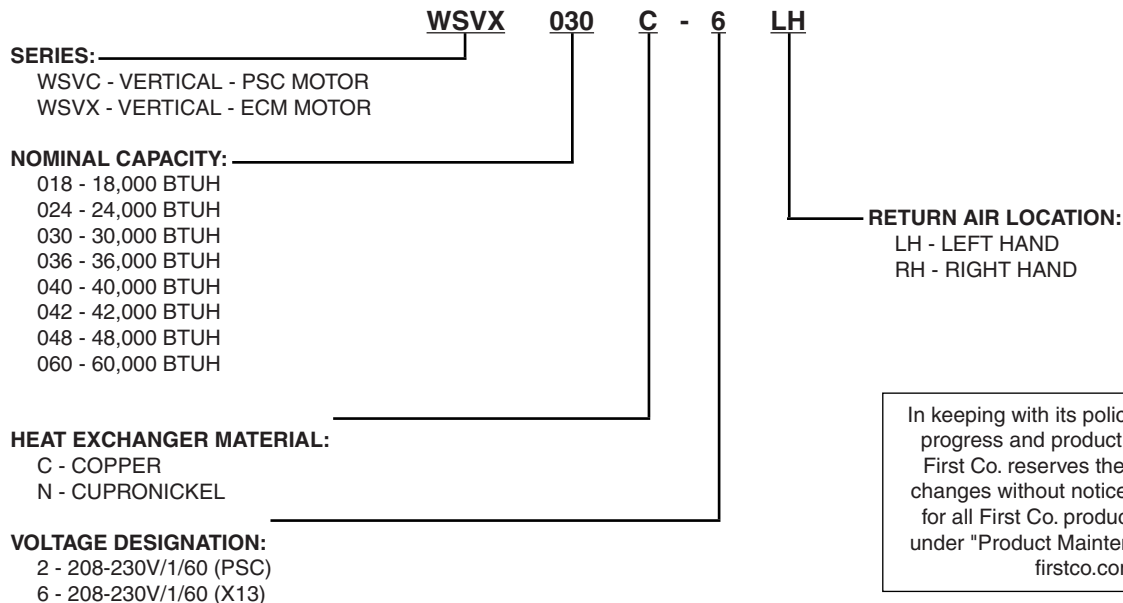


SIDE VIEW

| DIMENSIONS   |       |       |        |      |       |      |      |       |      |          |                  |           |                       |                        |                    |                             |                        |                  |          |
|--------------|-------|-------|--------|------|-------|------|------|-------|------|----------|------------------|-----------|-----------------------|------------------------|--------------------|-----------------------------|------------------------|------------------|----------|
| MODEL NUMBER | A     | B     | C      | D    | E     | F    | G    | H     | J    | K        | M                | N         | P                     | Q                      | R                  | Condenser Water Connections | Condensate Connections | Nom. Filter Size | Ship WT. |
|              | Width | Depth | Height |      | Duct  |      |      | Duct  |      | Water In | Condensate Drain | Water Out | R/A Duct Flange Width | R/A Duct Flange Height | Filter Rack Height |                             |                        |                  |          |
| WSVX018      | 21.50 | 21.50 | 36.25  | 5.62 | 13.75 | 2.25 | 3.63 | 16.25 | 1.75 | 2.50     | 7.00             | 12.50     | 17.50                 | 16.00                  | 18.00              | 3/4" F.P.T.                 | 3/4" F.P.T.            | 18 X 20 X 1      | 205      |
| WSVX024      | 21.20 | 21.50 | 36.25  | 5.62 | 13.75 | 2.25 | 3.63 | 16.25 | 1.75 | 2.50     | 7.00             | 12.50     | 17.50                 | 16.00                  | 18.00              | 3/4" F.P.T.                 | 3/4" F.P.T.            | 18 X 20 X 1      | 215      |
| WSVX030      | 21.50 | 21.50 | 39.25  | 5.62 | 13.75 | 2.25 | 3.63 | 16.25 | 1.75 | 2.50     | 7.00             | 12.50     | 17.50                 | 18.00                  | 20.00              | 3/4" F.P.T.                 | 3/4" F.P.T.            | 20 X 20 X 1      | 230      |
| WSVX036      | 21.50 | 21.50 | 39.25  | 5.62 | 13.75 | 2.25 | 3.63 | 16.25 | 1.75 | 2.50     | 7.00             | 12.50     | 17.50                 | 18.00                  | 20.00              | 3/4" F.P.T.                 | 3/4" F.P.T.            | 20 X 20 X 1      | 240      |
| WSVX040      | 21.50 | 21.50 | 39.25  | 5.62 | 13.75 | 2.25 | 3.63 | 16.25 | 1.75 | 2.50     | 7.00             | 12.50     | 17.50                 | 18.00                  | 20.00              | 3/4" F.P.T.                 | 3/4" F.P.T.            | 20 X 20 X 1      | 250      |
| WSVX042      | 21.50 | 26.00 | 43.25  | 5.00 | 15.75 | 0.75 | 5.00 | 16.25 | 4.75 | 2.50     | 7.00             | 12.50     | 22.00                 | 22.00                  | 24.00              | 3/4" F.P.T.                 | 3/4" F.P.T.            | 24 X 24 X 1      | 265      |
| WSVX048      | 26.00 | 26.00 | 43.25  | 7.12 | 17.75 | 1.25 | 6.25 | 17.75 | 2.12 | 2.75     | 6.25             | 10.75     | 22.00                 | 28.00                  | 28.00              | 1" F.P.T.                   | 3/4" F.P.T.            | 24 X 30 X 1      | 305      |
| WSVX060      | 26.00 | 26.00 | 43.25  | 7.12 | 17.75 | 1.25 | 6.25 | 17.75 | 2.12 | 2.75     | 6.25             | 10.75     | 22.00                 | 28.00                  | 28.00              | 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



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](http://www.firstco.com).