

AWSVX Series

WATER SOURCE HEAT PUMP

Vertical - R-410A

1-1/2 thru 5 Tons

HydroTech™

R-410A Water Source Heat Pump



AE-Air is pleased to introduce the all-new AWSVX 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 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 AWSVX unit before the unit is installed in the closet).
 - Part No. **K3821332** (fits AWSVX18-42)
 - Part No. **K4251** (fits AWSVX48/60)
- Evaporator Temperature Sensor

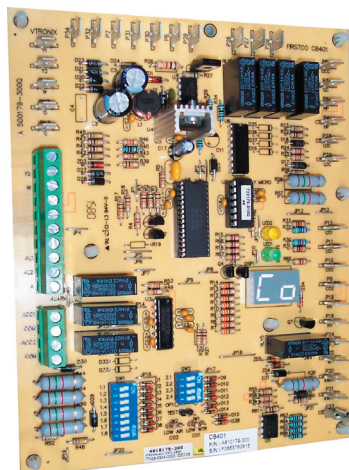
Digital Control Module - Controls unit operation and monitors all safety controls. (Patent Pending)

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)

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ELECTRICAL DATA							
MODEL NUMBER	VOLTAGE	COMPRESSOR		BLOWER		MIN. CIRCUIT AMPACITY	MAX. CIRCUIT PROTECTION
		RLA	LRA	FLA	HP		
AWSVX018	208/230V-1-60	7.1	43	2.8	1/3	12	15
AWSVX024	208/230V-1-60	8.1	43	2.8	1/3	15	20
AWSVX030	208/230V-1-60	10.6	54	4.1	1/2	18	25
AWSVX036	208/230V-1-60	13.1	74	4.1	1/2	21	30
AWSVX040	208/230V-1-60	15.7	88	4.1	1/2	27	40
AWSVX042	208/230V-1-60	15.7	88	4.1	1/2	27	40
AWSVX048	208/230V-1-60	20.2	117	7.6	1	33	50
AWSVX060	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
AWSVX018	550	5.0	17,110	14.1	21,210	4.3	AWSVX018	550	5.0	17,000	14.0	21,000	4.25
AWSVX024	745	6.1	23,620	14.4	28,260	4.3	AWSVX024	745	6.1	23,400	14.2	28,000	4.25
AWSVX030	930	9.0	28,250	14.2	33,120	4.4	AWSVX030	930	9.0	28,000	14.0	32,800	4.30
AWSVX036	950	10.0	33,350	14.1	42,510	4.4	AWSVX036	950	10.0	33,000	14.0	42,100	4.25
AWSVX040	970	10.1	37,320	13.2	46,620	4.3	AWSVX040	970	10.1	36,900	13.0	46,100	4.20
AWSVX042	1280	10.5	40,980	14.2	48,120	4.5	AWSVX042	1280	10.5	40,500	14.0	47,500	4.40
AWSVX048	1400	12.5	47,600	14.1	54,480	4.3	AWSVX048	1400	12.5	47,100	14.0	53,800	4.25
AWSVX060	1760	15.5	56,590	14.42	70,000	4.3	AWSVX060	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	
AWSVX018	HIGH STATIC	4	---	---	720	690	640	580			
	HIGH	3	620	590	540	500	460	---		X	X
	LOW	2	540	490	450	390	360	---	X		
AWSVX024	HIGH STATIC	4	---	---	1000	930	850	750			
	HIGH	3	790	760	720	690	650	---		X	X
	LOW	2	630	590	540	500	460	---	X		
AWSVX030	HIGH STATIC	4	---	---	1050	960	890	---			
	HIGH	3	970	950	920	890	850	---		X	X
	LOW	2	820	780	750	720	690	---	X		
AWSVX036	HIGH STATIC	4	---	---	1040	970	910	---			
	HIGH	3	1050	1020	990	940	870	---		X	X
	LOW	2	920	890	860	830	790	---	X		
AWSVX040	HIGH STATIC	4	---	---	1140	1110	1080	---			
	HIGH	3	1080	1050	1030	990	960	---		X	X
	LOW	2	950	920	890	860	820	---	X		
AWSVX042	HIGH STATIC	4	---	---	1460	1430	1400	1340			
	HIGH	3	1370	1340	1310	1280	1250	---		X	X
	LOW	2	1060	1030	1000	960	920	---	X		
AWSVX048	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:

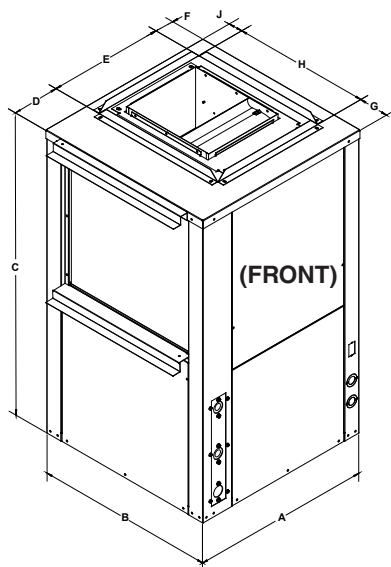
For superior dehumidification in the summer, all models operate at a slightly lower speed for a maximum of ten minutes before shifting to a higher speed. An optional "High" speed is available for higher static applications.

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

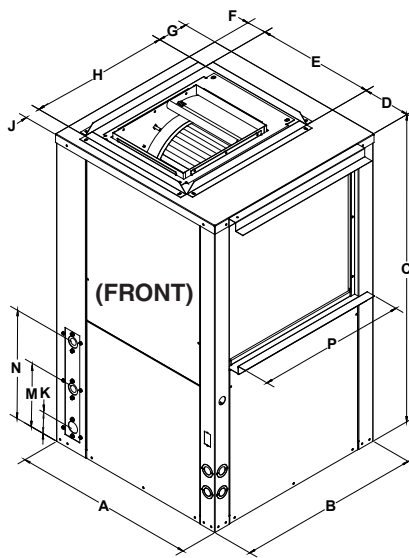
AWSVX Series

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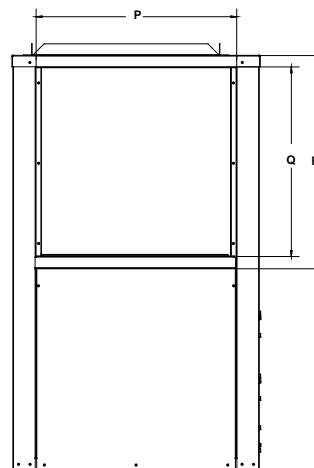
HydroTech™
R-410A Water Source Heat Pump



Left Hand Unit



Right Hand Unit



SIDE VIEW

MODEL NUMBER	DIMENSIONS															Condenser Water Connections	Condensate Connections	Nom. Filter Size	Ship WT.
	A	B	C	D	E	F	G	H	J	K	M	N	P	Q	R				
	Width	Depth	Height		Duct			Duct		Water In	Condensate Drain	Water Out	R/A Duct Flange Width	R/A Duct Flange Height	Filter Rack Height				
AWSVX018	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
AWSVX024	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
AWSVX030	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
AWSVX036	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
AWSVX040	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
AWSVX042	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
AWSVX048	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
AWSVX060	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

AWSVX 030 C - 6 LH

SERIES:
WSVC - VERTICAL - PSC MOTOR
WSVX - VERTICAL - ECM MOTOR

NOMINAL CAPACITY:
018 - 18,000 BTUH
024 - 24,000 BTUH
030 - 30,000 BTUH
036 - 36,000 BTUH
040 - 40,000 BTUH
042 - 42,000 BTUH
048 - 48,000 BTUH
060 - 60,000 BTUH

HEAT EXCHANGER MATERIAL:
C - COPPER
N - CUPRONICKEL

VOLTAGE DESIGNATION:
2 - 208-230V/1/60 (PSC)
6 - 208-230V/1/60 (X13)

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

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