

PRODUCT DESIGN GUIDE

Whisperline® Console





Console



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	Category	Position	Option Digit	Option Description
Cabinet Size 2	Product Family	1	S	S - Shorefit Brand
Departing stages 3 S S Single-stage			W	W - Whalen Brand
Unit Configuration	Cabinet Size	2	С	C - Console Unit
System Configuration	Operating stages	3	S	S - Single-stage
C	Unit Configuration	4	В	B - Bottom Inlet
G G - Heat Pump (heating default) I - Heat Pump or Electric Heat (Boilerless)	System Configuration	5	В	B - Cooling Only
I			С	C - Cooling Only with Hydronic Heat
Unit Capacity 6.7.8 008 008 - 0.70 ton (8,000 Btu) 010 - 0.83 ton (10,000 Btu) 012 - 1.00 ton (12,000 Btu) 015 - 1.25 ton (15,000 Btu) 018 018 - 1.50 ton (18,000 Btu) 018 018 - 1.50 ton (18,000 Btu) 019 Performance 9 S S S S S S S S S S S S			G	G - Heat Pump (heating default)
010			I	I - Heat Pump or Electric Heat (Boilerless)
012	 Unit Capacity	6,7,8	008	008 - 0.70 ton (8,000 Btu)
O15			010	010 - 0.83 ton (10,000 Btu)
Performance 9 S S - Standard			012	012 - 1.00 ton (12,000 Btu)
Performance 9 S S - Standard Revision (Major) 10 A A - Design Generation A Voltage 11 A A - 115-60-1 B B - 208/230-60-1 D D - 265-60-1 Distributor Options 12 G G - Geothermal Application (TXV) S S - Standard WLHP Application (Cap tube) Y Y - Standard WLHP Application (TXV) Revision (Minor) 13 A A - Design Revision A Sound Attenuation 14 X X - Standard Quiet Construction F F - Insulated Compressor Enclosure Heating Option 15 X X - None B B - Electric Heat - 1.0 kW (Boilerless) C C - Electric Heat - 2.0 kW (Boilerless) A A - 1-row Hot Water Coil - Sweat connections D D - 1-row Hot Water Coil - MPT Threaded Connection			015	015 - 1.25 ton (15,000 Btu)
Revision (Major) 10 A A - Design Generation A Voltage 11 A A - 115-60-1 B B - 208/230-60-1 D D - 265-60-1 Distributor Options 12 G G - Geothermal Application (TXV) S S - Standard WLHP Application (Cap tube) Y Y - Standard WLHP Application (TXV) Revision (Minor) 13 A A - Design Revision A Sound Attenuation 14 X X - Standard Quiet Construction F F - Insulated Compressor Enclosure Heating Option 15 X X - None B B - Electric Heat - 1.0 kW (Boilerless) C C - Electric Heat - 2.0 kW (Boilerless) A A - 1-row Hot Water Coil - Sweat connections D D - 1-row Hot Water Coil - MPT Threaded Connection			018	018 - 1.50 ton (18,000 Btu)
Voltage 11 A A - 115-60-1 B B - 208/230-60-1 D D - 265-60-1 Distributor Options 12 G G G - Geothermal Application (TXV) S S - Standard WLHP Application (Cap tube) Y Y - Standard WLHP Application (TXV) Revision (Minor) 13 A A - Design Revision A Sound Attenuation 14 X X - Standard Quiet Construction F F - Insulated Compressor Enclosure Heating Option 15 X X - None B B - Electric Heat - 1.0 kW (Boilerless) C C - Electric Heat - 2.0 kW (Boilerless) A A - 1-row Hot Water Coil - Sweat connections D D - 1-row Hot Water Coil - FPT Threaded Connection E E - 1-row Hot Water Coil - MPT Threaded Connection	Performance	9	S	S - Standard
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Distributor Options 12 G G - Geothermal Application (TXV) S S - Standard WLHP Application (Cap tube) Y - Standard WLHP Application (TXV) Revision (Minor) 13 A - Design Revision A Sound Attenuation 14 X X - Standard Quiet Construction F F - Insulated Compressor Enclosure Heating Option 15 X X - None B B - Electric Heat - 1.0 kW (Boilerless) C C - Electric Heat - 2.0 kW (Boilerless) A A - 1-row Hot Water Coil - Sweat connections D D - 1-row Hot Water Coil - FPT Threaded Connection E E - 1-row Hot Water Coil - MPT Threaded Connection			В	B - 208/230-60-1
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C C - Electric Heat - 2.0 kW (Boilerless) A A - 1-row Hot Water Coil - Sweat connections D D - 1-row Hot Water Coil - FPT Threaded Connection E E - 1-row Hot Water Coil - MPT Threaded Connection	Heating Option	15	Х	X - None
A A - 1-row Hot Water Coil - Sweat connections D D - 1-row Hot Water Coil - FPT Threaded Connection E E - 1-row Hot Water Coil - MPT Threaded Connection			В	B - Electric Heat - 1.0 kW (Boilerless)
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E E - 1-row Hot Water Coil - MPT Threaded Connectio			Α	A - 1-row Hot Water Coil - Sweat connections
			D	D - 1-row Hot Water Coil - FPT Threaded Connection
Coil Protection 16 C C - Copper tube / Aluminum fin - Sweat Connection			E	E - 1-row Hot Water Coil - MPT Threaded Connection
	Coil Protection	16	С	C - Copper tube / Aluminum fin - Sweat Connection

Category	Position	Option Digit	Option Description
Coil Protection	16	D	D - Copper tube / Aluminum fin - FPT Threaded Connection
		Е	E - Copper tube / Aluminum fin - MPT Threaded Connection
Control Type	17	X	X - Solid State Control
		F	F - Solid State Control with Hard Start Kit
Thermostat Type	18	A	A - Unit Mounted Electronic Thermostat
		В	B - Unit Mounted Mechanical MCO Control
		С	C - Remote Mounted Thermostat
		D	D - Remote Mounted Thermostat - Secondary Configuration
Fan Control	19	Х	X - Wired for 1-speed thermostat
		Α	A - Wired for 1-speed thermostat and 2-speed Fan Switch
		В	B - Wired for 2-speed thermostat
DDC Options	20	X	X - None
		Α	A - EMS Relay - N.O. line voltage
		В	B - EMS Relay - N.O. 24V voltage
		С	C - EMS Relay - N.C. line voltage
		R	R - EMS Relay - N.C. 24V voltage
Power Termination	21	Х	X - Single Point Power
		Α	A - Single Point Power with power cord
		В	B - Single Point Power: Unfused unit disconnect
		С	C - Single Point Power: Unfused unit disconnect with power cord
Drain Pan Options	22	A	A - Stainless Steel Drain Pan
		В	B - Stainless Steel Drain Pan with Condensate Pump
		С	C - Stainless Steel Drain Pan with Condensate Safety Switch
		D	D - Stainless Steel Drain Pan with Condensate Pump & Condensate Safety Switch
		E	E - Stainless Steel Drain Pan with Dual Drain Stub Assembly
		F	F - Stainless Steel Drain Pan with Condensate Pump & Dual Drain Stub Assembly
		G	G - Stainless Steel Drain Pan with Condensate Safety Switch & Dual Drain Stub Assembly
		н	H - Stainless Steel Drain Pan with Condensate Pump, Condensate Safety Switch & Dual Drain Stub Assembly
Cooling Flow Control	23	Х	X - No Autoflow Valve
		С	C - Automatic Flow Valve - Griswold K with PT Ports
		D	D - Automatic Flow Valve - Hays
		Е	E - Automatic Flow Valve - Hays with PT Ports



Category	Position	Option Digit	Option Description
		Н	H - Manual Flow Control Valve
Cooling Water Flow	24	Х	X - No flow control device installed
		D	D - 1.75 GPM
		E	E - 2.0 GPM
		G	G - 2.5 GPM
		Н	H - 3.0 GPM
		L	L - 4.0 GPM
		Z	Z - Customer specified GPM
Соах Туре	25	А	A - Standard Coax
		В	B - Cupro-Nickel Coax
		С	C - Insulated Coax
		D	D - Insulated Cupro-Nickel Coax
 Strainer	26	Х	X - No Y-Strainer
		Α	A - Y-Strainer
		С	C - Y-Strainer with Blowdown
Cabinet Type	27	X	X - Chassis Only - No Room Cabinet
		Α	A - Powder painted standard cabinet (with chassis)
		В	B - Powder painted cabinet for hot water heating (with chassis)
		С	C - Powder painted extended (46") cabinet (with chassis)
Outside Air	28	Х	X - None
		Α	A - Motorized Damper Assembly
Handing	29	Х	X - Standard Field Reversable Connections
		R	R - Right Hand Connections
		L	L - Left Hand Connections
Control Valve	30	Х	X - No control valve installed
		Α	A - 2-way 24 volt valve, on/off, 30 psi diff - Normally Open
		В	B - 2-way 24 volt valve, on/off, 30 psi diff - Normally Closed
		С	C - 3-way 24 volt valve, on/off, 30 psi diff - Normally Open
		D	D - 3-way 24 volt valve, on/off, 30 psi diff - Normally Closed
		J	J - Qty (2) 2-way 24 volt valve, on/off, 30 psi diff - N.C. Cooling / N.O. Heating
		4	4 - Factory installed valve supplied by customer
		5	5 - Field Installed Valve - 24-volt
		6	6 - Field Installed Valve - Line Voltage



Table 1: AHRI Performance Ratings – ASHRAE / ANSI / AHRI / ISO Standard 13256-1

Model	del Cooling Cooling Sensible Btuh		Cooling EER			Air Flow CFM Hi/Lo	Water Flow GPM	
WCS-08	7,800	6,000	14.0	9,200	4.4	300/250	2.0	
WCS-10	10,600	8,000	13.6	12,100	4.6	395/330	2.5	
WCS-12	11,500	9,400	12.4	14,000	4.3	400/350	3.0	
WCS-15	14,700	10,700	13.8	16,100	4.3	475/400	3.8	
WCS-18	17,800	13,700	13.1	21,000	4.4	540/420	4.5	



Features & Benefits

Whisperline® WCS water source heat pump

Quiet reliable operation in a compact vertical console unit with a reverse cycle R-410A refrigerant system to provide comfort heating and cooling.

Whisperline® WCS Cooling Only unit For warm climates where heating is not a priority the cooling only version is available in the same compact reliable cabinet as the heat pump version but with the flexibility of electric heating element to generate the desired heating.

Electric Heat Options - Boilerless Control

Factory installed electric heaters are available on vertical units. Unit controls are available for boilerless, supplemental, primary or emergency electric heat to serve several different application needs. Boilerless electric heat will be energized when the entering water temperature falls below set point. This will allow electric heat to function while ensuring the compressor remains off. With supplemental electric heat control, the wall thermostat will activate the compressor and heater simultaneously if necessary to maintain room heating conditions.

- Unfused Disconnect Units are available with an optional non-fused disconnect switch, located on the unit front behind the return air panel. The disconnect switch is used to break power to the unit for safety and ease of service.
- **EMS Relay** The EMS relay allows the WCS console unit to tie into the Energy Management System and turn on and off based on the programming of the building programming.
- Hard Start Kit A hard start kit makes your A/C start smoothly and quickly, which reduces damage to A/C parts and prolongs the life of your cooling system. By shortening the startup period of the compressor, the hard start kit reduces the amount of electricity it takes to start your A/C saving you money.
- Condensate Overflow Protection The switch is designed to sense when condensate water levels in the drain pan become excessively high. When high condensate water levels are detected during cooling or dehumidification mode, the unit is shut

down to prevent additional condensation entering the drain pan.

Remote Thermostat Controls (Requires Wall Stat)

A factory provided thermostat extension with a low voltage wire harness ranging from 5 to 20 foot to allow remote mounting of an external thermostat.

- **Dual Drain Stub Assembly** The dual drain stub assembly allows the unit to connect to the standard condensate drain line for normal operation with the added safety feature of a second drain line piped to a conspicuous location to indicate if there a block in the main drain connection.
- Room Cabinet Available as a standard feature of the console unit, the optional room cabinet is also available to replace worn or damaged cabinets. All cabinets are powder painted furniture-grade steel construction with extruded aluminum grille and control door.

Two Way Control Valve (On/Off) - FIELD INSTALLED

2-way valves are used for a variety of pumping applications when more than one unit is installed on a common loop. These valves are also used to shut off flow when the unit is not operating. On a call for cooling or heating the valve opens providing full water flow prior to compressor operation. A 24 volt control wire harness is included with the factory provided control valve option.

Automatic Flow Control Valve - FIELD INSTALLED

The automatic flow control device includes a ball valve cast in the valve body and is located on the return water pipe. The flow control valve consists of a stainless steel/brass flow cartridge and a contoured orifice plate. As the pressure drop increases, the flow cartridge will move into the contoured orifice plate to decrease the flow. This flexing action provides a constant flow, independent of pressure (2-80 psi), makes it difficult to clog and resistant to cavitation damage. This valve sets flow through the coil without any action required by a system balancer.

Hose kit – FIELD INSTALLED Optional hose kits are available for quick and easy connection to the water supply. Stainless steel braided hoses come in 24" or 36" lengths and include ball-type shut



off valves or equipped with both ball-type shut off valves and automatic flow control devices. Female pipe thread fittings (2) 1/2"

Cu-Ni Coaxial Heat Exchanger The optional

cupronickel tube-in-tube coaxial heat exchanger used in water source heat pumps is designed for maximum heat transfer at normal and low water flow rates with minimum pressure drop. The inside tube is deeply fluted to enhance heat transfer and minimize fouling. All coaxial coils are tested to 400 psig on the water side and 600 psig on the refrigerant side. The extended range chassis has coil and piping insulation to protect against condensation in low-temperature geothermal applications.

THERMOSTAT SELECTION OPTIONS WCS

Thermostat - Manual Changeover - Non-Programmable SCI SC2001L

Thermostat - Manual Changeover - Programmable SCI SC3010L

Thermostat - Auto or Manual Changeover - Programmable SCI SC5011

DIGITAL SOLID STATE CONTROL OPTIONS WCS



Non-Programmable Electronic Thermostat

Non-Programmable, Auto or Manual Changeover, 2-Speed Fan Control, Unit Mount. Part number 50293.

- Single Stage Heat Pump/Non-Heat Pump Systems
- Single Stage Heat/Cool Systems
- Two Speed Fan Control
- Auto/Manual Changeover
- Internal Temperature Sensing
- Ideally Suited for:
 - Residential, New Construction/ Replacement
 - **Light Commercial**

Specifications

Electrical Rating:

- 24 VAC (18 to 30 VAC)
- 3 amp maximum total load
- 1 amp maximum per terminal

Temperature control ranges: 63°F to 85°F **Accuracy**: ± 1°F System configurations: 1-stage heat, 1-stage cool Terminations: C, R, W1/O/B, G1, G2

Operating Modes

There are 4 possible operating modes and 2 fan modes.

OFF Mode

1. In this mode, the thermostat will NOT turn ON the heating or cooling systems.

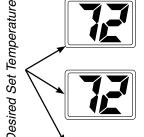
Heat Mode - Red LED On

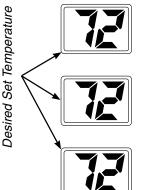
2. In this mode, the thermostat controls the heating system

Cool Mode - Blue LED On

3. In this mode, the thermostat controls the cooling system

Auto (Heat & Cool) Mode - Yellow LED On





4. In this mode, the thermostat controls the heating and cooling systems, automatically changing over from one to the other as needed.

Continuous Fan Mode

1. The indoor fan can be turned on manually in every operating mode by sliding the auto/on switch to ON.

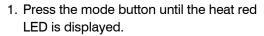
Cycling Fan Mode (- Switch to Auto)

2. Fan cycles with thermostat demand

Thermostat Displays Set Point Temp Only

Get to know your unit control.

Heat Test - Red LED On





- 2. Adjust the set temperature so it is 5° above the room temperature.
- The heat should come on.
- 4. Adjust the set temperature 5° below the room temperature and the heat should turn off. There is a 60 second fan delay on your system to purge any conditioned air.

Cool Test - Blue LED On

1. Press the mode button until the cool blue LED is displayed



- 2. Adjust the set temperature so it is 5° below the room temperature.
- 3. The air conditioning should come on.
- 4. Adjust the set temperature 5° above the room temperature and the A/C should turn off. There is a 60 second fan delay on your system to purge any conditioned air.

Fan Test

1. Slide the fan switch to the ON position. This turns the indoor fan ON continuous.



2. Slide the fan switch to the AUTO position. This cycles the indoor fan with the desired operation.



Operating Your Thermostat

- 1. Move the Fan Auto/On switch to the Auto position.
- Press the MODE button to enter desired operating mode.

Configuration Mode Settings

To enter configuration, simultaneously hold down the ▲ and ▼ buttons for 5 seconds.

1. Temperature scale (F or C) – Choose Fahrenheit or Celsius.



Press the ▲ or ¥ button to select.

Press the PROG button to advance to the next screen.

2. Deadband (4, 6) – Set the minimum number of degrees between your heating system activation and your cooling system activation.



Press the A or V button to set deadband value.

Press the PROG button to advance to the next screen.

3. Heat pump – Press the or button to configure as heat pump, or non-heat pump system.

Factory Set

- Hb Heat pump Heat active
- H0 Heat pump Cool active
- EL Electric heat

Press the PROG button to advance to the next screen.



 Differential (1°F - 5°F) (1°C - 5°C) – Set the number of degrees between your "turn on" temperature and your "setpoint" temperature.

Press the or button to set differential value.

To exit configuration, simultaneously hold down the and buttons for 5 seconds.

Troubleshooting

Symptom	Remedy
No display	Check for power at unit
– on display instead of set temperature	In OFF mode
Fan runs continuously	Check Fan On/Auto switch, fan runs continuously in On position



Table 3: Physical Data Table

Component			Models		
Component	WCS-08	WCS-10	WCS-12	WCS-15	WCS-18
Nominal Tonnage					
COOLING PERFORMANCE					
Capacity (MBTUH)	7,800	10.600	11.500	14.700	17.800
EER (Btuh/W)	14.0	13.6	12.4	13.8	13.1
Entering Water Temp (°F)	86	86	86	86	86
Water Flow (GPM)	2.0	2.5	3.0	3.8	4.5
Rated CFM	300	395	400	475	540
Refrigerant type	R410A	R410A	R410A	R410A	R410A
Refrigerant charge (oz)					
HEATING PERFORMANCE					
Capacity (MBTUH)	9,200	12,100	14,000	16,100	21,000
COP	4.4	4.6	4.3	4.3	4.4
Entering Water Temp (°F)	68	68	68	68	68
Water Flow (GPM)	2.0	2.5	3.0	3.8	4.5
DIMENSIONS (inches)					
Width (in.)	44.6	44.6	44.6	54.6	54.6
Depth (in.)	10.8	10.8	10.8	12.6	12.6
Height (in.)	25.5	25.5	25.5	25.5	25.5
OPERATING WEIGHT (lbs.)	108	111	113	138	148
SHIPPING WEIGHT (lbs.)	115	118	120	145	155
COMPRESSORS					
Type	Rotary	Rotary	Rotary	Rotary	Rotary
Quantity	1	1	1	1	1
EVAPORATOR COIL DATA					
Rows	2	2	2	3	3
Refrigerant control	Capillary Tube	Capillary Tube	Capillary Tube	Capillary Tube	Capillary Tube
SUPPLY FAN DATA			·		
Quantity	2	2	2	2	2
Fan Size (D x W)	4.75 x 6.875	4.75 x 6.875	4.75 x 6.875	4.75 x 6.875	4.75 x 6.875
Fan type	Centrifugal	Centrifugal	Centrifugal	Centrifugal	Centrifugal
Maximum E.S.P.		i i		·	
PSC Motor - Standard	0.0	0.0	0.0	0.0	0.0
PSC MOTOR HP	1				
Voltage - 208-230/60/1	1/10	1/10	1/10	1/10	1/10
Voltage - 265/60/1	1/10	1/10	1/10	1/10	1/10
SC HIGH STATIC MOTOR HP	1	.,	.,	.,	,,,,,
Voltage - 208-230/60/1	1/10	1/10	1/10	1/10	1/10
Voltage - 265/60/1	1/10	1/10	1/10	1/10	1/10
FILTERS	77.5	,,,,	.,	.,	,,
Size	10.375 x 27.75 x 0.1.25	10.375 x 27.75 x 0.1.25	10.375 x 27.75 x 0.1.25	12.25 x 32.00 x 0.1.25	12.25 x 32.00 x 0.1
Quantity	1	1	1	1	1



Table 4: Unit Voltage Limitations

Voltage	Minimum	Maximum				
208/230-60-1	197	252				
265-60-1	239	292				

Table 5: WCS Continuous Operating Limits

	Ambier	nt Air °F		Enterin	g Air °F		Entering Fluid °F				
Mode	Minimum	Maximum	Mini	mum	Maxi	mum	Standar	d Range	Extended Range		
	DB	DB	DB	WB	DB	WB	Min	Max	Min	Max	
Cooling	60	100	75	63	100	83	60	120	30	120	
Heating	60	80	60	_	80	_	60	90	20	90	

Note: Extended Range requires insulated risers, correct control jumper setting, and design condition antifreeze solution

Table 6: WCS Start-up Operating Limits

Mode	Ambier	nt Air °F		Enterin	g Air °F		Entering Fluid °F				
	Minimum	Maximum	Mini	mum	Maxi	mum	Standar	d Range	Extended Range		
	DB	DB	DB	WB	DB	WB	Min	Max	Min	Max	
Cooling	50	100	50	42	100	83	50	120	30	120	
Heating	50	80	50	_	80	_	50	90	20	90	

Note: Extended Range requires insulated risers, correct control jumper setting, and design condition antifreeze solution

Standard Range Units:

Units are designed to start in an ambient of 50°F (10°C) with entering air at 50°F (10°C), with entering water at 50°F (10°C), with nominal air flow and water flow (3.0 GPM/Ton), for initial start-up in heating and cooling mode.

Note: This is not a normal or continuous operating condition. It is assumed that such start-up is for the purpose of bringing the building space up to occupancy temperature and operating for extended periods of time.

Extended Range Units:

Units are designed to start in an ambient of 50°F (10°C) with entering air at 50°F (10°C), with entering water at 20°F (-7°C), with nominal air flow and water flow (3.0 GPM/Ton), for initial start-up in heating.

Units are designed to start in an ambient of 50°F (10°C) with entering air at 50°F (10°C), with entering

water at 30°F (-1°C), with nominal air flow and water flow (3.0 GPM/Ton), for initial start-up in cooling.

Note: This is not a normal or continuous operating condition. It is assumed that such start-up is for the purpose of bringing the building space up to occupancy temperature and operating for extended periods of time.

Environment

This equipment is designed for indoor installation only. Unconditioned locations such as attics, garages, etc., generally will not provide sufficient protection against extremes in temperature and/or humidity, and equipment performance, reliability, and service life may be adversely affected.

Power supply

A voltage variation of \pm 10% of nameplate voltage is acceptable.



	EWT (°F)	GPM		Entering	g Air - 80°	°F / 67°F			Enterin	g Air - 78	°F / 65°F		Entering Air - 75°F / 63°F				
Size (Tons)			TC (BTU/hr)	SC (BTU/hr)	kW	HR (BTU/hr)	Liquid Temp Rise (°F)	TC (BTU/hr)	SC (BTU/hr)	kW	HR (BTU/hr)	Liquid Temp Rise (°F)	TC (BTU/hr)	SC (BTU/hr)	kW	HR (BTU/hr)	Liquid Temp Rise (°F)
		1.50	7.885	6.054	0.573	9.839	13.12	7.738	6.007	0.570	9.683	12.91	7.615	5.215	0.567	9.551	12.73
0.75	86	1.88	7.724	6.075	0.554	9.615	10.26	7.580	6.028	0.552	9.462	10.09	7.459	5.233	0.549	9.332	9.95
		2.00	7.808	6.096	0.553	9.694	9.69	7.663	6.049	0.550	9.539	9.54	7.541	5.252	0.547	9.408	9.41
		2.00	11.540	8.718	0.933	14.723	14.72	11.387	8.652	0.927	14.549	14.55	11.242	7.490	0.920	14.382	14.38
1.00	86	2.50	11.251	8.632	0.905	14.339	11.47	11.101	8.567	0.899	14.169	11.34	10.960	7.416	0.893	14.006	11.20
		3.00	11.374	8.546	0.905	14.460	9.64	11.223	8.481	0.899	14.289	9.53	11.079	7.342	0.893	14.125	9.42
		2.50	15.164	11.209	1.079	18.847	15.08	14.850	11.186	1.072	18.509	14.81	14.538	9.684	1.066	18.174	14.54
1.25	86	3.13	15.383	11.162	1.052	18.974	12.14	15.064	11.139	1.045	18.631	11.92	14.747	9.643	1.039	18.293	11.71
		3.80	15.267	11.116	1.057	18.875	9.93	14.951	11.092	1.050	18.535	9.76	14.636	9.603	1.044	18.199	9.58
		3.00	18.782	13.662	1.344	23.369	15.58	18.501	14.081	1.336	23.061	15.37	18.253	12.191	1.329	22.786	15.19
1.50	86	3.75	18.506	13.457	1.309	22.973	12.25	18.229	13.869	1.302	22.670	12.09	17.984	12.007	1.294	22.399	11.95
		4.50	18.708	13.251	1.314	23.192	10.31	18.428	13.657	1.306	22.886	10.17	18.180	11.823	1.299	22.612	10.05

	EWT (°F)	GРM		Entering	Air - 65°F			Entering	Air - 70°F		Entering Air - 75°F			
Size (Tons)			HC (BTU/hr)	kW	HE (BTU/hr)	Liquid Temp Drop (°F)	HC (BTU/hr)	kW	HE (BTU/hr)	Liquid Temp Drop (°F)	HC (BTU/hr)	kW	HE (BTU/hr)	Liquid Temp Drop (°F)
		1.50	10.068	0.649	7.856	10.47	9.968	0.681	7.645	10.19	9.867	0.713	7.435	9.91
0.75	68	1.88	9.863	0.628	7.721	8.24	9.764	0.659	7.517	8.02	9.665	0.690	7.312	7.80
		2.00	9.970	0.626	7.836	7.84	9.871	0.657	7.630	7.63	9.771	0.688	7.424	7.42
		2.00	13.572	0.940	10.366	10.37	13.439	0.986	10.074	10.07	13.311	1.033	9.787	9.79
1.00	68	2.50	13.232	0.912	10.122	8.10	13.102	0.957	9.838	7.87	12.977	1.002	9.558	7.65
		3.00	13.377	0.911	10.267	6.84	13.245	0.956	9.982	6.65	13.119	1.001	9.701	6.47
		2.50	15.471	0.955	12.211	9.77	15.316	1.003	11.894	9.52	15.161	1.050	11.578	9.26
1.25	68	3.13	15.694	0.931	12.516	8.01	15.537	0.978	12.201	7.81	15.380	1.024	11.887	7.61
		3.80	15.576	0.936	12.382	6.52	15.420	0.982	12.068	6.35	15.264	1.029	11.754	6.19
		3.00	21.567	1.488	16.491	10.99	21.355	1.564	16.020	10.68	21.152	1.642	15.547	10.36
1.50	68	3.75	21.250	1.449	16.305	8.70	21.041	1.523	15.845	8.45	20.840	1.600	15.382	8.20
		4.50	21.482	1.455	16.518	7.34	21.271	1.529	16.055	7.14	21.067	1.606	15.588	6.93



Table 7: WCS PSC Performance Table

Unit	CFM Hi/Lo	Fan Option		CFM at External Static Pressure (in wg.)									
		Option	Speed	0.00	0.05	0.10	0.15	0.20	0.25	0.30	0.35	0.40	0.50
WCS-08	300/250	Standard PSC	HI	300	-	-	-	-	-	-	-	-	-
			Low	250	-	-	-	-	-	-	-	-	-
WCC 10	395/330	Standard PSC	HI	395	-	-	-	-	-	-	-	-	-
WCS-10			Low	330	-	-	-	-	-	-	-	-	-
W00.40	400/350	Standard PSC	HI	400	-	-	-	-	-	-	-	-	-
WCS-12			Low	350	-	-	-	-	-	-	-	-	-
WCC 15	475/400	0 Standard PSC	HI	475	-	-	-	-	-	-	-	-	-
WCS-15			Low	400	-	-	-	-	-	-	-	-	-
WCS-18	540/420	Standard PSC	HI	540	-	-	-	-	-	-	-	-	-
			Low	420	-	-	-	-	-	-	-	-	-



Table 10: WCS Electrical Ratings1

		Voltage/	Fan		Comp	ressor	Total	СКТ	Max. Fuse
Model	Comp	HZ/Ph	Amps	Fan HP	RLA	LRA	Amps.	Ampacity	
WCS-08	Rotary	115/60/1	1.2	1/10	6.1	39.1	7.30	9.0	15
WCS-08	Rotary	208-230/60/1	0.4	1/10	3.0	15.0	3.40	5.0	15
WCS-08	Rotary	265/60/1	0.4	1/10	2.7	11.0	3.10	4.0	15
WCS-10	Rotary	115/60/1	1.2	1/10	7.8	50.0	9.00	11.0	15
WCS-10	Rotary	208-230/60/1	0.4	1/10	4.4	22.0	4.80	6.0	15
WCS-10	Rotary	265/60/1	0.4	1/10	3.4	21.0	3.75	5.0	15
WCS-12	Rotary	115/60/1	1.2	1/10	9.5	50.0	10.70	14.0	20
WCS-12	Rotary	208-230/60/1	0.4	1/10	4.7	25.0	5.10	7.0	15
WCS-12	Rotary	265/60/1	0.4	1/10	4.2	22.0	4.60	6.0	15
WCS-15	Rotary	208-230/60/1	0.6	1/10	5.6	29.0	6.20	8.0	15
WCS-15	Rotary	265/60/1	0.6	1/10	5.0	28.0	5.60	7.0	15
WCS-18	Rotary	208-230/60/1	0.6	1/10	7.4	33.0	8.00	10.0	15
WCS-18	Rotary	265/60/1	0.6	1/10	6.0	28.0	6.60	9.0	15

IMPORTANT: Chassis must replace a unit of like capacity to ensure proper power supply.

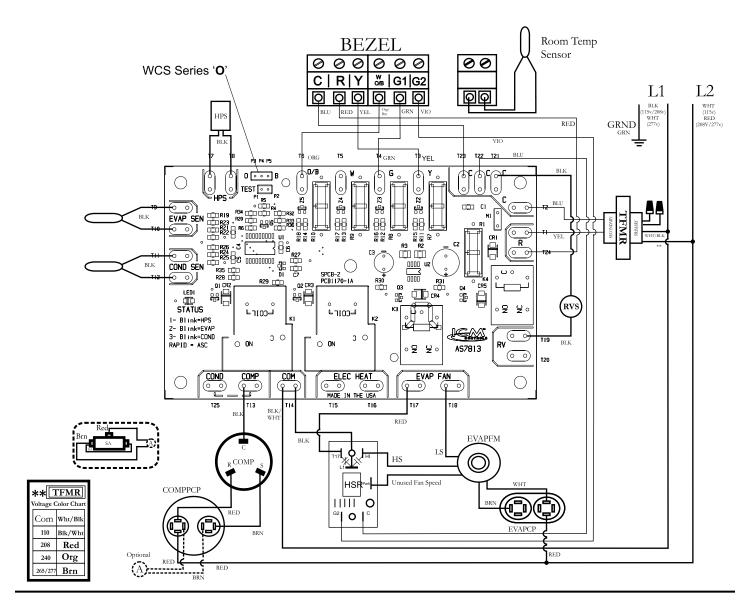
Electric Heat Ratings* (Boilerless)

Heater No.	Volt	Watts	BTU/h	HTR Amps	Total Amps	Min CKT Amps	Max. Fuse
	208	1,000	3,400	4.8	5.4	7	15
WCS-08	230	1,220	4,160	5.3	5.9	7	15
	277	1,000	3,400	3.6	4.2	5	15
	208	2,000	6,820	9.6	10.2	13	15
WCS-12	230	2,450	8,350	10.7	11.3	14	15
	277	2,000	6,820	7.3	7.9	10	15

^{*}Optional

⁽¹⁾ If optional electric heat is selected see Electric Heat Ratings Table: Total Amps, Ampacity & Fuse is the larger Value.





LEGEND:

COMP = Compressor

COMPCP= Compressor Capacitor

EVAPCP= Evaporator Capacitor

EVAPFM= Evaporator Fan Motor

FPT= Freeze Protection T'stat

HPS= High Pressure Switch

HS= Hard Start

HSR≡ High Speed Relay

RVS= Reversing Valve Solenoid

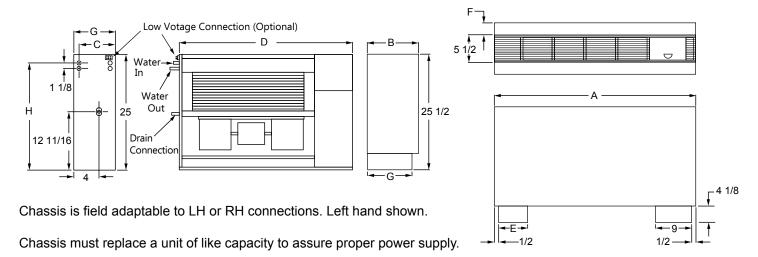
SA= Start Assist

TFMR= Transformer

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Model	А	В	С	D	E	F	G	Н	Water In-Out	Drain	Chassis Weight (lbs.)
WCS-08	440/40	40.0/4	0.7/0	07.0/4	0.4/4	0.5/0	10.1/4	00 5/40	5/8" O.D.	3/4" O.D.	116
WCS-10, 12	44 9/16	10 3/4	8 7/8	37 3/4	6 1/4	2 5/8	10 1/4	23 5/16			120
WCS-15, 18	54 9/16	12 9/16	10 7/8	42 3/4	10 3/4	3 1/2	12 1/8	24			155





Mechanical Specifications

SERIES WCS WHISPERLINE CONSOLE UNIT (WATER SOURCE) (GROUND SOURCE) HEAT PUMPS

PART 1 GENERAL

1.01 SECTION INCLUDES

A. Console Packaged Water Source Heat Pumps

1.02 RELATED SECTIONS

1.03 REFERENCES

A. ETL Listed under Underwriters Laboratories Standard for Safety UL1995 for heat pumps. B. AHRI ISO Standard 13256-1

1.04 DELIVERY, STORAGE AND HANDLING

A. Deliver products to site, store and protect from the weather and construction debris and be tagged with model number, configuration, and (OPTION) site location.

1.05 ENVIROMENTAL REQUIREMENTS

A. Protect units from construction debris by covering all openings prior to start-up of the equipment. Units must not be used for heating, cooling, or ventilation prior to the start-up of equipment for permanent use. Use of the equipment for the temporary heating, cooling or ventilation is prohibited.

1.06 FACTORY TESTING

A. All units shall be factory tested at cataloged operating conditions. Units shall be factory tested with cataloged water flow rates to verify proper heating, cooling, fan, and control operation. Testing without utilizing cataloged water flow rates is unacceptable.

1.07 SUBMITTAL DOCUMENTATION

A. Standard submittals shall include capacities, drawings, electrical data, installation, operation and maintenance manuals and other details.

PART 2 PRODUCTS

2.01 TYPE

A. Vertical Console (Water Source) (Ground Source) Heat Pump with, top discharge arrangement, hose kits, and all accessories. Units shall be (water source 60°F to 90°F(Heating) / 120°F(Cooling) (15.6°C to 32.2°C/48.9°C)) (ground source 20°F to 90°F(Heating)/120°F(Cooling) (-6.7°C to 32.2°C/48.9°C)) entering fluid temperature for (water source) (ground source) heat pump applications.

(OPTION 1) Unit shall be a Water-Cooled Air Conditioner with Hydronic Heating Coil.

2.02 CAPACITY

A. Shall be as indicated on the drawings, which are based on Whalen units. Capacities shall be certified under AHRI ISO Standard 13256-1.

2.03 CABINETS and CHASSIS

A. The room cabinet is to be constructed of powder painted furniture grade steel with extruded aluminum grille and control door. Air flow is to be bottom intake and top discharge. The cabinet shall be insulated to minimize sound



transmission to the room. Removal of the room cabinet provides complete access to the sides and front of the chassis for routine servicing. Cabinet is mounted to the chassis with screws for security.

- B. The chassis shall be constructed of heavy gauge, G-90U corrosion resistant sheet metal. Service panels shall be easily removable and sufficiently large to allow access to all components. Service ports are external for field service without chassis removal.
- C. The cabinet shall be insulated with 1/2-inch thick 2-pound density thermal and acoustical fiberglass insulation meeting material standard ASTM-C1071 and have an integral water repellent. The insulation shall have a fungi and bacteria resistant barrier with no growth conforming to ASTM-C1338, ASTM G21 and ASTM G22 and meet fire safety standards under NFPA90A and NFPA90B having a flame spread of less than 25 and a smoke developed classification of less than 50 per ASTM E-84 and UL 723. All edges shall be sealed or tucked in order to prevent introduction of glass fibers into the discharge air stream.
 - (OPTION 1) Sound attenuating,1/2-inch acoustical Soundfoam "M" insulation.
- D. Cabinet shall have a factory-installed discharge grille, to include a 15° deflection angle for optimal air distribution to the room.
- E. Service panels shall be easily removable and sufficiently large to allow access to all components.

2.04 REFRIGERATION SYSTEM

A. Units shall have a sealed refrigerant circuit, which includes a non-ozone depleting R-410A refrigerant. The refrigeration system consists of the compressor, air coil, water coil, reversing valve, cap-tube, filter-drier, and safety controls. System components shall be designed for easy field service accessibility.

- (OPTION 1) Thermostatic Expansion Device (TXV)
- B. The compressor shall be a hermetically sealed, quiet, durable, and efficient rotary type with built in pressure and external temperature overload protection. Compressor shall be externally isolated to minimize vibration and sound transmission.
- C. Access fittings shall be factory installed on high and low-pressure refrigerant lines to facilitate field service.
- D. The air coils shall be copper tubes mechanically bonded to aluminum fins, multi-circuited to insure maximum coil distribution and effectiveness. The coil shall be rated to withstand 645 psig refrigerant working pressure. Face velocity shall not exceed 400 feet per minute to insure quiet operation and positive condensate drainage.
- E. The water-to-refrigerant heat exchanger shall be a low water side pressure drop formed coaxial type (tube-in-tube) design. Heat exchanger shall be constructed with copper inner water tube with bonded aluminum fins and steel refrigerant outer tube. Steel outer tube to be painted to resist corrosion. Heat exchanger assembly shall be rated to withstand 645 Psig refrigerant and 400 Psig water working pressures.
- F. The 4-way refrigerant reversing valve is solenoid coil activated and shall be a pilot operated sliding piston type for positive shift and low-pressure drop. Valve design shall allow for heating function should the solenoid fail to function. Valve body shall be constructed of corrosion resistant brass and copper.

G. OPTIONS

1. Automatic flow control valve – An automatic flow control valve shall be provided with each unit and be factory preset for a fixed flow rate regardless of system pressure. Each automatic balancing valve shall be capable of



operation over a pressure differential range of 2 to 80 PSID, rated for 600 psig, and be easily accessible for cleaning and maintenance.

2. Standard Two-way, two-position (On/Off) control valve (30 psi differential pressure) – A two-way, two-position (On/Off) electric control valve may be factory or field mounted and wired unit. The valve shall have an end switch to ensure valve is fully open prior to compressor operation. Valve body shall be rated for 300 psig.

2.05 WATER CONNECTIONS

A. Piping connections to be sized and located per detail on specification sheets.

2.06 DRAIN PAN

A. The drain pan shall collect and drain condensate that may form on the air coil and shall be fabricated of welded and soldered 20 Ga. 304 stainless steel. Painted steel or plastic is not acceptable. Drain pan shall be fully insulated.

2.07 FANS

A. Evaporator motor/blower assembly shall consist of a high efficiency 2-speed 'PSC' motor designed for long life. Motor shall have sleeve bearings for long life and cool operation. Motor case is to be totally enclosed to inhibit entrance of moisture and contaminants. Motor mount to be 'resilient' end ring type to minimize noise and vibration. Motor is to direct drive the blower wheels. Blower wheels to be a DWDI, dynamically balanced, design for smooth operation and efficient airflow. Blower wheels to be constructed of galvanized steel or aluminum for corrosion resistance. Motor/blower assembly shall be mounted to a 'slide-out' deck for easy removal from the chassis. Fixed deck designs are not acceptable.

2.08 MOTORS

A. Fan motors shall be of the permanently lubricated PSC type with internal thermal overload protection standard, as required; suitable for the current characteristics shown on the drawings and shall have built-in thermal overload protection.

Motors shall be plug-in, multi-speed type.

2.09 FILTERS

A. Filter is to be 3/16" thick, electro-static type and cleanable for re-use. Filter to be chassis mounted for easy maintenance.

2.10 POWER SUPPLY

A. All controls and connectors necessary for chassis operation and interface with thermostat and power supply will be factory installed and tested.

• (OPTION 1) Each unit shall include a non-fused disconnect switch, factory mounted and wired. The switch shall be rated to be added to all units to handle the unit only.

2.11 CONTROLS

A. All control components are to be mounted in an enclosure within the chassis for easy access, ease of trouble shooting and service without chassis removal. The internal control board, via 24VAC NEC class 2 transformer, will provide outputs to the compressor, evaporator fan, reversing valve and (optional) electric heat strips. The high pressure switch (HPS) input will turn the compressor off upon opening. Temperature sensors/capillaries will monitor the evaporator and water side heat exchangers and shut down the compressor if a 35 deg. set point is reached. The control will incorporate a 5 minute anti-short cycle time delay to prevent the compressor from short cycling. Each evaporator fan initiation will introduce a 60 second post purge delay (in the auto position) after each room thermostat cycle.



- B. Unit Mounted Digital The on board LED thermostat will operate as a Heat/Cool or Heat Pump controller and inter aces via 24V control wiring with the self-contained internal control board previously described. The large LED Display shows Set Point only and operates as a non-programmable, auto-changeover or manual changeover thermostat including high/low fan speeds and on/auto fan operations. The room temperature set point is set via 2 up and down arrows. The fan speeds and on/ auto selection to be managed through individual slide switches. All functions are to be managed thru the internal control board. Chassis shall include a wiring diagram, which clearly details point-to-point wiring connections.
- C. Remote Thermostat An external low voltage terminal block is to be provided as a junction point for the wall thermostat wiring. The terminal block is to be clearly labeled identifying the required terminations. Chassis shall include a wiring diagram, which clearly details point-to-point wiring connections.
- D. Unit shall include a solid-state control board as part of the unit control system incorporating these features:
 - a. Random start compressor protection.
 - b. Anti-short cycle compressor with 5-minute minimum OFF time delay.
 - c. Safety controls that protect the compressor from the following conditions:
 - i. High pressure
 - ii. Low pressure
 - iii. Low airflow
 - iv. Low liquid flow
 - v. Low entering air temperature
 - vi. Brown-out power conditions
 - vii. Low/High liquid temperature with user selectable settings based on liquid properties.
 - d. Status LED indicating the device causing a fault condition shall be visible via a clear sight-glass such that access to unit interior is not needed to view status.
 - e. Soft lockout feature that provides for an automatic reset prior to the initiation of a hard lockout.
 - f. Test mode capability with shortened time delays for servicing.
 - g. Condensate Overflow Protection The unit will be supplied with a Mechanical float switch condensate overflow protection as standard.
 - h. Loss of Refrigerant Compressor Protection.
 - (OPTION) DDC Control Multiple Protocol DDC control interface system shall be able to communicate with protocols able to connect with BACnet, MS/TP, or Modbus, or Johnson Controls N2. The choice of protocol shall be field selectable/changeable via the use of a simple selector switch. Protocol selection shall not require any additional programming or special external hardware or software tools. This will permit all units to be daisy chain connected by a 2-wire twisted pair shielded cable.
 - The following points must be available at a central or remote computer location:
 - a. Space temperature
 - b. Discharge air temperature (optional)
 - c. Command of space temperature setpoint
 - d. Cooling status
 - e. Heating status
 - f. Unoccupied/occupied command
 - g. Cooling command
 - h. Heating command
 - i. Fan "ON/AUTO" command

2.12 WARRANTY

A. The Whalen Company shall warranty equipment for a period of 12 months from start up or 18 months from shipping (whichever occurs first).



- (OPTION 1) Extended 5-year compressor warranty covers compressor for a total of 5 years.
- (OPTION 2) Extended 5-year refrigeration circuit warranty covers coils, reversing valve, expansion valve and compressor for a total of 5 years.
- (OPTION 3) Extended 5-year control board warranty covers the solid-state control board for a total of 5 years.

2.13 FIELD INSTALLED ACCESSORIES

A. THERMOSTAT

- 1. The heat pump manufacturer shall provide a 24-volt (manual) (automatic) changeover wall thermostat with a HEAT-OFF-COOL system switch and AUTO-ON fan selector switch. Thermostat shall have an LCD display with temperature and setpoint(s) in °F or °C.
 - (OPTION) 7-Day, 5-2 Day, 5-1-1 Day programmable thermostat with programmable fan mode, Simple-SetTM Target Programming Technology, and is configurable remote sensor compatible.
- 2. Thermostats shall be remote mounted and wired in the field.

B. HOSE KITS

- 1. All units shall be connected via 2 or 3 feet long, braided stainless steel with Kevlar® reinforced core, fire rated hoses complete with adapters. ASTM ratings of Flame Spread 25, Fuel Contribution 25, Smoke Density 50, fire rated materials per ASTM E 84-00 (NFPA 255, ANSI/UL 723 & UBC 8-1)? Hose kits have a maximum working pressure of 400 PSI working pressure. Minimum burst pressure is four times working pressure. Temperature range of -40 °F to 200 °F. Non-fire rated hoses are not acceptable.
 - (OPTION) Ball valves with P/T ports, flow controller, Y strainer and electric valve shall be in included as specified in the schedule.

PART 3 EXECUTION

3.01 INSTALLATION

- A. Furnish as shown on the drawings and as specified herein, vertical (water source) (ground source) heat pumps, and with capacity and electrical characteristics as scheduled. Units shall be Series WCS as manufactured by The Whalen Company of Easton, MD.
- B. Install in accordance with manufacturer's installation instructions and maintain manufacturer's recommended clearances for the unit and accessories.
- C. Follow manufacturer's recommendations for cleaning and flushing.



Water-to-Air Heat Pump Standard Warranty **Limited Express Warranty The Whalen Company**

The Whalen Company warrants to the purchaser each water-to-air heat pump to be free from original defects in materials and workmanship.

Where inspection by an authorized representative of The Whalen Company confirms such defects to be present, for a period of eighteen months from date of shipment, Whalen will furnish replacement components or materials to the original purchaser without charge.

damages; (9) Equipment subjected to corrosion or abrasion; (10) Equipment manufactured or supplied by others; (11) Equipment which have been operated in any relocated after initial installation; (3) Any portion or component of any system that is not supplied by The Whalen Company, regardless of the cause of the failure of such portion or component; (4) Equipment on which the unit identification tags or labels have been removed or modified; (5) Equipment which have defects considered misuse and as such, will void all warranty coverage regardless of the cause of failure; (7) Equipment which have defects or damage which result from nanner contrary to The Whalen Company printed instructions; or (12) Equipment which have defects, damage or insufficient performance as a result of insufficien flood, acts of God, alteration or misapplication of the product; (6) Equipment used as temporary heating or cooling while the facility is still under construction is a contaminated or corrosive air or liquid supply, operation at abnormal temperatures, or unauthorized opening of refrigerant circuit; (8) Mold, fungus or bacteria This Limited Express Warranty is intended to cover original equipment defects only and does not cover or apply to: (1) Air filters, refrigerant, fluids, oil; or damage which result from improper installation, wiring, electrical imbalance characteristics or maintenance; or are caused by accident, or incorrect system design or the improper application of The Whalen Company products

The Whalen Company neither assumes nor authorizes any person to assume for it any obligation or warranty other than those stated herein.

This Limited Express Warranty does not cover labor charges associated with making repairs, inspection and diagnosis of malfunctions, all field labor in connection However, The Whalen Company at its sole discretion may provide a labor allowance in cases of DOA (Dead on Arrival) equipment for replacement or repair of defective components within 30-days of start-up or 90-days from factory shipment, whichever comes first. After this period with repair or replacement of parts, all field labor in connection with removal and transportation to and from a repair facility and all field labor in connection with only the Limited Express Warranty will apply. Labor will be paid per The Whalen Company Warranty Labor Allowance schedule Replacement or repair under this warranty will not extend the warranty time periods defined above. reinstallation after repairs are completed.

Whalen shall not, in any event, have any liability under this warranty unless and until it has been paid in full for the equipment supplied. The warranty period shall commence on the date of shipment, however, whether or not payment has been made. his warranty applies only to Whalen heat pump installations in the fifty United States and in Canada. There are no warranties outside those areas.

The Whalen Company has no liability for incidental or consequential damages arising out of the ownership, use, or operation of Whalen heat pumps.

THERE ARE NO WARRANTIES WHICH EXTEND BEYOND THE DESCRIPTION ON THE FACE HEREOF. NO IMPLIED WARRANTY OR MERCHANTABILITY SHALL ACCOMPANY THE SALE OF THIS EQUIPMENT, AND THIS EXPRESS WARRANTY IS INTENDED TO AND DOES REPLACE ANY IMPLIED WARRANTY OF MERCHANTABILITY.

This warranty, its limitations and its exclusions are to be governed by the laws of Maryland. Although some warranties may vary in their effect and coverage from locality to locality, this warranty, its effects, coverage and remedies are only those available in Maryland.

Rev: 12/2020





The Whalen Company warrants to the purchaser each water-to-air heat pump chassis (or each refrigeration chassis) to be free from original defects in materials and workmanship.

Where inspection by an authorized representative of The Whalen Company confirms such defects to be present, for a period of twelve months from date of shipment, Whalen will furnish replacement components or materials to the original purchaser without charge.

damages; (9) Equipment subjected to corrosion or abrasion; (10) Equipment manufactured or supplied by others; (11) Equipment which have been operated in any manner contrary to The Whalen Company printed instructions; or (12) Equipment which have defects, damage or insufficient performance as a result of insufficient or incorrect system design or the improper application of The Whalen Company products. considered misuse and as such, will void all warranty coverage regardless of the cause of failure. (7) Equipment which have defects or damage which result from relocated after initial installation; (3) Any portion or component of any system that is not supplied by The Whalen Company, regardless of the cause of the failure or damage which result from improper installation, wiring, electrical imbalance characteristics or maintenance; or are caused by accident, misuse or abuse, fire, flood, acts of God, alteration or misapplication of the product; (6) Equipment used as temporary heating or cooling while the facility is still under construction is a contaminated or corrosive air or liquid supply, operation at abnormal temperatures, or unauthorized opening of refrigerant circuit; (8) Mold, fungus or bacteria such portion or component; (4) Equipment on which the unit identification tags or labels have been removed or modified; (5) Equipment which have defects This Limited Express Warranty is intended to cover original equipment defects only and does not cover or apply to: (1) Air filters, refrigerant, fluids,

The Whalen Company neither assumes nor authorizes any person to assume for it any obligation or warranty other than those stated herein.

all field labor in connection

equipment for replacement or repair of defective components within 30-days of start-up or 90-days from factory shipment, whichever comes first. After this period sole discretion may provide a labor allowance in cases of DOA (Dead on Arrival) with repair or replacement of parts, all field labor in connection with removal and fransportation to and from a repair facility and all field labor in connection with Labor will be paid per The Whalen Company Warranty Labor Allowance schedule This Limited Express Warranty does not cover labor charges associated with making repairs, inspection and diagnosis of malfunctions, Whalen shall not, in any event, have any liability under this warranty unless and until it has been paid Replacement or repair under this warranty will not extend the warranty time periods defined above. only the Limited Express Warranty will apply. reinstallation after repairs are completed.

in full for the equipment supplied. The warranty period shall commence on the date of shipment,

however, whether or not payment has been made

This warranty applies only to Whalen heat pump installations in the fifty United States and in Canada. There are no warranties outside those areas

The Whalen Company has no liability for incidental or consequential damages arising out of the ownership, use, or operation of Whalen heat pumps.

THERE ARE NO WARRANTIES WHICH EXTEND BEYOND THE DESCRIPTION ON THE FACE HEREOF. NO IMPLIED WARRANTY OR MERCHANTABILITY SHALL ACCOMPANY THE SALE OF THIS EQUIPMENT, AND THIS EXPRESS WARRANTY IS INTENDED TO AND DOES REPLACE ANY IMPLIED WARRANTY OF

This warranty, its limitations and its exclusions are to be governed by the laws of Maryland. Although some warranties may vary in their effect and coverage from locality to locality, this warranty, its effects, coverage and remedies are only those available in Maryland.

Rev: 12/2020



Water-to-Air Heat Pump with 5 Year Compressor Warranty **Sompany**

The Whalen Company

Limited Express Warranty

The Whalen Company warrants to the purchaser each water-to-air heat pump to be free from original defects in materials and workmanship

Where inspection by an authorized representative of The Whalen Company confirms such defects to be present, for a period of eighteen months from date of shipment, Whalen will furnish replacement components or materials to the original purchaser without charge, In addition, for a period of sixty months from date of shipment, Whalen will furnish a replacement for any compressor found by an authorized representative of The Whalen Company to contain an original defect.

fire, flood, acts of God, alteration or misapplication of the product; (6) Equipment used as temporary heating or cooling while the facility is still under construction is defects or damage which result from improper installation, wiring, electrical imbalance characteristics or maintenance; or are caused by accident, misuse or abuse Equipment relocated after initial installation; (3) Any portion or component of any system that is not supplied by The Whalen Company, regardless of the cause of considered misuse and as such, will void all warranty coverage regardless of the cause of failure; (7) Equipment which have defects or damage which result from corrosive air or liquid supply, operation at abnormal temperatures, or unauthorized opening of refrigerant circuit; (8) Mold, fungus or bacteria lipment subjected to corrosion or abrasion; (10) Equipment manufactured or supplied by others; (11) Equipment which have been operated in any manner contrary to The Whalen Company printed instructions; or (12) Equipment which have defects, damage or insufficient performance as a result of This Limited Express Warranty is intended to cover original equipment defects only and does not cover or apply to: (1) Air filters, refrigerant, fluids, failure of such portion or component; (4) Equipment on which the unit identification tags or labels have been removed or modified; insufficient or incorrect system design or the improper application of The Whalen Company products Equipment subjected to corrosion or abrasion; (10) Equipment manufactured a contaminated or

The Whalen Company neither assumes nor authorizes any person to assume for it any obligation or warranty other than those stated herein.

Express Warranty does not cover labor charges associated with making repairs, inspection and diagnosis of malfunctions, all field labor in connection reinstallation after repairs are completed. However, The Whalen Company at its sole discretion may provide a labor allowance in cases of DOA (Dead on Arrival) equipment for replacement or repair of defective components within 30-days of start-up or 90-days from factory shipment, whichever comes first. After this period only the Limited Express Warranty will apply. Labor will be paid per The Whalen Company Warranty Labor Allowance schedule. with repair or replacement of parts, all field labor in connection with removal and transportation to and from a repair facility and all field labor in connection with

Replacement or repair under this warranty will not extend the warranty time periods defined above. Whalen shall not, in any event, have any liability under this warranty unless and until it has been paid in full for the equipment supplied. The warranty period shall commence on the date of shipment, however, whether or not payment has been made.

This warranty applies only to Whalen heat pump installations in the fifty United States and in Canada. There are no warranties outside those areas.

The Whalen Company has no liability for incidental or consequential damages arising out of the ownership, use, or operation of Whalen heat pumps

THERE ARE NO WARRANTIES WHICH EXTEND BEYOND THE DESCRIPTION ON THE FACE HEREOF. NO IMPLIED WARRANTY OR MERCHANTABILITY SHALL ACCOMPANY THE SALE OF THIS EQUIPMENT, AND THIS EXPRESS WARRANTY OF SHALL ACCOMPANY THE SALE OF THIS EQUIPMENT, AND THIS EXPRESS WARRANTY IS INTENDED TO AND DOES REPLACE ANY IMPLIED WARRANTY OF **MERCHANTABILITY.**

This warranty, its limitations and its exclusions are to be governed by the laws of Maryland. Although some warranties may vary in their effect and coverage from locality to locality, this warranty, its effects, coverage, and remedies are only those available in Maryland.

Rev: 12/2020





Where inspection by an authorized representative of The Whalen Company confirms such defects to be present, for a period of eighteen months from date of shipment, Whalen will furnish replacement components or materials to the original purchaser without charge. The Whalen Company warrants to the purchaser each water-to-air heat pump to be free from original defects in materials and workmanship.

epresentative of The Whalen Company to contain an original defect. Refrigeration circuit components are defined to include the compressor, reversing valve, water In addition, for a period of sixty months from the date of shipment, Whalen will repair or replace refrigeration circuit components found by an authorized coil, air coil, expansion device and interconnecting tubing only.

fire, flood, acts of God, alteration or misapplication of the product; (6) Equipment used as temporary heating or cooling while the facility is still under construction is defects or damage which result from improper installation, wiring, electrical imbalance characteristics or maintenance; or are caused by accident, misuse or abuse Equipment relocated after initial installation; (3) Any portion or component of any system that is not supplied by The Whalen Company, regardless of the cause of failure of such portion or component; (4) Equipment on which the unit identification tags or labels have been removed or modified; (5) Equipment which have considered misuse and as such, will void all warranty coverage regardless of the cause of failure; (7) Equipment which have defects or damage which result from a contaminated or corrosive air or liquid supply, operation at abnormal temperatures, or unauthorized opening of refrigerant circuit; (8) Mold, fungus or bacteria in any manner contrary to The Whalen Company printed instructions; or (12) Equipment which have defects, damage or insufficient performance as a result of damages; (9) Equipment subjected to corrosion or abrasion; (10) Equipment manufactured or supplied by others; (11) Equipment which have been operated This Limited Express Warranty is intended to cover original equipment defects only and does not cover or apply to: (1) Air filters, refrigerant, fluids, oil; insufficient or incorrect system design or the improper application of The Whalen Company products

The Whalen Company neither assumes nor authorizes any person to assume for it any obligation or warranty other than those stated herein.

This Limited Express Warranty does not cover labor charges associated with making repairs, inspection and diagnosis of malfunctions, all field labor in connection with removal and transportation to and from a repair facility and all field labor in connection with equipment for replacement or repair of defective components within 30-days of start-up or 90-days from factory shipment, whichever comes first. After this period reinstallation after repairs are completed. However, The Whalen Company at its sole discretion may provide a labor allowance in cases of DOA (Dead on Arrival) only the Limited Express Warranty will apply. Labor will be paid per The Whalen Company Warranty Labor Allowance schedule

warranty unless and until it has been paid in full for the equipment supplied. The warranty period shall commence on the date of shipment, however, whether or not Replacement or repair under this warranty will not extend the warranty time periods defined above. Whalen shall not, in any event, have any liability under this payment has been made.

he Whalen Company has no liability for incidental or consequential damages arising out of the ownership, use, or operation of Whalen heat pumps. This warranty applies only to Whalen heat pump installations in the fifty United States and in Canada. There are no warranties outside those areas.

THERE ARE NO WARRANTIES WHICH EXTEND BEYOND THE DESCRIPTION ON THE FACE HEREOF. NO IMPLIED WARRANTY OR MERCHANTABILITY SHALL ACCOMPANY THE SALE OF THIS EQUIPMENT, AND THIS EXPRESS WARRANTY OF INTENDED TO AND DOES REPLACE ANY IMPLIED WARRANTY OF **MERCHANTABILITY.**

This warranty, its limitations and its exclusions are to be governed by the laws of Maryland. Although some warranties may vary in their effect and coverage from locality, to locality, this warranty, its effects, coverage, and remedies are only those available in Maryland.

Rev: 12/2020



Whisperline® Design Guide Revision Table

Date	Description				
2/8/2021	Updated Warranty Certificates				
8/20/2020	Updated Mechanical Specifications and Nomenclature				
3/21/2018	First Published				



8900 Glebe Park Drive
Easton, MD 21601
Tel, 410.822.9200 • 410.822.8926
whalencompany.com
www.whalencompany.com







