

SERENITY
VERTICAL STACK,
VERTICAL & HORIZONTAL
PACKAGED
WATER SOURCE
HEAT PUMPS



Engineered
Comfort

The Comfort of Quality

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Serenity Water Source Heat Pumps



Heat pump solutions designed for tight spaces

Welcome to a new era of efficiency, comfort, and sustainability in high-rise living. Engineered Comfort is proud to introduce our groundbreaking Hi-Rise Water Source Heat Pump systems. Designed to elevate your building's environmental performance and occupant well-being, our innovative technology represents the pinnacle of heating and cooling solutions for tall structures. Perfect for new, existing and retrofit project where space is a constraint. Discover how Engineered Comfort's Hi-Rise Water Source Heat Pumps are redefining the standards of urban comfort and responsible design. Elevate your expectations; the future of high-rise climate control begins here.



Key Features and benefits • 44VH Series

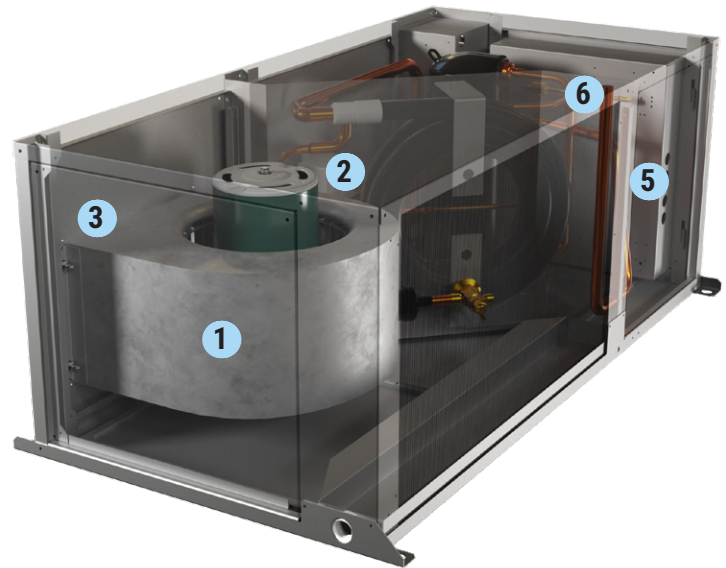


- 1 FAN ASSEMBLIES:** Forward curved, DWDI centrifuged type blower. • Single phase, 3-Speed ECM motors with thermal overload protection. • Quick disconnect motor connections. • Easily removable slide out fan/motor deck for service.
- 2 COMPRESSOR:** Highly efficient rotary (sizes 9 -15) and scroll (sizes 18+) compressors provide energy efficient operation. • Vibration isolated mounting and insulated compressor compartment allow for quiet operation.
- 3 BALL VALVES:** Shutoff valves with hose bib connection are standard on every unit.
- 4 FRONT RETURN PANEL:** Dual doors for separate access to fan and filter. • High performance louvered return air grille. • Quarter-turn cam lock fasteners. • Durable baked powder coat Appliance White paint finish.
- 5 CHASSIS:** Removable, allows staged installation and ease of

service and routine maintenance. By utilizing a single set of risers, Serenity® units stack from floor to floor to simplify installation. For staged installation projects, cabinets can be shipped separately from the refrigerant chassis. • The chassis, which includes the complete refrigerant circuit, slides into the cabinet after the construction debris has been removed to ensure trouble-free operation at start-up. • When a chassis requires service, it can be quickly replaced in a matter of minutes by sliding the existing chassis out and sliding a spare chassis into the cabinet.

- 6 FILTERS:** 1" throwaway standard (factory provided) or an optional 1" or 2" Merv 8 for improved indoor air quality.
- 7 CABINET:** 1/2" (13) Steri-liner, 4 lb/ft³ density foil backed insulation. • 1/2" (13) Fiber-free elastomeric closed cell foam insulation. • Manual or motorized outside air damper. • Custom built sub-base.

Key Features and benefits • 44PV and 44PH Series



- 1 FAN ASSEMBLIES:** Easily removable slide out fan/motor deck for service. • Single phase, 3-Speed ECM motors with thermal overload protection. • A large panel provides service access to the blower and motor. • All blower/motor assemblies have a removable orifice ring on the housing to accommodate motor and blower removal without disconnecting the unit from the ductwork.
- 2 COMPRESSOR:** Highly efficient rotary (sizes 9 -18) and scroll (sizes 24+) compressors provide energy efficient operation. • Vibration isolated mounting and insulated compressor compartment allow for quiet operation.
- 3 FIELD CONVERTIBLE FAN OUTLET:** Access panels are interchangeable to allow field conversion of the blower to provide maximum flexibility during installation.
- 4 SERVICE PORT CONNECTIONS:** Two service valves are located inside the compressor access panel, one on the low side and one on the high side of the refrigeration circuit. • Easily accessible for routine service.
- 5 SOLID STATE CONTROL BOARD:** Freeze protection - Factory set switch for water and water / glycol solution systems initiates a fault when temperatures exceed the selected limit for 30 continuous seconds. • Condensate overflow - The controller is designed to sense when condensate water levels

in the drain pan become excessively high. • Low pressure switch - A normally closed low refrigerant pressure switch is used to help protect the refrigerant circuit from excessively low refrigerant pressure. • Low liquid temp - Factory set switch for water and water / glycol solution systems initiates a fault when temperatures exceed the selected limit for 30 continuous seconds.

- 6 HIGH EFFICIENCY AIR FILTERS:** Optional High efficiency MERV 8, MERV 11 and MERV 13 pleated filters • Optional washable aluminum mesh filter.
- 7 HOT GAS REHEAT:** The hot gas reheat mode is designed to dehumidify the conditioned space with minimal change to the indoor air temperature and is controlled by a thermostat with an integral humidistat.
- 8 WATERSIDE ECONOMIZER:** The waterside economizer option helps to reduce energy consumption by using existing cold loop water temperature to condition a space without utilizing mechanical cooling. • The waterside economizer ships factory installed on the return air opening, upstream of the evaporator coil.
- 9 NON-FUSED DISCONNECT:** Optional non-fused disconnect switch. • The disconnect switch is used to break power to the unit for ease of field.

AHRI Performance Data

Model Series 44VH • Serenity Vertical Stack Water Source Heat Pump

Unit Size	D x W x H	TON	CFM	GPM	Cooling		Heating		Compressor
					Capacity (btuh)	EER	Capacity (btuh)	COP	
9	17 x 17 x 88	3/4	300	3.00	10,000	15.8	12,000	5.2	Rotary
12	17 x 17 x 88	1	400	3.50	12,400	15.7	14,500	5.1	Rotary
15	20 x 20 x 88	1 1/4	500	4.50	15,500	16.3	17,400	5.3	Rotary
18	20 x 20 x 88	1 1/2	625	5.50	18,500	16.0	21,000	5.0	Scroll
24	24 x 24 x 88	2	800	7.00	25,400	16.1	28,500	5.0	Scroll
30	24 x 24 x 88	2 1/2	1000	8.00	31,200	16.0	33,600	4.9	Scroll
36	24 x 24 x 88	3	1200	9.00	36,000	15.9	40,200	4.8	Scroll

Model Series 44PH • Serenity Horizontal Packaged Water Source Heat Pump

Unit Size	D x W x H	TON	CFM	GPM	Cooling*		Heating**		Compressor	Operating Weight (lbs)
					Capacity (btuh)	EER	Capacity (btuh)	COP		
6	34 x 20 x 11-1/2	1/2	200	2	6,000	17.0	7,500	5.6	Rotary	125
9	34 x 20 x 11-1/2	3/4	300	2.5	9,000	14.0	11,500	4.4	Rotary	128
12	34 x 20 x 11-1/2	1	400	3	12,500	13.0	15,000	4.4	Rotary	130
15	43 x 22 x 17	1 1/4	500	3.8	15,000	17.0	18,000	5.6	Rotary	180
18	43 x 22 x 17	1 1/2	600	4.5	18,000	17.0	21,600	5.6	Rotary	190
24	45 x 22 x 17	2	800	6	24,000	16.4	28,000	5.2	Scroll	230
30	45 x 22 x 17	2 1/2	1000	7.5	30,000	16.0	34,000	5.0	Scroll	235
36	55 x 22 x 19	3	1200	9	36,000	17.0	43,000	5.0	Scroll	280
42	55 x 22 x 22	3 1/2	1400	10.5	42,000	15.0	49,000	4.6	Scroll	320
48	55 x 25 x 22	4	1600	12	48,000	15.0	56,000	4.6	Scroll	325
60	55 x 25 x 22	5	2000	15	58,000	15.0	72,000	4.6	Scroll	340

Model Series 44PV • Serenity Vertical Packaged Water Source Heat Pump

Unit Size	D x W x H	TON	CFM	GPM	Cooling*		Heating**		Compressor	Operating Weight (lbs)
					Capacity (btuh)	EER	Capacity (btuh)	COP		
6	19 x 19 x 24	1/2	200	2	6,000	17.0	7,500	5.6	Rotary	135
9	19 x 19 x 24	3/4	300	2.5	9,000	14.0	11,500	4.4	Rotary	138
12	19 x 19 x 24	1	400	3	12,500	13.0	15,000	4.4	Rotary	140
15	22 x 22 x 36	1 1/4	500	3.8	15,000	17.0	18,000	5.6	Rotary	185
18	22 x 22 x 36	1 1/2	600	4.5	18,000	17.0	21,600	5.6	Rotary	195
24	22 x 22 x 40	2	800	6	24,000	16.4	28,000	5.2	Scroll	235
30	26 x 25 x 40	2 1/2	1000	7.5	30,000	16.0	34,000	5.0	Scroll	255
36	26 x 25 x 45	3	1200	9	36,000	17.0	43,000	5.0	Scroll	280
42	26 x 25 x 45	3 1/2	1400	10.5	42,000	15.0	49,000	4.6	Scroll	290
48	32 x 25 x 45	4	1600	12	48,000	15.0	56,000	4.6	Scroll	320
60	32 x 25 x 45	5	2000	15	58,000	15.0	72,000	4.6	Scroll	340

* Based on 86°F Entering Water Temp., 80°F DB 67°F WB Air Temperature. Performance based upon 208/60/1 voltage.

** Based on 68°F Entering Water Temp., 68°F DB 59°F WB Air Temperature.

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About Engineered Comfort

Engineered Comfort is known for our industry leading customer focused approach to providing innovative commercial and industrial HVAC products. Engineered Comfort is a branch of Nailor Industries, a manufacturer of a unique and comprehensive line of products essential for a well designed HVAC system. Product offerings include Air Control

and Distribution products, VAV Terminal Units, Green Building products, Fan Coil Units, Electric Duct Heaters, Sound Attenuators, Air Handling Units and Filter Housings. Coupled with a wide range of product offerings and industry leading design, testing and manufacturing capabilities, Nailor Industries offers a single source solution for all of your HVAC needs.



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