



40WW Commercial Heat Pump



Introduction

Nyle Thermal 40WW is a Water to Water source heat pump, capable of averaging 40 kilowatts of heating capacity.

Standard Features

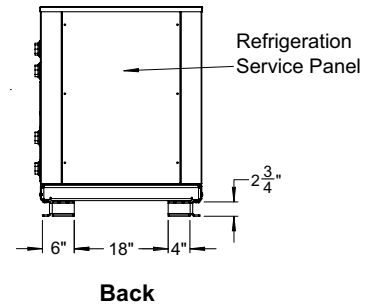
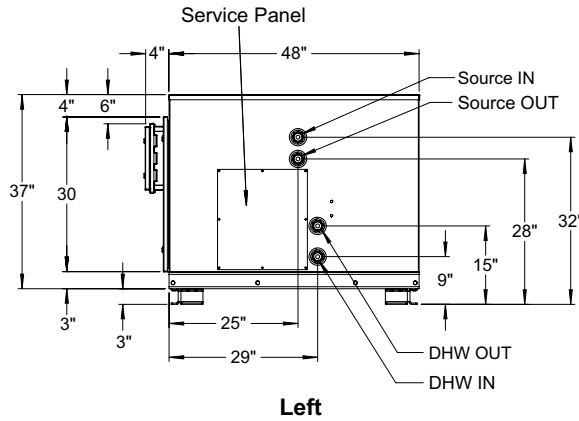
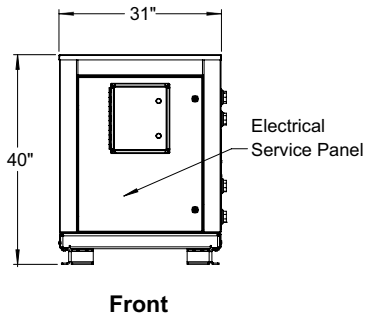
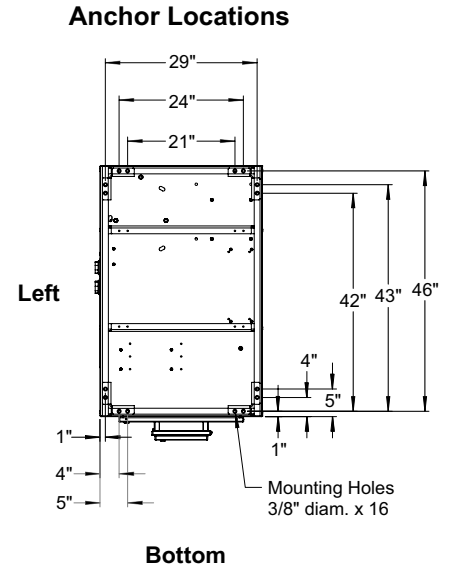
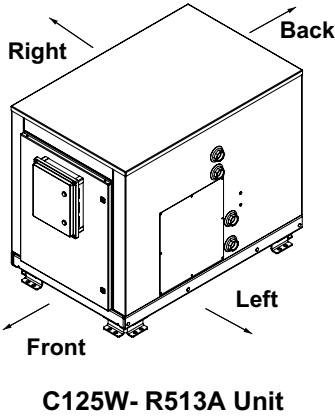
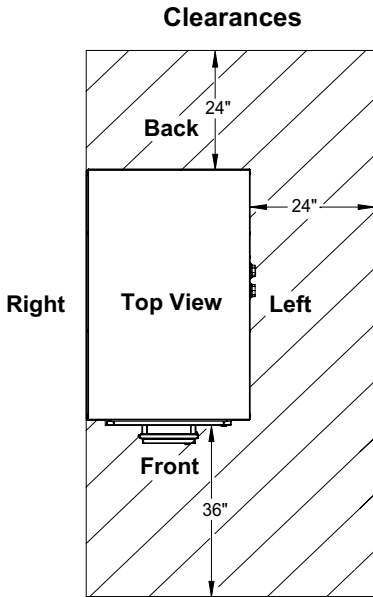
- Low GWP Refrigerant for SNAP Compliance
- Integral Circulator with improved performance to simplify piping
- Power Monitoring for Compressor Protection
- Build America Buy America compliant
- Monobloc design for easy installation
- High efficiency, water source heat pump
- Industry leading factory support and order lead times

Base Model Configurations

✓	Configuration
	Single-Pass Temperature Control OR Multi-Pass Temperature Control
	208-230V Power OR 460V Power OR

Available Options

✓	Option	Description
	Add BMS Gateway	Single heat pump communication gateway to building management systems
	Add Master Control Panel	Provides staging control for multiple heat pumps/tanks. Can take a BMS Gateway
	Add Stacking Frame	A steel frame to allow vertical stacking of up to two heat pumps
	Add Extended Warranty	Extends standard one year compressor warranty to five years
	Add International Crating	Required for cross-border shipments
	Add Factory Startup	Provides for a factory technician to perform the initial on-site startup process



Unit Specifications	Single Pass	Multi Pass
DHW Water Connections	1½" FPT Copper	
Source Water Connections	1½" FPT Copper	
DHW Design Water Flow Rate	12.0 GPM	20.0 GPM
Source Water Flow Rate	23 GPM	
DHW Water Circuit Pressure Drop ¹	7.1 ft hd	8.4 ft hd
DHW Water Circuit Cv Value ¹	7.0	11.0
Source Water Circuit Pressure Drop	13.9 ft hd	
Source Water Circuit Cv Value	9.0	
DHW External Head Allowance ²	9.7 ft hd	13.4 ft hd
Minimum Cold Cycle Volume ⁴	61.0 Gal.	
Minimum Warm Cycle Volume ⁵	N/A	171 Gal.
Minimum Tank Volume ⁶	N/A	427 Gal.
Nominal DOE Capacity	137,160 BTUs/hr	
Nominal DOE Performance	4.4 COP	
Recovery Rate ³	233 Gal/hr	
Compressor Type	Scroll	
Refrigerant	R513A	
Factory Charge	14 lbs.	
Max Water Temp	160°F	
Max Working Pressure DHW	150 psig	
Max Working Pressure Source	300 psig	
Source Water Operating Range	35° - 120°F	
Minimum Ambient Exposure	33°F	
Dimensions	52" L x 31" W x 40" H	
Sound Pressure ⁷	Front: 63.9 dB, Left: 66.8 dB, Right: 65.9 dB, Rear: 65.7 dB	
Weight	Dry 649 lbs. / Operating 667 lbs.	
Salt Spray Resistance Cabinet/Evap	1000 hours	

Electrical Specifications		
Main Power Input	208-230/3/60	460/3/60
Minimum Circuit Ampacity (MCA)	64	30
Minimum Overcurrent Protection (MOCP)	110	50
Rated Load Amps (RLA)	52	25
Short Circuit Current Rating (SCCR)	100	
Internal Component Data		
Compressor Locked Rotor Amps (LRA)	300	150
Compressor Horsepower (HP)	10	

Notes:

Certified to UL60335-1, UL60335-2-40, CSA C22.2 60335-1, CSA 60335-2-40 (LC16116-1).

¹ Water Circuit Pressure Drop and Heat Pump Cv value apply to external pump applications.

² Pressure drop allowed by internal circulator for external piping, at design flow rate.

³ Recovery Rate at 80 Deg. F source 100% water, DHW 50 EWT 140 LWT.

⁴ Cold Cycle volume is the volume below the cold trigger sensor. Cold in water over 70 Deg. F will need more volume.

⁵ Warm Cycle volume is the volume of water below the warm/recirc trigger sensor.

⁶ Tank volume is based on individual project demands, but cannot be lower than this minimum value in any case.

⁷ Sound Pressure recorded 3' from unit face, 3' from ground.

Performance Test Data**Test Conditions: 50 EWT, 140 LWT, 100% Water Source Side**

Entering Source Water	Supply Heating Capacity (Btu/hr)	Source Cooling Capacity (Btu/hr)	Power Input (KW)	Heating COP	Cooling COP	Combined COP
90°F	143,600	108,456	10.3	4.1	3.1	7.2
80°F	129,000	93,515	10.4	3.6	2.6	6.3
70°F	114,400	78,574	10.5	3.2	2.2	5.4
60°F	99,700	64,898	10.2	2.9	1.9	4.7
50°F	85,000	51,221	9.9	2.5	1.5	4.0
40°F	77,200	45,468	9.3	2.4	1.4	3.9