nylethermal.com

UNIT SPECIFICATIONS

80WW Commercial Heat Pump - Modular System

Introduction

Nyle Thermal 80WW is a Water to Water source heat pump, capable of averaging 80 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
- Modular design with zero side clearance required

Base Model Configurations

✓	Configuration
◯	Single-Pass Temperature Control OR
◯	Multi-Pass Temperature Control
◯	208-230v Power OR
◯	460v Power OR
◯	575v Power

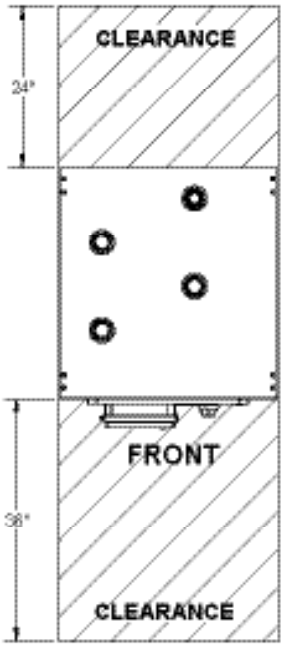
MODULAR UNIT

This model is modular, and can be mounted with up to 5 other modules with a frame and control panel to site-build a larger single heat pump with a minimal footprint. Capacities range from 80 kW to 480 kW for a single skidded configuration.

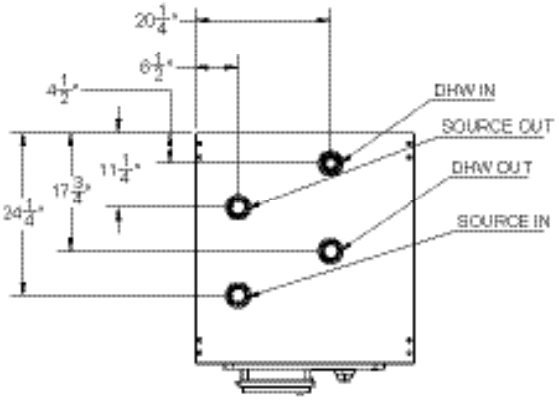
Available Options

✓	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 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

Water Connections and Required Clearances



TOP



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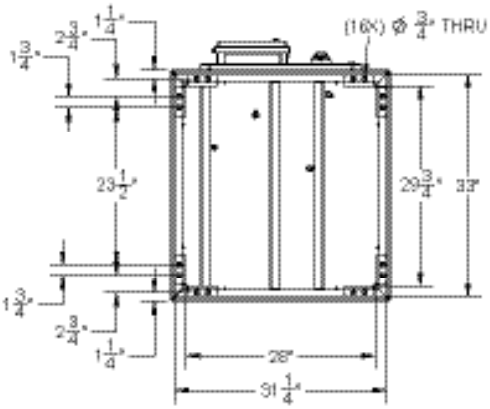
Anchor Locations



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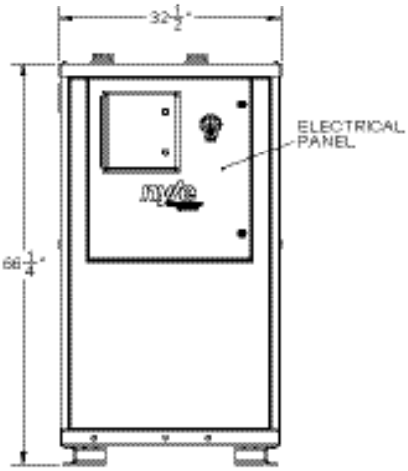
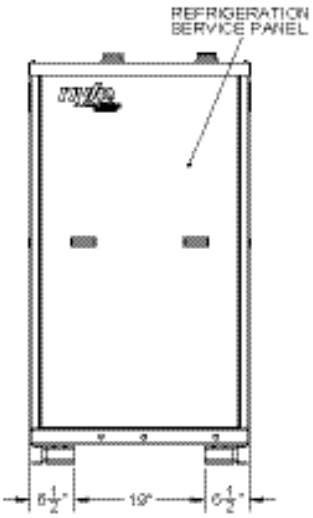


FRONT

LEFT



BACK

80WW – Unit Data

Unit Specifications	Single Pass	Multi Pass
DHW Water Connections	2" FPT Copper	
Source Water Connections	2" FPT Copper	
DHW Design Water Flow Rate	22.0 GPM	36.0 GPM
Source Water Flow Rate	48 GPM	
DHW Water Circuit Pressure Drop[1]	16.9 ft hd	7.4 ft hd
DHW Water Circuit Cv Value[1]	8	20
Source Water Circuit Pressure Drop	11.1	
Source Water Circuit Cv Value	22	
DHW External Head Allowance[2]	19.5 ft hd	18.7 ft hd
Min. Cold Cycle Volume[4]	119	
Min. Warm Cycle Volume[5]	N/A	334
Min. Tank Volume[6]	N/A	835
Nominal DOE Capacity	278,800	
Nominal DOE Performance	4.1	
Recovery Rate[3]	664 Gal/hr	
Compressor Type	Scroll	
Refrigerant	R513A	
Factory Charge	38.5 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	
Min. Ambient Exposure	33°F	
Dimensions	32½" L x 39" D x 66¼" H	
Sound Pressure[7]	72.1 dB Front, 71.9 dB Left, 70.9 dB Right, 73.6 dB Rear	
Weight	Dry 1074 lbs. / Operating 1113 lbs.	
Salt Spray Resistance Cabinet/Evap	1000 hours	

Electrical Specifications			
Main Power Input	208-230/3/60	460/3/60	575/3/60
Minimum Circuit Ampacity (MCA)	108	55	38
Maximum Overcurrent Protection (MOCP)	175	100	60
Rated Load Amps (RLA)	88	45	30
Short Circuit Current Rating (SCCR)	100		
Internal Component Data			
Compressor Locked Rotor Amps (LRA)	605	272	238
Compressor Horsepower (HP)	25		

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

Performance 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	280,400	203,630	22.5	3.7	2.7	6.3
80°F	253,600	178,536	22.0	3.4	2.4	5.8
70°F	226,900	153,542	21.5	3.1	2.1	5.2
60°F	200,600	129,460	20.9	2.8	1.8	4.6
50°F	174,400	105,478	20.2	2.5	1.5	4.1
40°F	152,200	87,031	19.1	2.3	1.3	3.7

80WW – Modular Configurations

160WW
160 kW heating capacity

240WW
240 kW heating capacity

320WW
320 kW heating capacity

480WW
480 kW heating capacity