



55AW Commercial Heat Pump



Introduction

Nyle Thermal 55AW is an Air to Water source heat pump, capable of averaging 55 kilowatts of heating capacity

Standard Features

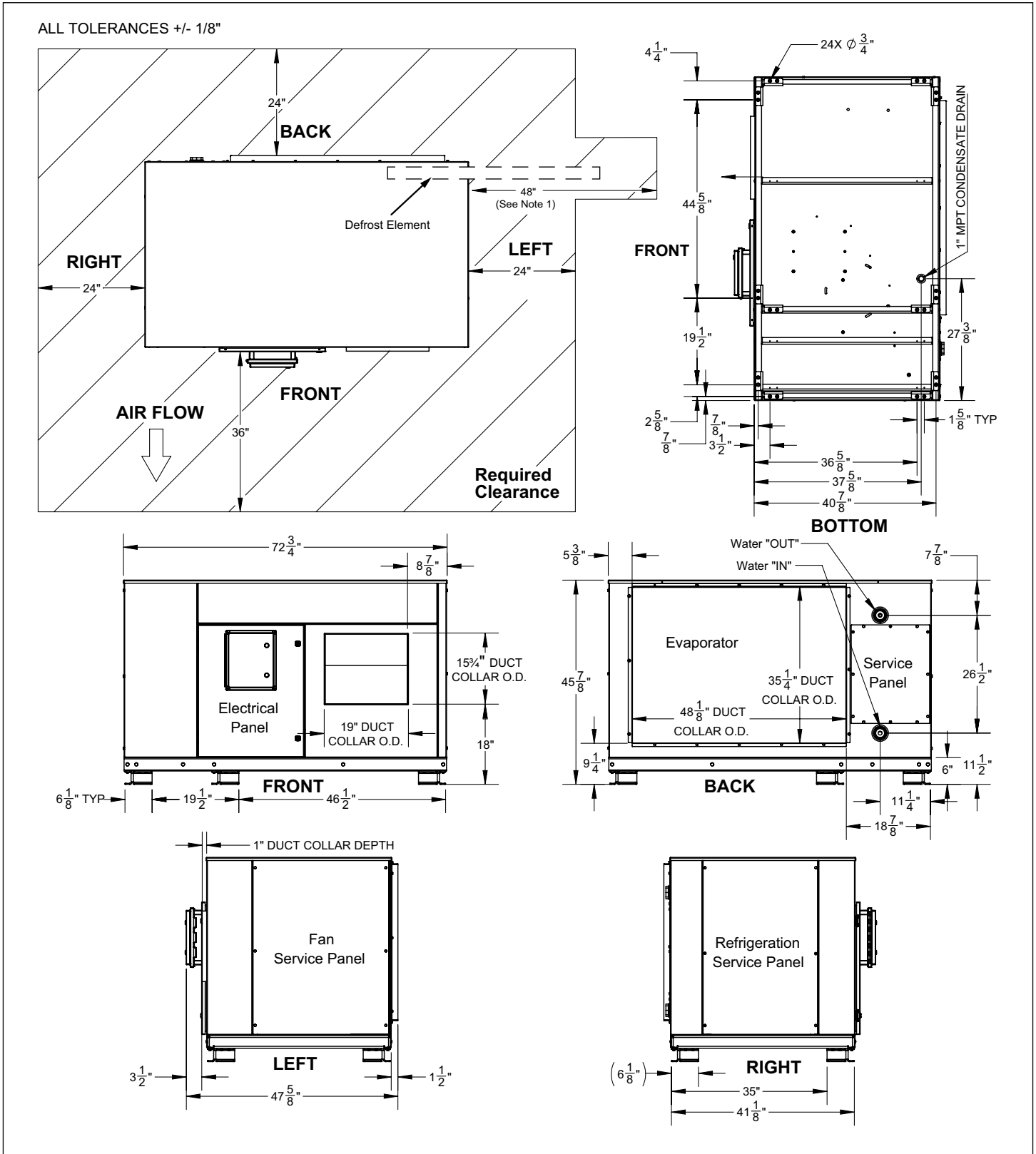
- Low GWP Refrigerant for SNAP Compliance
- Integral Circulator with improved performance to simplify piping
- Build America Buy America compliant
- Active Defrost/CWP - extends envelope to 35 degree fahrenheit ambient, increases defrosting capabilities
- Monobloc design for easy installation
- High efficiency, warm climate, air-source heat pump
- Industry leading factory support and order lead times
- Active defrost and two stages of onboard freeze protection

Base Model Configurations

✓	Configuration
	Single-Pass Temperature Control OR Multi-Pass Temperature Control
	Ductless OR Ducted Configuration
	208-230v Power OR 460v Power

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
	Add Remote Outdoor Sensor	Allows outdoor temperature sensing for interior ducted applications



Clearance Note:

1. Defrost elements pull to the left side, and would require 48" of clearance to service in place.
To avoid additional service clearance, make provisions to disconnect and move the unit for this rare failure condition if necessary.

Unit Specifications	Single Pass	Multi Pass
Water Connections	2" FPT Copper	
Design Water Flow Rate	19.8 GPM	32.9 GPM
Water Circuit Pressure Drop ¹	6.3 ft hd	5.0 ft hd
Heat Pump Cv Value ¹	12.0	22.3
External Head Allowance ²	16.0 ft hd	19.0 ft hd
Min. Cold Cycle Volume ⁴	110	
Min. Warm Cycle Volume ⁵	N/A	300
Min. Tank Volume ⁶	N/A	750
Recovery Rate ³	292 Gal/hr	
Compressor Type	Scroll	
Refrigerant	R513a	
Factory Charge	37 lbs.	
Max Water Temp	160°F	
Max Working Pressure	150 psig	
Ambient Operating Range	35° - 120°F	
Minimum Ambient Exposure	-13°F	
Dimensions	72¾" L x 47⅝" W x 45⅞" H	
Air Flow Rate	6,050 CFM	
Standard Sound Rating ⁷	83.3 dB (Front) / 73.7 dB (Left) / 74.3 dB (Right) / 77.5 dB (Rear)	
External Static Pressure for Ducting	0.80 in wcg	
Weight	Dry 1330 lbs. / Operating 1370 lbs.	
Salt Spray Resistance Cabinet/Evap	1000 hours	
Certifications	UL60335-1, UL60335-2-40, CSA C22.2 60335-1, CSA 60335-2-40 (LC16116-1)	

Notes:

- 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 degree F ambient, 50 EWT, 140 LWT, 50% RH.
- ⁴ Cold Cycle volume is the volume below the cold trigger sensor. Cold in water over 70 degree 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.

Electrical Data

C185A Blower Fan		
Main Power Input	208-230/3/60	460/3/60
Minimum Circuit Ampacity (MCA)	102	47
Maximum Overcurrent Protection (MOCP)	175	80
Rated Load Amps (RLA)	83	38
Short Circuit Current Rating (SCCR)	100	
Internal Component Data		
Compressor Locked Rotor Amps (LRA)	505	225
Compressor Horsepower (HP)	20	

Performance Test Data

Test Conditions: 50 EWT, 140 LWT, 50% RH

Ambient Air Condition	Supply Heating Capacity (Btu/hr)	Air Cooling Capacity (Btu/hr)	Power Input (KW)	Heating COP	Cooling COP	Combined COP
90°F	185,560	124,485	17.9	3.0	2.0	5.1
80°F	171,600	110,184	18.0	2.8	1.8	4.6
70°F	157,700	95,943	18.1	2.6	1.6	4.1
60°F	148,000	87,778	17.7	2.5	1.5	3.9
50°F	138,400	79,714	17.2	2.4	1.4	3.7
40°F	125,400	69,102	16.5	2.2	1.2	3.5