



75AW Commercial Heat Pump



Introduction

Nyle Thermal 75AW is an Air to Water source heat pump, capable of averaging 75 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, 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
	208-230V Power OR
	460V Power

Available Options

✓	Option	Description
	Add BMS Gateway	Single heat pump communication gateway to building management systems
	Add Active Defrost	Heat tracing and defrost elements to drop ambient operational range
	Add Master Control Panel	Provides staging control for multiple heat pumps/tanks. Can take a BMS Gateway
	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
Water Connections	2" FPT Copper	
Design Water Flow Rate	23.2 GPM	42.0 GPM
Water Circuit Pressure Drop ¹	7.8 ft hd	5.6 ft hd
Heat Pump Cv Value ¹	12.6	27.1
External Head Allowance ²	12.2 ft hd	16.9 ft hd
Min. Cold Cycle Volume ⁴	123 Gal.	134 Gal.
Min. Warm Cycle Volume ⁵	N/A	375
Min. Tank Volume ⁶	N/A	938
Nominal DOE Capacity	195,786 BTUs/hr	
Nominal DOE Performance	3.3 COP	
Recovery Rate ³	333 Gal/hr	
Compressor Type	Reciprocating	
Refrigerant	R513A	
Factory Charge	54 lbs.	
Max Water Temp	160°F	
Max Working Pressure	150 psig	
Ambient Operating Range ⁸	40° – 120°F (35° w/ Active Defrost Package)	
Minimum Ambient Exposure	-13°F	
Dimensions	54" L x 84-5/8" D x 75-5/8" H	
Air Flow Rate	8,000 CFM	
Standard Sound Rating ⁷	73.0 dB (Front) / 73.8 dB (Left) / 75.1 dB (Right) / 73.9 dB (Rear)	
External Static Pressure for Ducting	0.03 in. wcg	
Weight	Dry 2100 lbs. / Operating 2151 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.
- ⁸ Ambient Range extends down to 35 degree F with optional Active Defrost package.

Electrical Data

75AW Blower Fan		
Main Power Input	208-230/3/60	460/3/60
Minimum Circuit Ampacity (MCA)	114	58
Maximum Overcurrent Protection (MOCP)	200	100
Rated Load Amps (RLA)	93	47
Short Circuit Current Rating (SCCR)	100	
Internal Component Data		
Compressor Locked Rotor Amps (LRA)	262	218
Compressor Horsepower (HP)	25	

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	224,740	158,888	19.3	3.4	2.4	5.8
80°F	196,900	133,778	18.5	3.1	2.1	5.2
70°F	169,083	108,691	17.7	2.8	1.8	4.6
60°F	150,700	94,061	16.6	2.7	1.7	4.3
50°F	132,425	79,539	15.5	2.5	1.5	4.0
40°F	114,050	66,623	13.9	2.4	1.4	3.8