nylethermal.com

UNIT SPECIFICATIONS

100AW Commercial Heat Pump

Introduction

Nyle Thermal 100AW is an Air to Water source heat pump, capable of averaging 100 kilowatts of heating capacity

Standard Features

- Low GWP Refrigerant for SNAP Compliance
- Integral Circulator and ECM Fans
- Build America Buy America compliant
- Monobloc design for easy installation
- High efficiency, cold climate, air-source heat pump
- Industry leading factory support and order lead times
- Active defrost and two stages of onboard freeze protection
- Dual power feed for easy generator backup of freeze protection functions
- Fully Ductable on intake and discharge sides

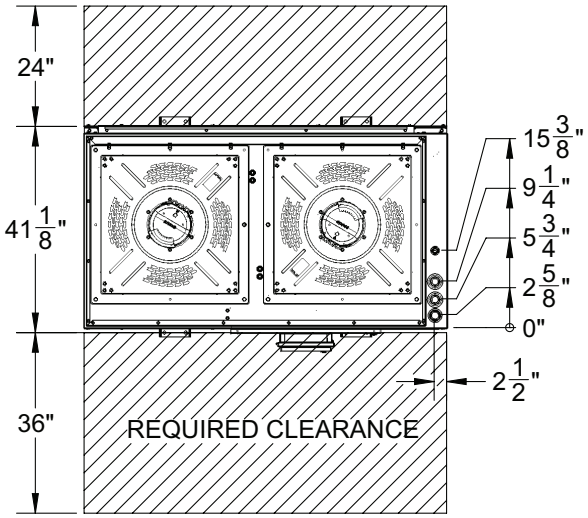
Base Model Configurations

✓	Configuration
	Single-Pass Temperature Control
	ECM Blower (Ducted/Ductless)
	208-230v Power OR 460v Power

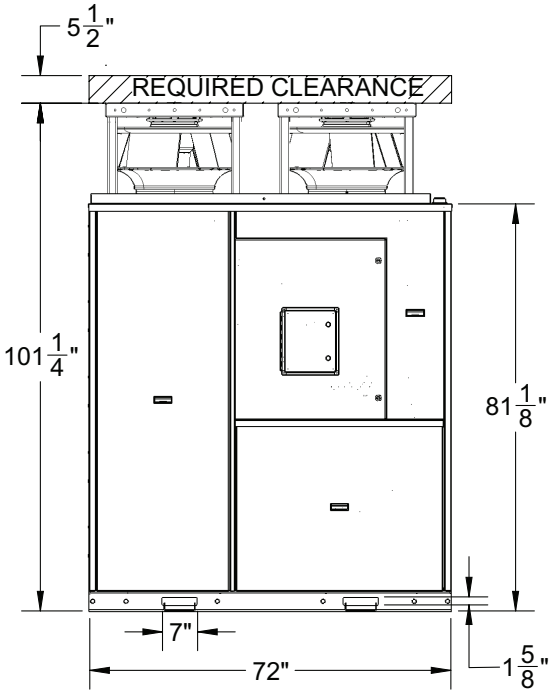
Available Options

✓	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 International Crating	Required for cross-border shipments
	Add Factory Startup	Provides for a factory technician to perform the initial on-site startup process
	Add Ductless Cowl	Covers discharge fans for protection in ductless applications
	Add Remote Outdoor Sensor	Allows outdoor temperature sensing for interior ducted applications
	Add Unified Power Package	Eliminate dual power feed for a single point power configuration
	Service Part Kit	See SPK Submittal for details/options.
	5 Year Compressor Warranty	Extends standard one year warranty to 5 years

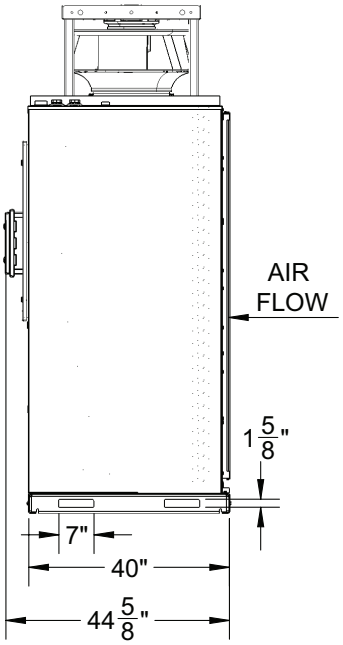
100AW – Unit Dimensions



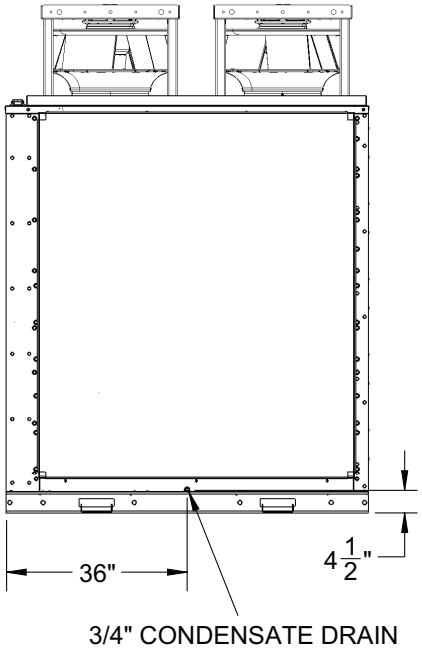
TOP



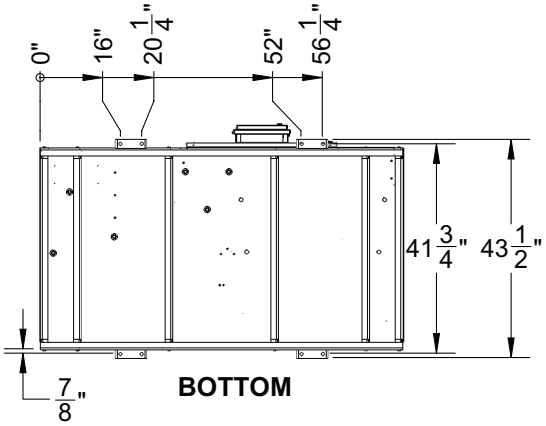
FRONT



LEFT

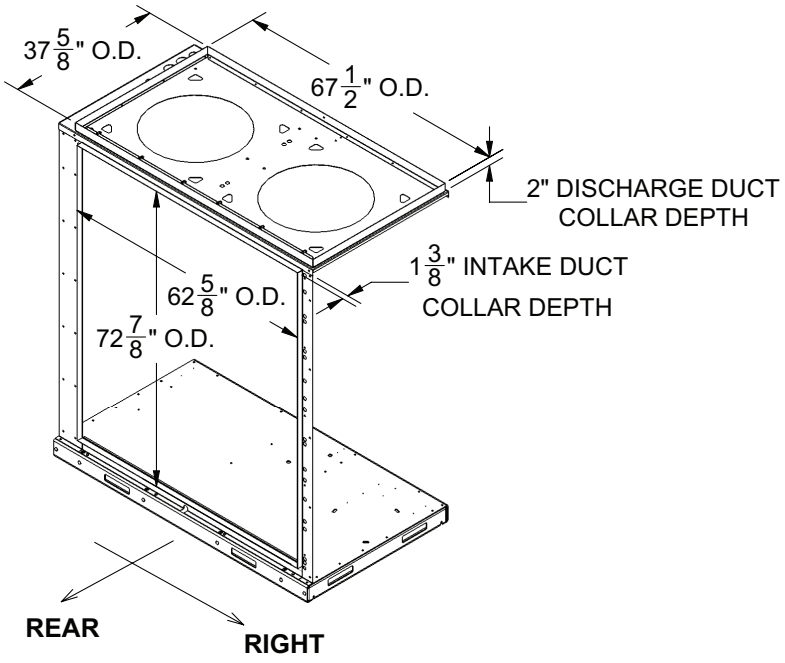


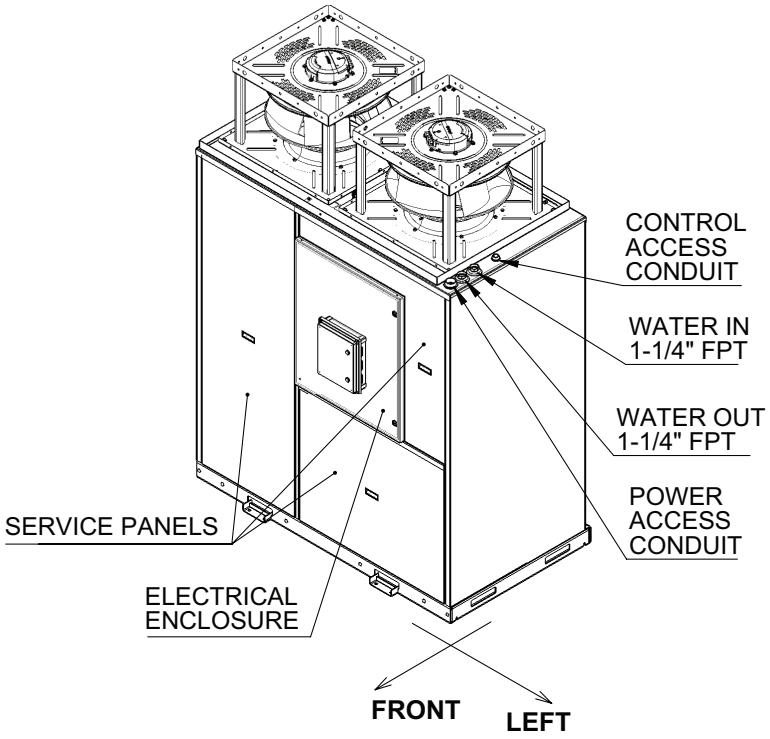
REAR



BOTTOM

100AW – Duct Collar Dimensions





nyle thermal

100AW – Unit Data

Unit Specifications		Single Pass			
Water Connections		1¼" FPT Copper			
Design Water Flow Rate		16 GPM			
External Head Pressure Allowed by Unit [3]		14.0 ft hd			
Recovery Rate [1]		405 Gal/hr			
Compressor Type		Reciprocating			
Refrigerant		R513A			
Factory Charge		60 lbs.			
Max Water Temp		160°F			
Max Working Pressure		150 psig			
Ambient Operating Range		Standard: 10° - 120°F			
Minimum Ambient Exposure		-15°F			
Dimensions		40" L x 72" W x 101¼" H			
Air Flow Rate		16,000 CFM			
Standard Sound Rating [2]		78 dBA Max. Standard / 73.3 dBA Max. Quiet Mode.			
External Static Pressure for Ducting		1.5 in wcg (Blower Only)			
Weight		Dry 2,300 lbs. / Operating 2,400 lbs.			
Electrical Specifications		**100AW – Standard Power Package**		**100AW – Unified Power Package**	
Voltage		208-230/3/60	460/3/60	208-230/3/60	460/3/60
Wire and Disconnect Sizing	MCA	133	69	140	72
	MOCP	222	113	228	116
Running Load Amps (RLA)		110	57	110	57
Power Factor		0.86		0.86	
Short Circuit Current Rating (SCCR)		100		100	
Internal Component Data					
Fan Motor Full Load Amps FLA		10.1	6.0	10.1	6.0
Fan Horsepower (HP)		5.1	6.02	5.1	6.02
Compressor Horsepower (HP)		30		30	
Compressor Locked Rotor Amps (LRA)		294	245	294	245
Internal Pump Full Load Amps (FLA)		On Back-up Feed		2.1	
Backup Circuit Single Phase Power Feed		**120/1/60**			
Min. Circuit Ampacity (MCA)		14	14		
Full Load Amps (FLA)		11.3	11.1		
Max. Overcurrent Protection (MOCP)		25	20		
Internal Pump Full Load Amps (FLA)		2.1	2.1		
Circuit Power		1360	1330		
Short Circuit Current Rating (SCCR)		100			

Notes:

Certified to UL 1995 on Certificate LC16035-1

[1] Water heated from 50°F to 150°F with 75°F entering air temperature and 60% relative humidity.

[2] Sound Pressure recorded 3' from unit face, 3' from ground Single point electric service.

[3] Pressure drop allowed by integral circulator for external piping.

nyle thermal

100AW – Performance Data

140° F Leaving Water Temperature (LWT)										
H2O inlet temperature 40°F										
Ambient DB °F	**10**	**24**	**30**	**40**	**50**	**60**	**70**	**80**	**90**	**100**
Heating capacity (kbtu/h)	98	126	141	171	205	241	287	333	351	351
Cooling capacity (kbtu/h)	60	76	88	112	140	171	211	252	269	269
Unit heating COP	2.4	2.4	2.5	2.8	3.0	3.2	3.4	3.6	3.8	3.9
H2O flow rate (gpm)	2.0	2.5	2.8	3.4	4.1	4.8	5.7	6.6	7.0	7.0
H2O inlet temperature 50°F										
Ambient DB °F	**10**	**24**	**30**	**40**	**50**	**60**	**70**	**80**	**90**	**100**
Heating capacity (kbtu/h)	98	126	141	171	205	241	287	333	351	351
Cooling capacity (kbtu/h)	60	76	88	112	140	171	211	252	269	269
Unit heating COP	2.4	2.4	2.5	2.8	3.0	3.2	3.4	3.6	3.8	3.9
H2O flow rate (gpm)	2.2	2.8	3.1	3.8	4.5	5.3	6.4	7.4	7.8	7.8
H2O inlet temperature 60°F										
Ambient DB °F	**10**	**24**	**30**	**40**	**50**	**60**	**70**	**80**	**90**	**100**
Heating capacity (kbtu/h)	98	126	141	171	205	241	287	333	351	351
Cooling capacity (kbtu/h)	60	76	88	112	140	171	211	252	269	269
Unit heating COP	2.4	2.4	2.5	2.8	3.0	3.2	3.4	3.6	3.8	3.9
H2O flow rate (gpm)	2.4	3.1	3.5	4.3	5.1	6.0	7.2	8.3	8.8	8.8
H2O inlet temperature 70°F										
Ambient DB °F	**10**	**24**	**30**	**40**	**50**	**60**	**70**	**80**	**90**	**100**
Heating capacity (kbtu/h)	98	126	141	171	205	241	287	333	351	351
Cooling capacity (kbtu/h)	60	76	88	112	140	171	211	252	269	269
Unit heating COP	2.4	2.4	2.5	2.8	3.0	3.2	3.4	3.6	3.8	3.9
H2O flow rate (gpm)	2.8	3.6	4.0	4.9	5.8	6.9	8.2	9.5	10.0	10.0

Note: All conditions are at 50% relative humidity.

nyle thermal

100AW – Performance Data

120° F Leaving Water Temperature (LWT)										
H2O inlet temperature 40°F										
Ambient DB °F	**10**	**24**	**30**	**40**	**50**	**60**	**70**	**80**	**90**	**100**
Heating capacity (kbtu/h)	106	139	156	187	233	264	308	351	398	398
Cooling capacity (kbtu/h)	68	93	107	133	165	202	242	282	327	327
Unit heating COP	2.6	2.9	3.0	3.3	3.8	3.9	4.1	4.4	4.9	5.0
H2O flow rate (gpm)	2.7	3.5	3.9	4.7	5.8	6.6	7.7	8.8	9.9	9.9
H2O inlet temperature 50 °F										
Ambient DB °F	**10**	**24**	**30**	**40**	**50**	**60**	**70**	**80**	**90**	**100**
Heating capacity (kbtu/h)	106	139	156	187	233	264	308	351	398	398
Cooling capacity (kbtu/h)	68	93	107	133	165	202	242	282	327	327
Unit heating COP	2.6	2.9	3.0	3.3	3.8	3.9	4.1	4.4	4.9	5.0
H2O flow rate (gpm)	3.0	4.0	4.4	5.3	6.6	7.5	8.8	10.0	11.3	11.3
H2O inlet temperature 60°F										
Ambient DB °F	**10**	**24**	**30**	**40**	**50**	**60**	**70**	**80**	**90**	**100**
Heating capacity (kbtu/h)	106	139	156	187	233	264	308	351	398	398
Cooling capacity (kbtu/h)	68	93	107	133	165	202	242	282	327	327
Unit heating COP	2.6	2.9	3.0	3.3	3.8	3.9	4.1	4.4	4.9	5.0
H2O flow rate (gpm)	3.5	4.6	5.2	6.2	7.7	8.8	10.2	11.7	13.2	13.2
H2O inlet temperature 70°F										
Ambient DB °F	**10**	**24**	**30**	**40**	**50**	**60**	**70**	**80**	**90**	**100**
Heating capacity (kbtu/h)	106	139	156	187	233	264	308	351	398	398
Cooling capacity (kbtu/h)	68	93	107	133	165	202	242	282	327	327
Unit heating COP	2.6	2.9	3.0	3.3	3.8	3.9	4.1	4.4	4.9	5.0
H2O flow rate (gpm)	4.2	5.5	6.2	7.4	9.3	10.5	12.3	14.0	15.9	15.9

Note: All conditions are at 50% relative humidity.