



Unit Specifications

Alectro™ HPB179 Heat Pump Boiler

Job Name _____ Date _____

Heat Pump Reference _____

Introduction

The Nyle Systems “Alectro” Heat Pump Boiler is a monobloc air source heat pump to serve as a boiler replacement on hydronic systems with high water temperature requirements. It is designed to simplify deployment on a wide variety of commercial hydronic heating systems. This product offers best-in-class performance and reliability for high-temperature water applications.

Standard Features

- Low GWP Refrigerant
- Integral EC circulator and Fans
- Over 55% domestic content available with optional BABA construction
- 170°F- maximum water temperature at 30°F Ambient
- 160°F- maximum water temperature at 18°F Ambient
- 140°F- maximum water temperature at 10°F Ambient
- Wide variety of operating water side Delta-T conditions
- Optimized for primary/secondary integration into existing hot water loops

Note: For units produced 4/1/25 to:



- Built-in outdoor reset and fixed temperature demand capability
- Fully ductable, high static fans with separate fan demand contact
- Controllable w/external controls, BMS, or internal sensors
- Industry leading factory support and order lead times

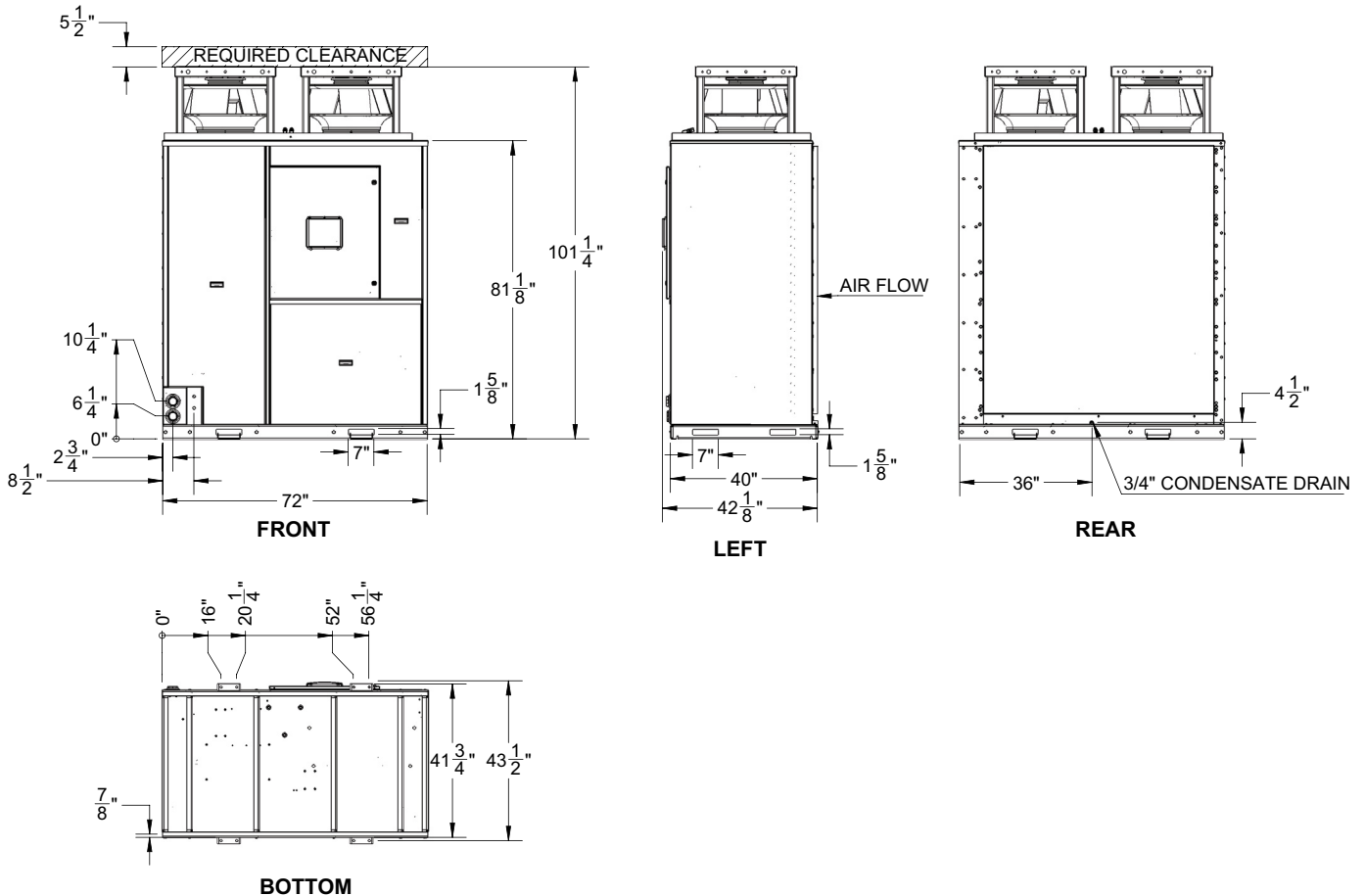
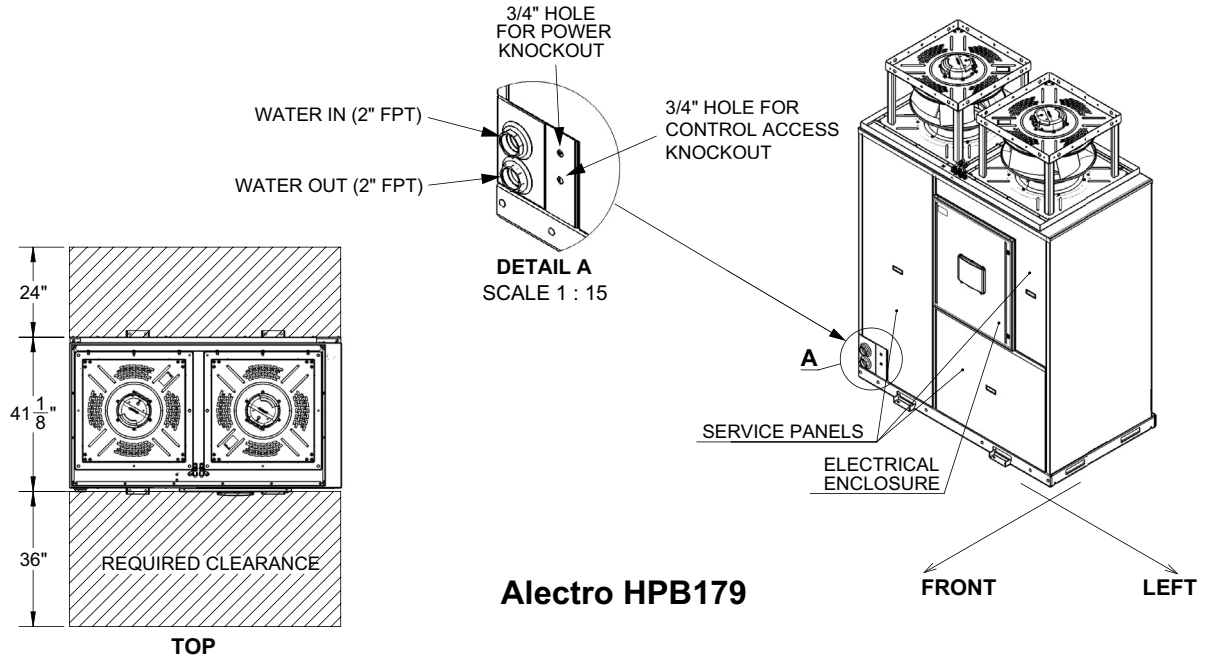
Base Model Configurations

✓	Power			
	208v		230v	460v Power
✓	Ducting			
	Ductless		Ducted	
✓	Construction			
	Standard		BABA Compliant	
✓	Warranty			
	Basic 1-year parts (included)		NyleSure™ Compressor 5-year extended, compressor	NyleSure™ Plus 5-year extended, compressor + parts

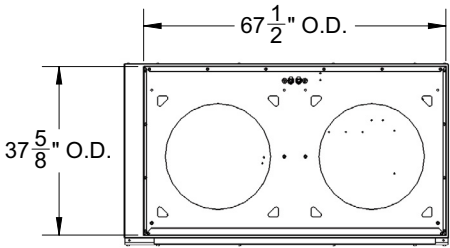
Available Options

✓	Option	Description
	Add Remote Outdoor Sensor	Allows outdoor temperature sensing for interior ducted applications
	Add Ductless Cowl	Covers fans for protection in ductless applications
	Add BMS Gateway	Single heat pump communication gateway to building management systems
	Add Lockable Enclosure	Allows field-supplied padlock to secure electrical enclosure
	Add Master Control Panel	Provides staging controls for up to 50 heat pumps and two water temperatures
	Add Factory Startup	Provides for a factory technician to perform the initial on-site startup process

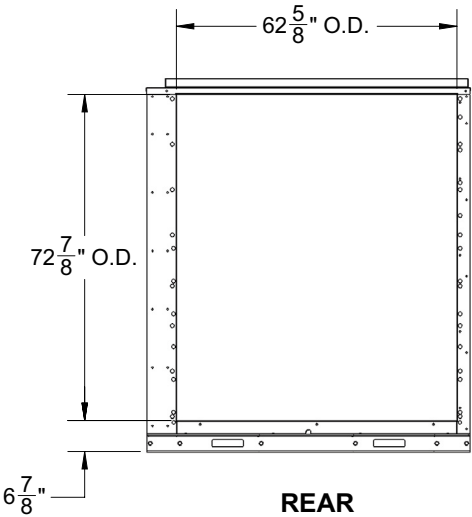
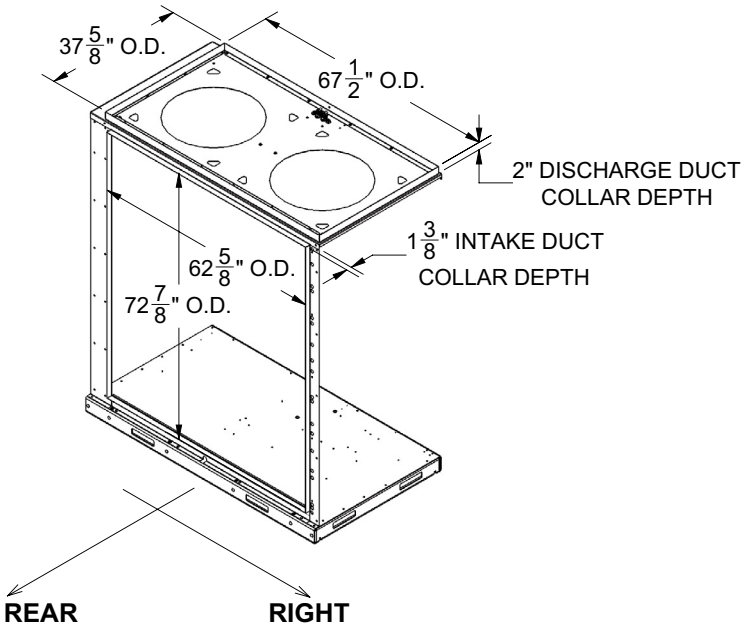
Alectro HPB179 – Unit Dimensions



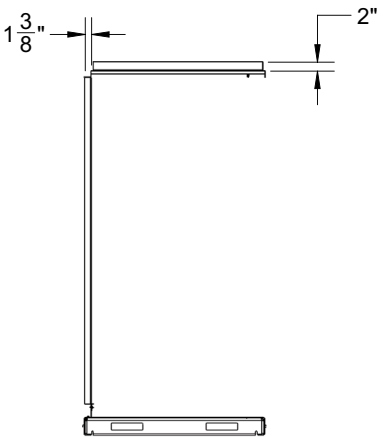
Alectro HPB179 – Duct Collar Dimensions



TOP



REAR



RIGHT

Alectro HPB179 – Unit Data

Unit Specifications	
Water Connections	2" FPT
Design Water Flow Rate	50.0 GPM
External Head Allowance ¹	16.0 Ft. Hd.
Minimum Cycling Volume (15dT) ²	385 Gal.
Minimum Cycling Volume (30dT) ²	192 Gal.
Compressor Type	Reciprocating
Refrigerant	R513A
Factory Charge	73 lbs.
Outlet Water Temperature Range	100-170°F
Maximum Working Pressure	145 psig
Ambient Operating Range	10 - 100°F
Minimum Ambient Exposure	-13°F
Dimensions	72" L x 40" D x 101-1/4" H
Design Air Flow	13,300 CFM
Sound Pressure ³	76.5 dBA (Front) / 71.9 dBA (Left) / 72.0 dBA (Right) / 77.9 dBA (Rear)
External Static Pressure for Ducting	3.1 inch wcg
Weight	2,220 lbs. (Dry) / 2,273 lbs. (Operating)
Salt Spray Resistance Cabinet/Evap	1000 Hrs.
Certifications	UL60335-1, UL60335-2-40, CSA C22.2 60335-1, CSA 60335-2-40

Notes:

¹ Pressure drop allowed by internal circulator for external piping, at design flow rate.

² Minimum Cycling Volume is the minimum water volume of the HP piping circuit at the specified firing differential.

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

Alectro HPB179 – Electrical Data



Electrical Specifications		
Main Power Feed	208-230/3/60	460/3/60
Minimum Circuit Ampacity (MCA)	135	69
Maximum Overcurrent Protection (MOCP)	225	110
Rated Load Amps (RLA)	113	57
Short Circuit Current Rating (SCCR)	100 kVA	
Internal Component Data		
Compressor Locked Rotor Amps (LRA)	294	245
Compressor Horsepower (HP)	30	
Control Power Feed	208-230/3/60	460/3/60
Minimum Circuit Ampacity (MCA)	19	19
Maximum Overcurrent Protection (MOCP)	30	30
Full Load Amps (FLA)	15	15
Power (Watts)	1800	1763
Short Circuit Current Rating (SCCR)	200 kVA	

Alectro HPB179 – Performance Data

170 LWT, 60% RH (Defrost De-rate Included)

Ambient Air Condition	Supply Heating Capacity (Btu/hr)	Air Cooling Capacity (Btu/hr)	Power Input (KW)	Heating COP	Cooling COP	Combined COP
80°F	243,300	152,882	26.5	2.7	1.7	4.4
70°F	212,850	116,802	28	2.2	1.2	3.4
60°F	182,400	80,722	29.8	1.8	0.8	2.6
50°F	153,550	65,179	26	1.7	0.7	2.5
40°F	124,700	49,636	22.0	1.7	0.7	2.3
30°F	92,000	26,831	19.1	1.4	0.4	1.8

160 LWT, 60% RH (Defrost De-rate Included)

Ambient Air Condition	Supply Heating Capacity (Btu/hr)	Air Cooling Capacity (Btu/hr)	Power Input (KW)	Heating COP	Cooling COP	Combined COP
80°F	260,500	165,305	28	2.7	1.7	4.5
70°F	228,100	136,147	27	2.5	1.5	4.0
60°F	195,700	106,988	26	2.2	1.2	3.4
50°F	165,780	84,574	24	2.0	1.0	3.1
35°F	120,900	50,954	21	1.7	0.7	2.5
25°F	93,178	31,193	18	1.5	0.5	2.0
17°F	71,000	15,384	16	1.3	0.3	1.6

140 LWT, 60% RH (Defrost De-rate Included)

Ambient Air Condition	Supply Heating Capacity (Btu/hr)	Air Cooling Capacity (Btu/hr)	Power Input (KW)	Heating COP	Cooling COP	Combined COP
80°F	290,900	203,212	26	3.3	2.3	5.6
70°F	256,450	172,174	25	3.0	2.0	5.1
60°F	222,000	141,136	24	2.7	1.7	4.5
50°F	187,920	113,061	22	2.5	1.5	4.0
35°F	136,800	70,948	19	2.1	1.1	3.2
20°F	101,160	44,930	16	1.8	0.8	2.6
10°F	77,400	27,585	15	1.6	0.6	2.1

Standard Rating Conditions

Ambient Air Condition	Leaving Water Temperature	Supply Heating Capacity (Btu/hr)	Heating COP
47°F	140°F	174,900	2.2
47°F	120°F	194,500	2.6
47°F	105°F	207,400	3.0
17°F	140°F	98,500	2.2
17°F	120°F	108,300	2.0
17°F	105°F	116,700	2.2