ENGINEERING SUBMITTAL SHEET

POLAR-HP-035ZA/BE

Cold Climate Air Source Hydronic Heatpump

SPECIFICATIONS:

Model		POLAR	035ZA/(BE)
Power Supply		V/P/Hz	220~240/1/60
Rated Cooling Capacity	Ambient Temp 35℃ Water Outlet 7℃	kW	7.1
Cooling Power Input		kW	2.90
Cooling Current Input		A	13.2
Co-Efficiency of Performance		COP	2.4
Rated Cooling Capacity	Ambient Temp 28℃ Water Outlet 12℃	kW	6.3
Cooling Power Input		kW	2.03
Cooling Current Input		A	9.2
Co-Efficiency of Performance		COP	3.1
Rated Heating Capacity	Ambient Temp 7℃ Water Outlet 45℃	kW	8.3
Heating Power Input		kW	2.72
Heating Current Input		A	12.4
Co-Efficiency of Performance		COP	3.3
Rated Heating Capacity	Ambient Temp - 7℃ Water Outlet 45℃	kW	7.0
Heating Power Input		kW	2.21
Heating Current Input		A	10.0
Co-Efficiency of Performance		COP	3.2

Rated Heating Capacity	Ambient Temp - 20℃ Water Outlet 45℃	kW	5.5
Heating Power Input		kW	3.18
Heating Current Input		A	14.5
Co-Efficiency of Performance		COP	1.7
Total Load		A	17.40
Breaker Sizing		A	30.0
Nominal Water Flow Volume		GPM	6.50
Water Pressure Drop		psi/ft head	4.77/11
Water Inlet/Outlet (External Threaded)		inch	1"
Refrigerant			R410A
Refrigerant Amount		OZ	70.5
Sound Level		dB(A)	53
IP Rating			IPX4
Net Weight		KG/LBS	92/203
Unit Dimensions(L/W/H)		mm	1145/470/883
Unit Dimensions(L/W/H)		inches	45.07/18.50/34.76
Certification			TUV Rheinland of North America, Inc. C US

035ZA/BE

COEFFICIENT OF PERFROMANCE TABLES

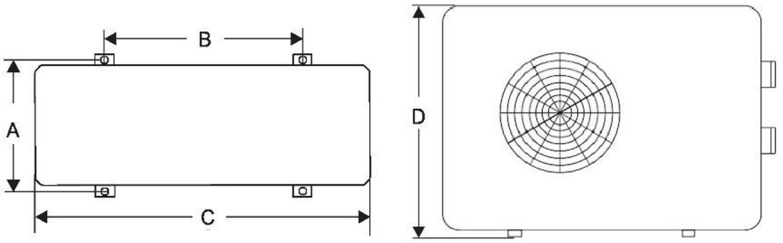
Celcius

EVI DC inverter heat pump			Ambient temperature (℃)											
POLAR 035ZA/(BE)			-30	-25	-20	-15	-12	-7	2	7	15	21	30	38
outlet water temperature (℃)	20	heating capacity (W)	4015	4401	5456	5873	6092	7100	8173	9142	11205	12077	13212	14324
		power input (W)	1859	1913	1956	1882	1638	1663	1699	1677	1779	1538	1332	1155
		COP (W/W)	2.16	2.30	2.79	3.12	3.72	4.27	4.81	5.45	6.30	7.85	9.92	12.40
	30	heating capacity (W)	3912	4324	5413	5866	6072	7092	8165	9099	11193	12065	13192	14300
		power input (W)	2048	2130	2183	2088	1834	1917	1899	1876	2061	1741	1527	1387
		COP (W/W)	1.91	2.03	2.48	2.81	3.31	3.70	4.30	4.85	5.43	6.93	8.64	10.31
	35	heating capacity (W)	3876	4291	5399	5852	6068	7088	8145	9085	11182	12048	13175	14285
		power input (W)	2307	2411	2488	2251	2057	2215	2244	2163	2349	2035	1745	1620
		COP (W/W)	1.68	1.78	2.17	2.60	2.95	3.20	3.63	4.20	4.76	5.92	7.55	8.82
	41	heating capacity (W)	3837	4276	5364	5832	6057	7083	8133	9068	11168	12035	13158	14265
		power input (W)	2460	2592	2669	2514	2303	2409	2480	2484	2691	2184	1979	1838
		COP (W/W)	1.56	1.65	2.01	2.32	2.63	2.94	3.28	3.65	4.15	5.51	6.65	7.76
	45	heating capacity (W)	3765	4213	5506	5821	6044	6958	8129	8306	11157	12027	13138	14154
		power input (W)	2597	2650	3183	2622	2437	2424	2746	2723	2846	2358	2190	2097
		COP (W/W)	1.45	1.59	1.73	2.22	2.48	2.87	2.96	3.05	3.92	5.10	6.00	6.75
	50	heating capacity (W)	3728	4146	5195	5010	6028	7042	8110	9028	11132	12019	13017	14166
		power input (W)	2761	2820	3309	2493	2728	2657	2856	3019	3025	2530	2494	2393
		COP (W/W)	1.35	1.47	1.57	2.01	2.21	2.65	2.84	2.99	3.68	4.75	5.22	5.92
	55	heating capacity (W)		4123	5354	5001	6005	7021	8100	9007	11121	12002	12901	14037
		power input (W)		3352	4056	2689	2873	2913	3057	3205	3177	2824	2792	2689
		COP (W/W)		1.23	1.32	1.86	2.09	2.41	2.65	2.81	3.50	4.25	4.62	5.22
	60	heating capacity (W)				4968	5966	7010	8072	8955	11108	11977	12876	13946
		power input (W)				2855	3059	3143	3178	3256	3316	2994	2960	2858
		COP (W/W)				1.74	1.95	2.23	2.54	2.75	3.35	4.00	4.35	4.88

Fahrenheit

EVI DC inverter heat pump			Ambient temperature (°F)											
POLAR 035ZA/(BE)			-22	-13	-4	5	10.4	19.4	35.6	44.6	59	69.8	86	100.4
outlet water temperature (°F)	68	heating capacity (W)	4015	4401	5456	5873	6092	7100	8173	9142	11205	12077	13212	14324
		power input (W)	1859	1913	1956	1882	1638	1663	1699	1677	1779	1538	1332	1155
		COP (W/W)	2.16	2.30	2.79	3.12	3.72	4.27	4.81	5.45	6.30	7.85	9.92	12.40
	86	heating capacity (W)	3912	4324	5413	5866	6072	7092	8165	9099	11193	12065	13192	14300
		power input (W)	2048	2130	2183	2088	1834	1917	1899	1876	2061	1741	1527	1387
		COP (W/W)	1.91	2.03	2.48	2.81	3.31	3.70	4.30	4.85	5.43	6.93	8.64	10.31
	95	heating capacity (W)	3876	4291	5399	5852	6068	7088	8145	9085	11182	12048	13175	14285
		power input (W)	2307	2411	2488	2251	2057	2215	2244	2163	2349	2035	1745	1620
		COP (W/W)	1.68	1.78	2.17	2.60	2.95	3.20	3.63	4.20	4.76	5.92	7.55	8.82
	106	heating capacity (W)	3837	4276	5364	5832	6057	7083	8133	9068	11168	12035	13158	14265
		power input (W)	2460	2592	2669	2514	2303	2409	2480	2484	2691	2184	1979	1838
		COP (W/W)	1.56	1.65	2.01	2.32	2.63	2.94	3.28	3.65	4.15	5.51	6.65	7.76
	113	heating capacity (W)	3765	4213	5506	5821	6044	6958	8129	8306	11157	12027	13138	14154
		power input (W)	2597	2650	3183	2622	2437	2424	2746	2723	2846	2358	2190	2097
		COP (W/W)	1.45	1.59	1.73	2.22	2.48	2.87	2.96	3.05	3.92	5.10	6.00	6.75
	122	heating capacity (W)	3728	4146	5195	5010	6028	7042	8110	9028	11132	12019	13017	14166
		power input (W)	2761	2820	3309	2493	2728	2657	2856	3019	3025	2530	2494	2393
		COP (W/W)	1.35	1.47	1.57	2.01	2.21	2.65	2.84	2.99	3.68	4.75	5.22	5.92
	131	heating capacity (W)		4123	5354	5001	6005	7021	8100	9007	11121	12002	12901	14037
		power input (W)		3352	4056	2689	2873	2913	3057	3205	3177	2824	2792	2689
		COP (W/W)		1.23	1.32	1.86	2.09	2.41	2.65	2.81	3.50	4.25	4.62	5.22
	140	heating capacity (W)				4968	5966	7010	8072	8955	11108	11977	12876	13946
		power input (W)				2855	3059	3143	3178	3256	3316	2994	2960	2858
		COP (W/W)				1.74	1.95	2.23	2.54	2.75	3.35	4.00	4.35	4.88

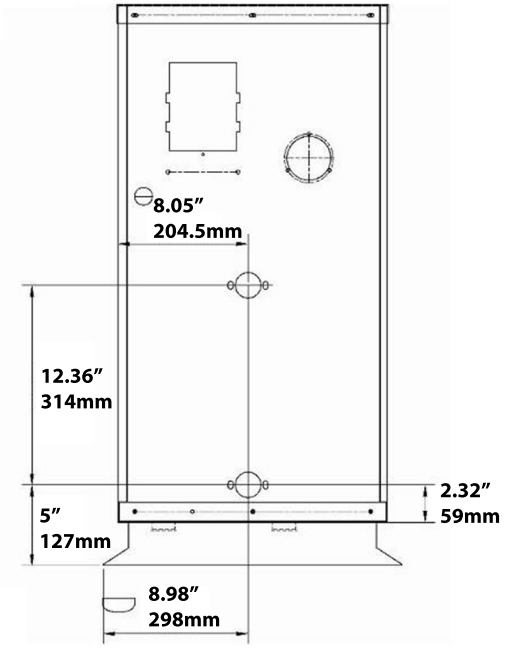
Product Dimensions:



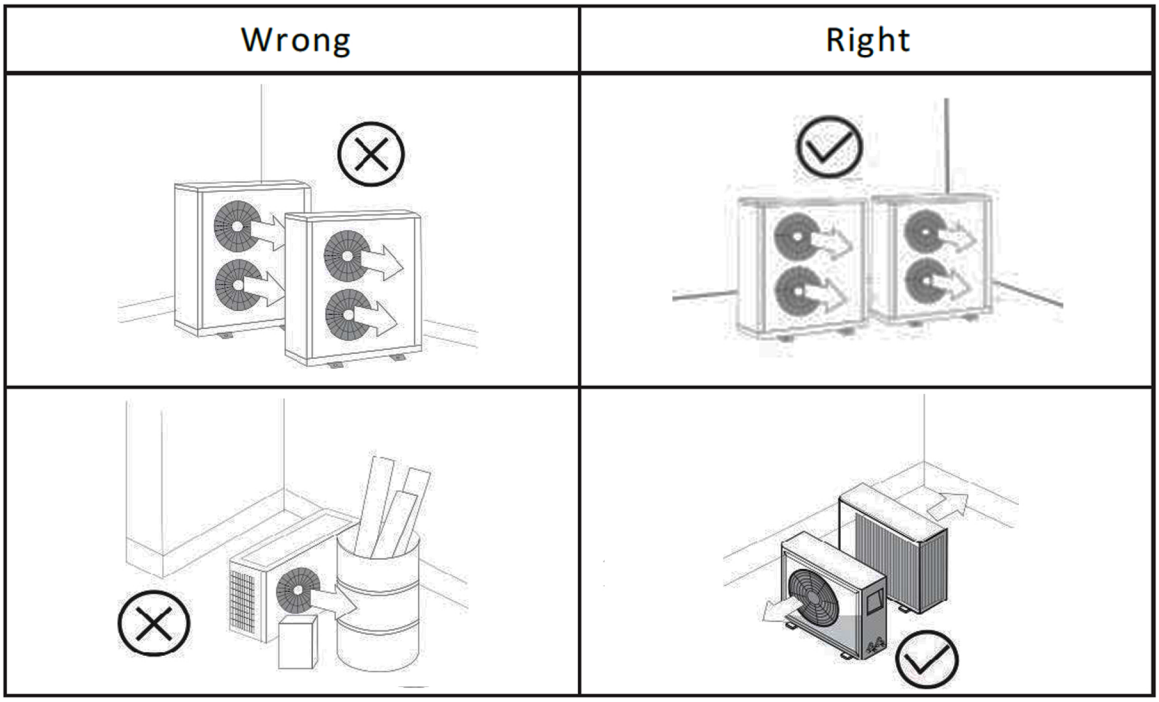
mm/inches

Size	035ZA/(BE)
A	440mm/17.3"
B	760mm/29.9"
C	1145mm/45"
D	883mm/34.8"

Water Port Locations:



Installation Location:



Installation Clearances: