

POLAR HEAT PUMPS

ENGINEERING SUBMITTAL SHEET


POLAR-HP-060ZA/BE

Cold Climate Air Source Hydronic Heatpump



SPECIFICATIONS:


Model		POLAR	060ZA/(BE)
Power Supply		V/P/Hz	220~240/1/60
Rated Cooling Capacity	Ambient Temp 35°C Water Outlet 7°C	kW	12.2
Cooling Power Input		kW	4.97
Cooling Current Input		A	22.6
Co-Efficiency of Performance		COP	2.5
Rated Cooling Capacity	Ambient Temp 28°C Water Outlet 12°C	kW	17.6
Cooling Power Input		kW	5.70
Cooling Current Input		A	25.9
Co-Efficiency of Performance		COP	3.1
Rated Heating Capacity	Ambient Temp 7°C Water Outlet 45°C	kW	17.0
Heating Power Input		kW	5.40
Heating Current Input		A	24.5
Co-Efficiency of Performance		COP	3.1
Rated Heating Capacity	Ambient Temp - 7°C Water Outlet 45°C	kW	13.5
Heating Power Input		kW	4.34
Heating Current Input		A	19.7
Co-Efficiency of Performance		COP	3.1

Rated Heating Capacity	Ambient Temp - 20°C Water Outlet 45°C	kW	9.7
Heating Power Input		kW	5.58
Heating Current Input		A	25.4
Co-Efficiency of Performance		COP	1.7
Total Load		A	27.60
Breaker Sizing		A	40.0
Nominal Water Flow Volume		GPM	13.00
Water Pressure Drop		psi/ft head	11/25.4
Water Inlet/Outlet (External Threaded)		inch	1"
Refrigerant			R410A
Refrigerant Amount		OZ	105.8
Sound Level		dB(A)	55
IP Rating			IPX4
Net Weight		KG/LBS	131/289
Unit Dimensions(L/W/H)		mm	1000/440/1380
Unit Dimensions(L/W/H)		inches	39.37/17.32/54.33
Certification			


060ZA/BE

COEFFICIENT OF PERFORMAMCE TABLES

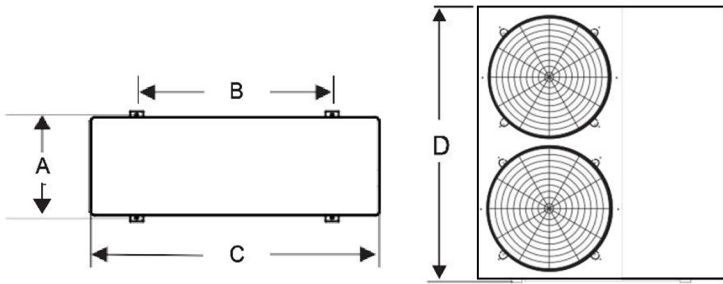
Celcius

EVI DC inverter heat pump			Ambient temperature (°C)											
POLAR 060ZA/(BE)			-30	-25	-20	-15	-12	-7	2	7	15	21	30	38
 outlet water temperature (°C)	20	heating capacity (W)	8432	9212	11569	12235	12588	13955	15862	18427	20415	22068	24326	25121
		power input (W)	3924	4079	4107	3990	3688	3722	3811	3952	3302	2821	2453	2026
		COP (W/W)	2.15	2.26	2.82	3.07	3.41	3.75	4.16	4.66	6.18	7.82	9.92	12.40
	30	heating capacity (W)	8092	9002	11439	12125	12375	13903	15789	18388	20202	21862	24127	24688
		power input (W)	4252	4452	4524	4215	4046	4121	3998	4172	3725	3165	2799	2339
		COP (W/W)	1.90	2.02	2.53	2.88	3.06	3.37	3.95	4.41	5.42	6.91	8.62	10.55
	35	heating capacity (W)	7928	8907	11173	12081	12217	13898	15690	18220	20052	21661	24102	24322
		power input (W)	4762	5002	5070	4620	4402	4480	4423	4556	4233	3658	3126	2759
		COP (W/W)	1.66	1.78	2.20	2.61	2.78	3.10	3.55	4.00	4.74	5.92	7.71	8.82
	41	heating capacity (W)	7823	8550	10702	11822	12184	13715	15611	18102	19825	21465	24080	24124
		power input (W)	4985	5180	5307	4852	4694	4715	4777	5370	4811	3896	3589	3125
		COP (W/W)	1.57	1.65	2.02	2.44	2.60	2.91	3.27	3.37	4.12	5.51	6.71	7.72
45	heating capacity (W)	7628	8766	9705	11600	12080	13525	15421	17044	19733	21321	24002	23124	
	power input (W)	5212	5499	5579	5160	4896	4342	4923	5413	5066	4102	3956	3445	
	COP (W/W)	1.46	1.59	1.74	2.25	2.47	3.11	3.13	3.15	3.90	5.20	6.07	6.71	
50	heating capacity (W)	7412	8512	10542	11352	11901	13490	15376	17960	19320	21280	20861	21023	
	power input (W)	5465	5796	6610	5782	5656	5160	5399	5983	5284	4522	4033	3712	
	COP (W/W)	1.36	1.47	1.59	1.96	2.10	2.61	2.85	3.00	3.66	4.71	5.17	5.66	
55	heating capacity (W)		8058	9178	11220	11830	13188	15120	17700	19102	21121	18812	19562	
	power input (W)		6485	6556	5940	5936	5643	5905	6072	5466	5021	4218	3989	
	COP (W/W)		1.24	1.40	1.89	1.99	2.34	2.56	2.92	3.49	4.21	4.46	4.90	
60	heating capacity (W)				11123	11642	12731	14810	17500	18872	21022	18312	18601	
	power input (W)				6210	6184	5854	6098	6232	5712	5412	4424	4312	
	COP (W/W)				1.79	1.88	2.17	2.43	2.81	3.30	3.88	4.14	4.31	

Fahrenheit

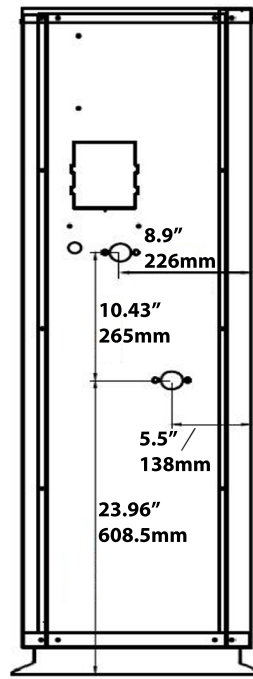
EVI DC inverter heat pump			Ambient temperature (°F)											
POLAR 060ZA/(BE)			-22	-13	-4	5	10.4	19.4	35.6	44.6	59	69.8	86	100.4
 outlet water temperature (°F)	68	heating capacity (W)	8432	9212	11569	12235	12588	13955	15862	18427	20415	22068	24326	25121
		power input (W)	3924	4079	4107	3990	3688	3722	3811	3952	3302	2821	2453	2026
		COP (W/W)	2.15	2.26	2.82	3.07	3.41	3.75	4.16	4.66	6.18	7.82	9.92	12.40
	86	heating capacity (W)	8092	9002	11439	12125	12375	13903	15789	18388	20202	21862	24127	24688
		power input (W)	4252	4452	4524	4215	4046	4121	3998	4172	3725	3165	2799	2339
		COP (W/W)	1.90	2.02	2.53	2.88	3.06	3.37	3.95	4.41	5.42	6.91	8.62	10.55
	95	heating capacity (W)	7928	8907	11173	12081	12217	13898	15690	18220	20052	21661	24102	24322
		power input (W)	4762	5002	5070	4620	4402	4480	4423	4556	4233	3658	3126	2759
		COP (W/W)	1.66	1.78	2.20	2.61	2.78	3.10	3.55	4.00	4.74	5.92	7.71	8.82
	106	heating capacity (W)	7823	8550	10702	11822	12184	13715	15611	18102	19825	21465	24080	24124
		power input (W)	4985	5180	5307	4852	4694	4715	4777	5370	4811	3896	3589	3125
		COP (W/W)	1.57	1.65	2.02	2.44	2.60	2.91	3.27	3.37	4.12	5.51	6.71	7.72
113	heating capacity (W)	7628	8766	9705	11600	12080	13525	15421	17044	19733	21321	24002	23124	
	power input (W)	5212	5499	5579	5160	4896	4342	4923	5413	5066	4102	3956	3445	
	COP (W/W)	1.46	1.59	1.74	2.25	2.47	3.11	3.13	3.15	3.90	5.20	6.07	6.71	
122	heating capacity (W)	7412	8512	10542	11352	11901	13490	15376	17960	19320	21280	20861	21023	
	power input (W)	5465	5796	6610	5782	5656	5160	5399	5983	5284	4522	4033	3712	
	COP (W/W)	1.36	1.47	1.59	1.96	2.10	2.61	2.85	3.00	3.66	4.71	5.17	5.66	
131	heating capacity (W)		8058	9178	11220	11830	13188	15120	17700	19102	21121	18812	19562	
	power input (W)		6485	6556	5940	5936	5643	5905	6072	5466	5021	4218	3989	
	COP (W/W)		1.24	1.40	1.89	1.99	2.34	2.56	2.92	3.49	4.21	4.46	4.90	
140	heating capacity (W)				11123	11642	12731	14810	17500	18872	21022	18312	18601	
	power input (W)				6210	6184	5854	6098	6232	5712	5412	4424	4312	
	COP (W/W)				1.79	1.88	2.17	2.43	2.81	3.30	3.88	4.14	4.31	

Product Dimensions:

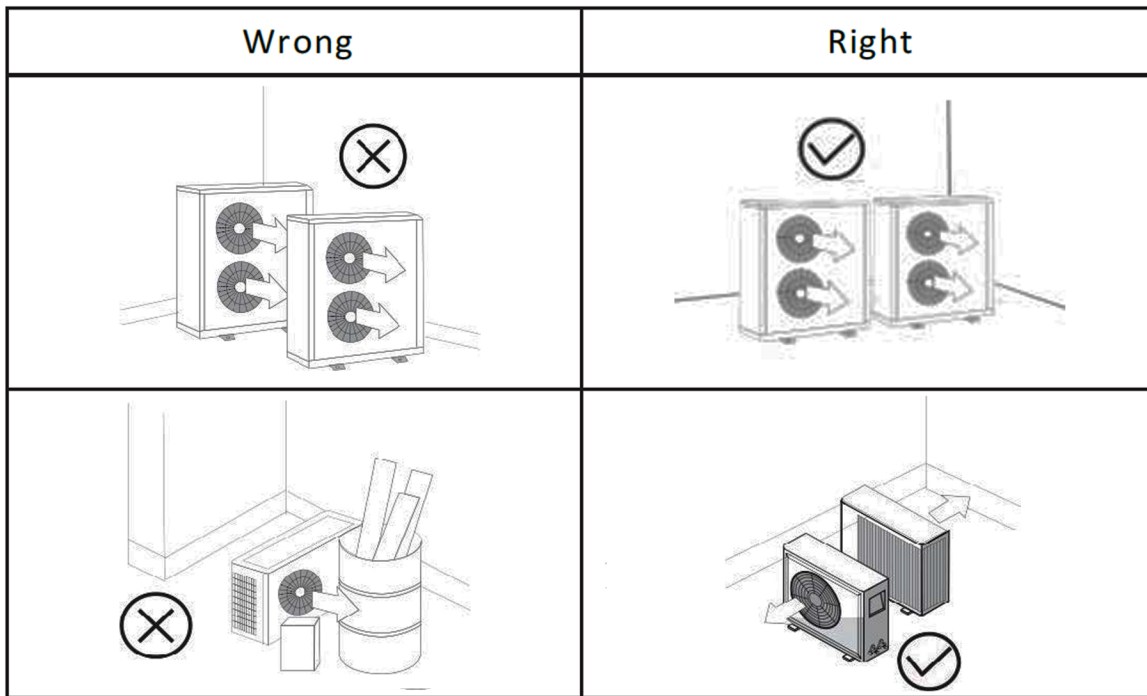


Size	050ZA/(BE) & 060ZA/(BE)
A	420mm/16.5"
B	700mm/27.6"
C	1000mm/39.4"
D	1380mm/54.3"

Water Port Locations:



Installation Location:



Installation Clearances:

