

HPM08-Nd2																							
Ambient temperature/ °C	Water outlet temperature °C																						
	25		30		35		40		45		50		55		60		65		70		75		
	Heating capacity	COP	Heating capacity	COP	Heating capacity	COP	Heating capacity	COP	Heating capacity	COP	Heating capacity	COP	Heating capacity	COP	Heating capacity	COP	Heating capacity	COP	Heating capacity	COP	Heating capacity	COP	
-30	5.03	2.47	5.00	2.27	4.97	2.07	4.94	1.86	4.91	1.64	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	
-25	5.21	2.69	5.18	2.52	5.15	2.33	5.13	2.11	5.10	1.89	5.09	1.78	4.91	1.66	NG	NG	NG	NG	NG	NG	NG	NG	
-20	6.03	2.93	6.00	2.75	5.95	2.59	5.95	2.36	6.00	5.92	2.13	5.92	1.96	5.92	1.80	5.71	1.74	5.51	1.67	NG	NG	NG	NG
-15	7.01	3.16	6.98	3.00	6.95	2.84	6.92	2.62	6.90	2.38	6.88	2.16	6.85	1.93	6.82	1.86	6.79	1.78	6.58	1.61	6.20	1.38	
-10	7.99	3.47	7.96	3.27	7.93	3.07	7.90	2.79	7.87	2.51	7.84	2.28	7.82	2.22	7.70	2.05	7.58	1.92	7.24	1.71	6.90	1.49	
-7	8.32	3.86	8.29	3.50	8.26	3.14	8.24	3.06	8.29	8.21	2.74	8.18	2.54	8.15	2.27	7.98	2.17	7.80	2.00	7.45	1.79	7.09	1.56
-5	8.55	4.08	8.52	3.82	8.49	3.56	8.46	3.21	8.43	2.86	8.40	2.60	8.37	2.33	8.16	2.15	7.95	1.97	7.59	1.75	7.22	1.53	
0	9.58	4.25	9.56	4.06	9.53	3.84	9.49	3.45	9.46	3.06	9.43	2.78	9.40	2.50	9.08	2.27	8.77	2.04	8.36	1.81	7.95	1.58	
2	9.33	4.57	9.30	4.25	9.27	3.92	9.24	3.62	9.30	9.21	3.19	9.18	2.99	9.16	2.68	8.82	2.43	8.48	2.16	8.08	1.93	7.68	1.69
5	9.66	5.13	9.63	4.76	9.61	4.30	9.58	3.91	9.55	3.44	9.52	3.13	9.49	2.82	9.10	2.52	8.71	2.23	8.29	1.99	7.87	1.74	
7	10.00	5.59	9.97	5.17	9.94	4.64	9.91	4.24	9.89	3.72	9.86	3.38	9.83	3.04	9.34	2.71	8.86	2.39	8.43	2.13	8.00	1.86	
10	10.28	6.43	10.24	5.91	10.21	5.40	10.18	4.70	10.15	4.00	10.11	3.59	10.08	3.17	9.54	2.82	9.01	2.48	8.56	2.17	8.11	1.86	
15	10.74	7.61	10.70	6.95	10.66	6.28	10.62	5.34	10.58	4.38	10.54	3.86	10.50	3.34	9.88	2.96	9.25	2.57	8.78	2.22	8.30	1.86	
20	11.20	9.34	11.15	8.48	11.11	7.63	11.06	6.36	11.02	5.10	10.97	4.44	10.93	3.78	10.21	3.33	9.50	2.88	8.99	2.45	8.48	2.00	
25	11.66	11.07	11.60	10.02	11.55	8.97	11.50	7.39	11.45	5.81	11.40	5.01	11.35	4.22	10.55	3.71	9.75	3.20	9.21	2.68	8.67	2.16	
30	NG	NG	10.96	11.55	10.91	10.32	10.85	8.42	10.81	6.52	10.75	5.59	10.70	4.66	9.90	4.08	9.09	3.50	8.57	2.91	NG	NG	
35	NG	NG	NG	NG	11.32	11.66	11.25	9.45	11.20	7.24	11.15	6.16	11.08	5.09	10.20	4.45	9.32	3.81	NG	NG	NG	NG	
HPM10-Nd2																							
Ambient temperature/ °C	Water outlet temperature °C																						
	25		30		35		40		45		50		55		60		65		70		75		
	Heating capacity	COP	Heating capacity	COP	Heating capacity	COP	Heating capacity	COP	Heating capacity	COP	Heating capacity	COP	Heating capacity	COP	Heating capacity	COP	Heating capacity	COP	Heating capacity	COP	Heating capacity	COP	
-30	6.29	2.26	6.25	2.08	6.21	1.90	6.18	1.70	6.14	1.50	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	
-25	6.51	2.47	6.47	2.30	6.44	2.13	6.41	1.93	6.38	1.72	6.37	1.62	6.13	1.52	NG	NG	NG	NG	NG	NG	NG	NG	
-20	7.54	2.68	7.50	2.52	7.46	2.37	7.44	2.16	7.40	1.95	7.40	1.80	7.40	1.64	7.14	1.59	6.88	1.53	NG	NG	NG	NG	
-15	8.76	2.89	8.73	2.75	8.69	2.60	8.66	2.38	8.62	2.18	8.59	1.98	8.56	1.77	8.53	1.70	8.49	1.62	8.22	1.47	7.75	1.26	
-10	9.98	3.40	9.95	3.20	9.91	3.00	9.88	2.74	9.84	2.46	9.81	2.23	9.77	2.00	9.62	1.88	9.47	1.76	9.05	1.56	8.62	1.37	
-7	10.40	3.53	10.37	3.31	10.33	3.11	10.30	2.80	10.26	2.51	10.22	2.29	10.19	2.15	9.97	1.99	9.75	1.83	9.31	1.63	8.86	1.43	
-5	10.68	4.09	10.65	3.77	10.61	3.50	10.57	3.24	10.54	2.90	10.50	2.64	10.47	2.38	10.20	2.20	9.94	1.94	9.48	1.72	9.03	1.50	
0	11.38	4.30	11.34	4.08	11.31	3.76	11.27	3.48	11.24	3.19	11.2	2.86	11.17	2.54	10.79	2.31	10.41	2.06	9.92	1.83	9.43	1.60	
2	11.66	4.40	11.62	4.14	11.59	3.83	11.55	3.45	11.52	3.05	11.48	2.76	11.45	2.48	11.02	2.24	10.60	2.01	10.10	1.78	9.59	1.56	
5	12.08	4.79	12.04	4.53	12.01	4.17	11.97	3.72	11.94	3.28	11.90	2.98	11.86	2.68	11.37	2.40	10.88	2.12	10.36	1.89	9.84	1.65	
7	12.50	5.32	12.46	5.01	12.43	4.61	12.39	4.11	12.36	3.61	12.32	3.28	12.29	2.95	11.68	2.63	11.07	2.32	10.54	2.06	10.00	1.81	
10	12.85	6.57	12.80	6.04	12.76	5.51	12.72	4.80	12.68	4.09	12.64	3.66	12.60	3.24	11.93	2.88	11.26	2.52	10.70	2.21	10.14	1.90	
15	13.42	8.49	13.37	7.75	13.32	7.00	13.27	5.94	13.23	4.88	13.18	4.30	13.13	3.72	12.35	3.30	11.57	2.87	10.97	2.47	10.37	2.07	
20	13.99	10.41	13.94	9.45	13.88	8.50	13.83	7.09	13.77	5.68	13.71	4.94	13.66	4.21	12.77	3.71	11.88	3.21	11.24	2.72	10.61	2.23	
25	14.57	12.33	14.50	11.16	14.44	10.00	14.38	8.23	14.31	6.47	14.25	5.59	14.19	4.70	13.19	4.13	12.19	3.56	11.51	2.98	10.84	2.40	
30	NG	NG	13.70	12.87	13.64	11.50	13.57	9.38	13.51	7.27	13.45	6.23	13.37	5.19	12.37	4.55	11.36	3.90	10.72	3.23	NG	NG	
35	NG	NG	NG	NG	14.15	12.99	14.07	10.53	14.00	8.06	13.93	6.87	13.85	5.67	12.75	4.96	11.65	4.25	NG	NG	NG	NG	
HPM12-Nd2																							
Ambient temperature/ °C	Water outlet temperature °C																						
	25		30		35		40		45		50		55		60		65		70		75		
	Heating capacity	COP	Heating capacity	COP	Heating capacity	COP	Heating capacity	COP	Heating capacity	COP	Heating capacity	COP	Heating capacity	COP	Heating capacity	COP	Heating capacity	COP	Heating capacity	COP	Heating capacity	COP	
-30	8.11	2.32	8.06	2.13	8.02	1.95	7.97	1.74	7.92	1.54	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	
-25	8.74	2.53	8.70	2.36	8.66	2.19	8.61	1.98	8.93	1.77	8.91	1.66	8.90	1.56	NG	NG	NG	NG	NG	NG	NG	NG	
-20	9.94	2.75	9.90	2.58	9.86	2.42	9.81	2.21	9.77	2.00	9.77	1.84	9.76	1.68	9.42	1.62	9.09	1.57	NG	NG	NG	NG	
-15	11.14	2.96	11.10	2.81	11.06	2.67	11.01	2.45	10.97	2.23	10.93	2.02	10.89	1.81	10.84	1.74	10.80	1.67	10.46	1.51	9.86	1.30	
-10	12.22	3.17	12.44	2.99	12.13	2.80	12.34	2.67	12.30	2.41	12.26	2.24	12.21	2.05	12.54	1.93	11.59	1.81	10.85	1.61	10.34	1.41	
-7	12.48	3.56	12.44	3.25	12.40	3.03	12.35	2.87	12.31	2.57	12.27	2.45	12.23	2.20	11.96	2.04	11.70	1.88	11.17	1.67	10.64	1.46	
-5	12.82	4.02	12.78	3.75	12.73	3.50	12.69	3.15	12.65	2.82	12.60	2.56	12.56	2.30	12.25	2.12	11.93	1.94	11.38	1.72	10.83	1.51	
0	12.42	4.35	12.37	4.13	12.34	3.72	12.30	3.48	12.25	3.20	12.22	2.82	12.18	2.54	11.77	2.30	11.78	2.07	10.83	1.84	10.29	1.62	
2	12.72	4.59	12.68	4.25	12.65	3.90	12.60	3.57	12.56	3.16	12.53	2.86	12.48	2.58	12.03	2.33	11.56	2.08	11.02	1.85	10.46	1.62	
5	13.17	5.23	13.14	4.84	13.10	4.46	13.06	3.99	13.02	3.51	12.98	3.19	12.95	2.86	13.13	2.57	13.06	2.27	12.43	2.03	10.74	1.77	
7	13.64	5.56	13.60	5.14	13.55	4.73	13.52	4.22	13.48	3.71	13.45	3.36	13.40	3.02	12.74	2.70	12.08	2.38	11.49	2.12	10.91	1.85	
10	13.76	6.74	13.72	6.20	13.68	5.65	13.63	4.92	13.59	4.19	13.79	3.76	13.75	3.32	14.32	2.96	13.93	2.59	13.38	2.27	12.95	1.95	
15	14.64	8.71	14.59	7.95	14.54	7.19	14.48	6.10	14.43	5.01	14.37	4.42	14.33	3.82	13.47	3.38	12.62	2.95	11.96	2.53	11.32	2.12	
20	15.26	10.68	15.21	9.70	15.15	8.72	15.08	7.28	15.02	5.83	14.96	5.07	14.90										

25	15.89	12.65	15.83	11.46	15.75	10.26	15.68	8.45	15.62	6.64	15.55	5.73	15.47	4.82	14.39	4.24	13.30	3.65	12.56	3.06	11.83	2.46
30	NG	NG	16.45	13.21	16.36	11.80	16.28	9.63	14.86	7.46	14.78	6.39	14.72	5.32	14.85	4.67	13.64	4.01	12.85	3.32	NG	NG
35	NG	NG	NG	NG	15.56	13.33	15.48	10.80	15.40	8.28	15.33	7.05	15.24	5.82	14.03	5.09	13.97	4.36	NG	NG	NG	NG

HPM14-Nd2																						
Ambient temperature/ ℃	Water outlet temperature ℃																					
	25		30		35		40		45		50		55		60		65		70		75	
	Heating capacity	COP	Heating capacity	COP	Heating capacity	COP	Heating capacity	COP	Heating capacity	COP	Heating capacity	COP	Heating capacity	COP	Heating capacity	COP	Heating capacity	COP	Heating capacity	COP	Heating capacity	COP
-30	7.59	2.225	7.29	2.047	7.44	1.869	7.33	1.6732	7.29	1.4774	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG
-25	8.79	2.4297	8.46	2.2695	8.63	2.1004	8.52	1.9046	8.47	1.6999	7.68	1.602	7.22	1.4952	NG	NG	NG	NG	NG	NG	NG	NG
-20	10.00	2.6433	9.79	2.4831	9.83	2.3318	9.70	2.1271	9.66	1.9224	8.98	1.7711	8.25	1.6198	7.53	1.5664	7.07	1.5041	NG	NG	NG	NG
-15	11.16	2.848	10.97	2.7056	11.03	2.5632	10.89	2.3585	10.85	2.1449	10.28	1.9491	9.20	1.7444	8.66	1.6732	8.40	1.602	8.24	1.4507	8.21	1.246
-10	12.05	3.3553	12.01	3.1595	11.86	2.9637	12.13	2.6967	11.88	2.4297	11.25	2.1983	10.52	1.9758	9.76	1.8512	9.27	1.7355	9.31	1.5397	8.62	1.3439
-7	12.94	3.6579	12.62	3.4265	12.36	3.204	12.87	2.9014	12.60	2.5988	11.93	2.3585	11.50	2.1093	10.74	1.958	10.04	1.8067	10.51	1.6109	9.55	1.4062
-5	13.23	3.8626	12.96	3.6134	12.69	3.3642	13.10	3.0349	12.94	2.7056	12.25	2.4564	11.63	2.2072	10.99	2.0292	10.71	1.8601	11.07	1.6554	10.11	1.4507
0	13.73	4.361	13.81	4.0584	13.53	3.7558	13.84	3.3731	13.80	2.9904	12.85	2.7145	12.21	2.4386	11.98	2.2161	11.57	1.9936	11.77	1.7711	11.01	1.5486
2	14.07	4.7196	14.15	4.3884	13.86	4.048	13.94	3.6248	13.90	3.2016	13.17	2.9072	12.61	2.6128	12.25	2.3644	11.78	2.1068	11.98	1.8768	11.38	1.6468
5	14.33	5.1965	14.66	4.8165	14.37	4.4365	14.20	3.9615	14.16	3.4865	13.66	3.173	13.18	2.85	12.63	2.5555	12.10	2.261	12.29	2.014	11.67	1.7575
7	14.46	5.7	14.79	5.28	14.87	4.85	14.83	4.33	14.79	3.8	14.62	3.45	14.33	3.1	13.19	2.77	12.30	2.44	12.50	2.17	12.07	1.9
10	14.86	6.91	15.19	6.35	15.27	5.8	14.72	5.05	14.56	4.3	14.27	3.86	14.11	3.41	13.25	3.03	12.92	2.66	12.69	2.33	12.24	2
15	15.53	8.93	15.86	8.15	15.54	7.37	15.23	6.26	14.94	5.14	14.41	4.53	14.70	3.92	13.72	3.47	13.28	3.02	13.02	2.6	12.52	2.18
20	16.19	10.96	16.68	9.95	16.61	8.95	16.41	7.46	16.34	5.98	15.48	5.21	15.30	4.43	14.19	3.91	13.63	3.38	13.34	2.87	12.80	2.35
25	16.86	12.98	17.36	11.75	18.05	10.52	18.30	8.67	17.89	6.81	16.63	5.88	16.02	4.95	14.65	4.35	14.23	3.75	13.66	3.14	13.08	2.53
30	NG	NG	18.03	13.55	18.75	12.1	18.83	9.88	18.74	7.65	18.00	6.56	17.17	5.46	15.88	4.79	14.83	4.11	13.98	3.41	NG	NG
35	NG	NG	NG	NG	19.45	13.68	19.35	11.08	19.60	8.49	19.50	7.23	18.40	5.97	17.23	5.22	15.74	4.47	NG	NG	NG	NG

HPM16-Nd2																						
Ambient temperature/ ℃	Water outlet temperature ℃																					
	25		30		35		40		45		50		55		60		65		70		75	
	Heating capacity	COP	Heating capacity	COP	Heating capacity	COP	Heating capacity	COP	Heating capacity	COP	Heating capacity	COP	Heating capacity	COP	Heating capacity	COP	Heating capacity	COP	Heating capacity	COP	Heating capacity	COP
-30	8.67	2.24	8.33	2.06	8.50	1.89	8.38	1.68	8.33	1.49	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG	NG
-25	10.05	2.45	9.67	2.28	9.86	2.12	9.74	1.91	9.69	1.71	8.78	1.61	8.25	1.51	NG	NG	NG	NG	NG	NG	NG	NG
-20	11.43	2.66	11.19	2.50	11.23	2.35	11.09	2.14	11.04	1.94	10.25	1.78	9.43	1.63	8.61	1.57	8.07	1.52	NG	NG	NG	NG
-15	12.76	2.87	12.54	2.72	12.60	2.59	12.45	2.37	12.40	2.16	11.75	1.96	10.51	1.76	9.90	1.68	9.60	1.62	9.42	1.46	9.39	1.26
-10	13.77	3.38	13.61	3.18	13.56	2.98	13.86	2.71	13.58	2.54	12.86	2.31	12.02	2.08	11.15	1.87	10.59	1.75	10.64	1.55	9.85	1.36
-7	14.79	3.64	14.43	3.37	14.13	3.14	14.71	2.92	14.40	2.66	13.63	2.44	13.15	2.18	12.27	1.98	11.48	1.82	12.01	1.62	10.91	1.42
-5	15.12	3.89	14.56	3.63	14.51	3.39	14.97	3.05	14.79	2.73	14.01	2.47	13.29	2.23	12.56	2.05	12.24	1.88	12.64	1.67	11.55	1.46
0	15.70	4.40	15.78	4.09	15.46	3.79	15.82	3.40	15.77	3.01	14.69	2.73	13.96	2.46	13.70	2.23	13.22	2.01	13.46	1.78	12.58	1.56
2	16.08	4.78	16.17	4.48	15.85	4.18	15.93	3.79	15.89	3.36	15.06	3.04	14.42	2.75	14.00	2.42	13.46	2.14	13.69	1.90	13.01	1.66
5	16.38	5.28	16.61	4.88	16.42	4.50	16.23	4.02	16.19	3.56	15.61	3.21	15.06	2.88	14.44	2.59	13.82	2.29	14.05	2.05	13.34	1.79
7	16.85	5.82	17.04	5.29	17.00	4.87	16.81	4.34	16.75	3.82	16.70	3.46	16.52	3.11	15.58	2.78	14.76	2.45	14.28	2.18	14.06	1.90
10	16.98	6.94	17.22	6.38	17.45	5.82	16.83	5.07	16.63	4.31	16.31	3.87	16.13	3.42	15.15	3.05	14.76	2.67	14.51	2.34	13.98	2.01
15	17.74	8.97	17.68	8.19	17.77	7.40	17.41	6.28	17.06	5.16	16.48	4.55	16.81	3.93	15.68	3.48	15.17	3.04	14.87	2.60	14.31	2.18
20	18.50	11.00	19.06	9.99	18.98	8.98	18.75	7.50	18.67	6.00	17.69	5.22	17.48	4.45	16.21	3.92	15.58	3.40	15.25	2.88	14.63	2.36
25	19.26	13.02	19.84	11.80	20.63	10.56	20.91	8.70	20.45	6.84	19.00	5.90	18.31	4.96	16.75	4.37	16.25	3.76	15.61	3.15	14.95	2.53
30	NG	NG	20.61	13.60	21.43	12.15	21.52	9.92	21.41	7.68	20.57	6.58	19.62	5.48	18.14	4.81	16.95	4.13	15.98	3.42	NG	NG
35	NG	NG	NG	NG	22.22	13.72	22.12	11.12	22.40	8.53	22.28	7.26	21.03	5.99	19.68	5.24	17.98	4.49	NG	NG	NG	NG