

3. Overall information of the heat pump

CH-HP16UMNM																	
Heating Capacity (kW)																	
Water Outlet Temp. (°C)	Ambient Temperature(°C)																
	-30	-25	-20	-15	-10	-7	-5	0	2	5	7	10	15	20	25	30	35
30	6.6	7.2	7.9	8.8	10.2	11.5	11.8	12.9	13.4	14.1	15.5	16.8	18.3	18.6	19.8	21.3	22.1
40	6.5	7.3	8.1	8.9	10.2	11.5	11.9	12.9	13.5	14.1	15.6	16.7	18.2	18.3	19.8	21.2	22.0
45	6.4	7.3	8.2	9.1	10.6	11.6	12.1	13.6	13.5	15.1	15.6	16.2	17.5	18.3	20.3	21.5	22.5
50		7.4	8.4	9.2	10.2	11.6	12.1	13.1	13.5	14.2	15.6	16.7	18.2	18.3	19.8	21.1	21.8
55			8.5	9.3	10.3	11.7	12.2	13.1	13.5	14.2	15.7	16.8	18.2	18.3	19.8	21.0	21.7
60				9.4	10.3	11.8	12.2	13.2	13.6	14.3	15.8	17.0	18.3	18.2	19.7	21.0	21.6
Power Input (kW)																	
Water Outlet Temp. (°C)	Ambient Temperature(°C)																
	-30	-25	-20	-15	-10	-7	-5	0	2	5	7	10	15	20	25	30	35
30	3.5	3.5	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.6	3.4	3.4	3.4	3.4
40	4.0	4.0	4.1	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.8	3.6	3.6	3.6	3.7
45	4.4	4.3	4.1	4.1	4.2	4.1	4.2	4.4	4.2	4.6	4.3	4.3	4.2	4.1	4.1	4.1	4.1
50		4.9	5.0	4.7	4.7	4.7	4.7	4.7	4.7	4.7	4.8	4.8	4.8	4.5	4.5	4.6	4.6
55			5.6	5.3	5.3	5.2	5.2	5.3	5.3	5.3	5.3	5.3	5.3	5.0	5.1	5.1	5.1
60				5.9	5.9	5.9	5.9	5.9	5.9	6.0	6.0	6.0	6.0	5.7	5.7	5.7	5.7
COP																	
Water Outlet Temp. (°C)	Ambient Temperature(°C)																
	-30	-25	-20	-15	-10	-7	-5	0	2	5	7	10	15	20	25	30	35
30	1.89	2.06	2.19	2.44	2.83	3.19	3.28	3.58	3.72	3.92	4.31	4.67	5.08	5.47	5.90	6.29	6.53
40	1.63	1.83	1.98	2.34	2.68	3.03	3.13	3.39	3.55	3.71	4.11	4.39	4.79	5.08	5.47	5.83	6.02
45	1.5	1.7	2.0	2.2	2.5	2.8	2.88	3.1	3.2	3.3	3.6	3.8	4.1	4.5	4.9	5.3	5.5
50		1.51	1.68	1.96	2.17	2.47	2.57	2.79	2.87	3.02	3.25	3.48	3.79	4.07	4.35	4.60	4.72
55			1.52	1.75	1.94	2.25	2.35	2.47	2.55	2.68	2.96	3.17	3.43	3.66	3.91	4.13	4.24
60				1.59	1.75	2.00	2.07	2.24	2.31	2.38	2.63	2.83	3.05	3.19	3.46	3.67	3.76

CH-HP31UMNM																	
Heating Capacity (kW)																	
Water Outlet Temp. (°C)	Ambient Temperature(°C)																
	-30	-25	-20	-15	-10	-7	-5	0	2	5	7	10	15	20	25	30	35
30	12	14.4	15.8	17.6	20.4	20.8	22.5	25.8	26.8	28.2	30.0	33.0	36.6	36.0	39.6	42.6	44.0
40	12.2	14.6	16.0	17.8	20.4	21.0	22.8	25.8	27.0	28.2	30.0	33.4	36.4	36.0	39.6	42.4	44.0
45	12.5	14.6	16.2	18.2	20.4	21.2	23.4	26.0	27.0	28.2	30.5	33.4	36.4	36.5	39.6	42.4	43.5
50		14.8	16.4	18.4	20.4	21.5	24.0	26.2	27.0	28.4	30.7	33.4	36.4	36.6	39.6	42.2	43.6
55			16.6	18.6	20.6	22.0	24.4	26.2	27.0	28.4	31.0	33.6	36.4	36.6	39.6	42.0	43.6
60				18.8	20.6	22.6	24.4	26.4	27.2	28.6	31.5	34.0	36.6	36.4	39.4	42.0	43.6
Power Input (kW)																	
Water Outlet Temp. (°C)	Ambient Temperature(°C)																
	-30	-25	-20	-15	-10	-7	-5	0	2	5	7	10	15	20	25	30	35
30	7.2	7.5	7.2	7.2	7.2	7.2	7.6	7.4	7.5	7.2	7.4	7.4	7.6	7.6	7.8	7.8	7.8
40	7.5	8.0	8.2	7.6	7.6	7.6	7.7	7.6	7.7	7.6	7.6	7.6	7.6	7.6	8.0	3.6	3.7
45	7.8	8.4	8.0	8.2	8.0	8.4	8.5	8.2	8.4	8.4	8.2	8.2	8.1	8.0	8.0	7.9	7.8
50		8.9	10.0	8.9	9.0	9.4	9.6	9.6	9.4	9.3	9.6	9.6	9.6	9.3	9.3	9.2	9.2
55			10.5	9.2	10.2	10.4	10.4	10.6	10.6	10.5	10.4	10.6	10.5	10.0	10.2	10.2	10.2
60				11.0	11.8	11.8	12.0	12.2	11.8	12.0	12.0	12.0	11.9	11.5	11.4	11.4	11.4
COP																	
Water Outlet Temp. (°C)	Ambient Temperature(°C)																
	-30	-25	-20	-15	-10	-7	-5	0	2	5	7	10	15	20	25	30	35
30	1.67	1.92	2.19	2.44	2.83	2.89	2.96	3.49	3.57	3.92	4.05	4.46	4.82	4.74	5.08	5.46	5.64
40	1.63	1.83	1.95	2.34	2.68	2.76	2.96	3.39	3.51	3.71	3.95	4.39	4.79	4.74	4.95	11.66	12.04
45	1.60	1.74	2.03	2.22	2.55	2.52	2.75	3.17	3.21	3.36	3.72	4.07	4.49	4.56	4.95	5.37	5.58
50		1.66	1.64	2.07	2.27	2.29	2.50	2.73	2.87	3.05	3.20	3.48	3.79	3.94	4.26	4.59	4.74
55			1.58	2.02	2.02	2.12	2.35	2.47	2.55	2.70	2.98	3.17	3.47	3.66	3.88	4.12	4.27
60				1.71	1.75	1.92	2.03	2.16	2.31	2.38	2.63	2.83	3.08	3.17	3.46	3.68	3.82

3. Overall information of the heat pump

CH-HP42UMNM																	
Heating Capacity(kW)																	
Water Outlet Temp. (°C)	Ambient Temperature(°C)																
	-30	-25	-20	-15	-10	-7	-5	0	2	5	7	10	15	20	25	30	35
30	18.7	21.2	23.6	26.7	30.9	32.5	33.5	36.5	37.8	40.1	42.2	46.4	48.2	51.8	53.9	56.1	58.3
40	18.9	21.6	24.0	27.0	30.9	32.6	33.8	36.6	38.0	40.2	42.5	46.4	48.3	51.9	54.1	56.3	58.5
45	18.4	21.0	23.5	26.7	29.9	31.6	32.8	35.4	36.7	38.9	41.8	46.4	48.4	51.9	54.3	56.3	58.8
50		20.5	24.1	26.9	29.9	31.7	33.0	35.6	36.7	39.0	41.0	46.7	48.4	52.0	54.5	56.4	59.1
55			24.4	27.1	30.0	31.8	33.2	35.9	36.9	39.2	41.0	46.7	48.4	52.2	54.8	56.7	59.5
60			25.0	27.4	30.1	32.1	33.3	36.0	37.2	39.3	41.2	46.8	48.7	52.4	54.8	56.8	59.7
Power Input(kW)																	
Water Outlet Temp. (°C)	Ambient Temperature(°C)																
	-30	-25	-20	-15	-10	-7	-5	0	2	5	7	10	15	20	25	30	35
30	9.5	9.5	9.5	9.6	9.6	9.6	9.6	9.6	9.7	9.7	9.7	9.7	9.7	9.8	9.8	9.8	9.8
40	10.2	10.3	10.4	10.4	10.4	10.4	10.4	10.4	10.5	10.5	10.5	10.5	10.5	10.5	10.5	10.6	10.6
45	11.2	11.3	11.3	11.3	11.4	11.4	11.4	11.4	11.5	11.6	11.9	11.8	11.8	11.9	12.0	12.0	12.0
50		11.6	12.7	12.7	12.7	12.8	12.8	12.8	12.8	12.9	13.0	13.0	13.1	13.2	13.2	13.3	13.4
55			14.1	14.2	14.2	14.3	14.3	14.3	14.3	14.4	14.4	14.4	14.5	14.5	14.7	14.8	14.8
60			15.9	16.0	16.0	16.0	16.0	16.1	16.2	16.2	16.3	16.3	16.4	16.4	16.5	16.6	16.7
COP																	
Water Outlet Temp. (°C)	Ambient Temperature(°C)																
	-30	-25	-20	-15	-10	-7	-5	0	2	5	7	10	15	20	25	30	35
30	1.98	2.23	2.48	2.80	3.23	3.38	3.49	3.79	3.91	4.15	4.35	4.78	4.97	5.30	5.53	5.72	5.94
40	1.85	2.10	2.32	2.61	2.98	3.13	3.25	3.51	3.64	3.84	4.06	4.44	4.62	4.94	5.15	5.34	5.52
45	1.64	1.87	2.08	2.36	2.64	2.78	2.89	3.11	3.21	3.36	3.52	3.95	4.10	4.36	4.53	4.69	4.88
50		1.76	1.90	2.11	2.35	2.47	2.58	2.77	2.86	3.03	3.16	3.58	3.70	3.94	4.13	4.24	4.41
55			1.73	1.91	2.11	2.23	2.32	2.50	2.58	2.72	2.84	3.23	3.34	3.59	3.73	3.83	4.01
60			1.57	1.72	1.88	2.00	2.08	2.23	2.30	2.42	2.53	2.87	2.97	3.19	3.32	3.43	3.58

CH-HP84UMNM																	
Heating Capacity(kW)																	
Water Outlet Temp. (°C)	Ambient Temperature(°C)																
	-30	-25	-20	-15	-10	-7	-5	0	2	5	7	10	15	20	25	30	35
30	37.9	43.0	47.8	54.1	62.5	65.7	67.9	73.8	76.5	81.1	85.5	94.0	97.6	104.8	109.2	113.5	118.0
40	38.3	43.8	48.6	54.7	62.5	65.9	68.4	74.0	77.0	81.3	86.0	94.0	97.8	105.0	109.6	114.0	118.5
45	38.5	44.1	49.3	55.9	62.8	66.2	68.9	74.3	77.0	81.5	86.0	94.0	97.9	105.0	110.0	114.0	119.0
50		44.5	50.6	56.5	62.8	66.4	69.3	74.7	77.0	81.9	86.0	94.5	98.0	105.2	110.3	114.2	119.7
55			51.2	56.9	63.0	66.8	69.6	75.2	77.5	82.2	86.0	94.5	98.0	105.7	110.9	114.8	120.5
60			52.5	57.5	63.1	67.3	69.9	75.5	78.0	82.4	86.5	94.8	98.5	106.0	111.0	115.0	120.8
Power Input(kW)																	
Water Outlet Temp. (°C)	Ambient Temperature(°C)																
	-30	-25	-20	-15	-10	-7	-5	0	2	5	7	10	15	20	25	30	35
30	19.0	19.1	19.1	19.2	19.2	19.3	19.3	19.3	19.4	19.4	19.5	19.5	19.5	19.6	19.6	19.7	19.7
40	20.5	20.7	20.8	20.8	20.8	20.9	20.9	20.9	21.0	21.0	21.0	21.0	21.0	21.1	21.1	21.2	21.3
45	22.5	22.6	22.7	22.7	22.8	22.8	22.8	22.9	23.0	23.2	23.5	23.6	23.7	23.9	24.1	24.1	24.2
50		25.3	25.5	25.6	25.6	25.7	25.7	25.8	25.8	25.9	26.1	26.2	26.3	26.5	26.5	26.7	26.9
55			28.4	28.5	28.6	28.7	28.7	28.8	28.8	28.9	29.0	29.0	29.1	29.2	29.5	29.7	29.8
60			32.0	32.1	32.1	32.2	32.2	32.4	32.5	32.6	32.7	32.8	32.9	33.0	33.2	33.3	33.5
COP																	
Water Outlet Temp. (°C)	Ambient Temperature(°C)																
	-30	-25	-20	-15	-10	-7	-5	0	2	5	7	10	15	20	25	30	35
30	1.99	2.25	2.50	2.82	3.26	3.40	3.52	3.82	3.94	4.18	4.38	4.82	5.01	5.35	5.57	5.76	5.99
40	1.87	2.12	2.34	2.63	3.00	3.15	3.27	3.54	3.67	3.87	4.10	4.48	4.66	4.98	5.19	5.38	5.56
45	1.71	1.95	2.17	2.46	2.75	2.90	3.02	3.24	3.35	3.51	3.66	3.98	4.13	4.39	4.56	4.73	4.92
50		1.76	1.98	2.21	2.45	2.58	2.70	2.90	2.98	3.16	3.30	3.61	3.73	3.97	4.16	4.28	4.45
55			1.80	2.00	2.20	2.33	2.43	2.61	2.69	2.84	2.97	3.26	3.37	3.62	3.76	3.87	4.04
60			1.64	1.79	1.97	2.09	2.17	2.33	2.40	2.53	2.65	2.89	2.99	3.21	3.34	3.45	3.61