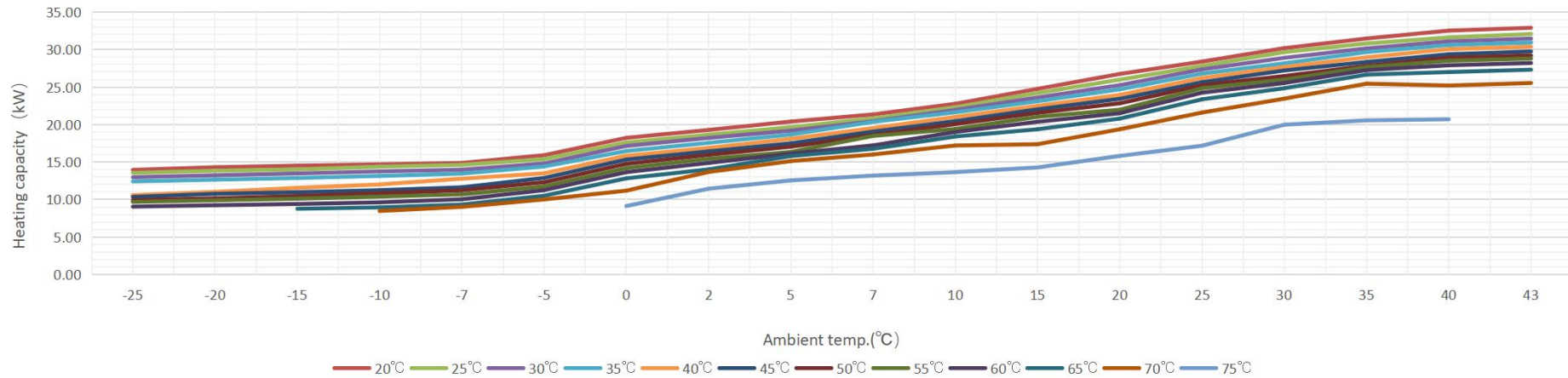


Performance curves of 20KW R290 Full inverter Heating&Cooling Heat Pump of New Energy

Heating Capacity (kW)

Ambient (°C)	Heating Capacity (kW)																	
	-25	90Hz	-15	85Hz	-10	80Hz	-5	75Hz	5	70Hz	10	65Hz	15	60Hz	20	55Hz	30	50Hz
20°C	13.95	14.31	14.52	14.68	14.88	15.91	18.23	19.28	20.40	21.35	22.77	24.76	26.75	28.40	30.19	31.48	32.53	32.90
25°C	13.56	13.84	14.02	14.38	14.62	15.40	17.61	18.65	19.65	20.82	22.30	24.20	25.99	27.82	29.65	30.81	31.62	32.08
30°C	12.98	13.23	13.48	13.75	13.98	14.81	17.14	18.22	19.19	20.44	21.95	23.61	25.25	27.36	28.90	30.16	31.10	31.47
35°C	12.42	12.65	12.87	13.14	13.46	14.41	16.47	17.56	18.66	20.36	21.63	23.10	24.69	26.79	28.17	29.66	30.60	30.94
40°C	10.58	11.02	11.56	12.01	12.78	13.50	15.85	16.89	18.10	19.53	21.02	22.49	23.96	26.21	27.67	28.97	30.05	30.39
45°C	10.35	10.76	10.98	11.25	11.63	12.88	15.33	16.42	17.50	19.06	20.46	22.03	23.43	25.65	27.21	28.35	29.38	29.75
50°C	9.91	10.15	10.47	10.83	11.23	12.30	14.76	15.96	17.04	18.62	20.05	21.56	22.83	25.24	26.47	27.83	28.93	29.22
55°C	9.68	9.89	10.11	10.39	10.68	11.74	14.20	15.43	16.34	18.48	19.41	21.03	21.98	24.84	26.00	27.65	28.51	28.80
60°C	9.05	9.24	9.41	9.62	10.03	11.25	13.65	14.88	16.12	17.22	19.01	20.37	21.50	24.25	25.54	27.25	27.91	28.20
65°C			8.77	8.95	9.33	10.50	12.83	14.02	15.79	16.76	18.41	19.37	20.79	23.37	24.84	26.65	27.01	27.32
70°C				8.47	9.02	10.01	11.18	13.67	15.13	16.01	17.21	17.38	19.37	21.60	23.45	25.45	25.20	25.54
75°C							9.13	11.44	12.55	13.19	13.65	14.28	15.82	17.18	19.98	20.56	20.70	

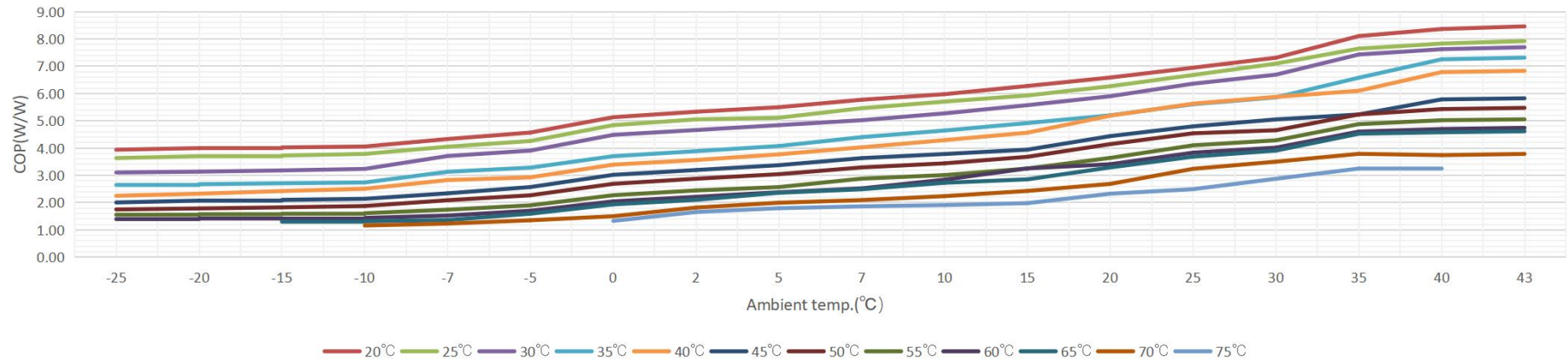
Heating Capacity Curve



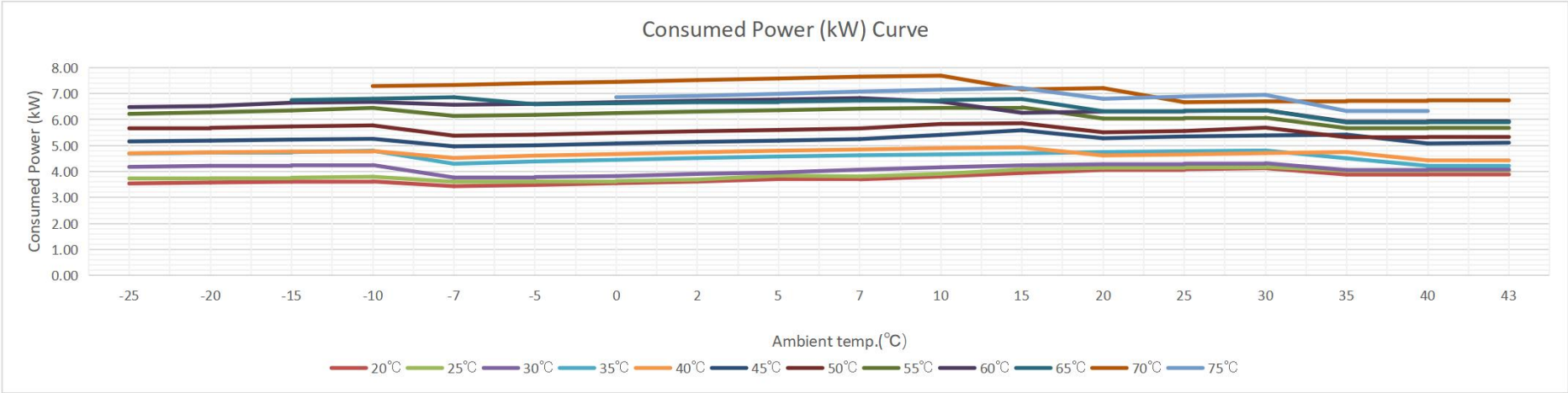
COP (kW/kW)

Ambient (°C) Outlet (°C)	COP (kW/kW)																	
	-25	-20	-15	-10	-7	-5	0	2	5	7	10	15	20	25	30	35	40	43
20°C	3.94	4.00	4.02	4.06	4.33	4.57	5.13	5.33	5.50	5.77	5.97	6.27	6.58	6.94	7.31	8.10	8.36	8.46
25°C	3.63	3.70	3.72	3.78	4.05	4.26	4.84	5.05	5.11	5.46	5.70	5.93	6.27	6.68	7.09	7.64	7.83	7.92
30°C	3.11	3.14	3.18	3.24	3.71	3.91	4.48	4.66	4.84	5.02	5.27	5.57	5.90	6.36	6.69	7.43	7.62	7.69
35°C	2.65	2.67	2.71	2.74	3.13	3.28	3.70	3.88	4.07	4.40	4.64	4.92	5.20	5.60	5.86	6.58	7.25	7.31
40°C	2.25	2.32	2.42	2.51	2.83	2.93	3.39	3.56	3.77	4.03	4.29	4.56	5.19	5.63	5.88	6.10	6.78	6.83
45°C	2.01	2.07	2.10	2.14	2.34	2.57	3.02	3.19	3.37	3.63	3.78	3.94	4.44	4.79	5.05	5.23	5.78	5.82
50°C	1.75	1.79	1.83	1.87	2.09	2.27	2.69	2.88	3.04	3.29	3.44	3.68	4.14	4.54	4.65	5.23	5.43	5.47
55°C	1.56	1.57	1.59	1.61	1.74	1.90	2.27	2.45	2.57	2.88	3.01	3.25	3.64	4.10	4.28	4.88	5.02	5.05
60°C	1.40	1.42	1.42	1.44	1.53	1.70	2.05	2.21	2.38	2.52	2.84	3.25	3.41	3.83	4.02	4.60	4.70	4.74
65°C			1.30	1.32	1.36	1.59	1.93	2.10	2.36	2.49	2.73	2.85	3.29	3.68	3.91	4.53	4.58	4.61
70°C				1.16	1.23	1.35	1.50	1.82	2.00	2.09	2.24	2.43	2.69	3.24	3.50	3.79	3.74	3.78
75°C							1.33	1.66	1.80	1.86	1.91	1.98	2.33	2.49	2.87	3.25	3.26	

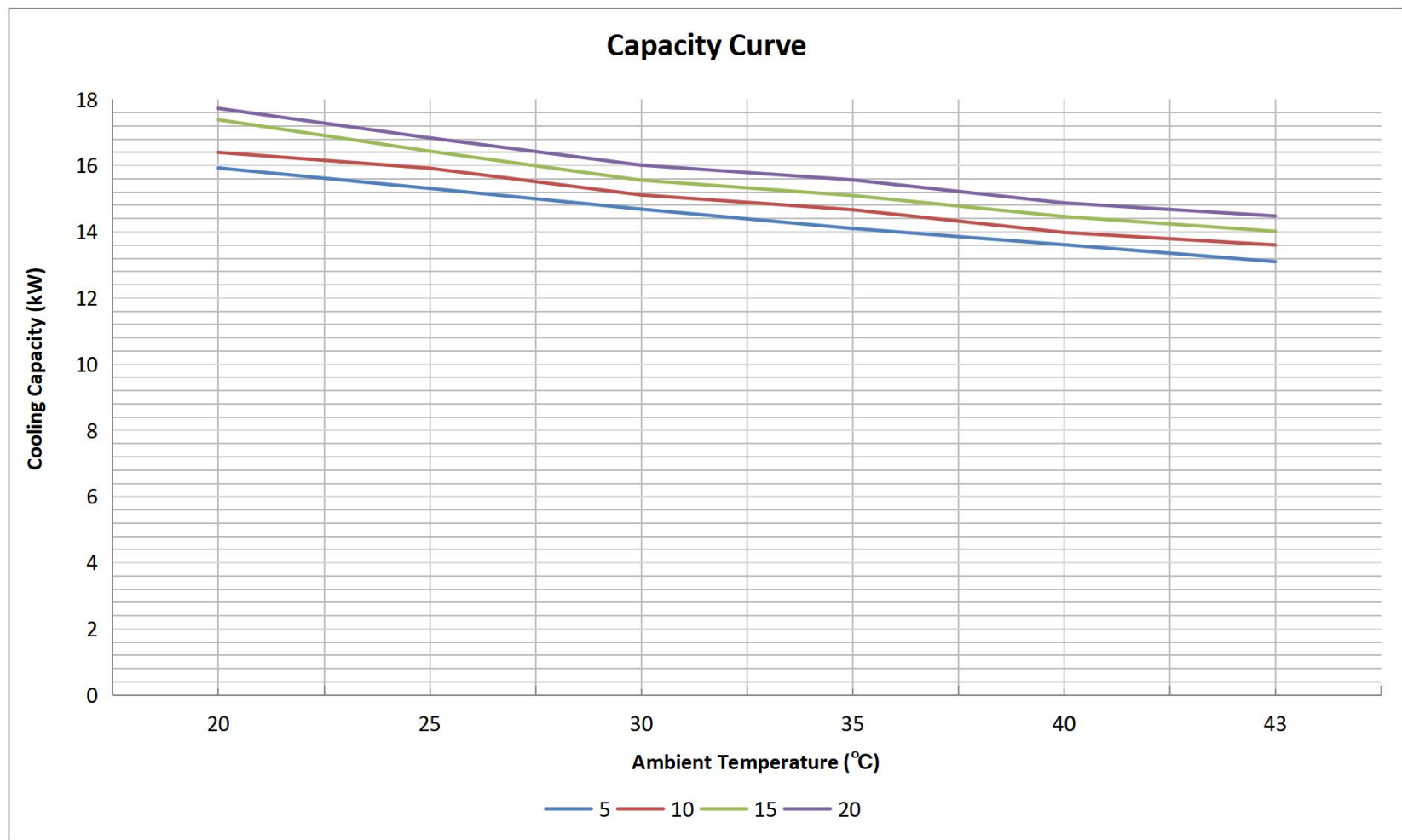
COP Curve



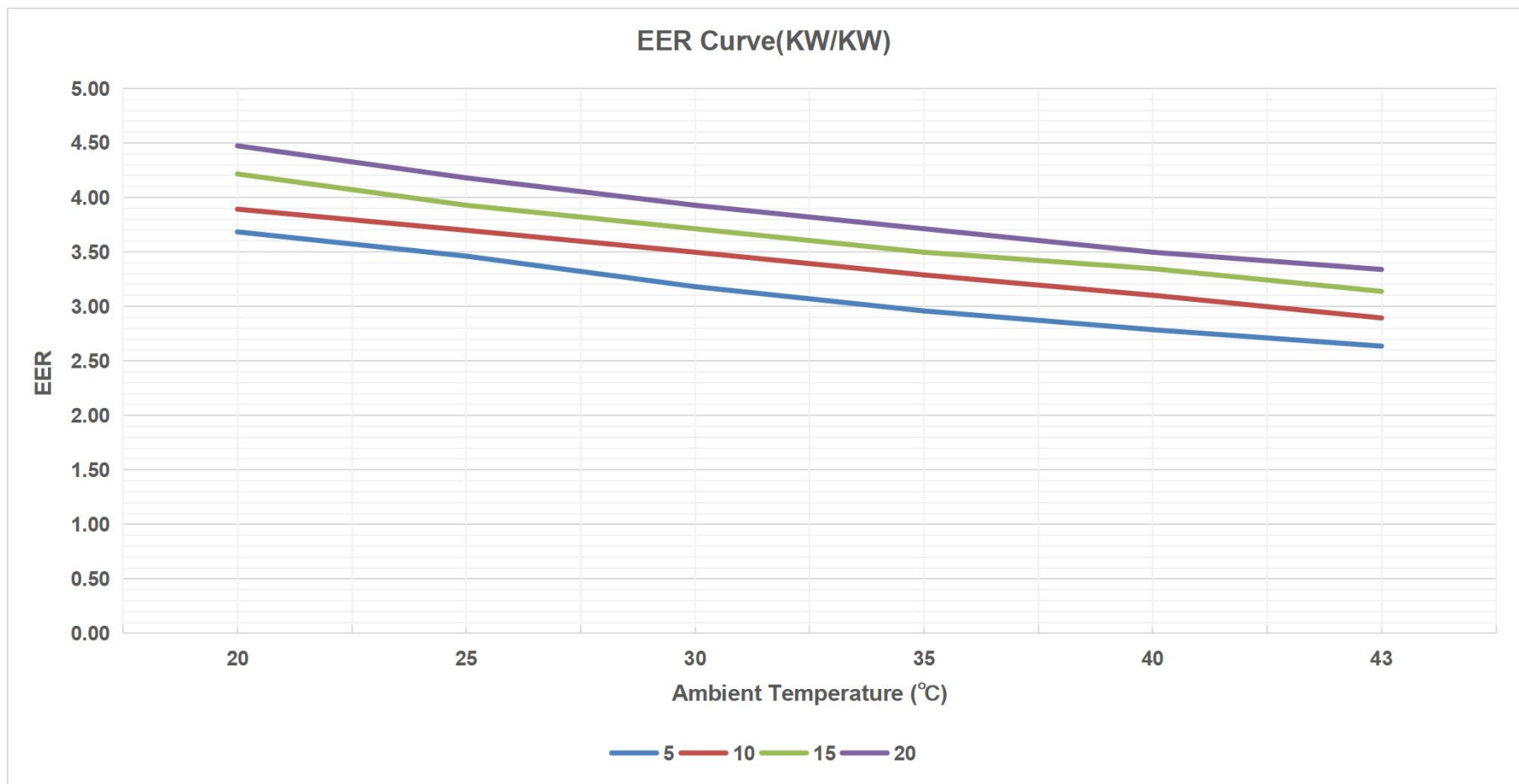
Consumed Power (kW)																		
Ambient (°C) Outlet (°C)		90Hz		85Hz		80Hz		75Hz		70Hz		65Hz		60Hz		55Hz		50Hz
	-25	-20	-15	-10	-7	-5	0	2	5	7	10	15	20	25	30	35	40	43
20°C	3.54	3.58	3.61	3.62	3.44	3.48	3.55	3.62	3.71	3.70	3.81	3.95	4.06	4.09	4.13	3.88	3.89	3.89
25°C	3.73	3.74	3.76	3.80	3.61	3.62	3.64	3.69	3.84	3.81	3.91	4.08	4.15	4.17	4.18	4.03	4.04	4.05
30°C	4.18	4.22	4.24	4.25	3.77	3.79	3.82	3.91	3.96	4.07	4.16	4.24	4.28	4.30	4.32	4.06	4.08	4.09
35°C	4.69	4.73	4.75	4.80	4.30	4.39	4.45	4.52	4.58	4.63	4.66	4.70	4.75	4.78	4.81	4.51	4.22	4.23
40°C	4.70	4.74	4.77	4.79	4.52	4.61	4.67	4.74	4.80	4.85	4.90	4.93	4.62	4.66	4.71	4.75	4.43	4.45
45°C	5.16	5.19	5.23	5.26	4.97	5.01	5.08	5.14	5.19	5.25	5.41	5.59	5.28	5.35	5.39	5.42	5.08	5.11
50°C	5.67	5.68	5.74	5.78	5.38	5.42	5.49	5.55	5.60	5.66	5.83	5.86	5.51	5.56	5.69	5.32	5.33	5.34
55°C	6.22	6.28	6.35	6.45	6.14	6.18	6.25	6.31	6.36	6.42	6.45	6.47	6.04	6.06	6.07	5.67	5.68	5.70
60°C	6.48	6.52	6.65	6.68	6.57	6.61	6.67	6.73	6.77	6.83	6.69	6.26	6.31	6.33	6.36	5.92	5.94	5.95
65°C			6.75	6.80	6.86	6.59	6.63	6.67	6.69	6.73	6.75	6.79	6.32	6.34	6.36	5.89	5.90	5.92
70°C				7.29	7.33	7.40	7.45	7.52	7.58	7.65	7.69	7.16	7.21	6.67	6.70	6.72	6.74	6.75
75°C							6.86	6.91	6.99	7.08	7.15	7.21	6.80	6.89	6.95	6.33	6.35	



		80Hz	75Hz	70Hz	65Hz	
Ambient (°C) Outlet (°C)	20	25	30	35	40	43
5	15.93	15.31	14.69	14.10	13.61	13.10
10	16.40	15.92	15.11	14.67	13.98	13.60
15	17.39	16.44	15.56	15.10	14.46	14.02
20	17.73	16.84	16.02	15.57	14.87	14.48



		80Hz	75Hz	70Hz	65Hz	
Ambient (°C) Outlet (°C)	20	25	30	35	40	43
5	3.68	3.46	3.18	2.96	2.79	2.64
10	3.89	3.70	3.50	3.29	3.10	2.89
15	4.22	3.93	3.71	3.50	3.35	3.14
20	4.47	4.18	3.93	3.71	3.50	3.34



		80Hz	75Hz	70Hz	65Hz	
Ambient (°C) Outlet (°C)	20	25	30	35	40	43
5	4.32	4.42	4.62	4.77	4.89	4.97
10	4.21	4.31	4.32	4.46	4.51	4.70
15	4.13	4.18	4.19	4.32	4.32	4.47
20	3.96	4.03	4.08	4.19	4.25	4.34

