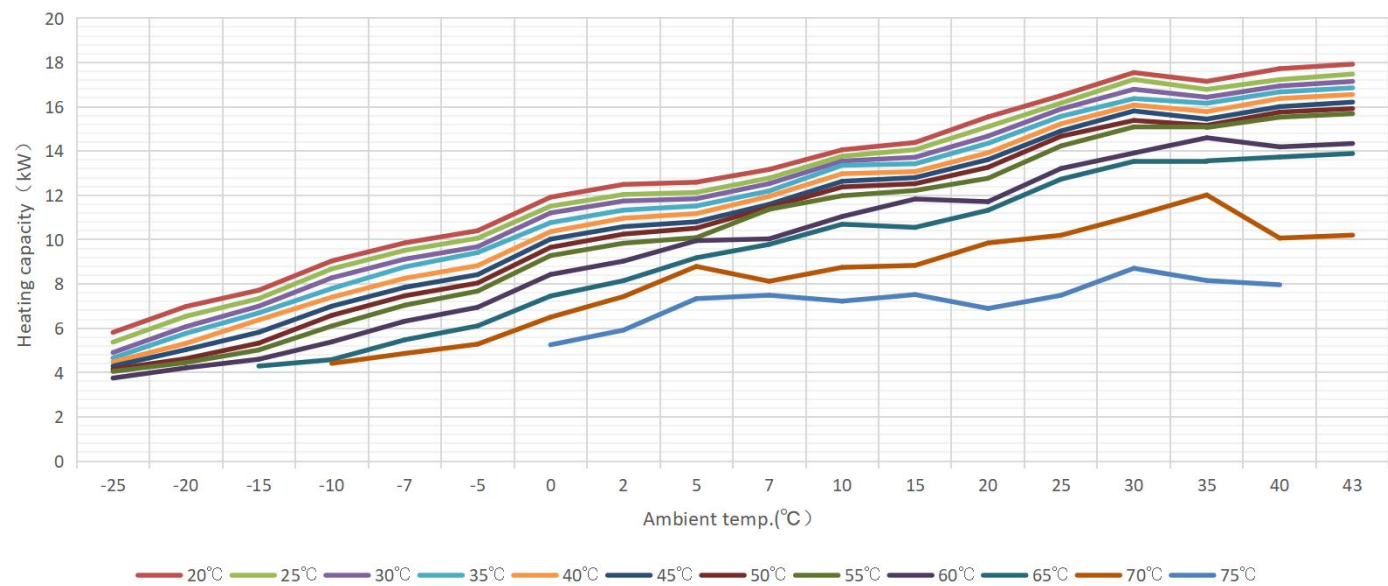


Performance curves of 13KW R290 Full inverter Heating&Cooling Heat Pump of New Energy

Heating Capacity (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	5.81	6.98	7.72	9.04	9.85	10.40	11.92	12.49	12.59	13.17	14.06	14.39	15.54	16.50	17.54	17.15	17.72	17.92
25°C	5.37	6.54	7.34	8.68	9.52	10.06	11.51	12.04	12.13	12.78	13.77	14.06	15.10	16.17	17.23	16.79	17.23	17.48
30°C	4.90	6.07	6.99	8.27	9.12	9.68	11.21	11.74	11.85	12.53	13.55	13.72	14.67	15.90	16.79	16.43	16.94	17.14
35°C	4.66	5.77	6.69	7.79	8.77	9.42	10.77	11.33	11.52	12.20	13.35	13.43	14.35	15.57	16.37	16.16	16.67	16.85
40°C	4.48	5.31	6.37	7.40	8.25	8.83	10.36	10.97	11.18	11.96	12.98	13.07	13.92	15.23	16.08	15.78	16.37	16.55
45°C	4.29	5.03	5.82	6.99	7.84	8.42	10.02	10.59	10.81	11.60	12.63	12.80	13.61	14.91	15.81	15.44	16.01	16.21
50°C	4.15	4.63	5.33	6.58	7.46	8.04	9.65	10.25	10.52	11.46	12.38	12.53	13.27	14.67	15.38	15.16	15.76	15.92
55°C	4.05	4.45	5.02	6.10	7.04	7.68	9.28	9.84	10.09	11.37	11.98	12.22	12.77	14.23	15.09	15.06	15.53	15.69
60°C	3.75	4.21	4.60	5.38	6.31	6.94	8.43	9.03	9.95	10.04	11.04	11.83	11.71	13.21	13.91	14.60	14.19	14.34
65°C			4.29	4.58	5.47	6.10	7.45	8.15	9.18	9.79	10.70	10.55	11.33	12.73	13.53	13.56	13.73	13.89
70°C				4.41	4.86	5.28	6.50	7.43	8.79	8.12	8.75	8.84	9.85	10.20	11.07	12.02	10.07	10.20
75°C							5.25	5.91	7.34	7.49	7.22	7.52	6.89	7.49	8.71	8.15	7.96	

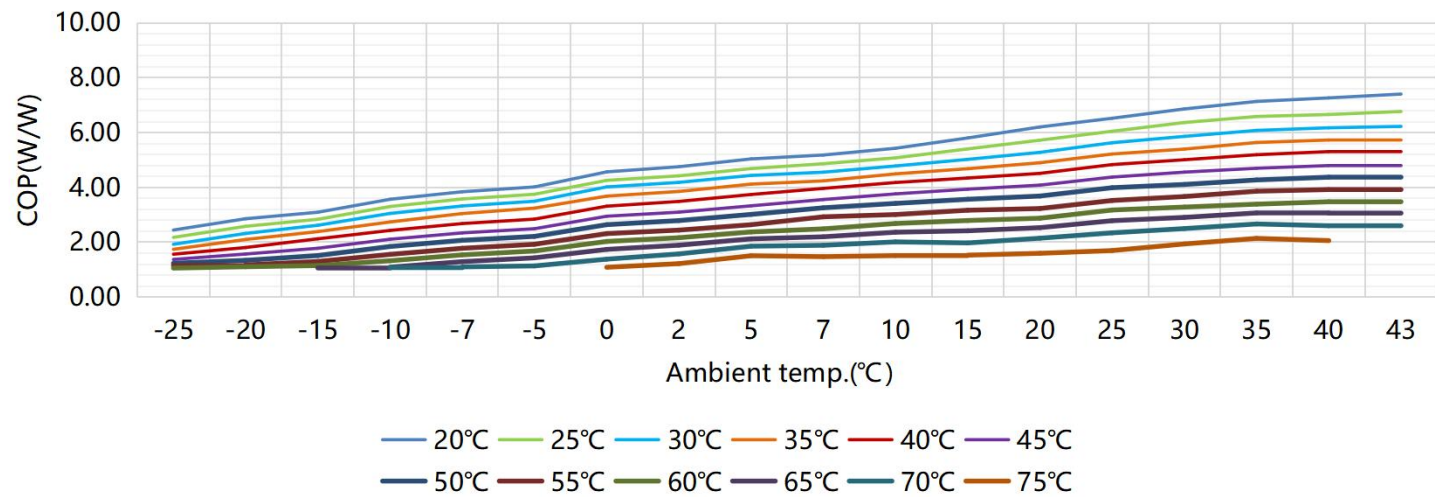
Heating Capacity Curve



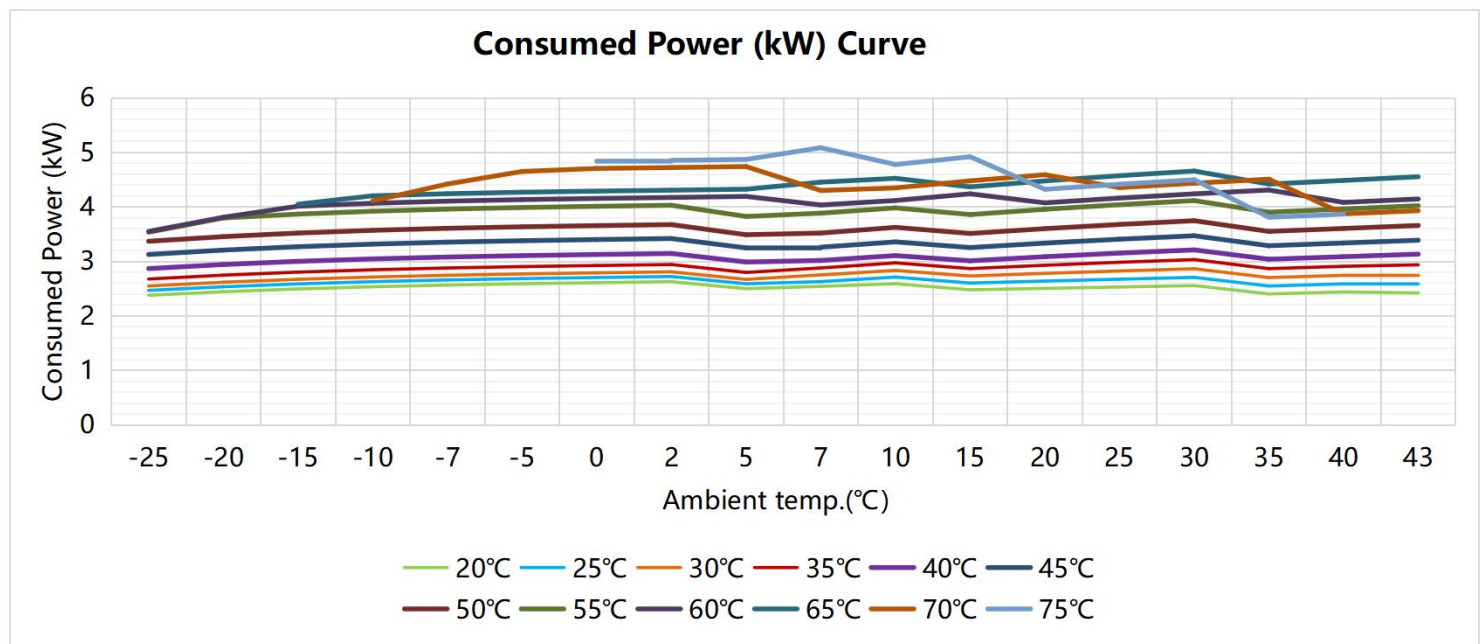
COP (kW/kW)

		90Hz		85Hz		80Hz		75Hz		70Hz		65Hz		60Hz		55Hz		50Hz
Ambient (°C) Outlet (°C)	-25	-20	-15	-10	-7	-5	0	2	5	7	10	15	20	25	30	35	40	43
20°C	2.44	2.86	3.09	3.57	3.84	4.02	4.57	4.75	5.04	5.18	5.43	5.80	6.20	6.52	6.86	7.13	7.26	7.40
25°C	2.18	2.58	2.84	3.30	3.58	3.75	4.26	4.42	4.69	4.86	5.08	5.40	5.72	6.05	6.37	6.59	6.66	6.77
30°C	1.92	2.32	2.62	3.05	3.32	3.49	4.02	4.18	4.44	4.55	4.78	5.02	5.28	5.63	5.86	6.08	6.17	6.22
35°C	1.74	2.10	2.39	2.74	3.05	3.24	3.68	3.85	4.12	4.24	4.49	4.68	4.90	5.22	5.40	5.64	5.73	5.74
40°C	1.56	1.81	2.12	2.43	2.68	2.84	3.31	3.49	3.74	3.96	4.18	4.34	4.51	4.83	5.01	5.19	5.30	5.28
45°C	1.37	1.57	1.78	2.11	2.34	2.49	2.95	3.10	3.33	3.56	3.76	3.93	4.08	4.37	4.56	4.70	4.80	4.78
50°C	1.23	1.34	1.51	1.84	2.07	2.21	2.64	2.79	3.01	3.26	3.42	3.57	3.68	3.99	4.11	4.27	4.37	4.35
55°C	1.15	1.17	1.30	1.56	1.78	1.92	2.31	2.44	2.64	2.93	3.01	3.17	3.23	3.52	3.67	3.86	3.92	3.90
60°C	1.06	1.11	1.15	1.32	1.54	1.68	2.03	2.16	2.37	2.49	2.68	2.79	2.87	3.17	3.28	3.39	3.47	3.46
65°C			1.06	1.09	1.29	1.43	1.74	1.89	2.12	2.20	2.36	2.42	2.53	2.78	2.91	3.07	3.06	3.05
70°C				1.07	1.10	1.14	1.38	1.57	1.85	1.89	2.01	1.97	2.15	2.34	2.50	2.67	2.60	2.60
75°C							1.08	1.22	1.51	1.47	1.51	1.53	1.59	1.70	1.94	2.14	2.06	

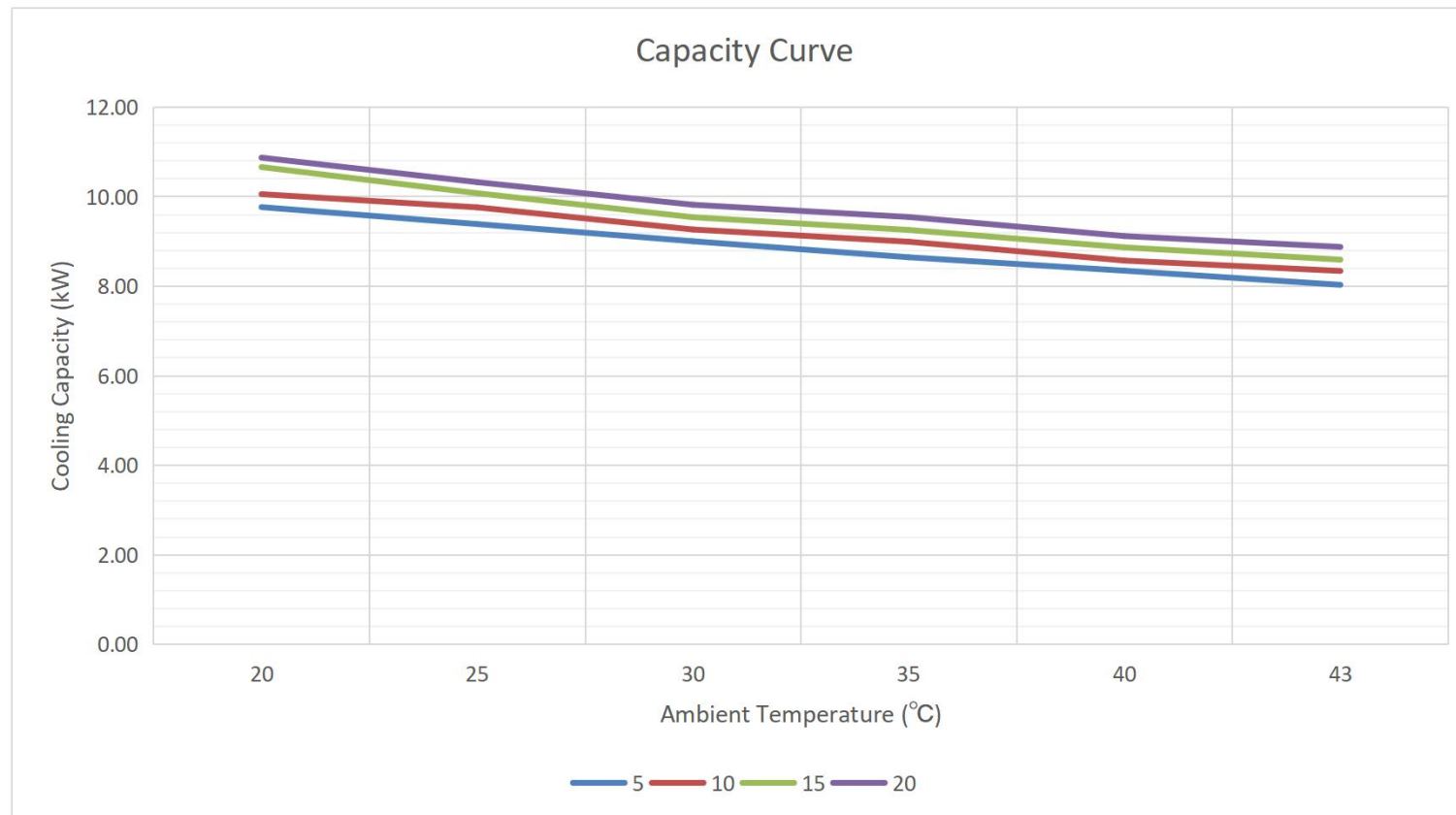
COP Curve



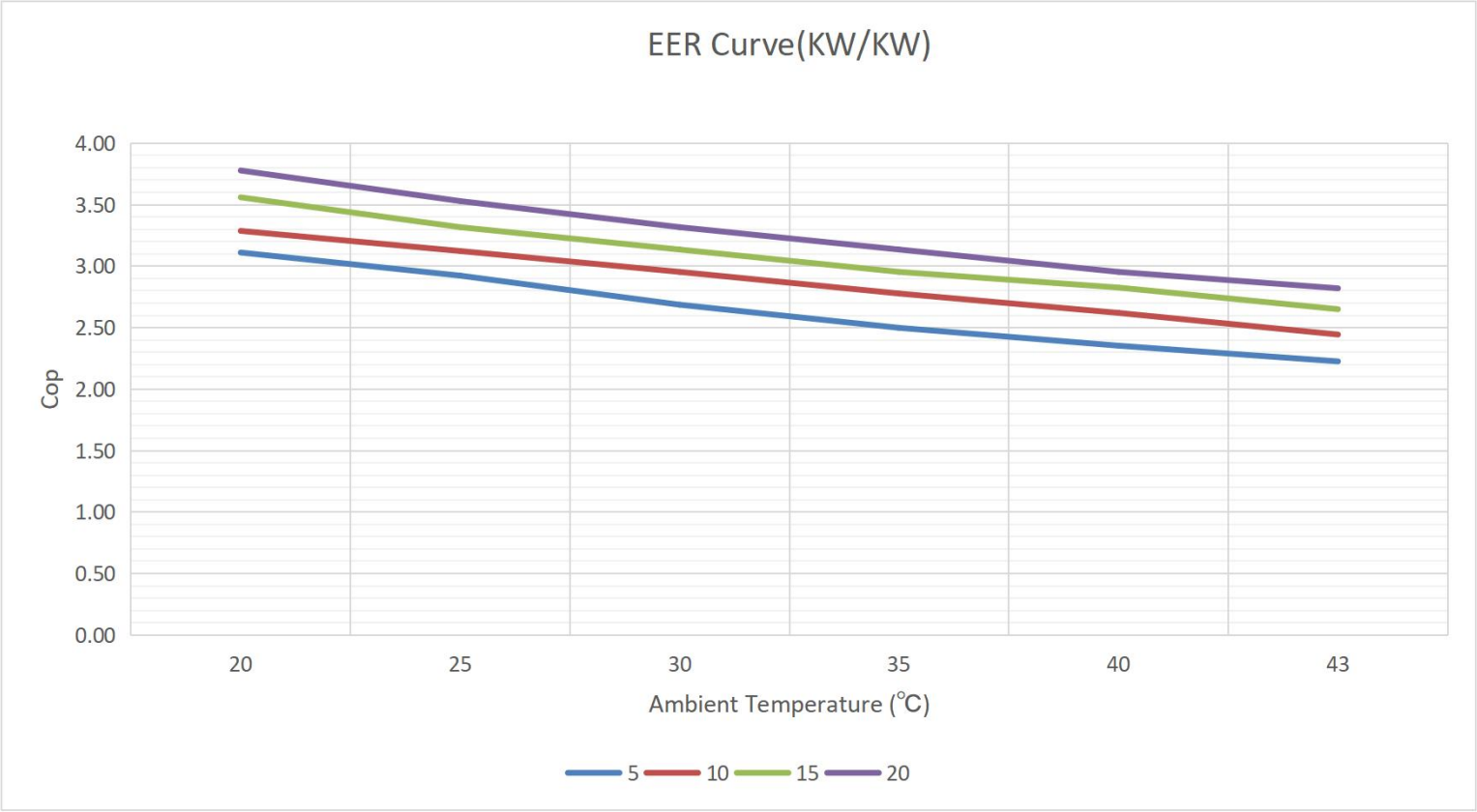
Consumed Power (kW)																		
		90Hz		85Hz		80Hz		75Hz		70Hz		65Hz		60Hz		55Hz		50Hz
Ambient (°C) Outlet (°C)	-25	-20	-15	-10	-7	-5	0	2	5	7	10	15	20	25	30	35	40	43
20°C	2.38	2.44	2.49	2.53	2.57	2.59	2.61	2.63	2.50	2.54	2.59	2.48	2.51	2.53	2.56	2.40	2.44	2.42
25°C	2.47	2.53	2.59	2.63	2.66	2.68	2.70	2.72	2.59	2.63	2.71	2.60	2.64	2.67	2.71	2.55	2.59	2.58
30°C	2.55	2.62	2.67	2.71	2.75	2.77	2.79	2.81	2.67	2.75	2.83	2.73	2.78	2.82	2.87	2.70	2.74	2.75
35°C	2.68	2.75	2.80	2.85	2.88	2.90	2.93	2.94	2.80	2.88	2.97	2.87	2.93	2.98	3.03	2.87	2.91	2.94
40°C	2.87	2.94	3.00	3.05	3.08	3.11	3.13	3.15	2.99	3.02	3.11	3.01	3.09	3.15	3.21	3.04	3.09	3.13
45°C	3.13	3.21	3.27	3.32	3.35	3.38	3.40	3.42	3.25	3.26	3.36	3.25	3.34	3.41	3.47	3.29	3.34	3.39
50°C	3.37	3.45	3.52	3.57	3.61	3.63	3.66	3.68	3.49	3.52	3.62	3.51	3.60	3.68	3.75	3.55	3.60	3.66
55°C	3.54	3.80	3.87	3.92	3.96	3.99	4.01	4.03	3.82	3.88	3.98	3.86	3.96	4.04	4.12	3.90	3.96	4.02
60°C	3.55	3.81	4.01	4.07	4.11	4.13	4.16	4.17	4.19	4.04	4.12	4.24	4.07	4.16	4.24	4.31	4.08	4.14
65°C			4.05	4.20	4.24	4.27	4.29	4.31	4.32	4.45	4.52	4.37	4.48	4.57	4.66	4.42	4.49	4.55
70°C				4.11	4.42	4.65	4.71	4.72	4.74	4.30	4.35	4.48	4.59	4.35	4.43	4.51	3.87	3.93
75°C							4.84	4.85	4.87	5.09	4.78	4.92	4.32	4.42	4.50	3.81	3.87	



		80Hz	75Hz	70Hz	65Hz	
Ambient (°C)	20	25	30	35	40	43
5	9.77	9.39	9.01	8.65	8.35	8.03
10	10.06	9.76	9.27	8.99	8.57	8.34
15	10.66	10.08	9.54	9.26	8.87	8.60
20	10.87	10.33	9.82	9.55	9.12	8.88



		80Hz	75Hz	70Hz	65Hz	
Ambient (°C)	20	25	30	35	40	43
5	3.11	2.92	2.69	2.50	2.35	2.23
10	3.29	3.12	2.95	2.78	2.62	2.44
15	3.56	3.32	3.14	2.95	2.83	2.65
20	3.78	3.53	3.32	3.14	2.95	2.82



		80Hz	75Hz	70Hz	65Hz	
Ambient (°C)	20	25	30	35	40	43
5	3.14	3.21	3.35	3.46	3.55	3.61
10	3.06	3.13	3.14	3.24	3.27	3.41
15	3.00	3.04	3.04	3.13	3.14	3.24
20	2.88	2.93	2.96	3.05	3.09	3.15

