

Performance Curves

ES M40 R290

Table of Contents

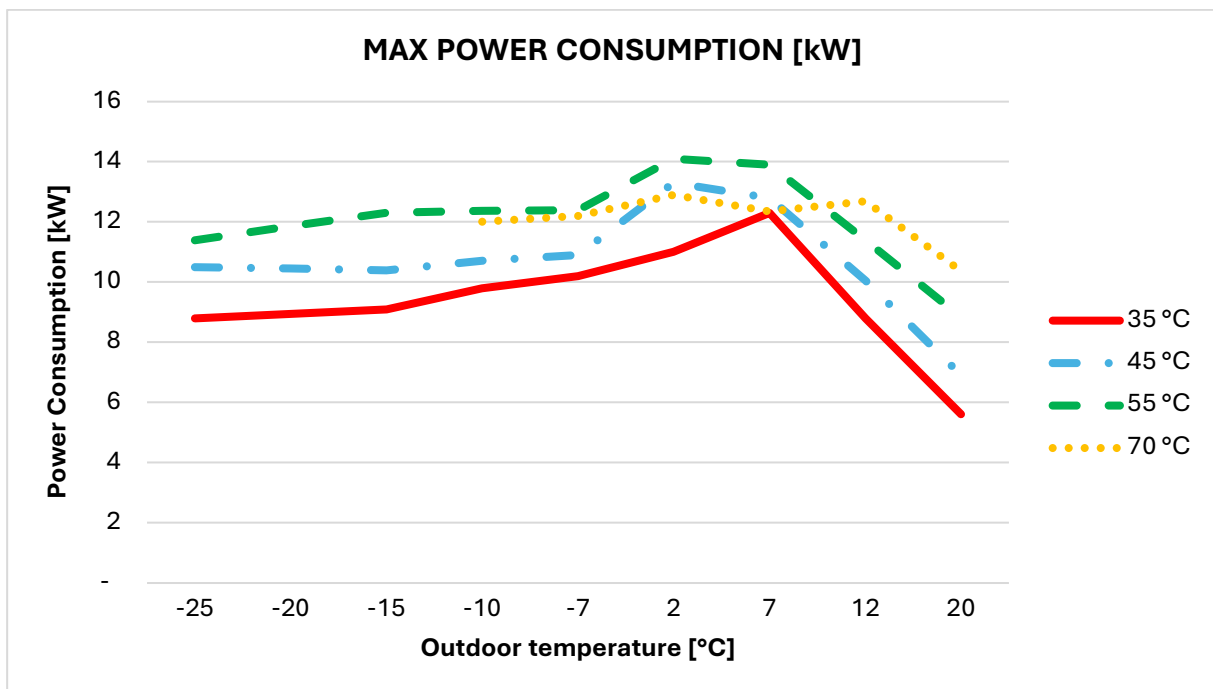
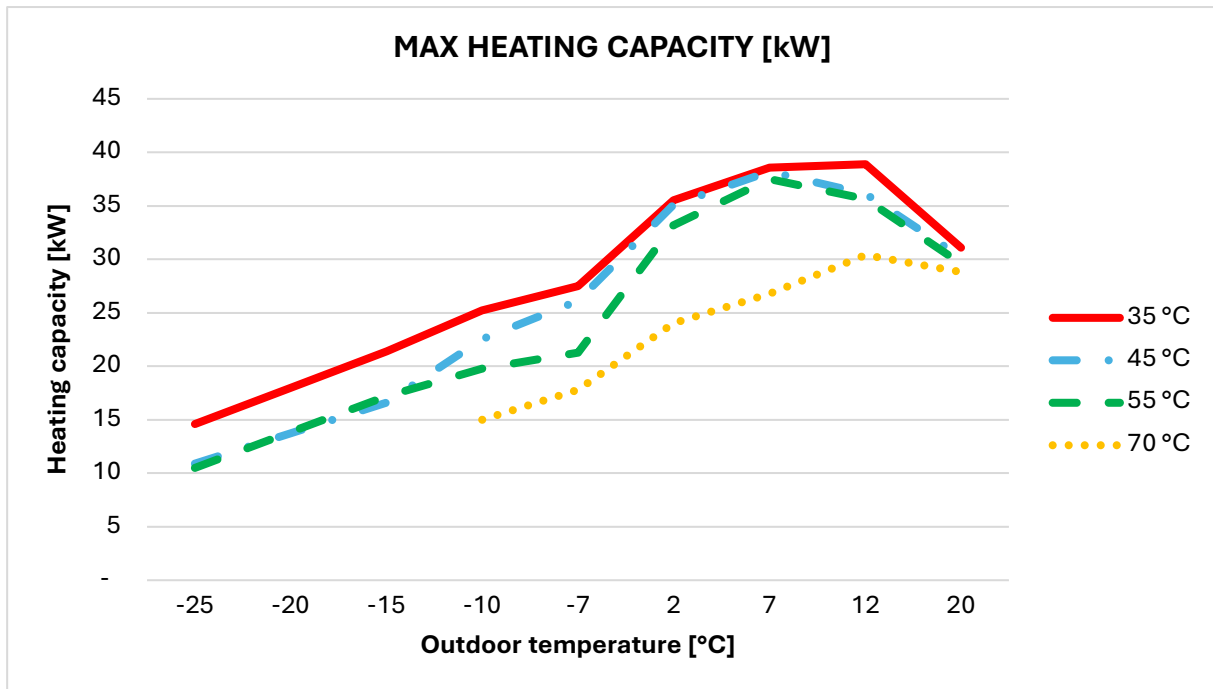
1	Document History	2
2	Performance curves	3
2.1	Heating mode	3
2.2	Cooling mode	4
3	Maximum water outlet temperatures vs outdoor temperatures	6
3.1	Heating mode	6
3.2	Cooling mode	6
4	Flow rates	7
5	Additional heating data	8
6	Additional cooling data	11

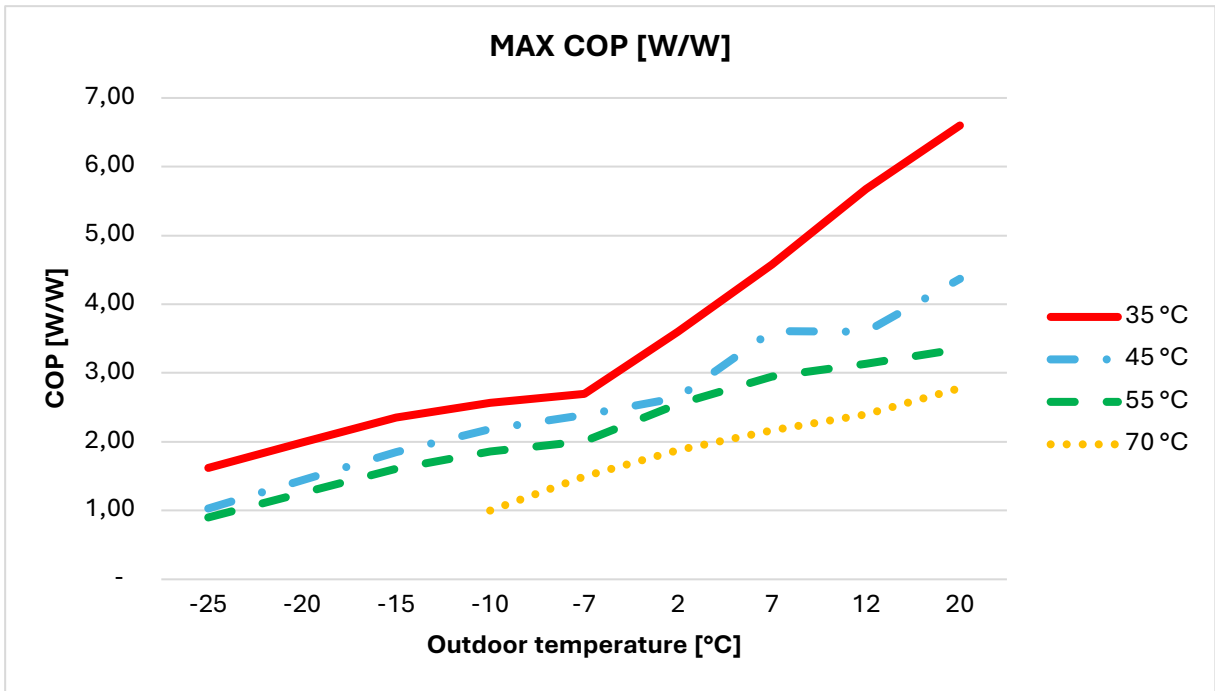
1 Document History

Version	Release	Version Information
1.0	November 13, 2025	First release
2.0	April 15, 2026	Design update

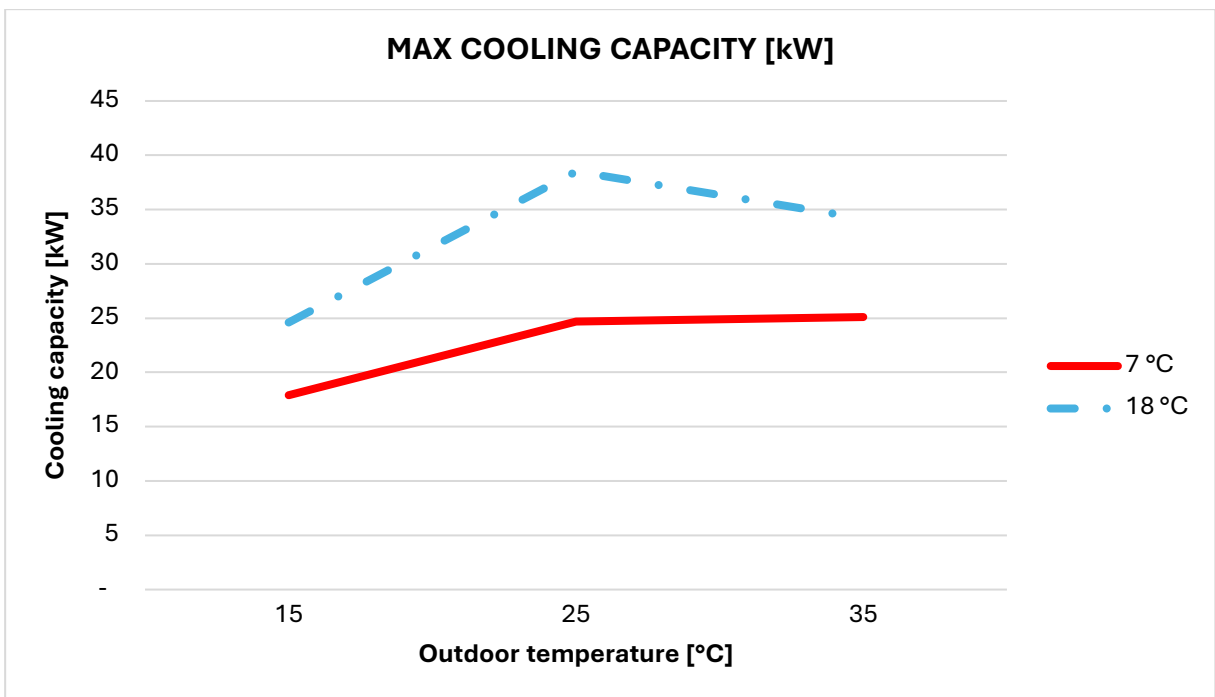
2 Performance curves

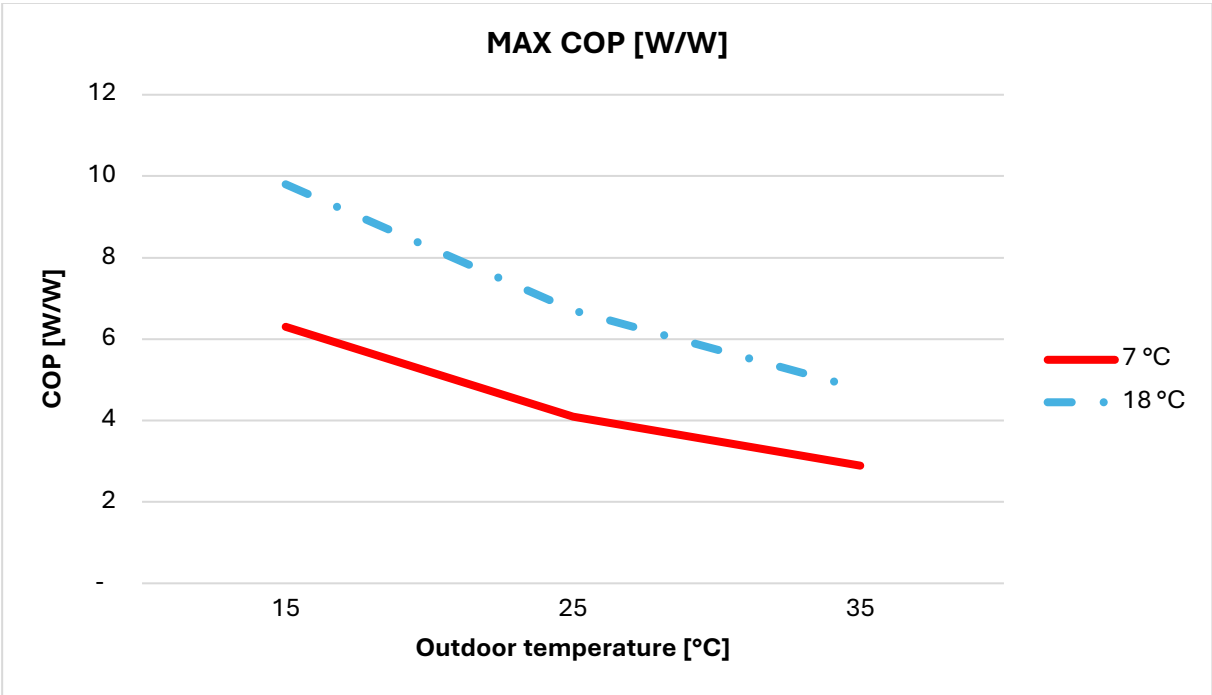
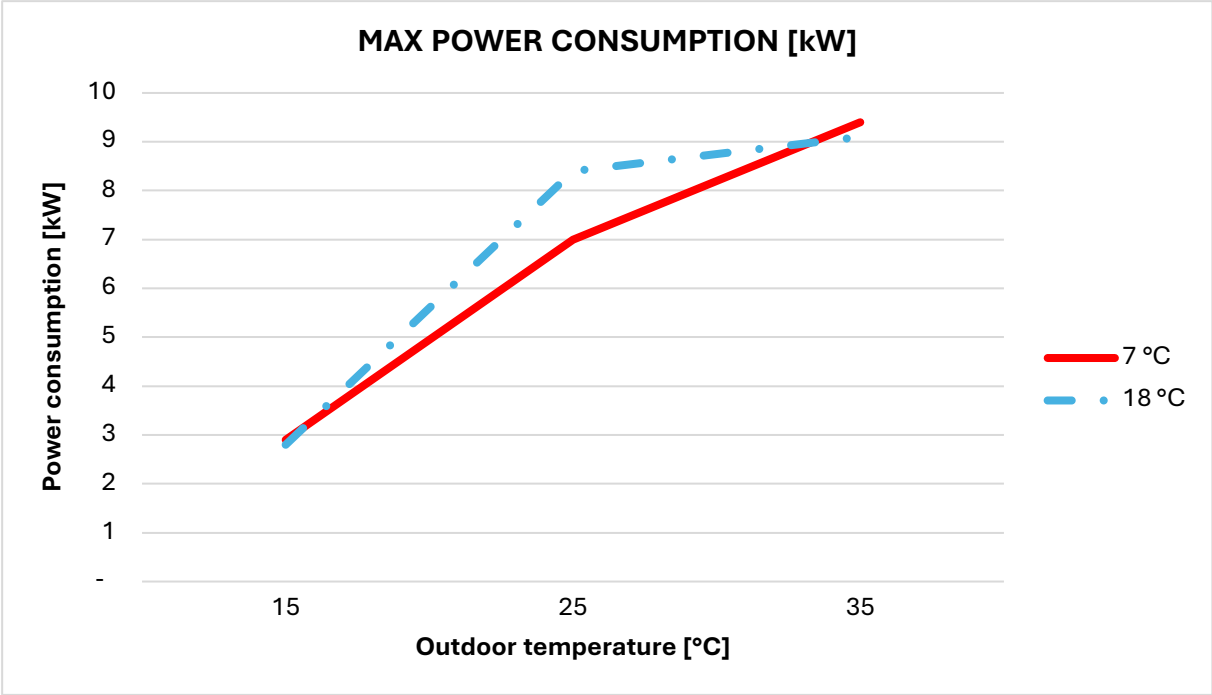
2.1 Heating mode





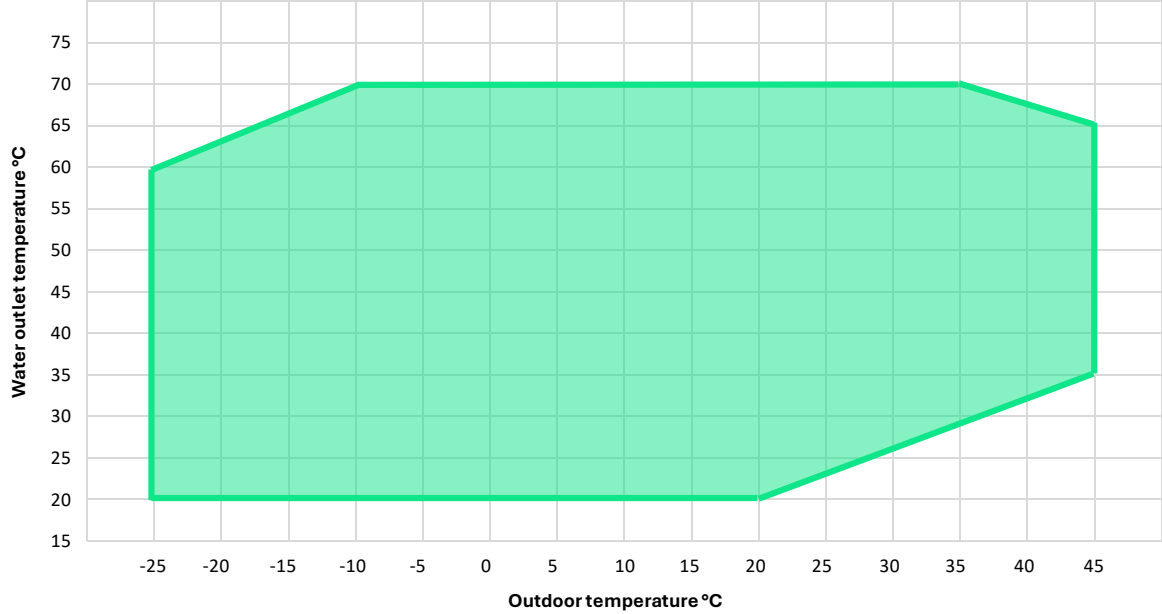
2.2 Cooling mode



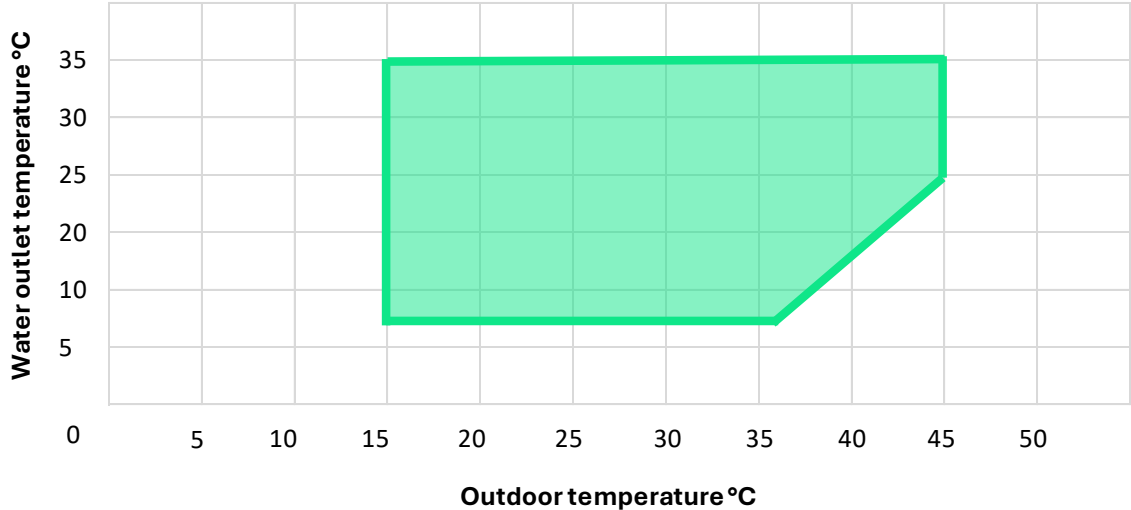


3 Maximum water outlet temperatures vs outdoor temperatures

3.1 Heating mode



3.2 Cooling mode



4 Flow rates

ES M40 R290

Water pressure drop	At nominal water flow through the heat exchanger	kPa	109
Minimum water flow for stable operation¹		l/m	50
Nominal water flow	Defrost mode ²	l/m	114.7
Nominal water flow	Cooling mode	l/m	114.7
Nominal water flow	DHW mode	l/m	N/A
Nominal water flow	Heating mode	l/m	114.7

¹ Protective minimums are below the stated values.

² 100% running speed on PWM.

5 Additional heating data

Outdoor temperature	Water outlet temperature	Frequency [Hz]	Capacity [kW]	Power [kW]	COP [W/W]	
35°C	70°C	38	22.7	6	3.80	
30°C	50°C	38	23.2	4.6	5.00	
		30	18.7	3.4	5.40	
20°C	35°C	59	31.11	5.61	5.55	
		30	16.4	2.5	6.60	
	45°C	59	30.20	6.91	4.37	
		30	15.8	3.7	4.20	
	55°C	59	29.60	8.84	3.35	
		30	15	4.7	3.20	
	70°C	70°C	59	28.80	10.37	2.78
			42	19.82	7.68	2.58
30			14.42	5.49	2.17	
12°C	35°C	80	38.89	8.79	4.42	
		65	31.7	7.2	4.40	
		52	25.8	5.2	5.00	
		30	15.1	2.7	5.68	
	45°C	45°C	80	36.09	10.06	3.59
			65	30	8.3	3.60
			52	24.3	6.9	3.56
			30	14	3.9	3.55
	55°C	55°C	80	35.65	11.39	3.13
			65	30.1	9.8	3.10
			52	18.8	6.5	2.89
			30	11.8	4.2	2.83
	70°C	70°C	72	30.4	12.7	2.40
			59	25.2	10.6	2.38
			42	17.5	7.6	2.30
			30	12.3	5.3	2.33
7°C	35°C	96	38.6	12.3	3.15	
		72	31.00	7.68	4.04	
		52	23	5.2	4.41	
		30	12.7	2.8	4.58	
	45°C	45°C	96	38.2	12.8	2.90
			72	31.42	11.63	2.70
			52	22.5	7.8	2.89
			30	11.9	3.3	3.61
	55°C	55°C	96	37.5	13.9	2.69
			72	27.16	9.22	2.95
			52	16.8	6.5	2.60
			30	8.9	4.1	2.14
	70°C	70°C	72	26.77	12.35	2.17
			65	24.2	11.3	2.14
			59	22	10.4	2.13
			42	15.4	7.3	2.11
30			10.5	5	2.09	
2°C	35°C	96	35.5	11	3.21	

		72	26.87	7.80	3.45	
		52	19.6	5.5	3.57	
		30	11	3.1	3.60	
	45°C	96	35.1	13.3	2.64	
		72	27.68	11.07	2.50	
		52	20.1	8.4	2.40	
	55°C	30	10.7	4.5	2.41	
		96	33.2	14.1	2.35	
		72	24.30	9.52	2.55	
	70°C	52	15.2	6.4	2.39	
		30	10.3	5	2.09	
		72	24	12.9	1.86	
		59	19.5	10.4	1.88	
		42	13.5	7.5	1.82	
		30	9.2	5.6	1.66	
-7°C	35°C	96	27.5	10.2	2.70	
		72	21.33	8.16	2.61	
		52	15.9	6.4	2.46	
	45°C	30	8.4	3.1	2.69	
		96	26.1	10.9	2.39	
		72	20.63	9.10	2.27	
	55°C	52	15.3	7.1	2.14	
		30	8.1	3.7	2.17	
		96	21.3	12.4	1.72	
	70°C	72	18.94	9.41	2.01	
		52	14.5	8	1.81	
		30	7.5	4.3	1.77	
		72	17.8	12.2	1.46	
		59	15.1	10.1	1.50	
		42	7.5	7.3	1.03	
		30	2.4	5.4	0.45	
		72	14.95	11.97	1.25	
		59	12.95	10.00	1.30	
-10°C	70°C	42	5.23	7.23	0.72	
		30	1.98	5.29	0.37	
		96	21.4	9.1	2.35	
-15°C	35°C	72	16.73	7.37	2.27	
		52	12.1	5.5	2.19	
		30	6.5	3	2.17	
	45°C	96	16.6	10.4	1.60	
		72	14.58	7.87	1.85	
		52	12	6.7	1.78	
	55°C	30	4.7	3.1	1.52	
		96	17.2	12.3	1.41	
		72	11.65	8.97	1.30	
			52	10.6	6.6	1.61
			30	4	3.8	1.07
			96	14.6	8.8	1.60
-25°C	35°C	59	9.34	5.78	1.62	
		96	10.9	10.5	1.00	
	45°C	96	10.9	10.5	1.00	

		59	6.32	6.12	1.03
	50°C	96	10.5	11.4	0.90
		59	4.95	6.63	0.75
	60°C	72	2.9	9.8	0.30

6 Additional cooling data

Outdoor temperature	Water outlet temperature	Frequency [Hz]	Capacity [kW]	Power [kW]	COP [W/W]
15°C	7°C	42	17.9	2.9	6.20
		36	15.5	2.4	6.30
		30	12.1	2.1	5.90
	18°C	42	24.6	2.8	8.80
		36	21.7	2.3	9.40
		30	18.3	1.9	9.80
25°C	7°C	74	24.7	7	3.50
		56	19.9	4.9	4.10
		30	9.2	2.5	3.60
	18°C	86	38.5	8.4	4.60
		56	29.9	4.5	6.70
		30	15.9	2.4	6.70
35°C	7°C	86	25.1	9.4	2.67
		68	22.8	7.9	2.89
		48	14.5	4.8	3.03
		30	4.5	2.9	1.56
	18°C	86	34.2	9.1	3.75
		68	31.6	7.8	4.05
		48	23	4.8	4.78
		30	12.1	2.8	4.33
40°C	7°C	74	20.2	8.4	2.40
		56	15	6	2.50
		30	8.5	3.2	2.70
	18°C	86	33.2	10.6	3.10
		56	24	6.1	3.90
		30	11.7	3	4.00



Sweden (HQ)

Energy Save Holding AB
Metallgatan 2-4. SE-441 32
Alingsås. Sweden

Norway

Energy Save AS
Kirkeveien 50. 1396 Hvalstad.
Norway

Slovenia

Energy Save Nordic D.O.O.
Ulica Heroja Nandeta 37. 2000
Maribor. Slovenia
www.energysave.se

We reserve the right to make changes that do not impair the functionality of the device.