Evo Heat Pump Actual Thermal Outputs, ErP Data and SCoPs

Nominal kW rating	Model Number	MCS Accreditation Number	Power Supply (Phases)	Compressor	Energy Rating @ 35C	Energy Rating @ 55C	35		55	
							η_{sshee}	ErP SCoP	η_{sshee}	ErP SCoP
7	K070-S1H	BBA0055/41	Single	Single	A+++	A++	180%	4.69	140%	3.7
9	K090-S1H	BBA0055/42	Single	Single	A+++	A++	171%	4.47	127%	3.39
13	K130-S1H	BBA0055/43	Single	Single	A++	A++	164%	4.29	130%	3.46
17	K170-S1H	BBA0055/44	Single	Single	A++	A+	155%	4.06	118%	3.16
15	K150-S3H	BBA0055/39	Three	Single	A++	A++	171%	4.47	135%	3.58

ErP data

η_{Sshee}— seasonal space heating energy efficiency

ErP SCoP—Seasonal COP according to ErP

Inlet Temperature 0°C—Thermal Outputs

Nominal kW rating	Model Number	MCS Accreditation Number	Power Supply (Phases)	Compressor	35		40		45		50		55		Max temp		
					kW	MCS SCoP	kW	MCS SCoP	kW	MCS SCoP	kW	MCS SCoP	kW	MCS SCoP	kW	MCS SCoP	Temp
7	K070-S1H	BBA0055/41	Single	Single	7.72	4.52	7.59	4.27	7.47	4.01	7.34	3.75	7.21	3.49	6.98	3.01	64
9	K090-S1H	BBA0055/42	Single	Single	9.60	4.44	9.46	4.19	9.31	3.93	9.17	3.68	9.03	3.43	8.81	3.03	63
13	K130-S1H	BBA0055/43	Single	Single	13.53	4.20	13.37	3.97	13.20	3.75	13.04	3.52	12.87	3.28	12.6	2.9	63
17	K170-S1H	BBA0055/44	Single	Single	17.0	3.86	16.7	3.64	16.5	3.41	16.2	3.19					50
15	K150-S3H	BBA0055/39	Three	Single	15.5	4.28	15.4	4.06	15.4	3.84	15.3	3.61	15.2	3.39	15.18	3.08	62

Inlet Temperature 2°C

Nominal kW rating	Model Number	MCS Accreditation Number	Power Supply (Phases)	Compressor	35		40		45		50		55		Max temp		
					kW	MCS SCoP	kW	MCS SCoP	kW	MCS SCoP	kW	MCS SCoP	kW	MCS SCoP	kW	MCS SCoP	Temp
7	K070-S1H	BBA0055/41	Single	Single	8.23	4.77	8.10	4.50	7.97	4.23	7.83	3.96	7.69	3.68	7.44	3.23	64
9	K090-S1H	BBA0055/42	Single	Single	10.23	4.68	10.10	4.42	9.93	4.15	9.78	3.88	9.64	3.62	9.42	3.20	63
13	K130-S1H	BBA0055/43	Single	Single	14.44	4.43	14.27	4.19	14.08	3.96	13.91	3.71	13.73	3.46	13.44	3.06	63
17	K170-S1H	BBA0055/44	Single	Single	18.1	4.43	17.76	3.98	17.43	3.52	17.09	3.07					50
15	K150-S3H	BBA0055/39	Three	Single	16.54	4.52	16.43	4.28	16.43	4.05	16.33	3.81	16.22	3.58	16.07	3.26	62

Inlet Temperature 4°C

Nominal kW rating	Model Number	MCS Accreditation Number	Power Supply (Phases)	Compressor	35		40		45		50		55		Max temp		
					kW	MCS SCoP	kW	MCS SCoP	kW	MCS SCoP	kW	MCS SCoP	kW	MCS SCoP	kW	MCS SCoP	Temp
7	K070-S1H	BBA0055/41	Single	Single	8.84	5.03	8.7	4.75	8.56	4.46	8.41	4.17	8.26	3.88	7.99	3.36	64
9	K090-S1H	BBA0055/42	Single	Single	10.99	4.94	10.85	4.66	10.66	4.37	10.5	4.10	10.35	3.82	10.11	3.37	63
13	K130-S1H	BBA0055/43	Single	Single	15.51	4.67	15.33	4.42	15.12	4.17	14.94	3.92	14.75	3.65	14.47	3.22	63
17	K170-S1H	BBA0055/44	Single	Single	19.2	4.64	18.73	4.17	18.25	3.69	17.78	3.22					50
15	K150-S3H	BBA0055/39	Three	Single	17.76	4.76	17.65	4.52	17.65	4.27	17.54	4.02	17.42	3.77	17.25	3.42	62

All MCS SCOP figures quoted are calculated as per EN14511, EN14825, EU Directives and MCS

All MCS SCOP figures quoted above an inlet temperature of 0°C are estimates and should not be used in running cost calculations for MCS

Evo Heat Pumps—R407C

Inlet Temperature 6°C

Nominal kW rating	Model Number	MCS Accreditation Number	Power Supply (Phases)	Compressor	35		40		45		50		55		Max temp		
					kW	MCS SCoP	kW	MCS SCoP	kW	MCS SCoP	kW	MCS SCoP	kW	MCS SCoP	kW	MCS SCoP	Temp
7	K070-S1H	BBA0055/41	Single	Single	9.45	5.32	9.30	5.03	9.15	4.72	8.99	4.42	8.83	4.11	8.49	3.55	64
9	K090-S1H	BBA0055/42	Single	Single	11.75	5.23	11.60	4.93	11.40	4.63	11.23	4.33	11.07	4.04	10.81	3.58	63
13	K130-S1H	BBA0055/43	Single	Single	16.58	4.95	16.38	4.67	16.17	4.42	15.97	4.15	15.76	3.86	15.42	3.4	63
17	K170-S1H	BBA0055/44	Single	Single	20.42	4.96	19.89	4.45	19.36	3.93	18.84	3.42					50
15	K150-S3H	BBA0055/39	Three	Single	18.99	5.04	18.86	4.78	18.86	4.52	18.75	4.25	18.62	3.99	18.44	3.63	62

Inlet Temperature 8°C—Thermal Outputs and Cops

Nominal kW rating	Model Number	MCS Accreditation Number	Power Supply (Phases)	Compressor	35		40		45		50		55		Max temp		
					kW	MCS SCoP	kW	MCS SCoP	kW	MCS SCoP	kW	MCS SCoP	kW	MCS SCoP	kW	MCS SCoP	Temp
7	K070-S1H	BBA0055/41	Single	Single	10.10	5.63	9.94	5.32	9.78	5.00	9.61	4.67	9.44	4.35	9.13	3.77	64
9	K090-S1H	BBA0055/42	Single	Single	12.56	5.53	12.40	5.22	12.19	4.90	12.00	4.58	11.83	4.27	11.56	3.77	63
13	K130-S1H	BBA0055/43	Single	Single	17.72	5.23	17.51	4.95	17.28	4.67	17.07	4.39	16.85	4.09	16.5	3.61	63
17	K170-S1H	BBA0055/44	Single	Single	21.71	5.3	21.12	4.75	20.53	4.19	19.93	3.64					50
15	K150-S3H	BBA0055/39	Three	Single	20.30	5.33	20.16	5.06	20.16	4.78	20.04	4.50	19.91	4.22	19.73	3.83	62

Inlet Temperature 10°C

Nominal kW rating	Model Number	MCS Accreditation Number	Power Supply (Phases)	Compressor	35		40		45		50		55		Max temp		
					kW	MCS SCoP	kW	MCS SCoP	kW	MCS SCoP	kW	MCS SCoP	kW	MCS SCoP	kW	MCS SCoP	Temp
7	K070-S1H	BBA0055/41	Single	Single	10.80	5.96	10.63	5.63	10.46	5.29	10.27	4.94	10.09	4.60	9.77	3.99	64
9	K090-S1H	BBA0055/42	Single	Single	13.42	5.85	13.25	5.52	13.03	5.18	12.83	4.85	12.65	4.52	12.36	3.99	63
13	K130-S1H	BBA0055/43	Single	Single	18.95	5.54	18.72	5.23	18.47	4.94	18.25	4.64	18.01	4.32	17.63	3.81	63
17	K170-S1H	BBA0055/44	Single	Single	23.07	5.67	22.41	5.07	21.75	4.46	21.09	3.86					50
15	K150-S3H	BBA0055/39	Three	Single	21.70	5.64	21.56	5.35	21.56	5.06	21.43	4.76	21.28	4.47	21.07	4.06	62

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Compact Actual Thermal Outputs, ErP Data and SCoPs

Shoebox Heat Pumps—R134a (Shoebox 3 and 6), R407c (Shoebox-NX 5kW)

Nominal kW rating	Model Number	MCS Accreditation Number	Power Supply (Phases)	Compressor	Energy Rating @ 35C	Energy Rating @ 55C	35		55	
							η_{sshee}	ErP SCoP	η_{sshee}	ErP SCoP
3.0	S3-P0K	BBA0055/31	Single	Single	A+	A+	140%	3.70	113%	3.02
5.0	S5-P0K	BBA0055/45	Single	Single	A+++	A++	176%	4.60	138%	3.65
6.0	S6-P0K	BBA0055/35	Single	Twin	A+	A+	130%	3.46	111%	2.97

Inlet Temperature 0°C

Nominal kW rating	Model Number	MCS Accreditation Number	Power Supply (Phases)	Compressor	35		45		55		60		65	
					kW	MCS SCoP	kW	MCS SCoP	kW	MCS SCoP	kW	MCS SCoP	kW	MCS SCoP
3.0	S3-P0K	BBA0055/31	Single	Single	3.03	3.52	2.83	3.19	2.54	2.86	2.35	2.65	2.16	2.44
5.0	S5-P0K	BBA0055/45	Single	Single	5.81	4.49	5.56	4.00	5.31	3.51	5.16	3.25	5.05	3.10
6.0	S6-P0K	BBA0055/35	Single	Twin	5.86	3.25	5.49	3.01	4.98	2.77	4.56	2.54	4.19	2.32

Inlet Temperature 2°C

Nominal kW rating	Model Number	MCS Accreditation Number	Power Supply (Phases)	Compressor	35		45		55		60		65	
					kW	MCS SCoP	kW	MCS SCoP	kW	MCS SCoP	kW	MCS SCoP	kW	MCS SCoP
3.0	S3-P0K	BBA0055/31	Single	Single	3.26	3.69	3.06	3.36	2.77	3.01	2.6	2.80	2.39	2.61
5.0	S5-P0K	BBA0055/45	Single	Single	6.26	4.67	6.05	4.21	5.78	3.74	5.62	3.43	5.52	3.18
6.0	S6-P0K	BBA0055/35	Single	Twin	6.33	3.41	5.94	3.17	5.38	2.92	5.05	2.68	4.64	2.48

Inlet Temperature 4°C

Nominal kW rating	Model Number	MCS Accreditation Number	Power Supply (Phases)	Compressor	35		45		55		60		65	
					kW	MCS SCoP	kW	MCS SCoP	kW	MCS SCoP	kW	MCS SCoP	kW	MCS SCoP
3.0	S3-P0K	BBA0055/31	Single	Single	3.49	3.86	3.3	3.51	3.01	3.16	2.84	2.94	2.64	2.76
5.0	S5-P0K	BBA0055/45	Single	Single	6.55	4.84	6.35	4.37	6.04	3.89	5.85	3.62	5.72	3.41
6.0	S6-P0K	BBA0055/35	Single	Twin	6.77	3.56	6.4	3.31	5.84	3.06	5.51	2.81	5.12	2.62

Inlet Temperature 6°C

Nominal kW rating	Model Number	MCS Accreditation Number	Power Supply (Phases)	Compressor	35		45		55		60		65	
					kW	MCS SCoP	kW	MCS SCoP	kW	MCS SCoP	kW	MCS SCoP	kW	MCS SCoP
3.0	S3-P0K	BBA0055/31	Single	Single	3.74	4.02	3.54	3.67	3.26	3.30	3.09	3.08	2.89	2.88
5.0	S5-P0K	BBA0055/45	Single	Single	6.93	5.02	6.67	4.53	6.41	4.03	6.29	3.78	6.22	3.57
6.0	S6-P0K	BBA0055/35	Single	Twin	7.26	3.71	6.87	3.46	6.33	3.20	6	2.95	5.61	2.74

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Compact Actual Thermal Outputs, ErP Data and SCoPs

Shoebox Heat Pumps—R134a (Shoebox 3 and 6), R407c (Shoebox-NX 5kW)

Inlet Temperature 8°C

Nominal kW rating	Model Number	MCS Accreditation Number	Power Supply (Phases)	Compressor	35		45		55		60		65	
					kW	MCS SCoP	kW	MCS SCoP	kW	MCS SCoP	kW	MCS SCoP	kW	MCS SCoP
3.0	S3-P0K	BBA0055/31	Single	Single	3.99	4.18	3.8	3.88	3.51	3.44	3.34	3.20	3.14	3.00
5.0	S5-P0K	BBA0055/45	Single	Single	7.35	5.17	7.07	4.69	6.07	4.20	6.48	3.92	6.33	3.69
6.0	S6-P0K	BBA0055/35	Single	Twin	7.74	3.86	7.37	3.65	6.81	3.34	6.48	3.06	6.09	2.85

Inlet Temperature 10°C

Nominal kW rating	Model Number	MCS Accreditation Number	Power Supply (Phases)	Compressor	35		45		55		60		65	
					kW	MCS SCoP	kW	MCS SCoP	kW	MCS SCoP	kW	MCS SCoP	kW	MCS SCoP
3.0	S3-P0K	BBA0055/31	Single	Single	4.25	4.33	4.06	3.95	3.78	3.57	3.6	3.33	3.41	3.11
5.0	S5-P0K-	BBA0055/45	Single	Single	7.77	5.35	7.45	4.87	7.16	4.38	7.02	4.17	6.94	3.99
6.0	S6-P0K	BBA0055/35	Single	Twin	8.25	4.00	7.88	3.73	7.34	3.46	6.99	3.18	6.62	2.96

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Actual Thermal Outputs, ErP Data and SCoPs

Q80 Commercial Range

Nominal kW rating	Model Number	MCS Accreditation Number	Power Supply (Phases)	Compressor	Energy Rating @ 35C	Energy Rating @ 55C	35		55	
							η_{sshee}	ErP SCoP	η_{sshee}	ErP SCoP
80	Q80	N/A	Three	Single	A++	A++	158%	4.14	131	3.48

ErP data

η_{Sshee} — seasonal space heating energy efficiency
ErP SCoP—Seasonal COP

Inlet Temperature 0°C

Nominal kW rating	Model Number	MCS Accreditation Number	Power Supply (Phases)	Compressor	35		45		55		60		65	
					kW	MCS SCoP	kW	MCS SCoP	kW	MCS SCoP	kW	MCS SCoP	kW	MCS SCoP
80	Q80	N/A	Three	Single	82.7	3.94	79.50	3.62	76.20	3.28	74.50	3.11	72.90	2.94

Inlet Temperature 2°C

Nominal kW rating	Model Number	MCS Accreditation Number	Power Supply (Phases)	Compressor	35		45		55		60		65	
					kW	MCS SCoP	kW	MCS SCoP	kW	MCS SCoP	kW	MCS SCoP	kW	MCS SCoP
80	Q80	N/A	Three	Single	88.24	4.13	84.68	3.78	81.21	3.42	79.32	3.23	77.75	3.03

Inlet Temperature 4°C

Nominal kW rating	Model Number	MCS Accreditation Number	Power Supply (Phases)	Compressor	35		45		55		60		65	
					kW	MCS SCoP	kW	MCS SCoP	kW	MCS SCoP	kW	MCS SCoP	kW	MCS SCoP
80	Q80	N/A	Three	Single	94.37	4.35	90.26	3.97	86.43	3.57	84.34	3.36	82.39	3.15

Inlet Temperature 6°C

Nominal kW rating	Model Number	MCS Accreditation Number	Power Supply (Phases)	Compressor	35		45		55		60		65	
					kW	MCS	kW	MCS	kW	MCS	kW	MCS	kW	MCS
80	Q80	N/A	Three	Single	100.9	4.56	96.24	4.15	91.84	3.73	89.56	3.49	87.24	3.28

Inlet Temperature 8°C

Nominal kW rating	Model Number	MCS Accreditation Number	Power Supply (Phases)	Compressor	35		45		55		60		65	
					kW	MCS SCoP	kW	MCS SCoP	kW	MCS SCoP	kW	MCS SCoP	kW	MCS SCoP
80	Q80	N/A	Three	Single	107.63	4.77	102.61	4.36	97.66	3.89	95.18	3.65	92.69	3.41

Inlet Temperature 10°C

Nominal kW rating	Model Number	MCS Accreditation Number	Power Supply (Phases)	Compressor	35		45		55		60		65	
					kW	MCS SCoP	kW	MCS SCoP	kW	MCS SCoP	kW	MCS SCoP	kW	MCS SCoP
80	Q80	N/A	Three	Single	114.95	4.98	109.19	4.57	103.87	4.07	101.01	3.78	98.34	3.56

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