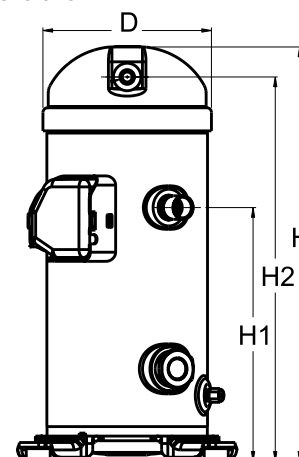


General Characteristics

Model number (on compressor nameplate)	MLZ038T2LC9	MLZ038T2LC9
Code number for Singlepack*	121U8046	120U8046
Code number for Industrial pack**	121U8045	120U8045
Drawing number	0XR6025B-2	0XR6025B-2
Suction and discharge connections	Brazed	Brazed
Suction connection	7/8" ODF	7/8" ODF
Discharge connection	1/2" ODF	1/2" ODF
Oil sight glass	Threaded	Threaded
Oil equalisation connection	None	None
Oil drain connection	1/4" flare	1/4" flare
LP gauge port	None	None
IPR valve	32 bar	32 bar
Swept volume	80.95 cm ³ /rev	
Displacement @ Nominal speed	14.1 m ³ /h @ 2900 rpm - 17.0 m ³ /h @ 3500 rpm	
Net weight	41 kg	
Oil charge	1.57 litre, PVE --	
Maximum system test pressure Low Side / High side	- bar(g) / - bar(g)	
Maximum differential test pressure	- bar	
Maximum number of starts per hour	12	
Refrigerant charge limit	5.44 kg	
Approved refrigerants	R404A, R507, R134a, R407C, R22	

Dimensions


D=184 mm

H=455 mm

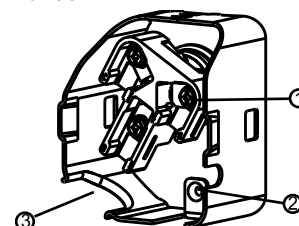
H1=280 mm

H2=422 mm

H3=- mm

Electrical Characteristics

Nominal voltage	208-230V/3/60Hz
Voltage range	188-253 V
Winding resistance between phases 1-2 +/- 7% at 25°C	0.599 Ω
Winding resistance between phases 1-3 +/- 7% at 25°C	0.603 Ω
Winding resistance between phases 2-3 +/- 7% at 25°C	0.611 Ω
Rated Load Amps (RLA)	16.7 A
Maximum Continuous Current (MCC)	26 A
Locked Rotor Amps (LRA)	123 A
Motor protection	Internal overload protector

Terminal box


IP22

1: Screw connectors 10-32 UNF x 9.5

2: Earth connection

3: Power cable passage

Recommended Installation torques

Suction Rotolock nut or valve	0 Nm
Discharge Rotolock nut or valve	0 Nm
Oil sight glass	52.5 Nm
Power connections / Earth connection	3 Nm / 2 Nm

Parts shipped with compressor

Mounting kit with grommets and sleeves
Initial oil charge
Installation instructions

Approvals : CE certified, UL certified (file SA11565), -

*Singlepack: Compressor in cardboard box. 121U... optimised for Danfoss pallet, 120U... optimised for US pallet

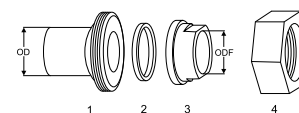
**Industrial pack: 121U...: 12 unboxed compressors on Danfoss pallet. 120U...: 16 unboxed compressors on US pallet

Rotolock accessories, suction side
Code no.

Rotolock valve, V05 (1-1/4" Rotolock, 7/8" ODF)	8168030
Gasket, 1-1/4"	8156131

Rotolock accessories, discharge side
Code no.

Solder sleeve, P06 (1" Rotolock, 1/2" ODF)	8153007
Rotolock valve, V06 (1" Rotolock, 1/2" ODF)	8168031
Gasket, 1"	8156130

Solder sleeve adapter set


- 1: Rotolock adapter (Suc & Dis)
- 2: Gasket (Suc & Dis)
- 3: Solder sleeve (Suc & Dis)
- 4: Rotolock nut (Suc & Dis)

Rotolock accessories, sets
Code no.

Solder sleeve adapter set (1-1/4" Rotolock, 7/8" ODF), (1" Rotolock, 1/2" ODF)	120Z0127
Gasket set, 1", 1-1/4", 1-3/4", OSG gaskets black & white	8156009

Oil / lubricants
Code no.

PVE lubricant, 320HV (FVC68D), 1 litre can	120Z5034
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Crankcase heaters
Code no.

Belt type crankcase heater, 70 W, 230 V, UL	120Z5011
Belt type crankcase heater, 65 W, 230 V, CE mark, UL	120Z0059

Miscellaneous accessories
Code no.

Acoustic hood	120Z5044
Discharge thermostat kit	7750009
IP54 upgrade kit	118U0057

Spare parts
Code no.

Mounting kit for 1 scroll compressor including 4 grommets, 4 sleeves, 4 bolts, 4 washers	120Z5005
Terminal box cover	120Z5018

Performance data at 50 Hz, EN 12900 rating conditions, Superheat = 10 K
R22

Cond. temp. in °C (tc)	Evaporating temperature in °C (to)							
	-20	-15	-10	-5	0	5	10	

Cooling capacity in W

16	6 507	8 303	10 418	12 824	-	-	-	-	-
20	6 334	8 054	10 086	12 404	14 978	-	-	-	-
30	5 913	7 462	9 306	11 421	13 778	16 348	19 097	-	-
40	5 421	6 826	8 509	10 446	12 613	14 981	17 520	-	-
50	-	6 040	7 587	9 373	11 376	13 568	15 923	-	-
60	-	-	-	8 095	9 958	12 000	14 198	-	-
68	-	-	-	-	-	10 563	12 653	-	-

Power input in W

16	1 600	1 694	1 809	1 937	-	-	-	-	-
20	1 843	1 930	2 036	2 152	2 271	-	-	-	-
30	2 400	2 478	2 569	2 664	2 757	2 840	2 905	-	-
40	2 956	3 039	3 127	3 215	3 294	3 358	3 399	-	-
50	-	3 702	3 802	3 896	3 975	4 034	4 063	-	-
60	-	-	-	4 797	4 890	4 956	4 987	-	-
68	-	-	-	-	-	5 933	5 975	-	-

Current consumption in A

16	6.16	6.52	6.96	7.46	-	-	-	-	-
20	7.09	7.43	7.83	8.28	8.74	-	-	-	-
30	9.24	9.54	9.89	10.25	10.61	10.93	11.18	-	-
40	11.38	11.70	12.04	12.37	12.68	12.93	13.08	-	-
50	-	14.25	14.64	15.00	15.30	15.53	15.64	-	-
60	-	-	-	18.47	18.82	19.08	19.20	-	-
68	-	-	-	-	-	22.84	23.00	-	-

Mass flow in kg/h

16	107	146	191	240	-	-	-	-	-
20	112	149	193	241	291	-	-	-	-
30	121	155	196	242	290	339	387	-	-
40	123	155	194	238	286	336	384	-	-
50	-	145	184	228	277	327	377	-	-
60	-	-	-	208	259	311	364	-	-
68	-	-	-	-	-	291	347	-	-

Coefficient of performance (C.O.P.)

16	4.07	4.90	5.76	6.62	-	-	-	-	-
20	3.44	4.17	4.96	5.77	6.60	-	-	-	-
30	2.46	3.01	3.62	4.29	5.00	5.76	6.57	-	-
40	1.83	2.25	2.72	3.25	3.83	4.46	5.15	-	-
50	-	1.63	2.00	2.41	2.86	3.36	3.92	-	-
60	-	-	-	1.69	2.04	2.42	2.85	-	-
68	-	-	-	-	-	1.78	2.12	-	-

Nominal performance at to = -10 °C, tc = 45 °C

Cooling capacity	8 070	W
Power input	3 445	W
Current consumption	13.26	A
Mass flow	190	kg/h
C.O.P.	2.34	

Pressure switch settings

Maximum HP switch setting	29.8	bar(g)
Minimum LP switch setting	0.5	bar(g)
LP pump down setting	0.95	bar(g)

Sound power data

Sound power level	70	dB(A)
With acoustic hood	62	dB(A)

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

Rating conditions : Superheat = 10 K , Subcooling = 0 K

Tolerance according EN12900

Performance data at 50 Hz, EN 12900 rating conditions, Suction temp. = 20 °C
R22

Cond. temp. in °C (tc)	Evaporating temperature in °C (to)							
	-20	-15	-10	-5	0	5	10	

Cooling capacity in W

16	6 348	8 125	10 228	12 636	-	-	-	-	-
20	6 196	7 899	9 920	12 238	14 832	-	-	-	-
30	5 827	7 364	9 200	11 312	13 679	16 282	19 097	-	-
40	-	6 788	8 463	10 395	12 562	14 944	17 520	-	-
50	-	-	-	9 380	11 373	13 561	15 923	-	-
60	-	-	-	-	10 004	12 024	14 198	-	-
68	-	-	-	-	-	-	12 653	-	-

Power input in W

16	1 600	1 694	1 809	1 937	-	-	-	-	-
20	1 843	1 930	2 036	2 152	2 271	-	-	-	-
30	2 400	2 478	2 569	2 664	2 757	2 840	2 905	-	-
40	-	3 039	3 127	3 215	3 294	3 358	3 399	-	-
50	-	-	-	3 896	3 975	4 034	4 063	-	-
60	-	-	-	-	4 890	4 956	4 987	-	-
68	-	-	-	-	-	-	5 975	-	-

Current consumption in A

16	6.16	6.52	6.96	7.46	-	-	-	-	-
20	7.09	7.43	7.83	8.28	8.74	-	-	-	-
30	9.24	9.54	9.89	10.25	10.61	10.93	11.18	-	-
40	-	11.70	12.04	12.37	12.68	12.93	13.08	-	-
50	-	-	-	15.00	15.30	15.53	15.64	-	-
60	-	-	-	-	18.82	19.08	19.20	-	-
68	-	-	-	-	-	-	23.00	-	-

Mass flow in kg/h

16	94	131	175	224	-	-	-	-	-
20	99	134	177	225	277	-	-	-	-
30	107	139	179	226	277	331	387	-	-
40	-	139	177	223	273	327	384	-	-
50	-	-	-	213	264	319	377	-	-
60	-	-	-	-	247	304	364	-	-
68	-	-	-	-	-	-	347	-	-

Coefficient of performance (C.O.P.)

16	3.97	4.80	5.65	6.52	-	-	-	-	-
20	3.36	4.09	4.87	5.69	6.53	-	-	-	-
30	2.43	2.97	3.58	4.25	4.96	5.73	6.57	-	-
40	-	2.23	2.71	3.23	3.81	4.45	5.15	-	-
50	-	-	-	2.41	2.86	3.36	3.92	-	-
60	-	-	-	-	2.05	2.43	2.85	-	-
68	-	-	-	-	-	-	2.12	-	-

Nominal performance at to = -10 °C, tc = 45 °C

Cooling capacity	8 055	W
Power input	3 445	W
Current consumption	13.26	A
Mass flow	174	kg/h
C.O.P.	2.34	

Pressure switch settings

Maximum HP switch setting	29.8	bar(g)
Minimum LP switch setting	0.5	bar(g)
LP pump down setting	0.95	bar(g)

Sound power data

Sound power level	70	dB(A)
With acoustic hood	62	dB(A)

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

Rating conditions : Suction gas temp. = 20 °C , Subcooling = 0 K

Tolerance according EN12900

Performance data at 60 Hz, EN 12900 rating conditions, Superheat = 10 K
R22

Cond. temp. in °C (tc)	Evaporating temperature in °C (to)							
	-20	-15	-10	-5	0	5	10	

Cooling capacity in W

16	7 852	9 993	12 499	15 334	-	-	-	-	-
20	7 607	9 665	12 085	14 830	17 863	-	-	-	-
30	7 035	8 896	11 109	13 639	16 450	19 502	22 752	-	-
40	6 423	8 103	10 122	12 451	15 054	17 895	20 932	-	-
50	-	7 166	9 007	11 147	13 556	16 200	19 040	-	-
60	-	-	-	9 613	11 840	14 300	16 958	-	-
68	-	-	-	-	-	12 554	15 075	-	-

Power input in W

16	1 884	1 995	2 131	2 282	-	-	-	-	-
20	2 171	2 274	2 398	2 534	2 675	-	-	-	-
30	2 827	2 919	3 025	3 138	3 247	3 345	3 422	-	-
40	3 482	3 579	3 683	3 787	3 880	3 956	4 004	-	-
50	-	4 360	4 479	4 589	4 683	4 751	4 785	-	-
60	-	-	-	5 651	5 760	5 837	5 874	-	-
68	-	-	-	-	-	6 988	7 038	-	-

Current consumption in A

16	5.91	6.26	6.69	7.16	-	-	-	-	-
20	6.81	7.13	7.52	7.95	8.39	-	-	-	-
30	8.87	9.16	9.49	9.84	10.19	10.49	10.74	-	-
40	10.93	11.23	11.56	11.88	12.18	12.41	12.56	-	-
50	-	13.68	14.05	14.40	14.69	14.91	15.02	-	-
60	-	-	-	17.73	18.07	18.32	18.43	-	-
68	-	-	-	-	-	21.93	22.08	-	-

Mass flow in kg/h

16	149	187	235	290	-	-	-	-	-
20	151	188	236	290	348	-	-	-	-
30	153	190	236	290	347	406	464	-	-
40	149	186	232	286	343	403	461	-	-
50	-	172	219	274	333	394	453	-	-
60	-	-	-	251	312	375	437	-	-
68	-	-	-	-	-	351	416	-	-

Coefficient of performance (C.O.P.)

16	4.17	5.01	5.87	6.72	-	-	-	-	-
20	3.50	4.25	5.04	5.85	6.68	-	-	-	-
30	2.49	3.05	3.67	4.35	5.07	5.83	6.65	-	-
40	1.84	2.26	2.75	3.29	3.88	4.52	5.23	-	-
50	-	1.64	2.01	2.43	2.90	3.41	3.98	-	-
60	-	-	-	1.70	2.06	2.45	2.89	-	-
68	-	-	-	-	-	1.80	2.14	-	-

Nominal performance at to = -10 °C, tc = 45 °C

Cooling capacity	9 588	W
Power input	4 057	W
Current consumption	12.73	A
Mass flow	227	kg/h
C.O.P.	2.36	

Pressure switch settings

Maximum HP switch setting	29.8	bar(g)
Minimum LP switch setting	0.5	bar(g)
LP pump down setting	0.95	bar(g)

Sound power data

Sound power level	74	dB(A)
With acoustic hood	66	dB(A)

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

Rating conditions : Superheat = 10 K , Subcooling = 0 K

Tolerance according EN12900

Performance data at 60 Hz, EN 12900 rating conditions, Suction temp. = 20 °C
R22

Cond. temp. in °C (tc)	Evaporating temperature in °C (to)							
	-20	-15	-10	-5	0	5	10	

Cooling capacity in W

16	7 660	9 779	12 271	15 109	-	-	-	-	-
20	7 441	9 479	11 886	14 632	17 689	-	-	-	-
30	6 933	8 780	10 982	13 509	16 332	19 423	22 752	-	-
40	-	8 057	10 067	12 389	14 993	17 850	20 932	-	-
50	-	-	-	11 155	13 553	16 192	19 040	-	-
60	-	-	-	-	11 895	14 328	16 958	-	-
68	-	-	-	-	-	-	15 075	-	-

Power input in W

16	1 884	1 995	2 131	2 282	-	-	-	-	-
20	2 171	2 274	2 398	2 534	2 675	-	-	-	-
30	2 827	2 919	3 025	3 138	3 247	3 345	3 422	-	-
40	-	3 579	3 683	3 787	3 880	3 956	4 004	-	-
50	-	-	-	4 589	4 683	4 751	4 785	-	-
60	-	-	-	-	5 760	5 837	5 874	-	-
68	-	-	-	-	-	-	7 038	-	-

Current consumption in A

16	5.91	6.26	6.69	7.16	-	-	-	-	-
20	6.81	7.13	7.52	7.95	8.39	-	-	-	-
30	8.87	9.16	9.49	9.84	10.19	10.49	10.74	-	-
40	-	11.23	11.56	11.88	12.18	12.41	12.56	-	-
50	-	-	-	14.40	14.69	14.91	15.02	-	-
60	-	-	-	-	18.07	18.32	18.43	-	-
68	-	-	-	-	-	-	22.08	-	-

Mass flow in kg/h

16	131	168	215	271	-	-	-	-	-
20	133	169	216	271	332	-	-	-	-
30	135	170	216	270	331	396	464	-	-
40	-	167	212	267	327	393	461	-	-
50	-	-	-	256	317	384	453	-	-
60	-	-	-	-	298	366	437	-	-
68	-	-	-	-	-	-	416	-	-

Coefficient of performance (C.O.P.)

16	4.07	4.90	5.76	6.62	-	-	-	-	-
20	3.43	4.17	4.96	5.77	6.61	-	-	-	-
30	2.45	3.01	3.63	4.31	5.03	5.81	6.65	-	-
40	-	2.25	2.73	3.27	3.86	4.51	5.23	-	-
50	-	-	-	2.43	2.89	3.41	3.98	-	-
60	-	-	-	-	2.07	2.45	2.89	-	-
68	-	-	-	-	-	-	2.14	-	-

Nominal performance at to = -10 °C, tc = 45 °C

Cooling capacity	9 569	W
Power input	4 057	W
Current consumption	12.73	A
Mass flow	208	kg/h
C.O.P.	2.36	

Pressure switch settings

Maximum HP switch setting	29.8	bar(g)
Minimum LP switch setting	0.5	bar(g)
LP pump down setting	0.95	bar(g)

Sound power data

Sound power level	74	dB(A)
With acoustic hood	66	dB(A)

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

Rating conditions : Suction gas temp. = 20 °C , Subcooling = 0 K

Tolerance according EN12900

Performance data at 50 Hz, EN 12900 rating conditions, Superheat = 10 K
R134a

Cond. temp. in °C (tc)	Evaporating temperature in °C (to)							
	-15	-10	-5	0	5	10	15	

Cooling capacity in W

22	4 835	6 110	7 620	9 390	11 447	-	-	-	-
30	4 440	5 646	7 072	8 744	10 687	12 928	-	-	-
40	3 925	5 034	6 344	7 881	9 671	11 740	14 113	-	-
50	-	4 394	5 575	6 965	8 589	10 473	12 643	-	-
60	-	-	4 774	6 003	7 448	9 135	11 088	-	-
70	-	-	-	5 004	6 257	7 733	9 458	-	-
73	-	-	-	4 698	5 891	7 302	8 955	-	-

Power input in W

22	1 439	1 456	1 470	1 487	1 512	-	-	-	-
30	1 698	1 726	1 748	1 766	1 786	1 811	-	-	-
40	2 066	2 117	2 154	2 180	2 200	2 220	2 242	-	-
50	-	2 579	2 638	2 680	2 709	2 729	2 746	-	-
60	-	-	3 215	3 280	3 325	3 354	3 372	-	-
70	-	-	-	3 994	4 063	4 108	4 135	-	-
73	-	-	-	4 233	4 310	4 362	4 393	-	-

Current consumption in A

22	5.54	5.60	5.66	5.72	5.82	-	-	-	-
30	6.53	6.65	6.73	6.80	6.87	6.97	-	-	-
40	7.95	8.15	8.29	8.39	8.47	8.54	8.63	-	-
50	-	9.93	10.15	10.32	10.43	10.51	10.57	-	-
60	-	-	12.37	12.63	12.80	12.91	12.98	-	-
70	-	-	-	15.37	15.64	15.81	15.92	-	-
73	-	-	-	16.29	16.59	16.79	16.91	-	-

Mass flow in kg/h

22	104	128	157	191	228	-	-	-	-
30	103	127	156	190	228	271	-	-	-
40	102	126	155	188	227	270	319	-	-
50	-	124	152	185	224	268	317	-	-
60	-	-	148	181	220	263	312	-	-
70	-	-	-	176	214	257	306	-	-
73	-	-	-	174	211	255	303	-	-

Coefficient of performance (C.O.P.)

22	3.36	4.20	5.18	6.31	7.57	-	-	-	-
30	2.62	3.27	4.05	4.95	5.99	7.14	-	-	-
40	1.90	2.38	2.95	3.61	4.39	5.29	6.29	-	-
50	-	1.70	2.11	2.60	3.17	3.84	4.60	-	-
60	-	-	1.48	1.83	2.24	2.72	3.29	-	-
70	-	-	-	1.25	1.54	1.88	2.29	-	-
73	-	-	-	1.11	1.37	1.67	2.04	-	-

Nominal performance at to = -10 °C, tc = 45 °C

Cooling capacity	4 717	W
Power input	2 338	W
Current consumption	9.00	A
Mass flow	125	kg/h
C.O.P.	2.02	

Pressure switch settings

Maximum HP switch setting	23.6	bar(g)
Minimum LP switch setting	0.45	bar(g)
LP pump down setting	0.85	bar(g)

Sound power data

Sound power level	70	dB(A)
With acoustic hood	62	dB(A)

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

Rating conditions : Superheat = 10 K , Subcooling = 0 K

Tolerance according EN12900

Performance data at 50 Hz, EN 12900 rating conditions, Suction temp. = 20 °C
R134a

Cond. temp. in °C (tc)	Evaporating temperature in °C (to)							
	-15	-10	-5	0	5	10	15	

Cooling capacity in W

22	4 912	6 181	7 679	9 431	11 466	-	-	-	-
30	-	5 750	7 163	8 811	10 723	12 928	-	-	-
40	-	-	6 474	7 982	9 728	11 740	14 047	-	-
50	-	-	5 744	7 100	8 668	10 473	12 542	-	-
60	-	-	-	6 171	7 548	9 135	-	-	-
70	-	-	-	-	6 378	7 733	-	-	-
73	-	-	-	-	6 018	7 302	-	-	-

Power input in W

22	1 439	1 456	1 470	1 487	1 512	-	-	-	-
30	-	1 726	1 748	1 766	1 786	1 811	-	-	-
40	-	-	2 154	2 180	2 200	2 220	2 242	-	-
50	-	-	2 638	2 680	2 709	2 729	2 746	-	-
60	-	-	-	3 280	3 325	3 354	-	-	-
70	-	-	-	-	4 063	4 108	-	-	-
73	-	-	-	-	4 310	4 362	-	-	-

Current consumption in A

22	5.54	5.60	5.66	5.72	5.82	-	-	-	-
30	-	6.65	6.73	6.80	6.87	6.97	-	-	-
40	-	-	8.29	8.39	8.47	8.54	8.63	-	-
50	-	-	10.15	10.32	10.43	10.51	10.57	-	-
60	-	-	-	12.63	12.80	12.91	-	-	-
70	-	-	-	-	15.64	15.81	-	-	-
73	-	-	-	-	16.59	16.79	-	-	-

Mass flow in kg/h

22	94	118	147	182	223	-	-	-	-
30	-	117	146	181	223	271	-	-	-
40	-	-	145	180	221	270	327	-	-
50	-	-	142	177	219	268	325	-	-
60	-	-	-	173	215	263	-	-	-
70	-	-	-	-	209	257	-	-	-
73	-	-	-	-	206	255	-	-	-

Coefficient of performance (C.O.P.)

22	3.41	4.25	5.22	6.34	7.59	-	-	-	-
30	-	3.33	4.10	4.99	6.01	7.14	-	-	-
40	-	-	3.01	3.66	4.42	5.29	6.27	-	-
50	-	-	2.18	2.65	3.20	3.84	4.57	-	-
60	-	-	-	1.88	2.27	2.72	-	-	-
70	-	-	-	-	1.57	1.88	-	-	-
73	-	-	-	-	1.40	1.67	-	-	-

Nominal performance at to = -10 °C, tc = 45 °C

Cooling capacity	-	W
Power input	-	W
Current consumption	-	A
Mass flow	-	kg/h
C.O.P.	-	

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

Rating conditions : Suction gas temp. = 20 °C , Subcooling = 0 K

Pressure switch settings

Maximum HP switch setting	23.6	bar(g)
Minimum LP switch setting	0.45	bar(g)
LP pump down setting	0.85	bar(g)

Sound power data

Sound power level	70	dB(A)
With acoustic hood	62	dB(A)

Tolerance according EN12900

Performance data at 60 Hz, EN 12900 rating conditions, Superheat = 10 K
R134a

Cond. temp. in °C (tc)	Evaporating temperature in °C (to)							
	-15	-10	-5	0	5	10	15	

Cooling capacity in W

22	5 990	7 541	9 410	11 585	14 052	-	-	-	-
30	5 466	6 939	8 727	10 817	13 197	15 856	-	-	-
40	4 849	6 199	7 859	9 818	12 064	14 584	17 367	-	-
50	-	5 442	6 946	8 745	10 827	13 180	15 792	-	-
60	-	-	5 954	7 564	9 454	11 611	14 024	-	-
70	-	-	-	6 244	7 912	9 845	12 028	-	-
73	-	-	-	5 815	7 412	9 271	11 380	-	-

Power input in W

22	1 725	1 755	1 799	1 853	1 913	-	-	-	-
30	2 033	2 062	2 102	2 152	2 207	2 264	-	-	-
40	2 497	2 527	2 568	2 616	2 668	2 721	2 771	-	-
50	-	3 090	3 135	3 186	3 240	3 292	3 341	-	-
60	-	-	3 809	3 867	3 926	3 983	4 034	-	-
70	-	-	-	4 664	4 733	4 798	4 857	-	-
73	-	-	-	4 927	5 000	5 068	5 129	-	-

Current consumption in A

22	5.41	5.51	5.65	5.81	6.00	-	-	-	-
30	6.38	6.47	6.60	6.75	6.93	7.10	-	-	-
40	7.84	7.93	8.06	8.21	8.37	8.54	8.70	-	-
50	-	9.70	9.84	10.00	10.16	10.33	10.48	-	-
60	-	-	11.95	12.13	12.32	12.50	12.66	-	-
70	-	-	-	14.64	14.85	15.06	15.24	-	-
73	-	-	-	15.46	15.69	15.90	16.09	-	-

Mass flow in kg/h

22	132	165	202	243	289	-	-	-	-
30	127	163	201	243	289	342	-	-	-
40	122	159	198	241	289	342	402	-	-
50	-	153	194	239	287	341	401	-	-
60	-	-	189	234	283	338	398	-	-
70	-	-	-	226	276	331	392	-	-
73	-	-	-	223	273	328	389	-	-

Coefficient of performance (C.O.P.)

22	3.47	4.30	5.23	6.25	7.34	-	-	-	-
30	2.69	3.37	4.15	5.03	5.98	7.00	-	-	-
40	1.94	2.45	3.06	3.75	4.52	5.36	6.27	-	-
50	-	1.76	2.22	2.74	3.34	4.00	4.73	-	-
60	-	-	1.56	1.96	2.41	2.92	3.48	-	-
70	-	-	-	1.34	1.67	2.05	2.48	-	-
73	-	-	-	1.18	1.48	1.83	2.22	-	-

Nominal performance at to = -10 °C, tc = 45 °C

Cooling capacity	5 824	W
Power input	2 796	W
Current consumption	8.77	A
Mass flow	156	kg/h
C.O.P.	2.08	

Pressure switch settings

Maximum HP switch setting	23.6	bar(g)
Minimum LP switch setting	0.45	bar(g)
LP pump down setting	0.85	bar(g)

Sound power data

Sound power level	74	dB(A)
With acoustic hood	66	dB(A)

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

Rating conditions : Superheat = 10 K , Subcooling = 0 K

Tolerance according EN12900

Performance data at 60 Hz, EN 12900 rating conditions, Suction temp. = 20 °C
R134a

Cond. temp. in °C (tc)	Evaporating temperature in °C (to)							
	-15	-10	-5	0	5	10	15	

Cooling capacity in W

22	6 085	7 629	9 483	11 635	14 076	-	-	-	-
30	-	7 067	8 839	10 900	13 242	15 856	-	-	-
40	-	-	8 021	9 945	12 136	14 584	17 286	-	-
50	-	-	7 157	8 914	10 927	13 180	15 667	-	-
60	-	-	-	7 776	9 581	11 611	-	-	-
70	-	-	-	-	8 065	9 845	-	-	-
73	-	-	-	-	7 572	9 271	-	-	-

Power input in W

22	1 725	1 755	1 799	1 853	1 913	-	-	-	-
30	-	2 062	2 102	2 152	2 207	2 264	-	-	-
40	-	-	2 568	2 616	2 668	2 721	2 771	-	-
50	-	-	3 135	3 186	3 240	3 292	3 341	-	-
60	-	-	-	3 867	3 926	3 983	-	-	-
70	-	-	-	-	4 733	4 798	-	-	-
73	-	-	-	-	5 000	5 068	-	-	-

Current consumption in A

22	5.41	5.51	5.65	5.81	6.00	-	-	-	-
30	-	6.47	6.60	6.75	6.93	7.10	-	-	-
40	-	-	8.06	8.21	8.37	8.54	8.70	-	-
50	-	-	9.84	10.00	10.16	10.33	10.48	-	-
60	-	-	-	12.13	12.32	12.50	-	-	-
70	-	-	-	-	14.85	15.06	-	-	-
73	-	-	-	-	15.69	15.90	-	-	-

Mass flow in kg/h

22	119	152	189	232	282	-	-	-	-
30	-	149	188	232	283	342	-	-	-
40	-	-	186	231	282	342	413	-	-
50	-	-	182	228	281	341	412	-	-
60	-	-	-	224	277	338	-	-	-
70	-	-	-	-	270	331	-	-	-
73	-	-	-	-	267	328	-	-	-

Coefficient of performance (C.O.P.)

22	3.53	4.35	5.27	6.28	7.36	-	-	-	-
30	-	3.43	4.20	5.07	6.00	7.00	-	-	-
40	-	-	3.12	3.80	4.55	5.36	6.24	-	-
50	-	-	2.28	2.80	3.37	4.00	4.69	-	-
60	-	-	-	2.01	2.44	2.92	-	-	-
70	-	-	-	-	1.70	2.05	-	-	-
73	-	-	-	-	1.51	1.83	-	-	-

Nominal performance at to = -10 °C, tc = 45 °C

Cooling capacity	-	W
Power input	-	W
Current consumption	-	A
Mass flow	-	kg/h
C.O.P.	-	

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

Rating conditions : Suction gas temp. = 20 °C , Subcooling = 0 K

Pressure switch settings

Maximum HP switch setting	23.6	bar(g)
Minimum LP switch setting	0.45	bar(g)
LP pump down setting	0.85	bar(g)

Sound power data

Sound power level	74	dB(A)
With acoustic hood	66	dB(A)

Tolerance according EN12900

Performance data at 50 Hz, EN 12900 rating conditions, Suction temp. = 20 °C
R404A

Cond. temp. in °C (tc)	Evaporating temperature in °C (to)								
	-30	-25	-20	-15	-10	-5	0	5	10

Cooling capacity in W

10	5 731	7 099	8 755	10 726	13 037	-	-	-	-
20	5 244	6 510	8 023	9 811	11 901	14 318	17 089	-	-
30	4 669	5 820	7 179	8 771	10 625	12 767	15 224	18 021	21 184
40	-	5 030	6 221	7 605	9 211	11 065	13 194	15 624	18 382
50	-	-	5 149	6 313	7 658	9 211	11 000	13 051	15 391
60	-	-	-	-	5 964	7 204	8 640	10 301	12 212

Power input in W

10	1 783	1 789	1 806	1 819	1 816	-	-	-	-
20	2 247	2 242	2 259	2 284	2 302	2 301	2 265	-	-
30	2 845	2 814	2 816	2 837	2 863	2 879	2 873	2 829	2 735
40	-	3 561	3 534	3 536	3 555	3 575	3 583	3 565	3 507
50	-	-	4 470	4 439	4 436	4 445	4 452	4 445	4 409
60	-	-	-	-	5 562	5 546	5 538	5 527	5 498

Current consumption in A

10	7.35	7.38	7.45	7.50	7.49	-	-	-	-
20	9.27	9.25	9.32	9.42	9.49	9.49	9.34	-	-
30	11.73	11.60	11.61	11.70	11.81	11.87	11.85	11.67	11.28
40	-	14.69	14.57	14.58	14.66	14.74	14.78	14.70	14.46
50	-	-	18.43	18.31	18.29	18.33	18.36	18.33	18.18
60	-	-	-	-	22.94	22.87	22.84	22.79	22.68

Mass flow in kg/h

10	102	137	175	218	268	-	-	-	-
20	109	141	178	220	269	326	392	-	-
30	111	142	177	218	265	322	388	465	554
40	-	139	172	212	259	314	380	457	547
50	-	-	164	202	248	304	369	446	537
60	-	-	-	-	235	290	355	433	523

Coefficient of performance (C.O.P.)

10	3.21	3.97	4.85	5.90	7.18	-	-	-	-
20	2.33	2.90	3.55	4.30	5.17	6.22	7.55	-	-
30	1.64	2.07	2.55	3.09	3.71	4.43	5.30	6.37	7.75
40	-	1.41	1.76	2.15	2.59	3.10	3.68	4.38	5.24
50	-	-	1.15	1.42	1.73	2.07	2.47	2.94	3.49
60	-	-	-	-	1.07	1.30	1.56	1.86	2.22

Nominal performance at to = -10 °C, tc = 45 °C

Cooling capacity	8 452	W
Power input	3 968	W
Current consumption	16.36	A
Mass flow	254	kg/h
C.O.P.	2.13	

Pressure switch settings

Maximum HP switch setting	29.7	bar(g)
Minimum LP switch setting	1.4	bar(g)
LP pump down setting	2	bar(g)

Sound power data

Sound power level	70	dB(A)
With acoustic hood	62	dB(A)

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

Rating conditions : Suction gas temp. = 20 °C , Subcooling = 0 K

Tolerance according EN12900

Performance data at 50 Hz, EN 12900 rating conditions, Superheat = 10 K
R404A

Cond. temp. in °C (tc)	Evaporating temperature in °C (to)								
	-30	-25	-20	-15	-10	-5	0	5	10

Cooling capacity in W

10	5 507	6 871	8 531	10 519	12 863	-	-	-	-
20	4 931	6 182	7 692	9 493	11 614	14 083	16 926	-	-
30	4 270	5 395	6 741	8 341	10 225	12 426	14 971	17 885	21 184
40	3 529	4 513	5 681	7 066	8 701	10 619	12 852	15 431	18 382
50	-	-	4 517	5 672	7 042	8 662	10 569	12 800	15 391
60	-	-	-	-	5 248	6 554	8 119	9 988	12 212

Power input in W

10	1 783	1 789	1 806	1 819	1 816	-	-	-	-
20	2 247	2 242	2 259	2 284	2 302	2 301	2 265	-	-
30	2 845	2 814	2 816	2 837	2 863	2 879	2 873	2 829	2 735
40	3 632	3 561	3 534	3 536	3 555	3 575	3 583	3 565	3 507
50	-	-	4 470	4 439	4 436	4 445	4 452	4 445	4 409
60	-	-	-	-	5 562	5 546	5 538	5 527	5 498

Current consumption in A

10	7.35	7.38	7.45	7.50	7.49	-	-	-	-
20	9.27	9.25	9.32	9.42	9.49	9.49	9.34	-	-
30	11.73	11.60	11.61	11.70	11.81	11.87	11.85	11.67	11.28
40	14.98	14.69	14.57	14.58	14.66	14.74	14.78	14.70	14.46
50	-	-	18.43	18.31	18.29	18.33	18.36	18.33	18.18
60	-	-	-	-	22.94	22.87	22.84	22.79	22.68

Mass flow in kg/h

10	122	160	201	246	296	-	-	-	-
20	130	165	204	248	297	352	414	-	-
30	133	166	203	245	293	348	410	478	554
40	131	162	198	238	285	340	401	471	547
50	-	-	188	228	274	328	390	460	537
60	-	-	-	-	260	313	375	445	523

Coefficient of performance (C.O.P.)

10	3.09	3.84	4.72	5.78	7.08	-	-	-	-
20	2.19	2.76	3.40	4.16	5.04	6.12	7.47	-	-
30	1.50	1.92	2.39	2.94	3.57	4.32	5.21	6.32	7.75
40	0.97	1.27	1.61	2.00	2.45	2.97	3.59	4.33	5.24
50	-	-	1.01	1.28	1.59	1.95	2.37	2.88	3.49
60	-	-	-	-	0.94	1.18	1.47	1.81	2.22

Nominal performance at to = -10 °C, tc = 45 °C

Cooling capacity	7 888	W
Power input	3 968	W
Current consumption	16.36	A
Mass flow	280	kg/h
C.O.P.	1.99	

Pressure switch settings

Maximum HP switch setting	29.7	bar(g)
Minimum LP switch setting	1.4	bar(g)
LP pump down setting	2	bar(g)

Sound power data

Sound power level	70	dB(A)
With acoustic hood	62	dB(A)

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

Rating conditions : Superheat = 10 K , Subcooling = 0 K

Tolerance according EN12900

Performance data at 60 Hz, EN 12900 rating conditions, Suction temp. = 20 °C
R404A

Cond. temp. in °C (tc)	Evaporating temperature in °C (to)								
	-30	-25	-20	-15	-10	-5	0	5	10

Cooling capacity in W

10	6 947	8 678	10 730	13 140	15 943	-	-	-	-
20	6 226	7 814	9 667	11 823	14 316	17 185	20 463	-	-
30	5 505	6 960	8 627	10 540	12 737	15 254	18 126	21 390	25 079
40	-	6 018	7 509	9 193	11 105	13 282	15 761	18 576	21 765
50	-	-	6 215	7 681	9 320	11 170	13 266	15 647	18 346
60	-	-	-	-	7 282	8 817	10 545	12 502	14 728

Power input in W

10	2 201	2 148	2 143	2 167	2 204	-	-	-	-
20	2 751	2 688	2 675	2 693	2 724	2 752	2 760	-	-
30	3 436	3 366	3 347	3 360	3 388	3 415	3 423	3 394	3 311
40	-	4 201	4 178	4 189	4 217	4 244	4 254	4 229	4 151
50	-	-	5 190	5 201	5 230	5 260	5 274	5 254	5 184
60	-	-	-	-	6 448	6 483	6 503	6 491	6 430

Current consumption in A

10	6.91	6.74	6.72	6.80	6.91	-	-	-	-
20	8.63	8.44	8.39	8.45	8.55	8.64	8.66	-	-
30	10.78	10.56	10.50	10.54	10.63	10.72	10.74	10.65	10.39
40	-	13.18	13.11	13.14	13.23	13.32	13.35	13.27	13.02
50	-	-	16.29	16.32	16.41	16.50	16.55	16.49	16.27
60	-	-	-	-	20.23	20.34	20.41	20.37	20.18

Mass flow in kg/h

10	122	166	214	267	327	-	-	-	-
20	128	170	215	265	323	391	470	-	-
30	130	170	213	262	318	384	461	552	658
40	-	165	208	256	311	376	452	542	648
50	-	-	197	245	301	366	442	532	638
60	-	-	-	-	287	352	430	521	627

Coefficient of performance (C.O.P.)

10	3.16	4.04	5.01	6.06	7.23	-	-	-	-
20	2.26	2.91	3.61	4.39	5.26	6.24	7.41	-	-
30	1.60	2.07	2.58	3.14	3.76	4.47	5.30	6.30	7.57
40	-	1.43	1.80	2.19	2.63	3.13	3.71	4.39	5.24
50	-	-	1.20	1.48	1.78	2.12	2.52	2.98	3.54
60	-	-	-	-	1.13	1.36	1.62	1.93	2.29

Nominal performance at to = -10 °C, tc = 45 °C

Cooling capacity	10 238	W
Power input	4 699	W
Current consumption	14.74	A
Mass flow	306	kg/h
C.O.P.	2.18	

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

Rating conditions : Suction gas temp. = 20 °C , Subcooling = 0 K

Pressure switch settings

Maximum HP switch setting	29.7	bar(g)
Minimum LP switch setting	1.4	bar(g)
LP pump down setting	2	bar(g)

Sound power data

Sound power level	74	dB(A)
With acoustic hood	66	dB(A)

Tolerance according EN12900

Performance data at 60 Hz, EN 12900 rating conditions, Superheat = 10 K
R404A

Cond. temp. in °C (tc)	Evaporating temperature in °C (to)								
	-30	-25	-20	-15	-10	-5	0	5	10

Cooling capacity in W

10	6 676	8 399	10 456	12 887	15 729	-	-	-	-
20	5 855	7 420	9 268	11 439	13 971	16 903	20 269	-	-
30	5 034	6 452	8 101	10 023	12 258	14 846	17 826	21 229	25 079
40	4 124	5 399	6 858	8 541	10 490	12 746	15 352	18 347	21 765
50	-	-	5 452	6 901	8 571	10 504	12 747	15 346	18 346
60	-	-	-	-	6 408	8 021	9 908	12 124	14 728

Power input in W

10	2 201	2 148	2 143	2 167	2 204	-	-	-	-
20	2 751	2 688	2 675	2 693	2 724	2 752	2 760	-	-
30	3 436	3 366	3 347	3 360	3 388	3 415	3 423	3 394	3 311
40	4 276	4 201	4 178	4 189	4 217	4 244	4 254	4 229	4 151
50	-	-	5 190	5 201	5 230	5 260	5 274	5 254	5 184
60	-	-	-	-	6 448	6 483	6 503	6 491	6 430

Current consumption in A

10	6.91	6.74	6.72	6.80	6.91	-	-	-	-
20	8.63	8.44	8.39	8.45	8.55	8.64	8.66	-	-
30	10.78	10.56	10.50	10.54	10.63	10.72	10.74	10.65	10.39
40	13.42	13.18	13.11	13.14	13.23	13.32	13.35	13.27	13.02
50	-	-	16.29	16.32	16.41	16.50	16.55	16.49	16.27
60	-	-	-	-	20.23	20.34	20.41	20.37	20.18

Mass flow in kg/h

10	146	195	246	301	361	-	-	-	-
20	153	199	247	299	357	422	496	-	-
30	155	199	245	295	351	415	487	568	658
40	150	193	239	288	343	406	478	558	648
50	-	-	227	276	332	395	467	548	638
60	-	-	-	-	316	381	454	536	627

Coefficient of performance (C.O.P.)

10	3.03	3.91	4.88	5.95	7.14	-	-	-	-
20	2.13	2.76	3.46	4.25	5.13	6.14	7.34	-	-
30	1.47	1.92	2.42	2.98	3.62	4.35	5.21	6.26	7.57
40	0.96	1.29	1.64	2.04	2.49	3.00	3.61	4.34	5.24
50	-	-	1.05	1.33	1.64	2.00	2.42	2.92	3.54
60	-	-	-	-	0.99	1.24	1.52	1.87	2.29

Nominal performance at to = -10 °C, tc = 45 °C

Cooling capacity	9 555	W
Power input	4 699	W
Current consumption	14.74	A
Mass flow	338	kg/h
C.O.P.	2.03	

Pressure switch settings

Maximum HP switch setting	29.7	bar(g)
Minimum LP switch setting	1.4	bar(g)
LP pump down setting	2	bar(g)

Sound power data

Sound power level	74	dB(A)
With acoustic hood	66	dB(A)

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

Rating conditions : Superheat = 10 K , Subcooling = 0 K

Tolerance according EN12900

Performance data at 50 Hz, EN 12900 rating conditions, Superheat = 10 K

R407C

Cond. temp. in °C (tc)	Evaporating temperature in °C (to)								
	-30	-25	-20	-15	-10	-5	0	5	10

Cooling capacity in W

30	-	4 339	5 528	6 980	8 725	10 792	13 211	16 012	19 224
35	-	4 026	5 160	6 542	8 202	10 170	12 474	15 144	18 210
40	-	3 726	4 801	6 109	7 680	9 543	11 727	14 263	17 178
45	-	-	4 444	5 674	7 152	8 906	10 966	13 361	16 121
50	-	-	-	5 231	6 611	8 251	10 183	12 433	15 033
55	-	-	-	-	6 051	7 573	9 371	11 472	13 906
60	-	-	-	-	-	6 865	8 524	10 471	12 734
65	-	-	-	-	-	-	7 635	9 421	11 507

Power input in W

30	-	2 051	2 106	2 174	2 251	2 333	2 417	2 499	2 576
35	-	2 547	2 567	2 600	2 642	2 689	2 739	2 786	2 827
40	-	3 055	3 048	3 054	3 069	3 089	3 111	3 131	3 146
45	-	-	3 557	3 544	3 540	3 541	3 544	3 545	3 541
50	-	-	-	4 079	4 064	4 054	4 046	4 036	4 021
55	-	-	-	-	4 651	4 638	4 627	4 614	4 595
60	-	-	-	-	-	5 301	5 295	5 287	5 273
65	-	-	-	-	-	-	6 059	6 063	6 062

Current consumption in A

30	-	6.92	6.82	6.95	7.23	7.57	7.87	8.05	8.01
35	-	8.73	8.45	8.42	8.55	8.76	8.96	9.04	8.93
40	-	9.99	9.56	9.40	9.42	9.54	9.66	9.69	9.54
45	-	-	10.38	10.12	10.07	10.13	10.20	10.21	10.06
50	-	-	-	10.82	10.72	10.75	10.82	10.83	10.71
55	-	-	-	-	11.59	11.63	11.72	11.78	11.72
60	-	-	-	-	-	12.99	13.14	13.28	13.31
65	-	-	-	-	-	-	15.31	15.56	15.72

Mass flow in kg/h

30	-	99	123	153	187	226	272	324	384
35	-	97	121	150	184	223	269	321	381
40	-	94	119	147	180	220	265	317	377
45	-	-	115	143	176	215	261	313	373
50	-	-	-	138	171	210	255	308	368
55	-	-	-	-	164	203	249	301	361
60	-	-	-	-	-	195	240	293	353
65	-	-	-	-	-	-	231	283	344

Coefficient of performance (C.O.P.)

30	-	2.12	2.62	3.21	3.88	4.63	5.47	6.41	7.46
35	-	1.58	2.01	2.52	3.10	3.78	4.55	5.44	6.44
40	-	1.22	1.58	2.00	2.50	3.09	3.77	4.55	5.46
45	-	-	1.25	1.60	2.02	2.52	3.09	3.77	4.55
50	-	-	-	1.28	1.63	2.04	2.52	3.08	3.74
55	-	-	-	-	1.30	1.63	2.03	2.49	3.03
60	-	-	-	-	-	1.30	1.61	1.98	2.42
65	-	-	-	-	-	-	1.26	1.55	1.90

Nominal performance at to = -10 °C, tc = 45 °C

Cooling capacity	7 152	W
Power input	3 540	W
Current consumption	10.07	A
Mass flow	176	kg/h
C.O.P.	2.02	

Pressure switch settings

Maximum HP switch setting	30	bar(g)
Minimum LP switch setting	0.5	bar(g)
LP pump down setting	1	bar(g)

Sound power data

Sound power level		dB(A)
With acoustic hood		dB(A)

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

Rating conditions : Superheat = 10 K , Subcooling = 0 K

Tolerance according EN12900

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Performance data at 50 Hz,

R407C

Cond. temp. in °C (tc)	Evaporating temperature in °C (to)								
	-30	-25	-20	-15	-10	-5	0	5	10

Cooling capacity in W

30	-	-	-	-	-	-	-	-	-
35	-	-	-	-	-	-	-	-	-
40	-	-	-	-	-	-	-	-	-
45	-	-	-	-	-	-	-	-	-
50	-	-	-	-	-	-	-	-	-
55	-	-	-	-	-	-	-	-	-
60	-	-	-	-	-	-	-	-	-
65	-	-	-	-	-	-	-	-	-

Power input in W

30	-	-	-	-	-	-	-	-	-
35	-	-	-	-	-	-	-	-	-
40	-	-	-	-	-	-	-	-	-
45	-	-	-	-	-	-	-	-	-
50	-	-	-	-	-	-	-	-	-
55	-	-	-	-	-	-	-	-	-
60	-	-	-	-	-	-	-	-	-
65	-	-	-	-	-	-	-	-	-

Current consumption in A

30	-	-	-	-	-	-	-	-	-
35	-	-	-	-	-	-	-	-	-
40	-	-	-	-	-	-	-	-	-
45	-	-	-	-	-	-	-	-	-
50	-	-	-	-	-	-	-	-	-
55	-	-	-	-	-	-	-	-	-
60	-	-	-	-	-	-	-	-	-
65	-	-	-	-	-	-	-	-	-

Mass flow in kg/h

30	-	-	-	-	-	-	-	-	-
35	-	-	-	-	-	-	-	-	-
40	-	-	-	-	-	-	-	-	-
45	-	-	-	-	-	-	-	-	-
50	-	-	-	-	-	-	-	-	-
55	-	-	-	-	-	-	-	-	-
60	-	-	-	-	-	-	-	-	-
65	-	-	-	-	-	-	-	-	-

Coefficient of performance (C.O.P.)

30	-	-	-	-	-	-	-	-	-
35	-	-	-	-	-	-	-	-	-
40	-	-	-	-	-	-	-	-	-
45	-	-	-	-	-	-	-	-	-
50	-	-	-	-	-	-	-	-	-
55	-	-	-	-	-	-	-	-	-
60	-	-	-	-	-	-	-	-	-
65	-	-	-	-	-	-	-	-	-

Nominal performance at to = °C, tc = °C

Cooling capacity	-	W
Power input	-	W
Current consumption	-	A
Mass flow	-	kg/h
C.O.P.	-	

Pressure switch settings

Maximum HP switch setting	30	bar(g)
Minimum LP switch setting	0.5	bar(g)
LP pump down setting	1	bar(g)

Sound power data

Sound power level	dB(A)
With accoustic hood	dB(A)

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

Rating conditions : Suction gas temp. = °C , Subcooling = K

Tolerance according EN12900

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Performance data at 60 Hz, EN 12900 rating conditions, Superheat = 10 K
R407C

Cond. temp. in °C (tc)	Evaporating temperature in °C (to)							
	-30	-25	-20	-15	-10	-5	0	5

Cooling capacity in W

30	-	5 115	6 513	8 225	10 286	12 727	15 583	18 888	22 674
35	-	4 757	6 095	7 729	9 693	12 021	14 746	17 901	21 520
40	-	4 409	5 682	7 235	9 100	11 311	13 901	16 902	20 349
45	-	-	5 266	6 733	8 495	10 585	13 036	15 880	19 151
50	-	-	-	6 213	7 868	9 833	12 140	14 823	17 914
55	-	-	-	-	7 208	9 044	11 204	13 721	16 628
60	-	-	-	-	-	8 208	10 216	12 562	15 279
65	-	-	-	-	-	-	9 164	11 334	13 856

Power input in W

30	-	2 469	2 539	2 621	2 711	2 807	2 906	3 004	3 099
35	-	3 051	3 078	3 117	3 165	3 220	3 277	3 335	3 389
40	-	3 648	3 640	3 645	3 659	3 680	3 705	3 731	3 753
45	-	-	4 235	4 214	4 203	4 200	4 200	4 202	4 202
50	-	-	-	4 836	4 808	4 788	4 773	4 759	4 744
55	-	-	-	-	5 483	5 456	5 433	5 412	5 391
60	-	-	-	-	-	6 212	6 191	6 172	6 152
65	-	-	-	-	-	-	7 057	7 048	7 039

Current consumption in A

30	-	6.92	6.82	6.95	7.23	7.57	7.87	8.05	8.01
35	-	8.73	8.45	8.42	8.55	8.76	8.96	9.04	8.93
40	-	9.99	9.56	9.40	9.42	9.54	9.66	9.69	9.54
45	-	-	10.38	10.12	10.07	10.13	10.20	10.21	10.06
50	-	-	-	10.82	10.72	10.75	10.82	10.83	10.71
55	-	-	-	-	11.59	11.63	11.72	11.78	11.72
60	-	-	-	-	-	12.99	13.14	13.28	13.31
65	-	-	-	-	-	-	15.31	15.56	15.72

Mass flow in kg/h

30	-	116	145	180	220	267	321	383	453
35	-	115	143	177	217	264	318	380	450
40	-	112	140	174	214	260	314	376	447
45	-	-	136	170	209	256	310	372	443
50	-	-	-	164	203	250	304	367	438
55	-	-	-	-	196	243	297	360	432
60	-	-	-	-	-	233	288	351	424
65	-	-	-	-	-	-	277	341	414

Coefficient of performance (C.O.P.)

30	-	2.07	2.57	3.14	3.79	4.53	5.36	6.29	7.32
35	-	1.56	1.98	2.48	3.06	3.73	4.50	5.37	6.35
40	-	1.21	1.56	1.99	2.49	3.07	3.75	4.53	5.42
45	-	-	1.24	1.60	2.02	2.52	3.10	3.78	4.56
50	-	-	-	1.28	1.64	2.05	2.54	3.11	3.78
55	-	-	-	-	1.31	1.66	2.06	2.54	3.08
60	-	-	-	-	-	1.32	1.65	2.04	2.48
65	-	-	-	-	-	-	1.30	1.61	1.97

Nominal performance at to = -10 °C, tc = 45 °C

Cooling capacity	8 495	W
Power input	4 203	W
Current consumption	10.07	A
Mass flow	209	kg/h
C.O.P.	2.02	

Pressure switch settings

Maximum HP switch setting	30	bar(g)
Minimum LP switch setting	0.5	bar(g)
LP pump down setting	1	bar(g)

Sound power data

Sound power level		dB(A)
With acoustic hood		dB(A)

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

Rating conditions : Superheat = 10 K , Subcooling = 0 K

Tolerance according EN12900

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Performance data at 60 Hz,

R407C

Cond. temp. in °C (tc)	Evaporating temperature in °C (to)								
	-30	-25	-20	-15	-10	-5	0	5	10

Cooling capacity in W

30	-	-	-	-	-	-	-	-	-
35	-	-	-	-	-	-	-	-	-
40	-	-	-	-	-	-	-	-	-
45	-	-	-	-	-	-	-	-	-
50	-	-	-	-	-	-	-	-	-
55	-	-	-	-	-	-	-	-	-
60	-	-	-	-	-	-	-	-	-
65	-	-	-	-	-	-	-	-	-

Power input in W

30	-	-	-	-	-	-	-	-	-
35	-	-	-	-	-	-	-	-	-
40	-	-	-	-	-	-	-	-	-
45	-	-	-	-	-	-	-	-	-
50	-	-	-	-	-	-	-	-	-
55	-	-	-	-	-	-	-	-	-
60	-	-	-	-	-	-	-	-	-
65	-	-	-	-	-	-	-	-	-

Current consumption in A

30	-	-	-	-	-	-	-	-	-
35	-	-	-	-	-	-	-	-	-
40	-	-	-	-	-	-	-	-	-
45	-	-	-	-	-	-	-	-	-
50	-	-	-	-	-	-	-	-	-
55	-	-	-	-	-	-	-	-	-
60	-	-	-	-	-	-	-	-	-
65	-	-	-	-	-	-	-	-	-

Mass flow in kg/h

30	-	-	-	-	-	-	-	-	-
35	-	-	-	-	-	-	-	-	-
40	-	-	-	-	-	-	-	-	-
45	-	-	-	-	-	-	-	-	-
50	-	-	-	-	-	-	-	-	-
55	-	-	-	-	-	-	-	-	-
60	-	-	-	-	-	-	-	-	-
65	-	-	-	-	-	-	-	-	-

Coefficient of performance (C.O.P.)

30	-	-	-	-	-	-	-	-	-
35	-	-	-	-	-	-	-	-	-
40	-	-	-	-	-	-	-	-	-
45	-	-	-	-	-	-	-	-	-
50	-	-	-	-	-	-	-	-	-
55	-	-	-	-	-	-	-	-	-
60	-	-	-	-	-	-	-	-	-
65	-	-	-	-	-	-	-	-	-

Nominal performance at to = °C, tc = °C

Cooling capacity	-	W
Power input	-	W
Current consumption	-	A
Mass flow	-	kg/h
C.O.P.	-	

Pressure switch settings

Maximum HP switch setting	30	bar(g)
Minimum LP switch setting	0.5	bar(g)
LP pump down setting	1	bar(g)

Sound power data

Sound power level	dB(A)
With accoustic hood	dB(A)

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

Rating conditions : Suction gas temp. = °C , Subcooling = K

Tolerance according EN12900

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Performance data at 50 Hz, EN 12900 rating conditions, Suction temp. = 20 °C

R448A

Cond. temp. in °C (tc)	Evaporating temperature in °C (to)								
	-30	-25	-20	-15	-10	-5	0	5	10

Cooling capacity in W

10	4 902	6 136	7 613	9 370	11 442	-	-	-	-
20	4 386	5 568	6 964	8 612	10 547	12 806	15 425	-	-
30	-	-	6 228	7 745	9 521	11 592	13 995	16 766	19 940
40	-	-	-	6 790	8 385	10 247	12 411	14 915	17 795
50	-	-	-	-	7 161	8 791	10 695	12 911	15 474
60	-	-	-	-	-	-	8 869	10 774	12 998

Power input in W

10	1 519	1 538	1 583	1 651	1 740	-	-	-	-
20	1 969	1 948	1 960	2 002	2 072	2 166	2 282	-	-
30	-	-	2 489	2 495	2 536	2 608	2 709	2 835	2 983
40	-	-	-	3 202	3 204	3 245	3 320	3 428	3 566
50	-	-	-	-	4 148	4 147	4 188	4 269	4 385
60	-	-	-	-	-	-	5 384	5 428	5 514

Current consumption in A

10	7.48	7.59	7.68	7.77	7.87	-	-	-	-
20	8.31	8.41	8.50	8.58	8.69	8.83	9.04	-	-
30	-	-	9.67	9.73	9.82	9.96	10.16	10.45	10.84
40	-	-	-	11.47	11.53	11.63	11.81	12.07	12.45
50	-	-	-	-	14.04	14.09	14.22	14.44	14.78
60	-	-	-	-	-	-	17.64	17.81	18.09

Mass flow in kg/h

10	80	101	126	155	190	-	-	-	-
20	77	98	123	153	188	230	280	-	-
30	-	-	119	148	184	226	275	333	401
40	-	-	-	142	177	219	268	326	394
50	-	-	-	-	168	209	258	315	383
60	-	-	-	-	-	-	245	302	368

Coefficient of performance (C.O.P.)

10	3.23	3.99	4.81	5.68	6.58	-	-	-	-
20	2.23	2.86	3.55	4.30	5.09	5.91	6.76	-	-
30	-	-	2.50	3.10	3.75	4.44	5.17	5.91	6.68
40	-	-	-	2.12	2.62	3.16	3.74	4.35	4.99
50	-	-	-	-	1.73	2.12	2.55	3.02	3.53
60	-	-	-	-	-	-	1.65	1.99	2.36

Nominal performance at to = -10 °C, tc = 45 °C

Cooling capacity	7 782	W
Power input	3 637	W
Current consumption	12.66	A
Mass flow	173	kg/h
C.O.P.	2.14	

to: Evaporating temperature at dew point
 tc: Condensing temperature at dew point
 Rating conditions : Suction gas temp. = 20 °C , Subcooling = 0 K

Pressure switch settings

Maximum HP switch setting	29.7	bar(g)
Minimum LP switch setting	1.4	bar(g)
LP pump down setting	2	bar(g)

Sound power data

Sound power level		dB(A)
With acoustic hood		dB(A)

Tolerance according EN12900

Performance data at 50 Hz, EN 12900 rating conditions, Superheat = 10 K
R448A

Cond. temp. in °C (tc)	Evaporating temperature in °C (to)								
	-30	-25	-20	-15	-10	-5	0	5	10

Cooling capacity in W

10	4 923	6 166	7 656	9 428	11 516	-	-	-	-
20	4 348	5 532	6 935	8 594	10 545	12 821	15 454	-	-
30	3 733	4 834	6 128	7 651	9 442	11 534	13 962	16 757	19 940
40	-	-	5 259	6 623	8 230	10 116	12 317	14 867	17 795
50	-	-	-	5 534	6 934	8 590	10 540	12 823	15 474
60	-	-	-	-	5 577	6 979	8 655	10 647	12 998

Power input in W

10	1 519	1 538	1 583	1 651	1 740	-	-	-	-
20	1 969	1 948	1 960	2 002	2 072	2 166	2 282	-	-
30	2 590	2 519	2 489	2 495	2 536	2 608	2 709	2 835	2 983
40	-	-	3 240	3 202	3 204	3 245	3 320	3 428	3 566
50	-	-	-	4 194	4 148	4 147	4 188	4 269	4 385
60	-	-	-	-	5 439	5 387	5 384	5 428	5 514

Current consumption in A

10	7.48	7.59	7.68	7.77	7.87	-	-	-	-
20	8.31	8.41	8.50	8.58	8.69	8.83	9.04	-	-
30	9.54	9.61	9.67	9.73	9.82	9.96	10.16	10.45	10.84
40	-	-	11.45	11.47	11.53	11.63	11.81	12.07	12.45
50	-	-	-	14.04	14.04	14.09	14.22	14.44	14.78
60	-	-	-	-	17.60	17.58	17.64	17.81	18.09

Mass flow in kg/h

10	94	117	143	174	209	-	-	-	-
20	91	114	140	171	206	247	294	-	-
30	87	110	136	166	202	242	289	342	401
40	-	-	129	159	195	235	282	335	394
50	-	-	-	150	185	225	271	324	383
60	-	-	-	-	172	212	258	310	368

Coefficient of performance (C.O.P.)

10	3.24	4.01	4.84	5.71	6.62	-	-	-	-
20	2.21	2.84	3.54	4.29	5.09	5.92	6.77	-	-
30	1.44	1.92	2.46	3.07	3.72	4.42	5.15	5.91	6.68
40	-	-	1.62	2.07	2.57	3.12	3.71	4.34	4.99
50	-	-	-	1.32	1.67	2.07	2.52	3.00	3.53
60	-	-	-	-	1.03	1.30	1.61	1.96	2.36

Nominal performance at to = -10 °C, tc = 45 °C

Cooling capacity	7 591	W
Power input	3 637	W
Current consumption	12.66	A
Mass flow	190	kg/h
C.O.P.	2.09	

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

Rating conditions : Superheat = 10 K , Subcooling = 0 K

Pressure switch settings

Maximum HP switch setting	29.7	bar(g)
Minimum LP switch setting	1.4	bar(g)
LP pump down setting	2	bar(g)

Sound power data

Sound power level		dB(A)
With accoustic hood		dB(A)

Tolerance according EN12900

Performance data at 60 Hz, EN 12900 rating conditions, Suction temp. = 20 °C

R448A

Cond. temp. in °C (tc)	Evaporating temperature in °C (to)								
	-30	-25	-20	-15	-10	-5	0	5	10

Cooling capacity in W

10	5 791	7 260	9 030	11 146	13 652	-	-	-	-
20	5 235	6 639	8 312	10 298	12 643	15 391	18 587	-	-
30	-	-	7 496	9 319	11 468	13 988	16 923	20 319	24 221
40	-	-	-	8 245	10 164	12 421	15 062	18 131	21 673
50	-	-	-	-	8 768	10 729	13 040	15 747	18 896
60	-	-	-	-	-	-	10 896	13 207	15 927

Power input in W

10	1 874	1 917	1 976	2 054	2 152	-	-	-	-
20	2 371	2 398	2 436	2 489	2 557	2 644	2 751	-	-
30	-	-	3 065	3 104	3 155	3 220	3 300	3 398	3 516
40	-	-	-	3 916	3 962	4 016	4 082	4 160	4 255
50	-	-	-	-	4 992	5 049	5 112	5 184	5 266
60	-	-	-	-	-	-	6 407	6 484	6 567

Current consumption in A

10	6.93	7.14	7.32	7.48	7.60	-	-	-	-
20	8.07	8.18	8.30	8.43	8.56	8.69	8.83	-	-
30	-	-	9.61	9.67	9.77	9.91	10.09	10.31	10.56
40	-	-	-	11.49	11.52	11.62	11.80	12.06	12.38
50	-	-	-	-	14.08	14.11	14.26	14.51	14.87
60	-	-	-	-	-	-	17.73	17.94	18.30

Mass flow in kg/h

10	94	119	149	184	227	-	-	-	-
20	92	117	147	183	225	276	337	-	-
30	-	-	143	179	221	272	333	404	488
40	-	-	-	173	215	265	325	396	479
50	-	-	-	-	206	256	315	385	467
60	-	-	-	-	-	-	301	370	451

Coefficient of performance (C.O.P.)

10	3.09	3.79	4.57	5.43	6.34	-	-	-	-
20	2.21	2.77	3.41	4.14	4.94	5.82	6.76	-	-
30	-	-	2.45	3.00	3.63	4.34	5.13	5.98	6.89
40	-	-	-	2.11	2.57	3.09	3.69	4.36	5.09
50	-	-	-	-	1.76	2.12	2.55	3.04	3.59
60	-	-	-	-	-	-	1.70	2.04	2.43

Nominal performance at to = -10 °C, tc = 45 °C

Cooling capacity	9 475	W
Power input	4 448	W
Current consumption	12.68	A
Mass flow	211	kg/h
C.O.P.	2.13	

Pressure switch settings

Maximum HP switch setting	29.7	bar(g)
Minimum LP switch setting	1.4	bar(g)
LP pump down setting	2	bar(g)

Sound power data

Sound power level		dB(A)
With acoustic hood		dB(A)

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

Rating conditions : Suction gas temp. = 20 °C , Subcooling = 0 K

Tolerance according EN12900

Performance data at 60 Hz, EN 12900 rating conditions, Superheat = 10 K

R448A

Cond. temp. in °C (tc)	Evaporating temperature in °C (to)								
	-30	-25	-20	-15	-10	-5	0	5	10

Cooling capacity in W

10	5 815	7 295	9 081	11 215	13 740	-	-	-	-
20	5 189	6 596	8 277	10 277	12 640	15 409	18 622	-	-
30	4 536	5 834	7 376	9 206	11 372	13 917	16 883	20 308	24 221
40	-	-	6 416	8 043	9 976	12 262	14 947	18 072	21 673
50	-	-	-	6 825	8 491	10 483	12 850	15 640	18 896
60	-	-	-	-	6 953	8 617	10 632	13 051	15 927

Power input in W

10	1 874	1 917	1 976	2 054	2 152	-	-	-	-
20	2 371	2 398	2 436	2 489	2 557	2 644	2 751	-	-
30	3 011	3 034	3 065	3 104	3 155	3 220	3 300	3 398	3 516
40	-	-	3 877	3 916	3 962	4 016	4 082	4 160	4 255
50	-	-	-	4 939	4 992	5 049	5 112	5 184	5 266
60	-	-	-	-	6 262	6 334	6 407	6 484	6 567

Current consumption in A

10	6.93	7.14	7.32	7.48	7.60	-	-	-	-
20	8.07	8.18	8.30	8.43	8.56	8.69	8.83	-	-
30	9.61	9.59	9.61	9.67	9.77	9.91	10.09	10.31	10.56
40	-	-	11.53	11.49	11.52	11.62	11.80	12.06	12.38
50	-	-	-	14.16	14.08	14.11	14.26	14.51	14.87
60	-	-	-	-	17.74	17.66	17.73	17.94	18.30

Mass flow in kg/h

10	111	139	170	207	249	-	-	-	-
20	109	136	168	204	247	297	354	-	-
30	105	132	163	200	243	293	350	415	488
40	-	-	158	194	236	285	342	407	479
50	-	-	-	185	226	275	331	395	467
60	-	-	-	-	215	262	317	380	451

Coefficient of performance (C.O.P.)

10	3.10	3.81	4.60	5.46	6.39	-	-	-	-
20	2.19	2.75	3.40	4.13	4.94	5.83	6.77	-	-
30	1.51	1.92	2.41	2.97	3.60	4.32	5.12	5.98	6.89
40	-	-	1.65	2.05	2.52	3.05	3.66	4.34	5.09
50	-	-	-	1.38	1.70	2.08	2.51	3.02	3.59
60	-	-	-	-	1.11	1.36	1.66	2.01	2.43

Nominal performance at to = -10 °C, tc = 45 °C

Cooling capacity	9 242	W
Power input	4 448	W
Current consumption	12.68	A
Mass flow	231	kg/h
C.O.P.	2.08	

Pressure switch settings

Maximum HP switch setting	29.7	bar(g)
Minimum LP switch setting	1.4	bar(g)
LP pump down setting	2	bar(g)

Sound power data

Sound power level		dB(A)
With acoustic hood		dB(A)

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

Rating conditions : Superheat = 10 K , Subcooling = 0 K

Tolerance according EN12900

Performance data at 50 Hz, EN 12900 rating conditions, Suction temp. = 20 °C
R449A

Cond. temp. in °C (tc)	Evaporating temperature in °C (to)								
	-30	-25	-20	-15	-10	-5	0	5	10

Cooling capacity in W

10	4 902	6 136	7 613	9 370	11 442	-	-	-	-
20	4 386	5 568	6 964	8 612	10 547	12 806	15 425	-	-
30	-	-	6 228	7 745	9 521	11 592	13 995	16 766	19 940
40	-	-	-	6 790	8 385	10 247	12 411	14 915	17 795
50	-	-	-	-	7 161	8 791	10 695	12 911	15 474
60	-	-	-	-	-	-	8 869	10 774	12 998

Power input in W

10	1 519	1 538	1 583	1 651	1 740	-	-	-	-
20	1 969	1 948	1 960	2 002	2 072	2 166	2 282	-	-
30	-	-	2 489	2 495	2 536	2 608	2 709	2 835	2 983
40	-	-	-	3 202	3 204	3 245	3 320	3 428	3 566
50	-	-	-	-	4 148	4 147	4 188	4 269	4 385
60	-	-	-	-	-	-	5 384	5 428	5 514

Current consumption in A

10	7.48	7.59	7.68	7.77	7.87	-	-	-	-
20	8.31	8.41	8.50	8.58	8.69	8.83	9.04	-	-
30	-	-	9.67	9.73	9.82	9.96	10.16	10.45	10.84
40	-	-	-	11.47	11.53	11.63	11.81	12.07	12.45
50	-	-	-	-	14.04	14.09	14.22	14.44	14.78
60	-	-	-	-	-	-	17.64	17.81	18.09

Mass flow in kg/h

10	80	101	126	155	190	-	-	-	-
20	77	98	123	153	188	230	280	-	-
30	-	-	119	148	184	226	275	333	401
40	-	-	-	142	177	219	268	326	394
50	-	-	-	-	168	209	258	315	383
60	-	-	-	-	-	-	245	302	368

Coefficient of performance (C.O.P.)

10	3.23	3.99	4.81	5.68	6.58	-	-	-	-
20	2.23	2.86	3.55	4.30	5.09	5.91	6.76	-	-
30	-	-	2.50	3.10	3.75	4.44	5.17	5.91	6.68
40	-	-	-	2.12	2.62	3.16	3.74	4.35	4.99
50	-	-	-	-	1.73	2.12	2.55	3.02	3.53
60	-	-	-	-	-	-	1.65	1.99	2.36

Nominal performance at to = -10 °C, tc = 45 °C

Cooling capacity	7 782	W
Power input	3 637	W
Current consumption	12.66	A
Mass flow	173	kg/h
C.O.P.	2.14	

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

Rating conditions : Suction gas temp. = 20 °C , Subcooling = 0 K

Pressure switch settings

Maximum HP switch setting	29.7	bar(g)
Minimum LP switch setting	1.4	bar(g)
LP pump down setting	2	bar(g)

Sound power data

Sound power level		dB(A)
With acoustic hood		dB(A)

Tolerance according EN12900

Performance data at 50 Hz, EN 12900 rating conditions, Superheat = 10 K
R449A

Cond. temp. in °C (tc)	Evaporating temperature in °C (to)								
	-30	-25	-20	-15	-10	-5	0	5	10

Cooling capacity in W

10	4 912	6 155	7 644	9 416	11 505	-	-	-	-
20	4 336	5 520	6 923	8 582	10 533	12 811	15 446	-	-
30	3 722	4 822	6 115	7 638	9 429	11 523	13 954	16 751	19 940
40	-	-	5 245	6 609	8 217	10 104	12 307	14 861	17 795
50	-	-	-	5 520	6 920	8 577	10 530	12 817	15 474
60	-	-	-	-	5 563	6 966	8 645	10 641	12 998

Power input in W

10	1 519	1 538	1 583	1 651	1 740	-	-	-	-
20	1 969	1 948	1 960	2 002	2 072	2 166	2 282	-	-
30	2 590	2 519	2 489	2 495	2 536	2 608	2 709	2 835	2 983
40	-	-	3 240	3 202	3 204	3 245	3 320	3 428	3 566
50	-	-	-	4 194	4 148	4 147	4 188	4 269	4 385
60	-	-	-	-	5 439	5 387	5 384	5 428	5 514

Current consumption in A

10	7.48	7.59	7.68	7.77	7.87	-	-	-	-
20	8.31	8.41	8.50	8.58	8.69	8.83	9.04	-	-
30	9.54	9.61	9.67	9.73	9.82	9.96	10.16	10.45	10.84
40	-	-	11.45	11.47	11.53	11.63	11.81	12.07	12.45
50	-	-	-	14.04	14.04	14.09	14.22	14.44	14.78
60	-	-	-	-	17.60	17.58	17.64	17.81	18.09

Mass flow in kg/h

10	94	117	143	174	209	-	-	-	-
20	91	114	140	171	206	247	294	-	-
30	87	110	136	166	202	242	289	342	401
40	-	-	129	159	195	235	282	335	394
50	-	-	-	150	185	225	271	324	383
60	-	-	-	-	172	212	258	310	368

Coefficient of performance (C.O.P.)

10	3.23	4.00	4.83	5.70	6.61	-	-	-	-
20	2.20	2.83	3.53	4.29	5.08	5.91	6.77	-	-
30	1.44	1.91	2.46	3.06	3.72	4.42	5.15	5.91	6.68
40	-	-	1.62	2.06	2.56	3.11	3.71	4.33	4.99
50	-	-	-	1.32	1.67	2.07	2.51	3.00	3.53
60	-	-	-	-	1.02	1.29	1.61	1.96	2.36

Nominal performance at to = -10 °C, tc = 45 °C

Cooling capacity	7 577	W
Power input	3 637	W
Current consumption	12.66	A
Mass flow	190	kg/h
C.O.P.	2.08	

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

Rating conditions : Superheat = 10 K , Subcooling = 0 K

Pressure switch settings

Maximum HP switch setting	29.7	bar(g)
Minimum LP switch setting	1.4	bar(g)
LP pump down setting	2	bar(g)

Sound power data

Sound power level		dB(A)
With acoustic hood		dB(A)

Tolerance according EN12900

Performance data at 60 Hz, EN 12900 rating conditions, Suction temp. = 20 °C
R449A

Cond. temp. in °C (tc)	Evaporating temperature in °C (to)								
	-30	-25	-20	-15	-10	-5	0	5	10

Cooling capacity in W

10	5 791	7 260	9 030	11 146	13 652	-	-	-	-
20	5 235	6 639	8 312	10 298	12 643	15 391	18 587	-	-
30	-	-	7 496	9 319	11 468	13 988	16 923	20 319	24 221
40	-	-	-	8 245	10 164	12 421	15 062	18 131	21 673
50	-	-	-	-	8 768	10 729	13 040	15 747	18 896
60	-	-	-	-	-	-	10 896	13 207	15 927

Power input in W

10	1 874	1 917	1 976	2 054	2 152	-	-	-	-
20	2 371	2 398	2 436	2 489	2 557	2 644	2 751	-	-
30	-	-	3 065	3 104	3 155	3 220	3 300	3 398	3 516
40	-	-	-	3 916	3 962	4 016	4 082	4 160	4 255
50	-	-	-	-	4 992	5 049	5 112	5 184	5 266
60	-	-	-	-	-	-	6 407	6 484	6 567

Current consumption in A

10	6.93	7.14	7.32	7.48	7.60	-	-	-	-
20	8.07	8.18	8.30	8.43	8.56	8.69	8.83	-	-
30	-	-	9.61	9.67	9.77	9.91	10.09	10.31	10.56
40	-	-	-	11.49	11.52	11.62	11.80	12.06	12.38
50	-	-	-	-	14.08	14.11	14.26	14.51	14.87
60	-	-	-	-	-	-	17.73	17.94	18.30

Mass flow in kg/h

10	96	121	151	187	231	-	-	-	-
20	93	119	149	186	229	281	343	-	-
30	-	-	146	182	225	277	339	412	497
40	-	-	-	176	219	271	332	404	489
50	-	-	-	-	211	261	321	393	477
60	-	-	-	-	-	-	308	378	461

Coefficient of performance (C.O.P.)

10	3.09	3.79	4.57	5.43	6.34	-	-	-	-
20	2.21	2.77	3.41	4.14	4.94	5.82	6.76	-	-
30	-	-	2.45	3.00	3.63	4.34	5.13	5.98	6.89
40	-	-	-	2.11	2.57	3.09	3.69	4.36	5.09
50	-	-	-	-	1.76	2.12	2.55	3.04	3.59
60	-	-	-	-	-	-	1.70	2.04	2.43

Nominal performance at to = -10 °C, tc = 45 °C

Cooling capacity	9 475	W
Power input	4 448	W
Current consumption	12.68	A
Mass flow	215	kg/h
C.O.P.	2.13	

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

Rating conditions : Suction gas temp. = 20 °C , Subcooling = 0 K

Pressure switch settings

Maximum HP switch setting	29.7	bar(g)
Minimum LP switch setting	1.4	bar(g)
LP pump down setting	2	bar(g)

Sound power data

Sound power level		dB(A)
With acoustic hood		dB(A)

Tolerance according EN12900

Performance data at 60 Hz, EN 12900 rating conditions, Superheat = 10 K

R449A

Cond. temp. in °C (tc)	Evaporating temperature in °C (to)								
	-30	-25	-20	-15	-10	-5	0	5	10

Cooling capacity in W

10	5 802	7 282	9 067	11 201	13 727	-	-	-	-
20	5 175	6 582	8 262	10 262	12 626	15 396	18 612	-	-
30	4 522	5 819	7 360	9 190	11 357	13 904	16 873	20 302	24 221
40	-	-	6 399	8 026	9 960	12 248	14 935	18 065	21 673
50	-	-	-	6 807	8 474	10 468	12 838	15 633	18 896
60	-	-	-	-	6 936	8 601	10 620	13 044	15 927

Power input in W

10	1 874	1 917	1 976	2 054	2 152	-	-	-	-
20	2 371	2 398	2 436	2 489	2 557	2 644	2 751	-	-
30	3 011	3 034	3 065	3 104	3 155	3 220	3 300	3 398	3 516
40	-	-	3 877	3 916	3 962	4 016	4 082	4 160	4 255
50	-	-	-	4 939	4 992	5 049	5 112	5 184	5 266
60	-	-	-	-	6 262	6 334	6 407	6 484	6 567

Current consumption in A

10	6.93	7.14	7.32	7.48	7.60	-	-	-	-
20	8.07	8.18	8.30	8.43	8.56	8.69	8.83	-	-
30	9.61	9.59	9.61	9.67	9.77	9.91	10.09	10.31	10.56
40	-	-	11.53	11.49	11.52	11.62	11.80	12.06	12.38
50	-	-	-	14.16	14.08	14.11	14.26	14.51	14.87
60	-	-	-	-	17.74	17.66	17.73	17.94	18.30

Mass flow in kg/h

10	113	141	173	210	253	-	-	-	-
20	111	138	170	208	251	302	360	-	-
30	107	135	166	204	247	298	356	423	497
40	-	-	161	197	240	291	349	415	489
50	-	-	-	189	231	281	338	404	477
60	-	-	-	-	219	267	324	388	461

Coefficient of performance (C.O.P.)

10	3.10	3.80	4.59	5.45	6.38	-	-	-	-
20	2.18	2.74	3.39	4.12	4.94	5.82	6.77	-	-
30	1.50	1.92	2.40	2.96	3.60	4.32	5.11	5.98	6.89
40	-	-	1.65	2.05	2.51	3.05	3.66	4.34	5.09
50	-	-	-	1.38	1.70	2.07	2.51	3.02	3.59
60	-	-	-	-	1.11	1.36	1.66	2.01	2.43

Nominal performance at to = -10 °C, tc = 45 °C

Cooling capacity	9 225	W
Power input	4 448	W
Current consumption	12.68	A
Mass flow	236	kg/h
C.O.P.	2.07	

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

Rating conditions : Superheat = 10 K , Subcooling = 0 K

Pressure switch settings

Maximum HP switch setting	29.7	bar(g)
Minimum LP switch setting	1.4	bar(g)
LP pump down setting	2	bar(g)

Sound power data

Sound power level		dB(A)
With acoustic hood		dB(A)

Tolerance according EN12900

Performance data at 50 Hz, EN 12900 rating conditions, Suction temp. = 20 °C
R452A

Cond. temp. in °C (tc)	Evaporating temperature in °C (to)								
	-30	-25	-20	-15	-10	-5	0	5	10

Cooling capacity in W

10	5 348	6 619	8 150	9 971	12 114	-	-	-	-
20	4 767	5 980	7 421	9 120	11 108	13 416	16 073	-	-
30	-	5 288	6 611	8 160	9 965	12 058	14 468	17 227	20 365
40	-	-	5 726	7 097	8 692	10 543	12 678	15 130	17 929
50	-	-	-	-	7 297	8 877	10 710	12 827	15 259
60	-	-	-	-	-	7 069	8 571	10 326	12 362

Power input in W

10	1 573	1 610	1 649	1 690	1 733	-	-	-	-
20	2 000	2 036	2 074	2 116	2 159	2 205	2 251	-	-
30	-	2 584	2 619	2 657	2 698	2 741	2 786	2 832	2 880
40	-	-	3 322	3 354	3 390	3 428	3 468	3 511	3 555
50	-	-	-	-	4 276	4 306	4 339	4 374	4 412
60	-	-	-	-	-	5 417	5 439	5 464	5 492

Current consumption in A

10	7.27	7.27	7.27	7.32	7.42	-	-	-	-
20	8.22	8.29	8.34	8.39	8.47	8.59	8.77	-	-
30	-	9.54	9.66	9.76	9.84	9.93	10.05	10.22	10.47
40	-	-	11.37	11.53	11.64	11.73	11.82	11.93	12.07
50	-	-	-	-	14.01	14.13	14.21	14.28	14.35
60	-	-	-	-	-	17.24	17.35	17.40	17.43

Mass flow in kg/h

10	108	135	167	205	251	-	-	-	-
20	105	133	165	203	249	303	367	-	-
30	-	129	161	200	245	300	364	439	527
40	-	-	155	193	239	293	357	432	520
50	-	-	-	-	229	283	347	421	509
60	-	-	-	-	-	269	332	407	493

Coefficient of performance (C.O.P.)

10	3.40	4.11	4.94	5.90	6.99	-	-	-	-
20	2.38	2.94	3.58	4.31	5.14	6.09	7.14	-	-
30	-	2.05	2.52	3.07	3.69	4.40	5.19	6.08	7.07
40	-	-	1.72	2.12	2.56	3.08	3.66	4.31	5.04
50	-	-	-	-	1.71	2.06	2.47	2.93	3.46
60	-	-	-	-	-	1.31	1.58	1.89	2.25

Nominal performance at to = -10 °C, tc = 45 °C

Cooling capacity	8 010	W
Power input	3 806	W
Current consumption	12.75	A
Mass flow	234	kg/h
C.O.P.	2.10	

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

Rating conditions : Suction gas temp. = 20 °C , Subcooling = 0 K

Pressure switch settings

Maximum HP switch setting	29.7	bar(g)
Minimum LP switch setting	1.4	bar(g)
LP pump down setting	2	bar(g)

Sound power data

Sound power level		dB(A)
With acoustic hood		dB(A)

Tolerance according EN12900

Performance data at 50 Hz, EN 12900 rating conditions, Superheat = 10 K

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Cond. temp. in °C (tc)	Evaporating temperature in °C (to)								
	-30	-25	-20	-15	-10	-5	0	5	10

Cooling capacity in W

10	5 176	6 444	7 980	9 817	11 986	-	-	-	-
20	4 525	5 724	7 161	8 871	10 884	13 234	15 949	-	-
30	3 853	4 954	6 264	7 816	9 645	11 785	14 267	17 120	20 365
40	3 170	4 144	5 297	6 664	8 280	10 180	12 400	14 974	17 929
50	-	-	4 270	5 423	6 796	8 428	10 357	12 621	15 259
60	-	-	-	-	5 199	6 532	8 139	10 067	12 362

Power input in W

10	1 573	1 610	1 649	1 690	1 733	-	-	-	-
20	2 000	2 036	2 074	2 116	2 159	2 205	2 251	-	-
30	2 552	2 584	2 619	2 657	2 698	2 741	2 786	2 832	2 880
40	3 270	3 294	3 322	3 354	3 390	3 428	3 468	3 511	3 555
50	-	-	4 226	4 249	4 276	4 306	4 339	4 374	4 412
60	-	-	-	-	5 398	5 417	5 439	5 464	5 492

Current consumption in A

10	7.27	7.27	7.27	7.32	7.42	-	-	-	-
20	8.22	8.29	8.34	8.39	8.47	8.59	8.77	-	-
30	9.36	9.54	9.66	9.76	9.84	9.93	10.05	10.22	10.47
40	10.83	11.14	11.37	11.53	11.64	11.73	11.82	11.93	12.07
50	-	-	13.57	13.83	14.01	14.13	14.21	14.28	14.35
60	-	-	-	-	17.06	17.24	17.35	17.40	17.43

Mass flow in kg/h

10	128	157	191	230	276	-	-	-	-
20	124	155	189	228	274	327	387	-	-
30	120	150	184	224	270	323	383	451	527
40	113	143	177	217	263	316	376	444	520
50	-	-	167	207	252	305	365	433	509
60	-	-	-	-	238	290	350	418	493

Coefficient of performance (C.O.P.)

10	3.29	4.00	4.84	5.81	6.92	-	-	-	-
20	2.26	2.81	3.45	4.19	5.04	6.00	7.08	-	-
30	1.51	1.92	2.39	2.94	3.58	4.30	5.12	6.04	7.07
40	0.97	1.26	1.59	1.99	2.44	2.97	3.58	4.27	5.04
50	-	-	1.01	1.28	1.59	1.96	2.39	2.89	3.46
60	-	-	-	-	0.96	1.21	1.50	1.84	2.25

Nominal performance at to = -10 °C, tc = 45 °C

Cooling capacity	7 552	W
Power input	3 806	W
Current consumption	12.75	A
Mass flow	258	kg/h
C.O.P.	1.98	

Pressure switch settings

Maximum HP switch setting	29.7	bar(g)
Minimum LP switch setting	1.4	bar(g)
LP pump down setting	2	bar(g)

Sound power data

Sound power level		dB(A)
With acoustic hood		dB(A)

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

Rating conditions : Superheat = 10 K , Subcooling = 0 K

Tolerance according EN12900

Performance data at 60 Hz, EN 12900 rating conditions, Suction temp. = 20 °C
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Cond. temp. in °C (tc)	Evaporating temperature in °C (to)								
	-30	-25	-20	-15	-10	-5	0	5	10

Cooling capacity in W

10	6 272	7 819	9 708	11 977	14 664	-	-	-	-
20	5 656	7 112	8 865	10 955	13 421	16 302	19 636	-	-
30	-	6 388	7 971	9 849	12 059	14 640	17 633	21 075	25 004
40	-	-	7 036	8 667	10 587	12 836	15 453	18 476	21 946
50	-	-	-	-	9 016	10 898	13 105	15 677	18 652
60	-	-	-	-	-	8 837	10 601	12 687	15 136

Power input in W

10	1 927	1 985	2 041	2 124	2 263	-	-	-	-
20	2 380	2 478	2 536	2 584	2 651	2 766	2 956	-	-
30	-	3 057	3 166	3 228	3 272	3 326	3 420	3 582	3 841
40	-	-	3 889	4 013	4 083	4 126	4 171	4 247	4 384
50	-	-	-	-	5 042	5 122	5 167	5 207	5 270
60	-	-	-	-	-	6 273	6 368	6 419	6 457

Current consumption in A

10	7.71	7.60	7.62	7.79	8.15	-	-	-	-
20	8.44	8.45	8.47	8.55	8.72	9.02	9.47	-	-
30	-	9.63	9.83	9.97	10.10	10.25	10.46	10.75	11.18
40	-	-	11.46	11.82	12.06	12.22	12.34	12.44	12.57
50	-	-	-	-	14.38	14.71	14.89	14.95	14.93
60	-	-	-	-	-	17.49	17.88	18.05	18.04

Mass flow in kg/h

10	126	160	199	246	303	-	-	-	-
20	124	158	197	244	301	369	449	-	-
30	-	155	194	241	297	364	443	537	647
40	-	-	190	236	291	357	435	528	636
50	-	-	-	-	283	347	424	515	622
60	-	-	-	-	-	336	411	500	604

Coefficient of performance (C.O.P.)

10	3.26	3.94	4.76	5.64	6.48	-	-	-	-
20	2.38	2.87	3.50	4.24	5.06	5.89	6.64	-	-
30	-	2.09	2.52	3.05	3.69	4.40	5.16	5.88	6.51
40	-	-	1.81	2.16	2.59	3.11	3.71	4.35	5.01
50	-	-	-	-	1.79	2.13	2.54	3.01	3.54
60	-	-	-	-	-	1.41	1.66	1.98	2.34

Nominal performance at to = -10 °C, tc = 45 °C

Cooling capacity	9 813	W
Power input	4 546	W
Current consumption	13.19	A
Mass flow	287	kg/h
C.O.P.	2.16	

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

Rating conditions : Suction gas temp. = 20 °C , Subcooling = 0 K

Pressure switch settings

Maximum HP switch setting	29.7	bar(g)
Minimum LP switch setting	1.4	bar(g)
LP pump down setting	2	bar(g)

Sound power data

Sound power level		dB(A)
With acoustic hood		dB(A)

Tolerance according EN12900

Performance data at 60 Hz, EN 12900 rating conditions, Superheat = 10 K
R452A

Cond. temp. in °C (tc)	Evaporating temperature in °C (to)								
	-30	-25	-20	-15	-10	-5	0	5	10

Cooling capacity in W

10	6 069	7 612	9 505	11 791	14 510	-	-	-	-
20	5 368	6 807	8 555	10 655	13 150	16 081	19 485	-	-
30	4 684	5 985	7 553	9 434	11 672	14 309	17 388	20 944	25 004
40	4 021	5 152	6 509	8 138	10 084	12 394	15 114	18 285	21 946
50	-	-	5 428	6 774	8 397	10 346	12 672	15 425	18 652
60	-	-	-	-	6 608	8 166	10 066	12 369	15 136

Power input in W

10	1 927	1 985	2 041	2 124	2 263	-	-	-	-
20	2 380	2 478	2 536	2 584	2 651	2 766	2 956	-	-
30	2 871	3 057	3 166	3 228	3 272	3 326	3 420	3 582	3 841
40	3 357	3 680	3 889	4 013	4 083	4 126	4 171	4 247	4 384
50	-	-	4 662	4 898	5 042	5 122	5 167	5 207	5 270
60	-	-	-	-	6 107	6 273	6 368	6 419	6 457

Current consumption in A

10	7.71	7.60	7.62	7.79	8.15	-	-	-	-
20	8.44	8.45	8.47	8.55	8.72	9.02	9.47	-	-
30	9.36	9.63	9.83	9.97	10.10	10.25	10.46	10.75	11.18
40	10.25	10.95	11.46	11.82	12.06	12.22	12.34	12.44	12.57
50	-	-	13.14	13.87	14.38	14.71	14.89	14.95	14.93
60	-	-	-	-	16.84	17.49	17.88	18.05	18.04

Mass flow in kg/h

10	150	186	228	277	334	-	-	-	-
20	148	184	226	274	331	397	473	-	-
30	145	181	222	270	327	392	467	552	647
40	143	178	218	265	320	384	458	542	636
50	-	-	213	258	312	374	447	529	622
60	-	-	-	-	302	362	433	514	604

Coefficient of performance (C.O.P.)

10	3.15	3.83	4.66	5.55	6.41	-	-	-	-
20	2.26	2.75	3.37	4.12	4.96	5.81	6.59	-	-
30	1.63	1.96	2.39	2.92	3.57	4.30	5.08	5.85	6.51
40	1.20	1.40	1.67	2.03	2.47	3.00	3.62	4.31	5.01
50	-	-	1.16	1.38	1.67	2.02	2.45	2.96	3.54
60	-	-	-	-	1.08	1.30	1.58	1.93	2.34

Nominal performance at to = -10 °C, tc = 45 °C

Cooling capacity	9 253	W
Power input	4 546	W
Current consumption	13.19	A
Mass flow	316	kg/h
C.O.P.	2.04	

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

Rating conditions : Superheat = 10 K , Subcooling = 0 K

Pressure switch settings

Maximum HP switch setting	29.7	bar(g)
Minimum LP switch setting	1.4	bar(g)
LP pump down setting	2	bar(g)

Sound power data

Sound power level		dB(A)
With acoustic hood		dB(A)

Tolerance according EN12900