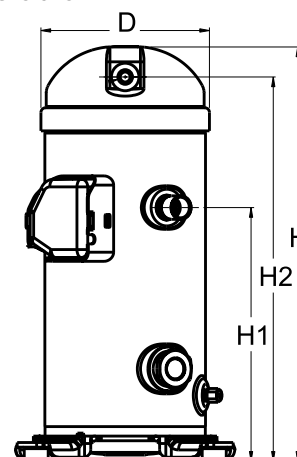


General Characteristics

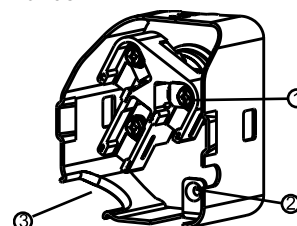
Model number (on compressor nameplate)	MLZ045T2LC9A	MLZ045T2LC9A
Code number for Singlepack*	121U8679	121L8679
Code number for Industrial pack**	121U8678	121L8678
Drawing number	0XR6025B-2	0XR6025B-2
Suction and discharge connections	Brazed	Brazed
Suction connection	7/8" ODF	7/8" ODF
Discharge connection	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	98.57 cm ³ /rev	
Displacement @ Nominal speed	17.1 m ³ /h @ 2900 rpm - 20.7 m ³ /h @ 3500 rpm	
Net weight	41 kg	
Oil charge	1.57 litre, POE --	
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,R407A,R407F,R448A,R449A,R452A,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	0.46 Ω
Winding resistance between phases 1-3 +/- 7% at 25°C	0.48 Ω
Winding resistance between phases 2-3 +/- 7% at 25°C	0.477 Ω
Rated Load Amps (RLA)	19.2 A
Maximum Continuous Current (MCC)	30 A
Locked Rotor Amps (LRA)	170 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.

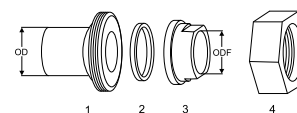
Rotolock valve, V05 (1-1/4" Rotolock, 7/8" ODF)	8168030
Gasket, 1-1/4"	8156131

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.

POE lubricant, 215PZ(PL46HB), 1 litre can	120Z0648
---	----------

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	120Z5084
Discharge thermostat kit	7750009
IP54 upgrade kit	118U0057

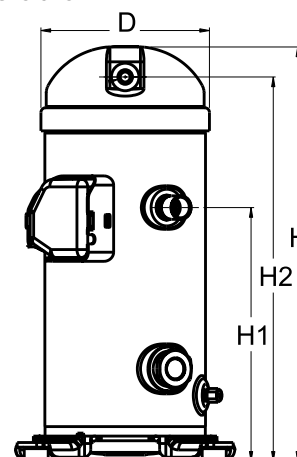
Spare parts

Code no.

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

General Characteristics

Model number (on compressor nameplate)	MLZ045T2LC9	MLZ045T2LC9
Code number for Singlepack*	121U8048	120U8048
Code number for Industrial pack**	121U8047	120U8047
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	98.57 cm ³ /rev	
Displacement @ Nominal speed	17.1 m ³ /h @ 2900 rpm - 20.7 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

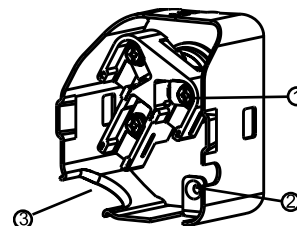
H1=280 mm

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	0.46 Ω
Winding resistance between phases 1-3 +/- 7% at 25°C	0.48 Ω
Winding resistance between phases 2-3 +/- 7% at 25°C	0.477 Ω
Rated Load Amps (RLA)	19.2 A
Maximum Continuous Current (MCC)	30 A
Locked Rotor Amps (LRA)	170 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

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
--	----------

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.

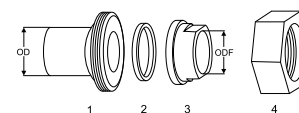
Acoustic hood	120Z5044
Discharge thermostat kit	7750009
IP54 upgrade kit	118U0057

Spare parts

Code no.

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

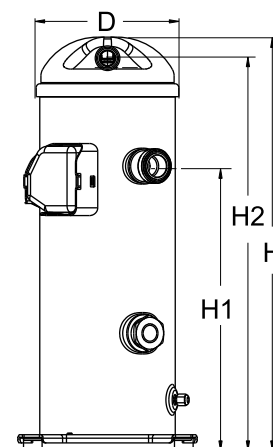
Solder sleeve adapter set



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

General Characteristics

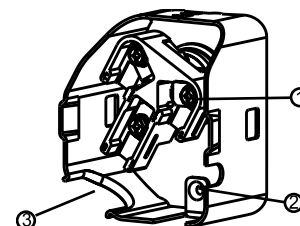
Model number (on compressor nameplate)		MLZ045T2LQ9
Code number for Singlepack*		121U8601
Code number for Industrial pack**		121U8600
Drawing number		0XR6298B-2
Suction and discharge connections		Rotolock
Suction connection		1-1/4 " Rotolock
Discharge connection		1 " Rotolock
Suction connection with supplied sleeve		7/8 " -
Discharge connection with supplied sleeve	- "	1/2 " -
Oil sight glass		Threaded
Oil equalisation connection		None
Oil drain connection		None
LP gauge port		None
IPR valve		None
Swept volume		98.57 cm ³ /rev
Displacement @ Nominal speed		17.1 m ³ /h @ 2900 rpm - 20.7 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=454.9 mm
H1=280 mm
H2=422.2 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	0.46 Ω
Winding resistance between phases 1-3 +/- 7% at 25°C	0.48 Ω
Winding resistance between phases 2-3 +/- 7% at 25°C	0.477 Ω
Rated Load Amps (RLA)	19.2 A
Maximum Continuous Current (MCC)	30 A
Locked Rotor Amps (LRA)	170 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

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.

Rotolock valve, V01 (1" Rotolock, 3/8" ODF)	8168027
Rotolock valve, V06 (1" Rotolock, 1/2" ODF)	8168031
Gasket, 1"	8156130

Rotolock accessories, sets
Code no.

Teflon seals, sleeves, nuts for discharge and suction (1" and 1 1/4")	120Z5074
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
--	----------

Crankcase heaters
Code no.

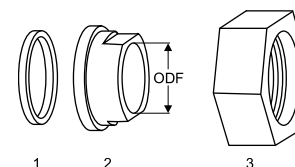
Belt type crankcase heater, 70 W, 230 V, UL	120Z5011
Belt type crankcase heater, 65 W, 230 V, CE mark, UL	120Z0059

Miscellaneous accessories
Code no.

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

Spare parts
Code no.

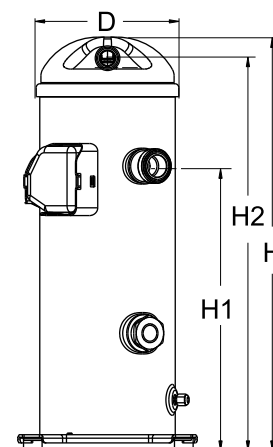
Mounting kit for 1 scroll compressor including 4 grommets, 4 sleeves, 4 bolts, 4 washers	120Z5005
Terminal box cover	120Z5018

Gaskets, sleeves and nuts


- 1: Gasket
- 2: Solder sleeve
- 3: Rotolock nut

General Characteristics

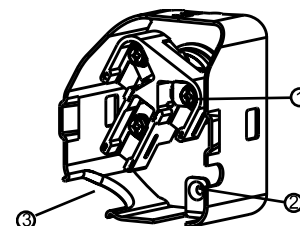
Model number (on compressor nameplate)	MLZ045T2LC9A	MLZ045T2LQ9A
Code number for Singlepack*	120U8679	121U8797
Code number for Industrial pack**	120U8678	121U8796
Drawing number	0XR6025B-2	0XR6298B-2
Suction and discharge connections	Brazed	Rotolock
Suction connection	7/8" ODF	1-1/4" Rotolock
Discharge connection	1/2" ODF	1" Rotolock
Suction connection with supplied sleeve		7/8" -
Discharge connection with supplied sleeve	- "	1/2" -
Oil sight glass	Threaded	Threaded
Oil equalisation connection	None	None
Oil drain connection	1/4" flare	None
LP gauge port	None	None
IPR valve	32 bar	None
Swept volume	98.57 cm ³ /rev	
Displacement @ Nominal speed	17.1 m ³ /h @ 2900 rpm - 20.7 m ³ /h @ 3500 rpm	
Net weight	41 kg	
Oil charge	1.57 litre, POE - -	
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,R407A,R407F,R448A,R449A,R452A,R22	

Dimensions


D=184 mm
H=454.9 mm
H1=280 mm
H2=422.2 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	0.46 Ω
Winding resistance between phases 1-3 +/- 7% at 25°C	0.48 Ω
Winding resistance between phases 2-3 +/- 7% at 25°C	0.477 Ω
Rated Load Amps (RLA)	19.2 A
Maximum Continuous Current (MCC)	30 A
Locked Rotor Amps (LRA)	170 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.

Rotolock valve, V01 (1" Rotolock, 3/8" ODF)	8168027
Rotolock valve, V06 (1" Rotolock, 1/2" ODF)	8168031
Gasket, 1"	8156130

Rotolock accessories, sets

Code no.

Teflon seals, sleeves, nuts for discharge and suction (1" and 1"1/4)	120Z5074
Gasket set, 1", 1-1/4", 1-3/4", OSG gaskets black & white	8156009

Oil / lubricants

Code no.

POE lubricant, 215PZ(PL46HB), 1 litre can	120Z0648
---	----------

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.

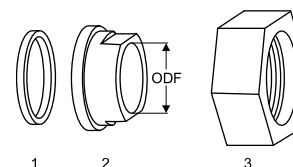
Acoustic hood	120Z5084
Discharge thermostat kit	7750009
IP54 upgrade kit	118U0057

Spare parts

Code no.

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

Gaskets, sleeves and nuts



- 1: Gasket
- 2: Solder sleeve
- 3: Rotolock nut

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	7 679	9 790	12 315	15 211	-	-	-	-	-
20	7 585	9 610	12 046	14 851	17 982	-	-	-	-
30	7 092	8 915	11 138	13 724	16 632	19 819	23 234	-	-
40	6 310	7 942	9 967	12 347	15 046	18 021	21 227	-	-
50	-	6 785	8 623	10 809	13 310	16 086	19 097	-	-
60	-	-	-	9 199	11 512	14 102	16 928	-	-
68	-	-	-	-	-	12 535	15 225	-	-

Power input in W

16	2 154	2 136	2 107	2 086	-	-	-	-	-
20	2 436	2 431	2 411	2 394	2 396	-	-	-	-
30	3 046	3 078	3 083	3 078	3 080	3 106	3 173	-	-
40	3 646	3 720	3 755	3 767	3 774	3 793	3 840	-	-
50	-	4 515	4 584	4 618	4 635	4 651	4 683	-	-
60	-	-	-	5 787	5 818	5 837	5 859	-	-
68	-	-	-	-	-	7 126	7 143	-	-

Current consumption in A

16	8.29	8.22	8.11	8.03	-	-	-	-	-
20	9.38	9.36	9.28	9.21	9.22	-	-	-	-
30	11.72	11.85	11.87	11.85	11.85	11.95	12.21	-	-
40	14.03	14.32	14.45	14.50	14.53	14.60	14.78	-	-
50	-	17.38	17.64	17.78	17.84	17.90	18.03	-	-
60	-	-	-	22.27	22.40	22.47	22.55	-	-
68	-	-	-	-	-	27.43	27.49	-	-

Mass flow in kg/h

16	141	182	231	287	-	-	-	-	-
20	144	184	231	286	346	-	-	-	-
30	148	185	230	282	340	401	466	-	-
40	144	180	224	275	332	393	457	-	-
50	-	165	210	263	321	383	448	-	-
60	-	-	-	242	303	368	436	-	-
68	-	-	-	-	-	351	422	-	-

Coefficient of performance (C.O.P.)

16	3.56	4.58	5.84	7.29	-	-	-	-	-
20	3.11	3.95	5.00	6.20	7.51	-	-	-	-
30	2.33	2.90	3.61	4.46	5.40	6.38	7.32	-	-
40	1.73	2.13	2.65	3.28	3.99	4.75	5.53	-	-
50	-	1.50	1.88	2.34	2.87	3.46	4.08	-	-
60	-	-	-	1.59	1.98	2.42	2.89	-	-
68	-	-	-	-	-	1.76	2.13	-	-

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

Cooling capacity	9 311	W
Power input	4 140	W
Current consumption	15.94	A
Mass flow	218	kg/h
C.O.P.	2.25	

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	71	dB(A)
With acoustic hood	63	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	7 492	9 581	12 090	14 988	-	-	-	-	-
20	7 419	9 426	11 848	14 653	17 807	-	-	-	-
30	6 990	8 798	11 010	13 593	16 514	19 739	23 234	-	-
40	-	7 898	9 912	12 286	14 985	17 977	21 227	-	-
50	-	-	-	10 816	13 307	16 078	19 097	-	-
60	-	-	-	-	11 565	14 129	16 928	-	-
68	-	-	-	-	-	-	15 225	-	-

Power input in W

16	2 154	2 136	2 107	2 086	-	-	-	-	-
20	2 436	2 431	2 411	2 394	2 396	-	-	-	-
30	3 046	3 078	3 083	3 078	3 080	3 106	3 173	-	-
40	-	3 720	3 755	3 767	3 774	3 793	3 840	-	-
50	-	-	-	4 618	4 635	4 651	4 683	-	-
60	-	-	-	-	5 818	5 837	5 859	-	-
68	-	-	-	-	-	-	7 143	-	-

Current consumption in A

16	8.29	8.22	8.11	8.03	-	-	-	-	-
20	9.38	9.36	9.28	9.21	9.22	-	-	-	-
30	11.72	11.85	11.87	11.85	11.85	11.95	12.21	-	-
40	-	14.32	14.45	14.50	14.53	14.60	14.78	-	-
50	-	-	-	17.78	17.84	17.90	18.03	-	-
60	-	-	-	-	22.40	22.47	22.55	-	-
68	-	-	-	-	-	-	27.49	-	-

Mass flow in kg/h

16	124	163	212	268	-	-	-	-	-
20	127	165	212	267	330	-	-	-	-
30	131	166	210	263	324	392	466	-	-
40	-	161	205	257	317	384	457	-	-
50	-	-	-	245	306	374	448	-	-
60	-	-	-	-	289	359	436	-	-
68	-	-	-	-	-	-	422	-	-

Coefficient of performance (C.O.P.)

16	3.48	4.49	5.74	7.18	-	-	-	-	-
20	3.05	3.88	4.91	6.12	7.43	-	-	-	-
30	2.29	2.86	3.57	4.42	5.36	6.36	7.32	-	-
40	-	2.12	2.64	3.26	3.97	4.74	5.53	-	-
50	-	-	-	2.34	2.87	3.46	4.08	-	-
60	-	-	-	-	1.99	2.42	2.89	-	-
68	-	-	-	-	-	-	2.13	-	-

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

Cooling capacity	9 292	W
Power input	4 140	W
Current consumption	15.94	A
Mass flow	200	kg/h
C.O.P.	2.24	

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	71	dB(A)
With acoustic hood	63	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	10 205	12 674	15 572	18 869	-	-	-	-	-
20	9 724	12 141	14 982	18 222	21 830	-	-	-	-
30	8 708	10 966	13 640	16 706	20 137	23 902	27 962	-	-
40	7 829	9 891	12 359	15 213	18 428	21 977	25 826	-	-
50	-	8 755	10 979	13 583	16 545	19 842	23 443	-	-
60	-	-	-	11 663	14 333	17 339	20 655	-	-
68	-	-	-	-	-	14 968	18 028	-	-

Power input in W

16	2 340	2 432	2 539	2 668	-	-	-	-	-
20	2 693	2 774	2 864	2 971	3 103	-	-	-	-
30	3 496	3 569	3 637	3 708	3 789	3 888	4 014	-	-
40	4 283	4 375	4 448	4 509	4 567	4 629	4 703	-	-
50	-	5 312	5 417	5 497	5 559	5 611	5 661	-	-
60	-	-	-	6 793	6 886	6 955	7 007	-	-
68	-	-	-	-	-	8 372	8 446	-	-

Current consumption in A

16	7.34	7.63	7.97	8.37	-	-	-	-	-
20	8.45	8.70	8.99	9.32	9.74	-	-	-	-
30	10.97	11.20	11.41	11.63	11.89	12.20	12.59	-	-
40	13.44	13.73	13.96	14.15	14.33	14.53	14.76	-	-
50	-	16.67	17.00	17.25	17.44	17.61	17.76	-	-
60	-	-	-	21.31	21.61	21.82	21.99	-	-
68	-	-	-	-	-	26.27	26.50	-	-

Mass flow in kg/h

16	196	241	295	355	-	-	-	-	-
20	190	235	289	349	416	-	-	-	-
30	183	228	281	342	409	482	558	-	-
40	180	225	278	339	406	479	556	-	-
50	-	216	269	330	398	472	550	-	-
60	-	-	-	309	378	453	532	-	-
68	-	-	-	-	-	423	504	-	-

Coefficient of performance (C.O.P.)

16	4.36	5.21	6.13	7.07	-	-	-	-	-
20	3.61	4.38	5.23	6.13	7.03	-	-	-	-
30	2.49	3.07	3.75	4.51	5.31	6.15	6.97	-	-
40	1.83	2.26	2.78	3.37	4.03	4.75	5.49	-	-
50	-	1.65	2.03	2.47	2.98	3.54	4.14	-	-
60	-	-	-	1.72	2.08	2.49	2.95	-	-
68	-	-	-	-	-	1.79	2.13	-	-

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

Cooling capacity	11 691	W
Power input	4 905	W
Current consumption	15.39	A
Mass flow	275	kg/h
C.O.P.	2.38	

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	9 956	12 403	15 288	18 592	-	-	-	-	-
20	9 512	11 907	14 736	17 978	21 617	-	-	-	-
30	8 582	10 823	13 484	16 547	19 993	23 805	27 962	-	-
40	-	9 835	12 292	15 137	18 354	21 923	25 826	-	-
50	-	-	-	13 592	16 542	19 831	23 443	-	-
60	-	-	-	-	14 400	17 373	20 655	-	-
68	-	-	-	-	-	-	18 028	-	-

Power input in W

16	2 340	2 432	2 539	2 668	-	-	-	-	-
20	2 693	2 774	2 864	2 971	3 103	-	-	-	-
30	3 496	3 569	3 637	3 708	3 789	3 888	4 014	-	-
40	-	4 375	4 448	4 509	4 567	4 629	4 703	-	-
50	-	-	-	5 497	5 559	5 611	5 661	-	-
60	-	-	-	-	6 886	6 955	7 007	-	-
68	-	-	-	-	-	-	8 446	-	-

Current consumption in A

16	7.34	7.63	7.97	8.37	-	-	-	-	-
20	8.45	8.70	8.99	9.32	9.74	-	-	-	-
30	10.97	11.20	11.41	11.63	11.89	12.20	12.59	-	-
40	-	13.73	13.96	14.15	14.33	14.53	14.76	-	-
50	-	-	-	17.25	17.44	17.61	17.76	-	-
60	-	-	-	-	21.61	21.82	21.99	-	-
68	-	-	-	-	-	-	26.50	-	-

Mass flow in kg/h

16	172	216	269	331	-	-	-	-	-
20	167	211	264	326	397	-	-	-	-
30	161	205	258	319	390	470	558	-	-
40	-	201	254	316	387	467	556	-	-
50	-	-	-	308	380	460	550	-	-
60	-	-	-	-	360	442	532	-	-
68	-	-	-	-	-	-	504	-	-

Coefficient of performance (C.O.P.)

16	4.25	5.10	6.02	6.97	-	-	-	-	-
20	3.53	4.29	5.14	6.05	6.97	-	-	-	-
30	2.45	3.03	3.71	4.46	5.28	6.12	6.97	-	-
40	-	2.25	2.76	3.36	4.02	4.74	5.49	-	-
50	-	-	-	2.47	2.98	3.53	4.14	-	-
60	-	-	-	-	2.09	2.50	2.95	-	-
68	-	-	-	-	-	-	2.13	-	-

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

Cooling capacity	11 668	W
Power input	4 905	W
Current consumption	15.39	A
Mass flow	251	kg/h
C.O.P.	2.38	

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	6 036	7 604	9 480	11 663	14 151	-	-	-	-
30	5 535	7 015	8 800	10 889	13 282	15 977	-	-	-
40	4 904	6 239	7 877	9 816	12 055	14 594	17 433	-	-
50	-	5 436	6 889	8 640	10 689	13 035	15 677	-	-
60	-	-	5 855	7 381	9 202	11 317	13 725	-	-
70	-	-	-	6 056	7 611	9 458	11 595	-	-
73	-	-	-	5 648	7 117	8 876	10 923	-	-

Power input in W

22	1 610	1 639	1 656	1 664	1 666	-	-	-	-
30	1 926	1 962	1 986	2 001	2 011	2 020	-	-	-
40	2 383	2 427	2 461	2 486	2 507	2 528	2 551	-	-
50	-	2 989	3 032	3 069	3 101	3 134	3 170	-	-
60	-	-	3 727	3 776	3 820	3 866	3 915	-	-
70	-	-	-	4 634	4 692	4 751	4 815	-	-
73	-	-	-	4 925	4 987	5 051	5 118	-	-

Current consumption in A

22	6.20	6.31	6.37	6.40	6.41	-	-	-	-
30	7.41	7.55	7.64	7.70	7.74	7.77	-	-	-
40	9.17	9.34	9.47	9.57	9.65	9.73	9.82	-	-
50	-	11.50	11.67	11.81	11.94	12.06	12.20	-	-
60	-	-	14.35	14.53	14.71	14.88	15.07	-	-
70	-	-	-	17.84	18.06	18.29	18.53	-	-
73	-	-	-	18.96	19.20	19.44	19.70	-	-

Mass flow in kg/h

22	130	160	196	237	283	-	-	-	-
30	128	159	195	237	283	335	-	-	-
40	125	156	193	234	282	334	392	-	-
50	-	152	188	230	278	331	390	-	-
60	-	-	181	223	271	324	384	-	-
70	-	-	-	214	261	315	374	-	-
73	-	-	-	210	258	311	370	-	-

Coefficient of performance (C.O.P.)

22	3.75	4.64	5.72	7.01	8.50	-	-	-	-
30	2.87	3.58	4.43	5.44	6.60	7.91	-	-	-
40	2.06	2.57	3.20	3.95	4.81	5.77	6.83	-	-
50	-	1.82	2.27	2.82	3.45	4.16	4.95	-	-
60	-	-	1.57	1.95	2.41	2.93	3.51	-	-
70	-	-	-	1.31	1.62	1.99	2.41	-	-
73	-	-	-	1.15	1.43	1.76	2.13	-	-

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

Cooling capacity	5 840	W
Power input	2 694	W
Current consumption	10.37	A
Mass flow	154	kg/h
C.O.P.	2.17	

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	71	dB(A)
With acoustic hood	63	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	6 132	7 693	9 554	11 713	14 174	-	-	-	-
30	-	7 145	8 913	10 974	13 327	15 977	-	-	-
40	-	-	8 039	9 942	12 127	14 594	17 351	-	-
50	-	-	7 099	8 808	10 787	13 035	15 552	-	-
60	-	-	-	7 587	9 325	11 317	-	-	-
70	-	-	-	-	7 758	9 458	-	-	-
73	-	-	-	-	7 270	8 876	-	-	-

Power input in W

22	1 610	1 639	1 656	1 664	1 666	-	-	-	-
30	-	1 962	1 986	2 001	2 011	2 020	-	-	-
40	-	-	2 461	2 486	2 507	2 528	2 551	-	-
50	-	-	3 032	3 069	3 101	3 134	3 170	-	-
60	-	-	-	3 776	3 820	3 866	-	-	-
70	-	-	-	-	4 692	4 751	-	-	-
73	-	-	-	-	4 987	5 051	-	-	-

Current consumption in A

22	6.20	6.31	6.37	6.40	6.41	-	-	-	-
30	-	7.55	7.64	7.70	7.74	7.77	-	-	-
40	-	-	9.47	9.57	9.65	9.73	9.82	-	-
50	-	-	11.67	11.81	11.94	12.06	12.20	-	-
60	-	-	-	14.53	14.71	14.88	-	-	-
70	-	-	-	-	18.06	18.29	-	-	-
73	-	-	-	-	19.20	19.44	-	-	-

Mass flow in kg/h

22	117	147	184	226	276	-	-	-	-
30	-	146	183	226	276	335	-	-	-
40	-	-	180	224	275	334	403	-	-
50	-	-	176	220	271	331	400	-	-
60	-	-	-	213	265	324	-	-	-
70	-	-	-	-	255	315	-	-	-
73	-	-	-	-	252	311	-	-	-

Coefficient of performance (C.O.P.)

22	3.81	4.69	5.77	7.04	8.51	-	-	-	-
30	-	3.64	4.49	5.48	6.63	7.91	-	-	-
40	-	-	3.27	4.00	4.84	5.77	6.80	-	-
50	-	-	2.34	2.87	3.48	4.16	4.91	-	-
60	-	-	-	2.01	2.44	2.93	-	-	-
70	-	-	-	-	1.65	1.99	-	-	-
73	-	-	-	-	1.46	1.76	-	-	-

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	71	dB(A)
With acoustic hood	63	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	7 365	9 293	11 582	14 244	17 287	-	-	-	-
30	6 802	8 636	10 817	13 356	16 263	19 548	-	-	-
40	5 951	7 640	9 659	12 018	14 728	17 799	21 241	-	-
50	-	6 534	8 361	10 511	12 994	15 821	19 001	-	-
60	-	-	7 013	8 924	11 151	13 704	16 593	-	-
70	-	-	-	7 348	9 289	11 538	14 107	-	-
73	-	-	-	6 891	8 740	10 893	13 359	-	-

Power input in W

22	2 044	2 087	2 127	2 175	2 239	-	-	-	-
30	2 399	2 447	2 486	2 527	2 578	2 649	-	-	-
40	2 938	3 001	3 047	3 086	3 128	3 183	3 259	-	-
50	-	3 680	3 741	3 788	3 830	3 876	3 936	-	-
60	-	-	4 581	4 643	4 693	4 740	4 793	-	-
70	-	-	-	5 663	5 730	5 785	5 839	-	-
73	-	-	-	6 003	6 076	6 136	6 192	-	-

Current consumption in A

22	6.41	6.55	6.68	6.82	7.03	-	-	-	-
30	7.53	7.68	7.80	7.93	8.09	8.31	-	-	-
40	9.22	9.42	9.56	9.68	9.82	9.99	10.23	-	-
50	-	11.55	11.74	11.89	12.02	12.16	12.35	-	-
60	-	-	14.37	14.57	14.73	14.87	15.04	-	-
70	-	-	-	17.77	17.98	18.15	18.32	-	-
73	-	-	-	18.84	19.06	19.25	19.43	-	-

Mass flow in kg/h

22	159	195	239	290	347	-	-	-	-
30	159	195	239	290	348	411	-	-	-
40	156	192	235	287	345	409	479	-	-
50	-	186	229	280	338	403	474	-	-
60	-	-	220	271	329	394	466	-	-
70	-	-	-	260	317	383	455	-	-
73	-	-	-	256	314	379	451	-	-

Coefficient of performance (C.O.P.)

22	3.60	4.45	5.44	6.55	7.72	-	-	-	-
30	2.84	3.53	4.35	5.29	6.31	7.38	-	-	-
40	2.03	2.55	3.17	3.89	4.71	5.59	6.52	-	-
50	-	1.78	2.23	2.77	3.39	4.08	4.83	-	-
60	-	-	1.53	1.92	2.38	2.89	3.46	-	-
70	-	-	-	1.30	1.62	1.99	2.42	-	-
73	-	-	-	1.15	1.44	1.78	2.16	-	-

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

Cooling capacity	7 095	W
Power input	3 324	W
Current consumption	10.43	A
Mass flow	189	kg/h
C.O.P.	2.13	

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	7 482	9 401	11 672	14 305	17 315	-	-	-	-
30	-	8 796	10 956	13 460	16 318	19 548	-	-	-
40	-	-	9 858	12 173	14 816	17 799	21 142	-	-
50	-	-	8 615	10 715	13 114	15 821	18 850	-	-
60	-	-	-	9 173	11 301	13 704	-	-	-
70	-	-	-	-	9 468	11 538	-	-	-
73	-	-	-	-	8 929	10 893	-	-	-

Power input in W

22	2 044	2 087	2 127	2 175	2 239	-	-	-	-
30	-	2 447	2 486	2 527	2 578	2 649	-	-	-
40	-	-	3 047	3 086	3 128	3 183	3 259	-	-
50	-	-	3 741	3 788	3 830	3 876	3 936	-	-
60	-	-	-	4 643	4 693	4 740	-	-	-
70	-	-	-	-	5 730	5 785	-	-	-
73	-	-	-	-	6 076	6 136	-	-	-

Current consumption in A

22	6.41	6.55	6.68	6.82	7.03	-	-	-	-
30	-	7.68	7.80	7.93	8.09	8.31	-	-	-
40	-	-	9.56	9.68	9.82	9.99	10.23	-	-
50	-	-	11.74	11.89	12.02	12.16	12.35	-	-
60	-	-	-	14.57	14.73	14.87	-	-	-
70	-	-	-	-	17.98	18.15	-	-	-
73	-	-	-	-	19.06	19.25	-	-	-

Mass flow in kg/h

22	143	179	224	277	339	-	-	-	-
30	-	179	224	277	340	411	-	-	-
40	-	-	220	274	337	409	491	-	-
50	-	-	214	267	330	403	487	-	-
60	-	-	-	258	321	394	-	-	-
70	-	-	-	-	310	383	-	-	-
73	-	-	-	-	306	379	-	-	-

Coefficient of performance (C.O.P.)

22	3.66	4.50	5.49	6.58	7.73	-	-	-	-
30	-	3.59	4.41	5.33	6.33	7.38	-	-	-
40	-	-	3.24	3.94	4.74	5.59	6.49	-	-
50	-	-	2.30	2.83	3.42	4.08	4.79	-	-
60	-	-	-	1.98	2.41	2.89	-	-	-
70	-	-	-	-	1.65	1.99	-	-	-
73	-	-	-	-	1.47	1.78	-	-	-

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	6 819	8 504	10 521	12 895	15 648	-	-	-	-
20	6 267	7 808	9 648	11 807	14 311	17 180	20 440	-	-
30	5 616	6 994	8 633	10 556	12 788	15 351	18 268	21 562	25 254
40	-	6 061	7 478	9 144	11 082	13 316	15 870	18 765	22 025
50	-	-	6 186	7 572	9 195	11 079	13 247	15 722	18 529
60	-	-	-	-	7 128	8 640	10 401	12 437	14 770

Power input in W

10	2 135	2 153	2 181	2 198	2 185	-	-	-	-
20	2 704	2 702	2 727	2 761	2 782	2 771	2 706	-	-
30	3 450	3 404	3 405	3 431	3 463	3 481	3 464	3 392	3 245
40	-	4 339	4 290	4 286	4 306	4 329	4 336	4 306	4 220
50	-	-	5 462	5 404	5 388	5 394	5 401	5 390	5 340
60	-	-	-	-	6 789	6 753	6 738	6 722	6 686

Current consumption in A

10	8.81	8.88	8.99	9.06	9.01	-	-	-	-
20	11.15	11.14	11.25	11.39	11.47	11.43	11.16	-	-
30	14.23	14.04	14.04	14.15	14.28	14.35	14.28	13.99	13.38
40	-	17.89	17.69	17.68	17.76	17.85	17.88	17.76	17.40
50	-	-	22.53	22.29	22.22	22.24	22.28	22.23	22.02
60	-	-	-	-	28.00	27.85	27.79	27.72	27.57

Mass flow in kg/h

10	126	167	212	262	321	-	-	-	-
20	131	171	215	265	323	391	472	-	-
30	131	170	213	262	319	387	467	561	672
40	-	165	207	255	312	378	457	550	660
50	-	-	198	245	300	365	443	535	644
60	-	-	-	-	284	348	425	516	624

Coefficient of performance (C.O.P.)

10	3.19	3.95	4.82	5.87	7.16	-	-	-	-
20	2.32	2.89	3.54	4.28	5.14	6.20	7.55	-	-
30	1.63	2.05	2.54	3.08	3.69	4.41	5.27	6.36	7.78
40	-	1.40	1.74	2.13	2.57	3.08	3.66	4.36	5.22
50	-	-	1.13	1.40	1.71	2.05	2.45	2.92	3.47
60	-	-	-	-	1.05	1.28	1.54	1.85	2.21

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

Cooling capacity	10 161	W
Power input	4 812	W
Current consumption	19.84	A
Mass flow	306	kg/h
C.O.P.	2.11	

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	71	dB(A)
With acoustic hood	63	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	6 553	8 230	10 252	12 647	15 439	-	-	-	-
20	5 893	7 415	9 250	11 424	13 965	16 899	20 245	-	-
30	5 137	6 483	8 106	10 038	12 307	14 941	17 965	21 400	25 254
40	4 290	5 438	6 830	8 496	10 468	12 779	15 458	18 533	22 025
50	-	-	5 427	6 804	8 456	10 419	12 728	15 420	18 529
60	-	-	-	-	6 273	7 860	9 774	12 060	14 770

Power input in W

10	2 135	2 153	2 181	2 198	2 185	-	-	-	-
20	2 704	2 702	2 727	2 761	2 782	2 771	2 706	-	-
30	3 450	3 404	3 405	3 431	3 463	3 481	3 464	3 392	3 245
40	4 451	4 339	4 290	4 286	4 306	4 329	4 336	4 306	4 220
50	-	-	5 462	5 404	5 388	5 394	5 401	5 390	5 340
60	-	-	-	-	6 789	6 753	6 738	6 722	6 686

Current consumption in A

10	8.81	8.88	8.99	9.06	9.01	-	-	-	-
20	11.15	11.14	11.25	11.39	11.47	11.43	11.16	-	-
30	14.23	14.04	14.04	14.15	14.28	14.35	14.28	13.99	13.38
40	18.36	17.89	17.69	17.68	17.76	17.85	17.88	17.76	17.40
50	-	-	22.53	22.29	22.22	22.24	22.28	22.23	22.02
60	-	-	-	-	28.00	27.85	27.79	27.72	27.57

Mass flow in kg/h

10	150	196	243	296	355	-	-	-	-
20	156	200	247	298	356	422	498	-	-
30	156	199	245	295	353	418	493	578	672
40	151	193	238	288	344	408	482	566	660
50	-	-	227	275	331	394	468	551	644
60	-	-	-	-	314	376	449	531	624

Coefficient of performance (C.O.P.)

10	3.07	3.82	4.70	5.75	7.07	-	-	-	-
20	2.18	2.74	3.39	4.14	5.02	6.10	7.48	-	-
30	1.49	1.90	2.38	2.93	3.55	4.29	5.19	6.31	7.78
40	0.96	1.25	1.59	1.98	2.43	2.95	3.56	4.30	5.22
50	-	-	0.99	1.26	1.57	1.93	2.36	2.86	3.47
60	-	-	-	-	0.92	1.16	1.45	1.79	2.21

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

Cooling capacity	9 483	W
Power input	4 812	W
Current consumption	19.84	A
Mass flow	338	kg/h
C.O.P.	1.97	

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	71	dB(A)
With acoustic hood	63	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	8 438	10 545	13 053	15 991	19 389	-	-	-	-
20	7 634	9 533	11 782	14 412	17 451	20 928	24 872	-	-
30	6 804	8 495	10 488	12 810	15 492	18 562	22 050	25 983	30 388
40	-	7 369	9 106	11 123	13 449	16 114	19 147	22 576	26 430
50	-	-	7 573	9 286	11 259	13 520	16 100	19 028	22 334
60	-	-	-	-	8 857	10 717	12 847	15 277	18 038

Power input in W

10	2 475	2 544	2 583	2 602	2 609	-	-	-	-
20	3 098	3 179	3 228	3 252	3 263	3 268	3 277	-	-
30	3 860	3 952	4 008	4 038	4 051	4 055	4 061	4 076	4 111
40	-	4 934	4 997	5 031	5 045	5 047	5 047	5 055	5 079
50	-	-	6 265	6 301	6 315	6 314	6 308	6 307	6 319
60	-	-	-	-	7 933	7 928	7 915	7 904	7 903

Current consumption in A

10	7.77	7.98	8.11	8.16	8.19	-	-	-	-
20	9.72	9.98	10.13	10.21	10.24	10.25	10.28	-	-
30	12.11	12.40	12.58	12.67	12.71	12.73	12.74	12.79	12.90
40	-	15.48	15.68	15.79	15.83	15.84	15.84	15.86	15.94
50	-	-	19.66	19.77	19.81	19.81	19.79	19.79	19.83
60	-	-	-	-	24.89	24.88	24.84	24.80	24.80

Mass flow in kg/h

10	149	202	261	327	402	-	-	-	-
20	158	207	262	324	395	478	575	-	-
30	162	208	259	318	387	468	563	673	802
40	-	203	252	310	378	457	551	661	790
50	-	-	241	298	365	444	539	649	779
60	-	-	-	-	348	429	525	637	768

Coefficient of performance (C.O.P.)

10	3.41	4.15	5.05	6.15	7.43	-	-	-	-
20	2.46	3.00	3.65	4.43	5.35	6.40	7.59	-	-
30	1.76	2.15	2.62	3.17	3.82	4.58	5.43	6.37	7.39
40	-	1.49	1.82	2.21	2.67	3.19	3.79	4.47	5.20
50	-	-	1.21	1.47	1.78	2.14	2.55	3.02	3.53
60	-	-	-	-	1.12	1.35	1.62	1.93	2.28

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

Cooling capacity	12 376	W
Power input	5 641	W
Current consumption	17.70	A
Mass flow	372	kg/h
C.O.P.	2.19	

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	8 108	10 205	12 719	15 683	19 130	-	-	-	-
20	7 179	9 053	11 296	13 944	17 030	20 585	24 636	-	-
30	6 223	7 874	9 848	12 181	14 909	18 066	21 684	25 787	30 388
40	5 182	6 611	8 316	10 334	12 704	15 464	18 651	22 298	26 430
50	-	-	6 643	8 344	10 354	12 715	15 470	18 663	22 334
60	-	-	-	-	7 794	9 750	12 072	14 815	18 038

Power input in W

10	2 475	2 544	2 583	2 602	2 609	-	-	-	-
20	3 098	3 179	3 228	3 252	3 263	3 268	3 277	-	-
30	3 860	3 952	4 008	4 038	4 051	4 055	4 061	4 076	4 111
40	4 832	4 934	4 997	5 031	5 045	5 047	5 047	5 055	5 079
50	-	-	6 265	6 301	6 315	6 314	6 308	6 307	6 319
60	-	-	-	-	7 933	7 928	7 915	7 904	7 903

Current consumption in A

10	7.77	7.98	8.11	8.16	8.19	-	-	-	-
20	9.72	9.98	10.13	10.21	10.24	10.25	10.28	-	-
30	12.11	12.40	12.58	12.67	12.71	12.73	12.74	12.79	12.90
40	15.16	15.48	15.68	15.79	15.83	15.84	15.84	15.86	15.94
50	-	-	19.66	19.77	19.81	19.81	19.79	19.79	19.83
60	-	-	-	-	24.89	24.88	24.84	24.80	24.80

Mass flow in kg/h

10	177	237	300	368	444	-	-	-	-
20	188	242	301	365	436	517	607	-	-
30	193	243	298	359	428	506	594	693	802
40	190	237	290	349	417	494	582	681	790
50	-	-	276	335	403	480	569	669	779
60	-	-	-	-	384	464	554	656	768

Coefficient of performance (C.O.P.)

10	3.28	4.01	4.92	6.03	7.33	-	-	-	-
20	2.32	2.85	3.50	4.29	5.22	6.30	7.52	-	-
30	1.61	1.99	2.46	3.02	3.68	4.45	5.34	6.33	7.39
40	1.07	1.34	1.66	2.05	2.52	3.06	3.70	4.41	5.20
50	-	-	1.06	1.32	1.64	2.01	2.45	2.96	3.53
60	-	-	-	-	0.98	1.23	1.53	1.87	2.28

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

Cooling capacity	11 551	W
Power input	5 641	W
Current consumption	17.70	A
Mass flow	410	kg/h
C.O.P.	2.05	

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

Cooling capacity in W

30	-	5 517	7 104	9 014	11 294	13 990	17 151	20 824	25 055
35	-	5 090	6 599	8 399	10 537	13 059	16 012	19 444	23 401
40	-	4 601	6 037	7 732	9 733	12 085	14 836	18 033	21 721
45	-	-	5 427	7 023	8 892	11 080	13 634	16 600	20 025
50	-	-	-	6 281	8 023	10 052	12 414	15 155	18 322
55	-	-	-	-	7 137	9 011	11 186	13 707	16 621
60	-	-	-	-	-	7 967	9 959	12 265	14 930
65	-	-	-	-	-	-	8 741	10 835	13 256

Power input in W

30	-	3 490	3 478	3 467	3 450	3 423	3 380	3 315	3 223
35	-	3 850	3 836	3 823	3 807	3 781	3 740	3 679	3 593
40	-	4 214	4 199	4 187	4 172	4 148	4 111	4 055	3 975
45	-	-	4 575	4 564	4 551	4 532	4 500	4 450	4 377
50	-	-	-	4 962	4 952	4 938	4 912	4 869	4 804
55	-	-	-	-	5 382	5 373	5 354	5 320	5 265
60	-	-	-	-	-	5 844	5 833	5 809	5 764
65	-	-	-	-	-	-	6 356	6 342	6 310

Current consumption in A

30	-	11.66	11.48	11.70	12.17	12.74	13.25	13.54	13.48
35	-	14.70	14.22	14.17	14.40	14.75	15.08	15.22	15.04
40	-	16.82	16.09	15.82	15.86	16.06	16.26	16.31	16.06
45	-	-	17.47	17.04	16.95	17.05	17.18	17.19	16.93
50	-	-	-	18.21	18.04	18.09	18.21	18.24	18.03
55	-	-	-	-	19.51	19.57	19.73	19.83	19.73
60	-	-	-	-	-	21.87	22.12	22.36	22.41
65	-	-	-	-	-	-	25.77	26.19	26.46

Mass flow in kg/h

30	-	124	156	195	240	293	353	422	501
35	-	120	153	191	235	286	345	413	489
40	-	115	147	185	228	278	336	402	476
45	-	-	141	178	220	269	325	389	462
50	-	-	-	169	211	259	314	376	446
55	-	-	-	-	200	247	301	362	430
60	-	-	-	-	-	235	287	346	413
65	-	-	-	-	-	-	272	330	395

Coefficient of performance (C.O.P.)

30	-	1.58	2.04	2.60	3.27	4.09	5.07	6.28	7.77
35	-	1.32	1.72	2.20	2.77	3.45	4.28	5.28	6.51
40	-	1.09	1.44	1.85	2.33	2.91	3.61	4.45	5.46
45	-	-	1.19	1.54	1.95	2.44	3.03	3.73	4.58
50	-	-	-	1.27	1.62	2.04	2.53	3.11	3.81
55	-	-	-	-	1.33	1.68	2.09	2.58	3.16
60	-	-	-	-	-	1.36	1.71	2.11	2.59
65	-	-	-	-	-	-	1.38	1.71	2.10

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

Cooling capacity	8 892	W
Power input	4 551	W
Current consumption	16.95	A
Mass flow	220	kg/h
C.O.P.	1.95	

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

Danfoss can accept no responsibility for possible errors in catalogues, brochures and other printed material. Danfoss reserves the right to alter its products without notice. This also applies to products already on order provided that such alternations can be made without subsequential changes being necessary in specifications already agreed. All trademarks in this material are property of the respective companies. Danfoss and the Danfoss logotype are trademarks of Danfoss A/S. All rights reserved.

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

Danfoss can accept no responsibility for possible errors in catalogues, brochures and other printed material. Danfoss reserves the right to alter its products without notice. This also applies to products already on order provided that such alternations can be made without subsequential changes being necessary in specifications already agreed. All trademarks in this material are property of the respective companies. Danfoss and the Danfoss logotype are trademarks of Danfoss A/S. All rights reserved.

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	-	6 784	8 668	10 932	13 634	16 830	20 578	24 937	29 965
35	-	6 207	7 978	10 104	12 643	15 652	19 189	23 311	28 077
40	-	5 694	7 333	9 303	11 661	14 465	17 771	21 637	26 121
45	-	-	6 746	8 542	10 701	13 281	16 338	19 930	24 113
50	-	-	-	7 834	9 776	12 114	14 904	18 203	22 067
55	-	-	-	-	8 899	10 977	13 482	16 470	19 997
60	-	-	-	-	-	9 882	12 085	14 743	17 915
65	-	-	-	-	-	-	10 722	13 035	15 832

Power input in W

30	-	3 551	3 694	3 814	3 923	4 031	4 148	4 284	4 450
35	-	4 234	4 302	4 355	4 402	4 454	4 521	4 613	4 742
40	-	4 945	4 939	4 924	4 909	4 905	4 923	4 972	5 063
45	-	-	5 614	5 531	5 455	5 396	5 364	5 371	5 425
50	-	-	-	6 185	6 048	5 934	5 854	5 817	5 835
55	-	-	-	-	6 697	6 529	6 400	6 320	6 302
60	-	-	-	-	-	7 188	7 011	6 890	6 835
65	-	-	-	-	-	-	7 697	7 534	7 444

Current consumption in A

30	-	12.45	12.26	12.50	13.00	13.60	14.15	14.47	14.40
35	-	15.70	15.19	15.13	15.37	15.75	16.10	16.26	16.06
40	-	17.97	17.19	16.90	16.94	17.15	17.37	17.42	17.16
45	-	-	18.66	18.20	18.10	18.21	18.35	18.36	18.09
50	-	-	-	19.44	19.27	19.32	19.45	19.48	19.26
55	-	-	-	-	20.84	20.90	21.07	21.18	21.07
60	-	-	-	-	-	23.35	23.63	23.88	23.94
65	-	-	-	-	-	-	27.52	27.97	28.26

Mass flow in kg/h

30	-	154	193	239	291	353	423	505	599
35	-	149	187	231	283	343	413	494	588
40	-	144	181	224	274	333	402	482	574
45	-	-	174	215	264	321	388	467	558
50	-	-	-	207	253	308	374	450	539
55	-	-	-	-	242	295	358	432	519
60	-	-	-	-	-	280	341	413	497
65	-	-	-	-	-	-	323	392	473

Coefficient of performance (C.O.P.)

30	-	1.91	2.35	2.87	3.47	4.17	4.96	5.82	6.73
35	-	1.47	1.85	2.32	2.87	3.51	4.24	5.05	5.92
40	-	1.15	1.48	1.89	2.38	2.95	3.61	4.35	5.16
45	-	-	1.20	1.54	1.96	2.46	3.05	3.71	4.45
50	-	-	-	1.27	1.62	2.04	2.55	3.13	3.78
55	-	-	-	-	1.33	1.68	2.11	2.61	3.17
60	-	-	-	-	-	1.37	1.72	2.14	2.62
65	-	-	-	-	-	-	1.39	1.73	2.13

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

Cooling capacity	10 701	W
Power input	5 455	W
Current consumption	18.10	A
Mass flow	264	kg/h
C.O.P.	1.96	

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

Danfoss can accept no responsibility for possible errors in catalogues, brochures and other printed material. Danfoss reserves the right to alter its products without notice. This also applies to products already on order provided that such alternations can be made without subsequential changes being necessary in specifications already agreed. All trademarks in this material are property of the respective companies. Danfoss and the Danfoss logotype are trademarks of Danfoss A/S. All rights reserved.

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

Danfoss can accept no responsibility for possible errors in catalogues, brochures and other printed material. Danfoss reserves the right to alter its products without notice. This also applies to products already on order provided that such alternations can be made without subsequential changes being necessary in specifications already agreed. All trademarks in this material are property of the respective companies. Danfoss and the Danfoss logotype are trademarks of Danfoss A/S. All rights reserved.

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	5 696	7 236	9 091	11 307	13 929	-	-	-	-
20	5 141	6 637	8 409	10 502	12 961	15 833	19 164	-	-
30	-	-	7 577	9 510	11 770	14 403	17 454	20 970	24 997
40	-	-	-	8 378	10 401	12 758	15 493	18 653	22 285
50	-	-	-	-	8 899	10 943	13 326	16 094	19 292
60	-	-	-	-	-	-	10 997	13 336	16 066

Power input in W

10	1 936	1 952	1 978	2 014	2 060	-	-	-	-
20	2 462	2 468	2 487	2 518	2 560	2 615	2 680	-	-
30	-	-	3 146	3 160	3 187	3 229	3 283	3 351	3 432
40	-	-	-	4 036	4 038	4 055	4 087	4 134	4 197
50	-	-	-	-	5 208	5 189	5 188	5 204	5 236
60	-	-	-	-	-	-	6 683	6 656	6 648

Current consumption in A

10	12.18	12.20	12.23	12.27	12.33	-	-	-	-
20	12.97	13.02	13.06	13.12	13.19	13.27	13.38	-	-
30	-	-	14.30	14.36	14.43	14.50	14.60	14.70	14.83
40	-	-	-	16.25	16.31	16.37	16.44	16.52	16.61
50	-	-	-	-	19.10	19.13	19.17	19.21	19.26
60	-	-	-	-	-	-	23.06	23.05	23.04

Mass flow in kg/h

10	93	119	150	187	231	-	-	-	-
20	90	117	149	186	231	284	347	-	-
30	-	-	145	182	227	280	343	417	503
40	-	-	-	176	220	272	335	408	493
50	-	-	-	-	209	261	321	393	477
60	-	-	-	-	-	-	304	374	455

Coefficient of performance (C.O.P.)

10	2.94	3.71	4.60	5.61	6.76	-	-	-	-
20	2.09	2.69	3.38	4.17	5.06	6.06	7.15	-	-
30	-	-	2.41	3.01	3.69	4.46	5.32	6.26	7.28
40	-	-	-	2.08	2.58	3.15	3.79	4.51	5.31
50	-	-	-	-	1.71	2.11	2.57	3.09	3.68
60	-	-	-	-	-	-	1.65	2.00	2.42

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

Cooling capacity	9 664	W
Power input	4 577	W
Current consumption	17.58	A
Mass flow	215	kg/h
C.O.P.	2.11	

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 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	5 720	7 272	9 142	11 377	14 019	-	-	-	-
20	5 095	6 595	8 374	10 480	12 958	15 851	19 200	-	-
30	4 398	5 806	7 456	9 396	11 672	14 330	17 413	20 959	24 997
40	-	-	6 436	8 172	10 209	12 595	15 375	18 593	22 285
50	-	-	-	6 857	8 617	10 692	13 132	15 984	19 292
60	-	-	-	-	6 943	8 670	10 731	13 178	16 066

Power input in W

10	1 936	1 952	1 978	2 014	2 060	-	-	-	-
20	2 462	2 468	2 487	2 518	2 560	2 615	2 680	-	-
30	3 160	3 145	3 146	3 160	3 187	3 229	3 283	3 351	3 432
40	-	-	4 050	4 036	4 038	4 055	4 087	4 134	4 197
50	-	-	-	5 243	5 208	5 189	5 188	5 204	5 236
60	-	-	-	-	6 794	6 729	6 683	6 656	6 648

Current consumption in A

10	12.18	12.20	12.23	12.27	12.33	-	-	-	-
20	12.97	13.02	13.06	13.12	13.19	13.27	13.38	-	-
30	14.19	14.24	14.30	14.36	14.43	14.50	14.60	14.70	14.83
40	-	-	16.20	16.25	16.31	16.37	16.44	16.52	16.61
50	-	-	-	19.08	19.10	19.13	19.17	19.21	19.26
60	-	-	-	-	23.09	23.07	23.06	23.05	23.04

Mass flow in kg/h

10	110	138	171	209	254	-	-	-	-
20	107	136	169	208	254	306	365	-	-
30	102	132	165	204	249	301	361	428	503
40	-	-	158	197	241	293	352	419	493
50	-	-	-	186	230	280	338	404	477
60	-	-	-	-	215	263	320	384	455

Coefficient of performance (C.O.P.)

10	2.95	3.73	4.62	5.65	6.80	-	-	-	-
20	2.07	2.67	3.37	4.16	5.06	6.06	7.16	-	-
30	1.39	1.85	2.37	2.97	3.66	4.44	5.30	6.25	7.28
40	-	-	1.59	2.02	2.53	3.11	3.76	4.50	5.31
50	-	-	-	1.31	1.65	2.06	2.53	3.07	3.68
60	-	-	-	-	1.02	1.29	1.61	1.98	2.42

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

Cooling capacity	9 426	W
Power input	4 577	W
Current consumption	17.58	A
Mass flow	236	kg/h
C.O.P.	2.06	

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
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	7 140	9 034	11 316	14 039	17 260	-	-	-	-
20	6 302	8 077	10 193	12 708	15 678	19 157	23 203	-	-
30	-	-	9 071	11 362	14 062	17 229	20 918	25 185	30 086
40	-	-	-	10 005	12 420	15 257	18 573	22 422	26 862
50	-	-	-	-	10 757	13 248	16 173	19 589	23 552
60	-	-	-	-	-	-	13 727	16 692	20 160

Power input in W

10	2 285	2 349	2 412	2 473	2 533	-	-	-	-
20	2 897	2 973	3 047	3 117	3 185	3 250	3 312	-	-
30	-	-	3 832	3 909	3 982	4 050	4 115	4 175	4 230
40	-	-	-	4 903	4 979	5 048	5 111	5 168	5 220
50	-	-	-	-	6 229	6 297	6 356	6 409	6 453
60	-	-	-	-	-	-	7 905	7 949	7 984

Current consumption in A

10	10.72	10.82	10.93	10.99	10.96	-	-	-	-
20	11.76	11.83	11.98	12.16	12.33	12.44	12.46	-	-
30	-	-	13.40	13.53	13.73	13.95	14.16	14.31	14.35
40	-	-	-	15.63	15.70	15.87	16.09	16.34	16.56
50	-	-	-	-	18.77	18.72	18.80	18.97	19.20
60	-	-	-	-	-	-	22.81	22.75	22.82

Mass flow in kg/h

10	116	148	187	232	287	-	-	-	-
20	110	142	180	225	279	344	420	-	-
30	-	-	173	218	271	335	411	501	606
40	-	-	-	210	262	326	401	490	595
50	-	-	-	-	253	316	391	479	583
60	-	-	-	-	-	-	379	467	570

Coefficient of performance (C.O.P.)

10	3.12	3.85	4.69	5.68	6.82	-	-	-	-
20	2.18	2.72	3.35	4.08	4.92	5.89	7.01	-	-
30	-	-	2.37	2.91	3.53	4.25	5.08	6.03	7.11
40	-	-	-	2.04	2.49	3.02	3.63	4.34	5.15
50	-	-	-	-	1.73	2.10	2.54	3.06	3.65
60	-	-	-	-	-	-	1.74	2.10	2.52

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

Cooling capacity	11 590	W
Power input	5 569	W
Current consumption	17.06	A
Mass flow	258	kg/h
C.O.P.	2.08	

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
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	7 169	9 079	11 379	14 126	17 371	-	-	-	-
20	6 247	8 024	10 151	12 682	15 674	19 179	23 246	-	-
30	5 364	6 992	8 926	11 225	13 945	17 142	20 869	25 171	30 086
40	-	-	7 710	9 759	12 190	15 062	18 431	22 349	26 862
50	-	-	-	8 291	10 416	12 945	15 938	19 456	23 552
60	-	-	-	-	8 624	10 793	13 394	16 495	20 160

Power input in W

10	2 285	2 349	2 412	2 473	2 533	-	-	-	-
20	2 897	2 973	3 047	3 117	3 185	3 250	3 312	-	-
30	3 663	3 750	3 832	3 909	3 982	4 050	4 115	4 175	4 230
40	-	-	4 822	4 903	4 979	5 048	5 111	5 168	5 220
50	-	-	-	6 154	6 229	6 297	6 356	6 409	6 453
60	-	-	-	-	7 789	7 852	7 905	7 949	7 984

Current consumption in A

10	10.72	10.82	10.93	10.99	10.96	-	-	-	-
20	11.76	11.83	11.98	12.16	12.33	12.44	12.46	-	-
30	13.51	13.37	13.40	13.53	13.73	13.95	14.16	14.31	14.35
40	-	-	15.72	15.63	15.70	15.87	16.09	16.34	16.56
50	-	-	-	19.01	18.77	18.72	18.80	18.97	19.20
60	-	-	-	-	23.49	23.04	22.81	22.75	22.82

Mass flow in kg/h

10	137	172	213	260	315	-	-	-	-
20	131	166	206	252	307	370	442	-	-
30	124	158	198	244	298	360	432	514	606
40	-	-	189	235	288	350	422	503	595
50	-	-	-	225	278	340	411	492	583
60	-	-	-	-	267	328	399	479	570

Coefficient of performance (C.O.P.)

10	3.14	3.86	4.72	5.71	6.86	-	-	-	-
20	2.16	2.70	3.33	4.07	4.92	5.90	7.02	-	-
30	1.46	1.86	2.33	2.87	3.50	4.23	5.07	6.03	7.11
40	-	-	1.60	1.99	2.45	2.98	3.61	4.32	5.15
50	-	-	-	1.35	1.67	2.06	2.51	3.04	3.65
60	-	-	-	-	1.11	1.37	1.69	2.07	2.52

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

Cooling capacity	11 305	W
Power input	5 569	W
Current consumption	17.06	A
Mass flow	283	kg/h
C.O.P.	2.03	

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
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	5 696	7 236	9 091	11 307	13 929	-	-	-	-
20	5 141	6 637	8 409	10 502	12 961	15 833	19 164	-	-
30	-	-	7 577	9 510	11 770	14 403	17 454	20 970	24 997
40	-	-	-	8 378	10 401	12 758	15 493	18 653	22 285
50	-	-	-	-	8 899	10 943	13 326	16 094	19 292
60	-	-	-	-	-	-	10 997	13 336	16 066

Power input in W

10	1 936	1 952	1 978	2 014	2 060	-	-	-	-
20	2 462	2 468	2 487	2 518	2 560	2 615	2 680	-	-
30	-	-	3 146	3 160	3 187	3 229	3 283	3 351	3 432
40	-	-	-	4 036	4 038	4 055	4 087	4 134	4 197
50	-	-	-	-	5 208	5 189	5 188	5 204	5 236
60	-	-	-	-	-	-	6 683	6 656	6 648

Current consumption in A

10	12.18	12.20	12.23	12.27	12.33	-	-	-	-
20	12.97	13.02	13.06	13.12	13.19	13.27	13.38	-	-
30	-	-	14.30	14.36	14.43	14.50	14.60	14.70	14.83
40	-	-	-	16.25	16.31	16.37	16.44	16.52	16.61
50	-	-	-	-	19.10	19.13	19.17	19.21	19.26
60	-	-	-	-	-	-	23.06	23.05	23.04

Mass flow in kg/h

10	93	119	150	187	231	-	-	-	-
20	90	117	149	186	231	284	347	-	-
30	-	-	145	182	227	280	343	417	503
40	-	-	-	176	220	272	335	408	493
50	-	-	-	-	209	261	321	393	477
60	-	-	-	-	-	-	304	374	455

Coefficient of performance (C.O.P.)

10	2.94	3.71	4.60	5.61	6.76	-	-	-	-
20	2.09	2.69	3.38	4.17	5.06	6.06	7.15	-	-
30	-	-	2.41	3.01	3.69	4.46	5.32	6.26	7.28
40	-	-	-	2.08	2.58	3.15	3.79	4.51	5.31
50	-	-	-	-	1.71	2.11	2.57	3.09	3.68
60	-	-	-	-	-	-	1.65	2.00	2.42

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

Cooling capacity	9 664	W
Power input	4 577	W
Current consumption	17.58	A
Mass flow	215	kg/h
C.O.P.	2.11	

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 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	5 707	7 258	9 129	11 363	14 006	-	-	-	-
20	5 082	6 580	8 359	10 465	12 944	15 838	19 190	-	-
30	4 385	5 791	7 440	9 379	11 656	14 316	17 402	20 952	24 997
40	-	-	6 419	8 155	10 192	12 580	15 363	18 586	22 285
50	-	-	-	6 839	8 600	10 677	13 120	15 976	19 292
60	-	-	-	-	6 925	8 654	10 718	13 171	16 066

Power input in W

10	1 936	1 952	1 978	2 014	2 060	-	-	-	-
20	2 462	2 468	2 487	2 518	2 560	2 615	2 680	-	-
30	3 160	3 145	3 146	3 160	3 187	3 229	3 283	3 351	3 432
40	-	-	4 050	4 036	4 038	4 055	4 087	4 134	4 197
50	-	-	-	5 243	5 208	5 189	5 188	5 204	5 236
60	-	-	-	-	6 794	6 729	6 683	6 656	6 648

Current consumption in A

10	12.18	12.20	12.23	12.27	12.33	-	-	-	-
20	12.97	13.02	13.06	13.12	13.19	13.27	13.38	-	-
30	14.19	14.24	14.30	14.36	14.43	14.50	14.60	14.70	14.83
40	-	-	16.20	16.25	16.31	16.37	16.44	16.52	16.61
50	-	-	-	19.08	19.10	19.13	19.17	19.21	19.26
60	-	-	-	-	23.09	23.07	23.06	23.05	23.04

Mass flow in kg/h

10	110	138	171	209	254	-	-	-	-
20	107	136	169	208	254	306	365	-	-
30	102	132	165	204	249	301	361	428	503
40	-	-	158	197	241	293	352	419	493
50	-	-	-	186	230	280	338	404	477
60	-	-	-	-	215	263	319	384	455

Coefficient of performance (C.O.P.)

10	2.95	3.72	4.62	5.64	6.80	-	-	-	-
20	2.06	2.67	3.36	4.16	5.06	6.06	7.16	-	-
30	1.39	1.84	2.37	2.97	3.66	4.43	5.30	6.25	7.28
40	-	-	1.59	2.02	2.52	3.10	3.76	4.50	5.31
50	-	-	-	1.30	1.65	2.06	2.53	3.07	3.68
60	-	-	-	-	1.02	1.29	1.60	1.98	2.42

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

Cooling capacity	9 409	W
Power input	4 577	W
Current consumption	17.58	A
Mass flow	236	kg/h
C.O.P.	2.06	

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	7 140	9 034	11 316	14 039	17 260	-	-	-	-
20	6 302	8 077	10 193	12 708	15 678	19 157	23 203	-	-
30	-	-	9 071	11 362	14 062	17 229	20 918	25 185	30 086
40	-	-	-	10 005	12 420	15 257	18 573	22 422	26 862
50	-	-	-	-	10 757	13 248	16 173	19 589	23 552
60	-	-	-	-	-	-	13 727	16 692	20 160

Power input in W

10	2 285	2 349	2 412	2 473	2 533	-	-	-	-
20	2 897	2 973	3 047	3 117	3 185	3 250	3 312	-	-
30	-	-	3 832	3 909	3 982	4 050	4 115	4 175	4 230
40	-	-	-	4 903	4 979	5 048	5 111	5 168	5 220
50	-	-	-	-	6 229	6 297	6 356	6 409	6 453
60	-	-	-	-	-	-	7 905	7 949	7 984

Current consumption in A

10	10.72	10.82	10.93	10.99	10.96	-	-	-	-
20	11.76	11.83	11.98	12.16	12.33	12.44	12.46	-	-
30	-	-	13.40	13.53	13.73	13.95	14.16	14.31	14.35
40	-	-	-	15.63	15.70	15.87	16.09	16.34	16.56
50	-	-	-	-	18.77	18.72	18.80	18.97	19.20
60	-	-	-	-	-	-	22.81	22.75	22.82

Mass flow in kg/h

10	118	151	190	236	292	-	-	-	-
20	112	145	183	229	284	350	428	-	-
30	-	-	176	222	276	341	419	510	617
40	-	-	-	214	268	332	409	500	606
50	-	-	-	-	258	323	399	489	595
60	-	-	-	-	-	-	387	477	582

Coefficient of performance (C.O.P.)

10	3.12	3.85	4.69	5.68	6.82	-	-	-	-
20	2.18	2.72	3.35	4.08	4.92	5.89	7.01	-	-
30	-	-	2.37	2.91	3.53	4.25	5.08	6.03	7.11
40	-	-	-	2.04	2.49	3.02	3.63	4.34	5.15
50	-	-	-	-	1.73	2.10	2.54	3.06	3.65
60	-	-	-	-	-	-	1.74	2.10	2.52

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

Cooling capacity	11 590	W
Power input	5 569	W
Current consumption	17.06	A
Mass flow	263	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 : Suction gas temp. = 20 °C , Subcooling = 0 K

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	7 154	9 062	11 362	14 108	17 355	-	-	-	-
20	6 231	8 007	10 133	12 664	15 657	19 164	23 234	-	-
30	5 348	6 973	8 907	11 205	13 926	17 125	20 855	25 163	30 086
40	-	-	7 690	9 739	12 170	15 044	18 417	22 341	26 862
50	-	-	-	8 269	10 395	12 926	15 923	19 447	23 552
60	-	-	-	-	8 603	10 773	13 379	16 485	20 160

Power input in W

10	2 285	2 349	2 412	2 473	2 533	-	-	-	-
20	2 897	2 973	3 047	3 117	3 185	3 250	3 312	-	-
30	3 663	3 750	3 832	3 909	3 982	4 050	4 115	4 175	4 230
40	-	-	4 822	4 903	4 979	5 048	5 111	5 168	5 220
50	-	-	-	6 154	6 229	6 297	6 356	6 409	6 453
60	-	-	-	-	7 789	7 852	7 905	7 949	7 984

Current consumption in A

10	10.72	10.82	10.93	10.99	10.96	-	-	-	-
20	11.76	11.83	11.98	12.16	12.33	12.44	12.46	-	-
30	13.51	13.37	13.40	13.53	13.73	13.95	14.16	14.31	14.35
40	-	-	15.72	15.63	15.70	15.87	16.09	16.34	16.56
50	-	-	-	19.01	18.77	18.72	18.80	18.97	19.20
60	-	-	-	-	23.49	23.04	22.81	22.75	22.82

Mass flow in kg/h

10	140	175	216	264	320	-	-	-	-
20	133	168	209	256	312	376	450	-	-
30	126	161	201	248	303	367	440	524	617
40	-	-	193	239	294	357	430	513	606
50	-	-	-	230	284	347	420	502	595
60	-	-	-	-	272	335	408	490	582

Coefficient of performance (C.O.P.)

10	3.13	3.86	4.71	5.71	6.85	-	-	-	-
20	2.15	2.69	3.33	4.06	4.92	5.90	7.01	-	-
30	1.46	1.86	2.32	2.87	3.50	4.23	5.07	6.03	7.11
40	-	-	1.59	1.99	2.44	2.98	3.60	4.32	5.15
50	-	-	-	1.34	1.67	2.05	2.51	3.03	3.65
60	-	-	-	-	1.10	1.37	1.69	2.07	2.52

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

Cooling capacity	11 285	W
Power input	5 569	W
Current consumption	17.06	A
Mass flow	289	kg/h
C.O.P.	2.03	

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	6 432	7 985	9 867	12 117	14 773	-	-	-	-
20	5 846	7 342	9 129	11 245	13 727	16 614	19 943	-	-
30	-	6 592	8 232	10 162	12 419	15 042	18 068	21 535	25 481
40	-	-	7 216	8 908	10 889	13 196	15 867	18 940	22 454
50	-	-	-	-	9 177	11 117	13 381	16 009	19 038
60	-	-	-	-	-	8 846	10 652	12 783	15 275

Power input in W

10	2 054	2 090	2 127	2 163	2 197	-	-	-	-
20	2 588	2 625	2 666	2 709	2 752	2 795	2 835	-	-
30	-	3 305	3 340	3 380	3 424	3 469	3 514	3 558	3 599
40	-	-	4 223	4 250	4 283	4 321	4 362	4 404	4 447
50	-	-	-	-	5 403	5 424	5 450	5 481	5 515
60	-	-	-	-	-	6 849	6 851	6 861	6 876

Current consumption in A

10	12.20	12.20	12.20	12.19	12.18	-	-	-	-
20	13.07	13.14	13.20	13.26	13.32	13.39	13.46	-	-
30	-	14.37	14.46	14.56	14.65	14.75	14.86	14.98	15.11
40	-	-	16.32	16.40	16.50	16.60	16.71	16.83	16.98
50	-	-	-	-	19.19	19.25	19.33	19.42	19.53
60	-	-	-	-	-	23.06	23.06	23.08	23.12

Mass flow in kg/h

10	130	163	202	249	305	-	-	-	-
20	128	163	203	251	308	376	456	-	-
30	-	160	201	249	306	374	454	549	659
40	-	-	195	243	299	367	447	541	651
50	-	-	-	-	288	354	433	526	634
60	-	-	-	-	-	337	413	504	610

Coefficient of performance (C.O.P.)

10	3.13	3.82	4.64	5.60	6.72	-	-	-	-
20	2.26	2.80	3.42	4.15	4.99	5.94	7.04	-	-
30	-	1.99	2.46	3.01	3.63	4.34	5.14	6.05	7.08
40	-	-	1.71	2.10	2.54	3.05	3.64	4.30	5.05
50	-	-	-	-	1.70	2.05	2.46	2.92	3.45
60	-	-	-	-	-	1.29	1.55	1.86	2.22

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

Cooling capacity	10 053	W
Power input	4 806	W
Current consumption	17.72	A
Mass flow	294	kg/h
C.O.P.	2.09	

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
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	6 224	7 773	9 661	11 929	14 617	-	-	-	-
20	5 548	7 027	8 810	10 937	13 451	16 389	19 789	-	-
30	4 819	6 176	7 800	9 734	12 020	14 701	17 817	21 401	25 481
40	4 077	5 261	6 675	8 364	10 372	12 742	15 519	18 744	22 454
50	-	-	5 476	6 870	8 547	10 554	12 940	15 752	19 038
60	-	-	-	-	6 581	8 174	10 115	12 462	15 275

Power input in W

10	2 054	2 090	2 127	2 163	2 197	-	-	-	-
20	2 588	2 625	2 666	2 709	2 752	2 795	2 835	-	-
30	3 277	3 305	3 340	3 380	3 424	3 469	3 514	3 558	3 599
40	4 194	4 204	4 223	4 250	4 283	4 321	4 362	4 404	4 447
50	-	-	5 386	5 390	5 403	5 424	5 450	5 481	5 515
60	-	-	-	-	6 856	6 849	6 851	6 861	6 876

Current consumption in A

10	12.20	12.20	12.20	12.19	12.18	-	-	-	-
20	13.07	13.14	13.20	13.26	13.32	13.39	13.46	-	-
30	14.28	14.37	14.46	14.56	14.65	14.75	14.86	14.98	15.11
40	16.16	16.24	16.32	16.40	16.50	16.60	16.71	16.83	16.98
50	-	-	19.11	19.14	19.19	19.25	19.33	19.42	19.53
60	-	-	-	-	23.08	23.06	23.06	23.08	23.12

Mass flow in kg/h

10	154	190	232	280	336	-	-	-	-
20	152	190	232	282	339	405	480	-	-
30	150	187	230	279	336	403	479	564	659
40	145	182	224	272	329	395	471	556	651
50	-	-	214	262	317	382	456	540	634
60	-	-	-	-	300	363	435	518	610

Coefficient of performance (C.O.P.)

10	3.03	3.72	4.54	5.51	6.65	-	-	-	-
20	2.14	2.68	3.30	4.04	4.89	5.86	6.98	-	-
30	1.47	1.87	2.34	2.88	3.51	4.24	5.07	6.01	7.08
40	0.97	1.25	1.58	1.97	2.42	2.95	3.56	4.26	5.05
50	-	-	1.02	1.27	1.58	1.95	2.37	2.87	3.45
60	-	-	-	-	0.96	1.19	1.48	1.82	2.22

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

Cooling capacity	9 479	W
Power input	4 806	W
Current consumption	17.72	A
Mass flow	324	kg/h
C.O.P.	1.97	

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
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	7 932	9 831	12 143	14 918	18 204	-	-	-	-
20	7 146	8 926	11 067	13 618	16 627	20 142	24 211	-	-
30	-	7 996	9 925	12 211	14 903	18 048	21 694	25 890	30 681
40	-	-	8 733	10 712	13 045	15 779	18 962	22 643	26 868
50	-	-	-	-	11 069	13 350	16 029	19 154	22 773
60	-	-	-	-	-	10 779	12 913	15 441	18 413

Power input in W

10	2 477	2 604	2 733	2 837	2 889	-	-	-	-
20	3 058	3 129	3 241	3 366	3 478	3 549	3 553	-	-
30	-	3 932	3 974	4 068	4 187	4 304	4 393	4 426	4 377
40	-	-	5 039	5 049	5 123	5 235	5 356	5 460	5 521
50	-	-	-	-	6 394	6 447	6 548	6 671	6 789
60	-	-	-	-	-	8 048	8 077	8 167	8 289

Current consumption in A

10	11.46	11.52	11.64	11.80	11.99	-	-	-	-
20	12.33	12.37	12.48	12.64	12.83	13.03	13.21	-	-
30	-	13.84	13.95	14.10	14.30	14.51	14.72	14.90	15.03
40	-	-	16.08	16.24	16.44	16.66	16.89	17.10	17.27
50	-	-	-	-	19.30	19.54	19.79	20.03	20.23
60	-	-	-	-	-	23.18	23.45	23.72	23.96

Mass flow in kg/h

10	160	201	249	307	376	-	-	-	-
20	157	198	246	304	373	455	553	-	-
30	-	194	242	299	367	448	545	660	794
40	-	-	236	292	358	438	534	647	779
50	-	-	-	-	348	426	519	629	759
60	-	-	-	-	-	410	501	608	735

Coefficient of performance (C.O.P.)

10	3.20	3.77	4.44	5.26	6.30	-	-	-	-
20	2.34	2.85	3.41	4.05	4.78	5.68	6.81	-	-
30	-	2.03	2.50	3.00	3.56	4.19	4.94	5.85	7.01
40	-	-	1.73	2.12	2.55	3.01	3.54	4.15	4.87
50	-	-	-	-	1.73	2.07	2.45	2.87	3.35
60	-	-	-	-	-	1.34	1.60	1.89	2.22

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

Cooling capacity	12 071	W
Power input	5 710	W
Current consumption	17.78	A
Mass flow	353	kg/h
C.O.P.	2.11	

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	7 676	9 570	11 890	14 687	18 012	-	-	-	-
20	6 782	8 543	10 680	13 245	16 292	19 870	24 024	-	-
30	5 905	7 492	9 405	11 697	14 424	17 639	21 393	25 729	30 681
40	5 055	6 429	8 078	10 059	12 426	15 236	18 546	22 408	26 868
50	-	-	6 712	8 342	10 310	12 675	15 500	18 846	22 773
60	-	-	-	-	8 078	9 961	12 261	15 053	18 413

Power input in W

10	2 477	2 604	2 733	2 837	2 889	-	-	-	-
20	3 058	3 129	3 241	3 366	3 478	3 549	3 553	-	-
30	3 969	3 932	3 974	4 068	4 187	4 304	4 393	4 426	4 377
40	5 317	5 119	5 039	5 049	5 123	5 235	5 356	5 460	5 521
50	-	-	6 543	6 417	6 394	6 447	6 548	6 671	6 789
60	-	-	-	-	8 107	8 048	8 077	8 167	8 289

Current consumption in A

10	11.46	11.52	11.64	11.80	11.99	-	-	-	-
20	12.33	12.37	12.48	12.64	12.83	13.03	13.21	-	-
30	13.82	13.84	13.95	14.10	14.30	14.51	14.72	14.90	15.03
40	15.99	15.99	16.08	16.24	16.44	16.66	16.89	17.10	17.27
50	-	-	18.94	19.09	19.30	19.54	19.79	20.03	20.23
60	-	-	-	-	22.93	23.18	23.45	23.72	23.96

Mass flow in kg/h

10	189	234	285	345	414	-	-	-	-
20	186	231	282	341	410	491	583	-	-
30	183	227	277	335	404	483	575	678	794
40	180	222	271	327	394	472	562	665	779
50	-	-	263	318	383	459	547	647	759
60	-	-	-	-	369	442	527	625	735

Coefficient of performance (C.O.P.)

10	3.10	3.67	4.35	5.18	6.24	-	-	-	-
20	2.22	2.73	3.30	3.93	4.68	5.60	6.76	-	-
30	1.49	1.91	2.37	2.88	3.45	4.10	4.87	5.81	7.01
40	0.95	1.26	1.60	1.99	2.43	2.91	3.46	4.10	4.87
50	-	-	1.03	1.30	1.61	1.97	2.37	2.82	3.35
60	-	-	-	-	1.00	1.24	1.52	1.84	2.22

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

Cooling capacity	11 382	W
Power input	5 710	W
Current consumption	17.78	A
Mass flow	389	kg/h
C.O.P.	1.99	

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