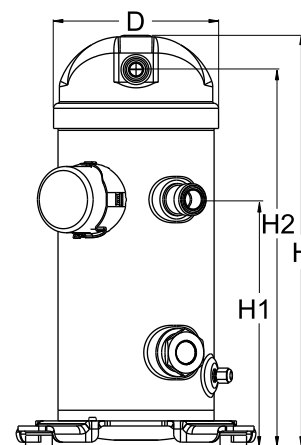


General Characteristics

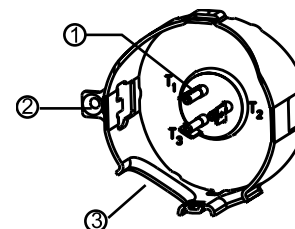
Model number (on compressor nameplate)		MLZ019T2LT9A
Code number for Singlepack*		121U8723
Code number for Industrial pack**		121U8722
Drawing number		0XC6290B-1
Suction and discharge connections		Rotolock
Suction connection		2-1/4 " Rotolock
Discharge connection		1-3/4 " Rotolock
Suction connection with supplied sleeve		1-5/8 " -
Discharge connection with supplied sleeve	- "	1-1/8 " -
Oil sight glass		Threaded
Oil equalisation connection		None
Oil drain connection		None
LP gauge port		None
IPR valve		None
Swept volume		43.51 cm ³ /rev
Displacement @ Nominal speed		7.6 m ³ /h @ 2900 rpm - 9.1 m ³ /h @ 3500 rpm
Net weight		31 kg
Oil charge		1.06 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		3.63 kg
Approved refrigerants		R404A,R507,R134a,R407A,R407F,R448A,R449A,R452A,R22

Dimensions


D=184 mm
H=412.1 mm
H1=249.8 mm
H2=379.4 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	1.182 Ω
Winding resistance between phases 1-3 +/- 7% at 25°C	0.87 Ω
Winding resistance between phases 2-3 +/- 7% at 25°C	1.182 Ω
Rated Load Amps (RLA)	11.2 A
Maximum Continuous Current (MCC)	17.5 A
Locked Rotor Amps (LRA)	95 A
Motor protection	Internal overload protector

Terminal box


IP22

- 1: Spade connectors 1/4"
- 2: Earth connection
- 3: Power cable passage

Recommended Installation torques

Oil sight glass	52.5 Nm
Power connections / Earth connection	0 Nm / 0 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.

Solder sleeve, P03 (2-1/4" Rotolock, 1-5/8" ODF)	8153006
Rotolock valve, V03 (2-1/4" Rotolock, 1-5/8" ODF)	8168026
Gasket, 2-1/4"	8156133

Rotolock accessories, discharge side

Code no.

Solder sleeve, P02 (1-3/4" Rotolock, 1-1/8" ODF)	8153004
Angle adapter, C02 (1-3/4" Rotolock, 1-1/8" ODF)	8168005
Rotolock valve, V02 (1-3/4" Rotolock, 1-1/8" ODF)	8168028
Gasket, 1-3/4"	8156132

Rotolock accessories, sets

Code no.

Valve set, V03 (2-1/4"~1-5/8"), V02 (1-3/4"~1-1/8")	7703383
Gasket set, 1-1/4", 1-3/4", 2-1/4", OSG gaskets black & white	8156013

Oil / lubricants

Code no.

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

Code no.

Belt type crankcase heater, 70 W, 240 V, CE mark, UL	120Z5040
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Miscellaneous accessories

Code no.

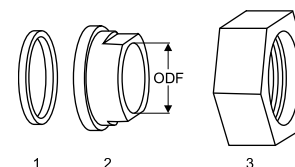
Acoustic hood	120Z5083
Discharge thermostat kit	7750009
IP54 upgrade kit	118U0056

Spare parts

Code no.

Mounting kit for 1 scroll compressor including 4 grommets, 4 sleeves, 4 bolts, 4 washers	120Z5005
Terminal box cover	120Z5015

Gaskets, sleeves and nuts

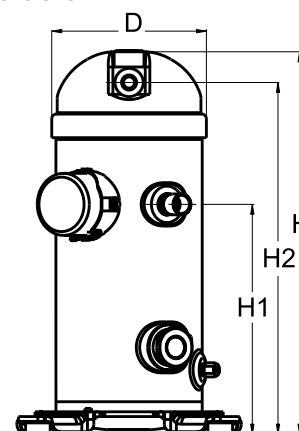


- 1: Gasket
- 2: Solder sleeve
- 3: Rotolock nut

General Characteristics

	MLZ019T2LP9A	MLZ019T2LP9A
Model number (on compressor nameplate)	120U8721	121U8721
Code number for Singlepack*	120U8720	121U8720
Code number for Industrial pack**	0XC6300B-1	0XC6300B-1
Drawing number	Brazed	Brazed
Suction and discharge connections	3/4" ODF	3/4" ODF
Suction connection	1/2" ODF	1/2" ODF
Discharge connection	Threaded	Threaded
Oil sight glass	None	None
Oil equalisation connection	1/4" flare	1/4" flare
Oil drain connection	None	None
LP gauge port	32 bar	32 bar
IPR valve	43.51 cm ³ /rev	
Swept volume	7.6 m ³ /h @ 2900 rpm - 9.1 m ³ /h @ 3500 rpm	
Displacement @ Nominal speed	31 kg	
Net weight	1.06 litre, POE --	
Oil charge	- bar(g) / - bar(g)	
Maximum system test pressure Low Side / High side	- bar	
Maximum differential test pressure	12	
Maximum number of starts per hour	3.63 kg	
Refrigerant charge limit	R404A,R507,R134a,R407A,R407F,R448A,R449A,R452A,R22	
Approved refrigerants		

Dimensions

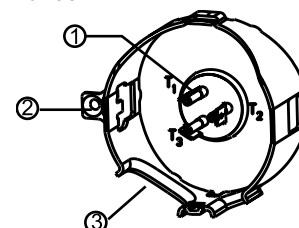


D=164.5 mm
H=412 mm
H1=250 mm
H2=379 mm
H3=- mm

Electrical Characteristics

Nominal voltage	208-230V/3/60Hz
Voltage range	188-253 V
Winding resistance between phases 1-2 +/- 7% at 25°C	1.182 Ω
Winding resistance between phases 1-3 +/- 7% at 25°C	0.87 Ω
Winding resistance between phases 2-3 +/- 7% at 25°C	1.182 Ω
Rated Load Amps (RLA)	11.2 A
Maximum Continuous Current (MCC)	17.5 A
Locked Rotor Amps (LRA)	95 A
Motor protection	Internal overload protector

Terminal box



IP22

- 1: Spade connectors 1/4"
- 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	0 Nm / 0 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.

Solder sleeve, P04 (1-1/4" Rotolock, 3/4" ODF)	8153008
Rotolock valve, V04 (1-1/4" Rotolock, 3/4" ODF)	8168029
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, 3/4" ODF), (1" Rotolock, 1/2" ODF)	120Z0126
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
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Crankcase heaters

Code no.

Belt type crankcase heater, 70 W, 240 V, CE mark, UL	120Z5040
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Miscellaneous accessories

Code no.

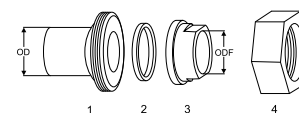
Acoustic hood	120Z5083
Discharge thermostat kit	7750009
IP54 upgrade kit	118U0056

Spare parts

Code no.

Mounting kit for 1 scroll compressor including 4 grommets, 4 sleeves, 4 bolts, 4 washers	120Z5005
Terminal box cover	120Z5015

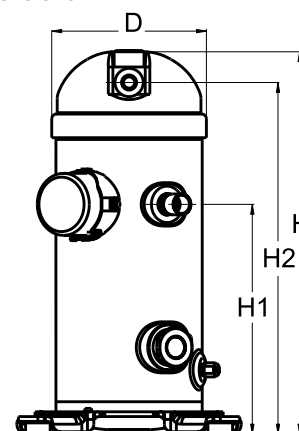
Solder sleeve adapter set



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

General Characteristics

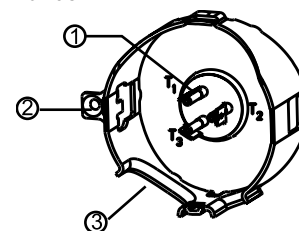
Model number (on compressor nameplate)	MLZ019T2LP9	MLZ019T2LP9
Code number for Singlepack*	121U8038	120U8038
Code number for Industrial pack**	121U8037	120U8037
Drawing number	0XC6300B-1	0XC6300B-1
Suction and discharge connections	Brazed	Brazed
Suction connection	3/4" ODF	3/4" ODF
Discharge connection	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	43.51 cm ³ /rev	
Displacement @ Nominal speed	7.6 m ³ /h @ 2900 rpm - 9.1 m ³ /h @ 3500 rpm	
Net weight	31 kg	
Oil charge	1.06 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	3.63 kg	
Approved refrigerants	R404A, R507, R134a, R22	

Dimensions


D=164.5 mm
H=412 mm
H1=250 mm
H2=379 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	1.182 Ω
Winding resistance between phases 1-3 +/- 7% at 25°C	0.87 Ω
Winding resistance between phases 2-3 +/- 7% at 25°C	1.182 Ω
Rated Load Amps (RLA)	11.2 A
Maximum Continuous Current (MCC)	17.5 A
Locked Rotor Amps (LRA)	95 A
Motor protection	Internal overload protector

Terminal box


IP22

- 1: Spade connectors 1/4"
- 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	0 Nm / 0 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.

Solder sleeve, P04 (1-1/4" Rotolock, 3/4" ODF)	8153008
Rotolock valve, V04 (1-1/4" Rotolock, 3/4" ODF)	8168029
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, 3/4" ODF), (1" Rotolock, 1/2" ODF)	120Z0126
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, 240 V, CE mark, UL	120Z5040
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Miscellaneous accessories

Code no.

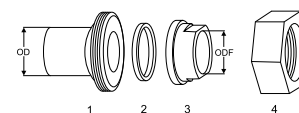
Acoustic hood	120Z5043
Discharge thermostat kit	7750009
IP54 upgrade kit	118U0056

Spare parts

Code no.

Mounting kit for 1 scroll compressor including 4 grommets, 4 sleeves, 4 bolts, 4 washers	120Z5005
Terminal box cover	120Z5015

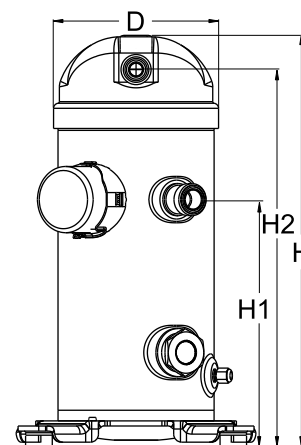
Solder sleeve adapter set



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

General Characteristics

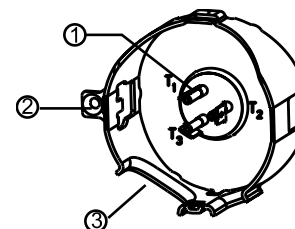
Model number (on compressor nameplate)		MLZ019T2LT9
Code number for Singlepack*		121U8555
Code number for Industrial pack**		121U8554
Drawing number		0XC6290B-1
Suction and discharge connections		Rotolock
Suction connection		2-1/4 " Rotolock
Discharge connection		1-3/4 " Rotolock
Suction connection with supplied sleeve		1-5/8 " -
Discharge connection with supplied sleeve	- "	1-1/8 " -
Oil sight glass		Threaded
Oil equalisation connection		None
Oil drain connection		None
LP gauge port		None
IPR valve		None
Swept volume		43.51 cm ³ /rev
Displacement @ Nominal speed		7.6 m ³ /h @ 2900 rpm - 9.1 m ³ /h @ 3500 rpm
Net weight		31 kg
Oil charge		1.06 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		3.63 kg
Approved refrigerants		R404A, R507, R134a, R407C, R22

Dimensions


D=184 mm
H=412.1 mm
H1=249.8 mm
H2=379.4 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	1.182 Ω
Winding resistance between phases 1-3 +/- 7% at 25°C	0.87 Ω
Winding resistance between phases 2-3 +/- 7% at 25°C	1.182 Ω
Rated Load Amps (RLA)	11.2 A
Maximum Continuous Current (MCC)	17.5 A
Locked Rotor Amps (LRA)	95 A
Motor protection	Internal overload protector

Terminal box

IP22

- 1: Spade connectors 1/4"
- 2: Earth connection
- 3: Power cable passage

Recommended Installation torques

Oil sight glass	52.5 Nm
Power connections / Earth connection	0 Nm / 0 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.

Solder sleeve, P03 (2-1/4" Rotolock, 1-5/8" ODF)	8153006
Rotolock valve, V03 (2-1/4" Rotolock, 1-5/8" ODF)	8168026
Gasket, 2-1/4"	8156133

Rotolock accessories, discharge side

Code no.

Solder sleeve, P02 (1-3/4" Rotolock, 1-1/8" ODF)	8153004
Angle adapter, C02 (1-3/4" Rotolock, 1-1/8" ODF)	8168005
Rotolock valve, V02 (1-3/4" Rotolock, 1-1/8" ODF)	8168028
Gasket, 1-3/4"	8156132

Rotolock accessories, sets

Code no.

Valve set, V03 (2-1/4"~1-5/8"), V02 (1-3/4"~1-1/8")	7703383
Gasket set, 1-1/4", 1-3/4", 2-1/4", OSG gaskets black & white	8156013

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, 240 V, CE mark, UL	120Z5040
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Miscellaneous accessories

Code no.

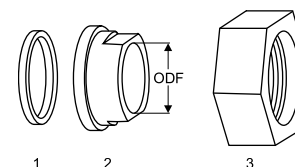
Acoustic hood	120Z5043
Discharge thermostat kit	7750009
IP54 upgrade kit	118U0056

Spare parts

Code no.

Mounting kit for 1 scroll compressor including 4 grommets, 4 sleeves, 4 bolts, 4 washers	120Z5005
Terminal box cover	120Z5015

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	3 939	4 731	5 623	6 646	-	-	-	-	-
20	3 825	4 614	5 501	6 514	7 685	-	-	-	-
30	3 473	4 239	5 094	6 068	7 193	8 495	9 999	-	-
40	3 071	3 790	4 588	5 499	6 552	7 778	9 203	-	-
50	-	3 321	4 039	4 861	5 819	6 944	8 265	-	-
60	-	-	-	4 208	5 047	6 047	7 239	-	-
68	-	-	-	-	-	5 319	6 391	-	-

Power input in W

16	854	890	928	972	-	-	-	-	-
20	990	1 019	1 051	1 086	1 127	-	-	-	-
30	1 318	1 338	1 358	1 379	1 402	1 430	1 463	-	-
40	1 651	1 672	1 690	1 706	1 721	1 738	1 758	-	-
50	-	2 049	2 074	2 094	2 111	2 127	2 142	-	-
60	-	-	-	2 572	2 600	2 624	2 644	-	-
68	-	-	-	-	-	3 118	3 149	-	-

Current consumption in A

16	3.29	3.42	3.57	3.74	-	-	-	-	-
20	3.81	3.92	4.04	4.18	4.34	-	-	-	-
30	5.07	5.15	5.23	5.31	5.40	5.50	5.63	-	-
40	6.36	6.44	6.51	6.57	6.63	6.69	6.77	-	-
50	-	7.89	7.98	8.06	8.13	8.19	8.25	-	-
60	-	-	-	9.90	10.01	10.10	10.18	-	-
68	-	-	-	-	-	12.00	12.12	-	-

Mass flow in kg/h

16	78	92	108	127	-	-	-	-	-
20	77	91	108	126	147	-	-	-	-
30	74	89	105	124	146	170	198	-	-
40	70	85	102	121	143	168	197	-	-
50	-	81	98	117	138	164	193	-	-
60	-	-	-	110	132	157	186	-	-
68	-	-	-	-	-	150	179	-	-

Coefficient of performance (C.O.P.)

16	4.61	5.32	6.06	6.84	-	-	-	-	-
20	3.86	4.53	5.24	6.00	6.82	-	-	-	-
30	2.64	3.17	3.75	4.40	5.13	5.94	6.83	-	-
40	1.86	2.27	2.71	3.22	3.81	4.48	5.23	-	-
50	-	1.62	1.95	2.32	2.76	3.27	3.86	-	-
60	-	-	-	1.64	1.94	2.30	2.74	-	-
68	-	-	-	-	-	1.71	2.03	-	-

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

Cooling capacity	4 316	W
Power input	1 874	W
Current consumption	7.21	A
Mass flow	100	kg/h
C.O.P.	2.30	

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	67	dB(A)
With acoustic hood	59	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	3 843	4 630	5 520	6 548	-	-	-	-	-
20	3 742	4 526	5 410	6 427	7 610	-	-	-	-
30	3 423	4 184	5 036	6 011	7 141	8 460	9 999	-	-
40	-	3 769	4 563	5 472	6 526	7 759	9 203	-	-
50	-	-	-	4 864	5 818	6 941	8 265	-	-
60	-	-	-	-	5 070	6 059	7 239	-	-
68	-	-	-	-	-	-	6 391	-	-

Power input in W

16	854	890	928	972	-	-	-	-	-
20	990	1 019	1 051	1 086	1 127	-	-	-	-
30	1 318	1 338	1 358	1 379	1 402	1 430	1 463	-	-
40	-	1 672	1 690	1 706	1 721	1 738	1 758	-	-
50	-	-	-	2 094	2 111	2 127	2 142	-	-
60	-	-	-	-	2 600	2 624	2 644	-	-
68	-	-	-	-	-	-	3 149	-	-

Current consumption in A

16	3.29	3.42	3.57	3.74	-	-	-	-	-
20	3.81	3.92	4.04	4.18	4.34	-	-	-	-
30	5.07	5.15	5.23	5.31	5.40	5.50	5.63	-	-
40	-	6.44	6.51	6.57	6.63	6.69	6.77	-	-
50	-	-	-	8.06	8.13	8.19	8.25	-	-
60	-	-	-	-	10.01	10.10	10.18	-	-
68	-	-	-	-	-	-	12.12	-	-

Mass flow in kg/h

16	69	83	99	118	-	-	-	-	-
20	67	82	99	118	140	-	-	-	-
30	65	80	96	116	139	166	198	-	-
40	-	77	93	113	136	164	197	-	-
50	-	-	-	109	132	160	193	-	-
60	-	-	-	-	126	153	186	-	-
68	-	-	-	-	-	-	179	-	-

Coefficient of performance (C.O.P.)

16	4.50	5.20	5.95	6.74	-	-	-	-	-
20	3.78	4.44	5.15	5.92	6.76	-	-	-	-
30	2.60	3.13	3.71	4.36	5.09	5.92	6.83	-	-
40	-	2.25	2.70	3.21	3.79	4.46	5.23	-	-
50	-	-	-	2.32	2.76	3.26	3.86	-	-
60	-	-	-	-	1.95	2.31	2.74	-	-
68	-	-	-	-	-	-	2.03	-	-

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

Cooling capacity	4 307	W
Power input	1 874	W
Current consumption	7.21	A
Mass flow	92	kg/h
C.O.P.	2.30	

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	67	dB(A)
With acoustic hood	59	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	4 382	5 441	6 669	8 074	-	-	-	-	-
20	4 295	5 328	6 525	7 895	9 443	-	-	-	-
30	4 006	4 973	6 092	7 372	8 820	10 441	12 238	-	-
40	3 620	4 519	5 559	6 748	8 094	9 605	11 284	-	-
50	-	3 975	4 932	6 028	7 271	8 670	10 231	-	-
60	-	-	-	5 219	6 357	7 642	9 083	-	-
68	-	-	-	-	-	6 756	8 099	-	-

Power input in W

16	824	865	916	968	-	-	-	-	-
20	1 079	1 120	1 171	1 222	1 266	-	-	-	-
30	1 555	1 598	1 649	1 698	1 738	1 760	1 756	-	-
40	1 921	1 968	2 021	2 070	2 108	2 126	2 115	-	-
50	-	2 384	2 440	2 490	2 527	2 542	2 527	-	-
60	-	-	-	3 111	3 149	3 163	3 145	-	-
68	-	-	-	-	-	3 909	3 889	-	-

Current consumption in A

16	2.59	2.71	2.87	3.04	-	-	-	-	-
20	3.39	3.52	3.67	3.83	3.97	-	-	-	-
30	4.88	5.01	5.17	5.33	5.45	5.52	5.51	-	-
40	6.03	6.18	6.34	6.50	6.61	6.67	6.64	-	-
50	-	7.48	7.66	7.81	7.93	7.98	7.93	-	-
60	-	-	-	9.76	9.88	9.93	9.87	-	-
68	-	-	-	-	-	12.27	12.20	-	-

Mass flow in kg/h

16	95	117	142	171	-	-	-	-	-
20	88	109	133	161	193	-	-	-	-
30	82	101	123	148	177	210	247	-	-
40	83	101	122	146	174	205	240	-	-
50	-	98	119	144	172	203	237	-	-
60	-	-	-	131	161	193	229	-	-
68	-	-	-	-	-	174	211	-	-

Coefficient of performance (C.O.P.)

16	5.32	6.29	7.28	8.34	-	-	-	-	-
20	3.98	4.76	5.57	6.46	7.46	-	-	-	-
30	2.58	3.11	3.69	4.34	5.07	5.93	6.97	-	-
40	1.88	2.30	2.75	3.26	3.84	4.52	5.34	-	-
50	-	1.67	2.02	2.42	2.88	3.41	4.05	-	-
60	-	-	-	1.68	2.02	2.42	2.89	-	-
68	-	-	-	-	-	1.73	2.08	-	-

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

Cooling capacity	5 257	W
Power input	2 215	W
Current consumption	6.95	A
Mass flow	121	kg/h
C.O.P.	2.37	

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 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	4 275	5 324	6 547	7 955	-	-	-	-	-
20	4 201	5 225	6 418	7 789	9 351	-	-	-	-
30	3 948	4 908	6 022	7 302	8 757	10 399	12 238	-	-
40	-	4 494	5 529	6 714	8 061	9 581	11 284	-	-
50	-	-	-	6 032	7 269	8 665	10 231	-	-
60	-	-	-	-	6 386	7 656	9 083	-	-
68	-	-	-	-	-	-	8 099	-	-

Power input in W

16	824	865	916	968	-	-	-	-	-
20	1 079	1 120	1 171	1 222	1 266	-	-	-	-
30	1 555	1 598	1 649	1 698	1 738	1 760	1 756	-	-
40	-	1 968	2 021	2 070	2 108	2 126	2 115	-	-
50	-	-	-	2 490	2 527	2 542	2 527	-	-
60	-	-	-	-	3 149	3 163	3 145	-	-
68	-	-	-	-	-	-	3 889	-	-

Current consumption in A

16	2.59	2.71	2.87	3.04	-	-	-	-	-
20	3.39	3.52	3.67	3.83	3.97	-	-	-	-
30	4.88	5.01	5.17	5.33	5.45	5.52	5.51	-	-
40	-	6.18	6.34	6.50	6.61	6.67	6.64	-	-
50	-	-	-	7.81	7.93	7.98	7.93	-	-
60	-	-	-	-	9.88	9.93	9.87	-	-
68	-	-	-	-	-	-	12.20	-	-

Mass flow in kg/h

16	84	105	130	160	-	-	-	-	-
20	78	98	122	150	184	-	-	-	-
30	73	90	112	138	169	205	247	-	-
40	-	91	111	136	166	200	240	-	-
50	-	-	-	134	164	198	237	-	-
60	-	-	-	-	153	189	229	-	-
68	-	-	-	-	-	-	211	-	-

Coefficient of performance (C.O.P.)

16	5.19	6.16	7.15	8.22	-	-	-	-	-
20	3.89	4.66	5.48	6.37	7.39	-	-	-	-
30	2.54	3.07	3.65	4.30	5.04	5.91	6.97	-	-
40	-	2.28	2.74	3.24	3.82	4.51	5.34	-	-
50	-	-	-	2.42	2.88	3.41	4.05	-	-
60	-	-	-	-	2.03	2.42	2.89	-	-
68	-	-	-	-	-	-	2.08	-	-

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

Cooling capacity	5 247	W
Power input	2 215	W
Current consumption	6.95	A
Mass flow	111	kg/h
C.O.P.	2.37	

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 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	2 601	3 269	4 077	5 035	6 150	-	-	-	-
30	2 404	3 031	3 791	4 692	5 744	6 957	-	-	-
40	2 142	2 712	3 405	4 230	5 198	6 317	7 597	-	-
50	-	2 375	2 995	3 738	4 614	5 633	6 803	-	-
60	-	-	2 566	3 221	3 999	4 911	5 964	-	-
70	-	-	-	2 684	3 358	4 156	5 087	-	-
73	-	-	-	2 520	3 162	3 925	4 818	-	-

Power input in W

22	788	794	800	810	826	-	-	-	-
30	937	947	955	963	973	988	-	-	-
40	1 143	1 163	1 178	1 190	1 200	1 210	1 223	-	-
50	-	1 412	1 440	1 461	1 476	1 489	1 500	-	-
60	-	-	1 744	1 781	1 808	1 828	1 843	-	-
70	-	-	-	2 154	2 198	2 233	2 258	-	-
73	-	-	-	2 276	2 328	2 367	2 397	-	-

Current consumption in A

22	3.03	3.05	3.08	3.12	3.18	-	-	-	-
30	3.61	3.64	3.67	3.71	3.75	3.80	-	-	-
40	4.40	4.48	4.54	4.58	4.62	4.66	4.71	-	-
50	-	5.43	5.54	5.62	5.68	5.73	5.77	-	-
60	-	-	6.71	6.85	6.96	7.04	7.09	-	-
70	-	-	-	8.29	8.46	8.59	8.69	-	-
73	-	-	-	8.76	8.96	9.11	9.23	-	-

Mass flow in kg/h

22	56	69	85	103	123	-	-	-	-
30	55	69	84	102	122	146	-	-	-
40	54	68	83	101	121	145	171	-	-
50	-	66	82	100	120	143	170	-	-
60	-	-	80	97	118	141	167	-	-
70	-	-	-	94	115	138	164	-	-
73	-	-	-	93	113	137	163	-	-

Coefficient of performance (C.O.P.)

22	3.30	4.12	5.09	6.21	7.45	-	-	-	-
30	2.56	3.20	3.97	4.87	5.90	7.04	-	-	-
40	1.87	2.33	2.89	3.56	4.33	5.22	6.21	-	-
50	-	1.68	2.08	2.56	3.13	3.78	4.54	-	-
60	-	-	1.47	1.81	2.21	2.69	3.24	-	-
70	-	-	-	1.25	1.53	1.86	2.25	-	-
73	-	-	-	1.11	1.36	1.66	2.01	-	-

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

Cooling capacity	2 546	W
Power input	1 283	W
Current consumption	4.94	A
Mass flow	67	kg/h
C.O.P.	1.98	

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	67	dB(A)
With acoustic hood	59	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	2 642	3 307	4 109	5 056	6 161	-	-	-	-
30	-	3 087	3 839	4 728	5 763	6 957	-	-	-
40	-	-	3 475	4 285	5 229	6 317	7 561	-	-
50	-	-	3 086	3 811	4 657	5 633	6 748	-	-
60	-	-	-	3 311	4 053	4 911	-	-	-
70	-	-	-	-	3 423	4 156	-	-	-
73	-	-	-	-	3 230	3 925	-	-	-

Power input in W

22	788	794	800	810	826	-	-	-	-
30	-	947	955	963	973	988	-	-	-
40	-	-	1 178	1 190	1 200	1 210	1 223	-	-
50	-	-	1 440	1 461	1 476	1 489	1 500	-	-
60	-	-	-	1 781	1 808	1 828	-	-	-
70	-	-	-	-	2 198	2 233	-	-	-
73	-	-	-	-	2 328	2 367	-	-	-

Current consumption in A

22	3.03	3.05	3.08	3.12	3.18	-	-	-	-
30	-	3.64	3.67	3.71	3.75	3.80	-	-	-
40	-	-	4.54	4.58	4.62	4.66	4.71	-	-
50	-	-	5.54	5.62	5.68	5.73	5.77	-	-
60	-	-	-	6.85	6.96	7.04	-	-	-
70	-	-	-	-	8.46	8.59	-	-	-
73	-	-	-	-	8.96	9.11	-	-	-

Mass flow in kg/h

22	50	64	79	98	120	-	-	-	-
30	-	63	79	97	120	146	-	-	-
40	-	-	78	97	119	145	176	-	-
50	-	-	77	95	117	143	174	-	-
60	-	-	-	93	115	141	-	-	-
70	-	-	-	-	112	138	-	-	-
73	-	-	-	-	111	137	-	-	-

Coefficient of performance (C.O.P.)

22	3.35	4.17	5.13	6.24	7.46	-	-	-	-
30	-	3.26	4.02	4.91	5.92	7.04	-	-	-
40	-	-	2.95	3.60	4.36	5.22	6.18	-	-
50	-	-	2.14	2.61	3.15	3.78	4.50	-	-
60	-	-	-	1.86	2.24	2.69	-	-	-
70	-	-	-	-	1.56	1.86	-	-	-
73	-	-	-	-	1.39	1.66	-	-	-

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	67	dB(A)
With acoustic hood	59	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	3 210	4 062	5 069	6 234	7 564	-	-	-	-
30	2 923	3 739	4 704	5 821	7 095	8 530	-	-	-
40	2 569	3 332	4 236	5 284	6 481	7 830	9 337	-	-
50	-	2 903	3 737	4 707	5 817	7 071	8 475	-	-
60	-	-	3 186	4 069	5 083	6 234	7 525	-	-
70	-	-	-	3 351	4 260	5 298	6 467	-	-
73	-	-	-	3 117	3 993	4 995	6 126	-	-

Power input in W

22	957	983	1 003	1 024	1 053	-	-	-	-
30	1 118	1 152	1 175	1 196	1 219	1 251	-	-	-
40	1 347	1 397	1 431	1 455	1 477	1 502	1 536	-	-
50	-	1 683	1 733	1 768	1 794	1 817	1 844	-	-
60	-	-	2 086	2 137	2 173	2 201	2 227	-	-
70	-	-	-	2 567	2 620	2 658	2 689	-	-
73	-	-	-	2 709	2 768	2 810	2 843	-	-

Current consumption in A

22	3.00	3.08	3.15	3.21	3.30	-	-	-	-
30	3.51	3.61	3.69	3.75	3.83	3.93	-	-	-
40	4.23	4.38	4.49	4.57	4.63	4.71	4.82	-	-
50	-	5.28	5.44	5.55	5.63	5.70	5.79	-	-
60	-	-	6.55	6.71	6.82	6.91	6.99	-	-
70	-	-	-	8.06	8.22	8.34	8.44	-	-
73	-	-	-	8.50	8.68	8.82	8.92	-	-

Mass flow in kg/h

22	69	87	107	127	150	-	-	-	-
30	67	87	106	127	151	178	-	-	-
40	63	83	104	126	150	178	211	-	-
50	-	79	100	122	147	175	209	-	-
60	-	-	95	118	143	172	206	-	-
70	-	-	-	115	140	169	203	-	-
73	-	-	-	114	139	169	203	-	-

Coefficient of performance (C.O.P.)

22	3.35	4.13	5.05	6.09	7.19	-	-	-	-
30	2.61	3.25	4.00	4.87	5.82	6.82	-	-	-
40	1.91	2.39	2.96	3.63	4.39	5.21	6.08	-	-
50	-	1.73	2.16	2.66	3.24	3.89	4.60	-	-
60	-	-	1.53	1.90	2.34	2.83	3.38	-	-
70	-	-	-	1.31	1.63	1.99	2.41	-	-
73	-	-	-	1.15	1.44	1.78	2.15	-	-

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

Cooling capacity	3 122	W
Power input	1 534	W
Current consumption	4.81	A
Mass flow	81	kg/h
C.O.P.	2.03	

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 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	3 262	4 109	5 108	6 261	7 576	-	-	-	-
30	-	3 809	4 764	5 866	7 119	8 530	-	-	-
40	-	-	4 323	5 352	6 519	7 830	9 294	-	-
50	-	-	3 851	4 798	5 870	7 071	8 408	-	-
60	-	-	-	4 182	5 151	6 234	-	-	-
70	-	-	-	-	4 343	5 298	-	-	-
73	-	-	-	-	4 079	4 995	-	-	-

Power input in W

22	957	983	1 003	1 024	1 053	-	-	-	-
30	-	1 152	1 175	1 196	1 219	1 251	-	-	-
40	-	-	1 431	1 455	1 477	1 502	1 536	-	-
50	-	-	1 733	1 768	1 794	1 817	1 844	-	-
60	-	-	-	2 137	2 173	2 201	-	-	-
70	-	-	-	-	2 620	2 658	-	-	-
73	-	-	-	-	2 768	2 810	-	-	-

Current consumption in A

22	3.00	3.08	3.15	3.21	3.30	-	-	-	-
30	-	3.61	3.69	3.75	3.83	3.93	-	-	-
40	-	-	4.49	4.57	4.63	4.71	4.82	-	-
50	-	-	5.44	5.55	5.63	5.70	5.79	-	-
60	-	-	-	6.71	6.82	6.91	-	-	-
70	-	-	-	-	8.22	8.34	-	-	-
73	-	-	-	-	8.68	8.82	-	-	-

Mass flow in kg/h

22	62	80	100	121	146	-	-	-	-
30	-	80	100	122	147	178	-	-	-
40	-	-	97	120	146	178	216	-	-
50	-	-	93	117	144	175	214	-	-
60	-	-	-	113	140	172	-	-	-
70	-	-	-	-	137	169	-	-	-
73	-	-	-	-	136	169	-	-	-

Coefficient of performance (C.O.P.)

22	3.41	4.18	5.09	6.11	7.20	-	-	-	-
30	-	3.31	4.05	4.90	5.84	6.82	-	-	-
40	-	-	3.02	3.68	4.41	5.21	6.05	-	-
50	-	-	2.22	2.71	3.27	3.89	4.56	-	-
60	-	-	-	1.96	2.37	2.83	-	-	-
70	-	-	-	-	1.66	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	71	dB(A)
With acoustic hood	63	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	2 958	3 714	4 602	5 644	6 865	-	-	-	-
20	2 693	3 396	4 206	5 146	6 238	7 506	8 972	-	-
30	2 391	3 040	3 771	4 608	5 571	6 686	7 974	9 458	11 159
40	-	2 627	3 278	4 010	4 844	5 804	6 913	8 193	9 667
50	-	-	2 706	3 331	4 035	4 839	5 768	6 844	8 090
60	-	-	-	-	3 124	3 772	4 520	5 390	6 408

Power input in W

10	934	950	961	972	993	-	-	-	-
20	1 179	1 202	1 211	1 212	1 214	1 223	1 249	-	-
30	1 472	1 513	1 530	1 532	1 526	1 518	1 518	1 533	1 570
40	-	1 877	1 915	1 928	1 925	1 912	1 897	1 888	1 893
50	-	-	2 360	2 396	2 406	2 398	2 380	2 359	2 343
60	-	-	-	-	2 965	2 974	2 963	2 941	2 915

Current consumption in A

10	3.85	3.92	3.96	4.01	4.10	-	-	-	-
20	4.86	4.96	4.99	5.00	5.00	5.04	5.15	-	-
30	6.07	6.24	6.31	6.32	6.29	6.26	6.26	6.32	6.47
40	-	7.74	7.90	7.95	7.94	7.88	7.82	7.79	7.81
50	-	-	9.73	9.88	9.92	9.89	9.82	9.73	9.66
60	-	-	-	-	12.23	12.26	12.22	12.13	12.02

Mass flow in kg/h

10	55	73	93	115	139	-	-	-	-
20	57	75	94	116	140	169	204	-	-
30	57	74	93	115	139	168	202	243	291
40	-	72	91	112	136	165	199	240	288
50	-	-	86	107	131	159	194	234	282
60	-	-	-	-	124	152	186	227	275

Coefficient of performance (C.O.P.)

10	3.17	3.91	4.79	5.80	6.91	-	-	-	-
20	2.28	2.82	3.47	4.25	5.14	6.14	7.19	-	-
30	1.62	2.01	2.46	3.01	3.65	4.40	5.25	6.17	7.11
40	-	1.40	1.71	2.08	2.52	3.04	3.64	4.34	5.11
50	-	-	1.15	1.39	1.68	2.02	2.42	2.90	3.45
60	-	-	-	-	1.05	1.27	1.53	1.83	2.20

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

Cooling capacity	4 451	W
Power input	2 155	W
Current consumption	8.89	A
Mass flow	134	kg/h
C.O.P.	2.06	

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	67	dB(A)
With acoustic hood	59	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	2 842	3 594	4 484	5 536	6 773	-	-	-	-
20	2 532	3 225	4 032	4 979	6 088	7 383	8 887	-	-
30	2 187	2 818	3 542	4 381	5 362	6 507	7 842	9 387	11 159
40	1 791	2 357	2 994	3 725	4 575	5 569	6 733	8 092	9 667
50	-	-	2 374	2 994	3 710	4 551	5 542	6 712	8 090
60	-	-	-	-	2 749	3 432	4 247	5 227	6 408

Power input in W

10	934	950	961	972	993	-	-	-	-
20	1 179	1 202	1 211	1 212	1 214	1 223	1 249	-	-
30	1 472	1 513	1 530	1 532	1 526	1 518	1 518	1 533	1 570
40	1 807	1 877	1 915	1 928	1 925	1 912	1 897	1 888	1 893
50	-	-	2 360	2 396	2 406	2 398	2 380	2 359	2 343
60	-	-	-	-	2 965	2 974	2 963	2 941	2 915

Current consumption in A

10	3.85	3.92	3.96	4.01	4.10	-	-	-	-
20	4.86	4.96	4.99	5.00	5.00	5.04	5.15	-	-
30	6.07	6.24	6.31	6.32	6.29	6.26	6.26	6.32	6.47
40	7.45	7.74	7.90	7.95	7.94	7.88	7.82	7.79	7.81
50	-	-	9.73	9.88	9.92	9.89	9.82	9.73	9.66
60	-	-	-	-	12.23	12.26	12.22	12.13	12.02

Mass flow in kg/h

10	66	86	107	129	154	-	-	-	-
20	68	88	108	130	155	183	215	-	-
30	68	87	107	129	154	182	214	250	291
40	65	84	104	126	150	178	210	247	288
50	-	-	99	120	144	172	204	241	282
60	-	-	-	-	136	164	197	233	275

Coefficient of performance (C.O.P.)

10	3.04	3.78	4.67	5.69	6.82	-	-	-	-
20	2.15	2.68	3.33	4.11	5.02	6.04	7.12	-	-
30	1.49	1.86	2.31	2.86	3.51	4.29	5.17	6.12	7.11
40	0.99	1.26	1.56	1.93	2.38	2.91	3.55	4.29	5.11
50	-	-	1.01	1.25	1.54	1.90	2.33	2.85	3.45
60	-	-	-	-	0.93	1.15	1.43	1.78	2.20

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

Cooling capacity	4 154	W
Power input	2 155	W
Current consumption	8.89	A
Mass flow	148	kg/h
C.O.P.	1.93	

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	67	dB(A)
With acoustic hood	59	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	3 694	4 648	5 772	7 081	8 594	-	-	-	-
20	3 354	4 212	5 215	6 381	7 726	9 266	11 019	-	-
30	2 987	3 754	4 642	5 669	6 851	8 204	9 747	11 494	13 462
40	-	3 245	4 023	4 916	5 940	7 112	8 449	9 967	11 684
50	-	-	3 328	4 092	4 963	5 959	7 096	8 391	9 861
60	-	-	-	-	3 892	4 716	5 659	6 736	7 967

Power input in W

10	1 198	1 188	1 180	1 187	1 220	-	-	-	-
20	1 425	1 436	1 433	1 427	1 431	1 455	1 513	-	-
30	1 744	1 796	1 817	1 818	1 811	1 808	1 822	1 863	1 944
40	-	2 214	2 278	2 305	2 308	2 298	2 286	2 286	2 308
50	-	-	2 763	2 836	2 868	2 870	2 853	2 830	2 813
60	-	-	-	-	3 438	3 471	3 469	3 443	3 407

Current consumption in A

10	3.76	3.73	3.70	3.72	3.83	-	-	-	-
20	4.47	4.51	4.50	4.48	4.49	4.57	4.75	-	-
30	5.47	5.64	5.70	5.70	5.68	5.67	5.72	5.85	6.10
40	-	6.95	7.15	7.23	7.24	7.21	7.17	7.17	7.24
50	-	-	8.67	8.90	9.00	9.00	8.95	8.88	8.83
60	-	-	-	-	10.79	10.89	10.88	10.80	10.69

Mass flow in kg/h

10	64	86	110	137	167	-	-	-	-
20	67	87	110	135	165	199	239	-	-
30	67	87	109	133	162	196	235	282	336
40	-	84	106	130	158	191	231	277	331
50	-	-	101	125	153	186	225	272	326
60	-	-	-	-	146	180	219	266	320

Coefficient of performance (C.O.P.)

10	3.08	3.91	4.89	5.97	7.05	-	-	-	-
20	2.35	2.93	3.64	4.47	5.40	6.37	7.28	-	-
30	1.71	2.09	2.56	3.12	3.78	4.54	5.35	6.17	6.92
40	-	1.47	1.77	2.13	2.57	3.10	3.70	4.36	5.06
50	-	-	1.20	1.44	1.73	2.08	2.49	2.96	3.51
60	-	-	-	-	1.13	1.36	1.63	1.96	2.34

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

Cooling capacity	5 461	W
Power input	2 583	W
Current consumption	8.11	A
Mass flow	156	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 60 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	3 550	4 498	5 624	6 945	8 479	-	-	-	-
20	3 154	4 000	5 000	6 174	7 539	9 114	10 914	-	-
30	2 732	3 480	4 359	5 390	6 593	7 985	9 585	11 407	13 462
40	2 258	2 911	3 674	4 567	5 611	6 825	8 230	9 844	11 684
50	-	-	2 920	3 677	4 564	5 604	6 818	8 230	9 861
60	-	-	-	-	3 425	4 291	5 317	6 532	7 967

Power input in W

10	1 198	1 188	1 180	1 187	1 220	-	-	-	-
20	1 425	1 436	1 433	1 427	1 431	1 455	1 513	-	-
30	1 744	1 796	1 817	1 818	1 811	1 808	1 822	1 863	1 944
40	2 101	2 214	2 278	2 305	2 308	2 298	2 286	2 286	2 308
50	-	-	2 763	2 836	2 868	2 870	2 853	2 830	2 813
60	-	-	-	-	3 438	3 471	3 469	3 443	3 407

Current consumption in A

10	3.76	3.73	3.70	3.72	3.83	-	-	-	-
20	4.47	4.51	4.50	4.48	4.49	4.57	4.75	-	-
30	5.47	5.64	5.70	5.70	5.68	5.67	5.72	5.85	6.10
40	6.59	6.95	7.15	7.23	7.24	7.21	7.17	7.17	7.24
50	-	-	8.67	8.90	9.00	9.00	8.95	8.88	8.83
60	-	-	-	-	10.79	10.89	10.88	10.80	10.69

Mass flow in kg/h

10	77	101	126	154	184	-	-	-	-
20	79	102	126	152	182	215	253	-	-
30	80	102	125	150	179	211	248	290	336
40	78	99	121	146	175	207	244	285	331
50	-	-	116	141	169	201	238	280	326
60	-	-	-	-	161	194	231	274	320

Coefficient of performance (C.O.P.)

10	2.96	3.79	4.77	5.85	6.95	-	-	-	-
20	2.21	2.78	3.49	4.33	5.27	6.26	7.22	-	-
30	1.57	1.94	2.40	2.97	3.64	4.42	5.26	6.12	6.92
40	1.07	1.32	1.61	1.98	2.43	2.97	3.60	4.31	5.06
50	-	-	1.06	1.30	1.59	1.95	2.39	2.91	3.51
60	-	-	-	-	1.00	1.24	1.53	1.90	2.34

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

Cooling capacity	5 097	W
Power input	2 583	W
Current consumption	8.11	A
Mass flow	172	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 50 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	2 522	3 200	4 014	4 986	6 134	-	-	-	-
20	2 251	2 897	3 662	4 568	5 633	6 879	8 323	-	-
30	-	-	3 285	4 115	5 087	6 223	7 541	9 061	10 804
40	-	-	-	3 636	4 506	5 521	6 702	8 069	9 641
50	-	-	-	-	3 898	4 784	5 819	7 022	8 413
60	-	-	-	-	-	-	4 899	5 928	7 129

Power input in W

10	939	953	963	974	990	-	-	-	-
20	1 150	1 180	1 199	1 212	1 223	1 238	1 260	-	-
30	-	-	1 479	1 504	1 522	1 536	1 551	1 572	1 604
40	-	-	-	1 860	1 895	1 919	1 938	1 956	1 978
50	-	-	-	-	2 350	2 396	2 429	2 455	2 478
60	-	-	-	-	-	-	3 033	3 077	3 111

Current consumption in A

10	5.81	5.84	5.92	6.02	6.14	-	-	-	-
20	6.64	6.48	6.42	6.43	6.50	6.59	6.67	-	-
30	-	-	7.24	7.12	7.09	7.14	7.22	7.33	7.42
40	-	-	-	8.24	8.08	8.03	8.07	8.18	8.32
50	-	-	-	-	9.60	9.42	9.38	9.44	9.59
60	-	-	-	-	-	-	11.29	11.27	11.38

Mass flow in kg/h

10	41	53	66	83	102	-	-	-	-
20	39	51	65	81	100	123	151	-	-
30	-	-	63	79	98	121	148	180	217
40	-	-	-	76	95	118	145	176	213
50	-	-	-	-	92	114	140	172	208
60	-	-	-	-	-	-	135	166	202

Coefficient of performance (C.O.P.)

10	2.69	3.36	4.17	5.12	6.20	-	-	-	-
20	1.96	2.45	3.05	3.77	4.61	5.56	6.60	-	-
30	-	-	2.22	2.73	3.34	4.05	4.86	5.76	6.73
40	-	-	-	1.95	2.38	2.88	3.46	4.12	4.87
50	-	-	-	-	1.66	2.00	2.40	2.86	3.40
60	-	-	-	-	-	-	1.62	1.93	2.29

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

Cooling capacity	4 205	W
Power input	2 112	W
Current consumption	8.76	A
Mass flow	94	kg/h
C.O.P.	1.99	

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	2 533	3 216	4 037	5 017	6 174	-	-	-	-
20	2 231	2 878	3 647	4 559	5 632	6 886	8 339	-	-
30	1 926	2 526	3 232	4 065	5 045	6 191	7 523	9 056	10 804
40	-	-	2 803	3 547	4 422	5 451	6 651	8 043	9 641
50	-	-	-	3 013	3 775	4 675	5 734	6 974	8 413
60	-	-	-	-	3 111	3 872	4 780	5 858	7 129

Power input in W

10	939	953	963	974	990	-	-	-	-
20	1 150	1 180	1 199	1 212	1 223	1 238	1 260	-	-
30	1 384	1 440	1 479	1 504	1 522	1 536	1 551	1 572	1 604
40	-	-	1 811	1 860	1 895	1 919	1 938	1 956	1 978
50	-	-	-	2 288	2 350	2 396	2 429	2 455	2 478
60	-	-	-	-	2 896	2 974	3 033	3 077	3 111

Current consumption in A

10	5.81	5.84	5.92	6.02	6.14	-	-	-	-
20	6.64	6.48	6.42	6.43	6.50	6.59	6.67	-	-
30	7.88	7.49	7.24	7.12	7.09	7.14	7.22	7.33	7.42
40	-	-	8.54	8.24	8.08	8.03	8.07	8.18	8.32
50	-	-	-	9.93	9.60	9.42	9.38	9.44	9.59
60	-	-	-	-	11.81	11.46	11.29	11.27	11.38

Mass flow in kg/h

10	48	61	76	92	112	-	-	-	-
20	47	59	74	91	110	133	159	-	-
30	45	57	72	88	108	130	156	185	217
40	-	-	69	85	105	127	152	181	213
50	-	-	-	82	101	123	148	176	208
60	-	-	-	-	96	118	142	170	202

Coefficient of performance (C.O.P.)

10	2.70	3.37	4.19	5.15	6.24	-	-	-	-
20	1.94	2.44	3.04	3.76	4.61	5.56	6.62	-	-
30	1.39	1.75	2.19	2.70	3.31	4.03	4.85	5.76	6.73
40	-	-	1.55	1.91	2.33	2.84	3.43	4.11	4.87
50	-	-	-	1.32	1.61	1.95	2.36	2.84	3.40
60	-	-	-	-	1.07	1.30	1.58	1.90	2.29

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

Cooling capacity	4 101	W
Power input	2 112	W
Current consumption	8.76	A
Mass flow	103	kg/h
C.O.P.	1.94	

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	2 943	3 742	4 709	5 867	7 241	-	-	-	-
20	2 672	3 438	4 349	5 431	6 706	8 199	9 935	-	-
30	-	-	3 947	4 937	6 099	7 458	9 036	10 859	12 950
40	-	-	-	4 401	5 435	6 644	8 051	9 681	11 557
50	-	-	-	-	4 729	5 774	6 995	8 417	10 064
60	-	-	-	-	-	-	5 883	7 083	8 486

Power input in W

10	1 058	1 084	1 110	1 137	1 165	-	-	-	-
20	1 321	1 351	1 379	1 407	1 436	1 466	1 498	-	-
30	-	-	1 719	1 747	1 774	1 802	1 831	1 862	1 896
40	-	-	-	2 186	2 210	2 234	2 258	2 283	2 310
50	-	-	-	-	2 775	2 793	2 811	2 828	2 846
60	-	-	-	-	-	-	3 519	3 527	3 535

Current consumption in A

10	5.44	5.43	5.51	5.64	5.76	-	-	-	-
20	6.34	6.17	6.14	6.20	6.32	6.44	6.53	-	-
30	-	-	6.94	6.89	6.94	7.05	7.17	7.27	7.29
40	-	-	-	7.95	7.88	7.92	8.03	8.16	8.27
50	-	-	-	-	9.39	9.31	9.34	9.45	9.59
60	-	-	-	-	-	-	11.36	11.39	11.51

Mass flow in kg/h

10	48	61	78	97	120	-	-	-	-
20	47	61	77	96	120	147	180	-	-
30	-	-	75	95	118	145	178	216	261
40	-	-	-	92	115	142	174	212	256
50	-	-	-	-	111	138	169	206	249
60	-	-	-	-	-	-	162	198	240

Coefficient of performance (C.O.P.)

10	2.78	3.45	4.24	5.16	6.22	-	-	-	-
20	2.02	2.55	3.15	3.86	4.67	5.59	6.63	-	-
30	-	-	2.30	2.83	3.44	4.14	4.94	5.83	6.83
40	-	-	-	2.01	2.46	2.97	3.57	4.24	5.00
50	-	-	-	-	1.70	2.07	2.49	2.98	3.54
60	-	-	-	-	-	-	1.67	2.01	2.40

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

Cooling capacity	5 086	W
Power input	2 475	W
Current consumption	8.55	A
Mass flow	113	kg/h
C.O.P.	2.06	

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	2 955	3 760	4 735	5 903	7 287	-	-	-	-
20	2 649	3 416	4 331	5 419	6 705	8 209	9 953	-	-
30	2 329	3 042	3 884	4 877	6 048	7 420	9 015	10 853	12 950
40	-	-	3 408	4 293	5 335	6 559	7 990	9 650	11 557
50	-	-	-	3 680	4 579	5 642	6 894	8 360	10 064
60	-	-	-	-	3 795	4 682	5 741	6 999	8 486

Power input in W

10	1 058	1 084	1 110	1 137	1 165	-	-	-	-
20	1 321	1 351	1 379	1 407	1 436	1 466	1 498	-	-
30	1 658	1 690	1 719	1 747	1 774	1 802	1 831	1 862	1 896
40	-	-	2 160	2 186	2 210	2 234	2 258	2 283	2 310
50	-	-	-	2 755	2 775	2 793	2 811	2 828	2 846
60	-	-	-	-	3 499	3 510	3 519	3 527	3 535

Current consumption in A

10	5.44	5.43	5.51	5.64	5.76	-	-	-	-
20	6.34	6.17	6.14	6.20	6.32	6.44	6.53	-	-
30	7.54	7.14	6.94	6.89	6.94	7.05	7.17	7.27	7.29
40	-	-	8.18	7.95	7.88	7.92	8.03	8.16	8.27
50	-	-	-	9.63	9.39	9.31	9.34	9.45	9.59
60	-	-	-	-	11.71	11.45	11.36	11.39	11.51

Mass flow in kg/h

10	57	71	89	109	132	-	-	-	-
20	55	70	88	108	131	158	189	-	-
30	54	69	86	106	129	156	187	222	261
40	-	-	84	103	126	153	183	217	256
50	-	-	-	100	122	148	178	211	249
60	-	-	-	-	117	142	171	204	240

Coefficient of performance (C.O.P.)

10	2.79	3.47	4.27	5.19	6.26	-	-	-	-
20	2.00	2.53	3.14	3.85	4.67	5.60	6.65	-	-
30	1.40	1.80	2.26	2.79	3.41	4.12	4.92	5.83	6.83
40	-	-	1.58	1.96	2.41	2.94	3.54	4.23	5.00
50	-	-	-	1.34	1.65	2.02	2.45	2.96	3.54
60	-	-	-	-	1.08	1.33	1.63	1.98	2.40

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

Cooling capacity	4 961	W
Power input	2 475	W
Current consumption	8.55	A
Mass flow	124	kg/h
C.O.P.	2.00	

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	2 522	3 200	4 014	4 986	6 134	-	-	-	-
20	2 251	2 897	3 662	4 568	5 633	6 879	8 323	-	-
30	-	-	3 285	4 115	5 087	6 223	7 541	9 061	10 804
40	-	-	-	3 636	4 506	5 521	6 702	8 069	9 641
50	-	-	-	-	3 898	4 784	5 819	7 022	8 413
60	-	-	-	-	-	-	4 899	5 928	7 129

Power input in W

10	939	953	963	974	990	-	-	-	-
20	1 150	1 180	1 199	1 212	1 223	1 238	1 260	-	-
30	-	-	1 479	1 504	1 522	1 536	1 551	1 572	1 604
40	-	-	-	1 860	1 895	1 919	1 938	1 956	1 978
50	-	-	-	-	2 351	2 396	2 429	2 455	2 478
60	-	-	-	-	-	-	3 033	3 077	3 111

Current consumption in A

10	5.81	5.84	5.92	6.02	6.14	-	-	-	-
20	6.64	6.48	6.42	6.43	6.50	6.59	6.67	-	-
30	-	-	7.24	7.12	7.09	7.14	7.22	7.33	7.42
40	-	-	-	8.24	8.08	8.03	8.07	8.18	8.32
50	-	-	-	-	9.60	9.42	9.38	9.44	9.59
60	-	-	-	-	-	-	11.29	11.27	11.38

Mass flow in kg/h

10	42	53	67	84	104	-	-	-	-
20	40	52	66	82	102	126	153	-	-
30	-	-	64	80	100	123	151	184	221
40	-	-	-	78	97	120	148	180	218
50	-	-	-	-	94	116	143	175	212
60	-	-	-	-	-	-	138	170	206

Coefficient of performance (C.O.P.)

10	2.69	3.36	4.17	5.12	6.20	-	-	-	-
20	1.96	2.45	3.05	3.77	4.61	5.56	6.60	-	-
30	-	-	2.22	2.73	3.34	4.05	4.86	5.76	6.73
40	-	-	-	1.95	2.38	2.88	3.46	4.12	4.87
50	-	-	-	-	1.66	2.00	2.40	2.86	3.40
60	-	-	-	-	-	-	1.62	1.93	2.29

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

Cooling capacity	4 205	W
Power input	2 112	W
Current consumption	8.76	A
Mass flow	95	kg/h
C.O.P.	1.99	

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	2 527	3 210	4 031	5 011	6 168	-	-	-	-
20	2 226	2 872	3 641	4 552	5 626	6 881	8 334	-	-
30	1 921	2 520	3 225	4 058	5 038	6 185	7 518	9 053	10 804
40	-	-	2 795	3 539	4 415	5 444	6 646	8 040	9 641
50	-	-	-	3 005	3 767	4 668	5 729	6 971	8 413
60	-	-	-	-	3 103	3 865	4 775	5 855	7 129

Power input in W

10	939	953	963	974	990	-	-	-	-
20	1 150	1 180	1 199	1 212	1 223	1 238	1 260	-	-
30	1 384	1 440	1 479	1 504	1 522	1 536	1 551	1 572	1 604
40	-	-	1 811	1 860	1 895	1 919	1 938	1 956	1 978
50	-	-	-	2 288	2 351	2 396	2 429	2 455	2 478
60	-	-	-	-	2 896	2 974	3 033	3 077	3 111

Current consumption in A

10	5.81	5.84	5.92	6.02	6.14	-	-	-	-
20	6.64	6.48	6.42	6.43	6.50	6.59	6.67	-	-
30	7.87	7.49	7.24	7.12	7.09	7.14	7.22	7.33	7.42
40	-	-	8.54	8.24	8.08	8.03	8.07	8.18	8.32
50	-	-	-	9.93	9.60	9.42	9.38	9.44	9.59
60	-	-	-	-	11.81	11.46	11.29	11.27	11.38

Mass flow in kg/h

10	49	62	77	94	114	-	-	-	-
20	48	60	75	92	112	135	161	-	-
30	45	58	73	90	110	133	159	188	221
40	-	-	70	87	107	129	155	185	218
50	-	-	-	84	103	125	151	180	212
60	-	-	-	-	98	120	145	174	206

Coefficient of performance (C.O.P.)

10	2.69	3.37	4.18	5.14	6.23	-	-	-	-
20	1.94	2.43	3.04	3.76	4.60	5.56	6.61	-	-
30	1.39	1.75	2.18	2.70	3.31	4.03	4.85	5.76	6.73
40	-	-	1.54	1.90	2.33	2.84	3.43	4.11	4.87
50	-	-	-	1.31	1.60	1.95	2.36	2.84	3.40
60	-	-	-	-	1.07	1.30	1.57	1.90	2.29

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

Cooling capacity	4 094	W
Power input	2 112	W
Current consumption	8.76	A
Mass flow	105	kg/h
C.O.P.	1.94	

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	2 943	3 742	4 709	5 867	7 241	-	-	-	-
20	2 672	3 438	4 349	5 431	6 706	8 199	9 935	-	-
30	-	-	3 947	4 937	6 099	7 458	9 036	10 859	12 950
40	-	-	-	4 401	5 435	6 644	8 051	9 681	11 557
50	-	-	-	-	4 729	5 774	6 995	8 417	10 064
60	-	-	-	-	-	-	5 883	7 083	8 486

Power input in W

10	1 058	1 084	1 110	1 137	1 165	-	-	-	-
20	1 321	1 351	1 379	1 407	1 436	1 466	1 498	-	-
30	-	-	1 719	1 747	1 774	1 802	1 831	1 862	1 896
40	-	-	-	2 186	2 210	2 234	2 258	2 283	2 310
50	-	-	-	-	2 775	2 793	2 811	2 828	2 846
60	-	-	-	-	-	-	3 519	3 527	3 535

Current consumption in A

10	5.44	5.43	5.51	5.64	5.76	-	-	-	-
20	6.34	6.17	6.14	6.20	6.32	6.44	6.53	-	-
30	-	-	6.94	6.89	6.94	7.05	7.17	7.27	7.29
40	-	-	-	7.95	7.88	7.92	8.03	8.16	8.27
50	-	-	-	-	9.39	9.31	9.34	9.45	9.59
60	-	-	-	-	-	-	11.36	11.39	11.51

Mass flow in kg/h

10	49	63	79	99	122	-	-	-	-
20	48	62	78	98	122	150	183	-	-
30	-	-	77	96	120	148	181	220	265
40	-	-	-	94	117	145	177	216	261
50	-	-	-	-	114	140	172	210	254
60	-	-	-	-	-	-	166	203	246

Coefficient of performance (C.O.P.)

10	2.78	3.45	4.24	5.16	6.22	-	-	-	-
20	2.02	2.55	3.15	3.86	4.67	5.59	6.63	-	-
30	-	-	2.30	2.83	3.44	4.14	4.94	5.83	6.83
40	-	-	-	2.01	2.46	2.97	3.57	4.24	5.00
50	-	-	-	-	1.70	2.07	2.49	2.98	3.54
60	-	-	-	-	-	-	1.67	2.01	2.40

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

Cooling capacity	5 086	W
Power input	2 475	W
Current consumption	8.55	A
Mass flow	116	kg/h
C.O.P.	2.06	

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	2 949	3 753	4 728	5 896	7 281	-	-	-	-
20	2 642	3 408	4 323	5 412	6 697	8 202	9 948	-	-
30	2 322	3 034	3 875	4 869	6 040	7 413	9 009	10 850	12 950
40	-	-	3 399	4 284	5 326	6 551	7 984	9 646	11 557
50	-	-	-	3 671	4 570	5 633	6 887	8 356	10 064
60	-	-	-	-	3 786	4 673	5 734	6 995	8 486

Power input in W

10	1 058	1 084	1 110	1 137	1 165	-	-	-	-
20	1 321	1 351	1 379	1 407	1 436	1 466	1 498	-	-
30	1 658	1 690	1 719	1 747	1 774	1 802	1 831	1 862	1 896
40	-	-	2 160	2 186	2 210	2 234	2 258	2 283	2 310
50	-	-	-	2 755	2 775	2 793	2 811	2 828	2 846
60	-	-	-	-	3 499	3 510	3 519	3 527	3 535

Current consumption in A

10	5.44	5.43	5.51	5.64	5.76	-	-	-	-
20	6.34	6.17	6.14	6.20	6.32	6.44	6.53	-	-
30	7.54	7.14	6.94	6.89	6.94	7.05	7.17	7.27	7.29
40	-	-	8.18	7.95	7.88	7.92	8.03	8.16	8.27
50	-	-	-	9.63	9.39	9.31	9.34	9.45	9.59
60	-	-	-	-	11.71	11.45	11.36	11.39	11.51

Mass flow in kg/h

10	58	73	90	110	134	-	-	-	-
20	56	72	89	110	133	161	193	-	-
30	55	70	88	108	132	159	190	226	265
40	-	-	85	105	129	156	187	222	261
50	-	-	-	102	125	151	181	216	254
60	-	-	-	-	120	145	175	208	246

Coefficient of performance (C.O.P.)

10	2.79	3.46	4.26	5.19	6.25	-	-	-	-
20	2.00	2.52	3.13	3.85	4.66	5.60	6.64	-	-
30	1.40	1.80	2.25	2.79	3.40	4.11	4.92	5.83	6.83
40	-	-	1.57	1.96	2.41	2.93	3.54	4.23	5.00
50	-	-	-	1.33	1.65	2.02	2.45	2.95	3.54
60	-	-	-	-	1.08	1.33	1.63	1.98	2.40

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

Cooling capacity	4 952	W
Power input	2 475	W
Current consumption	8.55	A
Mass flow	127	kg/h
C.O.P.	2.00	

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	2 814	3 514	4 358	5 365	6 551	-	-	-	-
20	2 508	3 167	3 952	4 879	5 965	7 227	8 681	-	-
30	-	2 814	3 526	4 362	5 336	6 467	7 771	9 264	10 963
40	-	-	3 084	3 815	4 666	5 654	6 795	8 105	9 602
50	-	-	-	-	3 956	4 789	5 754	6 870	8 152
60	-	-	-	-	-	3 872	4 651	5 560	6 616

Power input in W

10	964	988	1 006	1 017	1 020	-	-	-	-
20	1 182	1 208	1 230	1 247	1 259	1 264	1 262	-	-
30	-	1 499	1 520	1 540	1 556	1 567	1 573	1 574	1 567
40	-	-	1 904	1 921	1 936	1 949	1 960	1 966	1 968
50	-	-	-	-	2 428	2 438	2 448	2 456	2 462
60	-	-	-	-	-	3 061	3 065	3 071	3 076

Current consumption in A

10	6.65	6.57	6.54	6.58	6.68	-	-	-	-
20	6.55	6.47	6.43	6.43	6.47	6.55	6.67	-	-
30	-	6.97	6.95	6.95	6.96	7.00	7.06	7.14	7.23
40	-	-	7.93	7.95	7.98	8.01	8.04	8.07	8.09
50	-	-	-	-	9.36	9.41	9.44	9.45	9.44
60	-	-	-	-	-	11.03	11.09	11.12	11.11

Mass flow in kg/h

10	57	72	89	110	135	-	-	-	-
20	55	70	88	109	134	163	198	-	-
30	-	68	86	107	131	161	195	236	283
40	-	-	83	104	128	157	191	231	278
50	-	-	-	-	124	153	186	226	272
60	-	-	-	-	-	147	180	219	264

Coefficient of performance (C.O.P.)

10	2.92	3.56	4.33	5.28	6.42	-	-	-	-
20	2.12	2.62	3.21	3.91	4.74	5.72	6.88	-	-
30	-	1.88	2.32	2.83	3.43	4.13	4.94	5.89	7.00
40	-	-	1.62	1.99	2.41	2.90	3.47	4.12	4.88
50	-	-	-	-	1.63	1.96	2.35	2.80	3.31
60	-	-	-	-	-	1.27	1.52	1.81	2.15

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

Cooling capacity	4 316	W
Power input	2 166	W
Current consumption	8.63	A
Mass flow	126	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		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
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	2 723	3 420	4 267	5 282	6 482	-	-	-	-
20	2 380	3 031	3 813	4 745	5 845	7 129	8 614	-	-
30	2 044	2 636	3 341	4 178	5 165	6 321	7 663	9 206	10 963
40	1 715	2 237	2 853	3 582	4 445	5 460	6 646	8 021	9 602
50	-	-	2 347	2 959	3 685	4 546	5 564	6 760	8 152
60	-	-	-	-	2 881	3 578	4 416	5 420	6 616

Power input in W

10	964	988	1 006	1 017	1 020	-	-	-	-
20	1 182	1 208	1 230	1 247	1 259	1 264	1 262	-	-
30	1 475	1 499	1 520	1 540	1 556	1 567	1 573	1 574	1 567
40	1 870	1 887	1 904	1 921	1 936	1 949	1 960	1 966	1 968
50	-	-	2 407	2 417	2 428	2 438	2 448	2 456	2 462
60	-	-	-	-	3 057	3 061	3 065	3 071	3 076

Current consumption in A

10	6.65	6.57	6.54	6.58	6.68	-	-	-	-
20	6.55	6.47	6.43	6.43	6.47	6.55	6.67	-	-
30	7.02	6.97	6.95	6.95	6.96	7.00	7.06	7.14	7.23
40	7.88	7.90	7.93	7.95	7.98	8.01	8.04	8.07	8.09
50	-	-	9.20	9.29	9.36	9.41	9.44	9.45	9.44
60	-	-	-	-	10.92	11.03	11.09	11.12	11.11

Mass flow in kg/h

10	67	84	102	124	149	-	-	-	-
20	65	82	101	122	147	176	209	-	-
30	63	80	98	120	145	173	206	243	283
40	61	77	96	117	141	169	202	238	278
50	-	-	92	113	137	165	196	232	272
60	-	-	-	-	132	159	190	225	264

Coefficient of performance (C.O.P.)

10	2.82	3.46	4.24	5.20	6.36	-	-	-	-
20	2.01	2.51	3.10	3.80	4.64	5.64	6.83	-	-
30	1.39	1.76	2.20	2.71	3.32	4.03	4.87	5.85	7.00
40	0.92	1.19	1.50	1.87	2.30	2.80	3.39	4.08	4.88
50	-	-	0.98	1.22	1.52	1.86	2.27	2.75	3.31
60	-	-	-	-	0.94	1.17	1.44	1.77	2.15

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

Cooling capacity	4 070	W
Power input	2 166	W
Current consumption	8.63	A
Mass flow	139	kg/h
C.O.P.	1.88	

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	3 380	4 219	5 237	6 454	7 891	-	-	-	-
20	3 032	3 819	4 761	5 877	7 189	8 716	10 478	-	-
30	-	3 420	4 272	5 274	6 447	7 811	9 385	11 191	13 248
40	-	-	3 769	4 642	5 662	6 849	8 223	9 804	11 612
50	-	-	-	-	4 834	5 830	6 989	8 331	9 876
60	-	-	-	-	-	4 753	5 683	6 772	8 042

Power input in W

10	1 201	1 244	1 274	1 294	1 304	-	-	-	-
20	1 430	1 475	1 512	1 540	1 561	1 574	1 580	-	-
30	-	1 794	1 830	1 861	1 886	1 907	1 923	1 936	1 945
40	-	-	2 260	2 288	2 312	2 335	2 355	2 375	2 393
50	-	-	-	-	2 868	2 887	2 906	2 927	2 949
60	-	-	-	-	-	3 593	3 606	3 622	3 642

Current consumption in A

10	6.47	6.32	6.26	6.27	6.36	-	-	-	-
20	6.40	6.30	6.25	6.25	6.29	6.38	6.52	-	-
30	-	6.81	6.82	6.85	6.89	6.95	7.02	7.11	7.22
40	-	-	7.78	7.88	7.97	8.04	8.09	8.13	8.15
50	-	-	-	-	9.33	9.46	9.54	9.57	9.56
60	-	-	-	-	-	11.01	11.17	11.24	11.24

Mass flow in kg/h

10	68	86	107	133	163	-	-	-	-
20	67	85	106	131	161	197	239	-	-
30	-	83	104	129	159	194	236	285	343
40	-	-	102	126	156	190	231	280	336
50	-	-	-	-	152	186	226	274	329
60	-	-	-	-	-	181	220	267	321

Coefficient of performance (C.O.P.)

10	2.81	3.39	4.11	4.99	6.05	-	-	-	-
20	2.12	2.59	3.15	3.82	4.61	5.54	6.63	-	-
30	-	1.91	2.33	2.83	3.42	4.10	4.88	5.78	6.81
40	-	-	1.67	2.03	2.45	2.93	3.49	4.13	4.85
50	-	-	-	-	1.69	2.02	2.40	2.85	3.35
60	-	-	-	-	-	1.32	1.58	1.87	2.21

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

Cooling capacity	5 253	W
Power input	2 572	W
Current consumption	8.63	A
Mass flow	154	kg/h
C.O.P.	2.04	

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
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	3 271	4 107	5 128	6 354	7 807	-	-	-	-
20	2 878	3 655	4 594	5 717	7 044	8 598	10 397	-	-
30	2 499	3 204	4 048	5 052	6 240	7 634	9 255	11 122	13 248
40	2 134	2 752	3 486	4 359	5 393	6 613	8 042	9 702	11 612
50	-	-	2 907	3 635	4 502	5 535	6 758	8 197	9 876
60	-	-	-	-	3 560	4 392	5 396	6 602	8 042

Power input in W

10	1 201	1 244	1 274	1 294	1 304	-	-	-	-
20	1 430	1 475	1 512	1 540	1 561	1 574	1 580	-	-
30	1 752	1 794	1 830	1 861	1 886	1 907	1 923	1 936	1 945
40	2 196	2 230	2 260	2 288	2 312	2 335	2 355	2 375	2 393
50	-	-	2 832	2 850	2 868	2 887	2 906	2 927	2 949
60	-	-	-	-	3 584	3 593	3 606	3 622	3 642

Current consumption in A

10	6.47	6.32	6.26	6.27	6.36	-	-	-	-
20	6.40	6.30	6.25	6.25	6.29	6.38	6.52	-	-
30	6.81	6.81	6.82	6.85	6.89	6.95	7.02	7.11	7.22
40	7.51	7.65	7.78	7.88	7.97	8.04	8.09	8.13	8.15
50	-	-	8.92	9.15	9.33	9.46	9.54	9.57	9.56
60	-	-	-	-	10.77	11.01	11.17	11.24	11.24

Mass flow in kg/h

10	81	100	123	149	180	-	-	-	-
20	79	99	121	147	177	212	252	-	-
30	78	97	119	145	175	209	249	293	343
40	76	95	117	142	171	205	244	288	336
50	-	-	114	139	167	200	238	281	329
60	-	-	-	-	163	195	232	274	321

Coefficient of performance (C.O.P.)

10	2.72	3.30	4.02	4.91	5.99	-	-	-	-
20	2.01	2.48	3.04	3.71	4.51	5.46	6.58	-	-
30	1.43	1.79	2.21	2.71	3.31	4.00	4.81	5.75	6.81
40	0.97	1.23	1.54	1.91	2.33	2.83	3.41	4.09	4.85
50	-	-	1.03	1.28	1.57	1.92	2.33	2.80	3.35
60	-	-	-	-	0.99	1.22	1.50	1.82	2.21

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

Cooling capacity	4 953	W
Power input	2 572	W
Current consumption	8.63	A
Mass flow	169	kg/h
C.O.P.	1.93	

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