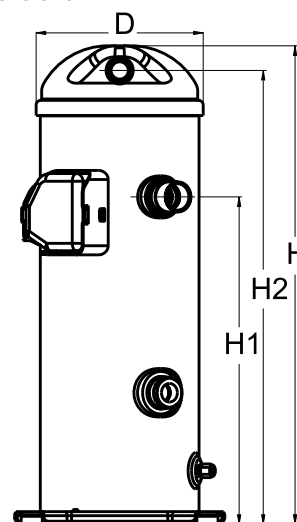


General Characteristics

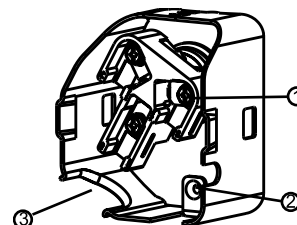
Model number (on compressor nameplate)	MLZ058T2LC9	MLZ058T2LC9
Code number for Singlepack*	121U8052	120U8052
Code number for Industrial pack**	121U8051	120U8051
Drawing number	0SR6167B-2	0SR6167B-2
Suction and discharge connections	Brazed	Brazed
Suction connection	1-1/8" ODF	1-1/8" ODF
Discharge connection	7/8" ODF	7/8" 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	None	None
Swept volume	125.95 cm ³ /rev	
Displacement @ Nominal speed	21.9 m ³ /h @ 2900 rpm - 26.4 m ³ /h @ 3500 rpm	
Net weight	47 kg	
Oil charge	2.66 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	7.26 kg	
Approved refrigerants	R404A, R507, R134a, R407C, R22	

Dimensions


D=185 mm
H=536 mm
H1=369 mm
H2=509 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	0.37 Ω
Winding resistance between phases 1-3 +/- 7% at 25°C	0.37 Ω
Winding resistance between phases 2-3 +/- 7% at 25°C	0.37 Ω
Rated Load Amps (RLA)	25.6 A
Maximum Continuous Current (MCC)	40 A
Locked Rotor Amps (LRA)	190 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.

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

Rotolock accessories, discharge side
Code no.

Rotolock valve, V05 (1-1/4" Rotolock, 7/8" ODF)	8168030
Gasket, 1-3/4"	8156132

Rotolock accessories, sets
Code no.

Solder sleeve adapter set (1-3/4" Rotolock, 1-1/8" ODF), (1-1/4" Rotolock, 7/8" ODF)	120Z0125
Valve set, V02(1"3/4~1"1/8), V05(1"1/4~7/8")	120Z0403
Gasket set, 1", 1-1/4", 1-3/4", OSG gaskets black & white	8156009

Oil / lubricants
Code no.

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

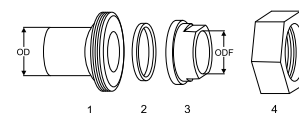
Belt type crankcase heater, 70 W, 230 V, UL	120Z5011
Belt type crankcase heater, 65 W, 230 V, CE mark, UL	120Z0059

Miscellaneous accessories
Code no.

Acoustic hood	120Z5045
Discharge thermostat kit	7750009
IP54 upgrade kit	118U0057

Spare parts
Code no.

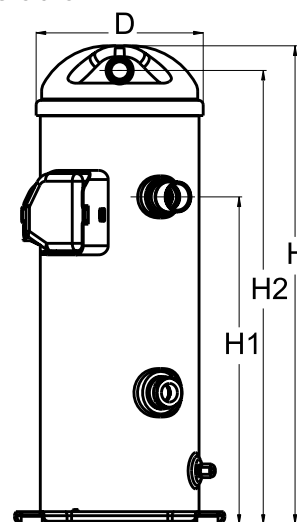
Mounting kit for 1 scroll compressor including 4 grommets, 4 sleeves, 4 bolts, 4 washers	120Z5005
Terminal box cover	120Z5018

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

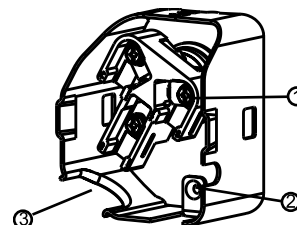
Model number (on compressor nameplate)	MLZ058T2LC9A	MLZ058T2LC9A
Code number for Singlepack*	121U8683	121L8683
Code number for Industrial pack**	121U8682	121L8682
Drawing number	0SR6167B-2	0SR6167B-2
Suction and discharge connections	Brazed	Brazed
Suction connection	1-1/8" ODF	1-1/8" ODF
Discharge connection	7/8" ODF	7/8" 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	None	None
Swept volume	125.95 cm ³ /rev	
Displacement @ Nominal speed	21.9 m ³ /h @ 2900 rpm - 26.4 m ³ /h @ 3500 rpm	
Net weight	47 kg	
Oil charge	2.66 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	7.26 kg	
Approved refrigerants	R404A,R507,R134a,R407A,R407F,R448A,R449A,R452A,R22	

Dimensions


D=185 mm
H=536 mm
H1=369 mm
H2=509 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	0.37 Ω
Winding resistance between phases 1-3 +/- 7% at 25°C	0.37 Ω
Winding resistance between phases 2-3 +/- 7% at 25°C	0.37 Ω
Rated Load Amps (RLA)	25.6 A
Maximum Continuous Current (MCC)	40 A
Locked Rotor Amps (LRA)	190 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.

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

Rotolock accessories, discharge side

Code no.

Rotolock valve, V05 (1-1/4" Rotolock, 7/8" ODF)	8168030
Gasket, 1-3/4"	8156132

Rotolock accessories, sets

Code no.

Solder sleeve adapter set (1-3/4" Rotolock, 1-1/8" ODF), (1-1/4" Rotolock, 7/8" ODF)	120Z0125
Valve set, V02(1"3/4~1"1/8), V05(1"1/4~7/8")	120Z0403
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, 230 V, UL	120Z5011
Belt type crankcase heater, 65 W, 230 V, CE mark, UL	120Z0059

Miscellaneous accessories

Code no.

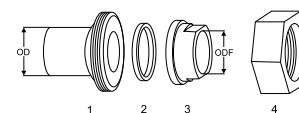
Acoustic hood	120Z5085
Discharge thermostat kit	7750009
IP54 upgrade kit	118U0057

Spare parts

Code no.

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

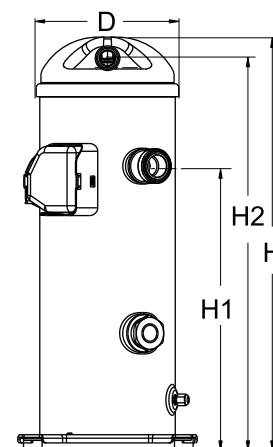
Solder sleeve adapter set



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

General Characteristics

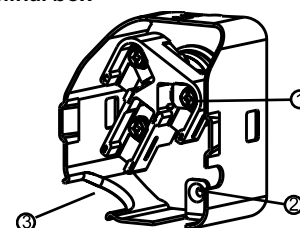
Model number (on compressor nameplate)		MLZ058T2LQ9
Code number for Singlepack*		121U8627
Code number for Industrial pack**		121U8626
Drawing number		0SR6307B-2
Suction and discharge connections		Rotolock
Suction connection		1-3/4 " Rotolock
Discharge connection		1-1/4 " Rotolock
Suction connection with supplied sleeve		1-1/8 " -
Discharge connection with supplied sleeve	- "	7/8 " -
Oil sight glass		Threaded
Oil equalisation connection		None
Oil drain connection		None
LP gauge port		None
IPR valve		None
Swept volume		125.95 cm ³ /rev
Displacement @ Nominal speed		21.9 m ³ /h @ 2900 rpm - 26.4 m ³ /h @ 3500 rpm
Net weight		47 kg
Oil charge		2.66 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		7.26 kg
Approved refrigerants		R404A, R507, R134a, R407C, R22

Dimensions


D=184 mm
H=535.8 mm
H1=369.2 mm
H2=508.6 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	0.37 Ω
Winding resistance between phases 1-3 +/- 7% at 25°C	0.37 Ω
Winding resistance between phases 2-3 +/- 7% at 25°C	0.37 Ω
Rated Load Amps (RLA)	25.6 A
Maximum Continuous Current (MCC)	40 A
Locked Rotor Amps (LRA)	190 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, V02 (1-3/4" Rotolock, 1-1/8" ODF)	8168028
Gasket, 1-3/4"	8156132

Rotolock accessories, discharge side
Code no.

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

Rotolock accessories, sets
Code no.

Teflon seals, sleeves, nuts for discharge and suction (1"1/4 and 1"1/4)	120Z5076
Gasket set, 1", 1-1/4", 1-3/4", OSG gaskets black & white	8156009

Oil / lubricants
Code no.

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

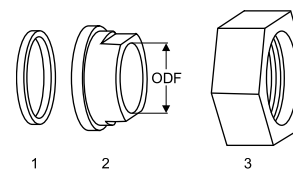
Belt type crankcase heater, 70 W, 230 V, UL	120Z5011
Belt type crankcase heater, 65 W, 230 V, CE mark, UL	120Z0059

Miscellaneous accessories
Code no.

Acoustic hood	120Z5045
Discharge thermostat kit	7750009
IP54 upgrade kit	118U0057

Spare parts
Code no.

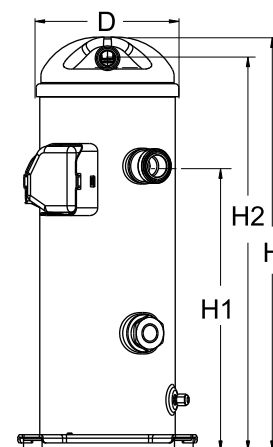
Mounting kit for 1 scroll compressor including 4 grommets, 4 sleeves, 4 bolts, 4 washers	120Z5005
Terminal box cover	120Z5018

Gaskets, sleeves and nuts


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

General Characteristics

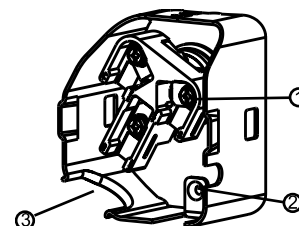
Model number (on compressor nameplate)	MLZ058T2LC9A	MLZ058T2LQ9A
Code number for Singlepack*	120U8683	121U8817
Code number for Industrial pack**	120U8682	121U8816
Drawing number	0SR6167B-2	0SR6307B-2
Suction and discharge connections	Brazed	Rotolock
Suction connection	1-1/8" ODF	1-3/4" Rotolock
Discharge connection	7/8" ODF	1-1/4" Rotolock
Suction connection with supplied sleeve		1-1/8" -
Discharge connection with supplied sleeve	- "	7/8" -
Oil sight glass	Threaded	Threaded
Oil equalisation connection	None	None
Oil drain connection	1/4" flare	None
LP gauge port	None	None
IPR valve	None	None
Swept volume	125.95 cm ³ /rev	
Displacement @ Nominal speed	21.9 m ³ /h @ 2900 rpm - 26.4 m ³ /h @ 3500 rpm	
Net weight	47 kg	
Oil charge	2.66 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	7.26 kg	
Approved refrigerants	R404A,R507,R134a,R407A,R407F,R448A,R449A,R452A,R22	

Dimensions


D=184 mm
H=535.8 mm
H1=369.2 mm
H2=508.6 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	0.37 Ω
Winding resistance between phases 1-3 +/- 7% at 25°C	0.37 Ω
Winding resistance between phases 2-3 +/- 7% at 25°C	0.37 Ω
Rated Load Amps (RLA)	25.6 A
Maximum Continuous Current (MCC)	40 A
Locked Rotor Amps (LRA)	190 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, V02 (1-3/4" Rotolock, 1-1/8" ODF)	8168028
Gasket, 1-3/4"	8156132

Rotolock accessories, discharge side

Code no.

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

Rotolock accessories, sets

Code no.

Teflon seals, sleeves, nuts for discharge and suction (1"1/4 and 1"1/4)	120Z5076
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, 230 V, UL	120Z5011
Belt type crankcase heater, 65 W, 230 V, CE mark, UL	120Z0059

Miscellaneous accessories

Code no.

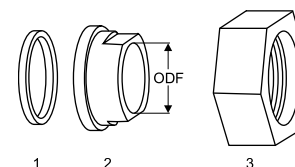
Acoustic hood	120Z5085
Discharge thermostat kit	7750009
IP54 upgrade kit	118U0057

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	10 935	13 583	16 650	20 171	-	-	-	-	-
20	10 397	12 955	15 930	19 358	23 271	-	-	-	-
30	9 370	11 691	14 424	17 606	21 271	25 449	30 158	-	-
40	8 516	10 585	13 060	15 979	19 382	23 298	27 755	-	-
50	-	9 296	11 497	14 139	17 262	20 903	25 092	-	-
60	-	-	-	11 752	14 577	17 925	21 831	-	-
68	-	-	-	-	-	14 899	18 564	-	-

Power input in W

16	2 838	2 796	2 735	2 683	-	-	-	-	-
20	3 188	3 169	3 125	3 083	3 071	-	-	-	-
30	3 931	3 967	3 963	3 946	3 942	3 981	4 089	-	-
40	4 674	4 764	4 798	4 803	4 806	4 836	4 919	-	-
50	-	5 796	5 866	5 891	5 899	5 918	5 974	-	-
60	-	-	-	7 446	7 457	7 463	7 491	-	-
68	-	-	-	-	-	9 192	9 196	-	-

Current consumption in A

16	10.92	10.76	10.53	10.33	-	-	-	-	-
20	12.27	12.20	12.03	11.87	11.82	-	-	-	-
30	15.13	15.27	15.25	15.19	15.17	15.32	15.74	-	-
40	17.99	18.34	18.47	18.49	18.50	18.61	18.93	-	-
50	-	22.31	22.58	22.67	22.71	22.78	23.00	-	-
60	-	-	-	28.66	28.70	28.73	28.83	-	-
68	-	-	-	-	-	35.38	35.39	-	-

Mass flow in kg/h

16	195	253	315	382	-	-	-	-	-
20	197	252	312	378	448	-	-	-	-
30	202	252	308	370	439	513	591	-	-
40	199	246	301	363	432	507	588	-	-
50	-	226	281	346	418	498	584	-	-
60	-	-	-	310	389	476	569	-	-
68	-	-	-	-	-	443	545	-	-

Coefficient of performance (C.O.P.)

16	3.85	4.86	6.09	7.52	-	-	-	-	-
20	3.26	4.09	5.10	6.28	7.58	-	-	-	-
30	2.38	2.95	3.64	4.46	5.40	6.39	7.37	-	-
40	1.82	2.22	2.72	3.33	4.03	4.82	5.64	-	-
50	-	1.60	1.96	2.40	2.93	3.53	4.20	-	-
60	-	-	-	1.58	1.95	2.40	2.91	-	-
68	-	-	-	-	-	1.62	2.02	-	-

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

Cooling capacity	12 324	W
Power input	5 288	W
Current consumption	20.35	A
Mass flow	293	kg/h
C.O.P.	2.33	

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 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	10 668	13 292	16 346	19 875	-	-	-	-	-
20	10 171	12 706	15 668	19 100	23 044	-	-	-	-
30	9 234	11 538	14 259	17 438	21 119	25 345	30 158	-	-
40	-	10 525	12 988	15 900	19 303	23 241	27 755	-	-
50	-	-	-	14 148	17 258	20 892	25 092	-	-
60	-	-	-	-	14 645	17 960	21 831	-	-
68	-	-	-	-	-	-	18 564	-	-

Power input in W

16	2 838	2 796	2 735	2 683	-	-	-	-	-
20	3 188	3 169	3 125	3 083	3 071	-	-	-	-
30	3 931	3 967	3 963	3 946	3 942	3 981	4 089	-	-
40	-	4 764	4 798	4 803	4 806	4 836	4 919	-	-
50	-	-	-	5 891	5 899	5 918	5 974	-	-
60	-	-	-	-	7 457	7 463	7 491	-	-
68	-	-	-	-	-	-	9 196	-	-

Current consumption in A

16	10.92	10.76	10.53	10.33	-	-	-	-	-
20	12.27	12.20	12.03	11.87	11.82	-	-	-	-
30	15.13	15.27	15.25	15.19	15.17	15.32	15.74	-	-
40	-	18.34	18.47	18.49	18.50	18.61	18.93	-	-
50	-	-	-	22.67	22.71	22.78	23.00	-	-
60	-	-	-	-	28.70	28.73	28.83	-	-
68	-	-	-	-	-	-	35.39	-	-

Mass flow in kg/h

16	171	227	288	357	-	-	-	-	-
20	173	226	286	353	427	-	-	-	-
30	178	226	282	346	419	500	591	-	-
40	-	221	275	339	412	495	588	-	-
50	-	-	-	323	399	486	584	-	-
60	-	-	-	-	371	464	569	-	-
68	-	-	-	-	-	-	545	-	-

Coefficient of performance (C.O.P.)

16	3.76	4.75	5.98	7.41	-	-	-	-	-
20	3.19	4.01	5.01	6.20	7.50	-	-	-	-
30	2.35	2.91	3.60	4.42	5.36	6.37	7.37	-	-
40	-	2.21	2.71	3.31	4.02	4.81	5.64	-	-
50	-	-	-	2.40	2.93	3.53	4.20	-	-
60	-	-	-	-	1.96	2.41	2.91	-	-
68	-	-	-	-	-	-	2.02	-	-

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

Cooling capacity	12 300	W
Power input	5 288	W
Current consumption	20.35	A
Mass flow	268	kg/h
C.O.P.	2.33	

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 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	12 564	15 810	19 601	23 922	-	-	-	-	-
20	12 100	15 246	18 937	23 158	27 892	-	-	-	-
30	11 075	13 952	17 373	21 325	25 793	30 758	36 188	-	-
40	10 074	12 655	15 777	19 431	23 606	28 286	33 446	-	-
50	-	11 149	13 944	17 272	21 126	25 494	30 357	-	-
60	-	-	-	14 645	18 147	22 174	26 715	-	-
68	-	-	-	-	-	19 003	23 262	-	-

Power input in W

16	3 232	3 329	3 459	3 620	-	-	-	-	-
20	3 604	3 704	3 828	3 976	4 147	-	-	-	-
30	4 497	4 615	4 738	4 866	4 998	5 133	5 270	-	-
40	5 457	5 611	5 751	5 877	5 987	6 080	6 157	-	-
50	-	6 842	7 017	7 158	7 263	7 334	7 368	-	-
60	-	-	-	8 858	8 977	9 042	9 051	-	-
68	-	-	-	-	-	10 836	10 838	-	-

Current consumption in A

16	10.14	10.45	10.85	11.36	-	-	-	-	-
20	11.31	11.62	12.01	12.48	13.01	-	-	-	-
30	14.11	14.48	14.87	15.27	15.68	16.11	16.54	-	-
40	17.12	17.61	18.05	18.44	18.79	19.08	19.32	-	-
50	-	21.47	22.02	22.46	22.79	23.01	23.12	-	-
60	-	-	-	27.79	28.17	28.37	28.40	-	-
68	-	-	-	-	-	34.00	34.01	-	-

Mass flow in kg/h

16	257	314	379	453	-	-	-	-	-
20	254	312	377	451	534	-	-	-	-
30	247	305	371	446	530	623	725	-	-
40	236	294	360	436	521	617	721	-	-
50	-	274	341	418	505	602	709	-	-
60	-	-	-	389	477	577	686	-	-
68	-	-	-	-	-	545	657	-	-

Coefficient of performance (C.O.P.)

16	3.89	4.75	5.67	6.61	-	-	-	-	-
20	3.36	4.12	4.95	5.82	6.73	-	-	-	-
30	2.46	3.02	3.67	4.38	5.16	5.99	6.87	-	-
40	1.85	2.26	2.74	3.31	3.94	4.65	5.43	-	-
50	-	1.63	1.99	2.41	2.91	3.48	4.12	-	-
60	-	-	-	1.65	2.02	2.45	2.95	-	-
68	-	-	-	-	-	1.75	2.15	-	-

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

Cooling capacity	14 903	W
Power input	6 343	W
Current consumption	19.90	A
Mass flow	352	kg/h
C.O.P.	2.35	

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	78	dB(A)
With acoustic hood	70	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	12 258	15 472	19 244	23 570	-	-	-	-	-
20	11 836	14 953	18 625	22 849	27 621	-	-	-	-
30	10 915	13 770	17 174	21 121	25 609	30 633	36 188	-	-
40	-	12 584	15 691	19 335	23 511	28 217	33 446	-	-
50	-	-	-	17 283	21 121	25 480	30 357	-	-
60	-	-	-	-	18 231	22 217	26 715	-	-
68	-	-	-	-	-	-	23 262	-	-

Power input in W

16	3 232	3 329	3 459	3 620	-	-	-	-	-
20	3 604	3 704	3 828	3 976	4 147	-	-	-	-
30	4 497	4 615	4 738	4 866	4 998	5 133	5 270	-	-
40	-	5 611	5 751	5 877	5 987	6 080	6 157	-	-
50	-	-	-	7 158	7 263	7 334	7 368	-	-
60	-	-	-	-	8 977	9 042	9 051	-	-
68	-	-	-	-	-	-	10 838	-	-

Current consumption in A

16	10.14	10.45	10.85	11.36	-	-	-	-	-
20	11.31	11.62	12.01	12.48	13.01	-	-	-	-
30	14.11	14.48	14.87	15.27	15.68	16.11	16.54	-	-
40	-	17.61	18.05	18.44	18.79	19.08	19.32	-	-
50	-	-	-	22.46	22.79	23.01	23.12	-	-
60	-	-	-	-	28.17	28.37	28.40	-	-
68	-	-	-	-	-	-	34.01	-	-

Mass flow in kg/h

16	226	282	347	423	-	-	-	-	-
20	224	280	345	421	509	-	-	-	-
30	218	274	339	416	505	608	725	-	-
40	-	264	329	407	497	602	721	-	-
50	-	-	-	390	482	588	709	-	-
60	-	-	-	-	455	563	686	-	-
68	-	-	-	-	-	-	657	-	-

Coefficient of performance (C.O.P.)

16	3.79	4.65	5.56	6.51	-	-	-	-	-
20	3.28	4.04	4.87	5.75	6.66	-	-	-	-
30	2.43	2.98	3.62	4.34	5.12	5.97	6.87	-	-
40	-	2.24	2.73	3.29	3.93	4.64	5.43	-	-
50	-	-	-	2.41	2.91	3.47	4.12	-	-
60	-	-	-	-	2.03	2.46	2.95	-	-
68	-	-	-	-	-	-	2.15	-	-

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

Cooling capacity	14 874	W
Power input	6 343	W
Current consumption	19.90	A
Mass flow	322	kg/h
C.O.P.	2.34	

Pressure switch settings

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

Sound power data

Sound power level	78	dB(A)
With acoustic hood	70	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	7 733	9 690	11 995	14 684	17 794	-	-	-	-
30	7 069	8 930	11 113	13 655	16 593	19 961	-	-	-
40	6 195	7 923	9 942	12 288	14 998	18 107	21 652	-	-
50	-	6 864	8 705	10 842	13 310	16 146	19 385	-	-
60	-	-	7 413	9 327	11 540	14 089	17 010	-	-
70	-	-	-	7 754	9 699	11 947	14 536	-	-
73	-	-	-	7 273	9 134	11 290	13 776	-	-

Power input in W

22	2 176	2 201	2 269	2 360	2 453	-	-	-	-
30	2 610	2 636	2 694	2 765	2 828	2 865	-	-	-
40	3 216	3 263	3 329	3 396	3 442	3 449	3 395	-	-
50	-	3 966	4 063	4 147	4 199	4 198	4 124	-	-
60	-	-	4 874	4 999	5 078	5 092	5 021	-	-
70	-	-	-	5 932	6 062	6 113	6 067	-	-
73	-	-	-	6 225	6 374	6 441	6 406	-	-

Current consumption in A

22	8.38	8.47	8.73	9.08	9.44	-	-	-	-
30	10.04	10.14	10.37	10.64	10.89	11.03	-	-	-
40	12.38	12.56	12.81	13.07	13.25	13.27	13.07	-	-
50	-	15.26	15.64	15.96	16.16	16.16	15.87	-	-
60	-	-	18.76	19.24	19.55	19.60	19.33	-	-
70	-	-	-	22.83	23.33	23.53	23.35	-	-
73	-	-	-	23.96	24.53	24.79	24.66	-	-

Mass flow in kg/h

22	166	206	250	301	357	-	-	-	-
30	162	202	247	298	355	418	-	-	-
40	159	198	243	294	351	416	488	-	-
50	-	194	238	289	346	412	486	-	-
60	-	-	232	282	339	405	480	-	-
70	-	-	-	273	330	395	470	-	-
73	-	-	-	270	326	392	466	-	-

Coefficient of performance (C.O.P.)

22	3.55	4.40	5.29	6.22	7.25	-	-	-	-
30	2.71	3.39	4.13	4.94	5.87	6.97	-	-	-
40	1.93	2.43	2.99	3.62	4.36	5.25	6.38	-	-
50	-	1.73	2.14	2.61	3.17	3.85	4.70	-	-
60	-	-	1.52	1.87	2.27	2.77	3.39	-	-
70	-	-	-	1.31	1.60	1.95	2.40	-	-
73	-	-	-	1.17	1.43	1.75	2.15	-	-

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

Cooling capacity	7 399	W
Power input	3 606	W
Current consumption	13.88	A
Mass flow	196	kg/h
C.O.P.	2.05	

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 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	7 857	9 803	12 088	14 748	17 823	-	-	-	-
30	-	9 095	11 256	13 761	16 649	19 961	-	-	-
40	-	-	10 147	12 447	15 087	18 107	21 550	-	-
50	-	-	8 970	11 052	13 432	16 146	19 231	-	-
60	-	-	-	9 587	11 695	14 089	-	-	-
70	-	-	-	-	9 886	11 947	-	-	-
73	-	-	-	-	9 331	11 290	-	-	-

Power input in W

22	2 176	2 201	2 269	2 360	2 453	-	-	-	-
30	-	2 636	2 694	2 765	2 828	2 865	-	-	-
40	-	-	3 329	3 396	3 442	3 449	3 395	-	-
50	-	-	4 063	4 147	4 199	4 198	4 124	-	-
60	-	-	-	4 999	5 078	5 092	-	-	-
70	-	-	-	-	6 062	6 113	-	-	-
73	-	-	-	-	6 374	6 441	-	-	-

Current consumption in A

22	8.38	8.47	8.73	9.08	9.44	-	-	-	-
30	-	10.14	10.37	10.64	10.89	11.03	-	-	-
40	-	-	12.81	13.07	13.25	13.27	13.07	-	-
50	-	-	15.64	15.96	16.16	16.16	15.87	-	-
60	-	-	-	19.24	19.55	19.60	-	-	-
70	-	-	-	-	23.33	23.53	-	-	-
73	-	-	-	-	24.53	24.79	-	-	-

Mass flow in kg/h

22	149	189	234	287	348	-	-	-	-
30	-	185	231	285	346	418	-	-	-
40	-	-	227	281	343	416	501	-	-
50	-	-	223	276	338	412	498	-	-
60	-	-	-	269	332	405	-	-	-
70	-	-	-	-	322	395	-	-	-
73	-	-	-	-	319	392	-	-	-

Coefficient of performance (C.O.P.)

22	3.61	4.45	5.33	6.25	7.27	-	-	-	-
30	-	3.45	4.18	4.98	5.89	6.97	-	-	-
40	-	-	3.05	3.67	4.38	5.25	6.35	-	-
50	-	-	2.21	2.67	3.20	3.85	4.66	-	-
60	-	-	-	1.92	2.30	2.77	-	-	-
70	-	-	-	-	1.63	1.95	-	-	-
73	-	-	-	-	1.46	1.75	-	-	-

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 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	9 410	11 836	14 647	17 858	21 487	-	-	-	-
30	8 613	10 901	13 571	16 638	20 120	24 034	-	-	-
40	7 617	9 690	12 141	14 985	18 241	21 924	26 053	-	-
50	-	8 451	10 635	13 210	16 191	19 597	23 445	-	-
60	-	-	9 074	11 332	13 992	17 073	20 592	-	-
70	-	-	-	9 371	11 664	14 372	17 514	-	-
73	-	-	-	8 770	10 943	13 531	16 550	-	-

Power input in W

22	2 627	2 677	2 779	2 916	3 066	-	-	-	-
30	3 097	3 144	3 234	3 348	3 467	3 571	-	-	-
40	3 802	3 865	3 959	4 066	4 166	4 239	4 265	-	-
50	-	4 714	4 835	4 957	5 060	5 124	5 131	-	-
60	-	-	5 837	5 996	6 124	6 202	6 211	-	-
70	-	-	-	7 157	7 333	7 448	7 481	-	-
73	-	-	-	7 526	7 720	7 850	7 895	-	-

Current consumption in A

22	8.24	8.40	8.72	9.15	9.62	-	-	-	-
30	9.72	9.86	10.15	10.51	10.88	11.20	-	-	-
40	11.93	12.13	12.42	12.76	13.07	13.30	13.38	-	-
50	-	14.79	15.17	15.55	15.88	16.08	16.10	-	-
60	-	-	18.31	18.81	19.22	19.46	19.49	-	-
70	-	-	-	22.46	23.01	23.37	23.47	-	-
73	-	-	-	23.61	24.22	24.63	24.77	-	-

Mass flow in kg/h

22	201	249	303	364	432	-	-	-	-
30	201	248	302	363	432	507	-	-	-
40	197	244	297	359	428	504	588	-	-
50	-	236	290	351	421	498	583	-	-
60	-	-	281	342	412	489	575	-	-
70	-	-	-	333	402	481	567	-	-
73	-	-	-	330	400	478	565	-	-

Coefficient of performance (C.O.P.)

22	3.58	4.42	5.27	6.12	7.01	-	-	-	-
30	2.78	3.47	4.20	4.97	5.80	6.73	-	-	-
40	2.00	2.51	3.07	3.69	4.38	5.17	6.11	-	-
50	-	1.79	2.20	2.66	3.20	3.82	4.57	-	-
60	-	-	1.55	1.89	2.28	2.75	3.32	-	-
70	-	-	-	1.31	1.59	1.93	2.34	-	-
73	-	-	-	1.17	1.42	1.72	2.10	-	-

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

Cooling capacity	9 073	W
Power input	4 275	W
Current consumption	13.41	A
Mass flow	240	kg/h
C.O.P.	2.12	

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	78	dB(A)
With acoustic hood	70	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	9 560	11 974	14 760	17 935	21 523	-	-	-	-
30	-	11 103	13 745	16 766	20 188	24 034	-	-	-
40	-	-	12 391	15 178	18 349	21 924	25 931	-	-
50	-	-	10 959	13 466	16 340	19 597	23 258	-	-
60	-	-	-	11 648	14 181	17 073	-	-	-
70	-	-	-	-	11 889	14 372	-	-	-
73	-	-	-	-	11 179	13 531	-	-	-

Power input in W

22	2 627	2 677	2 779	2 916	3 066	-	-	-	-
30	-	3 144	3 234	3 348	3 467	3 571	-	-	-
40	-	-	3 959	4 066	4 166	4 239	4 265	-	-
50	-	-	4 835	4 957	5 060	5 124	5 131	-	-
60	-	-	-	5 996	6 124	6 202	-	-	-
70	-	-	-	-	7 333	7 448	-	-	-
73	-	-	-	-	7 720	7 850	-	-	-

Current consumption in A

22	8.24	8.40	8.72	9.15	9.62	-	-	-	-
30	-	9.86	10.15	10.51	10.88	11.20	-	-	-
40	-	-	12.42	12.76	13.07	13.30	13.38	-	-
50	-	-	15.17	15.55	15.88	16.08	16.10	-	-
60	-	-	-	18.81	19.22	19.46	-	-	-
70	-	-	-	-	23.01	23.37	-	-	-
73	-	-	-	-	24.22	24.63	-	-	-

Mass flow in kg/h

22	181	229	284	348	422	-	-	-	-
30	-	228	283	347	422	507	-	-	-
40	-	-	278	343	418	504	603	-	-
50	-	-	272	336	411	498	598	-	-
60	-	-	-	327	402	489	-	-	-
70	-	-	-	-	393	481	-	-	-
73	-	-	-	-	390	478	-	-	-

Coefficient of performance (C.O.P.)

22	3.64	4.47	5.31	6.15	7.02	-	-	-	-
30	-	3.53	4.25	5.01	5.82	6.73	-	-	-
40	-	-	3.13	3.73	4.40	5.17	6.08	-	-
50	-	-	2.27	2.72	3.23	3.82	4.53	-	-
60	-	-	-	1.94	2.32	2.75	-	-	-
70	-	-	-	-	1.62	1.93	-	-	-
73	-	-	-	-	1.45	1.72	-	-	-

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.	-	

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	78	dB(A)
With acoustic hood	70	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, 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	9 903	11 654	14 121	17 271	21 073	-	-	-	-
20	9 050	10 627	12 854	15 699	19 130	23 116	27 623	-	-
30	7 879	9 282	11 270	13 811	16 873	20 424	24 432	28 865	33 689
40	-	7 596	9 345	11 582	14 275	17 393	20 903	24 774	28 972
50	-	-	7 052	8 986	11 311	13 996	17 009	20 319	23 894
60	-	-	-	-	7 954	10 208	12 726	15 477	18 430

Power input in W

10	2 581	2 850	3 005	3 066	3 056	-	-	-	-
20	3 213	3 464	3 619	3 700	3 728	3 724	3 710	-	-
30	4 119	4 312	4 428	4 488	4 515	4 529	4 551	4 603	4 706
40	-	5 532	5 569	5 570	5 555	5 547	5 566	5 634	5 772
50	-	-	7 182	7 083	6 988	6 918	6 894	6 938	7 071
60	-	-	-	-	8 950	8 779	8 673	8 654	8 742

Current consumption in A

10	10.64	11.75	12.39	12.65	12.60	-	-	-	-
20	13.25	14.28	14.92	15.26	15.37	15.36	15.30	-	-
30	16.99	17.78	18.26	18.51	18.62	18.68	18.77	18.98	19.41
40	-	22.81	22.97	22.97	22.91	22.88	22.96	23.24	23.80
50	-	-	29.62	29.21	28.82	28.53	28.43	28.61	29.16
60	-	-	-	-	36.91	36.20	35.77	35.69	36.05

Mass flow in kg/h

10	178	229	287	356	437	-	-	-	-
20	174	225	284	353	433	527	637	-	-
30	161	214	274	342	422	514	623	749	895
40	-	192	253	322	401	493	600	724	868
50	-	-	219	289	369	461	567	689	830
60	-	-	-	-	322	414	519	641	780

Coefficient of performance (C.O.P.)

10	3.84	4.09	4.70	5.63	6.90	-	-	-	-
20	2.82	3.07	3.55	4.24	5.13	6.21	7.45	-	-
30	1.91	2.15	2.55	3.08	3.74	4.51	5.37	6.27	7.16
40	-	1.37	1.68	2.08	2.57	3.14	3.76	4.40	5.02
50	-	-	0.98	1.27	1.62	2.02	2.47	2.93	3.38
60	-	-	-	-	0.89	1.16	1.47	1.79	2.11

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

Cooling capacity	12 841	W
Power input	6 214	W
Current consumption	25.63	A
Mass flow	387	kg/h
C.O.P.	2.07	

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 : 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	9 516	11 279	13 760	16 939	20 791	-	-	-	-
20	8 510	10 092	12 323	15 189	18 669	22 737	27 361	-	-
30	7 206	8 604	10 583	13 133	16 238	19 878	24 027	28 648	33 689
40	5 607	6 815	8 535	10 761	13 484	16 691	20 361	24 468	28 972
50	-	-	6 186	8 074	10 402	13 163	16 344	19 929	23 894
60	-	-	-	-	6 999	9 287	11 958	15 008	18 430

Power input in W

10	2 581	2 850	3 005	3 066	3 056	-	-	-	-
20	3 213	3 464	3 619	3 700	3 728	3 724	3 710	-	-
30	4 119	4 312	4 428	4 488	4 515	4 529	4 551	4 603	4 706
40	5 437	5 532	5 569	5 570	5 555	5 547	5 566	5 634	5 772
50	-	-	7 182	7 083	6 988	6 918	6 894	6 938	7 071
60	-	-	-	-	8 950	8 779	8 673	8 654	8 742

Current consumption in A

10	10.64	11.75	12.39	12.65	12.60	-	-	-	-
20	13.25	14.28	14.92	15.26	15.37	15.36	15.30	-	-
30	16.99	17.78	18.26	18.51	18.62	18.68	18.77	18.98	19.41
40	22.42	22.81	22.97	22.97	22.91	22.88	22.96	23.24	23.80
50	-	-	29.62	29.21	28.82	28.53	28.43	28.61	29.16
60	-	-	-	-	36.91	36.20	35.77	35.69	36.05

Mass flow in kg/h

10	212	268	330	401	482	-	-	-	-
20	207	264	326	397	478	569	673	-	-
30	191	250	314	385	465	556	658	771	895
40	162	224	290	362	443	533	634	746	868
50	-	-	251	325	407	498	598	709	830
60	-	-	-	-	355	447	549	660	780

Coefficient of performance (C.O.P.)

10	3.69	3.96	4.58	5.52	6.80	-	-	-	-
20	2.65	2.91	3.41	4.11	5.01	6.11	7.37	-	-
30	1.75	2.00	2.39	2.93	3.60	4.39	5.28	6.22	7.16
40	1.03	1.23	1.53	1.93	2.43	3.01	3.66	4.34	5.02
50	-	-	0.86	1.14	1.49	1.90	2.37	2.87	3.38
60	-	-	-	-	0.78	1.06	1.38	1.73	2.11

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

Cooling capacity	11 984	W
Power input	6 214	W
Current consumption	25.63	A
Mass flow	427	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	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
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	11 019	13 769	17 036	20 879	25 359	-	-	-	-
20	9 666	12 361	15 475	19 071	23 208	27 947	33 346	-	-
30	8 058	10 631	13 529	16 811	20 540	24 775	29 577	35 004	41 114
40	-	8 655	11 269	14 173	17 428	21 094	25 232	29 901	35 162
50	-	-	8 770	11 230	13 944	16 975	20 383	24 230	28 575
60	-	-	-	-	10 162	12 492	15 105	18 062	21 427

Power input in W

10	3 380	3 499	3 622	3 732	3 806	-	-	-	-
20	4 166	4 249	4 364	4 491	4 610	4 702	4 747	-	-
30	5 221	5 224	5 285	5 386	5 506	5 625	5 724	5 783	5 781
40	-	6 573	6 537	6 567	6 643	6 745	6 855	6 950	7 013
50	-	-	8 270	8 185	8 173	8 214	8 289	8 377	8 459
60	-	-	-	-	10 246	10 181	10 177	10 214	10 271

Current consumption in A

10	10.61	10.98	11.37	11.71	11.94	-	-	-	-
20	13.07	13.33	13.69	14.09	14.47	14.75	14.89	-	-
30	16.38	16.39	16.58	16.90	17.28	17.65	17.96	18.15	18.14
40	-	20.63	20.51	20.60	20.84	21.17	21.51	21.81	22.01
50	-	-	25.95	25.68	25.64	25.77	26.01	26.29	26.54
60	-	-	-	-	32.15	31.95	31.93	32.05	32.23

Mass flow in kg/h

10	225	282	349	427	519	-	-	-	-
20	213	276	347	429	525	636	766	-	-
30	196	263	337	421	518	630	760	910	1 083
40	-	240	315	400	496	607	735	883	1 052
50	-	-	281	364	458	566	691	834	998
60	-	-	-	-	402	505	624	761	919

Coefficient of performance (C.O.P.)

10	3.26	3.94	4.70	5.60	6.66	-	-	-	-
20	2.32	2.91	3.55	4.25	5.03	5.94	7.03	-	-
30	1.54	2.04	2.56	3.12	3.73	4.40	5.17	6.05	7.11
40	-	1.32	1.72	2.16	2.62	3.13	3.68	4.30	5.01
50	-	-	1.06	1.37	1.71	2.07	2.46	2.89	3.38
60	-	-	-	-	0.99	1.23	1.48	1.77	2.09

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

Cooling capacity	15 728	W
Power input	7 349	W
Current consumption	23.06	A
Mass flow	479	kg/h
C.O.P.	2.14	

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	78	dB(A)
With acoustic hood	70	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	10 589	13 326	16 600	20 477	25 019	-	-	-	-
20	9 090	11 738	14 837	18 452	22 649	27 489	33 029	-	-
30	7 370	9 854	12 704	15 986	19 767	24 113	29 086	34 741	41 114
40	5 522	7 765	10 292	13 168	16 462	20 243	24 578	29 532	35 162
50	-	-	7 694	10 091	12 824	15 964	19 586	23 764	28 575
60	-	-	-	-	8 943	11 365	14 193	17 515	21 427

Power input in W

10	3 380	3 499	3 622	3 732	3 806	-	-	-	-
20	4 166	4 249	4 364	4 491	4 610	4 702	4 747	-	-
30	5 221	5 224	5 285	5 386	5 506	5 625	5 724	5 783	5 781
40	6 696	6 573	6 537	6 567	6 643	6 745	6 855	6 950	7 013
50	-	-	8 270	8 185	8 173	8 214	8 289	8 377	8 459
60	-	-	-	-	10 246	10 181	10 177	10 214	10 271

Current consumption in A

10	10.61	10.98	11.37	11.71	11.94	-	-	-	-
20	13.07	13.33	13.69	14.09	14.47	14.75	14.89	-	-
30	16.38	16.39	16.58	16.90	17.28	17.65	17.96	18.15	18.14
40	21.01	20.63	20.51	20.60	20.84	21.17	21.51	21.81	22.01
50	-	-	25.95	25.68	25.64	25.77	26.01	26.29	26.54
60	-	-	-	-	32.15	31.95	31.93	32.05	32.23

Mass flow in kg/h

10	268	330	401	481	573	-	-	-	-
20	254	323	399	483	579	688	809	-	-
30	234	307	386	474	572	681	802	937	1 083
40	205	281	362	450	548	656	777	909	1 052
50	-	-	323	410	506	612	730	859	998
60	-	-	-	-	444	546	659	784	919

Coefficient of performance (C.O.P.)

10	3.13	3.81	4.58	5.49	6.57	-	-	-	-
20	2.18	2.76	3.40	4.11	4.91	5.85	6.96	-	-
30	1.41	1.89	2.40	2.97	3.59	4.29	5.08	6.01	7.11
40	0.82	1.18	1.57	2.01	2.48	3.00	3.59	4.25	5.01
50	-	-	0.93	1.23	1.57	1.94	2.36	2.84	3.38
60	-	-	-	-	0.87	1.12	1.39	1.71	2.09

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

Cooling capacity	14 679	W
Power input	7 349	W
Current consumption	23.06	A
Mass flow	529	kg/h
C.O.P.	2.00	

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	78	dB(A)
With acoustic hood	70	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	7 404	9 316	11 613	14 353	17 591	-	-	-	-
20	6 675	8 523	10 714	13 303	16 347	19 904	24 030	-	-
30	-	-	9 643	12 037	14 843	18 117	21 917	26 301	31 323
40	-	-	-	10 603	13 125	16 073	19 502	23 471	28 036
50	-	-	-	-	11 244	13 818	16 832	20 342	24 404
60	-	-	-	-	-	-	13 956	16 961	20 475

Power input in W

10	2 318	2 368	2 420	2 476	2 542	-	-	-	-
20	2 921	2 975	3 029	3 088	3 156	3 237	3 335	-	-
30	-	-	3 810	3 857	3 912	3 981	4 067	4 174	4 307
40	-	-	-	4 898	4 927	4 970	5 029	5 109	5 214
50	-	-	-	-	6 315	6 317	6 335	6 374	6 438
60	-	-	-	-	-	-	8 101	8 085	8 093

Current consumption in A

10	15.81	15.89	15.95	15.99	16.06	-	-	-	-
20	16.60	16.77	16.90	17.01	17.12	17.25	17.41	-	-
30	-	-	18.30	18.46	18.59	18.73	18.89	19.08	19.34
40	-	-	-	20.68	20.82	20.95	21.08	21.24	21.44
50	-	-	-	-	24.17	24.26	24.35	24.45	24.57
60	-	-	-	-	-	-	29.04	29.06	29.08

Mass flow in kg/h

10	120	153	192	238	292	-	-	-	-
20	117	150	189	236	291	357	435	-	-
30	-	-	184	231	286	353	431	523	631
40	-	-	-	222	277	343	421	513	620
50	-	-	-	-	264	329	406	497	603
60	-	-	-	-	-	-	386	475	580

Coefficient of performance (C.O.P.)

10	3.19	3.93	4.80	5.80	6.92	-	-	-	-
20	2.29	2.87	3.54	4.31	5.18	6.15	7.21	-	-
30	-	-	2.53	3.12	3.79	4.55	5.39	6.30	7.27
40	-	-	-	2.16	2.66	3.23	3.88	4.59	5.38
50	-	-	-	-	1.78	2.19	2.66	3.19	3.79
60	-	-	-	-	-	-	1.72	2.10	2.53

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

Cooling capacity	12 202	W
Power input	5 568	W
Current consumption	22.34	A
Mass flow	272	kg/h
C.O.P.	2.19	

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
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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	7 435	9 362	11 679	14 441	17 704	-	-	-	-
20	6 616	8 468	10 669	13 275	16 343	19 927	24 075	-	-
30	5 721	7 451	9 488	11 892	14 719	18 026	21 866	26 286	31 323
40	-	-	8 189	10 343	12 883	15 867	19 353	23 394	28 036
50	-	-	-	8 681	10 887	13 502	16 588	20 203	24 404
60	-	-	-	-	8 782	10 981	13 618	16 761	20 475

Power input in W

10	2 318	2 368	2 420	2 476	2 542	-	-	-	-
20	2 921	2 975	3 029	3 088	3 156	3 237	3 335	-	-
30	3 724	3 767	3 810	3 857	3 912	3 981	4 067	4 174	4 307
40	-	-	4 876	4 898	4 927	4 970	5 029	5 109	5 214
50	-	-	-	6 325	6 315	6 317	6 335	6 374	6 438
60	-	-	-	-	8 190	8 137	8 101	8 085	8 093

Current consumption in A

10	15.81	15.89	15.95	15.99	16.06	-	-	-	-
20	16.60	16.77	16.90	17.01	17.12	17.25	17.41	-	-
30	17.88	18.12	18.30	18.46	18.59	18.73	18.89	19.08	19.34
40	-	-	20.51	20.68	20.82	20.95	21.08	21.24	21.44
50	-	-	-	24.05	24.17	24.26	24.35	24.45	24.57
60	-	-	-	-	28.98	29.03	29.04	29.06	29.08

Mass flow in kg/h

10	142	178	219	266	321	-	-	-	-
20	138	175	216	264	320	384	458	-	-
30	133	169	210	258	314	379	453	537	631
40	-	-	201	249	305	369	443	527	620
50	-	-	-	236	290	354	427	510	603
60	-	-	-	-	271	333	406	488	580

Coefficient of performance (C.O.P.)

10	3.21	3.95	4.83	5.83	6.96	-	-	-	-
20	2.27	2.85	3.52	4.30	5.18	6.16	7.22	-	-
30	1.54	1.98	2.49	3.08	3.76	4.53	5.38	6.30	7.27
40	-	-	1.68	2.11	2.61	3.19	3.85	4.58	5.38
50	-	-	-	1.37	1.72	2.14	2.62	3.17	3.79
60	-	-	-	-	1.07	1.35	1.68	2.07	2.53

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

Cooling capacity	11 902	W
Power input	5 568	W
Current consumption	22.34	A
Mass flow	298	kg/h
C.O.P.	2.14	

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
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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	9 089	11 442	14 275	17 659	21 664	-	-	-	-
20	8 198	10 437	13 099	16 254	19 974	24 327	29 384	-	-
30	-	-	11 829	14 719	18 116	22 090	26 711	32 048	38 173
40	-	-	-	13 083	16 121	19 678	23 825	28 632	34 169
50	-	-	-	-	14 017	17 121	20 757	24 996	29 908
60	-	-	-	-	-	-	17 535	21 170	25 420

Power input in W

10	2 793	2 889	2 975	3 059	3 150	-	-	-	-
20	3 449	3 578	3 686	3 784	3 880	3 984	4 105	-	-
30	-	-	4 568	4 683	4 786	4 888	4 998	5 125	5 279
40	-	-	-	5 834	5 948	6 051	6 153	6 263	6 390
50	-	-	-	-	7 445	7 552	7 649	7 745	7 849
60	-	-	-	-	-	-	9 565	9 650	9 733

Current consumption in A

10	13.37	13.46	13.58	13.69	13.77	-	-	-	-
20	15.11	15.25	15.46	15.71	15.96	16.17	16.32	-	-
30	-	-	17.23	17.48	17.78	18.09	18.37	18.59	18.72
40	-	-	-	19.81	20.04	20.33	20.62	20.90	21.12
50	-	-	-	-	23.53	23.67	23.86	24.07	24.27
60	-	-	-	-	-	-	28.88	28.90	28.95

Mass flow in kg/h

10	148	188	236	292	360	-	-	-	-
20	144	184	231	288	356	437	532	-	-
30	-	-	226	282	349	430	525	637	768
40	-	-	-	274	341	420	514	626	756
50	-	-	-	-	330	408	501	611	740
60	-	-	-	-	-	-	484	592	719

Coefficient of performance (C.O.P.)

10	3.25	3.96	4.80	5.77	6.88	-	-	-	-
20	2.38	2.92	3.55	4.30	5.15	6.11	7.16	-	-
30	-	-	2.59	3.14	3.79	4.52	5.34	6.25	7.23
40	-	-	-	2.24	2.71	3.25	3.87	4.57	5.35
50	-	-	-	-	1.88	2.27	2.71	3.23	3.81
60	-	-	-	-	-	-	1.83	2.19	2.61

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

Cooling capacity	15 081	W
Power input	6 650	W
Current consumption	21.59	A
Mass flow	336	kg/h
C.O.P.	2.27	

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	9 127	11 498	14 355	17 768	21 803	-	-	-	-
20	8 126	10 369	13 044	16 221	19 969	24 355	29 439	-	-
30	7 109	9 186	11 639	14 542	17 965	21 979	26 648	32 031	38 173
40	-	-	10 171	12 762	15 823	19 427	23 644	28 539	34 169
50	-	-	-	10 911	13 572	16 729	20 455	24 826	29 908
60	-	-	-	-	11 240	13 912	17 111	20 920	25 420

Power input in W

10	2 793	2 889	2 975	3 059	3 150	-	-	-	-
20	3 449	3 578	3 686	3 784	3 880	3 984	4 105	-	-
30	4 270	4 434	4 568	4 683	4 786	4 888	4 998	5 125	5 279
40	-	-	5 700	5 834	5 948	6 051	6 153	6 263	6 390
50	-	-	-	7 317	7 445	7 552	7 649	7 745	7 849
60	-	-	-	-	9 355	9 470	9 565	9 650	9 733

Current consumption in A

10	13.37	13.46	13.58	13.69	13.77	-	-	-	-
20	15.11	15.25	15.46	15.71	15.96	16.17	16.32	-	-
30	16.98	17.05	17.23	17.48	17.78	18.09	18.37	18.59	18.72
40	-	-	19.66	19.81	20.04	20.33	20.62	20.90	21.12
50	-	-	-	23.49	23.53	23.67	23.86	24.07	24.27
60	-	-	-	-	29.05	28.91	28.88	28.90	28.95

Mass flow in kg/h

10	175	218	269	327	395	-	-	-	-
20	170	214	264	323	391	470	560	-	-
30	165	208	258	316	384	462	552	654	768
40	-	-	250	307	374	452	541	643	756
50	-	-	-	296	362	439	527	627	740
60	-	-	-	-	348	423	509	608	719

Coefficient of performance (C.O.P.)

10	3.27	3.98	4.83	5.81	6.92	-	-	-	-
20	2.36	2.90	3.54	4.29	5.15	6.11	7.17	-	-
30	1.67	2.07	2.55	3.11	3.75	4.50	5.33	6.25	7.23
40	-	-	1.78	2.19	2.66	3.21	3.84	4.56	5.35
50	-	-	-	1.49	1.82	2.22	2.67	3.21	3.81
60	-	-	-	-	1.20	1.47	1.79	2.17	2.61

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

Cooling capacity	14 710	W
Power input	6 650	W
Current consumption	21.59	A
Mass flow	368	kg/h
C.O.P.	2.21	

Pressure switch settings

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

Sound power data

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

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

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

Tolerance according EN12900

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

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

Cooling capacity in W

10	7 404	9 316	11 613	14 353	17 591	-	-	-	-
20	6 675	8 523	10 714	13 303	16 347	19 904	24 030	-	-
30	-	-	9 643	12 037	14 843	18 117	21 917	26 301	31 323
40	-	-	-	10 603	13 125	16 073	19 502	23 471	28 036
50	-	-	-	-	11 244	13 818	16 832	20 342	24 404
60	-	-	-	-	-	-	13 956	16 961	20 475

Power input in W

10	2 318	2 368	2 420	2 476	2 542	-	-	-	-
20	2 921	2 975	3 029	3 088	3 156	3 237	3 335	-	-
30	-	-	3 810	3 857	3 912	3 981	4 067	4 174	4 307
40	-	-	-	4 898	4 927	4 970	5 029	5 109	5 214
50	-	-	-	-	6 315	6 317	6 335	6 374	6 438
60	-	-	-	-	-	-	8 101	8 085	8 093

Current consumption in A

10	15.81	15.89	15.95	15.99	16.06	-	-	-	-
20	16.60	16.77	16.90	17.01	17.12	17.25	17.41	-	-
30	-	-	18.30	18.46	18.59	18.73	18.89	19.08	19.34
40	-	-	-	20.68	20.82	20.95	21.08	21.24	21.44
50	-	-	-	-	24.17	24.26	24.35	24.45	24.57
60	-	-	-	-	-	-	29.04	29.06	29.08

Mass flow in kg/h

10	120	153	192	238	292	-	-	-	-
20	117	150	189	236	291	357	435	-	-
30	-	-	184	231	286	353	431	523	631
40	-	-	-	222	277	343	421	513	620
50	-	-	-	-	264	329	406	497	603
60	-	-	-	-	-	-	386	475	580

Coefficient of performance (C.O.P.)

10	3.19	3.93	4.80	5.80	6.92	-	-	-	-
20	2.29	2.87	3.54	4.31	5.18	6.15	7.21	-	-
30	-	-	2.53	3.12	3.79	4.55	5.39	6.30	7.27
40	-	-	-	2.16	2.66	3.23	3.88	4.59	5.38
50	-	-	-	-	1.78	2.19	2.66	3.19	3.79
60	-	-	-	-	-	-	1.72	2.10	2.53

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

Cooling capacity	12 202	W
Power input	5 568	W
Current consumption	22.34	A
Mass flow	272	kg/h
C.O.P.	2.19	

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	7 419	9 345	11 661	14 424	17 688	-	-	-	-
20	6 599	8 450	10 650	13 256	16 325	19 911	24 062	-	-
30	5 703	7 432	9 468	11 871	14 699	18 008	21 852	26 278	31 323
40	-	-	8 168	10 321	12 862	15 848	19 338	23 386	28 036
50	-	-	-	8 659	10 865	13 482	16 572	20 194	24 404
60	-	-	-	-	8 760	10 961	13 602	16 751	20 475

Power input in W

10	2 318	2 368	2 420	2 476	2 542	-	-	-	-
20	2 921	2 975	3 029	3 088	3 156	3 237	3 335	-	-
30	3 724	3 767	3 810	3 857	3 912	3 981	4 067	4 174	4 307
40	-	-	4 876	4 898	4 927	4 970	5 029	5 109	5 214
50	-	-	-	6 325	6 315	6 317	6 335	6 374	6 438
60	-	-	-	-	8 190	8 137	8 101	8 085	8 093

Current consumption in A

10	15.81	15.89	15.95	15.99	16.06	-	-	-	-
20	16.60	16.77	16.90	17.01	17.12	17.25	17.41	-	-
30	17.88	18.12	18.30	18.46	18.59	18.73	18.89	19.08	19.34
40	-	-	20.51	20.68	20.82	20.95	21.08	21.24	21.44
50	-	-	-	24.05	24.17	24.26	24.35	24.45	24.57
60	-	-	-	-	28.98	29.03	29.04	29.06	29.08

Mass flow in kg/h

10	142	178	219	266	321	-	-	-	-
20	138	175	216	264	320	384	458	-	-
30	133	169	210	258	314	379	453	537	631
40	-	-	201	249	305	369	443	527	620
50	-	-	-	236	290	354	427	510	603
60	-	-	-	-	271	333	406	488	580

Coefficient of performance (C.O.P.)

10	3.20	3.95	4.82	5.82	6.96	-	-	-	-
20	2.26	2.84	3.52	4.29	5.17	6.15	7.21	-	-
30	1.53	1.97	2.49	3.08	3.76	4.52	5.37	6.30	7.27
40	-	-	1.68	2.11	2.61	3.19	3.85	4.58	5.38
50	-	-	-	1.37	1.72	2.13	2.62	3.17	3.79
60	-	-	-	-	1.07	1.35	1.68	2.07	2.53

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

Cooling capacity	11 880	W
Power input	5 568	W
Current consumption	22.34	A
Mass flow	298	kg/h
C.O.P.	2.13	

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	9 089	11 442	14 275	17 659	21 664	-	-	-	-
20	8 198	10 437	13 099	16 254	19 974	24 327	29 384	-	-
30	-	-	11 829	14 719	18 116	22 090	26 711	32 048	38 173
40	-	-	-	13 083	16 121	19 678	23 825	28 632	34 169
50	-	-	-	-	14 017	17 121	20 757	24 996	29 908
60	-	-	-	-	-	-	17 535	21 170	25 420

Power input in W

10	2 793	2 889	2 975	3 059	3 150	-	-	-	-
20	3 449	3 578	3 686	3 784	3 880	3 984	4 105	-	-
30	-	-	4 568	4 683	4 786	4 888	4 998	5 125	5 279
40	-	-	-	5 834	5 948	6 051	6 153	6 263	6 390
50	-	-	-	-	7 445	7 552	7 649	7 745	7 849
60	-	-	-	-	-	-	9 565	9 650	9 733

Current consumption in A

10	13.37	13.46	13.58	13.69	13.77	-	-	-	-
20	15.11	15.25	15.46	15.71	15.96	16.17	16.32	-	-
30	-	-	17.23	17.48	17.78	18.09	18.37	18.59	18.72
40	-	-	-	19.81	20.04	20.33	20.62	20.90	21.12
50	-	-	-	-	23.53	23.67	23.86	24.07	24.27
60	-	-	-	-	-	-	28.88	28.90	28.95

Mass flow in kg/h

10	150	191	239	297	366	-	-	-	-
20	146	187	235	293	362	444	542	-	-
30	-	-	230	287	356	438	535	649	782
40	-	-	-	280	348	429	525	638	771
50	-	-	-	-	337	417	512	624	755
60	-	-	-	-	-	-	495	606	735

Coefficient of performance (C.O.P.)

10	3.25	3.96	4.80	5.77	6.88	-	-	-	-
20	2.38	2.92	3.55	4.30	5.15	6.11	7.16	-	-
30	-	-	2.59	3.14	3.79	4.52	5.34	6.25	7.23
40	-	-	-	2.24	2.71	3.25	3.87	4.57	5.35
50	-	-	-	-	1.88	2.27	2.71	3.23	3.81
60	-	-	-	-	-	-	1.83	2.19	2.61

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

Cooling capacity	15 081	W
Power input	6 650	W
Current consumption	21.59	A
Mass flow	342	kg/h
C.O.P.	2.27	

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
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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	9 107	11 476	14 333	17 746	21 783	-	-	-	-
20	8 105	10 347	13 020	16 197	19 947	24 335	29 424	-	-
30	7 088	9 162	11 614	14 517	17 941	21 958	26 631	32 021	38 173
40	-	-	10 144	12 735	15 797	19 404	23 625	28 528	34 169
50	-	-	-	10 883	13 545	16 704	20 436	24 814	29 908
60	-	-	-	-	11 212	13 886	17 091	20 908	25 420

Power input in W

10	2 793	2 889	2 975	3 059	3 150	-	-	-	-
20	3 449	3 578	3 686	3 784	3 880	3 984	4 105	-	-
30	4 270	4 434	4 568	4 683	4 786	4 888	4 998	5 125	5 279
40	-	-	5 700	5 834	5 948	6 051	6 153	6 263	6 390
50	-	-	-	7 317	7 445	7 552	7 649	7 745	7 849
60	-	-	-	-	9 355	9 470	9 565	9 650	9 733

Current consumption in A

10	13.37	13.46	13.58	13.69	13.77	-	-	-	-
20	15.11	15.25	15.46	15.71	15.96	16.17	16.32	-	-
30	16.98	17.05	17.23	17.48	17.78	18.09	18.37	18.59	18.72
40	-	-	19.66	19.81	20.04	20.33	20.62	20.90	21.12
50	-	-	-	23.49	23.53	23.67	23.86	24.07	24.27
60	-	-	-	-	29.05	28.91	28.88	28.90	28.95

Mass flow in kg/h

10	178	222	273	332	402	-	-	-	-
20	173	217	268	328	397	478	570	-	-
30	168	212	262	322	391	471	563	667	782
40	-	-	255	313	381	461	552	656	771
50	-	-	-	302	370	448	538	641	755
60	-	-	-	-	355	432	521	622	735

Coefficient of performance (C.O.P.)

10	3.26	3.97	4.82	5.80	6.91	-	-	-	-
20	2.35	2.89	3.53	4.28	5.14	6.11	7.17	-	-
30	1.66	2.07	2.54	3.10	3.75	4.49	5.33	6.25	7.23
40	-	-	1.78	2.18	2.66	3.21	3.84	4.55	5.35
50	-	-	-	1.49	1.82	2.21	2.67	3.20	3.81
60	-	-	-	-	1.20	1.47	1.79	2.17	2.61

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

Cooling capacity	14 683	W
Power input	6 650	W
Current consumption	21.59	A
Mass flow	376	kg/h
C.O.P.	2.21	

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	8 434	10 474	12 931	15 854	19 292	-	-	-	-
20	7 542	9 515	11 855	14 613	17 836	21 575	25 879	-	-
30	-	8 419	10 583	13 115	16 064	19 479	23 410	27 905	33 014
40	-	-	9 154	11 400	14 014	17 046	20 543	24 557	29 134
50	-	-	-	-	11 727	14 315	17 319	20 791	24 777
60	-	-	-	-	-	11 326	13 777	16 646	19 982

Power input in W

10	2 558	2 610	2 652	2 691	2 734	-	-	-	-
20	3 151	3 232	3 293	3 343	3 391	3 444	3 511	-	-
30	-	4 000	4 084	4 149	4 203	4 254	4 312	4 383	4 477
40	-	-	5 105	5 187	5 251	5 303	5 354	5 410	5 481
50	-	-	-	-	6 616	6 673	6 719	6 764	6 815
60	-	-	-	-	-	8 444	8 489	8 525	8 558

Current consumption in A

10	15.53	15.59	15.65	15.71	15.79	-	-	-	-
20	16.62	16.75	16.87	16.99	17.11	17.23	17.37	-	-
30	-	18.21	18.38	18.54	18.70	18.85	19.01	19.17	19.35
40	-	-	20.60	20.79	20.96	21.13	21.30	21.46	21.63
50	-	-	-	-	24.31	24.48	24.64	24.79	24.94
60	-	-	-	-	-	29.30	29.44	29.57	29.68

Mass flow in kg/h

10	170	214	265	326	399	-	-	-	-
20	166	211	264	326	400	488	591	-	-
30	-	205	258	321	395	484	588	711	854
40	-	-	248	311	385	474	578	701	845
50	-	-	-	-	368	456	560	683	826
60	-	-	-	-	-	431	534	656	798

Coefficient of performance (C.O.P.)

10	3.30	4.01	4.88	5.89	7.06	-	-	-	-
20	2.39	2.94	3.60	4.37	5.26	6.26	7.37	-	-
30	-	2.10	2.59	3.16	3.82	4.58	5.43	6.37	7.37
40	-	-	1.79	2.20	2.67	3.21	3.84	4.54	5.32
50	-	-	-	-	1.77	2.15	2.58	3.07	3.64
60	-	-	-	-	-	1.34	1.62	1.95	2.33

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

Cooling capacity	12 898	W
Power input	5 889	W
Current consumption	22.48	A
Mass flow	378	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		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	8 161	10 196	12 661	15 608	19 088	-	-	-	-
20	7 158	9 107	11 441	14 213	17 477	21 283	25 679	-	-
30	6 088	7 888	10 028	12 563	15 548	19 038	23 084	27 731	33 014
40	4 992	6 582	8 468	10 704	13 349	16 460	20 093	24 302	29 134
50	-	-	6 802	8 680	10 922	13 591	16 748	20 457	24 777
60	-	-	-	-	8 303	10 465	13 083	16 229	19 982

Power input in W

10	2 558	2 610	2 652	2 691	2 734	-	-	-	-
20	3 151	3 232	3 293	3 343	3 391	3 444	3 511	-	-
30	3 888	4 000	4 084	4 149	4 203	4 254	4 312	4 383	4 477
40	4 850	4 996	5 105	5 187	5 251	5 303	5 354	5 410	5 481
50	-	-	6 438	6 541	6 616	6 673	6 719	6 764	6 815
60	-	-	-	-	8 381	8 444	8 489	8 525	8 558

Current consumption in A

10	15.53	15.59	15.65	15.71	15.79	-	-	-	-
20	16.62	16.75	16.87	16.99	17.11	17.23	17.37	-	-
30	18.02	18.21	18.38	18.54	18.70	18.85	19.01	19.17	19.35
40	20.15	20.39	20.60	20.79	20.96	21.13	21.30	21.46	21.63
50	-	-	23.91	24.12	24.31	24.48	24.64	24.79	24.94
60	-	-	-	-	29.14	29.30	29.44	29.57	29.68

Mass flow in kg/h

10	201	249	304	366	439	-	-	-	-
20	197	246	302	366	440	525	623	-	-
30	189	239	295	360	435	522	620	731	854
40	177	227	283	349	424	510	609	721	845
50	-	-	266	331	405	492	591	702	826
60	-	-	-	-	379	465	563	674	798

Coefficient of performance (C.O.P.)

10	3.19	3.91	4.77	5.80	6.98	-	-	-	-
20	2.27	2.82	3.47	4.25	5.15	6.18	7.31	-	-
30	1.57	1.97	2.46	3.03	3.70	4.48	5.35	6.33	7.37
40	1.03	1.32	1.66	2.06	2.54	3.10	3.75	4.49	5.32
50	-	-	1.06	1.33	1.65	2.04	2.49	3.02	3.64
60	-	-	-	-	0.99	1.24	1.54	1.90	2.33

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

Cooling capacity	12 162	W
Power input	5 889	W
Current consumption	22.48	A
Mass flow	415	kg/h
C.O.P.	2.07	

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

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

Pressure switch settings

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

Sound power data

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

Tolerance according EN12900

Performance data at 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	10 358	12 830	15 802	19 336	23 489	-	-	-	-
20	9 213	11 580	14 388	17 696	21 562	26 046	31 206	-	-
30	-	10 229	12 815	15 839	19 361	23 441	28 136	33 505	39 605
40	-	-	11 100	13 783	16 904	20 521	24 694	29 481	34 941
50	-	-	-	-	14 208	17 305	20 898	25 047	29 809
60	-	-	-	-	-	13 813	16 769	20 222	24 231

Power input in W

10	3 080	3 194	3 286	3 364	3 432	-	-	-	-
20	3 746	3 891	4 012	4 116	4 207	4 292	4 376	-	-
30	-	4 784	4 921	5 039	5 142	5 236	5 326	5 418	5 518
40	-	-	6 125	6 244	6 347	6 437	6 522	6 605	6 694
50	-	-	-	-	7 932	8 007	8 073	8 137	8 202
60	-	-	-	-	-	10 055	10 092	10 123	10 153

Current consumption in A

10	14.33	14.12	14.07	14.16	14.39	-	-	-	-
20	15.59	15.58	15.66	15.81	16.03	16.30	16.62	-	-
30	-	17.20	17.46	17.73	18.00	18.26	18.49	18.69	18.84
40	-	-	19.76	20.22	20.60	20.89	21.10	21.20	21.19
50	-	-	-	-	24.10	24.50	24.74	24.81	24.70
60	-	-	-	-	-	29.36	29.70	29.80	29.64

Mass flow in kg/h

10	208	262	324	398	486	-	-	-	-
20	202	257	320	395	483	589	713	-	-
30	-	249	312	387	476	582	707	854	1 025
40	-	-	300	375	464	570	695	842	1 013
50	-	-	-	-	446	552	676	823	994
60	-	-	-	-	-	526	650	796	966

Coefficient of performance (C.O.P.)

10	3.36	4.02	4.81	5.75	6.84	-	-	-	-
20	2.46	2.98	3.59	4.30	5.13	6.07	7.13	-	-
30	-	2.14	2.60	3.14	3.77	4.48	5.28	6.18	7.18
40	-	-	1.81	2.21	2.66	3.19	3.79	4.46	5.22
50	-	-	-	-	1.79	2.16	2.59	3.08	3.63
60	-	-	-	-	-	1.37	1.66	2.00	2.39

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

Cooling capacity	15 584	W
Power input	7 085	W
Current consumption	22.22	A
Mass flow	456	kg/h
C.O.P.	2.20	

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	10 024	12 489	15 473	19 036	23 241	-	-	-	-
20	8 744	11 084	13 885	17 212	21 128	25 694	30 966	-	-
30	7 430	9 584	12 142	15 173	18 740	22 910	27 745	33 297	39 605
40	6 102	8 011	10 268	12 942	16 101	19 815	24 152	29 176	34 941
50	-	-	8 283	10 542	13 233	16 430	20 208	24 644	29 809
60	-	-	-	-	10 145	12 764	15 923	19 714	24 231

Power input in W

10	3 080	3 194	3 286	3 364	3 432	-	-	-	-
20	3 746	3 891	4 012	4 116	4 207	4 292	4 376	-	-
30	4 620	4 784	4 921	5 039	5 142	5 236	5 326	5 418	5 518
40	5 812	5 982	6 125	6 244	6 347	6 437	6 522	6 605	6 694
50	-	-	7 732	7 842	7 932	8 007	8 073	8 137	8 202
60	-	-	-	-	10 007	10 055	10 092	10 123	10 153

Current consumption in A

10	14.33	14.12	14.07	14.16	14.39	-	-	-	-
20	15.59	15.58	15.66	15.81	16.03	16.30	16.62	-	-
30	16.95	17.20	17.46	17.73	18.00	18.26	18.49	18.69	18.84
40	18.69	19.25	19.76	20.22	20.60	20.89	21.10	21.20	21.19
50	-	-	22.86	23.55	24.10	24.50	24.74	24.81	24.70
60	-	-	-	-	28.80	29.36	29.70	29.80	29.64

Mass flow in kg/h

10	247	305	371	447	535	-	-	-	-
20	240	299	366	443	532	634	751	-	-
30	230	290	357	435	524	627	745	878	1 025
40	216	276	344	421	511	614	733	866	1 013
50	-	-	324	401	491	595	713	846	994
60	-	-	-	-	464	567	685	818	966

Coefficient of performance (C.O.P.)

10	3.25	3.91	4.71	5.66	6.77	-	-	-	-
20	2.33	2.85	3.46	4.18	5.02	5.99	7.08	-	-
30	1.61	2.00	2.47	3.01	3.64	4.38	5.21	6.15	7.18
40	1.05	1.34	1.68	2.07	2.54	3.08	3.70	4.42	5.22
50	-	-	1.07	1.34	1.67	2.05	2.50	3.03	3.63
60	-	-	-	-	1.01	1.27	1.58	1.95	2.39

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

Cooling capacity	14 694	W
Power input	7 085	W
Current consumption	22.22	A
Mass flow	502	kg/h
C.O.P.	2.07	

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