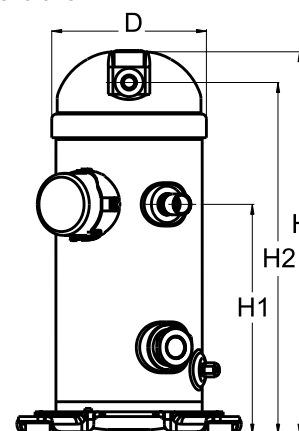


**General Characteristics**

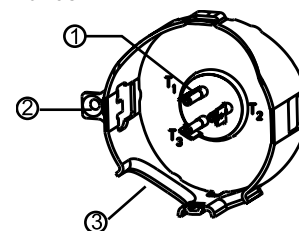
Model number (on compressor nameplate)	MLZ015T4LP9A	MLZ015T4LP9A
Code number for Singlepack*	121U8629	121L8629
Code number for Industrial pack**	121U8628	121L8628
Drawing number	0XC6300B-1	0XC6300B-1
Suction and discharge connections	Brazed	Brazed
Suction connection	3/4" ODF	3/4" ODF
Discharge connection	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	33.77 cm <sup>3</sup> /rev	
Displacement @ Nominal speed	5.9 m <sup>3</sup> /h @ 2900 rpm - 7.1 m <sup>3</sup> /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,R134a,R407A/F,R448A,R449A,R452A,R513A,R22	

**Dimensions**


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

**Electrical Characteristics**

Nominal voltage	380-400V/3/50Hz - 460V/3/60Hz
Voltage range	340-460 V @ 50Hz - 414-506 V @ 60Hz
Winding resistance between phases 1-2 +/- 7% at 25°C	6.724 Ω
Winding resistance between phases 1-3 +/- 7% at 25°C	4.952 Ω
Winding resistance between phases 2-3 +/- 7% at 25°C	6.724 Ω
Rated Load Amps (RLA)	4.5 A
Maximum Continuous Current (MCC)	7 A
Locked Rotor Amps (LRA)	30 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, -, -

\*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
Belt type crankcase heater, 70 W, 400/460V, CE mark, UL	120Z5041

**Miscellaneous accessories**

**Code no.**

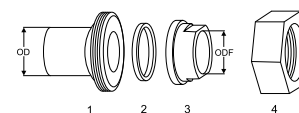
Acoustic hood	120Z5083
Discharge thermostat kit	7750009
IP54 upgrade kit	118U0056

**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)

**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	3 069	3 699	4 420	5 247	-	-	-	-	-
20	2 929	3 556	4 273	5 094	6 030	-	-	-	-
30	2 595	3 200	3 891	4 681	5 583	6 609	7 769	-	-
40	2 288	2 850	3 492	4 230	5 077	6 045	7 145	-	-
50	-	2 512	3 085	3 749	4 519	5 407	6 427	-	-
60	-	-	-	3 245	3 916	4 704	5 622	-	-
68	-	-	-	-	-	4 098	4 920	-	-

**Power input in W**

16	773	785	803	829	-	-	-	-	-
20	858	870	886	907	935	-	-	-	-
30	1 082	1 098	1 113	1 129	1 147	1 168	1 194	-	-
40	1 329	1 355	1 377	1 395	1 410	1 424	1 437	-	-
50	-	1 652	1 687	1 713	1 733	1 746	1 755	-	-
60	-	-	-	2 094	2 125	2 145	2 156	-	-
68	-	-	-	-	-	2 525	2 543	-	-

**Current consumption in A**

16	1.49	1.51	1.55	1.59	-	-	-	-	-
20	1.65	1.67	1.71	1.75	1.80	-	-	-	-
30	2.08	2.11	2.14	2.17	2.21	2.25	2.30	-	-
40	2.56	2.61	2.65	2.68	2.71	2.74	2.77	-	-
50	-	3.18	3.25	3.30	3.33	3.36	3.38	-	-
60	-	-	-	4.03	4.09	4.13	4.15	-	-
68	-	-	-	-	-	4.86	4.89	-	-

**Mass flow in kg/h**

16	58	69	83	98	-	-	-	-	-
20	57	69	82	97	115	-	-	-	-
30	55	67	80	96	114	133	155	-	-
40	53	65	78	94	112	132	154	-	-
50	-	62	75	91	109	129	151	-	-
60	-	-	-	86	104	124	146	-	-
68	-	-	-	-	-	117	140	-	-

**Coefficient of performance (C.O.P.)**

16	3.97	4.71	5.50	6.33	-	-	-	-	-
20	3.41	4.09	4.82	5.61	6.45	-	-	-	-
30	2.40	2.92	3.50	4.15	4.87	5.66	6.51	-	-
40	1.72	2.10	2.54	3.03	3.60	4.25	4.97	-	-
50	-	1.52	1.83	2.19	2.61	3.10	3.66	-	-
60	-	-	-	1.55	1.84	2.19	2.61	-	-
68	-	-	-	-	-	1.62	1.94	-	-

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

Cooling capacity	3 289	W
Power input	1 525	W
Current consumption	2.94	A
Mass flow	77	kg/h
C.O.P.	2.16	

**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	2 994	3 620	4 340	5 170	-	-	-	-	-
20	2 865	3 488	4 203	5 026	5 972	-	-	-	-
30	2 557	3 158	3 846	4 636	5 543	6 582	7 769	-	-
40	-	2 834	3 473	4 209	5 056	6 030	7 145	-	-
50	-	-	-	3 752	4 518	5 405	6 427	-	-
60	-	-	-	-	3 934	4 713	5 622	-	-
68	-	-	-	-	-	-	4 920	-	-

**Power input in W**

16	773	785	803	829	-	-	-	-	-
20	858	870	886	907	935	-	-	-	-
30	1 082	1 098	1 113	1 129	1 147	1 168	1 194	-	-
40	-	1 355	1 377	1 395	1 410	1 424	1 437	-	-
50	-	-	-	1 713	1 733	1 746	1 755	-	-
60	-	-	-	-	2 125	2 145	2 156	-	-
68	-	-	-	-	-	-	2 543	-	-

**Current consumption in A**

16	1.49	1.51	1.55	1.59	-	-	-	-	-
20	1.65	1.67	1.71	1.75	1.80	-	-	-	-
30	2.08	2.11	2.14	2.17	2.21	2.25	2.30	-	-
40	-	2.61	2.65	2.68	2.71	2.74	2.77	-	-
50	-	-	-	3.30	3.33	3.36	3.38	-	-
60	-	-	-	-	4.09	4.13	4.15	-	-
68	-	-	-	-	-	-	4.89	-	-

**Mass flow in kg/h**

16	51	62	76	91	-	-	-	-	-
20	50	62	75	91	109	-	-	-	-
30	48	60	74	90	108	130	155	-	-
40	-	58	72	88	107	129	154	-	-
50	-	-	-	85	104	126	151	-	-
60	-	-	-	-	99	121	146	-	-
68	-	-	-	-	-	-	140	-	-

**Coefficient of performance (C.O.P.)**

16	3.87	4.61	5.40	6.24	-	-	-	-	-
20	3.34	4.01	4.74	5.54	6.39	-	-	-	-
30	2.36	2.88	3.46	4.11	4.83	5.64	6.51	-	-
40	-	2.09	2.52	3.02	3.59	4.24	4.97	-	-
50	-	-	-	2.19	2.61	3.10	3.66	-	-
60	-	-	-	-	1.85	2.20	2.61	-	-
68	-	-	-	-	-	-	1.94	-	-

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

Cooling capacity	3 283	W
Power input	1 525	W
Current consumption	2.94	A
Mass flow	71	kg/h
C.O.P.	2.15	

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	29.8	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)

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	3 502	4 250	5 126	6 133	-	-	-	-	-
20	3 404	4 151	5 022	6 022	7 153	-	-	-	-
30	3 072	3 802	4 647	5 611	6 700	7 916	9 259	-	-
40	2 692	3 383	4 180	5 088	6 113	7 258	8 525	-	-
50	-	2 988	3 715	4 544	5 484	6 537	7 708	-	-
60	-	-	-	4 073	4 905	5 846	6 899	-	-
68	-	-	-	-	-	5 376	6 321	-	-

**Power input in W**

16	845	880	926	982	-	-	-	-	-
20	951	984	1 024	1 072	1 130	-	-	-	-
30	1 216	1 252	1 288	1 324	1 362	1 404	1 450	-	-
40	1 485	1 537	1 581	1 618	1 650	1 678	1 703	-	-
50	-	1 844	1 909	1 961	1 999	2 026	2 043	-	-
60	-	-	-	2 357	2 416	2 455	2 477	-	-
68	-	-	-	-	-	2 859	2 894	-	-

**Current consumption in A**

16	1.33	1.38	1.45	1.54	-	-	-	-	-
20	1.49	1.54	1.61	1.68	1.77	-	-	-	-
30	1.91	1.96	2.02	2.08	2.14	2.20	2.27	-	-
40	2.33	2.41	2.48	2.54	2.59	2.63	2.67	-	-
50	-	2.89	3.00	3.08	3.14	3.18	3.21	-	-
60	-	-	-	3.70	3.79	3.85	3.89	-	-
68	-	-	-	-	-	4.49	4.54	-	-

**Mass flow in kg/h**

16	68	83	100	119	-	-	-	-	-
20	68	83	100	119	141	-	-	-	-
30	66	81	99	118	140	164	189	-	-
40	63	79	96	116	139	163	189	-	-
50	-	74	92	113	136	160	186	-	-
60	-	-	-	107	131	156	183	-	-
68	-	-	-	-	-	151	178	-	-

**Coefficient of performance (C.O.P.)**

16	4.15	4.83	5.54	6.24	-	-	-	-	-
20	3.58	4.22	4.90	5.62	6.33	-	-	-	-
30	2.53	3.04	3.61	4.24	4.92	5.64	6.39	-	-
40	1.81	2.20	2.64	3.14	3.70	4.33	5.01	-	-
50	-	1.62	1.95	2.32	2.74	3.23	3.77	-	-
60	-	-	-	1.73	2.03	2.38	2.79	-	-
68	-	-	-	-	-	1.88	2.18	-	-

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

Cooling capacity	3 941	W
Power input	1 740	W
Current consumption	2.73	A
Mass flow	95	kg/h
C.O.P.	2.26	

**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	3 417	4 159	5 032	6 043	-	-	-	-	-
20	3 330	4 071	4 940	5 941	7 084	-	-	-	-
30	3 028	3 753	4 594	5 558	6 652	7 884	9 259	-	-
40	-	3 364	4 157	5 063	6 088	7 240	8 525	-	-
50	-	-	-	4 547	5 482	6 534	7 708	-	-
60	-	-	-	-	4 928	5 857	6 899	-	-
68	-	-	-	-	-	-	6 321	-	-

**Power input in W**

16	845	880	926	982	-	-	-	-	-
20	951	984	1 024	1 072	1 130	-	-	-	-
30	1 216	1 252	1 288	1 324	1 362	1 404	1 450	-	-
40	-	1 537	1 581	1 618	1 650	1 678	1 703	-	-
50	-	-	-	1 961	1 999	2 026	2 043	-	-
60	-	-	-	-	2 416	2 455	2 477	-	-
68	-	-	-	-	-	-	2 894	-	-

**Current consumption in A**

16	1.33	1.38	1.45	1.54	-	-	-	-	-
20	1.49	1.54	1.61	1.68	1.77	-	-	-	-
30	1.91	1.96	2.02	2.08	2.14	2.20	2.27	-	-
40	-	2.41	2.48	2.54	2.59	2.63	2.67	-	-
50	-	-	-	3.08	3.14	3.18	3.21	-	-
60	-	-	-	-	3.79	3.85	3.89	-	-
68	-	-	-	-	-	-	4.54	-	-

**Mass flow in kg/h**

16	60	74	92	111	-	-	-	-	-
20	60	74	91	111	134	-	-	-	-
30	58	73	90	111	134	160	189	-	-
40	-	71	88	109	132	159	189	-	-
50	-	-	-	105	129	156	186	-	-
60	-	-	-	-	124	152	183	-	-
68	-	-	-	-	-	-	178	-	-

**Coefficient of performance (C.O.P.)**

16	4.04	4.72	5.44	6.15	-	-	-	-	-
20	3.50	4.14	4.82	5.54	6.27	-	-	-	-
30	2.49	3.00	3.57	4.20	4.88	5.62	6.39	-	-
40	-	2.19	2.63	3.13	3.69	4.32	5.01	-	-
50	-	-	-	2.32	2.74	3.22	3.77	-	-
60	-	-	-	-	2.04	2.39	2.79	-	-
68	-	-	-	-	-	-	2.18	-	-

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

Cooling capacity	3 934	W
Power input	1 740	W
Current consumption	2.73	A
Mass flow	87	kg/h
C.O.P.	2.26	

**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	2 020	2 554	3 186	3 924	4 778	-	-	-	-
30	1 853	2 353	2 948	3 646	4 456	5 387	-	-	-
40	1 651	2 102	2 642	3 282	4 031	4 897	5 890	-	-
50	-	1 848	2 327	2 902	3 581	4 374	5 289	-	-
60	-	-	2 001	2 503	3 105	3 816	4 646	-	-
70	-	-	-	2 083	2 600	3 223	3 960	-	-
73	-	-	-	1 953	2 443	3 038	3 746	-	-

**Power input in W**

22	618	625	631	639	648	-	-	-	-
30	735	742	748	754	762	773	-	-	-
40	906	916	924	930	938	948	962	-	-
50	-	1 126	1 137	1 147	1 157	1 167	1 181	-	-
60	-	-	1 396	1 411	1 425	1 439	1 455	-	-
70	-	-	-	1 729	1 749	1 769	1 789	-	-
73	-	-	-	1 836	1 858	1 880	1 902	-	-

**Current consumption in A**

22	2.00	2.02	2.03	2.04	2.05	-	-	-	-
30	2.20	2.22	2.23	2.24	2.25	2.26	-	-	-
40	2.43	2.44	2.45	2.46	2.47	2.48	2.50	-	-
50	-	2.80	2.80	2.81	2.82	2.83	2.84	-	-
60	-	-	3.44	3.44	3.44	3.45	3.46	-	-
70	-	-	-	4.51	4.51	4.52	4.52	-	-
73	-	-	-	4.94	4.94	4.94	4.95	-	-

**Mass flow in kg/h**

22	43	54	66	80	96	-	-	-	-
30	43	53	65	79	95	113	-	-	-
40	42	52	64	78	94	112	133	-	-
50	-	52	63	77	93	111	132	-	-
60	-	-	62	75	91	109	130	-	-
70	-	-	-	73	89	107	127	-	-
73	-	-	-	73	88	106	126	-	-

**Coefficient of performance (C.O.P.)**

22	3.27	4.09	5.05	6.15	7.37	-	-	-	-
30	2.52	3.17	3.94	4.83	5.85	6.97	-	-	-
40	1.82	2.29	2.86	3.53	4.30	5.17	6.13	-	-
50	-	1.64	2.05	2.53	3.10	3.75	4.48	-	-
60	-	-	1.43	1.77	2.18	2.65	3.19	-	-
70	-	-	-	1.20	1.49	1.82	2.21	-	-
73	-	-	-	1.06	1.31	1.62	1.97	-	-

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

Cooling capacity	1 975	W
Power input	1 016	W
Current consumption	2.59	A
Mass flow	52	kg/h
C.O.P.	1.94	

**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	2 052	2 584	3 211	3 941	4 786	-	-	-	-
30	-	2 397	2 986	3 674	4 471	5 387	-	-	-
40	-	-	2 697	3 325	4 055	4 897	5 862	-	-
50	-	-	2 398	2 958	3 614	4 374	5 247	-	-
60	-	-	-	2 572	3 146	3 816	-	-	-
70	-	-	-	-	2 650	3 223	-	-	-
73	-	-	-	-	2 496	3 038	-	-	-

**Power input in W**

22	618	625	631	639	648	-	-	-	-
30	-	742	748	754	762	773	-	-	-
40	-	-	924	930	938	948	962	-	-
50	-	-	1 137	1 147	1 157	1 167	1 181	-	-
60	-	-	-	1 411	1 425	1 439	-	-	-
70	-	-	-	-	1 749	1 769	-	-	-
73	-	-	-	-	1 858	1 880	-	-	-

**Current consumption in A**

22	2.00	2.02	2.03	2.04	2.05	-	-	-	-
30	-	2.22	2.23	2.24	2.25	2.26	-	-	-
40	-	-	2.45	2.46	2.47	2.48	2.50	-	-
50	-	-	2.80	2.81	2.82	2.83	2.84	-	-
60	-	-	-	3.44	3.44	3.45	-	-	-
70	-	-	-	-	4.51	4.52	-	-	-
73	-	-	-	-	4.94	4.94	-	-	-

**Mass flow in kg/h**

22	39	49	62	76	93	-	-	-	-
30	-	49	61	76	93	113	-	-	-
40	-	-	60	75	92	112	136	-	-
50	-	-	59	74	91	111	135	-	-
60	-	-	-	72	89	109	-	-	-
70	-	-	-	-	87	107	-	-	-
73	-	-	-	-	86	106	-	-	-

**Coefficient of performance (C.O.P.)**

22	3.32	4.13	5.09	6.17	7.38	-	-	-	-
30	-	3.23	3.99	4.87	5.86	6.97	-	-	-
40	-	-	2.92	3.57	4.32	5.17	6.10	-	-
50	-	-	2.11	2.58	3.12	3.75	4.44	-	-
60	-	-	-	1.82	2.21	2.65	-	-	-
70	-	-	-	-	1.52	1.82	-	-	-
73	-	-	-	-	1.34	1.62	-	-	-

**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	2 496	3 149	3 926	4 828	5 859	-	-	-	-
30	2 277	2 904	3 650	4 517	5 506	6 621	-	-	-
40	2 003	2 591	3 290	4 104	5 035	6 085	7 256	-	-
50	-	2 258	2 903	3 656	4 520	5 496	6 586	-	-
60	-	-	2 477	3 161	3 949	4 843	5 845	-	-
70	-	-	-	2 608	3 312	4 115	5 021	-	-
73	-	-	-	2 428	3 106	3 881	4 755	-	-

**Power input in W**

22	739	753	768	787	810	-	-	-	-
30	872	887	903	920	940	964	-	-	-
40	1 058	1 080	1 100	1 118	1 138	1 159	1 184	-	-
50	-	1 303	1 332	1 357	1 380	1 403	1 428	-	-
60	-	-	1 604	1 640	1 672	1 701	1 729	-	-
70	-	-	-	1 972	2 017	2 057	2 094	-	-
73	-	-	-	2 082	2 132	2 176	2 216	-	-

**Current consumption in A**

22	1.99	2.00	2.01	2.01	2.02	-	-	-	-
30	2.19	2.21	2.22	2.23	2.24	2.26	-	-	-
40	2.42	2.44	2.46	2.47	2.49	2.51	2.54	-	-
50	-	2.77	2.80	2.82	2.84	2.87	2.90	-	-
60	-	-	3.38	3.41	3.44	3.48	3.51	-	-
70	-	-	-	4.40	4.44	4.48	4.53	-	-
73	-	-	-	4.79	4.84	4.88	4.93	-	-

**Mass flow in kg/h**

22	54	67	81	98	117	-	-	-	-
30	53	66	81	98	117	138	-	-	-
40	51	65	80	98	118	139	163	-	-
50	-	63	79	97	117	140	164	-	-
60	-	-	77	95	116	139	164	-	-
70	-	-	-	91	113	136	162	-	-
73	-	-	-	90	111	135	161	-	-

**Coefficient of performance (C.O.P.)**

22	3.38	4.18	5.11	6.14	7.23	-	-	-	-
30	2.61	3.27	4.04	4.91	5.86	6.87	-	-	-
40	1.89	2.40	2.99	3.67	4.43	5.25	6.13	-	-
50	-	1.73	2.18	2.69	3.27	3.92	4.61	-	-
60	-	-	1.54	1.93	2.36	2.85	3.38	-	-
70	-	-	-	1.32	1.64	2.00	2.40	-	-
73	-	-	-	1.17	1.46	1.78	2.15	-	-

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

Cooling capacity	2 427	W
Power input	1 188	W
Current consumption	2.59	A
Mass flow	64	kg/h
C.O.P.	2.04	

**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	2 536	3 186	3 956	4 849	5 869	-	-	-	-
30	-	2 958	3 697	4 551	5 525	6 621	-	-	-
40	-	-	3 358	4 157	5 065	6 085	7 222	-	-
50	-	-	2 991	3 727	4 561	5 496	6 534	-	-
60	-	-	-	3 249	4 002	4 843	-	-	-
70	-	-	-	-	3 376	4 115	-	-	-
73	-	-	-	-	3 173	3 881	-	-	-

**Power input in W**

22	739	753	768	787	810	-	-	-	-
30	-	887	903	920	940	964	-	-	-
40	-	-	1 100	1 118	1 138	1 159	1 184	-	-
50	-	-	1 332	1 357	1 380	1 403	1 428	-	-
60	-	-	-	1 640	1 672	1 701	-	-	-
70	-	-	-	-	2 017	2 057	-	-	-
73	-	-	-	-	2 132	2 176	-	-	-

**Current consumption in A**

22	1.99	2.00	2.01	2.01	2.02	-	-	-	-
30	-	2.21	2.22	2.23	2.24	2.26	-	-	-
40	-	-	2.46	2.47	2.49	2.51	2.54	-	-
50	-	-	2.80	2.82	2.84	2.87	2.90	-	-
60	-	-	-	3.41	3.44	3.48	-	-	-
70	-	-	-	-	4.44	4.48	-	-	-
73	-	-	-	-	4.84	4.88	-	-	-

**Mass flow in kg/h**

22	48	61	76	94	114	-	-	-	-
30	-	60	76	94	115	138	-	-	-
40	-	-	75	94	115	139	167	-	-
50	-	-	74	93	115	140	168	-	-
60	-	-	-	91	113	139	-	-	-
70	-	-	-	-	110	136	-	-	-
73	-	-	-	-	109	135	-	-	-

**Coefficient of performance (C.O.P.)**

22	3.43	4.23	5.15	6.16	7.25	-	-	-	-
30	-	3.33	4.09	4.95	5.88	6.87	-	-	-
40	-	-	3.05	3.72	4.45	5.25	6.10	-	-
50	-	-	2.25	2.75	3.30	3.92	4.58	-	-
60	-	-	-	1.98	2.39	2.85	-	-	-
70	-	-	-	-	1.67	2.00	-	-	-
73	-	-	-	-	1.49	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	2 340	2 903	3 593	4 425	5 415	-	-	-	-
20	2 090	2 625	3 258	4 006	4 885	5 911	7 100	-	-
30	1 767	2 278	2 860	3 529	4 301	5 194	6 222	7 402	8 749
40	-	1 851	2 387	2 982	3 654	4 417	5 289	6 286	7 424
50	-	-	1 829	2 356	2 931	3 571	4 292	5 111	6 044
60	-	-	-	-	2 122	2 643	3 219	3 865	4 599

**Power input in W**

10	783	782	765	736	696	-	-	-	-
20	977	983	976	958	933	904	876	-	-
30	1 248	1 250	1 240	1 222	1 199	1 176	1 155	1 141	1 136
40	-	1 625	1 601	1 572	1 540	1 510	1 485	1 469	1 465
50	-	-	2 103	2 050	1 997	1 949	1 908	1 879	1 864
60	-	-	-	-	2 615	2 537	2 468	2 414	2 377

**Current consumption in A**

10	1.61	1.61	1.58	1.52	1.44	-	-	-	-
20	2.01	2.03	2.01	1.97	1.92	1.86	1.81	-	-
30	2.57	2.58	2.56	2.52	2.47	2.42	2.38	2.35	2.34
40	-	3.35	3.30	3.24	3.18	3.11	3.06	3.03	3.02
50	-	-	4.34	4.23	4.12	4.02	3.94	3.87	3.84
60	-	-	-	-	5.39	5.23	5.09	4.98	4.90

**Mass flow in kg/h**

10	45	58	74	91	113	-	-	-	-
20	44	57	72	90	110	135	163	-	-
30	42	55	70	87	107	131	159	191	229
40	-	51	66	83	102	126	153	184	221
50	-	-	58	75	95	117	144	175	211
60	-	-	-	-	83	105	131	161	197

**Coefficient of performance (C.O.P.)**

10	2.99	3.71	4.69	6.01	7.78	-	-	-	-
20	2.14	2.67	3.34	4.18	5.24	6.54	8.11	-	-
30	1.42	1.82	2.31	2.89	3.59	4.42	5.39	6.49	7.70
40	-	1.14	1.49	1.90	2.37	2.93	3.56	4.28	5.07
50	-	-	0.87	1.15	1.47	1.83	2.25	2.72	3.24
60	-	-	-	-	0.81	1.04	1.30	1.60	1.93

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

Cooling capacity	3 302	W
Power input	1 751	W
Current consumption	3.61	A
Mass flow	99	kg/h
C.O.P.	1.89	

**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	2 248	2 810	3 501	4 339	5 342	-	-	-	-
20	1 966	2 493	3 124	3 876	4 767	5 814	7 032	-	-
30	1 616	2 111	2 686	3 356	4 140	5 055	6 119	7 346	8 749
40	1 197	1 661	2 180	2 771	3 451	4 239	5 152	6 209	7 424
50	-	-	1 605	2 117	2 695	3 358	4 124	5 013	6 044
60	-	-	-	-	1 867	2 405	3 024	3 748	4 599

**Power input in W**

10	783	782	765	736	696	-	-	-	-
20	977	983	976	958	933	904	876	-	-
30	1 248	1 250	1 240	1 222	1 199	1 176	1 155	1 141	1 136
40	1 640	1 625	1 601	1 572	1 540	1 510	1 485	1 469	1 465
50	-	-	2 103	2 050	1 997	1 949	1 908	1 879	1 864
60	-	-	-	-	2 615	2 537	2 468	2 414	2 377

**Current consumption in A**

10	1.61	1.61	1.58	1.52	1.44	-	-	-	-
20	2.01	2.03	2.01	1.97	1.92	1.86	1.81	-	-
30	2.57	2.58	2.56	2.52	2.47	2.42	2.38	2.35	2.34
40	3.38	3.35	3.30	3.24	3.18	3.11	3.06	3.03	3.02
50	-	-	4.34	4.23	4.12	4.02	3.94	3.87	3.84
60	-	-	-	-	5.39	5.23	5.09	4.98	4.90

**Mass flow in kg/h**

10	53	68	84	103	124	-	-	-	-
20	52	67	83	101	122	145	172	-	-
30	50	64	80	98	119	142	168	197	229
40	44	59	76	93	113	136	161	190	221
50	-	-	67	85	105	127	152	180	211
60	-	-	-	-	92	114	139	166	197

**Coefficient of performance (C.O.P.)**

10	2.87	3.59	4.57	5.90	7.67	-	-	-	-
20	2.01	2.54	3.20	4.05	5.11	6.43	8.03	-	-
30	1.29	1.69	2.17	2.75	3.45	4.30	5.30	6.44	7.70
40	0.73	1.02	1.36	1.76	2.24	2.81	3.47	4.23	5.07
50	-	-	0.76	1.03	1.35	1.72	2.16	2.67	3.24
60	-	-	-	-	0.71	0.95	1.23	1.55	1.93

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

Cooling capacity	3 082	W
Power input	1 751	W
Current consumption	3.61	A
Mass flow	109	kg/h
C.O.P.	1.76	

**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	2 856	3 532	4 349	5 325	6 478	-	-	-	-
20	2 514	3 159	3 917	4 805	5 843	7 049	8 441	-	-
30	2 134	2 750	3 450	4 253	5 177	6 241	7 464	8 863	10 458
40	-	2 283	2 926	3 644	4 456	5 380	6 434	7 638	9 010
50	-	-	2 324	2 959	3 659	4 444	5 331	6 341	7 491
60	-	-	-	-	2 764	3 411	4 133	4 950	5 881

**Power input in W**

10	967	947	930	916	902	-	-	-	-
20	1 209	1 195	1 184	1 172	1 160	1 145	1 126	-	-
30	1 502	1 497	1 492	1 486	1 477	1 464	1 445	1 418	1 382
40	-	1 868	1 872	1 872	1 868	1 859	1 841	1 814	1 777
50	-	-	2 339	2 348	2 351	2 346	2 331	2 306	2 268
60	-	-	-	-	2 940	2 942	2 932	2 910	2 874

**Current consumption in A**

10	1.52	1.49	1.46	1.44	1.41	-	-	-	-
20	1.90	1.87	1.86	1.84	1.82	1.80	1.77	-	-
30	2.36	2.35	2.34	2.33	2.32	2.30	2.27	2.22	2.17
40	-	2.93	2.94	2.94	2.93	2.92	2.89	2.85	2.79
50	-	-	3.67	3.68	3.69	3.68	3.66	3.62	3.56
60	-	-	-	-	4.61	4.62	4.60	4.57	4.51

**Mass flow in kg/h**

10	52	70	88	110	135	-	-	-	-
20	51	69	87	108	132	161	195	-	-
30	49	67	85	105	129	157	190	230	277
40	-	62	81	102	125	152	185	224	270
50	-	-	74	95	119	146	178	217	262
60	-	-	-	-	109	137	169	207	252

**Coefficient of performance (C.O.P.)**

10	2.95	3.73	4.68	5.82	7.18	-	-	-	-
20	2.08	2.64	3.31	4.10	5.04	6.16	7.50	-	-
30	1.42	1.84	2.31	2.86	3.50	4.26	5.17	6.25	7.57
40	-	1.22	1.56	1.95	2.38	2.89	3.50	4.21	5.07
50	-	-	0.99	1.26	1.56	1.89	2.29	2.75	3.30
60	-	-	-	-	0.94	1.16	1.41	1.70	2.05

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

Cooling capacity	4 068	W
Power input	2 097	W
Current consumption	3.29	A
Mass flow	122	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	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**
**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	2 744	3 419	4 238	5 222	6 391	-	-	-	-
20	2 364	3 000	3 755	4 649	5 702	6 934	8 361	-	-
30	1 952	2 549	3 240	4 044	4 982	6 074	7 340	8 797	10 458
40	1 493	2 048	2 672	3 386	4 209	5 163	6 268	7 544	9 010
50	-	-	2 038	2 659	3 365	4 179	5 123	6 219	7 491
60	-	-	-	-	2 432	3 103	3 884	4 800	5 881

**Power input in W**

10	967	947	930	916	902	-	-	-	-
20	1 209	1 195	1 184	1 172	1 160	1 145	1 126	-	-
30	1 502	1 497	1 492	1 486	1 477	1 464	1 445	1 418	1 382
40	1 863	1 868	1 872	1 872	1 868	1 859	1 841	1 814	1 777
50	-	-	2 339	2 348	2 351	2 346	2 331	2 306	2 268
60	-	-	-	-	2 940	2 942	2 932	2 910	2 874

**Current consumption in A**

10	1.52	1.49	1.46	1.44	1.41	-	-	-	-
20	1.90	1.87	1.86	1.84	1.82	1.80	1.77	-	-
30	2.36	2.35	2.34	2.33	2.32	2.30	2.27	2.22	2.17
40	2.92	2.93	2.94	2.94	2.93	2.92	2.89	2.85	2.79
50	-	-	3.67	3.68	3.69	3.68	3.66	3.62	3.56
60	-	-	-	-	4.61	4.62	4.60	4.57	4.51

**Mass flow in kg/h**

10	62	81	101	123	149	-	-	-	-
20	61	80	100	121	146	174	206	-	-
30	58	78	98	119	142	170	201	237	277
40	52	73	93	114	138	165	195	230	270
50	-	-	85	107	131	158	188	223	262
60	-	-	-	-	121	148	179	213	252

**Coefficient of performance (C.O.P.)**

10	2.84	3.61	4.56	5.70	7.09	-	-	-	-
20	1.96	2.51	3.17	3.97	4.91	6.05	7.43	-	-
30	1.30	1.70	2.17	2.72	3.37	4.15	5.08	6.20	7.57
40	0.80	1.10	1.43	1.81	2.25	2.78	3.40	4.16	5.07
50	-	-	0.87	1.13	1.43	1.78	2.20	2.70	3.30
60	-	-	-	-	0.83	1.05	1.32	1.65	2.05

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

Cooling capacity	3 797	W
Power input	2 097	W
Current consumption	3.29	A
Mass flow	135	kg/h
C.O.P.	1.81	

**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**
**R407A**

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

**Cooling capacity in W**

10	2 447	3 061	3 801	4 684	-	-	-	-	-
20	2 185	2 766	3 467	4 303	5 290	6 445	-	-	-
30	1 889	2 424	3 071	3 847	4 766	5 845	7 101	8 547	-
40	1 572	2 047	2 627	3 328	4 165	5 156	6 315	7 658	-
45	-	1 850	2 391	3 050	3 841	4 781	5 887	7 173	-
50	-	-	2 149	2 761	3 502	4 390	5 438	6 664	-
55	-	-	-	2 463	3 152	3 982	4 970	6 132	-
60	-	-	-	-	2 791	3 561	4 485	5 579	-

**Power input in W**

10	740	749	750	740	-	-	-	-	-
20	890	907	919	924	919	900	-	-	-
30	1 079	1 100	1 120	1 136	1 145	1 144	1 131	1 102	-
40	1 335	1 355	1 377	1 400	1 419	1 433	1 437	1 429	-
45	-	1 513	1 536	1 560	1 583	1 602	1 613	1 614	-
50	-	-	1 718	1 743	1 769	1 792	1 809	1 818	-
55	-	-	-	1 953	1 980	2 006	2 028	2 044	-
60	-	-	-	-	2 219	2 247	2 273	2 295	-

**Current consumption in A**

10	1.71	1.75	1.78	1.80	-	-	-	-	-
20	2.24	2.29	2.32	2.34	2.35	2.36	-	-	-
30	2.55	2.60	2.63	2.65	2.66	2.67	2.68	2.69	-
40	2.82	2.87	2.90	2.92	2.93	2.94	2.95	2.96	-
45	-	3.05	3.08	3.10	3.11	3.12	3.13	3.14	-
50	-	-	3.32	3.34	3.35	3.36	3.36	3.38	-
55	-	-	-	3.66	3.67	3.68	3.68	3.69	-
60	-	-	-	-	4.10	4.11	4.11	4.12	-

**Mass flow in kg/h**

10	48	59	72	87	-	-	-	-	-
20	46	58	71	87	105	126	-	-	-
30	44	56	69	85	103	125	149	178	-
40	41	52	66	81	100	122	147	175	-
45	-	50	63	79	98	119	145	173	-
50	-	-	61	76	95	117	142	171	-
55	-	-	-	73	92	113	138	167	-
60	-	-	-	-	88	109	135	163	-

**Coefficient of performance (C.O.P.)**

10	3.31	4.09	5.07	6.33	-	-	-	-	-
20	2.46	3.05	3.77	4.66	5.76	7.16	-	-	-
30	1.75	2.20	2.74	3.39	4.16	5.11	6.28	7.75	-
40	1.18	1.51	1.91	2.38	2.93	3.60	4.39	5.36	-
45	-	1.22	1.56	1.95	2.43	2.98	3.65	4.44	-
50	-	-	1.25	1.58	1.98	2.45	3.01	3.67	-
55	-	-	-	1.26	1.59	1.99	2.45	3.00	-
60	-	-	-	-	1.26	1.58	1.97	2.43	-

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

Cooling capacity	3 050	W
Power input	1 560	W
Current consumption	3.10	A
Mass flow	79	kg/h
C.O.P.	1.95	

**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

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Performance data at 50 Hz, ARI rating conditions

R407A

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

Cooling capacity in W

10	2 599	3 247	4 029	4 960	-	-	-	-	-
20	2 337	2 956	3 701	4 588	5 636	6 859	-	-	-
30	2 040	2 614	3 307	4 137	5 120	6 272	7 610	9 151	-
40	1 719	2 234	2 863	3 620	4 524	5 592	6 839	8 283	-
45	-	2 035	2 625	3 341	4 201	5 221	6 418	7 808	-
50	-	-	2 380	3 051	3 863	4 832	5 976	7 310	-
55	-	-	-	2 752	3 513	4 428	5 515	6 791	-
60	-	-	-	-	-	4 011	5 040	6 255	-

Power input in W

10	740	749	750	740	-	-	-	-	-
20	890	907	919	924	919	900	-	-	-
30	1 079	1 100	1 120	1 136	1 145	1 144	1 131	1 102	-
40	1 335	1 355	1 377	1 400	1 419	1 433	1 437	1 429	-
45	-	1 513	1 536	1 560	1 583	1 602	1 613	1 614	-
50	-	-	1 718	1 743	1 769	1 792	1 809	1 818	-
55	-	-	-	1 953	1 980	2 006	2 028	2 044	-
60	-	-	-	-	-	2 247	2 273	2 295	-

Current consumption in A

10	1.71	1.75	1.78	1.80	-	-	-	-	-
20	2.24	2.29	2.32	2.34	2.35	2.36	-	-	-
30	2.55	2.60	2.63	2.65	2.66	2.67	2.68	2.69	-
40	2.82	2.87	2.90	2.92	2.93	2.94	2.95	2.96	-
45	-	3.05	3.08	3.10	3.11	3.12	3.13	3.14	-
50	-	-	3.32	3.34	3.35	3.36	3.36	3.38	-
55	-	-	-	3.66	3.67	3.68	3.68	3.69	-
60	-	-	-	-	-	4.11	4.11	4.12	-

Mass flow in kg/h

10	47	59	72	87	-	-	-	-	-
20	46	57	71	86	105	125	-	-	-
30	44	55	69	84	103	124	149	176	-
40	41	52	65	81	100	121	146	174	-
45	-	50	63	79	97	119	144	172	-
50	-	-	60	76	94	116	141	170	-
55	-	-	-	73	91	113	138	166	-
60	-	-	-	-	-	109	134	162	-

Coefficient of performance (C.O.P.)

10	3.51	4.34	5.37	6.71	-	-	-	-	-
20	2.63	3.26	4.03	4.96	6.13	7.62	-	-	-
30	1.89	2.38	2.95	3.64	4.47	5.48	6.73	8.30	-
40	1.29	1.65	2.08	2.59	3.19	3.90	4.76	5.80	-
45	-	1.35	1.71	2.14	2.65	3.26	3.98	4.84	-
50	-	-	1.38	1.75	2.18	2.70	3.30	4.02	-
55	-	-	-	1.41	1.77	2.21	2.72	3.32	-
60	-	-	-	-	-	1.79	2.22	2.73	-

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

Cooling capacity	3 341	W
Power input	1 560	W
Current consumption	3.10	A
Mass flow	79	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	67	dB(A)
With acoustic hood	59	dB(A)

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

Rating conditions : Superheat = 11.1 K , Subcooling = 8.3 K

Tolerance according EN12900

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Performance data at 60 Hz, EN 12900 rating conditions

R407A

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

Cooling capacity in W

10	2 837	3 629	4 581	5 711	-	-	-	-	-
20	2 495	3 240	4 128	5 179	6 411	7 843	-	-	-
30	2 132	2 824	3 643	4 608	5 738	7 053	8 571	10 311	-
40	1 751	2 383	3 127	4 001	5 024	6 215	7 593	9 177	-
45	-	2 155	2 859	3 685	4 652	5 779	7 085	8 589	-
50	-	-	2 584	3 360	4 270	5 331	6 564	7 986	-
55	-	-	-	3 028	3 879	4 873	6 031	7 370	-
60	-	-	-	-	3 478	4 405	5 486	6 741	-

Power input in W

10	858	861	867	881	-	-	-	-	-
20	1 056	1 064	1 067	1 070	1 080	1 100	-	-	-
30	1 285	1 310	1 323	1 328	1 331	1 337	1 351	1 379	-
40	1 550	1 605	1 640	1 659	1 668	1 672	1 677	1 687	-
45	-	1 771	1 822	1 853	1 870	1 878	1 882	1 888	-
50	-	-	2 020	2 066	2 094	2 109	2 116	2 121	-
55	-	-	-	2 299	2 341	2 366	2 380	2 387	-
60	-	-	-	-	2 612	2 651	2 674	2 686	-

Current consumption in A

10	1.68	1.71	1.73	1.74	-	-	-	-	-
20	2.21	2.25	2.27	2.28	2.29	2.30	-	-	-
30	2.51	2.56	2.59	2.61	2.62	2.63	2.64	2.66	-
40	2.75	2.81	2.85	2.88	2.90	2.92	2.93	2.96	-
45	-	2.97	3.02	3.05	3.07	3.09	3.12	3.14	-
50	-	-	3.23	3.27	3.30	3.33	3.35	3.38	-
55	-	-	-	3.56	3.60	3.63	3.66	3.69	-
60	-	-	-	-	3.99	4.03	4.06	4.10	-

Mass flow in kg/h

10	55	70	87	107	-	-	-	-	-
20	53	68	85	105	127	154	-	-	-
30	50	65	82	102	125	151	180	214	-
40	46	61	78	98	121	147	176	210	-
45	-	58	76	96	118	144	174	207	-
50	-	-	73	93	116	142	171	204	-
55	-	-	-	90	113	139	168	201	-
60	-	-	-	-	109	135	165	198	-

Coefficient of performance (C.O.P.)

10	3.31	4.22	5.29	6.48	-	-	-	-	-
20	2.36	3.05	3.87	4.84	5.94	7.13	-	-	-
30	1.66	2.15	2.75	3.47	4.31	5.27	6.34	7.48	-
40	1.13	1.49	1.91	2.41	3.01	3.72	4.53	5.44	-
45	-	1.22	1.57	1.99	2.49	3.08	3.76	4.55	-
50	-	-	1.28	1.63	2.04	2.53	3.10	3.76	-
55	-	-	-	1.32	1.66	2.06	2.53	3.09	-
60	-	-	-	-	1.33	1.66	2.05	2.51	-

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

Cooling capacity	3 685	W
Power input	1 853	W
Current consumption	3.05	A
Mass flow	96	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	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

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**Performance data at 60 Hz, ARI rating conditions**
**R407A**

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

**Cooling capacity in W**

10	3 013	3 851	4 856	6 048	-	-	-	-	-
20	2 669	3 462	4 407	5 522	6 829	8 346	-	-	-
30	2 303	3 045	3 923	4 956	6 164	7 568	9 186	11 038	-
40	1 915	2 602	3 407	4 352	5 457	6 740	8 223	9 926	-
45	-	2 370	3 138	4 037	5 088	6 310	7 724	9 349	-
50	-	-	2 862	3 714	4 709	5 869	7 213	8 761	-
55	-	-	-	3 383	4 323	5 419	6 692	8 162	-
60	-	-	-	-	-	4 962	6 165	7 557	-

**Power input in W**

10	858	861	867	881	-	-	-	-	-
20	1 056	1 064	1 067	1 070	1 080	1 100	-	-	-
30	1 285	1 310	1 323	1 328	1 331	1 337	1 351	1 379	-
40	1 550	1 605	1 640	1 659	1 668	1 672	1 677	1 687	-
45	-	1 771	1 822	1 853	1 870	1 878	1 882	1 888	-
50	-	-	2 020	2 066	2 094	2 109	2 116	2 121	-
55	-	-	-	2 299	2 341	2 366	2 380	2 387	-
60	-	-	-	-	-	2 651	2 674	2 686	-

**Current consumption in A**

10	1.68	1.71	1.73	1.74	-	-	-	-	-
20	2.21	2.25	2.27	2.28	2.29	2.30	-	-	-
30	2.51	2.56	2.59	2.61	2.62	2.63	2.64	2.66	-
40	2.75	2.81	2.85	2.88	2.90	2.92	2.93	2.96	-
45	-	2.97	3.02	3.05	3.07	3.09	3.12	3.14	-
50	-	-	3.23	3.27	3.30	3.33	3.35	3.38	-
55	-	-	-	3.56	3.60	3.63	3.66	3.69	-
60	-	-	-	-	-	4.03	4.06	4.10	-

**Mass flow in kg/h**

10	55	70	86	106	-	-	-	-	-
20	53	67	84	104	127	153	-	-	-
30	50	64	81	101	124	150	179	213	-
40	45	60	78	97	120	146	175	209	-
45	-	58	75	95	118	144	173	206	-
50	-	-	73	92	115	141	170	203	-
55	-	-	-	89	112	138	167	200	-
60	-	-	-	-	-	135	164	197	-

**Coefficient of performance (C.O.P.)**

10	3.51	4.47	5.60	6.86	-	-	-	-	-
20	2.53	3.26	4.13	5.16	6.33	7.59	-	-	-
30	1.79	2.32	2.97	3.73	4.63	5.66	6.80	8.00	-
40	1.24	1.62	2.08	2.62	3.27	4.03	4.90	5.88	-
45	-	1.34	1.72	2.18	2.72	3.36	4.10	4.95	-
50	-	-	1.42	1.80	2.25	2.78	3.41	4.13	-
55	-	-	-	1.47	1.85	2.29	2.81	3.42	-
60	-	-	-	-	-	1.87	2.31	2.81	-

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

Cooling capacity	4 037	W
Power input	1 853	W
Current consumption	3.05	A
Mass flow	95	kg/h
C.O.P.	2.18	

**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 = 11.1 K , Subcooling = 8.3 K

Tolerance according EN12900

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**Performance data at 50 Hz, EN 12900 rating conditions, Superheat = 10 K**
**R407C**

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

**Cooling capacity in W**

30	-	1 921	2 414	2 997	3 673	4 450	5 333	6 327	7 440
35	-	1 781	2 263	2 830	3 486	4 238	5 091	6 052	7 126
40	-	1 645	2 112	2 658	3 289	4 012	4 831	5 754	6 785
45	-	-	1 968	2 490	3 092	3 781	4 562	5 442	6 425
50	-	-	-	2 335	2 903	3 554	4 292	5 124	6 056
55	-	-	-	-	2 731	3 339	4 031	4 811	5 686
60	-	-	-	-	-	3 145	3 785	4 508	5 322
65	-	-	-	-	-	-	3 561	4 223	4 971

**Power input in W**

30	-	1 000	1 029	1 058	1 086	1 115	1 147	1 181	1 218
35	-	1 109	1 146	1 178	1 208	1 236	1 262	1 289	1 316
40	-	1 217	1 264	1 304	1 337	1 366	1 391	1 412	1 432
45	-	-	1 383	1 433	1 473	1 506	1 532	1 552	1 566
50	-	-	-	1 565	1 616	1 656	1 685	1 706	1 718
55	-	-	-	-	1 764	1 814	1 850	1 875	1 888
60	-	-	-	-	-	1 980	2 026	2 058	2 075
65	-	-	-	-	-	-	2 214	2 255	2 279

**Current consumption in A**

30	-	1.80	1.86	1.91	1.96	2.01	2.07	2.13	2.20
35	-	2.00	2.07	2.13	2.18	2.23	2.28	2.32	2.37
40	-	2.20	2.28	2.35	2.41	2.46	2.51	2.55	2.58
45	-	-	2.50	2.58	2.66	2.72	2.76	2.80	2.83
50	-	-	-	2.82	2.92	2.99	3.04	3.08	3.10
55	-	-	-	-	3.18	3.27	3.34	3.38	3.41
60	-	-	-	-	-	3.57	3.66	3.71	3.74
65	-	-	-	-	-	-	3.99	4.07	4.11

**Mass flow in kg/h**

30	-	37	47	59	73	89	108	129	153
35	-	36	46	58	72	88	107	129	153
40	-	34	45	57	71	88	107	128	152
45	-	-	43	55	70	86	106	127	151
50	-	-	-	53	68	85	104	126	150
55	-	-	-	-	66	83	103	124	149
60	-	-	-	-	-	81	100	123	147
65	-	-	-	-	-	-	98	120	145

**Coefficient of performance (C.O.P.)**

30	-	1.92	2.35	2.83	3.38	3.99	4.65	5.36	6.11
35	-	1.61	1.98	2.40	2.89	3.43	4.03	4.70	5.42
40	-	1.35	1.67	2.04	2.46	2.94	3.47	4.07	4.74
45	-	-	1.42	1.74	2.10	2.51	2.98	3.51	4.10
50	-	-	-	1.49	1.80	2.15	2.55	3.00	3.52
55	-	-	-	-	1.55	1.84	2.18	2.57	3.01
60	-	-	-	-	-	1.59	1.87	2.19	2.56
65	-	-	-	-	-	-	1.61	1.87	2.18

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

Cooling capacity	3 092	W
Power input	1 473	W
Current consumption	2.66	A
Mass flow	70	kg/h
C.O.P.	2.10	

**Pressure switch settings**

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

**Sound power data**

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

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

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

Tolerance according EN12900

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Performance data at 50 Hz,

R407C

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

Cooling capacity in W

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

Power input in W

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

Current consumption in A

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

Mass flow in kg/h

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

Coefficient of performance (C.O.P.)

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

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

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

Pressure switch settings

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

Sound power data

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

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

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

Tolerance according EN12900

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

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

**Cooling capacity in W**

30	-	2 305	2 897	3 596	4 408	5 340	6 399	7 593	8 928
35	-	2 137	2 716	3 396	4 183	5 085	6 109	7 262	8 552
40	-	1 974	2 534	3 189	3 947	4 814	5 798	6 905	8 142
45	-	-	2 362	2 988	3 710	4 537	5 474	6 530	7 710
50	-	-	-	2 802	3 484	4 265	5 151	6 149	7 267
55	-	-	-	-	3 278	4 007	4 837	5 773	6 823
60	-	-	-	-	-	3 774	4 541	5 410	6 386
65	-	-	-	-	-	-	4 273	5 068	5 965

**Power input in W**

30	-	1 183	1 220	1 255	1 290	1 326	1 364	1 405	1 451
35	-	1 307	1 354	1 396	1 433	1 468	1 501	1 533	1 567
40	-	1 431	1 491	1 542	1 585	1 622	1 653	1 681	1 706
45	-	-	1 630	1 694	1 746	1 788	1 821	1 847	1 866
50	-	-	-	1 850	1 915	1 965	2 003	2 030	2 047
55	-	-	-	-	2 090	2 153	2 199	2 230	2 248
60	-	-	-	-	-	2 350	2 408	2 447	2 468
65	-	-	-	-	-	-	2 629	2 679	2 708

**Current consumption in A**

30	-	1.86	1.91	1.97	2.02	2.08	2.14	2.20	2.28
35	-	2.05	2.12	2.19	2.25	2.30	2.35	2.41	2.46
40	-	2.25	2.34	2.42	2.49	2.54	2.59	2.64	2.68
45	-	-	2.56	2.66	2.74	2.81	2.86	2.90	2.93
50	-	-	-	2.90	3.00	3.08	3.14	3.18	3.21
55	-	-	-	-	3.28	3.38	3.45	3.50	3.53
60	-	-	-	-	-	3.69	3.78	3.84	3.87
65	-	-	-	-	-	-	4.12	4.20	4.25

**Mass flow in kg/h**

30	-	44	56	71	87	107	129	155	184
35	-	43	55	70	87	106	129	154	183
40	-	41	54	68	85	105	128	154	183
45	-	-	52	66	84	104	127	153	182
50	-	-	-	64	82	102	125	151	181
55	-	-	-	-	79	100	123	149	179
60	-	-	-	-	-	97	120	147	177
65	-	-	-	-	-	-	117	144	174

**Coefficient of performance (C.O.P.)**

30	-	1.95	2.37	2.86	3.42	4.03	4.69	5.40	6.15
35	-	1.63	2.01	2.43	2.92	3.46	4.07	4.74	5.46
40	-	1.38	1.70	2.07	2.49	2.97	3.51	4.11	4.77
45	-	-	1.45	1.76	2.12	2.54	3.01	3.54	4.13
50	-	-	-	1.51	1.82	2.17	2.57	3.03	3.55
55	-	-	-	-	1.57	1.86	2.20	2.59	3.04
60	-	-	-	-	-	1.61	1.89	2.21	2.59
65	-	-	-	-	-	-	1.63	1.89	2.20

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

Cooling capacity	3 710	W
Power input	1 746	W
Current consumption	2.74	A
Mass flow	84	kg/h
C.O.P.	2.12	

**Pressure switch settings**

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

**Sound power data**

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

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

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

Tolerance according EN12900

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Performance data at 60 Hz,

R407C

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

Cooling capacity in W

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

Power input in W

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

Current consumption in A

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

Mass flow in kg/h

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

Coefficient of performance (C.O.P.)

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

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

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

Pressure switch settings

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

Sound power data

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

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

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

Tolerance according EN12900

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Performance data at 50 Hz, EN 12900 rating conditions

R407F

Cond. temp. in °C (tc)	Evaporating temperature in °C (to)							
	-23	-20	-15	-10	-5	0	5	10

Cooling capacity in W

10	2 830	3 231	4 001	4 914	-	-	-	-	-
20	2 552	2 933	3 667	4 537	5 561	6 754	-	-	-
30	2 233	2 586	3 268	4 080	5 039	6 162	7 465	8 965	-
40	1 886	2 202	2 816	3 555	4 434	5 472	6 683	8 085	-
45	-	-	2 575	3 271	4 105	5 094	6 253	7 600	-
50	-	-	-	2 976	3 760	4 696	5 801	7 089	-
55	-	-	-	-	3 402	4 281	5 326	6 552	-
60	-	-	-	-	-	-	-	-	-

Power input in W

10	786	788	790	790	-	-	-	-	-
20	953	959	965	969	972	973	-	-	-
30	1 160	1 171	1 185	1 194	1 201	1 206	1 209	1 213	-
40	1 426	1 443	1 466	1 484	1 497	1 507	1 514	1 520	-
45	-	-	1 636	1 659	1 676	1 689	1 699	1 707	-
50	-	-	-	1 857	1 879	1 896	1 909	1 919	-
55	-	-	-	-	2 107	2 129	2 146	2 159	-
60	-	-	-	-	-	-	-	-	-

Current consumption in A

10	1.82	1.84	1.87	1.88	-	-	-	-	-
20	2.40	2.42	2.45	2.46	2.47	2.47	-	-	-
30	2.73	2.75	2.78	2.80	2.81	2.81	2.82	2.83	-
40	3.03	3.05	3.08	3.09	3.10	3.10	3.11	3.12	-
45	-	-	3.27	3.28	3.29	3.30	3.30	3.31	-
50	-	-	-	3.54	3.55	3.55	3.56	3.57	-
55	-	-	-	-	3.90	3.90	3.90	3.91	-
60	-	-	-	-	-	-	-	-	-

Mass flow in kg/h

10	49	56	69	83	-	-	-	-	-
20	48	55	68	83	100	120	-	-	-
30	46	53	66	81	98	119	142	169	-
40	43	49	62	77	95	115	139	166	-
45	-	-	60	75	93	113	137	164	-
50	-	-	-	72	90	110	134	161	-
55	-	-	-	-	86	107	131	158	-
60	-	-	-	-	-	-	-	-	-

Coefficient of performance (C.O.P.)

10	3.60	4.10	5.07	6.22	-	-	-	-	-
20	2.68	3.06	3.80	4.68	5.72	6.94	-	-	-
30	1.92	2.21	2.76	3.42	4.20	5.11	6.17	7.39	-
40	1.32	1.53	1.92	2.40	2.96	3.63	4.41	5.32	-
45	-	-	1.57	1.97	2.45	3.02	3.68	4.45	-
50	-	-	-	1.60	2.00	2.48	3.04	3.69	-
55	-	-	-	-	1.61	2.01	2.48	3.04	-
60	-	-	-	-	-	-	-	-	-

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

Cooling capacity	3 271	W
Power input	1 659	W
Current consumption	3.28	A
Mass flow	75	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	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

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Performance data at 50 Hz, ARI rating conditions

R407F

Cond. temp. in °C (tc)	Evaporating temperature in °C (to)							
	-23	-20	-15	-10	-5	0	5	10

Cooling capacity in W

10	2 991	3 413	4 223	5 184	-	-	-	-	-
20	2 713	3 117	3 894	4 814	5 895	7 155	-	-	-
30	2 392	2 769	3 495	4 359	5 379	6 572	7 956	9 546	-
40	-	2 380	3 041	3 834	4 777	5 888	7 185	8 683	-
45	-	-	2 797	3 549	4 448	5 513	6 760	8 208	-
50	-	-	-	3 252	4 104	5 118	6 313	7 706	-
55	-	-	-	-	-	4 706	5 846	7 181	-
60	-	-	-	-	-	-	-	-	-

Power input in W

10	786	788	790	790	-	-	-	-	-
20	953	959	965	969	972	973	-	-	-
30	1 160	1 171	1 185	1 194	1 201	1 206	1 209	1 213	-
40	-	1 443	1 466	1 484	1 497	1 507	1 514	1 520	-
45	-	-	1 636	1 659	1 676	1 689	1 699	1 707	-
50	-	-	-	1 857	1 879	1 896	1 909	1 919	-
55	-	-	-	-	-	2 129	2 146	2 159	-
60	-	-	-	-	-	-	-	-	-

Current consumption in A

10	1.82	1.84	1.87	1.88	-	-	-	-	-
20	2.40	2.42	2.45	2.46	2.47	2.47	-	-	-
30	2.73	2.75	2.78	2.80	2.81	2.81	2.82	2.83	-
40	-	3.05	3.08	3.09	3.10	3.10	3.11	3.12	-
45	-	-	3.27	3.28	3.29	3.30	3.30	3.31	-
50	-	-	-	3.54	3.55	3.55	3.56	3.57	-
55	-	-	-	-	-	3.90	3.90	3.91	-
60	-	-	-	-	-	-	-	-	-

Mass flow in kg/h

10	49	56	68	83	-	-	-	-	-
20	48	55	67	82	99	119	-	-	-
30	46	52	65	80	98	118	141	168	-
40	-	49	62	77	94	115	138	165	-
45	-	-	60	74	92	112	136	163	-
50	-	-	-	72	89	110	133	160	-
55	-	-	-	-	-	106	130	157	-
60	-	-	-	-	-	-	-	-	-

Coefficient of performance (C.O.P.)

10	3.81	4.33	5.35	6.56	-	-	-	-	-
20	2.85	3.25	4.03	4.97	6.07	7.35	-	-	-
30	2.06	2.36	2.95	3.65	4.48	5.45	6.58	7.87	-
40	-	1.65	2.07	2.58	3.19	3.91	4.74	5.71	-
45	-	-	1.71	2.14	2.65	3.26	3.98	4.81	-
50	-	-	-	1.75	2.18	2.70	3.31	4.02	-
55	-	-	-	-	-	2.21	2.72	3.33	-
60	-	-	-	-	-	-	-	-	-

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

Cooling capacity	3 549	W
Power input	1 659	W
Current consumption	3.28	A
Mass flow	74	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	67	dB(A)
With acoustic hood	59	dB(A)

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

Rating conditions : Superheat = 11.1 K , Subcooling = 8.3 K

Tolerance according EN12900

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Performance data at 60 Hz, EN 12900 rating conditions

R407F

Cond. temp. in °C (tc)	Evaporating temperature in °C (to)							
	-23	-20	-15	-10	-5	0	5	10

Cooling capacity in W

10	3 355	3 877	4 878	6 062	-	-	-	-	-
20	2 986	3 480	4 421	5 528	6 822	8 321	-	-	-
30	2 591	3 051	3 924	4 948	6 143	7 527	9 122	10 946	-
40	2 171	2 594	3 393	4 326	5 415	6 677	8 134	9 805	-
45	-	-	3 115	4 001	5 033	6 232	7 618	9 209	-
50	-	-	-	3 666	4 641	5 774	7 087	8 597	-
55	-	-	-	-	4 238	5 304	6 542	7 969	-
60	-	-	-	-	-	-	-	-	-

Power input in W

10	914	914	920	944	-	-	-	-	-
20	1 133	1 133	1 130	1 132	1 147	1 183	-	-	-
30	1 392	1 404	1 411	1 409	1 409	1 417	1 444	1 499	-
40	1 687	1 722	1 757	1 772	1 775	1 774	1 779	1 800	-
45	-	-	1 954	1 984	1 995	1 997	1 999	2 009	-
50	-	-	-	2 215	2 240	2 249	2 252	2 257	-
55	-	-	-	-	2 508	2 530	2 539	2 543	-
60	-	-	-	-	-	-	-	-	-

Current consumption in A

10	1.80	1.82	1.84	1.84	-	-	-	-	-
20	2.39	2.41	2.43	2.44	2.44	2.44	-	-	-
30	2.73	2.75	2.78	2.80	2.80	2.81	2.82	2.83	-
40	3.00	3.04	3.07	3.10	3.11	3.12	3.14	3.16	-
45	-	-	3.25	3.28	3.30	3.32	3.34	3.36	-
50	-	-	-	3.53	3.55	3.57	3.60	3.62	-
55	-	-	-	-	3.88	3.91	3.93	3.96	-
60	-	-	-	-	-	-	-	-	-

Mass flow in kg/h

10	59	67	84	103	-	-	-	-	-
20	56	65	82	101	123	148	-	-	-
30	53	62	79	98	120	145	173	206	-
40	49	58	75	94	116	141	169	202	-
45	-	-	72	92	113	138	167	199	-
50	-	-	-	89	111	136	164	196	-
55	-	-	-	-	108	132	161	192	-
60	-	-	-	-	-	-	-	-	-

Coefficient of performance (C.O.P.)

10	3.67	4.24	5.30	6.42	-	-	-	-	-
20	2.64	3.07	3.91	4.88	5.95	7.03	-	-	-
30	1.86	2.17	2.78	3.51	4.36	5.31	6.32	7.30	-
40	1.29	1.51	1.93	2.44	3.05	3.76	4.57	5.45	-
45	-	-	1.59	2.02	2.52	3.12	3.81	4.58	-
50	-	-	-	1.66	2.07	2.57	3.15	3.81	-
55	-	-	-	-	1.69	2.10	2.58	3.13	-
60	-	-	-	-	-	-	-	-	-

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

Cooling capacity	4 001	W
Power input	1 984	W
Current consumption	3.28	A
Mass flow	92	kg/h
C.O.P.	2.02	

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

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**Performance data at 60 Hz, ARI rating conditions**
**R407F**

Cond. temp. in °C (tc)	Evaporating temperature in °C (to)							
	-23	-20	-15	-10	-5	0	5	10

**Cooling capacity in W**

10	3 545	4 095	5 150	6 395	-	-	-	-	-
20	3 175	3 698	4 694	5 865	7 232	8 814	-	-	-
30	2 776	3 267	4 197	5 288	6 558	8 029	9 721	11 655	-
40	-	2 805	3 664	4 666	5 834	7 186	8 745	10 531	-
45	-	-	3 384	4 341	5 454	6 745	8 235	9 945	-
50	-	-	-	4 006	5 064	6 293	7 713	9 345	-
55	-	-	-	-	-	5 831	7 180	8 734	-
60	-	-	-	-	-	-	-	-	-

**Power input in W**

10	914	914	920	944	-	-	-	-	-
20	1 133	1 133	1 130	1 132	1 147	1 183	-	-	-
30	1 392	1 404	1 411	1 409	1 409	1 417	1 444	1 499	-
40	-	1 722	1 757	1 772	1 775	1 774	1 779	1 800	-
45	-	-	1 954	1 984	1 995	1 997	1 999	2 009	-
50	-	-	-	2 215	2 240	2 249	2 252	2 257	-
55	-	-	-	-	-	2 530	2 539	2 543	-
60	-	-	-	-	-	-	-	-	-

**Current consumption in A**

10	1.80	1.82	1.84	1.84	-	-	-	-	-
20	2.39	2.41	2.43	2.44	2.44	2.44	-	-	-
30	2.73	2.75	2.78	2.80	2.80	2.81	2.82	2.83	-
40	-	3.04	3.07	3.10	3.11	3.12	3.14	3.16	-
45	-	-	3.25	3.28	3.30	3.32	3.34	3.36	-
50	-	-	-	3.53	3.55	3.57	3.60	3.62	-
55	-	-	-	-	-	3.91	3.93	3.96	-
60	-	-	-	-	-	-	-	-	-

**Mass flow in kg/h**

10	58	67	83	102	-	-	-	-	-
20	56	65	81	100	122	147	-	-	-
30	53	62	78	97	119	144	172	205	-
40	-	58	74	93	115	140	168	200	-
45	-	-	72	91	113	138	166	198	-
50	-	-	-	88	110	135	163	195	-
55	-	-	-	-	-	132	160	191	-
60	-	-	-	-	-	-	-	-	-

**Coefficient of performance (C.O.P.)**

10	3.88	4.48	5.60	6.77	-	-	-	-	-
20	2.80	3.26	4.15	5.18	6.31	7.45	-	-	-
30	1.99	2.33	2.98	3.75	4.66	5.67	6.73	7.78	-
40	-	1.63	2.08	2.63	3.29	4.05	4.91	5.85	-
45	-	-	1.73	2.19	2.73	3.38	4.12	4.95	-
50	-	-	-	1.81	2.26	2.80	3.42	4.14	-
55	-	-	-	-	-	2.30	2.83	3.43	-
60	-	-	-	-	-	-	-	-	-

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

Cooling capacity	4 341	W
Power input	1 984	W
Current consumption	3.28	A
Mass flow	91	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	71	dB(A)
With acoustic hood	63	dB(A)

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

Rating conditions : Superheat = 11.1 K , Subcooling = 8.3 K

Tolerance according EN12900

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**Performance data at 50 Hz, EN 12900 rating conditions, Suction temp. = 20 °C**
**R448A**

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

**Cooling capacity in W**

10	1 965	2 470	3 075	3 797	4 650	-	-	-	-
20	1 766	2 255	2 834	3 519	4 324	5 264	6 355	-	-
30	-	-	2 544	3 180	3 926	4 796	5 805	6 969	8 303
40	-	-	-	2 792	3 466	4 254	5 171	6 231	7 450
50	-	-	-	-	2 955	3 650	4 463	5 408	6 501
60	-	-	-	-	-	-	3 690	4 509	5 465

**Power input in W**

10	775	785	796	806	811	-	-	-	-
20	955	956	965	980	996	1 009	1 018	-	-
30	-	-	1 188	1 194	1 208	1 227	1 247	1 264	1 275
40	-	-	-	1 496	1 497	1 508	1 527	1 549	1 573
50	-	-	-	-	1 908	1 900	1 905	1 921	1 944
60	-	-	-	-	-	-	2 429	2 426	2 436

**Current consumption in A**

10	2.51	2.50	2.50	2.49	2.48	-	-	-	-
20	2.61	2.62	2.63	2.64	2.65	2.65	2.66	-	-
30	-	-	2.81	2.83	2.85	2.86	2.88	2.89	2.91
40	-	-	-	3.13	3.15	3.16	3.18	3.20	3.21
50	-	-	-	-	3.61	3.62	3.63	3.64	3.65
60	-	-	-	-	-	-	4.29	4.28	4.28

**Mass flow in kg/h**

10	32	41	51	63	77	-	-	-	-
20	31	40	50	62	77	94	115	-	-
30	-	-	49	61	76	93	114	139	167
40	-	-	-	59	73	91	112	136	165
50	-	-	-	-	70	87	108	132	161
60	-	-	-	-	-	-	102	126	155

**Coefficient of performance (C.O.P.)**

10	2.54	3.15	3.86	4.71	5.73	-	-	-	-
20	1.85	2.36	2.94	3.59	4.34	5.22	6.24	-	-
30	-	-	2.14	2.66	3.25	3.91	4.66	5.51	6.51
40	-	-	-	1.87	2.32	2.82	3.39	4.02	4.74
50	-	-	-	-	1.55	1.92	2.34	2.82	3.34
60	-	-	-	-	-	-	1.52	1.86	2.24

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

Cooling capacity	3 216	W
Power input	1 684	W
Current consumption	3.35	A
Mass flow	72	kg/h
C.O.P.	1.91	

**Pressure switch settings**

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

**Sound power data**

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

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

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

Tolerance according EN12900

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

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

**Cooling capacity in W**

10	1 974	2 482	3 093	3 821	4 680	-	-	-	-
20	1 751	2 241	2 823	3 512	4 323	5 270	6 367	-	-
30	1 503	1 962	2 504	3 142	3 893	4 772	5 792	6 965	8 303
40	-	-	2 147	2 723	3 402	4 200	5 132	6 211	7 450
50	-	-	-	2 266	2 862	3 567	4 398	5 371	6 501
60	-	-	-	-	2 282	2 882	3 601	4 456	5 465

**Power input in W**

10	775	785	796	806	811	-	-	-	-
20	955	956	965	980	996	1 009	1 018	-	-
30	1 211	1 192	1 188	1 194	1 208	1 227	1 247	1 264	1 275
40	-	-	1 510	1 496	1 497	1 508	1 527	1 549	1 573
50	-	-	-	1 933	1 908	1 900	1 905	1 921	1 944
60	-	-	-	-	2 488	2 448	2 429	2 426	2 436

**Current consumption in A**

10	2.51	2.50	2.50	2.49	2.48	-	-	-	-
20	2.61	2.62	2.63	2.64	2.65	2.65	2.66	-	-
30	2.78	2.80	2.81	2.83	2.85	2.86	2.88	2.89	2.91
40	-	-	3.12	3.13	3.15	3.16	3.18	3.20	3.21
50	-	-	-	3.61	3.61	3.62	3.63	3.64	3.65
60	-	-	-	-	4.31	4.30	4.29	4.28	4.28

**Mass flow in kg/h**

10	38	47	58	70	85	-	-	-	-
20	37	46	57	70	85	102	121	-	-
30	35	44	55	68	83	100	120	142	167
40	-	-	53	66	80	98	117	140	165
50	-	-	-	61	76	93	113	136	161
60	-	-	-	-	71	88	107	130	155

**Coefficient of performance (C.O.P.)**

10	2.55	3.16	3.88	4.74	5.77	-	-	-	-
20	1.83	2.34	2.92	3.58	4.34	5.22	6.26	-	-
30	1.24	1.65	2.11	2.63	3.22	3.89	4.65	5.51	6.51
40	-	-	1.42	1.82	2.27	2.78	3.36	4.01	4.74
50	-	-	-	1.17	1.50	1.88	2.31	2.80	3.34
60	-	-	-	-	0.92	1.18	1.48	1.84	2.24

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

Cooling capacity	3 137	W
Power input	1 684	W
Current consumption	3.35	A
Mass flow	79	kg/h
C.O.P.	1.86	

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

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

**Pressure switch settings**

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

**Sound power data**

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

Tolerance according EN12900

**Performance data at 60 Hz, EN 12900 rating conditions, Suction temp. = 20 °C**
**R448A**

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

**Cooling capacity in W**

10	2 255	2 893	3 665	4 588	5 682	-	-	-	-
20	1 997	2 597	3 311	4 159	5 158	6 328	7 686	-	-
30	-	-	2 961	3 730	4 632	5 686	6 910	8 324	9 945
40	-	-	-	3 302	4 104	5 039	6 126	7 384	8 830
50	-	-	-	-	3 573	4 387	5 334	6 433	7 703
60	-	-	-	-	-	-	4 534	5 472	6 561

**Power input in W**

10	836	867	898	922	935	-	-	-	-
20	1 062	1 088	1 120	1 153	1 181	1 198	1 201	-	-
30	-	-	1 378	1 407	1 438	1 466	1 485	1 490	1 476
40	-	-	-	1 736	1 759	1 785	1 809	1 825	1 829
50	-	-	-	-	2 192	2 205	2 222	2 239	2 250
60	-	-	-	-	-	-	2 776	2 781	2 787

**Current consumption in A**

10	2.22	2.24	2.27	2.29	2.30	-	-	-	-
20	2.42	2.43	2.46	2.49	2.52	2.53	2.53	-	-
30	-	-	2.68	2.70	2.73	2.77	2.79	2.80	2.78
40	-	-	-	3.02	3.04	3.07	3.10	3.13	3.15
50	-	-	-	-	3.51	3.52	3.55	3.58	3.62
60	-	-	-	-	-	-	4.22	4.24	4.27

**Mass flow in kg/h**

10	37	48	60	76	94	-	-	-	-
20	35	46	59	74	92	114	139	-	-
30	-	-	57	72	89	111	136	165	200
40	-	-	-	69	87	108	132	161	195
50	-	-	-	-	84	105	129	157	191
60	-	-	-	-	-	-	125	153	186

**Coefficient of performance (C.O.P.)**

10	2.70	3.34	4.08	4.97	6.08	-	-	-	-
20	1.88	2.39	2.96	3.61	4.37	5.28	6.40	-	-
30	-	-	2.15	2.65	3.22	3.88	4.65	5.59	6.74
40	-	-	-	1.90	2.33	2.82	3.39	4.05	4.83
50	-	-	-	-	1.63	1.99	2.40	2.87	3.42
60	-	-	-	-	-	-	1.63	1.97	2.35

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

Cooling capacity	3 839	W
Power input	1 958	W
Current consumption	3.25	A
Mass flow	85	kg/h
C.O.P.	1.96	

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

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

**Pressure switch settings**

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

**Sound power data**

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

Tolerance according EN12900

**Performance data at 60 Hz, EN 12900 rating conditions, Superheat = 10 K**
**R448A**

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

**Cooling capacity in W**

10	2 264	2 907	3 685	4 616	5 718	-	-	-	-
20	1 980	2 580	3 297	4 150	5 157	6 335	7 701	-	-
30	1 706	2 260	2 914	3 685	4 594	5 657	6 894	8 319	9 945
40	-	-	2 533	3 221	4 028	4 975	6 080	7 360	8 830
50	-	-	-	2 756	3 460	4 287	5 257	6 390	7 703
60	-	-	-	-	2 886	3 591	4 424	5 407	6 561

**Power input in W**

10	836	867	898	922	935	-	-	-	-
20	1 062	1 088	1 120	1 153	1 181	1 198	1 201	-	-
30	1 347	1 357	1 378	1 407	1 438	1 466	1 485	1 490	1 476
40	-	-	1 722	1 736	1 759	1 785	1 809	1 825	1 829
50	-	-	-	2 190	2 192	2 205	2 222	2 239	2 250
60	-	-	-	-	2 789	2 777	2 776	2 781	2 787

**Current consumption in A**

10	2.22	2.24	2.27	2.29	2.30	-	-	-	-
20	2.42	2.43	2.46	2.49	2.52	2.53	2.53	-	-
30	2.69	2.67	2.68	2.70	2.73	2.77	2.79	2.80	2.78
40	-	-	3.02	3.02	3.04	3.07	3.10	3.13	3.15
50	-	-	-	3.53	3.51	3.52	3.55	3.58	3.62
60	-	-	-	-	4.25	4.22	4.22	4.24	4.27

**Mass flow in kg/h**

10	43	55	69	85	104	-	-	-	-
20	41	53	67	83	101	122	147	-	-
30	39	51	65	80	98	119	143	170	200
40	-	-	62	78	95	116	139	166	195
50	-	-	-	75	92	112	135	161	191
60	-	-	-	-	89	109	132	157	186

**Coefficient of performance (C.O.P.)**

10	2.71	3.35	4.10	5.01	6.11	-	-	-	-
20	1.86	2.37	2.94	3.60	4.37	5.29	6.41	-	-
30	1.27	1.67	2.11	2.62	3.19	3.86	4.64	5.58	6.74
40	-	-	1.47	1.85	2.29	2.79	3.36	4.03	4.83
50	-	-	-	1.26	1.58	1.94	2.37	2.85	3.42
60	-	-	-	-	1.03	1.29	1.59	1.94	2.35

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

Cooling capacity	3 744	W
Power input	1 958	W
Current consumption	3.25	A
Mass flow	94	kg/h
C.O.P.	1.91	

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	1 965	2 470	3 075	3 797	4 650	-	-	-	-
20	1 766	2 255	2 834	3 519	4 324	5 264	6 355	-	-
30	-	-	2 544	3 180	3 926	4 796	5 805	6 969	8 303
40	-	-	-	2 792	3 466	4 254	5 171	6 231	7 450
50	-	-	-	-	2 955	3 650	4 463	5 408	6 501
60	-	-	-	-	-	-	3 690	4 509	5 465

**Power input in W**

10	775	785	796	806	811	-	-	-	-
20	955	956	965	980	996	1 009	1 018	-	-
30	-	-	1 188	1 194	1 208	1 227	1 247	1 264	1 275
40	-	-	-	1 496	1 497	1 508	1 527	1 549	1 573
50	-	-	-	-	1 908	1 900	1 905	1 921	1 944
60	-	-	-	-	-	-	2 429	2 426	2 436

**Current consumption in A**

10	2.51	2.50	2.50	2.49	2.48	-	-	-	-
20	2.61	2.62	2.63	2.64	2.65	2.65	2.66	-	-
30	-	-	2.81	2.83	2.85	2.86	2.88	2.89	2.91
40	-	-	-	3.13	3.15	3.16	3.18	3.20	3.21
50	-	-	-	-	3.61	3.62	3.63	3.64	3.65
60	-	-	-	-	-	-	4.29	4.28	4.28

**Mass flow in kg/h**

10	32	41	51	63	77	-	-	-	-
20	31	40	50	62	77	94	115	-	-
30	-	-	49	61	76	93	114	139	167
40	-	-	-	59	73	91	112	136	165
50	-	-	-	-	70	87	108	132	161
60	-	-	-	-	-	-	102	126	155

**Coefficient of performance (C.O.P.)**

10	2.54	3.15	3.86	4.71	5.73	-	-	-	-
20	1.85	2.36	2.94	3.59	4.34	5.22	6.24	-	-
30	-	-	2.14	2.66	3.25	3.91	4.66	5.51	6.51
40	-	-	-	1.87	2.32	2.82	3.39	4.02	4.74
50	-	-	-	-	1.55	1.92	2.34	2.82	3.34
60	-	-	-	-	-	-	1.52	1.86	2.24

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

Cooling capacity	3 216	W
Power input	1 684	W
Current consumption	3.35	A
Mass flow	72	kg/h
C.O.P.	1.91	

**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	1 969	2 477	3 088	3 816	4 676	-	-	-	-
20	1 746	2 236	2 817	3 507	4 318	5 266	6 364	-	-
30	1 498	1 957	2 498	3 137	3 888	4 767	5 788	6 963	8 303
40	-	-	2 141	2 717	3 397	4 195	5 128	6 209	7 450
50	-	-	-	2 260	2 856	3 561	4 394	5 369	6 501
60	-	-	-	-	2 277	2 877	3 597	4 453	5 465

**Power input in W**

10	775	785	796	806	811	-	-	-	-
20	955	956	965	980	996	1 009	1 018	-	-
30	1 211	1 192	1 188	1 194	1 208	1 227	1 247	1 264	1 275
40	-	-	1 510	1 496	1 497	1 508	1 527	1 549	1 573
50	-	-	-	1 933	1 908	1 900	1 905	1 921	1 944
60	-	-	-	-	2 488	2 448	2 429	2 426	2 436

**Current consumption in A**

10	2.51	2.50	2.50	2.49	2.48	-	-	-	-
20	2.61	2.62	2.63	2.64	2.65	2.65	2.66	-	-
30	2.78	2.80	2.81	2.83	2.85	2.86	2.88	2.89	2.91
40	-	-	3.12	3.13	3.15	3.16	3.18	3.20	3.21
50	-	-	-	3.61	3.61	3.62	3.63	3.64	3.65
60	-	-	-	-	4.31	4.30	4.29	4.28	4.28

**Mass flow in kg/h**

10	38	47	58	70	85	-	-	-	-
20	37	46	57	70	85	102	121	-	-
30	35	44	55	68	83	100	120	142	167
40	-	-	53	66	80	98	117	140	165
50	-	-	-	61	76	93	113	136	161
60	-	-	-	-	71	88	107	130	155

**Coefficient of performance (C.O.P.)**

10	2.54	3.16	3.88	4.73	5.76	-	-	-	-
20	1.83	2.34	2.92	3.58	4.34	5.22	6.25	-	-
30	1.24	1.64	2.10	2.63	3.22	3.88	4.64	5.51	6.51
40	-	-	1.42	1.82	2.27	2.78	3.36	4.01	4.74
50	-	-	-	1.17	1.50	1.87	2.31	2.79	3.34
60	-	-	-	-	0.91	1.18	1.48	1.84	2.24

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

Cooling capacity	3 132	W
Power input	1 684	W
Current consumption	3.35	A
Mass flow	79	kg/h
C.O.P.	1.86	

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	2 255	2 893	3 665	4 588	5 682	-	-	-	-
20	1 997	2 597	3 311	4 159	5 158	6 328	7 686	-	-
30	-	-	2 961	3 730	4 632	5 686	6 910	8 324	9 945
40	-	-	-	3 302	4 104	5 039	6 126	7 384	8 830
50	-	-	-	-	3 573	4 387	5 334	6 433	7 703
60	-	-	-	-	-	-	4 534	5 472	6 561

**Power input in W**

10	836	867	898	922	935	-	-	-	-
20	1 062	1 088	1 120	1 153	1 181	1 198	1 201	-	-
30	-	-	1 378	1 407	1 438	1 466	1 485	1 490	1 476
40	-	-	-	1 736	1 759	1 785	1 809	1 825	1 829
50	-	-	-	-	2 192	2 205	2 222	2 239	2 250
60	-	-	-	-	-	-	2 776	2 781	2 787

**Current consumption in A**

10	2.22	2.24	2.27	2.29	2.30	-	-	-	-
20	2.42	2.43	2.46	2.49	2.52	2.53	2.53	-	-
30	-	-	2.68	2.70	2.73	2.77	2.79	2.80	2.78
40	-	-	-	3.02	3.04	3.07	3.10	3.13	3.15
50	-	-	-	-	3.51	3.52	3.55	3.58	3.62
60	-	-	-	-	-	-	4.22	4.24	4.27

**Mass flow in kg/h**

10	37	48	61	77	96	-	-	-	-
20	36	47	59	75	93	116	142	-	-
30	-	-	58	73	91	113	138	169	204
40	-	-	-	71	88	110	135	165	199
50	-	-	-	-	86	107	131	161	195
60	-	-	-	-	-	-	128	156	190

**Coefficient of performance (C.O.P.)**

10	2.70	3.34	4.08	4.97	6.08	-	-	-	-
20	1.88	2.39	2.96	3.61	4.37	5.28	6.40	-	-
30	-	-	2.15	2.65	3.22	3.88	4.65	5.59	6.74
40	-	-	-	1.90	2.33	2.82	3.39	4.05	4.83
50	-	-	-	-	1.63	1.99	2.40	2.87	3.42
60	-	-	-	-	-	-	1.63	1.97	2.35

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

Cooling capacity	3 839	W
Power input	1 958	W
Current consumption	3.25	A
Mass flow	87	kg/h
C.O.P.	1.96	

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	2 259	2 902	3 680	4 611	5 713	-	-	-	-
20	1 975	2 575	3 292	4 144	5 151	6 330	7 697	-	-
30	1 700	2 254	2 908	3 679	4 587	5 652	6 890	8 316	9 945
40	-	-	2 527	3 214	4 022	4 969	6 075	7 357	8 830
50	-	-	-	2 749	3 453	4 280	5 252	6 387	7 703
60	-	-	-	-	2 879	3 584	4 419	5 404	6 561

**Power input in W**

10	836	867	898	922	935	-	-	-	-
20	1 062	1 088	1 120	1 153	1 181	1 198	1 201	-	-
30	1 347	1 357	1 378	1 407	1 438	1 466	1 485	1 490	1 476
40	-	-	1 722	1 736	1 759	1 785	1 809	1 825	1 829
50	-	-	-	2 190	2 192	2 205	2 222	2 239	2 250
60	-	-	-	-	2 789	2 777	2 776	2 781	2 787

**Current consumption in A**

10	2.22	2.24	2.27	2.29	2.30	-	-	-	-
20	2.42	2.43	2.46	2.49	2.52	2.53	2.53	-	-
30	2.69	2.67	2.68	2.70	2.73	2.77	2.79	2.80	2.78
40	-	-	3.02	3.02	3.04	3.07	3.10	3.13	3.15
50	-	-	-	3.53	3.51	3.52	3.55	3.58	3.62
60	-	-	-	-	4.25	4.22	4.22	4.24	4.27

**Mass flow in kg/h**

10	44	56	70	86	105	-	-	-	-
20	42	54	68	84	103	124	149	-	-
30	40	52	66	81	100	121	146	173	204
40	-	-	63	79	97	118	142	169	199
50	-	-	-	76	94	115	138	165	195
60	-	-	-	-	91	111	135	161	190

**Coefficient of performance (C.O.P.)**

10	2.70	3.35	4.10	5.00	6.11	-	-	-	-
20	1.86	2.37	2.94	3.59	4.36	5.28	6.41	-	-
30	1.26	1.66	2.11	2.61	3.19	3.86	4.64	5.58	6.74
40	-	-	1.47	1.85	2.29	2.78	3.36	4.03	4.83
50	-	-	-	1.26	1.57	1.94	2.36	2.85	3.42
60	-	-	-	-	1.03	1.29	1.59	1.94	2.35

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

Cooling capacity	3 738	W
Power input	1 958	W
Current consumption	3.25	A
Mass flow	96	kg/h
C.O.P.	1.91	

**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**
**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	2 171	2 716	3 381	4 182	5 130	-	-	-	-
20	1 941	2 447	3 057	3 785	4 645	5 650	6 816	-	-
30	-	2 185	2 732	3 380	4 144	5 036	6 072	7 265	8 629
40	-	-	2 403	2 964	3 624	4 397	5 296	6 335	7 529
50	-	-	-	-	3 083	3 729	4 484	5 362	6 379
60	-	-	-	-	-	3 028	3 633	4 344	5 176

**Power input in W**

10	795	815	828	832	829	-	-	-	-
20	946	974	995	1 009	1 015	1 012	1 002	-	-
30	-	1 181	1 209	1 230	1 242	1 248	1 245	1 234	1 215
40	-	-	1 488	1 513	1 532	1 542	1 545	1 540	1 527
50	-	-	-	-	1 900	1 915	1 922	1 921	1 912
60	-	-	-	-	-	2 384	2 393	2 395	2 389

**Current consumption in A**

10	2.42	2.44	2.45	2.46	2.47	-	-	-	-
20	2.56	2.59	2.61	2.62	2.63	2.63	2.62	-	-
30	-	2.77	2.80	2.82	2.83	2.84	2.84	2.82	2.81
40	-	-	3.07	3.10	3.12	3.14	3.14	3.14	3.12
50	-	-	-	-	3.54	3.56	3.58	3.58	3.57
60	-	-	-	-	-	4.15	4.18	4.19	4.20

**Mass flow in kg/h**

10	44	55	69	86	106	-	-	-	-
20	43	54	68	84	104	128	156	-	-
30	-	53	67	83	102	125	153	185	223
40	-	-	65	81	100	122	149	181	218
50	-	-	-	-	97	119	145	176	213
60	-	-	-	-	-	115	141	171	207

**Coefficient of performance (C.O.P.)**

10	2.73	3.33	4.09	5.02	6.19	-	-	-	-
20	2.05	2.51	3.07	3.75	4.58	5.58	6.80	-	-
30	-	1.85	2.26	2.75	3.34	4.04	4.88	5.89	7.10
40	-	-	1.61	1.96	2.37	2.85	3.43	4.11	4.93
50	-	-	-	-	1.62	1.95	2.33	2.79	3.34
60	-	-	-	-	-	1.27	1.52	1.81	2.17

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

Cooling capacity	3 357	W
Power input	1 705	W
Current consumption	3.31	A
Mass flow	98	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		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	2 101	2 644	3 311	4 117	5 076	-	-	-	-
20	1 843	2 342	2 950	3 681	4 551	5 574	6 763	-	-
30	1 598	2 047	2 589	3 238	4 011	4 922	5 987	7 220	8 629
40	1 361	1 754	2 223	2 783	3 452	4 246	5 180	6 269	7 529
50	-	-	1 847	2 313	2 872	3 540	4 336	5 276	6 379
60	-	-	-	-	2 261	2 798	3 449	4 235	5 176

**Power input in W**

10	795	815	828	832	829	-	-	-	-
20	946	974	995	1 009	1 015	1 012	1 002	-	-
30	1 146	1 181	1 209	1 230	1 242	1 248	1 245	1 234	1 215
40	1 414	1 455	1 488	1 513	1 532	1 542	1 545	1 540	1 527
50	-	-	1 849	1 878	1 900	1 915	1 922	1 921	1 912
60	-	-	-	-	2 367	2 384	2 393	2 395	2 389

**Current consumption in A**

10	2.42	2.44	2.45	2.46	2.47	-	-	-	-
20	2.56	2.59	2.61	2.62	2.63	2.63	2.62	-	-
30	2.73	2.77	2.80	2.82	2.83	2.84	2.84	2.82	2.81
40	2.98	3.03	3.07	3.10	3.12	3.14	3.14	3.14	3.12
50	-	-	3.45	3.50	3.54	3.56	3.58	3.58	3.57
60	-	-	-	-	4.11	4.15	4.18	4.19	4.20

**Mass flow in kg/h**

10	52	65	79	97	117	-	-	-	-
20	51	63	78	95	115	138	164	-	-
30	50	62	76	93	112	135	161	190	223
40	49	61	74	91	110	132	157	186	218
50	-	-	73	88	107	128	153	181	213
60	-	-	-	-	103	124	148	176	207

**Coefficient of performance (C.O.P.)**

10	2.64	3.24	4.00	4.95	6.12	-	-	-	-
20	1.95	2.40	2.96	3.65	4.49	5.51	6.75	-	-
30	1.39	1.73	2.14	2.63	3.23	3.95	4.81	5.85	7.10
40	0.96	1.21	1.49	1.84	2.25	2.75	3.35	4.07	4.93
50	-	-	1.00	1.23	1.51	1.85	2.26	2.75	3.34
60	-	-	-	-	0.96	1.17	1.44	1.77	2.17

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

Cooling capacity	3 165	W
Power input	1 705	W
Current consumption	3.31	A
Mass flow	108	kg/h
C.O.P.	1.86	

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	2 614	3 273	4 077	5 042	6 183	-	-	-	-
20	2 343	2 956	3 696	4 579	5 621	6 837	8 243	-	-
30	-	2 648	3 311	4 099	5 028	6 113	7 371	8 817	10 466
40	-	-	2 925	3 605	4 407	5 349	6 444	7 711	9 163
50	-	-	-	-	3 762	4 546	5 467	6 540	7 782
60	-	-	-	-	-	3 710	4 442	5 309	6 328

**Power input in W**

10	956	989	1 009	1 020	1 022	-	-	-	-
20	1 136	1 182	1 215	1 236	1 246	1 248	1 243	-	-
30	-	1 424	1 468	1 499	1 517	1 525	1 523	1 515	1 501
40	-	-	1 788	1 827	1 852	1 865	1 867	1 860	1 845
50	-	-	-	-	2 271	2 288	2 292	2 285	2 269
60	-	-	-	-	-	2 812	2 818	2 810	2 792

**Current consumption in A**

10	2.41	2.38	2.36	2.36	2.36	-	-	-	-
20	2.53	2.53	2.53	2.54	2.54	2.55	2.56	-	-
30	-	2.72	2.75	2.78	2.80	2.81	2.81	2.80	2.79
40	-	-	3.04	3.10	3.14	3.16	3.17	3.15	3.12
50	-	-	-	-	3.57	3.62	3.64	3.63	3.59
60	-	-	-	-	-	4.19	4.23	4.24	4.21

**Mass flow in kg/h**

10	53	67	84	104	128	-	-	-	-
20	51	66	82	102	126	155	188	-	-
30	-	64	81	100	124	152	185	225	271
40	-	-	79	98	121	149	181	220	266
50	-	-	-	-	118	145	177	215	259
60	-	-	-	-	-	141	172	209	253

**Coefficient of performance (C.O.P.)**

10	2.73	3.31	4.04	4.94	6.05	-	-	-	-
20	2.06	2.50	3.04	3.71	4.51	5.48	6.63	-	-
30	-	1.86	2.25	2.73	3.31	4.01	4.84	5.82	6.97
40	-	-	1.64	1.97	2.38	2.87	3.45	4.15	4.97
50	-	-	-	-	1.66	1.99	2.39	2.86	3.43
60	-	-	-	-	-	1.32	1.58	1.89	2.27

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

Cooling capacity	4 088	W
Power input	2 050	W
Current consumption	3.34	A
Mass flow	120	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 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	2 530	3 186	3 992	4 963	6 118	-	-	-	-
20	2 223	2 829	3 567	4 454	5 508	6 745	8 180	-	-
30	1 939	2 481	3 137	3 927	4 867	5 975	7 269	8 762	10 466
40	1 676	2 142	2 706	3 385	4 198	5 165	6 303	7 631	9 163
50	-	-	2 272	2 829	3 504	4 316	5 286	6 435	7 782
60	-	-	-	-	2 782	3 428	4 218	5 176	6 328

**Power input in W**

10	956	989	1 009	1 020	1 022	-	-	-	-
20	1 136	1 182	1 215	1 236	1 246	1 248	1 243	-	-
30	1 364	1 424	1 468	1 499	1 517	1 525	1 523	1 515	1 501
40	1 661	1 734	1 788	1 827	1 852	1 865	1 867	1 860	1 845
50	-	-	2 194	2 240	2 271	2 288	2 292	2 285	2 269
60	-	-	-	-	2 792	2 812	2 818	2 810	2 792

**Current consumption in A**

10	2.41	2.38	2.36	2.36	2.36	-	-	-	-
20	2.53	2.53	2.53	2.54	2.54	2.55	2.56	-	-
30	2.69	2.72	2.75	2.78	2.80	2.81	2.81	2.80	2.79
40	2.88	2.97	3.04	3.10	3.14	3.16	3.17	3.15	3.12
50	-	-	3.40	3.50	3.57	3.62	3.64	3.63	3.59
60	-	-	-	-	4.11	4.19	4.23	4.24	4.21

**Mass flow in kg/h**

10	62	78	96	116	141	-	-	-	-
20	61	76	94	115	139	167	199	-	-
30	60	75	92	113	136	164	195	231	271
40	60	74	91	110	133	160	191	226	266
50	-	-	89	108	130	156	186	221	259
60	-	-	-	-	127	152	181	215	253

**Coefficient of performance (C.O.P.)**

10	2.65	3.22	3.95	4.87	5.99	-	-	-	-
20	1.96	2.39	2.94	3.60	4.42	5.40	6.58	-	-
30	1.42	1.74	2.14	2.62	3.21	3.92	4.77	5.78	6.97
40	1.01	1.24	1.51	1.85	2.27	2.77	3.38	4.10	4.97
50	-	-	1.04	1.26	1.54	1.89	2.31	2.82	3.43
60	-	-	-	-	1.00	1.22	1.50	1.84	2.27

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

Cooling capacity	3 854	W
Power input	2 050	W
Current consumption	3.34	A
Mass flow	132	kg/h
C.O.P.	1.88	

**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**
**R513A**

Cond. temp. in °C (tc)	Evaporating temperature in °C (to)							
	-15	-10	-5	0	5	10	15	18

**Cooling capacity in W**

10	2 489	3 051	3 733	-	-	-	-	-	-
20	2 274	2 799	3 431	4 183	5 065	-	-	-	-
30	2 047	2 530	3 107	3 790	4 591	5 521	-	-	-
40	-	2 248	2 764	3 373	4 087	4 917	5 874	6 514	-
50	-	-	2 405	2 935	3 556	4 280	5 119	5 681	-
60	-	-	-	2 479	3 002	3 615	4 329	4 811	-
70	-	-	-	2 008	2 427	2 924	3 508	3 906	-
73	-	-	-	-	2 252	2 712	3 256	3 628	-

**Power input in W**

10	535	540	544	-	-	-	-	-	-
20	666	674	676	676	676	-	-	-	-
30	808	824	829	829	824	817	-	-	-
40	-	995	1 009	1 013	1 008	997	984	975	-
50	-	-	1 222	1 234	1 234	1 224	1 207	1 195	-
60	-	-	-	1 499	1 508	1 504	1 488	1 474	-
70	-	-	-	1 812	1 836	1 842	1 833	1 821	-
73	-	-	-	-	1 946	1 956	1 950	1 939	-

**Current consumption in A**

10	2.28	2.28	2.28	-	-	-	-	-	-
20	2.36	2.37	2.37	2.37	2.37	-	-	-	-
30	2.45	2.46	2.47	2.48	2.48	2.47	-	-	-
40	-	2.59	2.61	2.62	2.62	2.61	2.59	2.57	-
50	-	-	2.80	2.82	2.82	2.81	2.79	2.76	-
60	-	-	-	3.09	3.10	3.09	3.07	3.04	-
70	-	-	-	3.44	3.47	3.47	3.45	3.42	-
73	-	-	-	-	3.60	3.61	3.58	3.56	-

**Mass flow in kg/h**

10	48	59	72	-	-	-	-	-	-
20	47	58	72	88	107	-	-	-	-
30	46	58	71	87	106	128	-	-	-
40	-	56	70	85	104	126	152	170	-
50	-	-	68	83	102	124	150	167	-
60	-	-	-	81	99	121	146	164	-
70	-	-	-	79	96	118	143	160	-
73	-	-	-	-	96	116	141	158	-

**Coefficient of performance (C.O.P.)**

10	4.65	5.65	6.86	-	-	-	-	-	-
20	3.41	4.15	5.07	6.19	7.49	-	-	-	-
30	2.53	3.07	3.75	4.57	5.57	6.75	-	-	-
40	-	2.26	2.74	3.33	4.06	4.93	5.97	6.68	-
50	-	-	1.97	2.38	2.88	3.50	4.24	4.76	-
60	-	-	-	1.65	1.99	2.40	2.91	3.26	-
70	-	-	-	1.11	1.32	1.59	1.91	2.14	-
73	-	-	-	-	1.16	1.39	1.67	1.87	-

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

Cooling capacity	2 102	W
Power input	1 091	W
Current consumption	2.67	A
Mass flow	56	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		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

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

**R513A**

Cond. temp. in °C (tc)	Evaporating temperature in °C (to)							
	-15	-10	-5	0	5	10	15	18

**Cooling capacity in W**

10	2 442	3 008	3 697	-	-	-	-	-	-
20	2 208	2 737	3 378	4 143	5 044	-	-	-	-
30	1 963	2 450	3 036	3 736	4 560	5 521	-	-	-
40	1 710	2 149	2 676	3 304	4 047	4 917	5 924	6 597	-
50	-	1 838	2 300	2 851	3 507	4 280	5 183	5 791	-
60	-	-	1 911	2 381	2 944	3 615	4 408	4 948	-
70	-	-	-	1 895	2 360	2 924	3 602	4 071	-
73	-	-	-	1 747	2 182	2 712	3 355	3 802	-

**Power input in W**

10	535	540	544	-	-	-	-	-	-
20	666	674	676	676	676	-	-	-	-
30	808	824	829	829	824	817	-	-	-
40	967	995	1 009	1 013	1 008	997	984	975	-
50	-	1 194	1 222	1 234	1 234	1 224	1 207	1 195	-
60	-	-	1 472	1 499	1 508	1 504	1 488	1 474	-
70	-	-	-	1 812	1 836	1 842	1 833	1 821	-
73	-	-	-	1 916	1 946	1 956	1 950	1 939	-

**Current consumption in A**

10	2.28	2.28	2.28	-	-	-	-	-	-
20	2.36	2.37	2.37	2.37	2.37	-	-	-	-
30	2.45	2.46	2.47	2.48	2.48	2.47	-	-	-
40	2.57	2.59	2.61	2.62	2.62	2.61	2.59	2.57	-
50	-	2.77	2.80	2.82	2.82	2.81	2.79	2.76	-
60	-	-	3.06	3.09	3.10	3.09	3.07	3.04	-
70	-	-	-	3.44	3.47	3.47	3.45	3.42	-
73	-	-	-	3.57	3.60	3.61	3.58	3.56	-

**Mass flow in kg/h**

10	53	64	77	-	-	-	-	-	-
20	52	63	76	92	109	-	-	-	-
30	51	62	75	91	108	128	-	-	-
40	50	61	74	89	106	126	149	163	-
50	-	60	72	87	104	124	146	161	-
60	-	-	70	85	102	121	143	158	-
70	-	-	-	82	99	118	139	154	-
73	-	-	-	81	98	116	138	152	-

**Coefficient of performance (C.O.P.)**

10	4.56	5.57	6.79	-	-	-	-	-	-
20	3.31	4.06	5.00	6.13	7.46	-	-	-	-
30	2.43	2.97	3.66	4.51	5.54	6.75	-	-	-
40	1.77	2.16	2.65	3.26	4.02	4.93	6.02	6.76	-
50	-	1.54	1.88	2.31	2.84	3.50	4.29	4.85	-
60	-	-	1.30	1.59	1.95	2.40	2.96	3.36	-
70	-	-	-	1.05	1.29	1.59	1.97	2.24	-
73	-	-	-	0.91	1.12	1.39	1.72	1.96	-

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

Cooling capacity	1 994	W
Power input	1 091	W
Current consumption	2.67	A
Mass flow	61	kg/h
C.O.P.	1.83	

**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

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

**R513A**

Cond. temp. in °C (tc)	Evaporating temperature in °C (to)							
	-15	-10	-5	0	5	10	15	18

**Cooling capacity in W**

10	2 957	3 618	4 424	-	-	-	-	-	-
20	2 714	3 336	4 090	4 989	6 044	-	-	-	-
30	2 453	3 025	3 717	4 540	5 506	6 627	-	-	-
40	-	2 696	3 314	4 050	4 917	5 926	7 088	7 863	-
50	-	-	2 890	3 529	4 285	5 170	6 196	6 884	-
60	-	-	-	2 985	3 620	4 370	5 249	5 843	-
70	-	-	-	2 429	2 930	3 535	4 256	4 749	-
73	-	-	-	-	2 720	3 280	3 951	4 412	-

**Power input in W**

10	671	665	662	-	-	-	-	-	-
20	828	831	828	825	829	-	-	-	-
30	991	1 011	1 017	1 014	1 008	1 007	-	-	-
40	-	1 210	1 233	1 238	1 232	1 222	1 212	1 210	-
50	-	-	1 481	1 503	1 505	1 493	1 474	1 461	-
60	-	-	-	1 811	1 830	1 825	1 805	1 787	-
70	-	-	-	2 167	2 211	2 223	2 210	2 192	-
73	-	-	-	-	2 337	2 355	2 346	2 330	-

**Current consumption in A**

10	2.17	2.18	2.20	-	-	-	-	-	-
20	2.26	2.27	2.28	2.29	2.30	-	-	-	-
30	2.37	2.38	2.39	2.40	2.40	2.39	-	-	-
40	-	2.53	2.55	2.56	2.56	2.55	2.50	2.46	-
50	-	-	2.76	2.78	2.79	2.78	2.74	2.70	-
60	-	-	-	3.07	3.10	3.10	3.06	3.03	-
70	-	-	-	3.45	3.49	3.51	3.49	3.46	-
73	-	-	-	-	3.63	3.65	3.64	3.61	-

**Mass flow in kg/h**

10	57	70	86	-	-	-	-	-	-
20	56	70	86	105	127	-	-	-	-
30	55	69	85	104	127	154	-	-	-
40	-	68	83	102	125	152	184	205	-
50	-	-	82	100	123	150	181	203	-
60	-	-	-	98	120	146	177	199	-
70	-	-	-	95	116	142	173	194	-
73	-	-	-	-	115	141	171	192	-

**Coefficient of performance (C.O.P.)**

10	4.41	5.44	6.68	-	-	-	-	-	-
20	3.28	4.01	4.94	6.05	7.29	-	-	-	-
30	2.48	2.99	3.66	4.48	5.46	6.58	-	-	-
40	-	2.23	2.69	3.27	3.99	4.85	5.85	6.50	-
50	-	-	1.95	2.35	2.85	3.46	4.20	4.71	-
60	-	-	-	1.65	1.98	2.39	2.91	3.27	-
70	-	-	-	1.12	1.33	1.59	1.93	2.17	-
73	-	-	-	-	1.16	1.39	1.68	1.89	-

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

Cooling capacity	2 527	W
Power input	1 318	W
Current consumption	2.62	A
Mass flow	67	kg/h
C.O.P.	1.92	

**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

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**Performance data at 60 Hz, EN 12900 rating conditions, Superheat = 10 K**
**R513A**

Cond. temp. in °C (tc)	Evaporating temperature in °C (to)							
	-15	-10	-5	0	5	10	15	18

**Cooling capacity in W**

10	2 901	3 567	4 382	-	-	-	-	-	-
20	2 635	3 262	4 027	4 941	6 018	-	-	-	-
30	2 352	2 929	3 632	4 475	5 470	6 627	-	-	-
40	2 062	2 577	3 208	3 967	4 869	5 926	7 148	7 963	-
50	-	2 216	2 763	3 429	4 226	5 170	6 274	7 017	-
60	-	-	2 307	2 867	3 550	4 370	5 345	6 009	-
70	-	-	-	2 293	2 850	3 535	4 370	4 949	-
73	-	-	-	2 120	2 636	3 280	4 070	4 623	-

**Power input in W**

10	671	665	662	-	-	-	-	-	-
20	828	831	828	825	829	-	-	-	-
30	991	1 011	1 017	1 014	1 008	1 007	-	-	-
40	1 163	1 210	1 233	1 238	1 232	1 222	1 212	1 210	-
50	-	1 432	1 481	1 503	1 505	1 493	1 474	1 461	-
60	-	-	1 763	1 811	1 830	1 825	1 805	1 787	-
70	-	-	-	2 167	2 211	2 223	2 210	2 192	-
73	-	-	-	2 284	2 337	2 355	2 346	2 330	-

**Current consumption in A**

10	2.17	2.18	2.20	-	-	-	-	-	-
20	2.26	2.27	2.28	2.29	2.30	-	-	-	-
30	2.37	2.38	2.39	2.40	2.40	2.39	-	-	-
40	2.51	2.53	2.55	2.56	2.56	2.55	2.50	2.46	-
50	-	2.73	2.76	2.78	2.79	2.78	2.74	2.70	-
60	-	-	3.03	3.07	3.10	3.10	3.06	3.03	-
70	-	-	-	3.45	3.49	3.51	3.49	3.46	-
73	-	-	-	3.58	3.63	3.65	3.64	3.61	-

**Mass flow in kg/h**

10	63	76	91	-	-	-	-	-	-
20	62	76	91	109	130	-	-	-	-
30	61	75	90	108	130	154	-	-	-
40	60	73	89	107	128	152	179	197	-
50	-	72	87	105	125	150	177	195	-
60	-	-	85	102	122	146	173	191	-
70	-	-	-	100	119	142	169	186	-
73	-	-	-	99	118	141	167	185	-

**Coefficient of performance (C.O.P.)**

10	4.32	5.36	6.62	-	-	-	-	-	-
20	3.18	3.93	4.86	5.99	7.26	-	-	-	-
30	2.37	2.90	3.57	4.41	5.42	6.58	-	-	-
40	1.77	2.13	2.60	3.20	3.95	4.85	5.90	6.58	-
50	-	1.55	1.87	2.28	2.81	3.46	4.26	4.80	-
60	-	-	1.31	1.58	1.94	2.39	2.96	3.36	-
70	-	-	-	1.06	1.29	1.59	1.98	2.26	-
73	-	-	-	0.93	1.13	1.39	1.73	1.98	-

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

Cooling capacity	2 397	W
Power input	1 318	W
Current consumption	2.62	A
Mass flow	73	kg/h
C.O.P.	1.82	

**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

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