

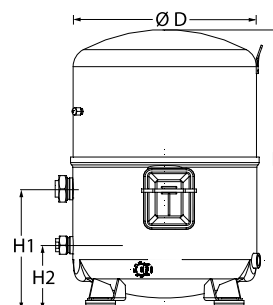
Datasheets

# Danfoss Reciprocating compressors **MT / MTZ / NTZ**



**General Characteristics**

Model number (on compressor nameplate)		<b>MTZ144HV4AVE</b>
Code number for Singlepack*		MTZ144-4VI
Code number for Industrial pack**		MTZ144-4VM
Drawing number		8504011e
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" ODF
Discharge connection with supplied sleeve		3/4" ODF
Oil sight glass		Threaded
Oil equalisation connection		3/8" flare SAE
Oil drain connection		None
LP gauge port		Schrader
IPR valve		30 bar / 8 bar
Cylinders		4
Swept volume		241.87 cm <sup>3</sup> /rev
Displacement @ Nominal speed		42.1 m <sup>3</sup> /h @ 2900 rpm - 50.8 m <sup>3</sup> /h @ 3500 rpm
Net weight		67 kg
Oil charge		3.9 litre, POE - 175PZ
Maximum system test pressure Low Side / High side		25 bar(g) / 30 bar(g)
Maximum differential test pressure		30 bar
Maximum number of starts per hour		12
Refrigerant charge limit		10 kg
Approved refrigerants		R404A, R134a, R407C, R407A/F, R448A, R449A, R452A

**Dimensions**


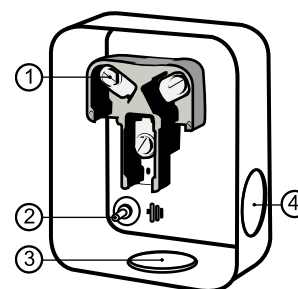
D=352 mm

H=540 mm

H1=233 mm

H2=125 mm

H3=- mm

**Terminal box**


IP54 (with cable gland)

1: Screw connectors 10-32 UNF x 9.5

2: Earth M4-12

3: Knock-out Ø 29 mm (1.14")

4: Knock-out Ø 25.5 mm (1.00")

**Electrical Characteristics**

Nominal voltage	380-400V/3/50Hz - 460V/3/60Hz
Voltage range	340-440 V @ 50Hz - 414-506 V @ 60Hz
Winding resistance (between phases) +/- 7% at 25°C	1.19 Ω
Maximum Continuous Current (MCC)	36 A
Locked Rotor Amps (LRA)	130 A
Motor protection	Internal overload protector

**Recommended Installation torques**

Oil sight glass	50 Nm
Power connections / Earth connection	3 Nm / 2 Nm
Mounting bolts	50 Nm

**Parts shipped with compressor**

Mounting kit with grommets, bolts, nuts, sleeves and washers
Suction & Discharge solder sleeves, rotolock nuts and gaskets (shipped with rotolock version only)
Initial oil charge
Installation instructions

**Approvals** : CE certified, UL certified (file SA6873), -

\*Singlepack: Compressor in cardboard box

\*\*Industrial pack: 6 Unboxed compressors on pallet (order per multiples of 6)

**Rotolock accessories, suction side**

**Code no.**

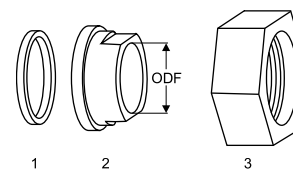
Solder sleeve, P02 (1-3/4" Rotolock, 1-1/8" ODF)	8153004
Rotolock valve, V02 (1-3/4" Rotolock, 1-1/8" ODF)	8168028
Gasket, 1-3/4"	8156132

**Gaskets, sleeves and nuts**

**Rotolock accessories, discharge 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



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

**Rotolock accessories, sets**

**Code no.**

Valve set, V02 (1-3/4"~1-1/8"), V04 (1-1/4"~3/4")	7703009
Gasket set, 1", 1-1/4", 1-3/4", OSG gaskets black & white	8156009

**Oil / lubricants**

**Code no.**

POE lubricant, 175PZ, 1 litre can	120Z0638
POE lubricant, 175PZ, 2.5 litre can	120Z0639

**Crankcase heaters**

**Code no.**

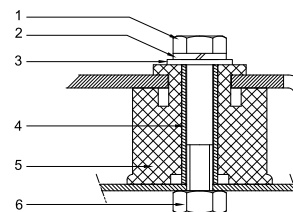
PTC heater 27W, CE mark, UL	120Z0459
Belt type crankcase heater, 75 W, 230 V, CE mark, UL	7773108
Belt type crankcase heater, 75 W, 400 V, CE mark, UL	7773118
Belt type crankcase heater, 75 W, 460 V, CE mark, UL	120Z0464

**Mounting kit**

**Miscellaneous accessories**

**Code no.**

Electronic soft start kit, MCI 25 C	7705007
Soft start kit with statoric resistors, prewired box, SCR03	7705001
Acoustic hood for 4 cylinder compressor	120Z0473
Oil equalisation nut	8153127



- 1: Bolt (4x)
- 2: Lock washer (4x)
- 3: Flat washer (4x)
- 4: Sleeve (4x)
- 5: Grommet (4x)
- 6: Nut (4x)

**Spare parts**

**Code no.**

Mounting kit for 4 cylinder compressor & MS, including 4 grommets, 4 bolts	8156007
Oil sight glass with gaskets (black & white)	8156019
Gasket for oil sight glass (black chloroprene)	8156145
Service kit for terminal box 96 x 115 mm, including 1 cover, 1 clamp	8156135
T block connector 52 x 57 mm	8173230

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

**Performance data at 50 Hz, EN 12900 rating conditions**
**R407C**

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

**Cooling capacity in W**

35	14 260	18 789	24 168	30 501	37 891	46 443	56 260	-	-
40	12 919	17 203	22 280	28 254	35 230	43 310	52 600	-	-
45	11 579	15 605	20 367	25 970	32 518	40 114	48 863	-	-
50	-	14 011	18 445	23 664	29 771	36 870	45 065	-	-
55	-	-	16 531	21 353	27 006	33 595	41 223	-	-
60	-	-	-	19 051	24 238	30 304	37 353	-	-
65	-	-	-	16 776	21 483	27 013	33 470	-	-

**Power input in W**

35	6 612	7 257	7 819	8 288	8 655	8 911	9 046	-	-
40	6 858	7 606	8 281	8 871	9 369	9 765	10 048	-	-
45	7 065	7 917	8 703	9 415	10 044	10 578	11 010	-	-
50	-	8 194	9 093	9 926	10 684	11 358	11 938	-	-
55	-	-	9 456	10 410	11 298	12 111	12 838	-	-
60	-	-	-	10 874	11 892	12 842	13 718	-	-
65	-	-	-	11 325	12 471	13 560	14 583	-	-

**Current consumption in A**

35	12.40	13.17	13.91	14.59	15.18	15.65	15.97	-	-
40	12.71	13.58	14.42	15.20	15.89	16.46	16.89	-	-
45	13.00	13.99	14.96	15.87	16.69	17.41	17.98	-	-
50	-	14.36	15.48	16.56	17.55	18.43	19.18	-	-
55	-	-	15.95	17.22	18.42	19.50	20.45	-	-
60	-	-	-	17.81	19.24	20.56	21.74	-	-
65	-	-	-	18.28	19.97	21.56	23.01	-	-

**Mass flow in kg/h**

35	309	401	507	630	771	932	1 114	-	-
40	295	385	491	612	751	910	1 091	-	-
45	279	369	473	592	730	887	1 064	-	-
50	-	351	453	571	706	860	1 035	-	-
55	-	-	432	548	681	832	1 004	-	-
60	-	-	-	524	654	802	971	-	-
65	-	-	-	498	625	770	935	-	-

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

35	2.16	2.59	3.09	3.68	4.38	5.21	6.22	-	-
40	1.88	2.26	2.69	3.18	3.76	4.44	5.23	-	-
45	1.64	1.97	2.34	2.76	3.24	3.79	4.44	-	-
50	-	1.71	2.03	2.38	2.79	3.25	3.77	-	-
55	-	-	1.75	2.05	2.39	2.77	3.21	-	-
60	-	-	-	1.75	2.04	2.36	2.72	-	-
65	-	-	-	1.48	1.72	1.99	2.30	-	-

**Nominal performance at to = 5 °C, tc = 50 °C**

Cooling capacity	29 771	W
Power input	10 684	W
Current consumption	17.55	A
Mass flow	706	kg/h
C.O.P.	2.79	


**Pressure switch settings**

Maximum HP switch setting	29.4	bar(g)
Minimum LP switch setting	1.4	bar(g)
LP pump down setting	1.7	bar(g)

**Sound power data**

Sound power level	85	dB(A)
With acoustic hood	79	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, ARI rating conditions**
**R407C**

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

**Cooling capacity in W**

35	15 349	20 199	25 951	32 714	40 596	49 706	60 153	-	-
40	13 981	18 592	24 047	30 457	37 930	46 577	56 505	-	-
45	12 611	16 969	22 115	28 159	35 211	43 381	52 778	-	-
50	-	15 348	20 171	25 837	32 455	40 136	48 989	-	-
55	-	-	18 233	23 508	29 679	36 859	45 159	-	-
60	-	-	-	21 190	26 904	33 572	41 306	-	-
65	-	-	-	18 905	24 150	30 297	37 458	-	-

**Power input in W**

35	6 612	7 257	7 819	8 288	8 655	8 911	9 046	-	-
40	6 858	7 606	8 281	8 871	9 369	9 765	10 048	-	-
45	7 065	7 917	8 703	9 415	10 044	10 578	11 010	-	-
50	-	8 194	9 093	9 926	10 684	11 358	11 938	-	-
55	-	-	9 456	10 410	11 298	12 111	12 838	-	-
60	-	-	-	10 874	11 892	12 842	13 718	-	-
65	-	-	-	11 325	12 471	13 560	14 583	-	-

**Current consumption in A**

35	12.40	13.17	13.91	14.59	15.18	15.65	15.97	-	-
40	12.71	13.58	14.42	15.20	15.89	16.46	16.89	-	-
45	13.00	13.99	14.96	15.87	16.69	17.41	17.98	-	-
50	-	14.36	15.48	16.56	17.55	18.43	19.18	-	-
55	-	-	15.95	17.22	18.42	19.50	20.45	-	-
60	-	-	-	17.81	19.24	20.56	21.74	-	-
65	-	-	-	18.28	19.97	21.56	23.01	-	-

**Mass flow in kg/h**

35	308	399	505	627	767	926	1 107	-	-
40	293	383	488	609	747	905	1 084	-	-
45	277	367	470	589	726	881	1 058	-	-
50	-	349	451	568	702	855	1 029	-	-
55	-	-	430	545	677	827	998	-	-
60	-	-	-	521	650	797	965	-	-
65	-	-	-	495	622	766	929	-	-

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

35	2.32	2.78	3.32	3.95	4.69	5.58	6.65	-	-
40	2.04	2.44	2.90	3.43	4.05	4.77	5.62	-	-
45	1.78	2.14	2.54	2.99	3.51	4.10	4.79	-	-
50	-	1.87	2.22	2.60	3.04	3.53	4.10	-	-
55	-	-	1.93	2.26	2.63	3.04	3.52	-	-
60	-	-	-	1.95	2.26	2.61	3.01	-	-
65	-	-	-	1.67	1.94	2.23	2.57	-	-

**Nominal performance at to = 7.2 °C, tc = 54.4 °C**

Cooling capacity	33 067	W
Power input	11 586	W
Current consumption	18.79	A
Mass flow	744	kg/h
C.O.P.	2.85	

**Pressure switch settings**

Maximum HP switch setting	29.4	bar(g)
Minimum LP switch setting	1.4	bar(g)
LP pump down setting	1.7	bar(g)

**Sound power data**

Sound power level	85	dB(A)
With acoustic hood	79	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

**Performance data at 50 Hz, EN 12900 rating conditions**
**R134a**

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

**Cooling capacity in W**

35	4 981	7 067	12 790	16 574	21 071	26 353	32 494	39 567	47 646
40	4 360	6 351	11 777	15 359	19 618	24 626	30 458	37 186	44 884
45	3 738	5 624	10 732	14 102	18 112	22 837	28 349	34 722	42 028
50	3 132	4 901	9 671	12 817	16 569	20 999	26 181	32 187	39 092
55	-	-	8 607	11 520	15 002	19 127	23 968	29 598	36 091
60	-	-	-	10 223	13 425	17 235	21 724	26 968	33 037
65	-	-	-	-	11 854	15 337	19 465	24 310	29 947
75	-	-	-	-	-	-	14 953	18 972	23 710

**Power input in W**

35	3 555	4 041	5 009	5 460	5 867	6 215	6 489	6 672	6 748
40	3 685	4 188	5 215	5 708	6 165	6 571	6 911	7 168	7 327
45	3 782	4 308	5 404	5 943	6 456	6 925	7 336	7 673	7 920
50	3 841	4 395	5 572	6 163	6 736	7 274	7 762	8 183	8 523
55	-	-	5 713	6 363	7 001	7 613	8 183	8 695	9 133
60	-	-	-	6 538	7 248	7 939	8 596	9 204	9 746
65	-	-	-	-	7 471	8 247	8 997	9 706	10 357
75	-	-	-	-	-	-	9 746	10 672	11 557

**Current consumption in A**

35	9.23	9.69	10.63	11.08	11.50	11.88	12.20	12.45	12.62
40	9.33	9.82	10.84	11.34	11.83	12.29	12.70	13.05	13.34
45	9.38	9.91	11.02	11.59	12.16	12.70	13.21	13.67	14.08
50	9.40	9.96	11.19	11.83	12.47	13.11	13.72	14.30	14.84
55	-	-	11.32	12.05	12.78	13.52	14.24	14.95	15.62
60	-	-	-	12.24	13.07	13.92	14.77	15.60	16.41
65	-	-	-	-	13.35	14.31	15.29	16.26	17.22
75	-	-	-	-	-	-	16.31	17.58	18.86

**Mass flow in kg/h**

35	126	176	304	386	480	588	711	851	1 009
40	117	167	295	375	469	576	699	838	994
45	106	156	283	363	456	562	684	821	976
50	95	144	271	350	441	546	666	802	955
55	-	-	256	334	424	528	646	780	931
60	-	-	-	317	405	507	623	755	904
65	-	-	-	-	385	484	598	728	874
75	-	-	-	-	-	-	541	664	805

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

35	1.40	1.75	2.55	3.04	3.59	4.24	5.01	5.93	7.06
40	1.18	1.52	2.26	2.69	3.18	3.75	4.41	5.19	6.13
45	0.99	1.31	1.99	2.37	2.81	3.30	3.86	4.53	5.31
50	0.82	1.12	1.74	2.08	2.46	2.89	3.37	3.93	4.59
55	-	-	1.51	1.81	2.14	2.51	2.93	3.40	3.95
60	-	-	-	1.56	1.85	2.17	2.53	2.93	3.39
65	-	-	-	-	1.59	1.86	2.16	2.50	2.89
75	-	-	-	-	-	-	1.53	1.78	2.05

**Nominal performance at to = 5 °C, tc = 50 °C**

Cooling capacity	20 999	W
Power input	7 274	W
Current consumption	13.11	A
Mass flow	546	kg/h
C.O.P.	2.89	

**Pressure switch settings**

Maximum HP switch setting	20.2	bar(g)
Minimum LP switch setting	0.1	bar(g)
LP pump down setting	0.4	bar(g)

**Sound power data**

Sound power level	0	dB(A)
With acoustic hood	0	dB(A)

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

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

Tolerance according EN12900

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

**Performance data at 50 Hz, ARI rating conditions**
**R134a**

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

**Cooling capacity in W**

35	5 415	7 668	13 830	17 892	22 711	28 362	34 921	42 464	51 066
40	4 767	6 929	12 801	16 664	21 248	26 629	32 883	40 086	48 313
45	4 115	6 176	11 735	15 388	19 726	24 826	30 764	37 616	45 459
50	-	5 423	10 648	14 079	18 161	22 968	28 580	35 071	42 518
55	-	-	9 553	12 752	16 566	21 071	26 345	32 464	39 506
60	-	-	-	11 421	14 956	19 148	24 074	29 812	36 438
65	-	-	-	-	-	17 215	21 783	27 130	33 331
75	-	-	-	-	-	-	17 206	21 743	27 072

**Power input in W**

35	3 555	4 041	5 009	5 460	5 867	6 215	6 489	6 672	6 748
40	3 685	4 188	5 215	5 708	6 165	6 571	6 911	7 168	7 327
45	3 782	4 308	5 404	5 943	6 456	6 925	7 336	7 673	7 920
50	-	4 395	5 572	6 163	6 736	7 274	7 762	8 183	8 523
55	-	-	5 713	6 363	7 001	7 613	8 183	8 695	9 133
60	-	-	-	6 538	7 248	7 939	8 596	9 204	9 746
65	-	-	-	-	-	8 247	8 997	9 706	10 357
75	-	-	-	-	-	-	9 746	10 672	11 557

**Current consumption in A**

35	9.23	9.69	10.63	11.08	11.50	11.88	12.20	12.45	12.62
40	9.33	9.82	10.84	11.34	11.83	12.29	12.70	13.05	13.34
45	9.38	9.91	11.02	11.59	12.16	12.70	13.21	13.67	14.08
50	-	9.96	11.19	11.83	12.47	13.11	13.72	14.30	14.84
55	-	-	11.32	12.05	12.78	13.52	14.24	14.95	15.62
60	-	-	-	12.24	13.07	13.92	14.77	15.60	16.41
65	-	-	-	-	-	14.31	15.29	16.26	17.22
75	-	-	-	-	-	-	16.31	17.58	18.86

**Mass flow in kg/h**

35	126	175	303	384	477	585	707	847	1 003
40	116	166	293	373	466	573	695	833	988
45	106	155	282	362	454	559	680	817	971
50	-	144	269	348	439	543	662	797	950
55	-	-	255	332	422	525	642	776	926
60	-	-	-	315	403	504	620	751	899
65	-	-	-	-	-	482	595	724	869
75	-	-	-	-	-	-	538	661	800

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

35	1.52	1.90	2.76	3.28	3.87	4.56	5.38	6.36	7.57
40	1.29	1.65	2.45	2.92	3.45	4.05	4.76	5.59	6.59
45	1.09	1.43	2.17	2.59	3.06	3.58	4.19	4.90	5.74
50	-	1.23	1.91	2.28	2.70	3.16	3.68	4.29	4.99
55	-	-	1.67	2.00	2.37	2.77	3.22	3.73	4.33
60	-	-	-	1.75	2.06	2.41	2.80	3.24	3.74
65	-	-	-	-	-	2.09	2.42	2.80	3.22
75	-	-	-	-	-	-	1.77	2.04	2.34

**Nominal performance at to = 7.2 °C, tc = 54.4 °C**

Cooling capacity	23 539	W
Power input	7 826	W
Current consumption	13.78	A
Mass flow	577	kg/h
C.O.P.	3.01	

**Pressure switch settings**

Maximum HP switch setting	20.2	bar(g)
Minimum LP switch setting	0.1	bar(g)
LP pump down setting	0.4	bar(g)

**Sound power data**

Sound power level	0	dB(A)
With acoustic hood	0	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

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

**Performance data at 50 Hz, EN 12900 rating conditions**
**R404A**

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

**Cooling capacity in W**

30	8 775	11 826	15 554	20 045	25 383	31 654	38 944	47 339	56 922
35	7 708	10 537	13 985	18 138	23 081	28 900	35 679	43 505	52 463
40	6 685	9 282	12 441	16 247	20 785	26 142	32 402	39 650	47 973
45	5 704	8 060	10 920	14 370	18 494	23 380	29 110	35 773	43 451
50	4 764	6 870	9 422	12 506	16 208	20 612	25 805	31 871	38 896
55	-	5 710	7 945	10 654	13 924	17 838	22 483	27 944	34 306
60	-	4 580	6 489	8 814	11 641	15 056	19 144	23 991	29 681

**Power input in W**

30	5 941	6 670	7 347	7 965	8 516	8 992	9 385	9 688	9 892
35	6 031	6 840	7 606	8 322	8 979	9 570	10 086	10 521	10 865
40	6 077	6 967	7 822	8 635	9 398	10 104	10 744	11 310	11 795
45	6 084	7 054	7 998	8 909	9 778	10 598	11 362	12 060	12 686
50	6 054	7 105	8 138	9 146	10 122	11 057	11 944	12 774	13 540
55	-	7 123	8 246	9 352	10 433	11 483	12 493	13 456	14 362
60	-	7 114	8 325	9 529	10 717	11 881	13 015	14 109	15 156

**Current consumption in A**

30	11.52	12.38	13.24	14.07	14.82	15.47	15.97	16.29	16.39
35	11.60	12.54	13.49	14.42	15.29	16.06	16.71	17.19	17.47
40	11.66	12.69	13.74	14.78	15.78	16.70	17.51	18.16	18.63
45	11.68	12.81	13.97	15.14	16.28	17.36	18.34	19.18	19.84
50	11.62	12.86	14.15	15.46	16.76	18.00	19.16	20.20	21.08
55	-	12.81	14.24	15.70	17.17	18.60	19.95	21.20	22.31
60	-	12.63	14.21	15.84	17.48	19.11	20.67	22.15	23.49

**Mass flow in kg/h**

30	276	364	467	586	724	882	1 062	1 266	1 495
35	261	348	449	567	703	858	1 036	1 236	1 463
40	246	331	431	547	680	833	1 007	1 205	1 428
45	230	314	412	525	656	806	977	1 172	1 391
50	214	296	391	502	630	777	945	1 136	1 351
55	-	278	371	479	604	747	912	1 099	1 310
60	-	259	349	454	576	716	877	1 059	1 266

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

30	1.48	1.77	2.12	2.52	2.98	3.52	4.15	4.89	5.75
35	1.28	1.54	1.84	2.18	2.57	3.02	3.54	4.14	4.83
40	1.10	1.33	1.59	1.88	2.21	2.59	3.02	3.51	4.07
45	0.94	1.14	1.37	1.61	1.89	2.21	2.56	2.97	3.43
50	0.79	0.97	1.16	1.37	1.60	1.86	2.16	2.49	2.87
55	-	0.80	0.96	1.14	1.33	1.55	1.80	2.08	2.39
60	-	0.64	0.78	0.92	1.09	1.27	1.47	1.70	1.96

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

Cooling capacity	18 494	W
Power input	9 778	W
Current consumption	16.28	A
Mass flow	656	kg/h
C.O.P.	1.89	


**Pressure switch settings**

Maximum HP switch setting	27.7	bar(g)
Minimum LP switch setting	1	bar(g)
LP pump down setting	1.3	bar(g)

**Sound power data**

Sound power level	83	dB(A)
With acoustic hood	77	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, ARI rating conditions**
**R404A**

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

**Cooling capacity in W**

30	9 768	13 128	17 223	22 141	27 974	34 809	42 737	51 847	62 226
35	8 673	11 818	15 638	20 225	25 668	32 058	39 485	48 039	57 807
40	7 621	10 541	14 079	18 324	23 370	29 307	36 225	44 214	53 365
45	6 611	9 299	12 544	16 441	21 081	26 557	32 959	40 378	48 905
50	5 643	8 090	11 037	14 577	18 805	23 813	29 694	36 540	44 441
55	-	6 919	9 560	12 739	16 550	21 088	26 447	32 719	39 997
60	-	5 791	8 125	10 941	14 337	18 408	23 251	28 961	35 630

**Power input in W**

30	5 941	6 670	7 347	7 965	8 516	8 992	9 385	9 688	9 892
35	6 031	6 840	7 606	8 322	8 979	9 570	10 086	10 521	10 865
40	6 077	6 967	7 822	8 635	9 398	10 104	10 744	11 310	11 795
45	6 084	7 054	7 998	8 909	9 778	10 598	11 362	12 060	12 686
50	6 054	7 105	8 138	9 146	10 122	11 057	11 944	12 774	13 540
55	-	7 123	8 246	9 352	10 433	11 483	12 493	13 456	14 362
60	-	7 114	8 325	9 529	10 717	11 881	13 015	14 109	15 156

**Current consumption in A**

30	11.52	12.38	13.24	14.07	14.82	15.47	15.97	16.29	16.39
35	11.60	12.54	13.49	14.42	15.29	16.06	16.71	17.19	17.47
40	11.66	12.69	13.74	14.78	15.78	16.70	17.51	18.16	18.63
45	11.68	12.81	13.97	15.14	16.28	17.36	18.34	19.18	19.84
50	11.62	12.86	14.15	15.46	16.76	18.00	19.16	20.20	21.08
55	-	12.81	14.24	15.70	17.17	18.60	19.95	21.20	22.31
60	-	12.63	14.21	15.84	17.48	19.11	20.67	22.15	23.49

**Mass flow in kg/h**

30	275	362	464	583	720	876	1 055	1 257	1 485
35	260	346	447	564	698	853	1 029	1 228	1 453
40	245	330	429	543	676	828	1 001	1 197	1 418
45	229	312	409	522	652	801	971	1 164	1 381
50	213	294	389	499	627	773	939	1 129	1 342
55	-	276	368	476	600	743	906	1 091	1 301
60	-	257	347	452	573	712	871	1 052	1 257

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

30	1.64	1.97	2.34	2.78	3.28	3.87	4.55	5.35	6.29
35	1.44	1.73	2.06	2.43	2.86	3.35	3.91	4.57	5.32
40	1.25	1.51	1.80	2.12	2.49	2.90	3.37	3.91	4.52
45	1.09	1.32	1.57	1.85	2.16	2.51	2.90	3.35	3.86
50	0.93	1.14	1.36	1.59	1.86	2.15	2.49	2.86	3.28
55	-	0.97	1.16	1.36	1.59	1.84	2.12	2.43	2.78
60	-	0.81	0.98	1.15	1.34	1.55	1.79	2.05	2.35

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

Cooling capacity	21 081	W
Power input	9 778	W
Current consumption	16.28	A
Mass flow	652	kg/h
C.O.P.	2.16	

**Pressure switch settings**

Maximum HP switch setting	27.7	bar(g)
Minimum LP switch setting	1	bar(g)
LP pump down setting	1.3	bar(g)

**Sound power data**

Sound power level	83	dB(A)
With acoustic hood	77	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

**Performance data at 50 Hz, EN 12900 rating conditions**
**R407A**

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

**Cooling capacity in W**

30	6 440	9 312	12 812	17 026	22 042	27 947	34 825	42 765	51 853
35	5 585	8 325	11 647	15 638	20 384	25 974	32 492	40 026	48 662
40	4 710	7 304	10 435	14 189	18 653	23 913	30 058	37 172	45 343
45	3 834	6 269	9 194	12 698	16 866	21 785	27 541	34 222	41 914
50	-	5 238	7 945	11 184	15 042	19 606	24 962	31 196	38 396
55	-	-	6 704	9 666	13 201	17 396	22 338	28 112	34 806
60	-	-	-	8 163	11 361	15 174	19 687	24 988	31 163

**Power input in W**

30	4 483	5 274	6 015	6 697	7 313	7 853	8 309	8 671	8 930
35	4 475	5 349	6 181	6 964	7 688	8 344	8 925	9 419	9 820
40	4 422	5 380	6 305	7 188	8 021	8 795	9 501	10 130	10 673
45	4 328	5 371	6 389	7 375	8 318	9 210	10 043	10 807	11 493
50	-	5 327	6 440	7 528	8 582	9 594	10 554	11 454	12 285
55	-	-	6 462	7 653	8 819	9 951	11 040	12 077	13 053
60	-	-	-	7 754	9 033	10 286	11 505	12 679	13 801

**Current consumption in A**

30	10.30	11.14	11.98	12.81	13.57	14.23	14.75	15.10	15.23
35	10.36	11.22	12.13	13.03	13.90	14.69	15.36	15.89	16.22
40	10.41	11.32	12.29	13.29	14.27	15.20	16.04	16.75	17.30
45	10.42	11.39	12.44	13.54	14.65	15.73	16.75	17.66	18.43
50	-	11.39	12.53	13.75	15.00	16.25	17.45	18.58	19.58
55	-	-	12.53	13.87	15.28	16.70	18.10	19.45	20.71
60	-	-	-	13.88	15.45	17.06	18.67	20.26	21.78

**Mass flow in kg/h**

30	153	218	294	383	487	606	744	900	1 077
35	140	205	281	370	473	592	728	884	1 060
40	125	190	266	354	457	575	710	864	1 038
45	109	173	249	336	438	554	688	840	1 013
50	-	155	230	316	416	531	663	814	984
55	-	-	208	294	392	506	636	784	951
60	-	-	-	269	366	477	605	750	915

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

30	1.44	1.77	2.13	2.54	3.01	3.56	4.19	4.93	5.81
35	1.25	1.56	1.88	2.25	2.65	3.11	3.64	4.25	4.96
40	1.07	1.36	1.66	1.97	2.33	2.72	3.16	3.67	4.25
45	0.89	1.17	1.44	1.72	2.03	2.37	2.74	3.17	3.65
50	-	0.98	1.23	1.49	1.75	2.04	2.37	2.72	3.13
55	-	-	1.04	1.26	1.50	1.75	2.02	2.33	2.67
60	-	-	-	1.05	1.26	1.48	1.71	1.97	2.26

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

Cooling capacity	16 866	W
Power input	8 318	W
Current consumption	14.65	A
Mass flow	438	kg/h
C.O.P.	2.03	

**Pressure switch settings**

Maximum HP switch setting	25.8	bar(g)
Minimum LP switch setting	0.9	bar(g)
LP pump down setting	1.2	bar(g)

**Sound power data**

Sound power level	82	dB(A)
With acoustic hood	76	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, ARI rating conditions**
**R407A**

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

**Cooling capacity in W**

30	6 965	10 056	13 817	18 337	23 709	30 022	37 367	45 834	55 514
35	6 076	9 042	12 630	16 933	22 041	28 045	35 037	43 107	52 345
40	5 160	7 987	11 389	15 460	20 291	25 974	32 599	40 258	49 042
45	4 235	6 909	10 113	13 939	18 479	23 827	30 073	37 309	45 626
50	-	5 828	8 820	12 388	16 625	21 625	27 479	34 280	42 120
55	-	-	7 530	10 827	14 749	19 389	24 840	31 196	38 547
60	-	-	-	9 276	12 871	17 141	22 180	28 081	34 937

**Power input in W**

30	4 483	5 274	6 015	6 697	7 313	7 853	8 309	8 671	8 930
35	4 475	5 349	6 181	6 964	7 688	8 344	8 925	9 419	9 820
40	4 422	5 380	6 305	7 188	8 021	8 795	9 501	10 130	10 673
45	4 328	5 371	6 389	7 375	8 318	9 210	10 043	10 807	11 493
50	-	5 327	6 440	7 528	8 582	9 594	10 554	11 454	12 285
55	-	-	6 462	7 653	8 819	9 951	11 040	12 077	13 053
60	-	-	-	7 754	9 033	10 286	11 505	12 679	13 801

**Current consumption in A**

30	10.30	11.14	11.98	12.81	13.57	14.23	14.75	15.10	15.23
35	10.36	11.22	12.13	13.03	13.90	14.69	15.36	15.89	16.22
40	10.41	11.32	12.29	13.29	14.27	15.20	16.04	16.75	17.30
45	10.42	11.39	12.44	13.54	14.65	15.73	16.75	17.66	18.43
50	-	11.39	12.53	13.75	15.00	16.25	17.45	18.58	19.58
55	-	-	12.53	13.87	15.28	16.70	18.10	19.45	20.71
60	-	-	-	13.88	15.45	17.06	18.67	20.26	21.78

**Mass flow in kg/h**

30	152	217	292	381	484	603	739	895	1 071
35	139	204	279	368	470	589	724	879	1 053
40	124	189	264	352	454	571	706	859	1 032
45	108	172	247	334	435	551	684	835	1 006
50	-	154	228	314	414	528	660	809	978
55	-	-	207	292	390	503	632	779	945
60	-	-	-	268	364	475	602	746	909

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

30	1.55	1.91	2.30	2.74	3.24	3.82	4.50	5.29	6.22
35	1.36	1.69	2.04	2.43	2.87	3.36	3.93	4.58	5.33
40	1.17	1.48	1.81	2.15	2.53	2.95	3.43	3.97	4.59
45	0.98	1.29	1.58	1.89	2.22	2.59	2.99	3.45	3.97
50	-	1.09	1.37	1.65	1.94	2.25	2.60	2.99	3.43
55	-	-	1.17	1.41	1.67	1.95	2.25	2.58	2.95
60	-	-	-	1.20	1.42	1.67	1.93	2.21	2.53

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

Cooling capacity	18 479	W
Power input	8 318	W
Current consumption	14.65	A
Mass flow	435	kg/h
C.O.P.	2.22	

**Pressure switch settings**

Maximum HP switch setting	25.8	bar(g)
Minimum LP switch setting	0.9	bar(g)
LP pump down setting	1.2	bar(g)

**Sound power data**

Sound power level	82	dB(A)
With acoustic hood	76	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

**Performance data at 50 Hz, EN 12900 rating conditions**
**R407F**

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

**Cooling capacity in W**

30	-	10 201	14 162	18 931	24 611	31 301	39 103	48 118	58 446
35	-	8 855	12 476	16 833	22 026	28 157	35 327	43 636	53 185
40	-	7 714	11 049	15 047	19 808	25 434	32 026	39 683	48 508
45	-	6 735	9 838	13 531	17 914	23 089	29 156	36 216	44 370
50	-	-	8 799	12 240	16 300	21 077	26 673	33 190	40 727
55	-	-	-	11 132	14 921	19 355	24 535	30 561	37 536
60	-	-	-	-	-	-	-	-	-

**Power input in W**

30	-	5 621	6 380	7 098	7 737	8 261	8 632	8 814	8 769
35	-	5 709	6 540	7 357	8 123	8 803	9 358	9 752	9 947
40	-	5 800	6 685	7 585	8 463	9 281	10 003	10 592	11 011
45	-	5 924	6 847	7 812	8 784	9 724	10 597	11 364	11 988
50	-	-	7 053	8 067	9 116	10 161	11 167	12 095	12 910
55	-	-	-	8 379	9 488	10 622	11 744	12 817	13 804
60	-	-	-	-	-	-	-	-	-

**Current consumption in A**

30	-	11.15	12.06	12.95	13.77	14.46	14.97	15.24	15.22
35	-	11.37	12.33	13.30	14.23	15.06	15.74	16.22	16.44
40	-	11.52	12.53	13.60	14.65	15.64	16.50	17.20	17.67
45	-	11.61	12.70	13.87	15.05	16.21	17.28	18.21	18.94
50	-	-	12.85	14.14	15.48	16.82	18.10	19.27	20.28
55	-	-	-	14.44	15.95	17.48	18.99	20.42	21.72
60	-	-	-	-	-	-	-	-	-

**Mass flow in kg/h**

30	-	211	289	380	487	610	753	915	1 100
35	-	192	267	354	456	574	711	867	1 044
40	-	177	248	333	431	544	676	826	996
45	-	163	234	315	411	521	648	793	958
50	-	-	222	303	396	503	627	768	928
55	-	-	-	294	386	492	613	751	907
60	-	-	-	-	-	-	-	-	-

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

30	-	1.81	2.22	2.67	3.18	3.79	4.53	5.46	6.66
35	-	1.55	1.91	2.29	2.71	3.20	3.78	4.47	5.35
40	-	1.33	1.65	1.98	2.34	2.74	3.20	3.75	4.41
45	-	1.14	1.44	1.73	2.04	2.37	2.75	3.19	3.70
50	-	-	1.25	1.52	1.79	2.07	2.39	2.74	3.15
55	-	-	-	1.33	1.57	1.82	2.09	2.38	2.72
60	-	-	-	-	-	-	-	-	-

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

Cooling capacity	17 914	W
Power input	8 784	W
Current consumption	15.05	A
Mass flow	411	kg/h
C.O.P.	2.04	

**Pressure switch settings**

Maximum HP switch setting	24	bar(g)
Minimum LP switch setting	1	bar(g)
LP pump down setting	1.26	bar(g)

**Sound power data**

Sound power level	82	dB(A)
With acoustic hood	76	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, ARI rating conditions**
**R407F**

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

**Cooling capacity in W**

30	-	10 934	15 163	20 249	26 298	33 416	41 709	51 280	62 235
35	-	9 535	13 418	18 084	23 638	30 188	37 837	46 693	56 860
40	-	8 351	11 946	16 249	21 365	27 402	34 466	42 663	52 099
45	-	7 338	10 703	14 700	19 437	25 020	31 556	39 152	47 914
50	-	-	9 646	13 397	17 813	23 000	29 067	36 121	44 269
55	-	-	-	12 299	16 455	21 309	26 969	33 543	41 139
60	-	-	-	-	-	-	-	-	-

**Power input in W**

30	-	5 621	6 380	7 098	7 737	8 261	8 632	8 814	8 769
35	-	5 709	6 540	7 357	8 123	8 803	9 358	9 752	9 947
40	-	5 800	6 685	7 585	8 463	9 281	10 003	10 592	11 011
45	-	5 924	6 847	7 812	8 784	9 724	10 597	11 364	11 988
50	-	-	7 053	8 067	9 116	10 161	11 167	12 095	12 910
55	-	-	-	8 379	9 488	10 622	11 744	12 817	13 804
60	-	-	-	-	-	-	-	-	-

**Current consumption in A**

30	-	11.15	12.06	12.95	13.77	14.46	14.97	15.24	15.22
35	-	11.37	12.33	13.30	14.23	15.06	15.74	16.22	16.44
40	-	11.52	12.53	13.60	14.65	15.64	16.50	17.20	17.67
45	-	11.61	12.70	13.87	15.05	16.21	17.28	18.21	18.94
50	-	-	12.85	14.14	15.48	16.82	18.10	19.27	20.28
55	-	-	-	14.44	15.95	17.48	18.99	20.42	21.72
60	-	-	-	-	-	-	-	-	-

**Mass flow in kg/h**

30	-	210	287	378	484	607	748	910	1 093
35	-	191	265	352	453	571	706	861	1 037
40	-	176	247	331	428	541	672	820	990
45	-	162	232	314	408	518	644	788	952
50	-	-	221	301	394	500	623	763	922
55	-	-	-	293	384	489	609	746	902
60	-	-	-	-	-	-	-	-	-

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

30	-	1.95	2.38	2.85	3.40	4.05	4.83	5.82	7.10
35	-	1.67	2.05	2.46	2.91	3.43	4.04	4.79	5.72
40	-	1.44	1.79	2.14	2.52	2.95	3.45	4.03	4.73
45	-	1.24	1.56	1.88	2.21	2.57	2.98	3.45	4.00
50	-	-	1.37	1.66	1.95	2.26	2.60	2.99	3.43
55	-	-	-	1.47	1.73	2.01	2.30	2.62	2.98
60	-	-	-	-	-	-	-	-	-

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

Cooling capacity	19 437	W
Power input	8 784	W
Current consumption	15.05	A
Mass flow	408	kg/h
C.O.P.	2.21	

**Pressure switch settings**

Maximum HP switch setting	24	bar(g)
Minimum LP switch setting	1	bar(g)
LP pump down setting	1.26	bar(g)

**Sound power data**

Sound power level	82	dB(A)
With acoustic hood	76	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

**Performance data at 50 Hz, EN 12900 rating conditions**
**R134a**

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

**Cooling capacity in W**

35	4 981	7 067	12 790	16 574	21 071	26 353	32 494	39 567	47 646
40	4 360	6 351	11 777	15 359	19 618	24 626	30 458	37 186	44 884
45	3 738	5 624	10 732	14 102	18 112	22 837	28 349	34 722	42 028
50	3 132	4 901	9 671	12 817	16 569	20 999	26 181	32 187	39 092
55	-	-	8 607	11 520	15 002	19 127	23 968	29 598	36 091
60	-	-	-	10 223	13 425	17 235	21 724	26 968	33 037
65	-	-	-	-	11 854	15 337	19 465	24 310	29 947
75	-	-	-	-	-	-	14 953	18 972	23 710

**Power input in W**

35	3 555	4 041	5 009	5 460	5 867	6 215	6 489	6 672	6 748
40	3 685	4 188	5 215	5 708	6 165	6 571	6 911	7 168	7 327
45	3 782	4 308	5 404	5 943	6 456	6 925	7 336	7 673	7 920
50	3 841	4 395	5 572	6 163	6 736	7 274	7 762	8 183	8 523
55	-	-	5 713	6 363	7 001	7 613	8 183	8 695	9 133
60	-	-	-	6 538	7 248	7 939	8 596	9 204	9 746
65	-	-	-	-	7 471	8 247	8 997	9 706	10 357
75	-	-	-	-	-	-	9 746	10 672	11 557

**Current consumption in A**

35	9.23	9.69	10.63	11.08	11.50	11.88	12.20	12.45	12.62
40	9.33	9.82	10.84	11.34	11.83	12.29	12.70	13.05	13.34
45	9.38	9.91	11.02	11.59	12.16	12.70	13.21	13.67	14.08
50	9.40	9.96	11.19	11.83	12.47	13.11	13.72	14.30	14.84
55	-	-	11.32	12.05	12.78	13.52	14.24	14.95	15.62
60	-	-	-	12.24	13.07	13.92	14.77	15.60	16.41
65	-	-	-	-	13.35	14.31	15.29	16.26	17.22
75	-	-	-	-	-	-	16.31	17.58	18.86

**Mass flow in kg/h**

35	126	176	304	386	480	588	711	851	1 009
40	117	167	295	375	469	576	699	838	994
45	106	156	283	363	456	562	684	821	976
50	95	144	271	350	441	546	666	802	955
55	-	-	256	334	424	528	646	780	931
60	-	-	-	317	405	507	623	755	904
65	-	-	-	-	385	484	598	728	874
75	-	-	-	-	-	-	541	664	805

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

35	1.40	1.75	2.55	3.04	3.59	4.24	5.01	5.93	7.06
40	1.18	1.52	2.26	2.69	3.18	3.75	4.41	5.19	6.13
45	0.99	1.31	1.99	2.37	2.81	3.30	3.86	4.53	5.31
50	0.82	1.12	1.74	2.08	2.46	2.89	3.37	3.93	4.59
55	-	-	1.51	1.81	2.14	2.51	2.93	3.40	3.95
60	-	-	-	1.56	1.85	2.17	2.53	2.93	3.39
65	-	-	-	-	1.59	1.86	2.16	2.50	2.89
75	-	-	-	-	-	-	1.53	1.78	2.05

**Nominal performance at to = 5 °C, tc = 50 °C**

Cooling capacity	20 999	W
Power input	7 274	W
Current consumption	13.11	A
Mass flow	546	kg/h
C.O.P.	2.89	

**Pressure switch settings**

Maximum HP switch setting	20.2	bar(g)
Minimum LP switch setting	0.1	bar(g)
LP pump down setting	0.4	bar(g)

**Sound power data**

Sound power level	0	dB(A)
With acoustic hood	0	dB(A)

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

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

Tolerance according EN12900

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

**Performance data at 50 Hz, ARI rating conditions**
**R134a**

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

**Cooling capacity in W**

35	5 415	7 668	13 830	17 892	22 711	28 362	34 921	42 464	51 066
40	4 767	6 929	12 801	16 664	21 248	26 629	32 883	40 086	48 313
45	4 115	6 176	11 735	15 388	19 726	24 826	30 764	37 616	45 459
50	-	5 423	10 648	14 079	18 161	22 968	28 580	35 071	42 518
55	-	-	9 553	12 752	16 566	21 071	26 345	32 464	39 506
60	-	-	-	11 421	14 956	19 148	24 074	29 812	36 438
65	-	-	-	-	-	17 215	21 783	27 130	33 331
75	-	-	-	-	-	-	17 206	21 743	27 072

**Power input in W**

35	3 555	4 041	5 009	5 460	5 867	6 215	6 489	6 672	6 748
40	3 685	4 188	5 215	5 708	6 165	6 571	6 911	7 168	7 327
45	3 782	4 308	5 404	5 943	6 456	6 925	7 336	7 673	7 920
50	-	4 395	5 572	6 163	6 736	7 274	7 762	8 183	8 523
55	-	-	5 713	6 363	7 001	7 613	8 183	8 695	9 133
60	-	-	-	6 538	7 248	7 939	8 596	9 204	9 746
65	-	-	-	-	-	8 247	8 997	9 706	10 357
75	-	-	-	-	-	-	9 746	10 672	11 557

**Current consumption in A**

35	9.23	9.69	10.63	11.08	11.50	11.88	12.20	12.45	12.62
40	9.33	9.82	10.84	11.34	11.83	12.29	12.70	13.05	13.34
45	9.38	9.91	11.02	11.59	12.16	12.70	13.21	13.67	14.08
50	-	9.96	11.19	11.83	12.47	13.11	13.72	14.30	14.84
55	-	-	11.32	12.05	12.78	13.52	14.24	14.95	15.62
60	-	-	-	12.24	13.07	13.92	14.77	15.60	16.41
65	-	-	-	-	-	14.31	15.29	16.26	17.22
75	-	-	-	-	-	-	16.31	17.58	18.86

**Mass flow in kg/h**

35	126	175	303	384	477	585	707	847	1 003
40	116	166	293	373	466	573	695	833	988
45	106	155	282	362	454	559	680	817	971
50	-	144	269	348	439	543	662	797	950
55	-	-	255	332	422	525	642	776	926
60	-	-	-	315	403	504	620	751	899
65	-	-	-	-	-	482	595	724	869
75	-	-	-	-	-	-	538	661	800

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

35	1.52	1.90	2.76	3.28	3.87	4.56	5.38	6.36	7.57
40	1.29	1.65	2.45	2.92	3.45	4.05	4.76	5.59	6.59
45	1.09	1.43	2.17	2.59	3.06	3.58	4.19	4.90	5.74
50	-	1.23	1.91	2.28	2.70	3.16	3.68	4.29	4.99
55	-	-	1.67	2.00	2.37	2.77	3.22	3.73	4.33
60	-	-	-	1.75	2.06	2.41	2.80	3.24	3.74
65	-	-	-	-	-	2.09	2.42	2.80	3.22
75	-	-	-	-	-	-	1.77	2.04	2.34

**Nominal performance at to = 7.2 °C, tc = 54.4 °C**

Cooling capacity	23 539	W
Power input	7 826	W
Current consumption	13.78	A
Mass flow	577	kg/h
C.O.P.	3.01	

**Pressure switch settings**

Maximum HP switch setting	20.2	bar(g)
Minimum LP switch setting	0.1	bar(g)
LP pump down setting	0.4	bar(g)

**Sound power data**

Sound power level	0	dB(A)
With acoustic hood	0	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

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

**Performance data at 50 Hz, EN 12900 rating conditions**
**R407C**

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

**Cooling capacity in W**

35	14 260	18 789	24 168	30 501	37 891	46 443	56 260	-	-
40	12 919	17 203	22 280	28 254	35 230	43 310	52 600	-	-
45	11 579	15 605	20 367	25 970	32 518	40 114	48 863	-	-
50	-	14 011	18 445	23 664	29 771	36 870	45 065	-	-
55	-	-	16 531	21 353	27 006	33 595	41 223	-	-
60	-	-	-	19 051	24 238	30 304	37 353	-	-
65	-	-	-	16 776	21 483	27 013	33 470	-	-

**Power input in W**

35	6 612	7 257	7 819	8 288	8 655	8 911	9 046	-	-
40	6 858	7 606	8 281	8 871	9 369	9 765	10 048	-	-
45	7 065	7 917	8 703	9 415	10 044	10 578	11 010	-	-
50	-	8 194	9 093	9 926	10 684	11 358	11 938	-	-
55	-	-	9 456	10 410	11 298	12 111	12 838	-	-
60	-	-	-	10 874	11 892	12 842	13 718	-	-
65	-	-	-	11 325	12 471	13 560	14 583	-	-

**Current consumption in A**

35	12.40	13.17	13.91	14.59	15.18	15.65	15.97	-	-
40	12.71	13.58	14.42	15.20	15.89	16.46	16.89	-	-
45	13.00	13.99	14.96	15.87	16.69	17.41	17.98	-	-
50	-	14.36	15.48	16.56	17.55	18.43	19.18	-	-
55	-	-	15.95	17.22	18.42	19.50	20.45	-	-
60	-	-	-	17.81	19.24	20.56	21.74	-	-
65	-	-	-	18.28	19.97	21.56	23.01	-	-

**Mass flow in kg/h**

35	309	401	507	630	771	932	1 114	-	-
40	295	385	491	612	751	910	1 091	-	-
45	279	369	473	592	730	887	1 064	-	-
50	-	351	453	571	706	860	1 035	-	-
55	-	-	432	548	681	832	1 004	-	-
60	-	-	-	524	654	802	971	-	-
65	-	-	-	498	625	770	935	-	-

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

35	2.16	2.59	3.09	3.68	4.38	5.21	6.22	-	-
40	1.88	2.26	2.69	3.18	3.76	4.44	5.23	-	-
45	1.64	1.97	2.34	2.76	3.24	3.79	4.44	-	-
50	-	1.71	2.03	2.38	2.79	3.25	3.77	-	-
55	-	-	1.75	2.05	2.39	2.77	3.21	-	-
60	-	-	-	1.75	2.04	2.36	2.72	-	-
65	-	-	-	1.48	1.72	1.99	2.30	-	-

**Nominal performance at to = 5 °C, tc = 50 °C**

Cooling capacity	29 771	W
Power input	10 684	W
Current consumption	17.55	A
Mass flow	706	kg/h
C.O.P.	2.79	



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	29.4	bar(g)
Minimum LP switch setting	1.4	bar(g)
LP pump down setting	1.7	bar(g)

**Sound power data**

Sound power level	85	dB(A)
With acoustic hood	79	dB(A)

Tolerance according EN12900



**Performance data at 50 Hz, ARI rating conditions**
**R407C**

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

**Cooling capacity in W**

35	15 349	20 199	25 951	32 714	40 596	49 706	60 153	-	-
40	13 981	18 592	24 047	30 457	37 930	46 577	56 505	-	-
45	12 611	16 969	22 115	28 159	35 211	43 381	52 778	-	-
50	-	15 348	20 171	25 837	32 455	40 136	48 989	-	-
55	-	-	18 233	23 508	29 679	36 859	45 159	-	-
60	-	-	-	21 190	26 904	33 572	41 306	-	-
65	-	-	-	18 905	24 150	30 297	37 458	-	-

**Power input in W**

35	6 612	7 257	7 819	8 288	8 655	8 911	9 046	-	-
40	6 858	7 606	8 281	8 871	9 369	9 765	10 048	-	-
45	7 065	7 917	8 703	9 415	10 044	10 578	11 010	-	-
50	-	8 194	9 093	9 926	10 684	11 358	11 938	-	-
55	-	-	9 456	10 410	11 298	12 111	12 838	-	-
60	-	-	-	10 874	11 892	12 842	13 718	-	-
65	-	-	-	11 325	12 471	13 560	14 583	-	-

**Current consumption in A**

35	12.40	13.17	13.91	14.59	15.18	15.65	15.97	-	-
40	12.71	13.58	14.42	15.20	15.89	16.46	16.89	-	-
45	13.00	13.99	14.96	15.87	16.69	17.41	17.98	-	-
50	-	14.36	15.48	16.56	17.55	18.43	19.18	-	-
55	-	-	15.95	17.22	18.42	19.50	20.45	-	-
60	-	-	-	17.81	19.24	20.56	21.74	-	-
65	-	-	-	18.28	19.97	21.56	23.01	-	-

**Mass flow in kg/h**

35	308	399	505	627	767	926	1 107	-	-
40	293	383	488	609	747	905	1 084	-	-
45	277	367	470	589	726	881	1 058	-	-
50	-	349	451	568	702	855	1 029	-	-
55	-	-	430	545	677	827	998	-	-
60	-	-	-	521	650	797	965	-	-
65	-	-	-	495	622	766	929	-	-

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

35	2.32	2.78	3.32	3.95	4.69	5.58	6.65	-	-
40	2.04	2.44	2.90	3.43	4.05	4.77	5.62	-	-
45	1.78	2.14	2.54	2.99	3.51	4.10	4.79	-	-
50	-	1.87	2.22	2.60	3.04	3.53	4.10	-	-
55	-	-	1.93	2.26	2.63	3.04	3.52	-	-
60	-	-	-	1.95	2.26	2.61	3.01	-	-
65	-	-	-	1.67	1.94	2.23	2.57	-	-

**Nominal performance at to = 7.2 °C, tc = 54.4 °C**

Cooling capacity	33 067	W
Power input	11 586	W
Current consumption	18.79	A
Mass flow	744	kg/h
C.O.P.	2.85	

**Pressure switch settings**

Maximum HP switch setting	29.4	bar(g)
Minimum LP switch setting	1.4	bar(g)
LP pump down setting	1.7	bar(g)

**Sound power data**

Sound power level	85	dB(A)
With acoustic hood	79	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

**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	-	15 623	20 162	25 633	32 127	-	-	-	-
20	-	13 101	17 109	21 939	27 680	34 424	42 272	-	-
30	-	10 833	14 342	18 565	23 586	29 491	36 374	44 340	53 509
40	-	-	11 817	15 465	19 799	24 900	30 854	37 755	45 707
50	-	-	-	12 591	16 273	20 605	25 666	31 538	38 312
60	-	-	-	-	12 961	16 560	20 764	25 644	31 276

**Power input in W**

10	-	4 576	4 917	5 208	5 456	-	-	-	-
20	-	5 190	5 662	6 083	6 459	6 794	7 093	-	-
30	-	5 643	6 275	6 855	7 389	7 881	8 334	8 755	9 146
40	-	-	6 750	7 519	8 240	8 917	9 555	10 159	10 733
50	-	-	-	8 069	9 006	9 899	10 751	11 567	12 352
60	-	-	-	-	9 683	10 820	11 915	12 973	13 998

**Current consumption in A**

10	-	10.35	10.78	11.14	11.41	-	-	-	-
20	-	10.96	11.56	12.11	12.59	12.98	13.25	-	-
30	-	11.48	12.28	13.05	13.78	14.44	15.01	15.47	15.79
40	-	-	12.88	13.91	14.92	15.89	16.79	17.60	18.30
50	-	-	-	14.62	15.95	17.26	18.53	19.73	20.85
60	-	-	-	-	16.80	18.48	20.15	21.78	23.35

**Mass flow in kg/h**

10	-	255	332	424	535	-	-	-	-
20	-	230	302	389	494	618	767	-	-
30	-	206	274	356	455	573	714	881	1 080
40	-	-	247	325	419	531	665	824	1 013
50	-	-	-	295	384	491	618	769	949
60	-	-	-	-	349	451	573	717	889

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

10	-	3.41	4.10	4.92	5.89	-	-	-	-
20	-	2.52	3.02	3.61	4.29	5.07	5.96	-	-
30	-	1.92	2.29	2.71	3.19	3.74	4.36	5.06	5.85
40	-	-	1.75	2.06	2.40	2.79	3.23	3.72	4.26
50	-	-	-	1.56	1.81	2.08	2.39	2.73	3.10
60	-	-	-	-	1.34	1.53	1.74	1.98	2.23

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

Cooling capacity	18 006	W
Power input	8 634	W
Current consumption	15.45	A
Mass flow	401	kg/h
C.O.P.	2.09	

**Pressure switch settings**

Maximum HP switch setting	27.7	bar(g)
Minimum LP switch setting	1	bar(g)
LP pump down setting	1.3	bar(g)

**Sound power data**

Sound power level	83	dB(A)
With acoustic hood	77	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	11 978	15 700	20 275	25 791	32 334	-	-	-	-
20	9 744	13 016	17 037	21 894	27 673	34 463	42 351	-	-
30	7 760	10 614	14 112	18 341	23 389	29 342	36 289	44 315	53 509
40	5 977	8 445	11 452	15 086	19 433	24 582	30 619	37 632	45 707
50	-	6 459	9 008	12 078	15 757	20 133	25 293	31 323	38 312
60	-	-	6 731	9 269	12 312	15 947	20 261	25 341	31 276

**Power input in W**

10	4 183	4 576	4 917	5 208	5 456	-	-	-	-
20	4 664	5 190	5 662	6 083	6 459	6 794	7 093	-	-
30	4 956	5 643	6 275	6 855	7 389	7 881	8 334	8 755	9 146
40	5 051	5 929	6 750	7 519	8 240	8 917	9 555	10 159	10 733
50	-	6 043	7 083	8 069	9 006	9 899	10 751	11 567	12 352
60	-	-	7 268	8 501	9 683	10 820	11 915	12 973	13 998

**Current consumption in A**

10	9.87	10.35	10.78	11.14	11.41	-	-	-	-
20	10.34	10.96	11.56	12.11	12.59	12.98	13.25	-	-
30	10.68	11.48	12.28	13.05	13.78	14.44	15.01	15.47	15.79
40	10.83	11.84	12.88	13.91	14.92	15.89	16.79	17.60	18.30
50	-	11.99	13.29	14.62	15.95	17.26	18.53	19.73	20.85
60	-	-	13.46	15.11	16.80	18.48	20.15	21.78	23.35

**Mass flow in kg/h**

10	228	297	378	475	587	-	-	-	-
20	203	268	345	436	542	665	807	-	-
30	178	240	313	399	500	617	751	905	1 080
40	153	212	282	364	460	571	699	846	1 013
50	-	184	251	330	421	528	650	790	949
60	-	-	220	296	384	485	602	737	889

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

10	2.86	3.43	4.12	4.95	5.93	-	-	-	-
20	2.09	2.51	3.01	3.60	4.28	5.07	5.97	-	-
30	1.57	1.88	2.25	2.68	3.17	3.72	4.35	5.06	5.85
40	1.18	1.42	1.70	2.01	2.36	2.76	3.20	3.70	4.26
50	-	1.07	1.27	1.50	1.75	2.03	2.35	2.71	3.10
60	-	-	0.93	1.09	1.27	1.47	1.70	1.95	2.23

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

Cooling capacity	17 563	W
Power input	8 634	W
Current consumption	15.45	A
Mass flow	441	kg/h
C.O.P.	2.03	

**Pressure switch settings**

Maximum HP switch setting	27.7	bar(g)
Minimum LP switch setting	1	bar(g)
LP pump down setting	1.3	bar(g)

**Sound power data**

Sound power level	83	dB(A)
With acoustic hood	77	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	-	15 652	20 193	25 664	32 157	-	-	-	-
20	-	13 130	17 140	21 971	27 711	34 451	42 294	-	-
30	-	10 861	14 373	18 598	23 617	29 520	36 397	44 353	53 509
40	-	-	11 848	15 498	19 831	24 930	30 878	37 769	45 707
50	-	-	-	12 624	16 306	20 635	25 690	31 553	38 312
60	-	-	-	-	12 994	16 590	20 788	25 659	31 276

**Power input in W**

10	-	4 576	4 917	5 208	5 456	-	-	-	-
20	-	5 190	5 662	6 083	6 459	6 794	7 093	-	-
30	-	5 643	6 275	6 855	7 389	7 881	8 334	8 755	9 146
40	-	-	6 750	7 519	8 240	8 917	9 555	10 159	10 733
50	-	-	-	8 069	9 006	9 899	10 751	11 567	12 352
60	-	-	-	-	9 683	10 820	11 915	12 973	13 998

**Current consumption in A**

10	-	10.35	10.78	11.14	11.41	-	-	-	-
20	-	10.96	11.56	12.11	12.59	12.98	13.25	-	-
30	-	11.48	12.28	13.05	13.78	14.44	15.01	15.47	15.79
40	-	-	12.88	13.91	14.92	15.89	16.79	17.60	18.30
50	-	-	-	14.62	15.95	17.26	18.53	19.73	20.85
60	-	-	-	-	16.80	18.48	20.15	21.78	23.35

**Mass flow in kg/h**

10	-	255	335	431	544	-	-	-	-
20	-	232	307	396	503	630	781	-	-
30	-	209	279	364	465	585	728	897	1 097
40	-	-	252	332	428	543	679	840	1 032
50	-	-	-	301	393	502	631	786	969
60	-	-	-	-	358	462	586	734	911

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

10	-	3.42	4.11	4.93	5.89	-	-	-	-
20	-	2.53	3.03	3.61	4.29	5.07	5.96	-	-
30	-	1.92	2.29	2.71	3.20	3.75	4.37	5.07	5.85
40	-	-	1.76	2.06	2.41	2.80	3.23	3.72	4.26
50	-	-	-	1.56	1.81	2.08	2.39	2.73	3.10
60	-	-	-	-	1.34	1.53	1.74	1.98	2.23

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

Cooling capacity	18 039	W
Power input	8 634	W
Current consumption	15.45	A
Mass flow	410	kg/h
C.O.P.	2.09	

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

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

**Pressure switch settings**

Maximum HP switch setting	27.7	bar(g)
Minimum LP switch setting	1	bar(g)
LP pump down setting	1.3	bar(g)

**Sound power data**

Sound power level	83	dB(A)
With acoustic hood	77	dB(A)

Tolerance according EN12900

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

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

**Cooling capacity in W**

10	11 978	15 700	20 275	25 791	32 334	-	-	-	-
20	9 744	13 016	17 037	21 894	27 673	34 463	42 351	-	-
30	7 760	10 614	14 112	18 341	23 389	29 342	36 289	44 315	53 509
40	5 977	8 445	11 452	15 086	19 433	24 582	30 619	37 632	45 707
50	-	6 459	9 008	12 078	15 757	20 133	25 293	31 323	38 312
60	-	-	6 731	9 269	12 312	15 947	20 261	25 341	31 276

**Power input in W**

10	4 183	4 576	4 917	5 208	5 456	-	-	-	-
20	4 664	5 190	5 662	6 083	6 459	6 794	7 093	-	-
30	4 956	5 643	6 275	6 855	7 389	7 881	8 334	8 755	9 146
40	5 051	5 929	6 750	7 519	8 240	8 917	9 555	10 159	10 733
50	-	6 043	7 083	8 069	9 006	9 899	10 751	11 567	12 352
60	-	-	7 268	8 501	9 683	10 820	11 915	12 973	13 998

**Current consumption in A**

10	9.87	10.35	10.78	11.14	11.41	-	-	-	-
20	10.34	10.96	11.56	12.11	12.59	12.98	13.25	-	-
30	10.68	11.48	12.28	13.05	13.78	14.44	15.01	15.47	15.79
40	10.83	11.84	12.88	13.91	14.92	15.89	16.79	17.60	18.30
50	-	11.99	13.29	14.62	15.95	17.26	18.53	19.73	20.85
60	-	-	13.46	15.11	16.80	18.48	20.15	21.78	23.35

**Mass flow in kg/h**

10	223	297	382	482	597	-	-	-	-
20	201	270	350	444	552	678	821	-	-
30	179	243	319	407	510	629	766	921	1 097
40	156	217	288	372	470	583	714	863	1 032
50	-	189	257	337	431	539	664	807	969
60	-	-	226	303	392	496	616	754	911

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

10	2.86	3.43	4.12	4.95	5.93	-	-	-	-
20	2.09	2.51	3.01	3.60	4.28	5.07	5.97	-	-
30	1.57	1.88	2.25	2.68	3.17	3.72	4.35	5.06	5.85
40	1.18	1.42	1.70	2.01	2.36	2.76	3.20	3.70	4.26
50	-	1.07	1.27	1.50	1.75	2.03	2.35	2.71	3.10
60	-	-	0.93	1.09	1.27	1.47	1.70	1.95	2.23

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

Cooling capacity	17 563	W
Power input	8 634	W
Current consumption	15.45	A
Mass flow	450	kg/h
C.O.P.	2.03	

**Pressure switch settings**

Maximum HP switch setting	27.7	bar(g)
Minimum LP switch setting	1	bar(g)
LP pump down setting	1.3	bar(g)

**Sound power data**

Sound power level	83	dB(A)
With acoustic hood	77	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	-	17 585	21 709	26 638	32 448	-	-	-	-
20	-	15 096	18 856	23 323	28 570	34 674	41 718	-	-
30	-	12 713	16 083	20 062	24 719	30 126	36 359	43 503	51 660
40	-	10 396	13 350	16 814	20 856	25 542	30 938	37 119	44 169
50	-	-	10 612	13 538	16 941	20 880	25 417	30 612	36 531
60	-	-	-	10 197	12 941	16 115	19 771	23 955	28 711

**Power input in W**

10	-	4 028	4 273	4 597	5 055	-	-	-	-
20	-	5 228	5 564	5 901	6 293	6 794	7 458	-	-
30	-	6 225	6 770	7 236	7 679	8 152	8 709	9 403	10 290
40	-	6 811	7 681	8 394	9 004	9 566	10 132	10 758	11 496
50	-	-	8 091	9 167	10 061	10 828	11 520	12 193	12 900
60	-	-	-	9 348	10 642	11 730	12 666	13 502	14 294

**Current consumption in A**

10	-	10.08	10.15	10.27	10.45	-	-	-	-
20	-	10.99	11.32	11.65	12.00	12.39	12.83	-	-
30	-	11.78	12.44	13.06	13.66	14.25	14.85	15.48	16.14
40	-	12.26	13.34	14.33	15.25	16.12	16.96	17.78	18.59
50	-	-	13.84	15.27	16.60	17.83	18.98	20.07	21.10
60	-	-	-	15.73	17.53	19.20	20.74	22.17	23.52

**Mass flow in kg/h**

10	-	354	443	548	672	-	-	-	-
20	-	333	419	521	642	786	954	-	-
30	-	308	392	492	610	749	914	1 108	1 337
40	-	281	362	459	574	709	869	1 058	1 281
50	-	-	328	422	533	664	820	1 003	1 220
60	-	-	-	379	487	614	765	942	1 153

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

10	-	4.37	5.08	5.79	6.42	-	-	-	-
20	-	2.89	3.39	3.95	4.54	5.10	5.59	-	-
30	-	2.04	2.38	2.77	3.22	3.70	4.17	4.63	5.02
40	-	1.53	1.74	2.00	2.32	2.67	3.05	3.45	3.84
50	-	-	1.31	1.48	1.68	1.93	2.21	2.51	2.83
60	-	-	-	1.09	1.22	1.37	1.56	1.77	2.01

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

Cooling capacity	18 908	W
Power input	9 579	W
Current consumption	15.96	A
Mass flow	554	kg/h
C.O.P.	1.97	

**Pressure switch settings**

Maximum HP switch setting	27.7	bar(g)
Minimum LP switch setting	1	bar(g)
LP pump down setting	1.3	bar(g)

**Sound power data**

Sound power level	83	dB(A)
With acoustic hood	77	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	13 734	17 119	21 255	26 224	32 105	-	-	-	-
20	11 362	14 449	18 196	22 685	27 994	34 204	41 396	-	-
30	9 152	11 911	15 239	19 218	23 926	29 445	35 853	43 232	51 660
40	7 068	9 469	12 349	15 788	19 866	24 663	30 259	36 734	44 169
50	5 074	7 088	9 490	12 360	15 778	19 824	24 578	30 120	36 531
60	-	4 731	6 626	8 897	11 626	14 891	18 774	23 354	28 711

**Power input in W**

10	3 809	4 028	4 273	4 597	5 055	-	-	-	-
20	4 838	5 228	5 564	5 901	6 293	6 794	7 458	-	-
30	5 548	6 225	6 770	7 236	7 679	8 152	8 709	9 403	10 290
40	5 731	6 811	7 681	8 394	9 004	9 566	10 132	10 758	11 496
50	5 179	6 780	8 091	9 167	10 061	10 828	11 520	12 193	12 900
60	-	5 923	7 793	9 348	10 642	11 730	12 666	13 502	14 294

**Current consumption in A**

10	10.04	10.08	10.15	10.27	10.45	-	-	-	-
20	10.65	10.99	11.32	11.65	12.00	12.39	12.83	-	-
30	11.06	11.78	12.44	13.06	13.66	14.25	14.85	15.48	16.14
40	11.09	12.26	13.34	14.33	15.25	16.12	16.96	17.78	18.59
50	10.57	12.27	13.84	15.27	16.60	17.83	18.98	20.07	21.10
60	-	11.64	13.77	15.73	17.53	19.20	20.74	22.17	23.52

**Mass flow in kg/h**

10	332	413	507	615	740	-	-	-	-
20	309	388	479	585	707	847	1 006	-	-
30	282	359	449	552	671	807	963	1 139	1 337
40	251	327	415	515	631	764	916	1 087	1 281
50	215	290	375	474	587	716	864	1 031	1 220
60	-	246	329	425	536	662	806	969	1 153

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

10	3.61	4.25	4.97	5.71	6.35	-	-	-	-
20	2.35	2.76	3.27	3.84	4.45	5.03	5.55	-	-
30	1.65	1.91	2.25	2.66	3.12	3.61	4.12	4.60	5.02
40	1.23	1.39	1.61	1.88	2.21	2.58	2.99	3.41	3.84
50	0.98	1.05	1.17	1.35	1.57	1.83	2.13	2.47	2.83
60	-	0.80	0.85	0.95	1.09	1.27	1.48	1.73	2.01

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

Cooling capacity	17 828	W
Power input	9 579	W
Current consumption	15.96	A
Mass flow	610	kg/h
C.O.P.	1.86	

**Pressure switch settings**

Maximum HP switch setting	27.7	bar(g)
Minimum LP switch setting	1	bar(g)
LP pump down setting	1.3	bar(g)

**Sound power data**

Sound power level	83	dB(A)
With acoustic hood	77	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**
**R407C**

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

**Cooling capacity in W**

35	18 671	24 058	30 304	37 522	45 824	55 322	66 128	-	-
40	16 997	22 179	28 154	35 034	42 930	51 954	62 218	-	-
45	15 250	20 219	25 916	32 451	39 934	48 478	58 193	-	-
50	-	18 187	23 597	29 779	36 843	44 898	54 057	-	-
55	-	-	21 204	27 025	33 661	41 220	49 813	-	-
60	-	-	-	24 194	30 391	37 444	45 462	-	-
65	-	-	-	21 288	27 036	33 571	41 001	-	-

**Power input in W**

35	8 262	9 046	9 713	10 280	10 762	11 174	11 533	-	-
40	8 568	9 509	10 321	11 019	11 620	12 138	12 590	-	-
45	8 781	9 900	10 878	11 729	12 469	13 114	13 680	-	-
50	-	10 205	11 369	12 393	13 295	14 088	14 789	-	-
55	-	-	11 779	12 999	14 082	15 044	15 902	-	-
60	-	-	-	13 529	14 816	15 968	17 003	-	-
65	-	-	-	13 970	15 481	16 845	18 078	-	-

**Current consumption in A**

35	12.46	13.38	14.16	14.81	15.37	15.86	16.30	-	-
40	12.78	13.89	14.84	15.65	16.36	17.00	17.57	-	-
45	13.02	14.34	15.49	16.50	17.39	18.19	18.92	-	-
50	-	14.71	16.09	17.31	18.41	19.40	20.32	-	-
55	-	-	16.59	18.06	19.39	20.61	21.75	-	-
60	-	-	-	18.72	20.31	21.78	23.16	-	-
65	-	-	-	19.25	21.13	22.88	24.52	-	-

**Mass flow in kg/h**

35	405	513	636	775	933	1 110	1 310	-	-
40	388	497	621	759	916	1 092	1 290	-	-
45	368	478	602	741	897	1 072	1 268	-	-
50	-	456	580	719	875	1 048	1 242	-	-
55	-	-	555	694	849	1 022	1 214	-	-
60	-	-	-	666	820	992	1 182	-	-
65	-	-	-	634	787	958	1 147	-	-

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

35	2.26	2.66	3.12	3.65	4.26	4.95	5.73	-	-
40	1.98	2.33	2.73	3.18	3.69	4.28	4.94	-	-
45	1.74	2.04	2.38	2.77	3.20	3.70	4.25	-	-
50	-	1.78	2.08	2.40	2.77	3.19	3.66	-	-
55	-	-	1.80	2.08	2.39	2.74	3.13	-	-
60	-	-	-	1.79	2.05	2.34	2.67	-	-
65	-	-	-	1.52	1.75	1.99	2.27	-	-

**Nominal performance at to = 5 °C, tc = 50 °C**

Cooling capacity	36 843	W
Power input	13 295	W
Current consumption	18.41	A
Mass flow	875	kg/h
C.O.P.	2.77	

**Pressure switch settings**

Maximum HP switch setting	29.4	bar(g)
Minimum LP switch setting	1.4	bar(g)
LP pump down setting	1.7	bar(g)

**Sound power data**

Sound power level	88	dB(A)
With acoustic hood	82	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, ARI rating conditions**
**R407C**

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

**Cooling capacity in W**

35	20 097	25 863	32 540	40 244	49 095	59 209	70 704	-	-
40	18 395	23 970	30 387	37 765	46 221	55 872	66 837	-	-
45	16 610	21 988	28 140	35 186	43 242	52 426	62 855	-	-
50	-	19 922	25 806	32 514	40 164	48 875	58 764	-	-
55	-	-	23 388	29 753	36 993	45 225	54 568	-	-
60	-	-	-	26 910	33 734	41 482	50 274	-	-
65	-	-	-	23 989	30 392	37 652	45 886	-	-

**Power input in W**

35	8 262	9 046	9 713	10 280	10 762	11 174	11 533	-	-
40	8 568	9 509	10 321	11 019	11 620	12 138	12 590	-	-
45	8 781	9 900	10 878	11 729	12 469	13 114	13 680	-	-
50	-	10 205	11 369	12 393	13 295	14 088	14 789	-	-
55	-	-	11 779	12 999	14 082	15 044	15 902	-	-
60	-	-	-	13 529	14 816	15 968	17 003	-	-
65	-	-	-	13 970	15 481	16 845	18 078	-	-

**Current consumption in A**

35	12.46	13.38	14.16	14.81	15.37	15.86	16.30	-	-
40	12.78	13.89	14.84	15.65	16.36	17.00	17.57	-	-
45	13.02	14.34	15.49	16.50	17.39	18.19	18.92	-	-
50	-	14.71	16.09	17.31	18.41	19.40	20.32	-	-
55	-	-	16.59	18.06	19.39	20.61	21.75	-	-
60	-	-	-	18.72	20.31	21.78	23.16	-	-
65	-	-	-	19.25	21.13	22.88	24.52	-	-

**Mass flow in kg/h**

35	403	511	633	771	927	1 104	1 302	-	-
40	386	495	617	755	911	1 086	1 282	-	-
45	366	476	599	737	892	1 065	1 260	-	-
50	-	454	577	715	870	1 042	1 235	-	-
55	-	-	552	690	844	1 016	1 207	-	-
60	-	-	-	662	815	986	1 175	-	-
65	-	-	-	630	783	952	1 140	-	-

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

35	2.43	2.86	3.35	3.91	4.56	5.30	6.13	-	-
40	2.15	2.52	2.94	3.43	3.98	4.60	5.31	-	-
45	1.89	2.22	2.59	3.00	3.47	4.00	4.59	-	-
50	-	1.95	2.27	2.62	3.02	3.47	3.97	-	-
55	-	-	1.99	2.29	2.63	3.01	3.43	-	-
60	-	-	-	1.99	2.28	2.60	2.96	-	-
65	-	-	-	1.72	1.96	2.24	2.54	-	-

**Nominal performance at to = 7.2 °C, tc = 54.4 °C**

Cooling capacity	40 896	W
Power input	14 418	W
Current consumption	19.81	A
Mass flow	921	kg/h
C.O.P.	2.84	

**Pressure switch settings**

Maximum HP switch setting	29.4	bar(g)
Minimum LP switch setting	1.4	bar(g)
LP pump down setting	1.7	bar(g)

**Sound power data**

Sound power level	88	dB(A)
With acoustic hood	82	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

**Performance data at 60 Hz, EN 12900 rating conditions**
**R134a**

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

**Cooling capacity in W**

35	5 978	8 481	15 349	19 889	25 285	31 624	38 993	47 481	57 175
40	5 232	7 621	14 132	18 431	23 541	29 551	36 550	44 624	53 861
45	4 486	6 749	12 879	16 922	21 735	27 404	34 019	41 666	50 434
50	3 758	5 882	11 605	15 381	19 883	25 199	31 417	38 625	46 911
55	-	-	10 328	13 824	18 002	22 952	28 761	35 518	43 309
60	-	-	-	12 268	16 111	20 682	26 069	32 361	39 645
65	-	-	-	-	14 224	18 404	23 358	29 172	35 936
75	-	-	-	-	-	-	17 943	22 766	28 452

**Power input in W**

35	4 266	4 849	6 011	6 552	7 040	7 458	7 787	8 006	8 098
40	4 422	5 026	6 258	6 849	7 398	7 885	8 293	8 601	8 792
45	4 538	5 169	6 485	7 132	7 747	8 310	8 804	9 208	9 504
50	4 610	5 274	6 686	7 396	8 083	8 729	9 314	9 820	10 228
55	-	-	6 856	7 635	8 401	9 136	9 820	10 434	10 960
60	-	-	-	7 845	8 697	9 527	10 316	11 045	11 695
65	-	-	-	-	8 965	9 897	10 797	11 647	12 428
75	-	-	-	-	-	-	11 696	12 807	13 869

**Current consumption in A**

35	9.62	10.11	11.09	11.56	12.00	12.39	12.72	12.99	13.17
40	9.73	10.24	11.30	11.83	12.34	12.81	13.24	13.61	13.91
45	9.79	10.33	11.50	12.09	12.68	13.24	13.77	14.26	14.68
50	9.80	10.39	11.67	12.34	13.01	13.67	14.31	14.92	15.48
55	-	-	11.81	12.56	13.33	14.10	14.86	15.59	16.29
60	-	-	-	12.77	13.64	14.52	15.40	16.27	17.12
65	-	-	-	-	13.93	14.93	15.95	16.96	17.96
75	-	-	-	-	-	-	17.02	18.35	19.68

**Mass flow in kg/h**

35	152	211	366	463	576	706	854	1 022	1 211
40	140	200	354	451	563	692	839	1 006	1 194
45	128	188	340	436	548	675	821	986	1 172
50	115	174	325	420	530	656	800	963	1 147
55	-	-	308	402	510	634	776	937	1 118
60	-	-	-	381	487	609	749	907	1 086
65	-	-	-	-	462	582	719	874	1 050
75	-	-	-	-	-	-	650	799	967

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

35	1.40	1.75	2.55	3.04	3.59	4.24	5.01	5.93	7.06
40	1.18	1.52	2.26	2.69	3.18	3.75	4.41	5.19	6.13
45	0.99	1.31	1.99	2.37	2.81	3.30	3.86	4.53	5.31
50	0.82	1.12	1.74	2.08	2.46	2.89	3.37	3.93	4.59
55	-	-	1.51	1.81	2.14	2.51	2.93	3.40	3.95
60	-	-	-	1.56	1.85	2.17	2.53	2.93	3.39
65	-	-	-	-	1.59	1.86	2.16	2.50	2.89
75	-	-	-	-	-	-	1.53	1.78	2.05

**Nominal performance at to = 5 °C, tc = 50 °C**

Cooling capacity	25 199	W
Power input	8 729	W
Current consumption	13.67	A
Mass flow	656	kg/h
C.O.P.	2.89	

**Pressure switch settings**

Maximum HP switch setting	20.2	bar(g)
Minimum LP switch setting	0.1	bar(g)
LP pump down setting	0.4	bar(g)

**Sound power data**

Sound power level	0	dB(A)
With acoustic hood	0	dB(A)

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

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

Tolerance according EN12900

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

**Performance data at 60 Hz, ARI rating conditions**
**R134a**

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

**Cooling capacity in W**

35	6 498	9 202	16 596	21 471	27 253	34 034	41 905	50 957	61 280
40	5 720	8 315	15 361	19 997	25 497	31 954	39 459	48 103	57 976
45	4 938	7 412	14 082	18 466	23 671	29 791	36 917	45 140	54 551
50	-	6 508	12 777	16 895	21 793	27 562	34 296	42 085	51 022
55	-	-	11 463	15 303	19 879	25 285	31 614	38 957	47 407
60	-	-	-	13 706	17 947	22 977	28 889	35 774	43 726
65	-	-	-	-	-	20 658	26 140	32 555	39 998
75	-	-	-	-	-	-	20 647	26 092	32 487

**Power input in W**

35	4 266	4 849	6 011	6 552	7 040	7 458	7 787	8 006	8 098
40	4 422	5 026	6 258	6 849	7 398	7 885	8 293	8 601	8 792
45	4 538	5 169	6 485	7 132	7 747	8 310	8 804	9 208	9 504
50	-	5 274	6 686	7 396	8 083	8 729	9 314	9 820	10 228
55	-	-	6 856	7 635	8 401	9 136	9 820	10 434	10 960
60	-	-	-	7 845	8 697	9 527	10 316	11 045	11 695
65	-	-	-	-	-	9 897	10 797	11 647	12 428
75	-	-	-	-	-	-	11 696	12 807	13 869

**Current consumption in A**

35	9.62	10.11	11.09	11.56	12.00	12.39	12.72	12.99	13.17
40	9.73	10.24	11.30	11.83	12.34	12.81	13.24	13.61	13.91
45	9.79	10.33	11.50	12.09	12.68	13.24	13.77	14.26	14.68
50	-	10.39	11.67	12.34	13.01	13.67	14.31	14.92	15.48
55	-	-	11.81	12.56	13.33	14.10	14.86	15.59	16.29
60	-	-	-	12.77	13.64	14.52	15.40	16.27	17.12
65	-	-	-	-	-	14.93	15.95	16.96	17.96
75	-	-	-	-	-	-	17.02	18.35	19.68

**Mass flow in kg/h**

35	151	210	364	461	573	702	849	1 016	1 205
40	140	199	352	448	560	688	834	1 000	1 187
45	127	187	339	434	545	672	817	981	1 165
50	-	173	323	418	527	653	796	958	1 140
55	-	-	306	399	507	631	772	932	1 112
60	-	-	-	379	485	606	745	902	1 080
65	-	-	-	-	-	579	715	869	1 044
75	-	-	-	-	-	-	647	794	962

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

35	1.52	1.90	2.76	3.28	3.87	4.56	5.38	6.36	7.57
40	1.29	1.65	2.45	2.92	3.45	4.05	4.76	5.59	6.59
45	1.09	1.43	2.17	2.59	3.06	3.58	4.19	4.90	5.74
50	-	1.23	1.91	2.28	2.70	3.16	3.68	4.29	4.99
55	-	-	1.67	2.00	2.37	2.77	3.22	3.73	4.33
60	-	-	-	1.75	2.06	2.41	2.80	3.24	3.74
65	-	-	-	-	-	2.09	2.42	2.80	3.22
75	-	-	-	-	-	-	1.77	2.04	2.34

**Nominal performance at to = 7.2 °C, tc = 54.4 °C**

Cooling capacity	28 247	W
Power input	9 391	W
Current consumption	14.38	A
Mass flow	693	kg/h
C.O.P.	3.01	

**Pressure switch settings**

Maximum HP switch setting	20.2	bar(g)
Minimum LP switch setting	0.1	bar(g)
LP pump down setting	0.4	bar(g)

**Sound power data**

Sound power level	0	dB(A)
With acoustic hood	0	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

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

**Performance data at 60 Hz, EN 12900 rating conditions**
**R404A**

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

**Cooling capacity in W**

30	11 226	14 729	18 951	23 990	29 945	36 912	44 990	54 276	64 871
35	9 885	13 183	17 145	21 867	27 448	33 986	41 577	50 321	60 315
40	8 541	11 613	15 292	19 676	24 862	30 948	38 031	46 209	55 582
45	7 205	10 029	13 405	17 428	22 197	27 809	34 362	41 954	50 683
50	5 889	8 444	11 493	15 134	19 464	24 581	30 582	37 566	45 629
55	-	6 867	9 568	12 805	16 675	21 275	26 702	33 055	40 431
60	-	5 310	7 642	10 453	13 841	17 902	22 733	28 433	35 099

**Power input in W**

30	7 417	8 268	9 059	9 808	10 537	11 263	12 006	12 786	13 622
35	7 503	8 470	9 365	10 208	11 018	11 814	12 616	13 444	14 316
40	7 507	8 609	9 629	10 585	11 496	12 382	13 263	14 158	15 086
45	7 404	8 663	9 826	10 915	11 947	12 943	13 923	14 905	15 909
50	7 172	8 606	9 934	11 175	12 348	13 474	14 572	15 661	16 761
55	-	8 416	9 928	11 341	12 676	13 951	15 187	16 403	17 618
60	-	8 070	9 785	11 390	12 906	14 351	15 745	17 107	18 458

**Current consumption in A**

30	11.43	12.41	13.30	14.11	14.88	15.64	16.40	17.20	18.05
35	11.51	12.63	13.66	14.61	15.52	16.42	17.32	18.25	19.24
40	11.49	12.77	13.96	15.07	16.13	17.17	18.22	19.30	20.43
45	11.38	12.83	14.17	15.45	16.68	17.88	19.09	20.32	21.61
50	11.13	12.76	14.29	15.74	17.15	18.52	19.90	21.31	22.77
55	-	12.56	14.28	15.92	17.51	19.08	20.64	22.23	23.87
60	-	12.20	14.13	15.97	17.76	19.52	21.28	23.06	24.89

**Mass flow in kg/h**

30	353	453	569	702	854	1 029	1 227	1 451	1 704
35	335	435	551	683	835	1 009	1 206	1 430	1 681
40	314	414	529	662	813	986	1 182	1 404	1 654
45	290	390	505	636	787	958	1 153	1 374	1 622
50	264	363	477	608	757	927	1 120	1 339	1 585
55	-	333	446	575	723	891	1 083	1 299	1 543
60	-	300	411	538	684	851	1 040	1 255	1 496

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

30	1.51	1.78	2.09	2.45	2.84	3.28	3.75	4.25	4.76
35	1.32	1.56	1.83	2.14	2.49	2.88	3.30	3.74	4.21
40	1.14	1.35	1.59	1.86	2.16	2.50	2.87	3.26	3.68
45	0.97	1.16	1.36	1.60	1.86	2.15	2.47	2.81	3.19
50	0.82	0.98	1.16	1.35	1.58	1.82	2.10	2.40	2.72
55	-	0.82	0.96	1.13	1.32	1.52	1.76	2.02	2.29
60	-	0.66	0.78	0.92	1.07	1.25	1.44	1.66	1.90

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

Cooling capacity	22 197	W
Power input	11 947	W
Current consumption	16.68	A
Mass flow	787	kg/h
C.O.P.	1.86	

**Pressure switch settings**

Maximum HP switch setting	27.7	bar(g)
Minimum LP switch setting	1	bar(g)
LP pump down setting	1.3	bar(g)

**Sound power data**

Sound power level	86	dB(A)
With acoustic hood	80	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, ARI rating conditions**
**R404A**

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

**Cooling capacity in W**

30	12 497	16 351	20 984	26 500	33 001	40 590	49 371	59 445	70 916
35	11 122	14 786	19 172	24 383	30 525	37 700	46 012	55 564	66 459
40	9 737	13 189	17 306	22 193	27 954	34 695	42 518	51 528	61 829
45	8 351	11 571	15 399	19 940	25 302	31 588	38 905	47 355	57 045
50	6 976	9 944	13 463	17 640	22 583	28 399	35 192	43 068	52 133
55	-	8 321	11 513	15 310	19 820	25 151	31 410	38 703	47 137
60	-	6 714	9 570	12 976	17 045	21 887	27 610	34 323	42 133

**Power input in W**

30	7 417	8 268	9 059	9 808	10 537	11 263	12 006	12 786	13 622
35	7 503	8 470	9 365	10 208	11 018	11 814	12 616	13 444	14 316
40	7 507	8 609	9 629	10 585	11 496	12 382	13 263	14 158	15 086
45	7 404	8 663	9 826	10 915	11 947	12 943	13 923	14 905	15 909
50	7 172	8 606	9 934	11 175	12 348	13 474	14 572	15 661	16 761
55	-	8 416	9 928	11 341	12 676	13 951	15 187	16 403	17 618
60	-	8 070	9 785	11 390	12 906	14 351	15 745	17 107	18 458

**Current consumption in A**

30	11.43	12.41	13.30	14.11	14.88	15.64	16.40	17.20	18.05
35	11.51	12.63	13.66	14.61	15.52	16.42	17.32	18.25	19.24
40	11.49	12.77	13.96	15.07	16.13	17.17	18.22	19.30	20.43
45	11.38	12.83	14.17	15.45	16.68	17.88	19.09	20.32	21.61
50	11.13	12.76	14.29	15.74	17.15	18.52	19.90	21.31	22.77
55	-	12.56	14.28	15.92	17.51	19.08	20.64	22.23	23.87
60	-	12.20	14.13	15.97	17.76	19.52	21.28	23.06	24.89

**Mass flow in kg/h**

30	351	451	566	698	849	1 022	1 219	1 442	1 692
35	333	433	548	679	830	1 003	1 199	1 420	1 670
40	312	412	526	658	808	980	1 175	1 395	1 643
45	289	388	502	633	782	953	1 146	1 365	1 611
50	263	361	474	604	752	921	1 113	1 330	1 575
55	-	331	443	572	718	886	1 076	1 291	1 533
60	-	298	409	535	680	846	1 034	1 247	1 486

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

30	1.68	1.98	2.32	2.70	3.13	3.60	4.11	4.65	5.21
35	1.48	1.75	2.05	2.39	2.77	3.19	3.65	4.13	4.64
40	1.30	1.53	1.80	2.10	2.43	2.80	3.21	3.64	4.10
45	1.13	1.34	1.57	1.83	2.12	2.44	2.79	3.18	3.59
50	0.97	1.16	1.36	1.58	1.83	2.11	2.42	2.75	3.11
55	-	0.99	1.16	1.35	1.56	1.80	2.07	2.36	2.68
60	-	0.83	0.98	1.14	1.32	1.53	1.75	2.01	2.28

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

Cooling capacity	25 302	W
Power input	11 947	W
Current consumption	16.68	A
Mass flow	782	kg/h
C.O.P.	2.12	

**Pressure switch settings**

Maximum HP switch setting	27.7	bar(g)
Minimum LP switch setting	1	bar(g)
LP pump down setting	1.3	bar(g)

**Sound power data**

Sound power level	86	dB(A)
With acoustic hood	80	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

**Performance data at 60 Hz, EN 12900 rating conditions**
**R407A**

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

**Cooling capacity in W**

30	7 728	11 174	15 374	20 432	26 451	33 536	41 790	51 318	62 224
35	6 702	9 989	13 976	18 765	24 461	31 168	38 990	48 031	58 394
40	5 652	8 765	12 522	17 026	22 383	28 696	36 069	44 606	54 411
45	4 601	7 523	11 033	15 237	20 239	26 142	33 050	41 067	50 297
50	-	6 285	9 534	13 421	18 051	23 527	29 954	37 435	46 075
55	-	-	8 045	11 600	15 842	20 875	26 805	33 734	41 767
60	-	-	-	9 795	13 634	18 209	23 625	29 986	37 396

**Power input in W**

30	5 380	6 328	7 218	8 037	8 776	9 424	9 971	10 405	10 716
35	5 370	6 418	7 417	8 357	9 225	10 013	10 709	11 303	11 784
40	5 306	6 455	7 565	8 626	9 625	10 554	11 401	12 156	12 808
45	5 194	6 445	7 667	8 850	9 981	11 052	12 051	12 968	13 792
50	-	6 393	7 728	9 034	10 299	11 513	12 665	13 745	14 742
55	-	-	7 754	9 184	10 583	11 941	13 248	14 492	15 663
60	-	-	-	9 305	10 840	12 344	13 806	15 215	16 562

**Current consumption in A**

30	10.74	11.61	12.50	13.35	14.15	14.84	15.38	15.75	15.88
35	10.80	11.70	12.64	13.59	14.49	15.31	16.02	16.56	16.91
40	10.85	11.80	12.82	13.85	14.88	15.85	16.72	17.47	18.04
45	10.86	11.87	12.97	14.11	15.27	16.40	17.46	18.41	19.22
50	-	11.86	13.06	14.33	15.63	16.93	18.19	19.36	20.42
55	-	-	13.05	14.45	15.92	17.40	18.87	20.28	21.59
60	-	-	-	14.45	16.09	17.77	19.46	21.11	22.69

**Mass flow in kg/h**

30	184	261	353	460	584	728	893	1 080	1 293
35	168	246	337	444	568	711	874	1 061	1 272
40	150	228	319	425	548	690	852	1 037	1 246
45	131	208	299	404	526	666	826	1 009	1 216
50	-	187	276	380	500	638	797	977	1 181
55	-	-	251	353	472	608	764	941	1 142
60	-	-	-	324	440	574	727	901	1 099

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

30	1.44	1.77	2.13	2.54	3.01	3.56	4.19	4.93	5.81
35	1.25	1.56	1.88	2.25	2.65	3.11	3.64	4.25	4.96
40	1.07	1.36	1.66	1.97	2.33	2.72	3.16	3.67	4.25
45	0.89	1.17	1.44	1.72	2.03	2.37	2.74	3.17	3.65
50	-	0.98	1.23	1.49	1.75	2.04	2.37	2.72	3.13
55	-	-	1.04	1.26	1.50	1.75	2.02	2.33	2.67
60	-	-	-	1.05	1.26	1.48	1.71	1.97	2.26

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

Cooling capacity	20 239	W
Power input	9 981	W
Current consumption	15.27	A
Mass flow	526	kg/h
C.O.P.	2.03	

**Pressure switch settings**

Maximum HP switch setting	25.8	bar(g)
Minimum LP switch setting	0.9	bar(g)
LP pump down setting	1.2	bar(g)

**Sound power data**

Sound power level	85	dB(A)
With acoustic hood	79	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, ARI rating conditions**
**R407A**

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

**Cooling capacity in W**

30	8 358	12 067	16 580	22 004	28 450	36 026	44 840	55 001	66 617
35	7 292	10 850	15 156	20 319	26 449	33 654	42 044	51 728	62 814
40	6 192	9 584	13 667	18 552	24 349	31 169	39 119	48 310	58 850
45	5 082	8 291	12 135	16 726	22 175	28 592	36 088	44 771	54 751
50	-	6 994	10 584	14 865	19 950	25 950	32 975	41 136	50 544
55	-	-	9 035	12 992	17 698	23 267	29 808	37 435	46 257
60	-	-	-	11 131	15 445	20 569	26 616	33 697	41 925

**Power input in W**

30	5 380	6 328	7 218	8 037	8 776	9 424	9 971	10 405	10 716
35	5 370	6 418	7 417	8 357	9 225	10 013	10 709	11 303	11 784
40	5 306	6 455	7 565	8 626	9 625	10 554	11 401	12 156	12 808
45	5 194	6 445	7 667	8 850	9 981	11 052	12 051	12 968	13 792
50	-	6 393	7 728	9 034	10 299	11 513	12 665	13 745	14 742
55	-	-	7 754	9 184	10 583	11 941	13 248	14 492	15 663
60	-	-	-	9 305	10 840	12 344	13 806	15 215	16 562

**Current consumption in A**

30	10.74	11.61	12.50	13.35	14.15	14.84	15.38	15.75	15.88
35	10.80	11.70	12.64	13.59	14.49	15.31	16.02	16.56	16.91
40	10.85	11.80	12.82	13.85	14.88	15.85	16.72	17.47	18.04
45	10.86	11.87	12.97	14.11	15.27	16.40	17.46	18.41	19.22
50	-	11.86	13.06	14.33	15.63	16.93	18.19	19.36	20.42
55	-	-	13.05	14.45	15.92	17.40	18.87	20.28	21.59
60	-	-	-	14.45	16.09	17.77	19.46	21.11	22.69

**Mass flow in kg/h**

30	183	260	351	457	581	724	888	1 074	1 285
35	167	245	336	442	565	707	869	1 055	1 264
40	150	227	318	423	545	686	847	1 031	1 238
45	130	207	297	402	523	662	822	1 003	1 208
50	-	186	275	378	497	635	792	971	1 174
55	-	-	250	351	469	604	759	936	1 135
60	-	-	-	322	438	571	723	896	1 092

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

30	1.55	1.91	2.30	2.74	3.24	3.82	4.50	5.29	6.22
35	1.36	1.69	2.04	2.43	2.87	3.36	3.93	4.58	5.33
40	1.17	1.48	1.81	2.15	2.53	2.95	3.43	3.97	4.59
45	0.98	1.29	1.58	1.89	2.22	2.59	2.99	3.45	3.97
50	-	1.09	1.37	1.65	1.94	2.25	2.60	2.99	3.43
55	-	-	1.17	1.41	1.67	1.95	2.25	2.58	2.95
60	-	-	-	1.20	1.42	1.67	1.93	2.21	2.53

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

Cooling capacity	22 175	W
Power input	9 981	W
Current consumption	15.27	A
Mass flow	523	kg/h
C.O.P.	2.22	

**Pressure switch settings**

Maximum HP switch setting	25.8	bar(g)
Minimum LP switch setting	0.9	bar(g)
LP pump down setting	1.2	bar(g)

**Sound power data**

Sound power level	85	dB(A)
With acoustic hood	79	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

**Performance data at 60 Hz, EN 12900 rating conditions**
**R407F**

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

**Cooling capacity in W**

30	-	12 242	16 994	22 718	29 533	37 562	46 924	57 742	70 135
35	-	10 626	14 971	20 199	26 431	33 789	42 393	52 363	63 822
40	-	9 257	13 259	18 056	23 770	30 521	38 431	47 620	58 209
45	-	8 082	11 805	16 237	21 497	27 707	34 987	43 459	53 243
50	-	-	10 558	14 688	19 560	25 292	32 008	39 828	48 872
55	-	-	-	13 359	17 905	23 226	29 442	36 674	45 043
60	-	-	-	-	-	-	-	-	-

**Power input in W**

30	-	6 746	7 656	8 517	9 284	9 913	10 358	10 577	10 523
35	-	6 851	7 847	8 828	9 748	10 564	11 230	11 702	11 937
40	-	6 961	8 022	9 102	10 155	11 137	12 004	12 710	13 213
45	-	7 109	8 216	9 375	10 541	11 669	12 716	13 636	14 386
50	-	-	8 463	9 681	10 939	12 194	13 400	14 515	15 492
55	-	-	-	10 055	11 385	12 746	14 093	15 380	16 565
60	-	-	-	-	-	-	-	-	-

**Current consumption in A**

30	-	11.63	12.57	13.50	14.36	15.08	15.61	15.89	15.87
35	-	11.86	12.86	13.87	14.84	15.71	16.42	16.92	17.14
40	-	12.01	13.07	14.18	15.28	16.31	17.21	17.94	18.42
45	-	12.10	13.24	14.46	15.70	16.91	18.02	18.99	19.75
50	-	-	13.40	14.75	16.14	17.54	18.88	20.10	21.15
55	-	-	-	15.06	16.63	18.23	19.81	21.30	22.65
60	-	-	-	-	-	-	-	-	-

**Mass flow in kg/h**

30	-	253	346	456	584	732	903	1 098	1 320
35	-	231	320	425	547	689	852	1 040	1 252
40	-	211	298	399	516	653	810	990	1 195
45	-	195	280	378	492	625	777	951	1 149
50	-	-	266	363	475	604	752	921	1 113
55	-	-	-	352	463	590	735	901	1 088
60	-	-	-	-	-	-	-	-	-

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

30	-	1.81	2.22	2.67	3.18	3.79	4.53	5.46	6.66
35	-	1.55	1.91	2.29	2.71	3.20	3.78	4.47	5.35
40	-	1.33	1.65	1.98	2.34	2.74	3.20	3.75	4.41
45	-	1.14	1.44	1.73	2.04	2.37	2.75	3.19	3.70
50	-	-	1.25	1.52	1.79	2.07	2.39	2.74	3.15
55	-	-	-	1.33	1.57	1.82	2.09	2.38	2.72
60	-	-	-	-	-	-	-	-	-

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

Cooling capacity	21 497	W
Power input	10 541	W
Current consumption	15.70	A
Mass flow	492	kg/h
C.O.P.	2.04	

**Pressure switch settings**

Maximum HP switch setting	24	bar(g)
Minimum LP switch setting	1	bar(g)
LP pump down setting	1.26	bar(g)

**Sound power data**

Sound power level	85	dB(A)
With acoustic hood	79	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, ARI rating conditions**
**R407F**

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

**Cooling capacity in W**

30	-	13 121	18 195	24 299	31 558	40 100	50 050	61 536	74 682
35	-	11 442	16 102	21 701	28 366	36 225	45 405	56 032	68 232
40	-	10 022	14 336	19 498	25 638	32 883	41 360	51 196	62 519
45	-	8 806	12 844	17 641	23 324	30 024	37 867	46 982	57 496
50	-	-	11 575	16 077	21 375	27 600	34 881	43 346	53 123
55	-	-	-	14 758	19 746	25 571	32 363	40 252	49 367
60	-	-	-	-	-	-	-	-	-

**Power input in W**

30	-	6 746	7 656	8 517	9 284	9 913	10 358	10 577	10 523
35	-	6 851	7 847	8 828	9 748	10 564	11 230	11 702	11 937
40	-	6 961	8 022	9 102	10 155	11 137	12 004	12 710	13 213
45	-	7 109	8 216	9 375	10 541	11 669	12 716	13 636	14 386
50	-	-	8 463	9 681	10 939	12 194	13 400	14 515	15 492
55	-	-	-	10 055	11 385	12 746	14 093	15 380	16 565
60	-	-	-	-	-	-	-	-	-

**Current consumption in A**

30	-	11.63	12.57	13.50	14.36	15.08	15.61	15.89	15.87
35	-	11.86	12.86	13.87	14.84	15.71	16.42	16.92	17.14
40	-	12.01	13.07	14.18	15.28	16.31	17.21	17.94	18.42
45	-	12.10	13.24	14.46	15.70	16.91	18.02	18.99	19.75
50	-	-	13.40	14.75	16.14	17.54	18.88	20.10	21.15
55	-	-	-	15.06	16.63	18.23	19.81	21.30	22.65
60	-	-	-	-	-	-	-	-	-

**Mass flow in kg/h**

30	-	252	344	453	581	728	898	1 091	1 311
35	-	229	318	422	544	685	847	1 033	1 244
40	-	210	296	396	513	649	805	984	1 187
45	-	194	278	376	490	621	772	945	1 141
50	-	-	265	361	472	600	747	915	1 106
55	-	-	-	350	460	586	731	895	1 081
60	-	-	-	-	-	-	-	-	-

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

30	-	1.95	2.38	2.85	3.40	4.05	4.83	5.82	7.10
35	-	1.67	2.05	2.46	2.91	3.43	4.04	4.79	5.72
40	-	1.44	1.79	2.14	2.52	2.95	3.45	4.03	4.73
45	-	1.24	1.56	1.88	2.21	2.57	2.98	3.45	4.00
50	-	-	1.37	1.66	1.95	2.26	2.60	2.99	3.43
55	-	-	-	1.47	1.73	2.01	2.30	2.62	2.98
60	-	-	-	-	-	-	-	-	-

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

Cooling capacity	23 324	W
Power input	10 541	W
Current consumption	15.70	A
Mass flow	490	kg/h
C.O.P.	2.21	

**Pressure switch settings**

Maximum HP switch setting	24	bar(g)
Minimum LP switch setting	1	bar(g)
LP pump down setting	1.26	bar(g)

**Sound power data**

Sound power level	85	dB(A)
With acoustic hood	79	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

Performance data at 60 Hz, EN 12900 rating conditions

R134a

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

Cooling capacity in W

35	5 978	8 481	15 349	19 889	25 285	31 624	38 993	47 481	57 175
40	5 232	7 621	14 132	18 431	23 541	29 551	36 550	44 624	53 861
45	4 486	6 749	12 879	16 922	21 735	27 404	34 019	41 666	50 434
50	3 758	5 882	11 605	15 381	19 883	25 199	31 417	38 625	46 911
55	-	-	10 328	13 824	18 002	22 952	28 761	35 518	43 309
60	-	-	-	12 268	16 111	20 682	26 069	32 361	39 645
65	-	-	-	-	14 224	18 404	23 358	29 172	35 936
75	-	-	-	-	-	-	17 943	22 766	28 452

Power input in W

35	4 266	4 849	6 011	6 552	7 040	7 458	7 787	8 006	8 098
40	4 422	5 026	6 258	6 849	7 398	7 885	8 293	8 601	8 792
45	4 538	5 169	6 485	7 132	7 747	8 310	8 804	9 208	9 504
50	4 610	5 274	6 686	7 396	8 083	8 729	9 314	9 820	10 228
55	-	-	6 856	7 635	8 401	9 136	9 820	10 434	10 960
60	-	-	-	7 845	8 697	9 527	10 316	11 045	11 695
65	-	-	-	-	8 965	9 897	10 797	11 647	12 428
75	-	-	-	-	-	-	11 696	12 807	13 869

Current consumption in A

35	9.62	10.11	11.09	11.56	12.00	12.39	12.72	12.99	13.17
40	9.73	10.24	11.30	11.83	12.34	12.81	13.24	13.61	13.91
45	9.79	10.33	11.50	12.09	12.68	13.24	13.77	14.26	14.68
50	9.80	10.39	11.67	12.34	13.01	13.67	14.31	14.92	15.48
55	-	-	11.81	12.56	13.33	14.10	14.86	15.59	16.29
60	-	-	-	12.77	13.64	14.52	15.40	16.27	17.12
65	-	-	-	-	13.93	14.93	15.95	16.96	17.96
75	-	-	-	-	-	-	17.02	18.35	19.68

Mass flow in kg/h

35	152	211	366	463	576	706	854	1 022	1 211
40	140	200	354	451	563	692	839	1 006	1 194
45	128	188	340	436	548	675	821	986	1 172
50	115	174	325	420	530	656	800	963	1 147
55	-	-	308	402	510	634	776	937	1 118
60	-	-	-	381	487	609	749	907	1 086
65	-	-	-	-	462	582	719	874	1 050
75	-	-	-	-	-	-	650	799	967

Coefficient of performance (C.O.P.)

35	1.40	1.75	2.55	3.04	3.59	4.24	5.01	5.93	7.06
40	1.18	1.52	2.26	2.69	3.18	3.75	4.41	5.19	6.13
45	0.99	1.31	1.99	2.37	2.81	3.30	3.86	4.53	5.31
50	0.82	1.12	1.74	2.08	2.46	2.89	3.37	3.93	4.59
55	-	-	1.51	1.81	2.14	2.51	2.93	3.40	3.95
60	-	-	-	1.56	1.85	2.17	2.53	2.93	3.39
65	-	-	-	-	1.59	1.86	2.16	2.50	2.89
75	-	-	-	-	-	-	1.53	1.78	2.05

Nominal performance at to = 5 °C, tc = 50 °C

Cooling capacity	25 199	W
Power input	8 729	W
Current consumption	13.67	A
Mass flow	656	kg/h
C.O.P.	2.89	

Pressure switch settings

Maximum HP switch setting	20.2	bar(g)
Minimum LP switch setting	0.1	bar(g)
LP pump down setting	0.4	bar(g)

Sound power data

Sound power level	0	dB(A)
With acoustic hood	0	dB(A)

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

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

Tolerance according EN12900

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

**Performance data at 60 Hz, ARI rating conditions**
**R134a**

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

**Cooling capacity in W**

35	6 498	9 202	16 596	21 471	27 253	34 034	41 905	50 957	61 280
40	5 720	8 315	15 361	19 997	25 497	31 954	39 459	48 103	57 976
45	4 938	7 412	14 082	18 466	23 671	29 791	36 917	45 140	54 551
50	-	6 508	12 777	16 895	21 793	27 562	34 296	42 085	51 022
55	-	-	11 463	15 303	19 879	25 285	31 614	38 957	47 407
60	-	-	-	13 706	17 947	22 977	28 889	35 774	43 726
65	-	-	-	-	-	20 658	26 140	32 555	39 998
75	-	-	-	-	-	-	20 647	26 092	32 487

**Power input in W**

35	4 266	4 849	6 011	6 552	7 040	7 458	7 787	8 006	8 098
40	4 422	5 026	6 258	6 849	7 398	7 885	8 293	8 601	8 792
45	4 538	5 169	6 485	7 132	7 747	8 310	8 804	9 208	9 504
50	-	5 274	6 686	7 396	8 083	8 729	9 314	9 820	10 228
55	-	-	6 856	7 635	8 401	9 136	9 820	10 434	10 960
60	-	-	-	7 845	8 697	9 527	10 316	11 045	11 695
65	-	-	-	-	-	9 897	10 797	11 647	12 428
75	-	-	-	-	-	-	11 696	12 807	13 869

**Current consumption in A**

35	9.62	10.11	11.09	11.56	12.00	12.39	12.72	12.99	13.17
40	9.73	10.24	11.30	11.83	12.34	12.81	13.24	13.61	13.91
45	9.79	10.33	11.50	12.09	12.68	13.24	13.77	14.26	14.68
50	-	10.39	11.67	12.34	13.01	13.67	14.31	14.92	15.48
55	-	-	11.81	12.56	13.33	14.10	14.86	15.59	16.29
60	-	-	-	12.77	13.64	14.52	15.40	16.27	17.12
65	-	-	-	-	-	14.93	15.95	16.96	17.96
75	-	-	-	-	-	-	17.02	18.35	19.68

**Mass flow in kg/h**

35	151	210	364	461	573	702	849	1 016	1 205
40	140	199	352	448	560	688	834	1 000	1 187
45	127	187	339	434	545	672	817	981	1 165
50	-	173	323	418	527	653	796	958	1 140
55	-	-	306	399	507	631	772	932	1 112
60	-	-	-	379	485	606	745	902	1 080
65	-	-	-	-	-	579	715	869	1 044
75	-	-	-	-	-	-	647	794	962

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

35	1.52	1.90	2.76	3.28	3.87	4.56	5.38	6.36	7.57
40	1.29	1.65	2.45	2.92	3.45	4.05	4.76	5.59	6.59
45	1.09	1.43	2.17	2.59	3.06	3.58	4.19	4.90	5.74
50	-	1.23	1.91	2.28	2.70	3.16	3.68	4.29	4.99
55	-	-	1.67	2.00	2.37	2.77	3.22	3.73	4.33
60	-	-	-	1.75	2.06	2.41	2.80	3.24	3.74
65	-	-	-	-	-	2.09	2.42	2.80	3.22
75	-	-	-	-	-	-	1.77	2.04	2.34

**Nominal performance at to = 7.2 °C, tc = 54.4 °C**

Cooling capacity	28 247	W
Power input	9 391	W
Current consumption	14.38	A
Mass flow	693	kg/h
C.O.P.	3.01	

**Pressure switch settings**

Maximum HP switch setting	20.2	bar(g)
Minimum LP switch setting	0.1	bar(g)
LP pump down setting	0.4	bar(g)

**Sound power data**

Sound power level	0	dB(A)
With acoustic hood	0	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

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

**Performance data at 60 Hz, EN 12900 rating conditions**
**R407C**

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

**Cooling capacity in W**

35	18 671	24 058	30 304	37 522	45 824	55 322	66 128	-	-
40	16 997	22 179	28 154	35 034	42 930	51 954	62 218	-	-
45	15 250	20 219	25 916	32 451	39 934	48 478	58 193	-	-
50	-	18 187	23 597	29 779	36 843	44 898	54 057	-	-
55	-	-	21 204	27 025	33 661	41 220	49 813	-	-
60	-	-	-	24 194	30 391	37 444	45 462	-	-
65	-	-	-	21 288	27 036	33 571	41 001	-	-

**Power input in W**

35	8 262	9 046	9 713	10 280	10 762	11 174	11 533	-	-
40	8 568	9 509	10 321	11 019	11 620	12 138	12 590	-	-
45	8 781	9 900	10 878	11 729	12 469	13 114	13 680	-	-
50	-	10 205	11 369	12 393	13 295	14 088	14 789	-	-
55	-	-	11 779	12 999	14 082	15 044	15 902	-	-
60	-	-	-	13 529	14 816	15 968	17 003	-	-
65	-	-	-	13 970	15 481	16 845	18 078	-	-

**Current consumption in A**

35	12.46	13.38	14.16	14.81	15.37	15.86	16.30	-	-
40	12.78	13.89	14.84	15.65	16.36	17.00	17.57	-	-
45	13.02	14.34	15.49	16.50	17.39	18.19	18.92	-	-
50	-	14.71	16.09	17.31	18.41	19.40	20.32	-	-
55	-	-	16.59	18.06	19.39	20.61	21.75	-	-
60	-	-	-	18.72	20.31	21.78	23.16	-	-
65	-	-	-	19.25	21.13	22.88	24.52	-	-

**Mass flow in kg/h**

35	405	513	636	775	933	1 110	1 310	-	-
40	388	497	621	759	916	1 092	1 290	-	-
45	368	478	602	741	897	1 072	1 268	-	-
50	-	456	580	719	875	1 048	1 242	-	-
55	-	-	555	694	849	1 022	1 214	-	-
60	-	-	-	666	820	992	1 182	-	-
65	-	-	-	634	787	958	1 147	-	-

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

35	2.26	2.66	3.12	3.65	4.26	4.95	5.73	-	-
40	1.98	2.33	2.73	3.18	3.69	4.28	4.94	-	-
45	1.74	2.04	2.38	2.77	3.20	3.70	4.25	-	-
50	-	1.78	2.08	2.40	2.77	3.19	3.66	-	-
55	-	-	1.80	2.08	2.39	2.74	3.13	-	-
60	-	-	-	1.79	2.05	2.34	2.67	-	-
65	-	-	-	1.52	1.75	1.99	2.27	-	-

**Nominal performance at to = 5 °C, tc = 50 °C**

Cooling capacity	36 843	W
Power input	13 295	W
Current consumption	18.41	A
Mass flow	875	kg/h
C.O.P.	2.77	

**Pressure switch settings**

Maximum HP switch setting	29.4	bar(g)
Minimum LP switch setting	1.4	bar(g)
LP pump down setting	1.7	bar(g)

**Sound power data**

Sound power level	88	dB(A)
With acoustic hood	82	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, ARI rating conditions**
**R407C**

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

**Cooling capacity in W**

35	20 097	25 863	32 540	40 244	49 095	59 209	70 704	-	-
40	18 395	23 970	30 387	37 765	46 221	55 872	66 837	-	-
45	16 610	21 988	28 140	35 186	43 242	52 426	62 855	-	-
50	-	19 922	25 806	32 514	40 164	48 875	58 764	-	-
55	-	-	23 388	29 753	36 993	45 225	54 568	-	-
60	-	-	-	26 910	33 734	41 482	50 274	-	-
65	-	-	-	23 989	30 392	37 652	45 886	-	-

**Power input in W**

35	8 262	9 046	9 713	10 280	10 762	11 174	11 533	-	-
40	8 568	9 509	10 321	11 019	11 620	12 138	12 590	-	-
45	8 781	9 900	10 878	11 729	12 469	13 114	13 680	-	-
50	-	10 205	11 369	12 393	13 295	14 088	14 789	-	-
55	-	-	11 779	12 999	14 082	15 044	15 902	-	-
60	-	-	-	13 529	14 816	15 968	17 003	-	-
65	-	-	-	13 970	15 481	16 845	18 078	-	-

**Current consumption in A**

35	12.46	13.38	14.16	14.81	15.37	15.86	16.30	-	-
40	12.78	13.89	14.84	15.65	16.36	17.00	17.57	-	-
45	13.02	14.34	15.49	16.50	17.39	18.19	18.92	-	-
50	-	14.71	16.09	17.31	18.41	19.40	20.32	-	-
55	-	-	16.59	18.06	19.39	20.61	21.75	-	-
60	-	-	-	18.72	20.31	21.78	23.16	-	-
65	-	-	-	19.25	21.13	22.88	24.52	-	-

**Mass flow in kg/h**

35	403	511	633	771	927	1 104	1 302	-	-
40	386	495	617	755	911	1 086	1 282	-	-
45	366	476	599	737	892	1 065	1 260	-	-
50	-	454	577	715	870	1 042	1 235	-	-
55	-	-	552	690	844	1 016	1 207	-	-
60	-	-	-	662	815	986	1 175	-	-
65	-	-	-	630	783	952	1 140	-	-

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

35	2.43	2.86	3.35	3.91	4.56	5.30	6.13	-	-
40	2.15	2.52	2.94	3.43	3.98	4.60	5.31	-	-
45	1.89	2.22	2.59	3.00	3.47	4.00	4.59	-	-
50	-	1.95	2.27	2.62	3.02	3.47	3.97	-	-
55	-	-	1.99	2.29	2.63	3.01	3.43	-	-
60	-	-	-	1.99	2.28	2.60	2.96	-	-
65	-	-	-	1.72	1.96	2.24	2.54	-	-

**Nominal performance at to = 7.2 °C, tc = 54.4 °C**

Cooling capacity	40 896	W
Power input	14 418	W
Current consumption	19.81	A
Mass flow	921	kg/h
C.O.P.	2.84	

**Pressure switch settings**

Maximum HP switch setting	29.4	bar(g)
Minimum LP switch setting	1.4	bar(g)
LP pump down setting	1.7	bar(g)

**Sound power data**

Sound power level	88	dB(A)
With acoustic hood	82	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

**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	-	18 765	24 184	30 705	38 437	-	-	-	-
20	-	15 742	20 544	26 322	33 181	41 229	50 585	-	-
30	-	13 009	17 222	22 287	28 303	35 372	43 604	53 122	64 071
40	-	-	14 179	18 560	23 763	29 884	37 024	45 293	54 817
50	-	-	-	15 101	19 521	24 725	30 806	37 861	45 995
60	-	-	-	-	15 539	19 859	24 913	30 786	37 562

**Power input in W**

10	-	5 463	5 853	6 184	6 460	-	-	-	-
20	-	6 216	6 774	7 270	7 711	8 103	8 454	-	-
30	-	6 766	7 522	8 215	8 852	9 439	9 982	10 489	10 965
40	-	-	8 098	9 020	9 883	10 696	11 464	12 194	12 892
50	-	-	-	9 684	10 806	11 875	12 899	13 883	14 834
60	-	-	-	-	11 619	12 977	14 287	15 557	16 793

**Current consumption in A**

10	-	10.79	11.24	11.62	11.90	-	-	-	-
20	-	11.43	12.05	12.62	13.13	13.53	13.82	-	-
30	-	11.97	12.80	13.61	14.37	15.06	15.65	16.13	16.47
40	-	-	13.43	14.51	15.56	16.57	17.51	18.36	19.09
50	-	-	-	15.25	16.64	18.00	19.32	20.58	21.74
60	-	-	-	-	17.52	19.28	21.02	22.72	24.35

**Mass flow in kg/h**

10	-	306	397	507	639	-	-	-	-
20	-	277	363	467	592	740	917	-	-
30	-	248	329	428	546	688	856	1 055	1 292
40	-	-	297	390	503	637	798	988	1 215
50	-	-	-	353	460	589	742	924	1 140
60	-	-	-	-	419	541	687	861	1 068

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

10	-	3.44	4.13	4.97	5.95	-	-	-	-
20	-	2.53	3.03	3.62	4.30	5.09	5.98	-	-
30	-	1.92	2.29	2.71	3.20	3.75	4.37	5.06	5.84
40	-	-	1.75	2.06	2.40	2.79	3.23	3.71	4.25
50	-	-	-	1.56	1.81	2.08	2.39	2.73	3.10
60	-	-	-	-	1.34	1.53	1.74	1.98	2.24

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

Cooling capacity	21 607	W
Power input	10 358	W
Current consumption	16.12	A
Mass flow	482	kg/h
C.O.P.	2.09	

**Pressure switch settings**

Maximum HP switch setting	27.7	bar(g)
Minimum LP switch setting	1	bar(g)
LP pump down setting	1.3	bar(g)

**Sound power data**

Sound power level	86	dB(A)
With acoustic hood	80	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	14 404	18 857	24 320	30 895	38 685	-	-	-	-
20	11 713	15 640	20 458	26 268	33 173	41 276	50 680	-	-
30	9 317	12 746	16 946	22 018	28 066	35 193	43 501	53 093	64 071
40	7 175	10 133	13 742	18 104	23 324	29 502	36 742	45 146	54 817
50	-	7 759	10 805	14 485	18 902	24 159	30 359	37 603	45 995
60	-	-	8 092	11 117	14 761	19 124	24 310	30 422	37 562

**Power input in W**

10	5 006	5 463	5 853	6 184	6 460	-	-	-	-
20	5 591	6 216	6 774	7 270	7 711	8 103	8 454	-	-
30	5 941	6 766	7 522	8 215	8 852	9 439	9 982	10 489	10 965
40	6 057	7 113	8 098	9 020	9 883	10 696	11 464	12 194	12 892
50	-	7 257	8 503	9 684	10 806	11 875	12 899	13 883	14 834
60	-	-	8 736	10 207	11 619	12 977	14 287	15 557	16 793

**Current consumption in A**

10	10.29	10.79	11.24	11.62	11.90	-	-	-	-
20	10.78	11.43	12.05	12.62	13.13	13.53	13.82	-	-
30	11.14	11.97	12.80	13.61	14.37	15.06	15.65	16.13	16.47
40	11.30	12.35	13.43	14.51	15.56	16.57	17.51	18.36	19.09
50	-	12.51	13.86	15.25	16.64	18.00	19.32	20.58	21.74
60	-	-	14.04	15.76	17.52	19.28	21.02	22.72	24.35

**Mass flow in kg/h**

10	274	356	453	568	701	-	-	-	-
20	244	322	414	523	649	796	964	-	-
30	214	288	376	479	600	740	900	1 084	1 292
40	184	255	338	437	552	685	839	1 015	1 215
50	-	221	301	396	505	633	780	949	1 140
60	-	-	265	355	460	582	723	884	1 068

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

10	2.88	3.45	4.15	5.00	5.99	-	-	-	-
20	2.09	2.52	3.02	3.61	4.30	5.09	6.00	-	-
30	1.57	1.88	2.25	2.68	3.17	3.73	4.36	5.06	5.84
40	1.18	1.42	1.70	2.01	2.36	2.76	3.20	3.70	4.25
50	-	1.07	1.27	1.50	1.75	2.03	2.35	2.71	3.10
60	-	-	0.93	1.09	1.27	1.47	1.70	1.96	2.24

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

Cooling capacity	21 075	W
Power input	10 358	W
Current consumption	16.12	A
Mass flow	529	kg/h
C.O.P.	2.03	

**Pressure switch settings**

Maximum HP switch setting	27.7	bar(g)
Minimum LP switch setting	1	bar(g)
LP pump down setting	1.3	bar(g)

**Sound power data**

Sound power level	86	dB(A)
With acoustic hood	80	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**
**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	-	18 800	24 221	30 743	38 473	-	-	-	-
20	-	15 776	20 581	26 360	33 218	41 262	50 612	-	-
30	-	13 043	17 259	22 326	28 340	35 406	43 631	53 139	64 071
40	-	-	14 217	18 599	23 801	29 919	37 053	45 311	54 817
50	-	-	-	15 140	19 560	24 762	30 836	37 878	45 995
60	-	-	-	-	15 578	19 895	24 943	30 803	37 562

**Power input in W**

10	-	5 463	5 853	6 184	6 460	-	-	-	-
20	-	6 216	6 774	7 270	7 711	8 103	8 454	-	-
30	-	6 766	7 522	8 215	8 852	9 439	9 982	10 489	10 965
40	-	-	8 098	9 020	9 883	10 696	11 464	12 194	12 892
50	-	-	-	9 684	10 806	11 875	12 899	13 883	14 834
60	-	-	-	-	11 619	12 977	14 287	15 557	16 793

**Current consumption in A**

10	-	10.79	11.24	11.62	11.90	-	-	-	-
20	-	11.43	12.05	12.62	13.13	13.53	13.82	-	-
30	-	11.97	12.80	13.61	14.37	15.06	15.65	16.13	16.47
40	-	-	13.43	14.51	15.56	16.57	17.51	18.36	19.09
50	-	-	-	15.25	16.64	18.00	19.32	20.58	21.74
60	-	-	-	-	17.52	19.28	21.02	22.72	24.35

**Mass flow in kg/h**

10	-	301	397	512	647	-	-	-	-
20	-	276	367	474	602	754	933	-	-
30	-	250	335	436	558	702	873	1 075	1 314
40	-	-	303	399	514	651	814	1 008	1 237
50	-	-	-	362	471	602	758	943	1 164
60	-	-	-	-	429	554	703	881	1 094

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

10	-	3.44	4.14	4.97	5.96	-	-	-	-
20	-	2.54	3.04	3.63	4.31	5.09	5.99	-	-
30	-	1.93	2.29	2.72	3.20	3.75	4.37	5.07	5.84
40	-	-	1.76	2.06	2.41	2.80	3.23	3.72	4.25
50	-	-	-	1.56	1.81	2.09	2.39	2.73	3.10
60	-	-	-	-	1.34	1.53	1.75	1.98	2.24

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

Cooling capacity	21 646	W
Power input	10 358	W
Current consumption	16.12	A
Mass flow	492	kg/h
C.O.P.	2.09	

**Pressure switch settings**

Maximum HP switch setting	27.7	bar(g)
Minimum LP switch setting	1	bar(g)
LP pump down setting	1.3	bar(g)

**Sound power data**

Sound power level	86	dB(A)
With acoustic hood	80	dB(A)

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

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

Tolerance according EN12900



**Performance data at 60 Hz, EN 12900 rating conditions, Superheat = 10 K**
**R449A**

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

**Cooling capacity in W**

10	14 404	18 857	24 320	30 895	38 685	-	-	-	-
20	11 713	15 640	20 458	26 268	33 173	41 276	50 680	-	-
30	9 317	12 746	16 946	22 018	28 066	35 193	43 501	53 093	64 071
40	7 175	10 133	13 742	18 104	23 324	29 502	36 742	45 146	54 817
50	-	7 759	10 805	14 485	18 902	24 159	30 359	37 603	45 995
60	-	-	8 092	11 117	14 761	19 124	24 310	30 422	37 562

**Power input in W**

10	5 006	5 463	5 853	6 184	6 460	-	-	-	-
20	5 591	6 216	6 774	7 270	7 711	8 103	8 454	-	-
30	5 941	6 766	7 522	8 215	8 852	9 439	9 982	10 489	10 965
40	6 057	7 113	8 098	9 020	9 883	10 696	11 464	12 194	12 892
50	-	7 257	8 503	9 684	10 806	11 875	12 899	13 883	14 834
60	-	-	8 736	10 207	11 619	12 977	14 287	15 557	16 793

**Current consumption in A**

10	10.29	10.79	11.24	11.62	11.90	-	-	-	-
20	10.78	11.43	12.05	12.62	13.13	13.53	13.82	-	-
30	11.14	11.97	12.80	13.61	14.37	15.06	15.65	16.13	16.47
40	11.30	12.35	13.43	14.51	15.56	16.57	17.51	18.36	19.09
50	-	12.51	13.86	15.25	16.64	18.00	19.32	20.58	21.74
60	-	-	14.04	15.76	17.52	19.28	21.02	22.72	24.35

**Mass flow in kg/h**

10	262	350	453	573	710	-	-	-	-
20	238	321	418	531	661	810	981	-	-
30	213	291	382	489	612	755	918	1 104	1 314
40	187	260	346	447	564	700	856	1 035	1 237
50	-	227	309	405	517	647	797	969	1 164
60	-	-	272	363	471	595	740	905	1 094

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

10	2.88	3.45	4.15	5.00	5.99	-	-	-	-
20	2.09	2.52	3.02	3.61	4.30	5.09	6.00	-	-
30	1.57	1.88	2.25	2.68	3.17	3.73	4.36	5.06	5.84
40	1.18	1.42	1.70	2.01	2.36	2.76	3.20	3.70	4.25
50	-	1.07	1.27	1.50	1.75	2.03	2.35	2.71	3.10
60	-	-	0.93	1.09	1.27	1.47	1.70	1.96	2.24

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

Cooling capacity	21 075	W
Power input	10 358	W
Current consumption	16.12	A
Mass flow	540	kg/h
C.O.P.	2.03	

**Pressure switch settings**

Maximum HP switch setting	27.7	bar(g)
Minimum LP switch setting	1	bar(g)
LP pump down setting	1.3	bar(g)

**Sound power data**

Sound power level	86	dB(A)
With acoustic hood	80	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**
**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	-	21 102	26 050	31 965	38 938	-	-	-	-
20	-	18 115	22 627	27 987	34 284	41 608	50 062	-	-
30	-	15 256	19 299	24 074	29 663	36 152	43 631	52 203	61 992
40	-	12 475	16 020	20 177	25 028	30 650	37 125	44 542	53 002
50	-	-	12 734	16 246	20 329	25 056	30 501	36 735	43 837
60	-	-	-	12 236	15 529	19 338	23 726	28 746	34 453

**Power input in W**

10	-	4 834	5 127	5 516	6 065	-	-	-	-
20	-	6 273	6 677	7 082	7 552	8 153	8 949	-	-
30	-	7 470	8 123	8 684	9 215	9 783	10 451	11 284	12 348
40	-	8 174	9 217	10 073	10 805	11 479	12 159	12 909	13 795
50	-	-	9 710	11 001	12 074	12 993	13 824	14 632	15 480
60	-	-	-	11 217	12 771	14 076	15 199	16 203	17 153

**Current consumption in A**

10	-	10.51	10.58	10.71	10.90	-	-	-	-
20	-	11.46	11.81	12.15	12.52	12.93	13.38	-	-
30	-	12.28	12.97	13.62	14.25	14.87	15.49	16.14	16.83
40	-	12.79	13.91	14.94	15.91	16.82	17.69	18.54	19.39
50	-	-	14.43	15.93	17.31	18.59	19.79	20.93	22.01
60	-	-	-	16.41	18.29	20.02	21.63	23.13	24.53

**Mass flow in kg/h**

10	-	425	531	657	807	-	-	-	-
20	-	399	503	625	771	943	1 145	-	-
30	-	370	471	590	732	899	1 096	1 329	1 605
40	-	337	435	551	688	851	1 043	1 269	1 538
50	-	-	393	506	640	797	984	1 204	1 464
60	-	-	-	455	584	737	918	1 131	1 384

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

10	-	4.37	5.08	5.79	6.42	-	-	-	-
20	-	2.89	3.39	3.95	4.54	5.10	5.59	-	-
30	-	2.04	2.38	2.77	3.22	3.70	4.17	4.63	5.02
40	-	1.53	1.74	2.00	2.32	2.67	3.05	3.45	3.84
50	-	-	1.31	1.48	1.68	1.93	2.21	2.51	2.83
60	-	-	-	1.09	1.22	1.37	1.56	1.77	2.01

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

Cooling capacity	22 689	W
Power input	11 495	W
Current consumption	16.65	A
Mass flow	665	kg/h
C.O.P.	1.97	

**Pressure switch settings**

Maximum HP switch setting	27.7	bar(g)
Minimum LP switch setting	1	bar(g)
LP pump down setting	1.3	bar(g)

**Sound power data**

Sound power level	86	dB(A)
With acoustic hood	80	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	16 480	20 542	25 507	31 469	38 526	-	-	-	-
20	13 635	17 338	21 835	27 221	33 593	41 045	49 675	-	-
30	10 983	14 293	18 287	23 061	28 711	35 334	43 024	51 878	61 992
40	8 482	11 363	14 819	18 946	23 839	29 596	36 311	44 081	53 002
50	6 089	8 506	11 388	14 832	18 934	23 789	29 494	36 145	43 837
60	-	5 677	7 951	10 677	13 951	17 870	22 529	28 025	34 453

**Power input in W**

10	4 571	4 834	5 127	5 516	6 065	-	-	-	-
20	5 806	6 273	6 677	7 082	7 552	8 153	8 949	-	-
30	6 657	7 470	8 123	8 684	9 215	9 783	10 451	11 284	12 348
40	6 877	8 174	9 217	10 073	10 805	11 479	12 159	12 909	13 795
50	6 215	8 136	9 710	11 001	12 074	12 993	13 824	14 632	15 480
60	-	7 108	9 351	11 217	12 771	14 076	15 199	16 203	17 153

**Current consumption in A**

10	10.47	10.51	10.58	10.71	10.90	-	-	-	-
20	11.11	11.46	11.81	12.15	12.52	12.93	13.38	-	-
30	11.53	12.28	12.97	13.62	14.25	14.87	15.49	16.14	16.83
40	11.57	12.79	13.91	14.94	15.91	16.82	17.69	18.54	19.39
50	11.03	12.80	14.43	15.93	17.31	18.59	19.79	20.93	22.01
60	-	12.15	14.36	16.41	18.29	20.02	21.63	23.13	24.53

**Mass flow in kg/h**

10	399	496	608	738	888	-	-	-	-
20	370	465	575	702	848	1 016	1 207	-	-
30	338	431	539	663	805	969	1 155	1 366	1 605
40	301	392	497	618	758	917	1 099	1 305	1 538
50	258	348	450	568	704	859	1 036	1 237	1 464
60	-	295	395	511	643	794	967	1 163	1 384

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

10	3.61	4.25	4.97	5.71	6.35	-	-	-	-
20	2.35	2.76	3.27	3.84	4.45	5.03	5.55	-	-
30	1.65	1.91	2.25	2.66	3.12	3.61	4.12	4.60	5.02
40	1.23	1.39	1.61	1.88	2.21	2.58	2.99	3.41	3.84
50	0.98	1.05	1.17	1.35	1.57	1.83	2.13	2.47	2.83
60	-	0.80	0.85	0.95	1.09	1.27	1.48	1.73	2.01

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

Cooling capacity	21 393	W
Power input	11 495	W
Current consumption	16.65	A
Mass flow	732	kg/h
C.O.P.	1.86	

**Pressure switch settings**

Maximum HP switch setting	27.7	bar(g)
Minimum LP switch setting	1	bar(g)
LP pump down setting	1.3	bar(g)

**Sound power data**

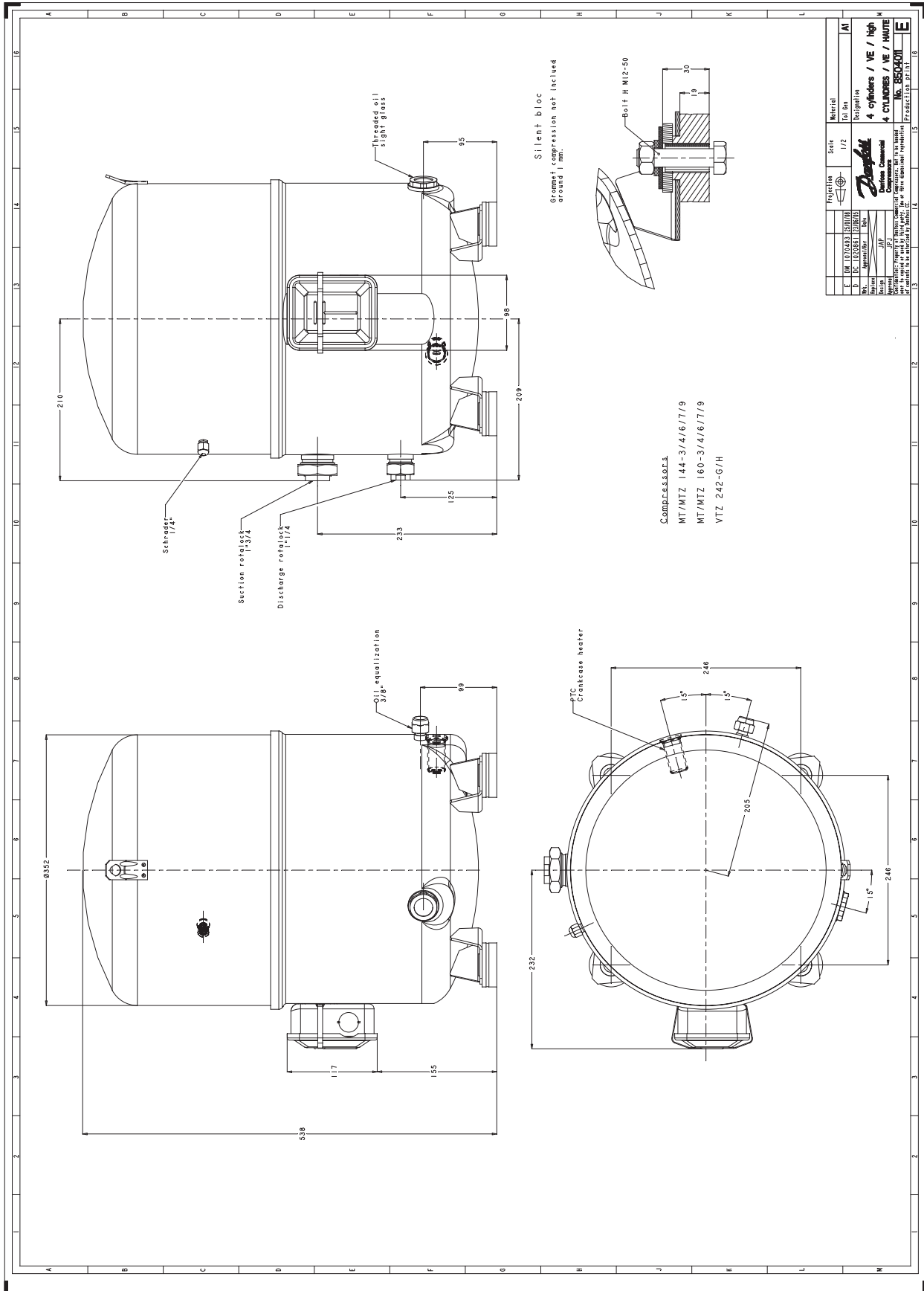
Sound power level	86	dB(A)
With acoustic hood	80	dB(A)

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

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

Tolerance according EN12900



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