

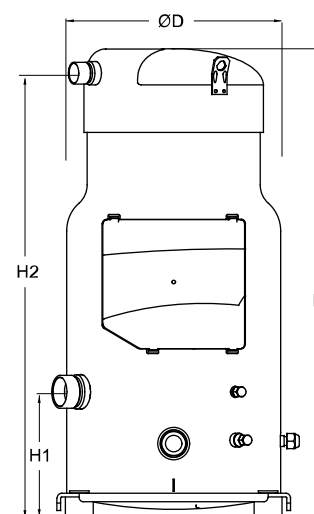
Datasheets

# Danfoss scroll compressors **SM / SY / SZ / SH / WSH**



**General Characteristics**

Model number (on compressor nameplate)	SZ185W4SD	SZ185W4PD
Code number for Singlepack*		SZ185-4PCI
Code number for Industrial pack**		SZ185-4PCM
Drawing number	8551190a	8551191a
Suction and discharge connections	Rotolock	Brazed
Suction connection	2-1/4" Rotolock	1-5/8" ODF
Discharge connection	1-3/4" Rotolock	1-1/8" ODF
Suction connection with supplied sleeve	1-3/8" ODF	
Discharge connection with supplied sleeve	7/8" ODF	
Oil sight glass	Threaded	Threaded
Oil equalisation connection	3/8" flare SAE	3/8" flare SAE
Oil drain connection	1/4" flare	1/4" flare
LP gauge port	Schrader	Schrader
IPR valve	None	None
Swept volume	249.9 cm <sup>3</sup> /rev	
Displacement @ Nominal speed	43.5 m <sup>3</sup> /h @ 2900 rpm - 52.5 m <sup>3</sup> /h @ 3500 rpm	
Net weight	100 kg	
Oil charge	6.2 litre, POE - 160SZ	
Maximum system test pressure Low Side / High side	25 bar(g) / 32 bar(g)	
Maximum differential test pressure	24 bar	
Maximum number of starts per hour	12	
Refrigerant charge limit	13.5 kg	
Approved refrigerants	R407C, R134a, R404A, R507A	

**Dimensions**


D=317 mm

H=678 mm

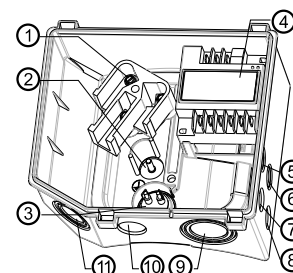
H1=180 mm

H2=643 mm

H3=- mm

**Electrical Characteristics**

Nominal voltage	380-400V/3/50Hz - 460V/3/60Hz
Voltage range	342-440 V @ 50Hz - 414-506 V @ 60Hz
Winding resistance (between phases) +/- 7% at 25°C	0.94 Ω
Rated Load Amps (RLA)	24 A
Maximum Continuous Current (MCC)	34 A
Locked Rotor Amps (LRA)	155 A
Motor protection	Electronic protection module, 24 V AC

**Terminal box**


IP54 (with cable gland)

- 1: Power connection, 3 x 4.8 mm (3/16")
- 2: Earth M5
- 3: Thermistor connector
- 4: Electronic protection module
- 5: Double knock-out Ø 22.5 mm (7/8") & Ø 16.5 mm (0.65")
- 6: Double knock-out Ø 22.5 mm (7/8") & Ø 16.5 mm (0.65")
- 7: Knock-out Ø 20.7 mm (0.81")
- 8: Knock-out Ø 20.7 mm (0.81")
- 9: Triple knock-out Ø 50.8 mm (2") & Ø 43.7 mm (1.72") & Ø 34.5 mm (1.35")
- 10: Knock-out Ø 25.5 mm (1.00")
- 11: Triple knock-out Ø 40.5 mm (1.59") & Ø 32.2 mm (1.27") & Ø 25.5 mm (1")

**Recommended Installation torques**

Suction Rotolock nut or valve	130 Nm
Discharge Rotolock nut or valve	110 Nm
Oil sight glass	50 Nm
Power connections / Earth connection	3 Nm / 2 Nm
Mounting bolts	21 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)
Electronic protection module mounted in terminal box
Initial oil charge
Installation instructions

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

\*Singlepack: Compressor in cardboard box

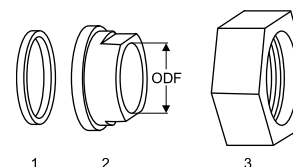
\*\*Industrial pack: 6 Unboxed compressors on pallet (order per multiples of 6)

**Rotolock accessories, suction side**
**Code no.**

Solder sleeve, P08 (2-1/4" Rotolock, 1-3/8" ODF)	8153005
Solder sleeve, P03 (2-1/4" Rotolock, 1-5/8" ODF)	8153006
Rotolock valve, V08 (2-1/4" Rotolock, 1-3/8" ODF)	8168025
Rotolock valve, V03 (2-1/4" Rotolock, 1-5/8" ODF)	8168026
Gasket, 2-1/4"	8156133

**Rotolock accessories, discharge side**
**Code no.**

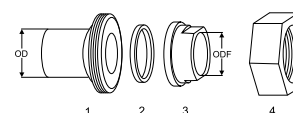
Solder sleeve, P07 (1-3/4" Rotolock, 7/8" ODF)	8153013
Solder sleeve, P02 (1-3/4" Rotolock, 1-1/8" ODF)	8153004
Angle adapter, C07 (1-3/4" Rotolock, 7/8" ODF)	8168008
Angle adapter, C02 (1-3/4" Rotolock, 1-1/8" ODF)	8168005
Rotolock valve, V07 (1-3/4" Rotolock, 7/8" ODF)	8168032
Rotolock valve, V02 (1-3/4" Rotolock, 1-1/8" ODF)	8168028
Gasket, 1-3/4"	8156132

**Gaskets, sleeves and nuts**


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

**Rotolock accessories, sets**
**Code no.**

Solder sleeve adapter set, (2-1/4" Rotolock, 1-5/8" ODF), (1-3/4" Rotolock, 1"1/8 ODF)	7765028
Valve set, V08 (2-1/4"~1-3/8"), V07 (1-3/4"~7/8")	7703010
Gasket set, 1-1/4", 1-3/4", 2-1/4", OSG gaskets black & white	8156013

**Solder sleeve adapter set**


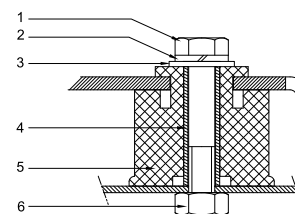
- 1: Rotolock adapter (Suc & Dis)
- 2: Gasket (Suc & Dis)
- 3: Solder sleeve (Suc & Dis)
- 4: Rotolock nut (Suc & Dis)

**Oil / lubricants**
**Code no.**

POE lubricant, 160SZ, 1 litre can	7754023
POE lubricant, 160SZ, 2.5 litre can	12020571

**Crankcase heaters**
**Code no.**

Surface sump heater + bottom insulation, 56 W, 24 V, CE mark, UL	12020360
Surface sump heater + bottom insulation, 56 W, 230 V, CE mark, UL	12020376
Surface sump heater + bottom insulation, 56 W, 400 V, CE mark, UL	12020377
Surface sump heater + bottom insulation, 56 W, 460 V, CE mark, UL	12020378
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	12020464

**Mounting kit**


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

**Miscellaneous accessories**
**Code no.**

Electronic soft start kit, MCI 25 C	7705007
Acoustic hood for scroll compressor S175-S185	7755007
Acoustic bottom insulation for scroll compressor	12020353
Discharge thermostat kit	7750009

**Spare parts**
**Code no.**

Electronic motor protection module, 24 V AC	12020584
Mounting kit for 1 scroll compressor including 4 grommets, 4 sleeves, 4 bolts, 4 washers	8156138
Mounting kit for 1 scroll compressor including 4 grommets, 4 sleeves, 4 bolts, 4 washers, 2 rotolock nuts, 2 solder sleeves, 2 gaskets	8156147
Oil sight glass with gaskets (black & white)	8156019
Gasket for oil sight glass (white teflon)	8156129
Terminal box 210 x 190 incl. cover	12020458
T block connector 60 x 75 mm	8173021

Performance data at 50 Hz, EN 12900 rating conditions

R407C

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

Cooling capacity in W

30	16 699	21 232	26 635	33 016	40 485	49 149	59 119	70 502	-
35	15 588	19 959	25 151	31 274	38 436	46 746	56 313	67 246	-
40	14 433	18 622	23 585	29 430	36 266	44 203	53 350	63 814	-
45	-	17 229	21 943	27 491	33 984	41 528	50 234	60 211	-
50	-	-	20 232	25 465	31 594	38 728	46 975	56 444	-
55	-	-	-	23 359	29 105	35 809	43 578	52 521	-
60	-	-	-	-	26 524	32 778	40 051	48 449	-
65	-	-	-	-	23 857	29 643	36 399	44 234	-

Power input in W

30	7 470	7 534	7 594	7 650	7 702	7 751	7 796	7 838	-
35	8 402	8 473	8 539	8 599	8 653	8 702	8 747	8 787	-
40	9 441	9 519	9 589	9 653	9 709	9 759	9 802	9 840	-
45	-	10 694	10 768	10 835	10 893	10 943	10 985	11 019	-
50	-	-	12 098	12 167	12 226	12 276	12 316	12 347	-
55	-	-	-	13 673	13 732	13 781	13 819	13 846	-
60	-	-	-	-	15 433	15 480	15 515	15 538	-
65	-	-	-	-	17 351	17 396	17 428	17 446	-

Current consumption in A

30	15.36	15.44	15.49	15.53	15.58	15.66	15.80	16.00	-
35	16.38	16.48	16.54	16.59	16.63	16.69	16.78	16.93	-
40	17.56	17.70	17.78	17.83	17.87	17.91	17.98	18.08	-
45	-	19.12	19.24	19.30	19.34	19.37	19.41	19.48	-
50	-	-	20.93	21.02	21.06	21.08	21.11	21.15	-
55	-	-	-	23.01	23.07	23.09	23.10	23.12	-
60	-	-	-	-	25.39	25.42	25.43	25.42	-
65	-	-	-	-	28.05	28.10	28.10	28.09	-

Mass flow in kg/h

30	351	440	543	662	800	957	1 136	1 339	-
35	344	433	537	656	794	951	1 130	1 333	-
40	335	425	529	648	786	943	1 122	1 324	-
45	-	415	519	638	775	932	1 111	1 313	-
50	-	-	507	626	763	919	1 097	1 298	-
55	-	-	-	612	748	903	1 080	1 280	-
60	-	-	-	-	730	885	1 060	1 259	-
65	-	-	-	-	710	864	1 038	1 235	-

Coefficient of performance (C.O.P.)

30	2.24	2.82	3.51	4.32	5.26	6.34	7.58	8.99	-
35	1.86	2.36	2.95	3.64	4.44	5.37	6.44	7.65	-
40	1.53	1.96	2.46	3.05	3.74	4.53	5.44	6.49	-
45	-	1.61	2.04	2.54	3.12	3.80	4.57	5.46	-
50	-	-	1.67	2.09	2.58	3.15	3.81	4.57	-
55	-	-	-	1.71	2.12	2.60	3.15	3.79	-
60	-	-	-	-	1.72	2.12	2.58	3.12	-
65	-	-	-	-	1.37	1.70	2.09	2.54	-

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

Cooling capacity	38 728	W
Power input	12 276	W
Current consumption	21.08	A
Mass flow	919	kg/h
C.O.P.	3.15	

Pressure switch settings

Maximum HP switch setting	29.5	bar(g)
Minimum LP switch setting	0.5	bar(g)
LP pump down setting	1	bar(g)

Sound power data

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

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

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

Tolerance according EN12900

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Performance data at 50 Hz, ARI rating conditions

R407C

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

Cooling capacity in W

30	17 910	22 746	28 502	35 293	43 232	52 432	63 008	75 070	-
35	16 801	21 483	27 038	33 581	41 224	50 083	60 270	71 899	-
40	15 643	20 154	25 489	31 764	39 094	47 592	57 373	68 551	-
45	-	18 765	23 861	29 851	36 848	44 968	54 326	65 035	-
50	-	-	22 163	27 848	34 495	42 219	51 136	61 359	-
55	-	-	-	25 764	32 043	39 354	47 813	57 535	-
60	-	-	-	-	29 502	36 384	44 370	53 577	-
65	-	-	-	-	26 884	33 323	40 824	49 505	-

Power input in W

30	7 470	7 534	7 594	7 650	7 702	7 751	7 796	7 838	-
35	8 402	8 473	8 539	8 599	8 653	8 702	8 747	8 787	-
40	9 441	9 519	9 589	9 653	9 709	9 759	9 802	9 840	-
45	-	10 694	10 768	10 835	10 893	10 943	10 985	11 019	-
50	-	-	12 098	12 167	12 226	12 276	12 316	12 347	-
55	-	-	-	13 673	13 732	13 781	13 819	13 846	-
60	-	-	-	-	15 433	15 480	15 515	15 538	-
65	-	-	-	-	17 351	17 396	17 428	17 446	-

Current consumption in A

30	15.36	15.44	15.49	15.53	15.58	15.66	15.80	16.00	-
35	16.38	16.48	16.54	16.59	16.63	16.69	16.78	16.93	-
40	17.56	17.70	17.78	17.83	17.87	17.91	17.98	18.08	-
45	-	19.12	19.24	19.30	19.34	19.37	19.41	19.48	-
50	-	-	20.93	21.02	21.06	21.08	21.11	21.15	-
55	-	-	-	23.01	23.07	23.09	23.10	23.12	-
60	-	-	-	-	25.39	25.42	25.43	25.42	-
65	-	-	-	-	28.05	28.10	28.10	28.09	-

Mass flow in kg/h

30	349	438	540	659	795	951	1 129	1 331	-
35	342	431	534	653	789	946	1 123	1 325	-
40	334	423	526	645	781	938	1 115	1 316	-
45	-	413	516	635	771	927	1 104	1 304	-
50	-	-	504	623	759	914	1 090	1 290	-
55	-	-	-	608	744	898	1 074	1 272	-
60	-	-	-	-	726	880	1 054	1 252	-
65	-	-	-	-	706	859	1 032	1 228	-

Coefficient of performance (C.O.P.)

30	2.40	3.02	3.75	4.61	5.61	6.76	8.08	9.58	-
35	2.00	2.54	3.17	3.91	4.76	5.76	6.89	8.18	-
40	1.66	2.12	2.66	3.29	4.03	4.88	5.85	6.97	-
45	-	1.75	2.22	2.76	3.38	4.11	4.95	5.90	-
50	-	-	1.83	2.29	2.82	3.44	4.15	4.97	-
55	-	-	-	1.88	2.33	2.86	3.46	4.16	-
60	-	-	-	-	1.91	2.35	2.86	3.45	-
65	-	-	-	-	1.55	1.92	2.34	2.84	-

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

Cooling capacity	43 301	W
Power input	13 608	W
Current consumption	22.84	A
Mass flow	975	kg/h
C.O.P.	3.18	

Pressure switch settings

Maximum HP switch setting	29.5	bar(g)
Minimum LP switch setting	0.5	bar(g)
LP pump down setting	1	bar(g)

Sound power data

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

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

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

Tolerance according EN12900

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Performance data at 50 Hz, EN 12900 rating conditions

R407C

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

Cooling capacity in W

30	16 699	21 232	26 635	33 016	40 485	49 149	59 119	70 502	-
35	15 588	19 959	25 151	31 274	38 436	46 746	56 313	67 246	-
40	14 433	18 622	23 585	29 430	36 266	44 203	53 350	63 814	-
45	-	17 229	21 943	27 491	33 984	41 528	50 234	60 211	-
50	-	-	20 232	25 465	31 594	38 728	46 975	56 444	-
55	-	-	-	23 359	29 105	35 809	43 578	52 521	-
60	-	-	-	-	26 524	32 778	40 051	48 449	-
65	-	-	-	-	23 857	29 643	36 399	44 234	-

Power input in W

30	7 470	7 534	7 594	7 650	7 702	7 751	7 796	7 838	-
35	8 402	8 473	8 539	8 599	8 653	8 702	8 747	8 787	-
40	9 441	9 519	9 589	9 653	9 709	9 759	9 802	9 840	-
45	-	10 694	10 768	10 835	10 893	10 943	10 985	11 019	-
50	-	-	12 098	12 167	12 226	12 276	12 316	12 347	-
55	-	-	-	13 673	13 732	13 781	13 819	13 846	-
60	-	-	-	-	15 433	15 480	15 515	15 538	-
65	-	-	-	-	17 351	17 396	17 428	17 446	-

Current consumption in A

30	15.36	15.44	15.49	15.53	15.58	15.66	15.80	16.00	-
35	16.38	16.48	16.54	16.59	16.63	16.69	16.78	16.93	-
40	17.56	17.70	17.78	17.83	17.87	17.91	17.98	18.08	-
45	-	19.12	19.24	19.30	19.34	19.37	19.41	19.48	-
50	-	-	20.93	21.02	21.06	21.08	21.11	21.15	-
55	-	-	-	23.01	23.07	23.09	23.10	23.12	-
60	-	-	-	-	25.39	25.42	25.43	25.42	-
65	-	-	-	-	28.05	28.10	28.10	28.09	-

Mass flow in kg/h

30	351	440	543	662	800	957	1 136	1 339	-
35	344	433	537	656	794	951	1 130	1 333	-
40	335	425	529	648	786	943	1 122	1 324	-
45	-	415	519	638	775	932	1 111	1 313	-
50	-	-	507	626	763	919	1 097	1 298	-
55	-	-	-	612	748	903	1 080	1 280	-
60	-	-	-	-	730	885	1 060	1 259	-
65	-	-	-	-	710	864	1 038	1 235	-

Coefficient of performance (C.O.P.)

30	2.24	2.82	3.51	4.32	5.26	6.34	7.58	8.99	-
35	1.86	2.36	2.95	3.64	4.44	5.37	6.44	7.65	-
40	1.53	1.96	2.46	3.05	3.74	4.53	5.44	6.49	-
45	-	1.61	2.04	2.54	3.12	3.80	4.57	5.46	-
50	-	-	1.67	2.09	2.58	3.15	3.81	4.57	-
55	-	-	-	1.71	2.12	2.60	3.15	3.79	-
60	-	-	-	-	1.72	2.12	2.58	3.12	-
65	-	-	-	-	1.37	1.70	2.09	2.54	-

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

Cooling capacity	38 728	W
Power input	12 276	W
Current consumption	21.08	A
Mass flow	919	kg/h
C.O.P.	3.15	

Pressure switch settings

Maximum HP switch setting	29.5	bar(g)
Minimum LP switch setting	0.5	bar(g)
LP pump down setting	1	bar(g)

Sound power data

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

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

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

Tolerance according EN12900

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Performance data at 50 Hz, ARI rating conditions

R407C

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

Cooling capacity in W

30	17 910	22 746	28 502	35 293	43 232	52 432	63 008	75 070	-
35	16 801	21 483	27 038	33 581	41 224	50 083	60 270	71 899	-
40	15 643	20 154	25 489	31 764	39 094	47 592	57 373	68 551	-
45	-	18 765	23 861	29 851	36 848	44 968	54 326	65 035	-
50	-	-	22 163	27 848	34 495	42 219	51 136	61 359	-
55	-	-	-	25 764	32 043	39 354	47 813	57 535	-
60	-	-	-	-	29 502	36 384	44 370	53 577	-
65	-	-	-	-	26 884	33 323	40 824	49 505	-

Power input in W

30	7 470	7 534	7 594	7 650	7 702	7 751	7 796	7 838	-
35	8 402	8 473	8 539	8 599	8 653	8 702	8 747	8 787	-
40	9 441	9 519	9 589	9 653	9 709	9 759	9 802	9 840	-
45	-	10 694	10 768	10 835	10 893	10 943	10 985	11 019	-
50	-	-	12 098	12 167	12 226	12 276	12 316	12 347	-
55	-	-	-	13 673	13 732	13 781	13 819	13 846	-
60	-	-	-	-	15 433	15 480	15 515	15 538	-
65	-	-	-	-	17 351	17 396	17 428	17 446	-

Current consumption in A

30	15.36	15.44	15.49	15.53	15.58	15.66	15.80	16.00	-
35	16.38	16.48	16.54	16.59	16.63	16.69	16.78	16.93	-
40	17.56	17.70	17.78	17.83	17.87	17.91	17.98	18.08	-
45	-	19.12	19.24	19.30	19.34	19.37	19.41	19.48	-
50	-	-	20.93	21.02	21.06	21.08	21.11	21.15	-
55	-	-	-	23.01	23.07	23.09	23.10	23.12	-
60	-	-	-	-	25.39	25.42	25.43	25.42	-
65	-	-	-	-	28.05	28.10	28.10	28.09	-

Mass flow in kg/h

30	349	438	540	659	795	951	1 129	1 331	-
35	342	431	534	653	789	946	1 123	1 325	-
40	334	423	526	645	781	938	1 115	1 316	-
45	-	413	516	635	771	927	1 104	1 304	-
50	-	-	504	623	759	914	1 090	1 290	-
55	-	-	-	608	744	898	1 074	1 272	-
60	-	-	-	-	726	880	1 054	1 252	-
65	-	-	-	-	706	859	1 032	1 228	-

Coefficient of performance (C.O.P.)

30	2.40	3.02	3.75	4.61	5.61	6.76	8.08	9.58	-
35	2.00	2.54	3.17	3.91	4.76	5.76	6.89	8.18	-
40	1.66	2.12	2.66	3.29	4.03	4.88	5.85	6.97	-
45	-	1.75	2.22	2.76	3.38	4.11	4.95	5.90	-
50	-	-	1.83	2.29	2.82	3.44	4.15	4.97	-
55	-	-	-	1.88	2.33	2.86	3.46	4.16	-
60	-	-	-	-	1.91	2.35	2.86	3.45	-
65	-	-	-	-	1.55	1.92	2.34	2.84	-

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

Cooling capacity	43 301	W
Power input	13 608	W
Current consumption	22.84	A
Mass flow	975	kg/h
C.O.P.	3.18	

Pressure switch settings

Maximum HP switch setting	29.5	bar(g)
Minimum LP switch setting	0.5	bar(g)
LP pump down setting	1	bar(g)

Sound power data

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

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

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

Tolerance according EN12900

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Performance data at 60 Hz, EN 12900 rating conditions

R407C

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

Cooling capacity in W

30	20 263	25 675	32 085	39 630	48 450	58 683	70 469	83 946	-
35	19 042	24 274	30 442	37 681	46 131	55 929	67 214	80 126	-
40	17 745	22 780	28 686	35 601	43 662	53 006	63 772	76 098	-
45	-	21 200	26 827	33 398	41 051	49 922	60 149	71 870	-
50	-	-	24 872	31 081	38 306	46 685	56 353	67 448	-
55	-	-	-	28 656	35 434	43 300	52 388	62 836	-
60	-	-	-	-	32 440	39 771	48 258	58 035	-
65	-	-	-	-	29 325	36 099	43 959	53 039	-

Power input in W

30	8 970	9 117	9 245	9 362	9 477	9 599	9 736	9 896	-
35	10 015	10 183	10 326	10 453	10 572	10 691	10 820	10 967	-
40	11 174	11 365	11 526	11 665	11 790	11 911	12 035	12 172	-
45	-	12 683	12 865	13 019	13 154	13 278	13 401	13 530	-
50	-	-	14 362	14 534	14 682	14 813	14 937	15 061	-
55	-	-	-	16 232	16 395	16 535	16 663	16 786	-
60	-	-	-	-	18 313	18 466	18 601	18 725	-
65	-	-	-	-	20 456	20 625	20 769	20 898	-

Current consumption in A

30	14.55	14.73	14.88	14.97	15.01	14.97	14.83	14.60	-
35	15.63	15.84	16.03	16.17	16.26	16.29	16.23	16.08	-
40	16.90	17.13	17.34	17.52	17.66	17.75	17.76	17.69	-
45	-	18.63	18.86	19.07	19.25	19.38	19.45	19.45	-
50	-	-	20.62	20.85	21.05	21.22	21.34	21.40	-
55	-	-	-	22.88	23.11	23.31	23.48	23.58	-
60	-	-	-	-	25.46	25.68	25.88	26.03	-
65	-	-	-	-	28.13	28.37	28.59	28.77	-

Mass flow in kg/h

30	426	532	654	795	957	1 143	1 354	1 593	-
35	420	527	650	791	953	1 138	1 349	1 587	-
40	413	520	643	784	946	1 131	1 341	1 578	-
45	-	511	634	776	937	1 121	1 330	1 566	-
50	-	-	623	764	925	1 108	1 316	1 550	-
55	-	-	-	750	910	1 092	1 298	1 531	-
60	-	-	-	-	893	1 073	1 278	1 509	-
65	-	-	-	-	872	1 051	1 254	1 483	-

Coefficient of performance (C.O.P.)

30	2.26	2.82	3.47	4.23	5.11	6.11	7.24	8.48	-
35	1.90	2.38	2.95	3.60	4.36	5.23	6.21	7.31	-
40	1.59	2.00	2.49	3.05	3.70	4.45	5.30	6.25	-
45	-	1.67	2.09	2.57	3.12	3.76	4.49	5.31	-
50	-	-	1.73	2.14	2.61	3.15	3.77	4.48	-
55	-	-	-	1.77	2.16	2.62	3.14	3.74	-
60	-	-	-	-	1.77	2.15	2.59	3.10	-
65	-	-	-	-	1.43	1.75	2.12	2.54	-

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

Cooling capacity	46 685	W
Power input	14 813	W
Current consumption	21.22	A
Mass flow	1 108	kg/h
C.O.P.	3.15	

Pressure switch settings

Maximum HP switch setting	29.5	bar(g)
Minimum LP switch setting	0.5	bar(g)
LP pump down setting	1	bar(g)

Sound power data

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

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

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

Tolerance according EN12900

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Performance data at 60 Hz, ARI rating conditions

R407C

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

Cooling capacity in W

30	21 733	27 505	34 333	42 362	51 737	62 603	75 104	89 386	-
35	20 523	26 128	32 726	40 461	49 477	59 921	71 937	85 669	-
40	19 233	24 653	31 003	38 425	47 066	57 070	68 582	81 747	-
45	-	23 091	29 173	36 265	44 512	54 058	65 048	77 628	-
50	-	-	27 246	33 989	41 824	50 894	61 344	73 321	-
55	-	-	-	31 607	39 011	47 587	57 479	68 834	-
60	-	-	-	-	36 082	44 146	53 463	64 177	-
65	-	-	-	-	33 047	40 580	49 303	59 360	-

Power input in W

30	8 970	9 117	9 245	9 362	9 477	9 599	9 736	9 896	-
35	10 015	10 183	10 326	10 453	10 572	10 691	10 820	10 967	-
40	11 174	11 365	11 526	11 665	11 790	11 911	12 035	12 172	-
45	-	12 683	12 865	13 019	13 154	13 278	13 401	13 530	-
50	-	-	14 362	14 534	14 682	14 813	14 937	15 061	-
55	-	-	-	16 232	16 395	16 535	16 663	16 786	-
60	-	-	-	-	18 313	18 466	18 601	18 725	-
65	-	-	-	-	20 456	20 625	20 769	20 898	-

Current consumption in A

30	14.55	14.73	14.88	14.97	15.01	14.97	14.83	14.60	-
35	15.63	15.84	16.03	16.17	16.26	16.29	16.23	16.08	-
40	16.90	17.13	17.34	17.52	17.66	17.75	17.76	17.69	-
45	-	18.63	18.86	19.07	19.25	19.38	19.45	19.45	-
50	-	-	20.62	20.85	21.05	21.22	21.34	21.40	-
55	-	-	-	22.88	23.11	23.31	23.48	23.58	-
60	-	-	-	-	25.46	25.68	25.88	26.03	-
65	-	-	-	-	28.13	28.37	28.59	28.77	-

Mass flow in kg/h

30	424	529	651	791	952	1 136	1 346	1 584	-
35	418	524	646	787	948	1 132	1 341	1 577	-
40	411	517	640	780	941	1 125	1 333	1 568	-
45	-	508	631	771	932	1 115	1 322	1 556	-
50	-	-	620	760	920	1 102	1 308	1 541	-
55	-	-	-	746	905	1 086	1 291	1 522	-
60	-	-	-	-	888	1 067	1 270	1 500	-
65	-	-	-	-	867	1 045	1 247	1 474	-

Coefficient of performance (C.O.P.)

30	2.42	3.02	3.71	4.52	5.46	6.52	7.71	9.03	-
35	2.05	2.57	3.17	3.87	4.68	5.60	6.65	7.81	-
40	1.72	2.17	2.69	3.29	3.99	4.79	5.70	6.72	-
45	-	1.82	2.27	2.79	3.38	4.07	4.85	5.74	-
50	-	-	1.90	2.34	2.85	3.44	4.11	4.87	-
55	-	-	-	1.95	2.38	2.88	3.45	4.10	-
60	-	-	-	-	1.97	2.39	2.87	3.43	-
65	-	-	-	-	1.62	1.97	2.37	2.84	-

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

Cooling capacity	52 202	W
Power input	16 375	W
Current consumption	23.12	A
Mass flow	1 175	kg/h
C.O.P.	3.19	

Pressure switch settings

Maximum HP switch setting	29.5	bar(g)
Minimum LP switch setting	0.5	bar(g)
LP pump down setting	1	bar(g)

Sound power data

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

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

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

Tolerance according EN12900

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Performance data at 60 Hz, EN 12900 rating conditions

R407C

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

Cooling capacity in W

30	20 263	25 675	32 085	39 630	48 450	58 683	70 469	83 946	-
35	19 042	24 274	30 442	37 681	46 131	55 929	67 214	80 126	-
40	17 745	22 780	28 686	35 601	43 662	53 006	63 772	76 098	-
45	-	21 200	26 827	33 398	41 051	49 922	60 149	71 870	-
50	-	-	24 872	31 081	38 306	46 685	56 353	67 448	-
55	-	-	-	28 656	35 434	43 300	52 388	62 836	-
60	-	-	-	-	32 440	39 771	48 258	58 035	-
65	-	-	-	-	29 325	36 099	43 959	53 039	-

Power input in W

30	8 970	9 117	9 245	9 362	9 477	9 599	9 736	9 896	-
35	10 015	10 183	10 326	10 453	10 572	10 691	10 820	10 967	-
40	11 174	11 365	11 526	11 665	11 790	11 911	12 035	12 172	-
45	-	12 683	12 865	13 019	13 154	13 278	13 401	13 530	-
50	-	-	14 362	14 534	14 682	14 813	14 937	15 061	-
55	-	-	-	16 232	16 395	16 535	16 663	16 786	-
60	-	-	-	-	18 313	18 466	18 601	18 725	-
65	-	-	-	-	20 456	20 625	20 769	20 898	-

Current consumption in A

30	14.55	14.73	14.88	14.97	15.01	14.97	14.83	14.60	-
35	15.63	15.84	16.03	16.17	16.26	16.29	16.23	16.08	-
40	16.90	17.13	17.34	17.52	17.66	17.75	17.76	17.69	-
45	-	18.63	18.86	19.07	19.25	19.38	19.45	19.45	-
50	-	-	20.62	20.85	21.05	21.22	21.34	21.40	-
55	-	-	-	22.88	23.11	23.31	23.48	23.58	-
60	-	-	-	-	25.46	25.68	25.88	26.03	-
65	-	-	-	-	28.13	28.37	28.59	28.77	-

Mass flow in kg/h

30	426	532	654	795	957	1 143	1 354	1 593	-
35	420	527	650	791	953	1 138	1 349	1 587	-
40	413	520	643	784	946	1 131	1 341	1 578	-
45	-	511	634	776	937	1 121	1 330	1 566	-
50	-	-	623	764	925	1 108	1 316	1 550	-
55	-	-	-	750	910	1 092	1 298	1 531	-
60	-	-	-	-	893	1 073	1 278	1 509	-
65	-	-	-	-	872	1 051	1 254	1 483	-

Coefficient of performance (C.O.P.)

30	2.26	2.82	3.47	4.23	5.11	6.11	7.24	8.48	-
35	1.90	2.38	2.95	3.60	4.36	5.23	6.21	7.31	-
40	1.59	2.00	2.49	3.05	3.70	4.45	5.30	6.25	-
45	-	1.67	2.09	2.57	3.12	3.76	4.49	5.31	-
50	-	-	1.73	2.14	2.61	3.15	3.77	4.48	-
55	-	-	-	1.77	2.16	2.62	3.14	3.74	-
60	-	-	-	-	1.77	2.15	2.59	3.10	-
65	-	-	-	-	1.43	1.75	2.12	2.54	-

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

Cooling capacity	46 685	W
Power input	14 813	W
Current consumption	21.22	A
Mass flow	1 108	kg/h
C.O.P.	3.15	

Pressure switch settings

Maximum HP switch setting	29.5	bar(g)
Minimum LP switch setting	0.5	bar(g)
LP pump down setting	1	bar(g)

Sound power data

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

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

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

Tolerance according EN12900

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Performance data at 60 Hz, ARI rating conditions

R407C

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

Cooling capacity in W

30	21 733	27 505	34 333	42 362	51 737	62 603	75 104	89 386	-
35	20 523	26 128	32 726	40 461	49 477	59 921	71 937	85 669	-
40	19 233	24 653	31 003	38 425	47 066	57 070	68 582	81 747	-
45	-	23 091	29 173	36 265	44 512	54 058	65 048	77 628	-
50	-	-	27 246	33 989	41 824	50 894	61 344	73 321	-
55	-	-	-	31 607	39 011	47 587	57 479	68 834	-
60	-	-	-	-	36 082	44 146	53 463	64 177	-
65	-	-	-	-	33 047	40 580	49 303	59 360	-

Power input in W

30	8 970	9 117	9 245	9 362	9 477	9 599	9 736	9 896	-
35	10 015	10 183	10 326	10 453	10 572	10 691	10 820	10 967	-
40	11 174	11 365	11 526	11 665	11 790	11 911	12 035	12 172	-
45	-	12 683	12 865	13 019	13 154	13 278	13 401	13 530	-
50	-	-	14 362	14 534	14 682	14 813	14 937	15 061	-
55	-	-	-	16 232	16 395	16 535	16 663	16 786	-
60	-	-	-	-	18 313	18 466	18 601	18 725	-
65	-	-	-	-	20 456	20 625	20 769	20 898	-

Current consumption in A

30	14.55	14.73	14.88	14.97	15.01	14.97	14.83	14.60	-
35	15.63	15.84	16.03	16.17	16.26	16.29	16.23	16.08	-
40	16.90	17.13	17.34	17.52	17.66	17.75	17.76	17.69	-
45	-	18.63	18.86	19.07	19.25	19.38	19.45	19.45	-
50	-	-	20.62	20.85	21.05	21.22	21.34	21.40	-
55	-	-	-	22.88	23.11	23.31	23.48	23.58	-
60	-	-	-	-	25.46	25.68	25.88	26.03	-
65	-	-	-	-	28.13	28.37	28.59	28.77	-

Mass flow in kg/h

30	424	529	651	791	952	1 136	1 346	1 584	-
35	418	524	646	787	948	1 132	1 341	1 577	-
40	411	517	640	780	941	1 125	1 333	1 568	-
45	-	508	631	771	932	1 115	1 322	1 556	-
50	-	-	620	760	920	1 102	1 308	1 541	-
55	-	-	-	746	905	1 086	1 291	1 522	-
60	-	-	-	-	888	1 067	1 270	1 500	-
65	-	-	-	-	867	1 045	1 247	1 474	-

Coefficient of performance (C.O.P.)

30	2.42	3.02	3.71	4.52	5.46	6.52	7.71	9.03	-
35	2.05	2.57	3.17	3.87	4.68	5.60	6.65	7.81	-
40	1.72	2.17	2.69	3.29	3.99	4.79	5.70	6.72	-
45	-	1.82	2.27	2.79	3.38	4.07	4.85	5.74	-
50	-	-	1.90	2.34	2.85	3.44	4.11	4.87	-
55	-	-	-	1.95	2.38	2.88	3.45	4.10	-
60	-	-	-	-	1.97	2.39	2.87	3.43	-
65	-	-	-	-	1.62	1.97	2.37	2.84	-

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

Cooling capacity	52 202	W
Power input	16 375	W
Current consumption	23.12	A
Mass flow	1 175	kg/h
C.O.P.	3.19	

Pressure switch settings

Maximum HP switch setting	29.5	bar(g)
Minimum LP switch setting	0.5	bar(g)
LP pump down setting	1	bar(g)

Sound power data

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

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

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

Tolerance according EN12900

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