ENGINEERING



Datasheets

Danfoss scroll compressors **H series**





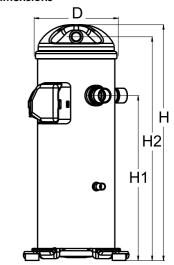
Datasheet, technical data

Danfoss scroll compressor, HCP120T4

General Characteristics

Model number (on compressor nameplate)		HCP120T4LC6	
Code number for Singlepack*		120U0401	
Code number for Industrial pack**		120U0398	
Drawing number		0SR4103B-4	
Suction and discharge connections		Brazed	
Suction connection		1-1/8 " ODF	
Discharge connection		7/8 " ODF	
Oil sight glass		None	
Oil equalisation connection		1/2"	
Oil drain connection		None	
LP gauge port		None	
IPR valve		None	
Swept volume	162.4 cm3/rev		
Displacement @ Nominal speed	28.3 m3/h @ 2900 rpm - 34.1 m3/h @ 3500 rpm		
Net weight	45.2 kg		
Oil charge 2.66 litre, PVE			
Maximum system test pressure Low Side / High side	- bar(g)	/ - bar(g)	
Maximum differential test pressure	- bar		
Maximum number of starts per hour		-	
Refrigerant charge limit	7.26 kg		
Approved refrigerants	R407C		

Dimensions



Electrical Characteristics

Liectrical Characteristics	
Nominal voltage	380-415V/3/50Hz - 460V/3/60Hz
Voltage range	342-457 V @ 50Hz - 414-506 V @ 60Hz
Winding resistance between phases 1-2 +/- 7% at 25°C	1.125 Ω
Winding resistance between phases 1-3 +/- 7% at 25°C	1.110 Ω
Winding resistance between phases 2-3 +/- 7% at 25°C	1.100 Ω
Rated Load Amps (RLA)	19.2 A
Maximum Continuous Current (MCC)	25 A
Locked Rotor Amps (LRA)	140 A
Motor protection	Internal overload protector

D=184 mm H=545 mm H1=369 mm H2=519 mm H3=- mm

Recommended Installation torques

Oil sight glass	52.5 Nm
Power connections / Earth connection	3 Nm / 2 Nm

Terminal box



Parts shipped with compressor

Mounting kit with grommets and sleeves
Initial oil charge
Installation instructions

Approvals: CE certified, UL certified (file SA11565), -

*Singlepack: Compressor in cardboard box

**Industrial pack: 12 or 16 Unboxed compressors on pallet

IP22

1: Screw connectors 10-32 UNF x 9.5

2: Earth connection

3: Power cable passage



Datasheet, accessories and spare parts

Danfoss scroll compressor, HCP120T4

Rotolock accessories, suction side	Code no.
Solder sleeve, P02 (1-3/4" Rotolock, 1-1/8" ODF)	8153004
Angle adapter, C02 (1-3/4" Rotolock, 1-1/8" ODF)	8168005
Rotolock valve, V02 (1-3/4" Rotolock, 1-1/8" ODF)	8168028
Gasket, 1-3/4"	8156132

Rotolock accessories, discharge sideCode no.Rotolock valve, V05 (1-1/4" Rotolock, 7/8" ODF)8168030Gasket, 1-3/4"8156132

Rotolock accessories, sets	Code no.
Solder sleeve adapter set (1-3/4" Rotolock, 1-1/8" ODF), (1-1/4" Rotolock, 7/8" ODF)	120Z0125
Valve set, V02(1"3/4~1"1/8), V05(1"1/4~7/8")	120Z0403
Gasket set, 1", 1-1/4", 1-3/4", OSG gaskets black & white	8156009

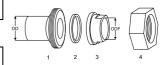
Oil / lubricants	Code no.
PVE lubricant, 320HV (FVC68D), 1 litre can	120Z5034

Crankcase heaters	Code no.
Belt type crankcase heater, 65 W, 230 V, CE mark, UL	120Z0059
Belt type crankcase heater, 65 W, 400 V, CE mark, UL	120Z0060
Belt type crankcase heater, 70 W, 240 V, CE mark, UL	120Z5040
Belt type crankcase heater, 70 W, 240 V, CE mark, UL	120Z5040

Miscellaneous accessories	Code no.
Acoustic hood	120Z5045
Discharge thermostat kit	7750009
IP54 upgrade kit	118U0057

Spare parts	Code no.
Mounting kit for 1 scroll compressor including 4 grommets, 4 sleeves, 4 bolts, 4 washers	120Z5005
Mounting kit, including 1 bolt, 1 sleeve, 1 washer	120Z5031
Terminal box cover	12075018

Solder sleeve adapter set



1: Rotolock adapter (Suc & Dis)

2: Gasket (Suc & Dis)

3: Solder sleeve (Suc & Dis)

4: Rotolock nut (Suc & Dis)



Danfoss scroll compressor. HCP120T4

Performance data at 50 Hz, EN 12900 rating conditions

R407C

Cond. temp. in				Evapora	ating temperature	in °C (to)			
°C (tc)	-30	-25	-20	-15	-10	-5	0	5	10
Cooling capacity	in W								
30	-	8 773	11 267	14 335	17 945	22 062	26 653	31 683	37 118
35		8 319	10 525	13 361	16 796	20 795	25 325	30 352	35 842
40	<u>_</u>	8 044	9 901	12 444	15 640	19 456	23 860	28 818	34 296
45	<u>-</u>		9 419	11 607	14 501	18 071	22 283	27 106	32 505
					1				
50	-	-	-	10 872	13 404	16 665	20 621	25 243	30 497
55	-	-	-	-	12 372	15 262	18 900	23 255	28 296
60	-	-	-	-	-	13 885	17 142	21 166	25 928
65	-	-	-	-	-	-	15 369	18 999	23 415
ower input in W									
30	-	4 973	5 090	5 171	5 233	5 291	5 365	5 469	5 622
35	-	5 488	5 642	5 745	5 812	5 862	5 911	5 976	6 074
40	-	6 022	6 224	6 358	6 443	6 495	6 530	6 566	6 619
45	-	-	6 853	7 030	7 142	7 206	7 238	7 256	7 275
50	-	-	-	7 778	7 928	8 014	8 054	8 063	8 059
55	_	_	-	-	8 818	8 937	8 994	9 006	8 990
60	_	-	_	-	-	9 993	10 078	10 103	10 084
65	_	-	_	-	_	-	11 323	11 371	11 360
00		1	ı	1	ı	1	11 020	11071	11 000
Current consump	tion in A								
30	-	12.86	12.95	13.04	13.13	13.22	13.30	13.37	13.42
35	-	13.66	13.72	13.78	13.85	13.93	14.00	14.06	14.11
40	-	14.53	14.56	14.60	14.65	14.71	14.77	14.83	14.89
45	-	-	15.53	15.55	15.58	15.63	15.69	15.75	15.81
50	-	-	-	16.69	16.71	16.75	16.81	16.87	16.94
55	-	-	-	-	18.10	18.13	18.19	18.26	18.34
60	-	-	-	-	-	19.84	19.89	19.97	20.06
65	-	_	-	-	-	-	21.99	22.07	22.18
		<u>I</u>				1			
Mass flow in kg/h			T	1	T	1	T	T	
30	-	199	249	309	379	460	553	659	779
35	-	196	246	306	375	455	547	652	771
40	-	192	242	300	369	449	540	644	762
45	-	-	235	293	362	441	532	636	753
50	-	-	-	284	352	431	522	626	743
55	-	-	-	-	339	419	510	613	731
60	-	-	-	-	-	403	494	598	716
65	-	-	-	-	-	-	475	580	698
Coefficient of per	formance (C.() P)							
30	-	1.76	2.21	2.77	3.43	4.17	4.97	5.79	6.60
35	-	1.52	1.87	2.33	2.89	3.55	4.28	5.08	5.90
40	-	1.34	1.59	1.96	2.43	3.00	3.65	4.39	5.18
45	-	-	1.37	1.65	2.03	2.51	3.08	3.74	4.47
50	-	-	-	1.40	1.69	2.08	2.56	3.13	3.78
55	_	-	_	-	1.40	1.71	2.10	2.58	3.15
55	-	-	-	-	-	1.71	1.70	2.10	2.57
60				1 -	1 -	1.05	1.70	Z. 1U	2.01

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

pooa.	,		
Cooling capacity	25 243	W	
Power input	8 063	W	
Current consumption	16.87	Α	
Mass flow	626	kg/h	
C.O.P.	3.13		

to: Evaporating temperature at dew point

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

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

Sound power data

Sound power level	74	dB(A)
With accoustic hood	69	dB(A)

Tolerance according EN12900

tc: Condensing temperature at dew point



Danfoss scroll compressor. HCP120T4

Performance data at 50 Hz, ARI rating conditions

R407C

Colling capacity in W	Cond. temp. in				Evapora	ting temperature	in °C (to)			
30	°C (tc)	-30	-25	-20				0	5	10
30	Cooling canacity	· in W								
35			9 421	12 084	15 357	19 202	23 583	28 461	33 799	39 559
40		_	+							
45		_								
50										
60			-			1				
Cover Input in W	-	_	_	_	_	-				
Nover input in W		-	+	_	_	_				
30				1	1	ı	1			
35	Power input in W	ı	1			1		1	1	1
40		-								
45		-	+							
So		-					1			
S55 - - - - -		-	-	1		1				
Conficient of performance (C.O.P.) Conficien	-	-	-	-	7 778					
Current consumption in A		-	+		-					
Surrent consumption in A 30		-	+	-						
12.86	65	-	-	-	-	-	-	11 323	11 371	11 360
13.66	Current consum	ption in A								
40	30	-	12.86	12.95	13.04	13.13	13.22	13.30	13.37	13.42
45	35	-	13.66	13.72	13.78	13.85	13.93	14.00	14.06	14.11
50	40	-	14.53	14.56	14.60	14.65	14.71	14.77	14.83	14.89
18.10	45	-	-	15.53	15.55	15.58	15.63	15.69	15.75	15.81
60 19.84 19.89 19.97 20.06 65 21.99 22.07 22.18 **Asss flow in kg/h** 30 - 198 248 308 377 458 550 655 774	50	-	-	-	16.69	16.71	16.75	16.81	16.87	16.94
fass flow in kg/h 30 - 198 248 308 377 458 550 655 774 35 - 195 245 304 373 452 544 648 766 40 - 191 241 299 367 446 537 641 758 45 - - 234 292 360 439 529 632 749 50 - - 234 292 350 429 519 622 739 55 - - - 282 350 429 519 622 739 55 - - - - 337 416 507 610 726 60 - - - - - 449 595 712 65 - - - - - - 45 694	55	-	-	-	-	18.10	18.13	18.19	18.26	18.34
Mass flow in kg/h 30	60	-	-	-	-	-	19.84	19.89	19.97	20.06
30 - 198 248 308 377 458 550 655 774 35 - 195 245 304 373 452 544 648 766 40 - 191 241 299 367 446 537 641 758 45 - - 234 292 360 439 529 632 749 50 - - - 282 350 429 519 622 739 55 - - - - 337 416 507 610 726 60 - - - - - 401 491 595 712 65 - - - - - - 472 576 694 **Coefficient of performance (C.O.P.) **Coefficient of performance (C.O.P.) **The company of the company	65	-	-	-	-	-	-	21.99	22.07	22.18
30 - 198 248 308 377 458 550 655 774 35 - 195 245 304 373 452 544 648 766 40 - 191 241 299 367 446 537 641 758 45 - - 234 292 360 439 529 632 749 50 - - - 282 350 429 519 622 739 55 - - - - 337 416 507 610 726 60 - - - - - 401 491 595 712 65 - - - - - - 472 576 694 **Coefficient of performance (C.O.P.) **Coefficient of performance (C.O.P.) **The company of the company	Mara - 61 and 1 and 1 and	i.								
35 - 195 245 304 373 452 544 648 766 40 - 191 241 299 367 446 537 641 758 45 - - 234 292 360 439 529 632 749 50 - - - 282 350 429 519 622 739 55 - - - - 337 416 507 610 726 60 - - - - - 401 491 595 712 65 - - - - - 472 576 694 Soefficient of performance (C.O.P.) 30 - 1.89 2.37 2.97 3.67 4.46 5.31 6.18 7.04 35 - 1.64 2.01 2.50 3.11 3.81 4.59 5			100	249	200	277	459	550	655	774
40 - 191 241 299 367 446 537 641 758 45 - - 234 292 360 439 529 632 749 50 - - - 282 350 429 519 622 739 55 - - - - 337 416 507 610 726 60 - - - - - 401 491 595 712 65 - - - - - - 472 576 694 Soefficient of performance (C.O.P.) 30 - 1.89 2.37 2.97 3.67 4.46 5.31 6.18 7.04 35 - 1.64 2.01 2.50 3.11 3.81 4.59 5.44 6.32 40 - 1.45 1.72 2.12 2.62 3.23										
45 - - 234 292 360 439 529 632 749 50 - - - 282 350 429 519 622 739 55 - - - - 337 416 507 610 726 60 - - - - - 401 491 595 712 65 - - - - - - 472 576 694 Soefficient of performance (C.O.P.) 30 - 1.89 2.37 2.97 3.67 4.46 5.31 6.18 7.04 35 - 1.64 2.01 2.50 3.11 3.81 4.59 5.44 6.32 40 - 1.45 1.72 2.12 2.62 3.23 3.94 4.73 5.57 45 - - 1.50 1.80 2.21 2.72			+							
50 - - - 282 350 429 519 622 739 55 - - - - 337 416 507 610 726 60 - - - - - 401 491 595 712 65 - - - - - - 472 576 694 Soefficient of performance (C.O.P.) 30 - 1.89 2.37 2.97 3.67 4.46 5.31 6.18 7.04 35 - 1.64 2.01 2.50 3.11 3.81 4.59 5.44 6.32 40 - 1.45 1.72 2.12 2.62 3.23 3.94 4.73 5.57 45 - - 1.50 1.80 2.21 2.72 3.34 4.05 4.83 50 - - - 1.53 1.85 2.27										
55 - - - - 337 416 507 610 726 60 - - - - - 401 491 595 712 65 - - - - - - 472 576 694 Coefficient of performance (C.O.P.) 30 - 1.89 2.37 2.97 3.67 4.46 5.31 6.18 7.04 35 - 1.64 2.01 2.50 3.11 3.81 4.59 5.44 6.32 40 - 1.45 1.72 2.12 2.62 3.23 3.94 4.73 5.57 45 - - 1.50 1.80 2.21 2.72 3.34 4.05 4.83 50 - - - 1.53 1.85 2.27 2.80 3.41 4.12 55 - - - - 1.55 1.88 </td <td></td> <td></td> <td></td> <td>1</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>				1						
60 - - - - 401 491 595 712 65 - - - - - - 472 576 694 Coefficient of performance (C.O.P.) 30 - 1.89 2.37 2.97 3.67 4.46 5.31 6.18 7.04 35 - 1.64 2.01 2.50 3.11 3.81 4.59 5.44 6.32 40 - 1.45 1.72 2.12 2.62 3.23 3.94 4.73 5.57 45 - - 1.50 1.80 2.21 2.72 3.34 4.05 4.83 50 - - - 1.53 1.85 2.27 2.80 3.41 4.12 55 - - - 1.55 1.88 2.31 2.84 3.45 60 - - - - 1.55 1.89 2.33										
65 - - - - - 472 576 694 Coefficient of performance (C.O.P.) 30 - 1.89 2.37 2.97 3.67 4.46 5.31 6.18 7.04 35 - 1.64 2.01 2.50 3.11 3.81 4.59 5.44 6.32 40 - 1.45 1.72 2.12 2.62 3.23 3.94 4.73 5.57 45 - - 1.50 1.80 2.21 2.72 3.34 4.05 4.83 50 - - - 1.53 1.85 2.27 2.80 3.41 4.12 55 - - - 1.55 1.88 2.31 2.84 3.45 60 - - - - - 1.55 1.89 2.33 2.85						1				
Coefficient of performance (C.O.P.) 30 - 1.89 2.37 2.97 3.67 4.46 5.31 6.18 7.04 35 - 1.64 2.01 2.50 3.11 3.81 4.59 5.44 6.32 40 - 1.45 1.72 2.12 2.62 3.23 3.94 4.73 5.57 45 - - 1.50 1.80 2.21 2.72 3.34 4.05 4.83 50 - - - 1.53 1.85 2.27 2.80 3.41 4.12 55 - - - 1.55 1.88 2.31 2.84 3.45 60 - - - - 1.55 1.89 2.33 2.85										
30 - 1.89 2.37 2.97 3.67 4.46 5.31 6.18 7.04 35 - 1.64 2.01 2.50 3.11 3.81 4.59 5.44 6.32 40 - 1.45 1.72 2.12 2.62 3.23 3.94 4.73 5.57 45 - - 1.50 1.80 2.21 2.72 3.34 4.05 4.83 50 - - - 1.53 1.85 2.27 2.80 3.41 4.12 55 - - - 1.55 1.88 2.31 2.84 3.45 60 - - - - 1.55 1.89 2.33 2.85	'		ı	<u> </u>	<u> </u>	I	<u> </u>	7/2	570	034
35 - 1.64 2.01 2.50 3.11 3.81 4.59 5.44 6.32 40 - 1.45 1.72 2.12 2.62 3.23 3.94 4.73 5.57 45 - - 1.50 1.80 2.21 2.72 3.34 4.05 4.83 50 - - - 1.53 1.85 2.27 2.80 3.41 4.12 55 - - - 1.55 1.88 2.31 2.84 3.45 60 - - - - 1.55 1.89 2.33 2.85			1	0.07	0.07	2.07	1 440	F 04	0.40	704
40 - 1.45 1.72 2.12 2.62 3.23 3.94 4.73 5.57 45 - - 1.50 1.80 2.21 2.72 3.34 4.05 4.83 50 - - - 1.53 1.85 2.27 2.80 3.41 4.12 55 - - - 1.55 1.88 2.31 2.84 3.45 60 - - - - 1.55 1.89 2.33 2.85										
45 - - 1.50 1.80 2.21 2.72 3.34 4.05 4.83 50 - - - 1.53 1.85 2.27 2.80 3.41 4.12 55 - - - - 1.55 1.88 2.31 2.84 3.45 60 - - - - 1.55 1.89 2.33 2.85										
50 - - - 1.53 1.85 2.27 2.80 3.41 4.12 55 - - - - 1.55 1.88 2.31 2.84 3.45 60 - - - - 1.55 1.89 2.33 2.85							+	1		
55 - - - 1.55 1.88 2.31 2.84 3.45 60 - - - - 1.55 1.89 2.33 2.85	-									
60 1.55 1.89 2.33 2.85								1		
						1				
65 - - - - 1.53 1.88 2.31	-			<u> </u>	1	ł				
	65	-	-	-	-	-	-	1.53	1.88	2.31
lominal performance at to = 7.2 °C, tc = 54.4 °C Pressure switch settings	Caslina sanasih.		2, 12 0111 0	7 \\/			Marriagnas LID arri		20	In a art art

Cooling capacity	28 137	W
Power input	8 881	W
Current consumption	18.11	Α
Mass flow	661	kg/h
C.O.P.	3.17	

to: Evaporating temperature at dew point

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

Pressure switch settings

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

Sound power data

I	Sound power level	74	dB(A)
	With accoustic hood	69	dB(A)

Tolerance according EN12900

tc: Condensing temperature at dew point



Danfoss scroll compressor. HCP120T4

Performance data at 50 Hz, EN 12900 rating conditions

R407C

Cond. temp. in	in Evaporating temperature in °C (to)								
°C (tc)	-30	-25	-20	-15	-10	-5	0	5	10
Cooling capacity	in W								
30	-	8 773	11 267	14 335	17 945	22 062	26 653	31 683	37 118
35		8 319	10 525	13 361	16 796	20 795	25 325	30 352	35 842
40	<u>_</u>	8 044	9 901	12 444	15 640	19 456	23 860	28 818	34 296
45	<u>-</u>		9 419	11 607	14 501	18 071	22 283	27 106	32 505
					1				
50	-	-	-	10 872	13 404	16 665	20 621	25 243	30 497
55	-	-	-	-	12 372	15 262	18 900	23 255	28 296
60	-	-	-	-	-	13 885	17 142	21 166	25 928
65	-	-	-	-	-	-	15 369	18 999	23 415
ower input in W									
30	-	4 973	5 090	5 171	5 233	5 291	5 365	5 469	5 622
35	-	5 488	5 642	5 745	5 812	5 862	5 911	5 976	6 074
40	-	6 022	6 224	6 358	6 443	6 495	6 530	6 566	6 619
45	-	-	6 853	7 030	7 142	7 206	7 238	7 256	7 275
50	-	-	-	7 778	7 928	8 014	8 054	8 063	8 059
55	_	_	-	-	8 818	8 937	8 994	9 006	8 990
60	_	-	_	-	-	9 993	10 078	10 103	10 084
65	_	-	_	-	_	-	11 323	11 371	11 360
00		1	ı	1	ı	1	11 020	11071	11 000
Current consump	tion in A								
30	-	12.86	12.95	13.04	13.13	13.22	13.30	13.37	13.42
35	-	13.66	13.72	13.78	13.85	13.93	14.00	14.06	14.11
40	-	14.53	14.56	14.60	14.65	14.71	14.77	14.83	14.89
45	-	-	15.53	15.55	15.58	15.63	15.69	15.75	15.81
50	-	-	-	16.69	16.71	16.75	16.81	16.87	16.94
55	-	-	-	-	18.10	18.13	18.19	18.26	18.34
60	-	-	-	-	-	19.84	19.89	19.97	20.06
65	-	_	-	-	-	-	21.99	22.07	22.18
		<u>I</u>				1			
Mass flow in kg/h			T	1	T	1	T	1	
30	-	199	249	309	379	460	553	659	779
35	-	196	246	306	375	455	547	652	771
40	-	192	242	300	369	449	540	644	762
45	-	-	235	293	362	441	532	636	753
50	-	-	-	284	352	431	522	626	743
55	-	-	-	-	339	419	510	613	731
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65	-	-	-	-	-	-	475	580	698
Coefficient of per	formance (C.() P)							
30	-	1.76	2.21	2.77	3.43	4.17	4.97	5.79	6.60
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45	-	-	1.37	1.65	2.03	2.51	3.08	3.74	4.47
50	-	-	-	1.40	1.69	2.08	2.56	3.13	3.78
55	_	-	_	-	1.40	1.71	2.10	2.58	3.15
55	-	-	-	-	-	1.71	1.70	2.10	2.57
60				1 -	1 -	1.05	1.70	Z. 1U	2.01

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

pooa.	,		
Cooling capacity	25 243	W	
Power input	8 063	W	
Current consumption	16.87	Α	
Mass flow	626	kg/h	
C.O.P.	3.13		

to: Evaporating temperature at dew point

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

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

Sound power data

Sound power level	74	dB(A)
With accoustic hood	69	dB(A)

Tolerance according EN12900

tc: Condensing temperature at dew point



Danfoss scroll compressor. HCP120T4

Performance data at 50 Hz, ARI rating conditions

R407C

Colling capacity in W	Cond. temp. in				Evapora	ting temperature	in °C (to)			
30	°C (tc)	-30	-25	-20				0	5	10
30	Cooling canacity	· in W								
35			9 421	12 084	15 357	19 202	23 583	28 461	33 799	39 559
40		_	+							
45		_								
50										
60			-			1				
Cover Input in W	-	_	_	_	_	-				
Nover input in W		-	+	_	_	_				
30				1	1	ı	1			
35	Power input in W	ı	1			1		1	1	1
40		-								
45		-	+							
So		-					1			
S55 - - - - -		-	-	1		1				
Conficient of performance (C.O.P.) Conficien	-	-	-	-	7 778					
Current consumption in A		-	+		-					
Surrent consumption in A 30		-	+	-						
12.86	65	-	-	-	-	-	-	11 323	11 371	11 360
13.66	Current consum	ption in A								
40	30	-	12.86	12.95	13.04	13.13	13.22	13.30	13.37	13.42
45	35	-	13.66	13.72	13.78	13.85	13.93	14.00	14.06	14.11
50	40	-	14.53	14.56	14.60	14.65	14.71	14.77	14.83	14.89
18.10	45	-	-	15.53	15.55	15.58	15.63	15.69	15.75	15.81
60 19.84 19.89 19.97 20.06 65 21.99 22.07 22.18 **Asss flow in kg/h** 30 - 198 248 308 377 458 550 655 774	50	-	-	-	16.69	16.71	16.75	16.81	16.87	16.94
fass flow in kg/h 30 - 198 248 308 377 458 550 655 774 35 - 195 245 304 373 452 544 648 766 40 - 191 241 299 367 446 537 641 758 45 - - 234 292 360 439 529 632 749 50 - - 234 292 350 429 519 622 739 55 - - - 282 350 429 519 622 739 55 - - - - 337 416 507 610 726 60 - - - - - 449 595 712 65 - - - - - - 45 694	55	-	-	-	-	18.10	18.13	18.19	18.26	18.34
Mass flow in kg/h 30	60	-	-	-	-	-	19.84	19.89	19.97	20.06
30 - 198 248 308 377 458 550 655 774 35 - 195 245 304 373 452 544 648 766 40 - 191 241 299 367 446 537 641 758 45 - - 234 292 360 439 529 632 749 50 - - - 282 350 429 519 622 739 55 - - - - 337 416 507 610 726 60 - - - - - 401 491 595 712 65 - - - - - - 472 576 694 **Coefficient of performance (C.O.P.) **Coefficient of performance (C.O.P.) **The company of the company	65	-	-	-	-	-	-	21.99	22.07	22.18
30 - 198 248 308 377 458 550 655 774 35 - 195 245 304 373 452 544 648 766 40 - 191 241 299 367 446 537 641 758 45 - - 234 292 360 439 529 632 749 50 - - - 282 350 429 519 622 739 55 - - - - 337 416 507 610 726 60 - - - - - 401 491 595 712 65 - - - - - - 472 576 694 **Coefficient of performance (C.O.P.) **Coefficient of performance (C.O.P.) **The company of the company	Mara - 61 and 1 and 1 and	i.								
35 - 195 245 304 373 452 544 648 766 40 - 191 241 299 367 446 537 641 758 45 - - 234 292 360 439 529 632 749 50 - - - 282 350 429 519 622 739 55 - - - - 337 416 507 610 726 60 - - - - - 401 491 595 712 65 - - - - - 472 576 694 Soefficient of performance (C.O.P.) 30 - 1.89 2.37 2.97 3.67 4.46 5.31 6.18 7.04 35 - 1.64 2.01 2.50 3.11 3.81 4.59 5			100	249	200	277	459	550	655	774
40 - 191 241 299 367 446 537 641 758 45 - - 234 292 360 439 529 632 749 50 - - - 282 350 429 519 622 739 55 - - - - 337 416 507 610 726 60 - - - - - 401 491 595 712 65 - - - - - - 472 576 694 Soefficient of performance (C.O.P.) 30 - 1.89 2.37 2.97 3.67 4.46 5.31 6.18 7.04 35 - 1.64 2.01 2.50 3.11 3.81 4.59 5.44 6.32 40 - 1.45 1.72 2.12 2.62 3.23										
45 - - 234 292 360 439 529 632 749 50 - - - 282 350 429 519 622 739 55 - - - - 337 416 507 610 726 60 - - - - - 401 491 595 712 65 - - - - - - 472 576 694 Soefficient of performance (C.O.P.) 30 - 1.89 2.37 2.97 3.67 4.46 5.31 6.18 7.04 35 - 1.64 2.01 2.50 3.11 3.81 4.59 5.44 6.32 40 - 1.45 1.72 2.12 2.62 3.23 3.94 4.73 5.57 45 - - 1.50 1.80 2.21 2.72			+							
50 - - - 282 350 429 519 622 739 55 - - - - 337 416 507 610 726 60 - - - - - 401 491 595 712 65 - - - - - - 472 576 694 Soefficient of performance (C.O.P.) 30 - 1.89 2.37 2.97 3.67 4.46 5.31 6.18 7.04 35 - 1.64 2.01 2.50 3.11 3.81 4.59 5.44 6.32 40 - 1.45 1.72 2.12 2.62 3.23 3.94 4.73 5.57 45 - - 1.50 1.80 2.21 2.72 3.34 4.05 4.83 50 - - - 1.53 1.85 2.27										
55 - - - - 337 416 507 610 726 60 - - - - - 401 491 595 712 65 - - - - - - 472 576 694 Coefficient of performance (C.O.P.) 30 - 1.89 2.37 2.97 3.67 4.46 5.31 6.18 7.04 35 - 1.64 2.01 2.50 3.11 3.81 4.59 5.44 6.32 40 - 1.45 1.72 2.12 2.62 3.23 3.94 4.73 5.57 45 - - 1.50 1.80 2.21 2.72 3.34 4.05 4.83 50 - - - 1.53 1.85 2.27 2.80 3.41 4.12 55 - - - - 1.55 1.88 </td <td></td> <td></td> <td></td> <td>1</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>				1						
60 - - - - 401 491 595 712 65 - - - - - - 472 576 694 Coefficient of performance (C.O.P.) 30 - 1.89 2.37 2.97 3.67 4.46 5.31 6.18 7.04 35 - 1.64 2.01 2.50 3.11 3.81 4.59 5.44 6.32 40 - 1.45 1.72 2.12 2.62 3.23 3.94 4.73 5.57 45 - - 1.50 1.80 2.21 2.72 3.34 4.05 4.83 50 - - - 1.53 1.85 2.27 2.80 3.41 4.12 55 - - - 1.55 1.88 2.31 2.84 3.45 60 - - - - 1.55 1.89 2.33										
65 - - - - - 472 576 694 Coefficient of performance (C.O.P.) 30 - 1.89 2.37 2.97 3.67 4.46 5.31 6.18 7.04 35 - 1.64 2.01 2.50 3.11 3.81 4.59 5.44 6.32 40 - 1.45 1.72 2.12 2.62 3.23 3.94 4.73 5.57 45 - - 1.50 1.80 2.21 2.72 3.34 4.05 4.83 50 - - - 1.53 1.85 2.27 2.80 3.41 4.12 55 - - - 1.55 1.88 2.31 2.84 3.45 60 - - - - - 1.55 1.89 2.33 2.85						1				
Coefficient of performance (C.O.P.) 30 - 1.89 2.37 2.97 3.67 4.46 5.31 6.18 7.04 35 - 1.64 2.01 2.50 3.11 3.81 4.59 5.44 6.32 40 - 1.45 1.72 2.12 2.62 3.23 3.94 4.73 5.57 45 - - 1.50 1.80 2.21 2.72 3.34 4.05 4.83 50 - - - 1.53 1.85 2.27 2.80 3.41 4.12 55 - - - 1.55 1.88 2.31 2.84 3.45 60 - - - - 1.55 1.89 2.33 2.85										
30 - 1.89 2.37 2.97 3.67 4.46 5.31 6.18 7.04 35 - 1.64 2.01 2.50 3.11 3.81 4.59 5.44 6.32 40 - 1.45 1.72 2.12 2.62 3.23 3.94 4.73 5.57 45 - - 1.50 1.80 2.21 2.72 3.34 4.05 4.83 50 - - - 1.53 1.85 2.27 2.80 3.41 4.12 55 - - - 1.55 1.88 2.31 2.84 3.45 60 - - - - 1.55 1.89 2.33 2.85	'		ı	<u> </u>	<u> </u>	I	<u> </u>	7/2	570	034
35 - 1.64 2.01 2.50 3.11 3.81 4.59 5.44 6.32 40 - 1.45 1.72 2.12 2.62 3.23 3.94 4.73 5.57 45 - - 1.50 1.80 2.21 2.72 3.34 4.05 4.83 50 - - - 1.53 1.85 2.27 2.80 3.41 4.12 55 - - - 1.55 1.88 2.31 2.84 3.45 60 - - - - 1.55 1.89 2.33 2.85			1	0.07	0.07	2.07	1 440	F 04	0.40	704
40 - 1.45 1.72 2.12 2.62 3.23 3.94 4.73 5.57 45 - - 1.50 1.80 2.21 2.72 3.34 4.05 4.83 50 - - - 1.53 1.85 2.27 2.80 3.41 4.12 55 - - - 1.55 1.88 2.31 2.84 3.45 60 - - - - 1.55 1.89 2.33 2.85										
45 - - 1.50 1.80 2.21 2.72 3.34 4.05 4.83 50 - - - 1.53 1.85 2.27 2.80 3.41 4.12 55 - - - - 1.55 1.88 2.31 2.84 3.45 60 - - - - 1.55 1.89 2.33 2.85										
50 - - - 1.53 1.85 2.27 2.80 3.41 4.12 55 - - - - 1.55 1.88 2.31 2.84 3.45 60 - - - - 1.55 1.89 2.33 2.85							+	1		
55 - - - 1.55 1.88 2.31 2.84 3.45 60 - - - - 1.55 1.89 2.33 2.85	-									
60 1.55 1.89 2.33 2.85								1		
						1				
65 - - - - 1.53 1.88 2.31	-			<u> </u>	1	ł				
	65	-	-	-	-	_	-	1.53	1.88	2.31
lominal performance at to = 7.2 °C, tc = 54.4 °C Pressure switch settings	Caslina sanasih.		2, 12 0111 0	7 \\/			Marriagnas LID arri		20	In a art art

Cooling capacity	28 137	W
Power input	8 881	W
Current consumption	18.11	Α
Mass flow	661	kg/h
C.O.P.	3.17	

to: Evaporating temperature at dew point

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

Pressure switch settings

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

Sound power data

I	Sound power level	74	dB(A)
	With accoustic hood	69	dB(A)

Tolerance according EN12900

tc: Condensing temperature at dew point



Danfoss scroll compressor. HCP120T4

Performance data at 60 Hz, EN 12900 rating conditions

R407C

Cond. temp. in	temp. in Evaporating temperature in °C (to)								
°C (tc)	-30	-25	-20	-15	-10	-5	0	5	10
Cooling capacity	ı in W								
30		10 514	13 501	17 179	21 509	26 447	31 952	37 983	44 496
		9 972				24 934			42 974
35			12 615	16 017	20 137	1	30 367	36 395	
40	-	9 642	11 869	14 921	18 756	23 335	28 618	34 563	41 128
45	-	-	11 291	13 919	17 395	21 680	26 735	32 519	38 991
50	-	-	-	13 038	16 082	19 999	24 749	30 294	36 592
55	-	-	-	-	14 845	18 320	22 690	27 918	33 964
60	-	-	-	-	-	16 670	20 586	25 420	31 133
65	-	-	-	-	-	-	18 462	22 825	28 126
Power input in V	v								
30	-	6 084	6 252	6 349	6 405	6 451	6 520	6 642	6 849
35	-	6 693	6 896	7 013	7 074	7 111	7 156	7 240	7 395
40	-	7 339	7 585	7 730	7 805	7 842	7 872	7 926	8 037
45	-	-	8 337	8 519	8 617	8 662	8 686	8 720	8 796
50	-	-	-	9 400	9 529	9 591	9 617	9 639	9 689
55	-	-	-	-	10 559	10 647	10 685	10 704	10 735
60	-	-	-	-	-	11 849	11 907	11 931	11 954
65	-	-	-	-	-	-	13 303	13 342	13 364
•		•	•	•		•	•		
Current consum	ption in A	12.77	12.96	12.05	12.04	12.12	12.21	12.20	12.22
30			12.86	12.95	13.04	13.13	13.21	13.28	13.33
35	-	13.57	13.62	13.69	13.76	13.83	13.90	13.96	14.02
40	-	14.43	14.46	14.50	14.55	14.61	14.67	14.73	14.79
45	-	-	15.42	15.44	15.48	15.53	15.58	15.64	15.70
50	-	-	-	16.57	16.60	16.64	16.69	16.76	16.83
55	-	-	-	-	17.98	18.01	18.07	18.13	18.21
60	-	-	-	-	-	19.70	19.76	19.84	19.93
65	-	-	-	-	-	-	21.84	21.92	22.03
Mass flow in kg/	h								
30	-	238	299	371	455	552	663	790	933
35	-	236	295	366	449	546	656	782	924
40	-	231	290	360	443	538	648	773	914
45	-	-	282	352	434	529	638	763	904
50	-	-	-	340	422	517	627	751	891
55	-	-	-	-	407	502	612	736	877
60	-	-	-	-	-	484	593	718	859
65	-	-	-	-	-	-	571	696	838
Coefficient of pe	rformance (C.	O.P.)							
30	-	1.73	2.16	2.71	3.36	4.10	4.90	5.72	6.50
35	-	1.49	1.83	2.28	2.85	3.51	4.24	5.03	5.81
40	-	1.31	1.56	1.93	2.40	2.98	3.64	4.36	5.12
45	-	-	1.35	1.63	2.02	2.50	3.08	3.73	4.43
50	-	-	-	1.39	1.69	2.09	2.57	3.14	3.78
55	-	-	-	-	1.41	1.72	2.12	2.61	3.16
60	-	-	-	-	-	1.41	1.73	2.13	2.60
65	-	-	_	-	-	-	1.39	1.71	2.10

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

Cooling capacity	30 294	W
Power input	9 639	W
Current consumption	16.76	Α
Mass flow	751	kg/h
C.O.P.	3.14	

to: Evaporating temperature at dew point

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

Pressure switch settings

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

Sound power data

ſ	Sound power level	77	dB(A)
ı	With accoustic hood	72	dB(A)

Tolerance according EN12900

tc: Condensing temperature at dew point



Danfoss scroll compressor. HCP120T4

Performance data at 60 Hz, ARI rating conditions

R407C

Cond. temp. in Evaporating temperature in °C (to)									
°C (tc)	-30	-25	-20	-15	-10	-5	0	5	10
Cooling capacity	in W								
30	-	11 291	14 480	18 404	23 016	28 270	34 120	40 520	47 423
35		10 762	13 596	17 240	21 648	26 773	32 570	38 992	45 994
					1	1			
40 45	-	10 466	12 864	16 148	20 271	25 186	30 849 28 989	37 212 35 212	44 231 42 166
			12 318	15 160	18 916	23 541			
50	-	-	-	14 308	17 617	21 870 20 206	27 022 24 980	33 025	39 833 37 264
55		-	-	-	16 406	†		30 682	
60	-	-	-	-	-	18 582	22 897	28 216	34 491
65	-	-	-	-	-	-	20 805	25 659	31 546
Power input in W									
30	-	6 084	6 252	6 349	6 405	6 451	6 520	6 642	6 849
35	-	6 693	6 896	7 013	7 074	7 111	7 156	7 240	7 395
40	-	7 339	7 585	7 730	7 805	7 842	7 872	7 926	8 037
45	-	-	8 337	8 519	8 617	8 662	8 686	8 720	8 796
50	-	-	-	9 400	9 529	9 591	9 617	9 639	9 689
55	-	-	-	-	10 559	10 647	10 685	10 704	10 735
60	-	-	-	_	-	11 849	11 907	11 931	11 954
65	_	-	_	_	-	-	13 303	13 342	13 364
		L	l	II.	l	II.			
Current consump	tion in A								
30	-	12.77	12.86	12.95	13.04	13.13	13.21	13.28	13.33
35	-	13.57	13.62	13.69	13.76	13.83	13.90	13.96	14.02
40	-	14.43	14.46	14.50	14.55	14.61	14.67	14.73	14.79
45	-	-	15.42	15.44	15.48	15.53	15.58	15.64	15.70
50	-	-	-	16.57	16.60	16.64	16.69	16.76	16.83
55	-	-	-	-	17.98	18.01	18.07	18.13	18.21
60	-	-	-	-	-	19.70	19.76	19.84	19.93
65	-	-	-	-	-	-	21.84	21.92	22.03
			•		•			•	
Mass flow in kg/h	l								
30	-	237	297	369	452	549	660	786	928
35	-	234	294	364	447	543	652	777	918
40	-	229	288	358	440	535	644	768	909
45	-	-	280	350	431	526	635	758	898
50	-	-	-	338	420	514	623	747	886
55	-	-	-	-	405	500	608	732	872
60	-	-	-	-	-	481	590	714	854
65	-	-	-	-	-	-	568	692	833
Danfflalant of	fa								
30	formance (C.0	1.86	2.32	2.90	3.59	4.38	5.23	6.10	6.92
35		1.61	1.97	2.46	3.06	3.77	4.55	5.39	6.22
40	-	1.43	1.70	2.40	2.60	3.21	3.92	4.69	5.50
				1		1			4.79
45	-	-	1.48	1.78 1.52	2.20	2.72	3.34	4.04	
50	-	-			1.85	2.28	2.81	3.43	4.11
55	-	-	-	-	1.55	1.90	2.34	2.87	3.47
60	-	-	-	-	-	1.57	1.92	2.36	2.89
65	-	-	-	-	-	-	1.56	1.92	2.36

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

recinitial portormaneo acto	. 0, 10 04.4 0	
Cooling capacity	33 775	W
Power input	10 579	W
Current consumption	17.99	Α
Mass flow	793	kg/h
C.O.P.	3.19	

to: Evaporating temperature at dew point

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

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

Sound power data

Sound power level	77	dB(A)
With accoustic hood	72	dB(A)

Tolerance according EN12900

tc: Condensing temperature at dew point



Danfoss scroll compressor. HCP120T4

Performance data at 60 Hz, EN 12900 rating conditions

R407C

Cond. temp. in	temp. in Evaporating temperature in °C (to)								
°C (tc)	-30	-25	-20	-15	-10	-5	0	5	10
Cooling capacity	ı in W								
30		10 514	13 501	17 179	21 509	26 447	31 952	37 983	44 496
		9 972				24 934			42 974
35			12 615	16 017	20 137	1	30 367	36 395	
40	-	9 642	11 869	14 921	18 756	23 335	28 618	34 563	41 128
45	-	-	11 291	13 919	17 395	21 680	26 735	32 519	38 991
50	-	-	-	13 038	16 082	19 999	24 749	30 294	36 592
55	-	-	-	-	14 845	18 320	22 690	27 918	33 964
60	-	-	-	-	-	16 670	20 586	25 420	31 133
65	-	-	-	-	-	-	18 462	22 825	28 126
Power input in V	v								
30	-	6 084	6 252	6 349	6 405	6 451	6 520	6 642	6 849
35	-	6 693	6 896	7 013	7 074	7 111	7 156	7 240	7 395
40	-	7 339	7 585	7 730	7 805	7 842	7 872	7 926	8 037
45	-	-	8 337	8 519	8 617	8 662	8 686	8 720	8 796
50	-	-	-	9 400	9 529	9 591	9 617	9 639	9 689
55	-	-	-	-	10 559	10 647	10 685	10 704	10 735
60	-	-	-	-	-	11 849	11 907	11 931	11 954
65	-	-	-	-	-	-	13 303	13 342	13 364
•		•	•	•		•	•		
Current consum	ption in A	12.77	12.96	12.05	12.04	12.12	12.21	12.20	12.22
30			12.86	12.95	13.04	13.13	13.21	13.28	13.33
35	-	13.57	13.62	13.69	13.76	13.83	13.90	13.96	14.02
40	-	14.43	14.46	14.50	14.55	14.61	14.67	14.73	14.79
45	-	-	15.42	15.44	15.48	15.53	15.58	15.64	15.70
50	-	-	-	16.57	16.60	16.64	16.69	16.76	16.83
55	-	-	-	-	17.98	18.01	18.07	18.13	18.21
60	-	-	-	-	-	19.70	19.76	19.84	19.93
65	-	-	-	-	-	-	21.84	21.92	22.03
Mass flow in kg/	h								
30	-	238	299	371	455	552	663	790	933
35	-	236	295	366	449	546	656	782	924
40	-	231	290	360	443	538	648	773	914
45	-	-	282	352	434	529	638	763	904
50	-	-	-	340	422	517	627	751	891
55	-	-	-	-	407	502	612	736	877
60	-	-	-	-	-	484	593	718	859
65	-	-	-	-	-	-	571	696	838
Coefficient of pe	rformance (C.	O.P.)							
30	-	1.73	2.16	2.71	3.36	4.10	4.90	5.72	6.50
35	-	1.49	1.83	2.28	2.85	3.51	4.24	5.03	5.81
40	-	1.31	1.56	1.93	2.40	2.98	3.64	4.36	5.12
45	-	-	1.35	1.63	2.02	2.50	3.08	3.73	4.43
50	-	-	-	1.39	1.69	2.09	2.57	3.14	3.78
55	-	-	-	-	1.41	1.72	2.12	2.61	3.16
60	-	-	-	-	-	1.41	1.73	2.13	2.60
65	-	-	_	-	-	-	1.39	1.71	2.10

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

Cooling capacity	30 294	W
Power input	9 639	W
Current consumption	16.76	Α
Mass flow	751	kg/h
C.O.P.	3.14	

to: Evaporating temperature at dew point

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

Pressure switch settings

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

Sound power data

ſ	Sound power level	77	dB(A)
ı	With accoustic hood	72	dB(A)

Tolerance according EN12900

tc: Condensing temperature at dew point



Danfoss scroll compressor. HCP120T4

Performance data at 60 Hz, ARI rating conditions

R407C

Cond. temp. in Evaporating temperature in °C (to)									
°C (tc)	-30	-25	-20	-15	-10	-5	0	5	10
Cooling capacity	in W								
30	-	11 291	14 480	18 404	23 016	28 270	34 120	40 520	47 423
35		10 762	13 596	17 240	21 648	26 773	32 570	38 992	45 994
					1	1			
40 45	-	10 466	12 864	16 148	20 271	25 186	30 849 28 989	37 212 35 212	44 231 42 166
			12 318	15 160	18 916	23 541			
50	-	-	-	14 308	17 617	21 870 20 206	27 022 24 980	33 025	39 833 37 264
55		-	-	-	16 406	†		30 682	
60	-	-	-	-	-	18 582	22 897	28 216	34 491
65	-	-	-	-	-	-	20 805	25 659	31 546
Power input in W									
30	-	6 084	6 252	6 349	6 405	6 451	6 520	6 642	6 849
35	-	6 693	6 896	7 013	7 074	7 111	7 156	7 240	7 395
40	-	7 339	7 585	7 730	7 805	7 842	7 872	7 926	8 037
45	-	-	8 337	8 519	8 617	8 662	8 686	8 720	8 796
50	-	-	-	9 400	9 529	9 591	9 617	9 639	9 689
55	-	-	-	-	10 559	10 647	10 685	10 704	10 735
60	-	-	-	-	-	11 849	11 907	11 931	11 954
65	_	-	_	_	-	-	13 303	13 342	13 364
		L	l	II.	l	II.			
Current consump	tion in A								
30	-	12.77	12.86	12.95	13.04	13.13	13.21	13.28	13.33
35	-	13.57	13.62	13.69	13.76	13.83	13.90	13.96	14.02
40	-	14.43	14.46	14.50	14.55	14.61	14.67	14.73	14.79
45	-	-	15.42	15.44	15.48	15.53	15.58	15.64	15.70
50	-	-	-	16.57	16.60	16.64	16.69	16.76	16.83
55	-	-	-	-	17.98	18.01	18.07	18.13	18.21
60	-	-	-	-	-	19.70	19.76	19.84	19.93
65	-	-	-	-	-	-	21.84	21.92	22.03
			•		•			•	
Mass flow in kg/h	l								
30	-	237	297	369	452	549	660	786	928
35	-	234	294	364	447	543	652	777	918
40	-	229	288	358	440	535	644	768	909
45	-	-	280	350	431	526	635	758	898
50	-	-	-	338	420	514	623	747	886
55	-	-	-	-	405	500	608	732	872
60	-	-	-	-	-	481	590	714	854
65	-	-	-	-	-	-	568	692	833
Danfflalant of	fa								
30	formance (C.0	1.86	2.32	2.90	3.59	4.38	5.23	6.10	6.92
35		1.61	1.97	2.46	3.06	3.77	4.55	5.39	6.22
40	-	1.43	1.70	2.40	2.60	3.21	3.92	4.69	5.50
				1		1			4.79
45	-	-	1.48	1.78 1.52	2.20	2.72	3.34	4.04	
50	-	-			1.85	2.28	2.81	3.43	4.11
55	-	-	-	-	1.55	1.90	2.34	2.87	3.47
60	-	-	-	-	-	1.57	1.92	2.36	2.89
65	-	-	-	-	-	-	1.56	1.92	2.36

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

recinitial portormaneo acto	. 0, 10 04.4 0	
Cooling capacity	33 775	W
Power input	10 579	W
Current consumption	17.99	Α
Mass flow	793	kg/h
C.O.P.	3.19	

to: Evaporating temperature at dew point

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

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

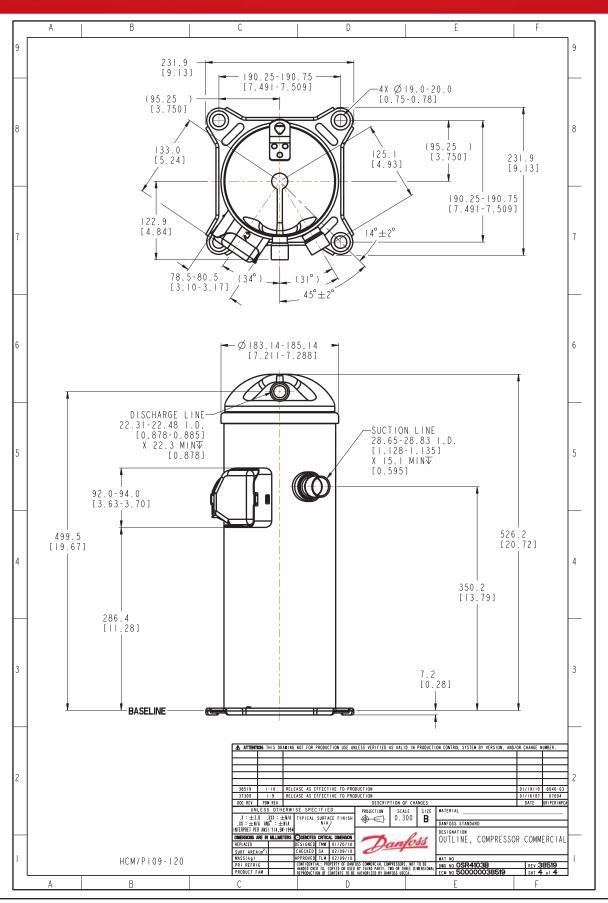
Sound power data

Sound power level	77	dB(A)
With accoustic hood	72	dB(A)

Tolerance according EN12900

tc: Condensing temperature at dew point





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FRCC.PD.0SR4103B-4 page drawings



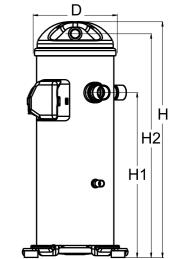
Datasheet, technical data

Danfoss scroll compressor, HCP120T4

General Characteristics

Model number (on compressor nameplate)		HCP120T4LC7
Code number for Singlepack*		120U0406
Code number for Industrial pack**		120U0403
Drawing number		0SR4103B-4
Suction and discharge connections		Brazed
Suction connection		1-1/8 " ODF
Discharge connection		7/8 " ODF
Oil sight glass		None
Oil equalisation connection		1/2"
Oil drain connection		None
LP gauge port		None
IPR valve		None
Swept volume	162.4 c	m3/rev
Displacement @ Nominal speed	28.3 m3/h @ 2900 rpm	- 34.1 m3/h @ 3500 rpm
Net weight	45.2 kg	
Oil charge	2.66 litre	e, PVE
Maximum system test pressure Low Side / High side	- bar(g)	/ - bar(g)
Maximum differential test pressure	- bar	
Maximum number of starts per hour		-
Refrigerant charge limit	7.26	5 kg
Approved refrigerants	R40)7C

Dimensions



Electrical Characteristics

Electrical characteristics	
Nominal voltage	380-415V/3/50Hz - 460V/3/60Hz
Voltage range	342-457 V @ 50Hz - 414-506 V @ 60Hz
Winding resistance between phases 1-2 +/- 7% at 25°C	1.125 Ω
Winding resistance between phases 1-3 +/- 7% at 25°C	1.110 Ω
Winding resistance between phases 2-3 +/- 7% at 25°C	1.100 Ω
Rated Load Amps (RLA)	19.2 A
Maximum Continuous Current (MCC)	25 A
Locked Rotor Amps (LRA)	140 A
Motor protection	Internal overload protector

D=184 mm H=545 mm H1=369 mm H2=519 mm H3=- mm

Recommended Installation torques

Oil sight glass	52.5 Nm
Power connections / Earth connection	3 Nm / 2 Nm

Terminal box



Parts shipped with compressor

Mounting kit with grommets and sleeves
Initial oil charge
Installation instructions

Approvals: CE certified, UL certified (file SA11565), -

 $\hbox{*Singlepack: Compressor in cardboard box}\\$

**Industrial pack: 12 or 16 Unboxed compressors on pallet

IP22

1: Screw connectors 10-32 UNF x 9.5

2: Earth connection

3: Power cable passage



Datasheet, accessories and spare parts

Danfoss scroll compressor, HCP120T4

Rotolock accessories, suction side	Code no.
Solder sleeve, P02 (1-3/4" Rotolock, 1-1/8" ODF)	8153004
Angle adapter, C02 (1-3/4" Rotolock, 1-1/8" ODF)	8168005
Rotolock valve, V02 (1-3/4" Rotolock, 1-1/8" ODF)	8168028
Gasket, 1-3/4"	8156132

Rotolock accessories, discharge sideCode no.Rotolock valve, V05 (1-1/4" Rotolock, 7/8" ODF)8168030Gasket, 1-3/4"8156132

Rotolock accessories, sets	Code no.
Solder sleeve adapter set (1-3/4" Rotolock, 1-1/8" ODF), (1-1/4" Rotolock, 7/8" ODF)	120Z0125
Valve set, V02(1"3/4~1"1/8), V05(1"1/4~7/8")	120Z0403
Gasket set, 1", 1-1/4", 1-3/4", OSG gaskets black & white	8156009

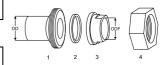
Oil / lubricants	Code no.
PVE lubricant, 320HV (FVC68D), 1 litre can	120Z5034

Crankcase heaters	Code no.
Belt type crankcase heater, 65 W, 230 V, CE mark, UL	120Z0059
Belt type crankcase heater, 65 W, 400 V, CE mark, UL	120Z0060
Belt type crankcase heater, 70 W, 240 V, CE mark, UL	120Z5040
Belt type crankcase heater, 70 W, 240 V, CE mark, UL	120Z5040

Miscellaneous accessories	Code no.
Acoustic hood	120Z5045
Discharge thermostat kit	7750009
IP54 upgrade kit	118U0057

Spare parts	Code no.
Mounting kit for 1 scroll compressor including 4 grommets, 4 sleeves, 4 bolts, 4 washers	120Z5005
Mounting kit, including 1 bolt, 1 sleeve, 1 washer	120Z5031
Terminal box cover	12075018

Solder sleeve adapter set



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



Danfoss scroll compressor. HCP120T4

Performance data at 50 Hz, EN 12900 rating conditions

R407C

Cond. temp. in				Evapora	ating temperature	in °C (to)			
°C (tc)	-30	-25	-20	-15	-10	-5	0	5	10
Cooling capacity	in W								
30	-	8 773	11 267	14 335	17 945	22 062	26 653	31 683	37 118
35		8 319	10 525	13 361	16 796	20 795	25 325	30 352	35 842
40	<u>_</u>	8 044	9 901	12 444	15 640	19 456	23 860	28 818	34 296
45	<u>-</u>		9 419	11 607	14 501	18 071	22 283	27 106	32 505
					1				
50	-	-	-	10 872	13 404	16 665	20 621	25 243	30 497
55	-	-	-	-	12 372	15 262	18 900	23 255	28 296
60	-	-	-	-	-	13 885	17 142	21 166	25 928
65	-	-	-	-	-	-	15 369	18 999	23 415
ower input in W									
30	-	4 973	5 090	5 171	5 233	5 291	5 365	5 469	5 622
35	-	5 488	5 642	5 745	5 812	5 862	5 911	5 976	6 074
40	-	6 022	6 224	6 358	6 443	6 495	6 530	6 566	6 619
45	-	-	6 853	7 030	7 142	7 206	7 238	7 256	7 275
50	-	-	-	7 778	7 928	8 014	8 054	8 063	8 059
55	_	_	-	-	8 818	8 937	8 994	9 006	8 990
60	_	-	_	-	-	9 993	10 078	10 103	10 084
65	_	-	_	-	_	-	11 323	11 371	11 360
00		1	ı	1	ı	1	11 020	11071	11 000
Current consump	tion in A								
30	-	12.86	12.95	13.04	13.13	13.22	13.30	13.37	13.42
35	-	13.66	13.72	13.78	13.85	13.93	14.00	14.06	14.11
40	-	14.53	14.56	14.60	14.65	14.71	14.77	14.83	14.89
45	-	-	15.53	15.55	15.58	15.63	15.69	15.75	15.81
50	-	-	-	16.69	16.71	16.75	16.81	16.87	16.94
55	-	-	-	-	18.10	18.13	18.19	18.26	18.34
60	-	-	-	-	-	19.84	19.89	19.97	20.06
65	-	_	-	-	-	-	21.99	22.07	22.18
		<u>I</u>				1			
Mass flow in kg/h			T	1	T	1	T	1	
30	-	199	249	309	379	460	553	659	779
35	-	196	246	306	375	455	547	652	771
40	-	192	242	300	369	449	540	644	762
45	-	-	235	293	362	441	532	636	753
50	-	-	-	284	352	431	522	626	743
55	-	-	-	-	339	419	510	613	731
60	-	-	-	-	-	403	494	598	716
65	-	-	-	-	-	-	475	580	698
Coefficient of per	formance (C.() P)							
30	-	1.76	2.21	2.77	3.43	4.17	4.97	5.79	6.60
35	-	1.52	1.87	2.33	2.89	3.55	4.28	5.08	5.90
40	-	1.34	1.59	1.96	2.43	3.00	3.65	4.39	5.18
45	-	-	1.37	1.65	2.03	2.51	3.08	3.74	4.47
50	-	-	-	1.40	1.69	2.08	2.56	3.13	3.78
55	_	-	_	-	1.40	1.71	2.10	2.58	3.15
55	-	-	-	-	-	1.71	1.70	2.10	2.57
60				1 -	1 -	1.05	1.70	2.10	2.01

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

pooa.	,		
Cooling capacity	25 243	W	
Power input	8 063	W	
Current consumption	16.87	Α	
Mass flow	626	kg/h	
C.O.P.	3.13		

to: Evaporating temperature at dew point

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

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

Sound power data

Sound power level	74	dB(A)
With accoustic hood	69	dB(A)

Tolerance according EN12900

tc: Condensing temperature at dew point



Danfoss scroll compressor. HCP120T4

Performance data at 50 Hz, ARI rating conditions

R407C

Colling capacity in W	Cond. temp. in				Evapora	ting temperature	in °C (to)			
30	°C (tc)	-30	-25	-20				0	5	10
30	Cooling canacity	· in W								
35			9 421	12 084	15 357	19 202	23 583	28 461	33 799	39 559
40		_	+							
45		_								
50										
60			-			1				
Cover Input in W	-	_	_	_	_	-				
Nover input in W		-	+	_	_	_				
30				1	1	ı	1			
35	Power input in W	ı	1			1		1	1	1
40		-								
45		-	+							
So		-					1			
S55 - - - - -		-	-	1		1				
Conficient of performance (C.O.P.) Conficien	-	-	-	-	7 778					
Current consumption in A		-	+		-					
Surrent consumption in A 30		-	+	-						
12.86	65	-	-	-	-	-	-	11 323	11 371	11 360
13.66	Current consum	ption in A								
40	30	-	12.86	12.95	13.04	13.13	13.22	13.30	13.37	13.42
45	35	-	13.66	13.72	13.78	13.85	13.93	14.00	14.06	14.11
50	40	-	14.53	14.56	14.60	14.65	14.71	14.77	14.83	14.89
18.10	45	-	-	15.53	15.55	15.58	15.63	15.69	15.75	15.81
60 19.84 19.89 19.97 20.06 65 21.99 22.07 22.18 **Asss flow in kg/h** 30 - 198 248 308 377 458 550 655 774	50	-	-	-	16.69	16.71	16.75	16.81	16.87	16.94
fass flow in kg/h 30 - 198 248 308 377 458 550 655 774 35 - 195 245 304 373 452 544 648 766 40 - 191 241 299 367 446 537 641 758 45 - - 234 292 360 439 529 632 749 50 - - 234 292 350 429 519 622 739 55 - - - 282 350 429 519 622 739 55 - - - - 337 416 507 610 726 60 - - - - - 449 595 712 65 - - - - - - 45 694	55	-	-	-	-	18.10	18.13	18.19	18.26	18.34
Mass flow in kg/h 30	60	-	-	-	-	-	19.84	19.89	19.97	20.06
30 - 198 248 308 377 458 550 655 774 35 - 195 245 304 373 452 544 648 766 40 - 191 241 299 367 446 537 641 758 45 - - 234 292 360 439 529 632 749 50 - - - 282 350 429 519 622 739 55 - - - - 337 416 507 610 726 60 - - - - - 401 491 595 712 65 - - - - - - 472 576 694 **Coefficient of performance (C.O.P.) **Coefficient of performance (C.O.P.) **The company of the company	65	-	-	-	-	-	-	21.99	22.07	22.18
30 - 198 248 308 377 458 550 655 774 35 - 195 245 304 373 452 544 648 766 40 - 191 241 299 367 446 537 641 758 45 - - 234 292 360 439 529 632 749 50 - - - 282 350 429 519 622 739 55 - - - - 337 416 507 610 726 60 - - - - - 401 491 595 712 65 - - - - - - 472 576 694 **Coefficient of performance (C.O.P.) **Coefficient of performance (C.O.P.) **The company of the company	Mara - 61 and 1 and 1 and	i.								
35 - 195 245 304 373 452 544 648 766 40 - 191 241 299 367 446 537 641 758 45 - - 234 292 360 439 529 632 749 50 - - - 282 350 429 519 622 739 55 - - - - 337 416 507 610 726 60 - - - - - 401 491 595 712 65 - - - - - 472 576 694 Soefficient of performance (C.O.P.) 30 - 1.89 2.37 2.97 3.67 4.46 5.31 6.18 7.04 35 - 1.64 2.01 2.50 3.11 3.81 4.59 5			100	249	200	277	459	550	655	774
40 - 191 241 299 367 446 537 641 758 45 - - 234 292 360 439 529 632 749 50 - - - 282 350 429 519 622 739 55 - - - - 337 416 507 610 726 60 - - - - - 401 491 595 712 65 - - - - - - 472 576 694 Soefficient of performance (C.O.P.) 30 - 1.89 2.37 2.97 3.67 4.46 5.31 6.18 7.04 35 - 1.64 2.01 2.50 3.11 3.81 4.59 5.44 6.32 40 - 1.45 1.72 2.12 2.62 3.23										
45 - - 234 292 360 439 529 632 749 50 - - - 282 350 429 519 622 739 55 - - - - 337 416 507 610 726 60 - - - - - 401 491 595 712 65 - - - - - - 472 576 694 Soefficient of performance (C.O.P.) 30 - 1.89 2.37 2.97 3.67 4.46 5.31 6.18 7.04 35 - 1.64 2.01 2.50 3.11 3.81 4.59 5.44 6.32 40 - 1.45 1.72 2.12 2.62 3.23 3.94 4.73 5.57 45 - - 1.50 1.80 2.21 2.72			+							
50 - - - 282 350 429 519 622 739 55 - - - - 337 416 507 610 726 60 - - - - - 401 491 595 712 65 - - - - - - 472 576 694 Soefficient of performance (C.O.P.) 30 - 1.89 2.37 2.97 3.67 4.46 5.31 6.18 7.04 35 - 1.64 2.01 2.50 3.11 3.81 4.59 5.44 6.32 40 - 1.45 1.72 2.12 2.62 3.23 3.94 4.73 5.57 45 - - 1.50 1.80 2.21 2.72 3.34 4.05 4.83 50 - - - 1.53 1.85 2.27										
55 - - - - 337 416 507 610 726 60 - - - - - 401 491 595 712 65 - - - - - - 472 576 694 Coefficient of performance (C.O.P.) 30 - 1.89 2.37 2.97 3.67 4.46 5.31 6.18 7.04 35 - 1.64 2.01 2.50 3.11 3.81 4.59 5.44 6.32 40 - 1.45 1.72 2.12 2.62 3.23 3.94 4.73 5.57 45 - - 1.50 1.80 2.21 2.72 3.34 4.05 4.83 50 - - - 1.53 1.85 2.27 2.80 3.41 4.12 55 - - - - 1.55 1.88 </td <td></td> <td></td> <td></td> <td>1</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>				1						
60 - - - - 401 491 595 712 65 - - - - - - 472 576 694 Coefficient of performance (C.O.P.) 30 - 1.89 2.37 2.97 3.67 4.46 5.31 6.18 7.04 35 - 1.64 2.01 2.50 3.11 3.81 4.59 5.44 6.32 40 - 1.45 1.72 2.12 2.62 3.23 3.94 4.73 5.57 45 - - 1.50 1.80 2.21 2.72 3.34 4.05 4.83 50 - - - 1.53 1.85 2.27 2.80 3.41 4.12 55 - - - 1.55 1.88 2.31 2.84 3.45 60 - - - - 1.55 1.89 2.33										
65 - - - - - 472 576 694 Coefficient of performance (C.O.P.) 30 - 1.89 2.37 2.97 3.67 4.46 5.31 6.18 7.04 35 - 1.64 2.01 2.50 3.11 3.81 4.59 5.44 6.32 40 - 1.45 1.72 2.12 2.62 3.23 3.94 4.73 5.57 45 - - 1.50 1.80 2.21 2.72 3.34 4.05 4.83 50 - - - 1.53 1.85 2.27 2.80 3.41 4.12 55 - - - 1.55 1.88 2.31 2.84 3.45 60 - - - - - 1.55 1.89 2.33 2.85						1				
Coefficient of performance (C.O.P.) 30 - 1.89 2.37 2.97 3.67 4.46 5.31 6.18 7.04 35 - 1.64 2.01 2.50 3.11 3.81 4.59 5.44 6.32 40 - 1.45 1.72 2.12 2.62 3.23 3.94 4.73 5.57 45 - - 1.50 1.80 2.21 2.72 3.34 4.05 4.83 50 - - - 1.53 1.85 2.27 2.80 3.41 4.12 55 - - - 1.55 1.88 2.31 2.84 3.45 60 - - - - 1.55 1.89 2.33 2.85										
30 - 1.89 2.37 2.97 3.67 4.46 5.31 6.18 7.04 35 - 1.64 2.01 2.50 3.11 3.81 4.59 5.44 6.32 40 - 1.45 1.72 2.12 2.62 3.23 3.94 4.73 5.57 45 - - 1.50 1.80 2.21 2.72 3.34 4.05 4.83 50 - - - 1.53 1.85 2.27 2.80 3.41 4.12 55 - - - 1.55 1.88 2.31 2.84 3.45 60 - - - - 1.55 1.89 2.33 2.85	'		ı	<u> </u>	<u> </u>	I	<u> </u>	7/2	570	034
35 - 1.64 2.01 2.50 3.11 3.81 4.59 5.44 6.32 40 - 1.45 1.72 2.12 2.62 3.23 3.94 4.73 5.57 45 - - 1.50 1.80 2.21 2.72 3.34 4.05 4.83 50 - - - 1.53 1.85 2.27 2.80 3.41 4.12 55 - - - 1.55 1.88 2.31 2.84 3.45 60 - - - - 1.55 1.89 2.33 2.85			1	0.07	0.07	2.07	1 440	F 04	0.40	704
40 - 1.45 1.72 2.12 2.62 3.23 3.94 4.73 5.57 45 - - 1.50 1.80 2.21 2.72 3.34 4.05 4.83 50 - - - 1.53 1.85 2.27 2.80 3.41 4.12 55 - - - 1.55 1.88 2.31 2.84 3.45 60 - - - - 1.55 1.89 2.33 2.85										
45 - - 1.50 1.80 2.21 2.72 3.34 4.05 4.83 50 - - - 1.53 1.85 2.27 2.80 3.41 4.12 55 - - - - 1.55 1.88 2.31 2.84 3.45 60 - - - - 1.55 1.89 2.33 2.85										
50 - - - 1.53 1.85 2.27 2.80 3.41 4.12 55 - - - - 1.55 1.88 2.31 2.84 3.45 60 - - - - 1.55 1.89 2.33 2.85							+	1		
55 - - - 1.55 1.88 2.31 2.84 3.45 60 - - - - 1.55 1.89 2.33 2.85	-									
60 1.55 1.89 2.33 2.85								1		
						1				
65 - - - - 1.53 1.88 2.31	-			<u> </u>	1	ł				
	65	-	-	-	-	_	-	1.53	1.88	2.31
lominal performance at to = 7.2 °C, tc = 54.4 °C Pressure switch settings	Caslina sanasih.		2, 12 0111 0	7 \\/			Marriagnas LID arri		20	In a art art

Cooling capacity	28 137	W
Power input	8 881	W
Current consumption	18.11	Α
Mass flow	661	kg/h
C.O.P.	3.17	

to: Evaporating temperature at dew point

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

Pressure switch settings

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

Sound power data

I	Sound power level	74	dB(A)
	With accoustic hood	69	dB(A)

Tolerance according EN12900

tc: Condensing temperature at dew point



Danfoss scroll compressor. HCP120T4

Performance data at 50 Hz, EN 12900 rating conditions

R407C

Cond. temp. in				Evapora	ating temperature	in °C (to)			
°C (tc)	-30	-25	-20	-15	-10	-5	0	5	10
Cooling capacity	in W								
30	-	8 773	11 267	14 335	17 945	22 062	26 653	31 683	37 118
35		8 319	10 525	13 361	16 796	20 795	25 325	30 352	35 842
40	<u>_</u>	8 044	9 901	12 444	15 640	19 456	23 860	28 818	34 296
45	<u>-</u>		9 419	11 607	14 501	18 071	22 283	27 106	32 505
					1				
50	-	-	-	10 872	13 404	16 665	20 621	25 243	30 497
55	-	-	-	-	12 372	15 262	18 900	23 255	28 296
60	-	-	-	-	-	13 885	17 142	21 166	25 928
65	-	-	-	-	-	-	15 369	18 999	23 415
ower input in W									
30	-	4 973	5 090	5 171	5 233	5 291	5 365	5 469	5 622
35	-	5 488	5 642	5 745	5 812	5 862	5 911	5 976	6 074
40	-	6 022	6 224	6 358	6 443	6 495	6 530	6 566	6 619
45	-	-	6 853	7 030	7 142	7 206	7 238	7 256	7 275
50	-	-	-	7 778	7 928	8 014	8 054	8 063	8 059
55	_	_	-	-	8 818	8 937	8 994	9 006	8 990
60	_	-	_	-	-	9 993	10 078	10 103	10 084
65	_	-	_	-	_	-	11 323	11 371	11 360
00		1	ı	1	ı	1	11 020	11071	11 000
Current consump	tion in A								
30	-	12.86	12.95	13.04	13.13	13.22	13.30	13.37	13.42
35	-	13.66	13.72	13.78	13.85	13.93	14.00	14.06	14.11
40	-	14.53	14.56	14.60	14.65	14.71	14.77	14.83	14.89
45	-	-	15.53	15.55	15.58	15.63	15.69	15.75	15.81
50	-	-	-	16.69	16.71	16.75	16.81	16.87	16.94
55	-	-	-	-	18.10	18.13	18.19	18.26	18.34
60	-	-	-	-	-	19.84	19.89	19.97	20.06
65	-	_	-	-	-	-	21.99	22.07	22.18
		<u>I</u>				1			
Mass flow in kg/h			T	1	T	1	T	1	
30	-	199	249	309	379	460	553	659	779
35	-	196	246	306	375	455	547	652	771
40	-	192	242	300	369	449	540	644	762
45	-	-	235	293	362	441	532	636	753
50	-	-	-	284	352	431	522	626	743
55	-	-	-	-	339	419	510	613	731
60	-	-	-	-	-	403	494	598	716
65	-	-	-	-	-	-	475	580	698
Coefficient of per	formance (C.() P)							
30	-	1.76	2.21	2.77	3.43	4.17	4.97	5.79	6.60
35	-	1.52	1.87	2.33	2.89	3.55	4.28	5.08	5.90
40	-	1.34	1.59	1.96	2.43	3.00	3.65	4.39	5.18
45	-	-	1.37	1.65	2.03	2.51	3.08	3.74	4.47
50	-	-	-	1.40	1.69	2.08	2.56	3.13	3.78
55	_	-	_	-	1.40	1.71	2.10	2.58	3.15
55	-	-	-	-	-	1.71	1.70	2.10	2.57
60				1 -	1 -	1.05	1.70	2.10	2.01

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

pooa.	,		
Cooling capacity	25 243	W	
Power input	8 063	W	
Current consumption	16.87	Α	
Mass flow	626	kg/h	
C.O.P.	3.13		

to: Evaporating temperature at dew point

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

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

Sound power data

Sound power level	74	dB(A)
With accoustic hood	69	dB(A)

Tolerance according EN12900

tc: Condensing temperature at dew point



Danfoss scroll compressor. HCP120T4

Performance data at 50 Hz, ARI rating conditions

R407C

Colling capacity in W	Cond. temp. in	p. in Evaporating temperature in °C (to)								
30	°C (tc)	-30	-25	-20				0	5	10
30	Cooling canacity	· in W								
35			9 421	12 084	15 357	19 202	23 583	28 461	33 799	39 559
40		_	+							
45		_								
50										
60			-			1				
Cover Input in W	-	_	_	_	_	-				
Nover input in W		-	+	_	_	_				
30				1	1	ı	1			
35	Power input in W	ı	1			1		1	1	1
40		-								
45		-	+							
So		-					1			
S55 - - - - -		-	-	1		1				
Conficient of performance (C.O.P.) Conficien	-	-	-	-	7 778					
Current consumption in A		-	+		-					
Surrent consumption in A 30		-	+	-						
12.86	65	-	-	-	-	-	-	11 323	11 371	11 360
13.66	Current consum	ption in A								
40	30	-	12.86	12.95	13.04	13.13	13.22	13.30	13.37	13.42
45	35	-	13.66	13.72	13.78	13.85	13.93	14.00	14.06	14.11
50	40	-	14.53	14.56	14.60	14.65	14.71	14.77	14.83	14.89
18.10	45	-	-	15.53	15.55	15.58	15.63	15.69	15.75	15.81
60 19.84 19.89 19.97 20.06 65 21.99 22.07 22.18 **Asss flow in kg/h** 30 - 198 248 308 377 458 550 655 774	50	-	-	-	16.69	16.71	16.75	16.81	16.87	16.94
fass flow in kg/h 30 - 198 248 308 377 458 550 655 774 35 - 195 245 304 373 452 544 648 766 40 - 191 241 299 367 446 537 641 758 45 - - 234 292 360 439 529 632 749 50 - - 234 292 350 429 519 622 739 55 - - - 282 350 429 519 622 739 55 - - - - 337 416 507 610 726 60 - - - - - 449 595 712 65 - - - - - - 45 694	55	-	-	-	-	18.10	18.13	18.19	18.26	18.34
Mass flow in kg/h 30	60	-	-	-	-	-	19.84	19.89	19.97	20.06
30 - 198 248 308 377 458 550 655 774 35 - 195 245 304 373 452 544 648 766 40 - 191 241 299 367 446 537 641 758 45 - - 234 292 360 439 529 632 749 50 - - - 282 350 429 519 622 739 55 - - - - 337 416 507 610 726 60 - - - - - 401 491 595 712 65 - - - - - - 472 576 694 **Coefficient of performance (C.O.P.) **Coefficient of performance (C.O.P.) **The company of the company	65	-	-	-	-	-	-	21.99	22.07	22.18
30 - 198 248 308 377 458 550 655 774 35 - 195 245 304 373 452 544 648 766 40 - 191 241 299 367 446 537 641 758 45 - - 234 292 360 439 529 632 749 50 - - - 282 350 429 519 622 739 55 - - - - 337 416 507 610 726 60 - - - - - 401 491 595 712 65 - - - - - - 472 576 694 **Coefficient of performance (C.O.P.) **Coefficient of performance (C.O.P.) **The company of the company	Mara - 61 and 1 and 1 and	i.								
35 - 195 245 304 373 452 544 648 766 40 - 191 241 299 367 446 537 641 758 45 - - 234 292 360 439 529 632 749 50 - - - 282 350 429 519 622 739 55 - - - - 337 416 507 610 726 60 - - - - - 401 491 595 712 65 - - - - - 472 576 694 Soefficient of performance (C.O.P.) 30 - 1.89 2.37 2.97 3.67 4.46 5.31 6.18 7.04 35 - 1.64 2.01 2.50 3.11 3.81 4.59 5			100	249	200	277	459	550	655	774
40 - 191 241 299 367 446 537 641 758 45 - - 234 292 360 439 529 632 749 50 - - - 282 350 429 519 622 739 55 - - - - 337 416 507 610 726 60 - - - - - 401 491 595 712 65 - - - - - - 472 576 694 Soefficient of performance (C.O.P.) 30 - 1.89 2.37 2.97 3.67 4.46 5.31 6.18 7.04 35 - 1.64 2.01 2.50 3.11 3.81 4.59 5.44 6.32 40 - 1.45 1.72 2.12 2.62 3.23										
45 - - 234 292 360 439 529 632 749 50 - - - 282 350 429 519 622 739 55 - - - - 337 416 507 610 726 60 - - - - - 401 491 595 712 65 - - - - - - 472 576 694 Soefficient of performance (C.O.P.) 30 - 1.89 2.37 2.97 3.67 4.46 5.31 6.18 7.04 35 - 1.64 2.01 2.50 3.11 3.81 4.59 5.44 6.32 40 - 1.45 1.72 2.12 2.62 3.23 3.94 4.73 5.57 45 - - 1.50 1.80 2.21 2.72			+							
50 - - - 282 350 429 519 622 739 55 - - - - 337 416 507 610 726 60 - - - - - 401 491 595 712 65 - - - - - - 472 576 694 Soefficient of performance (C.O.P.) 30 - 1.89 2.37 2.97 3.67 4.46 5.31 6.18 7.04 35 - 1.64 2.01 2.50 3.11 3.81 4.59 5.44 6.32 40 - 1.45 1.72 2.12 2.62 3.23 3.94 4.73 5.57 45 - - 1.50 1.80 2.21 2.72 3.34 4.05 4.83 50 - - - 1.53 1.85 2.27										
55 - - - - 337 416 507 610 726 60 - - - - - 401 491 595 712 65 - - - - - - 472 576 694 Coefficient of performance (C.O.P.) 30 - 1.89 2.37 2.97 3.67 4.46 5.31 6.18 7.04 35 - 1.64 2.01 2.50 3.11 3.81 4.59 5.44 6.32 40 - 1.45 1.72 2.12 2.62 3.23 3.94 4.73 5.57 45 - - 1.50 1.80 2.21 2.72 3.34 4.05 4.83 50 - - - 1.53 1.85 2.27 2.80 3.41 4.12 55 - - - - 1.55 1.88 </td <td></td> <td></td> <td></td> <td>1</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>				1						
60 - - - - 401 491 595 712 65 - - - - - - 472 576 694 Coefficient of performance (C.O.P.) 30 - 1.89 2.37 2.97 3.67 4.46 5.31 6.18 7.04 35 - 1.64 2.01 2.50 3.11 3.81 4.59 5.44 6.32 40 - 1.45 1.72 2.12 2.62 3.23 3.94 4.73 5.57 45 - - 1.50 1.80 2.21 2.72 3.34 4.05 4.83 50 - - - 1.53 1.85 2.27 2.80 3.41 4.12 55 - - - 1.55 1.88 2.31 2.84 3.45 60 - - - - 1.55 1.89 2.33										
65 - - - - - 472 576 694 Coefficient of performance (C.O.P.) 30 - 1.89 2.37 2.97 3.67 4.46 5.31 6.18 7.04 35 - 1.64 2.01 2.50 3.11 3.81 4.59 5.44 6.32 40 - 1.45 1.72 2.12 2.62 3.23 3.94 4.73 5.57 45 - - 1.50 1.80 2.21 2.72 3.34 4.05 4.83 50 - - - 1.53 1.85 2.27 2.80 3.41 4.12 55 - - - 1.55 1.88 2.31 2.84 3.45 60 - - - - - 1.55 1.89 2.33 2.85						1				
Coefficient of performance (C.O.P.) 30 - 1.89 2.37 2.97 3.67 4.46 5.31 6.18 7.04 35 - 1.64 2.01 2.50 3.11 3.81 4.59 5.44 6.32 40 - 1.45 1.72 2.12 2.62 3.23 3.94 4.73 5.57 45 - - 1.50 1.80 2.21 2.72 3.34 4.05 4.83 50 - - - 1.53 1.85 2.27 2.80 3.41 4.12 55 - - - 1.55 1.88 2.31 2.84 3.45 60 - - - - 1.55 1.89 2.33 2.85										
30 - 1.89 2.37 2.97 3.67 4.46 5.31 6.18 7.04 35 - 1.64 2.01 2.50 3.11 3.81 4.59 5.44 6.32 40 - 1.45 1.72 2.12 2.62 3.23 3.94 4.73 5.57 45 - - 1.50 1.80 2.21 2.72 3.34 4.05 4.83 50 - - - 1.53 1.85 2.27 2.80 3.41 4.12 55 - - - 1.55 1.88 2.31 2.84 3.45 60 - - - - 1.55 1.89 2.33 2.85	'		ı	<u> </u>	<u> </u>	I	<u> </u>	7/2	570	034
35 - 1.64 2.01 2.50 3.11 3.81 4.59 5.44 6.32 40 - 1.45 1.72 2.12 2.62 3.23 3.94 4.73 5.57 45 - - 1.50 1.80 2.21 2.72 3.34 4.05 4.83 50 - - - 1.53 1.85 2.27 2.80 3.41 4.12 55 - - - 1.55 1.88 2.31 2.84 3.45 60 - - - - 1.55 1.89 2.33 2.85			1	0.07	0.07	2.07	1 440	F 04	0.40	704
40 - 1.45 1.72 2.12 2.62 3.23 3.94 4.73 5.57 45 - - 1.50 1.80 2.21 2.72 3.34 4.05 4.83 50 - - - 1.53 1.85 2.27 2.80 3.41 4.12 55 - - - 1.55 1.88 2.31 2.84 3.45 60 - - - - 1.55 1.89 2.33 2.85										
45 - - 1.50 1.80 2.21 2.72 3.34 4.05 4.83 50 - - - 1.53 1.85 2.27 2.80 3.41 4.12 55 - - - - 1.55 1.88 2.31 2.84 3.45 60 - - - - 1.55 1.89 2.33 2.85										
50 - - - 1.53 1.85 2.27 2.80 3.41 4.12 55 - - - - 1.55 1.88 2.31 2.84 3.45 60 - - - - 1.55 1.89 2.33 2.85							+	1		
55 - - - 1.55 1.88 2.31 2.84 3.45 60 - - - - 1.55 1.89 2.33 2.85	-									
60 1.55 1.89 2.33 2.85								1		
						1				
65 - - - - 1.53 1.88 2.31	-			<u> </u>	1	ł				
	65	-	-	-	-	_	-	1.53	1.88	2.31
lominal performance at to = 7.2 °C, tc = 54.4 °C Pressure switch settings	Caslina sanasih.		2, 12 0111 0	7 \\/			Marriagnas LID arri		20	In a art art

Cooling capacity	28 137	W
Power input	8 881	W
Current consumption	18.11	Α
Mass flow	661	kg/h
C.O.P.	3.17	

to: Evaporating temperature at dew point

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

Pressure switch settings

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

Sound power data

I	Sound power level	74	dB(A)
	With accoustic hood	69	dB(A)

Tolerance according EN12900

tc: Condensing temperature at dew point



Danfoss scroll compressor. HCP120T4

Performance data at 60 Hz, EN 12900 rating conditions

R407C

Cond. temp. in				Evapora	ting temperature i	n °C (to)			
°C (tc)	-30	-25	-20	-15	-10	-5	0	5	10
Cooling capacity	ı in W								
30		10 514	13 501	17 179	21 509	26 447	31 952	37 983	44 496
		9 972				24 934			42 974
35			12 615	16 017	20 137	1	30 367	36 395	
40	-	9 642	11 869	14 921	18 756	23 335	28 618	34 563	41 128
45	-	-	11 291	13 919	17 395	21 680	26 735	32 519	38 991
50	-	-	-	13 038	16 082	19 999	24 749	30 294	36 592
55	-	-	-	-	14 845	18 320	22 690	27 918	33 964
60	-	-	-	-	-	16 670	20 586	25 420	31 133
65	-	-	-	-	-	-	18 462	22 825	28 126
Power input in V	v								
30	-	6 084	6 252	6 349	6 405	6 451	6 520	6 642	6 849
35	-	6 693	6 896	7 013	7 074	7 111	7 156	7 240	7 395
40	-	7 339	7 585	7 730	7 805	7 842	7 872	7 926	8 037
45	-	-	8 337	8 519	8 617	8 662	8 686	8 720	8 796
50	-	-	-	9 400	9 529	9 591	9 617	9 639	9 689
55	-	-	-	-	10 559	10 647	10 685	10 704	10 735
60	-	-	-	-	-	11 849	11 907	11 931	11 954
65	-	-	-	-	-	-	13 303	13 342	13 364
•		1	•	•		•	•		
Current consum	ption in A	12.77	12.96	12.05	12.04	12.12	12.21	12.20	12.22
30			12.86	12.95	13.04	13.13	13.21	13.28	13.33
35	-	13.57	13.62	13.69	13.76	13.83	13.90	13.96	14.02
40	-	14.43	14.46	14.50	14.55	14.61	14.67	14.73	14.79
45	-	-	15.42	15.44	15.48	15.53	15.58	15.64	15.70
50	-	-	-	16.57	16.60	16.64	16.69	16.76	16.83
55	-	-	-	-	17.98	18.01	18.07	18.13	18.21
60	-	-	-	-	-	19.70	19.76	19.84	19.93
65	-	-	-	-	-	-	21.84	21.92	22.03
Mass flow in kg/	h								
30	-	238	299	371	455	552	663	790	933
35	-	236	295	366	449	546	656	782	924
40	-	231	290	360	443	538	648	773	914
45	-	-	282	352	434	529	638	763	904
50	-	-	-	340	422	517	627	751	891
55	-	-	-	-	407	502	612	736	877
60	-	-	-	-	-	484	593	718	859
65	-	-	-	-	-	-	571	696	838
Coefficient of pe	rformance (C.	O.P.)							
30	-	1.73	2.16	2.71	3.36	4.10	4.90	5.72	6.50
35	-	1.49	1.83	2.28	2.85	3.51	4.24	5.03	5.81
40	-	1.31	1.56	1.93	2.40	2.98	3.64	4.36	5.12
45	-	-	1.35	1.63	2.02	2.50	3.08	3.73	4.43
50	-	-	-	1.39	1.69	2.09	2.57	3.14	3.78
55	-	-	-	-	1.41	1.72	2.12	2.61	3.16
60	-	-	-	-	-	1.41	1.73	2.13	2.60
65	-	-	_	-	-	-	1.39	1.71	2.10

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

Cooling capacity	30 294	W
Power input	9 639	W
Current consumption	16.76	Α
Mass flow	751	kg/h
C.O.P.	3.14	

to: Evaporating temperature at dew point

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

Pressure switch settings

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

Sound power data

ſ	Sound power level	77	dB(A)
ı	With accoustic hood	72	dB(A)

Tolerance according EN12900

tc: Condensing temperature at dew point



Danfoss scroll compressor. HCP120T4

Performance data at 60 Hz, ARI rating conditions

R407C

Cond. temp. in Evaporating temperature in °C (to)									
°C (tc)	-30	-25	-20	-15	-10	-5	0	5	10
Cooling capacity	in W								
30	-	11 291	14 480	18 404	23 016	28 270	34 120	40 520	47 423
35		10 762	13 596	17 240	21 648	26 773	32 570	38 992	45 994
					1	1			
40 45	-	10 466	12 864	16 148	20 271	25 186	30 849 28 989	37 212 35 212	44 231 42 166
			12 318	15 160	18 916	23 541			
50	-	-	-	14 308	17 617	21 870 20 206	27 022 24 980	33 025	39 833 37 264
55		-	-	-	16 406	†		30 682	
60	-	-	-	-	-	18 582	22 897	28 216	34 491
65	-	-	-	-	-	-	20 805	25 659	31 546
Power input in W									
30	-	6 084	6 252	6 349	6 405	6 451	6 520	6 642	6 849
35	-	6 693	6 896	7 013	7 074	7 111	7 156	7 240	7 395
40	-	7 339	7 585	7 730	7 805	7 842	7 872	7 926	8 037
45	-	-	8 337	8 519	8 617	8 662	8 686	8 720	8 796
50	-	-	-	9 400	9 529	9 591	9 617	9 639	9 689
55	-	-	-	-	10 559	10 647	10 685	10 704	10 735
60	-	-	-	-	-	11 849	11 907	11 931	11 954
65	_	-	_	_	-	-	13 303	13 342	13 364
		L	l	II.	l	II.			
Current consump	tion in A								
30	-	12.77	12.86	12.95	13.04	13.13	13.21	13.28	13.33
35	-	13.57	13.62	13.69	13.76	13.83	13.90	13.96	14.02
40	-	14.43	14.46	14.50	14.55	14.61	14.67	14.73	14.79
45	-	-	15.42	15.44	15.48	15.53	15.58	15.64	15.70
50	-	-	-	16.57	16.60	16.64	16.69	16.76	16.83
55	-	-	-	-	17.98	18.01	18.07	18.13	18.21
60	-	-	-	-	-	19.70	19.76	19.84	19.93
65	-	-	-	-	-	-	21.84	21.92	22.03
			•		•			•	
Mass flow in kg/h	l								
30	-	237	297	369	452	549	660	786	928
35	-	234	294	364	447	543	652	777	918
40	-	229	288	358	440	535	644	768	909
45	-	-	280	350	431	526	635	758	898
50	-	-	-	338	420	514	623	747	886
55	-	-	-	-	405	500	608	732	872
60	-	-	-	-	-	481	590	714	854
65	-	-	-	-	-	-	568	692	833
Danfflalant of	fa								
30	formance (C.0	1.86	2.32	2.90	3.59	4.38	5.23	6.10	6.92
35		1.61	1.97	2.46	3.06	3.77	4.55	5.39	6.22
40	-	1.43	1.70	2.40	2.60	3.21	3.92	4.69	5.50
				1		1			4.79
45	-	-	1.48	1.78 1.52	2.20	2.72	3.34	4.04	
50	-	-			1.85	2.28	2.81	3.43	4.11
55	-	-	-	-	1.55	1.90	2.34	2.87	3.47
60	-	-	-	-	-	1.57	1.92	2.36	2.89
65	-	-	-	-	-	-	1.56	1.92	2.36

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

recinitial portormaneo acto	. 0, 10 04.4 0	
Cooling capacity	33 775	W
Power input	10 579	W
Current consumption	17.99	Α
Mass flow	793	kg/h
C.O.P.	3.19	

to: Evaporating temperature at dew point

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

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

Sound power data

Sound power level	77	dB(A)
With accoustic hood	72	dB(A)

Tolerance according EN12900

tc: Condensing temperature at dew point



Danfoss scroll compressor. HCP120T4

Performance data at 60 Hz, EN 12900 rating conditions

R407C

Cond. temp. in Evaporating temperature in °C (to)									
°C (tc)	-30	-25	-20	-15	-10	-5	0	5	10
Cooling capacity	ı in W								
30		10 514	13 501	17 179	21 509	26 447	31 952	37 983	44 496
		9 972				24 934			42 974
35			12 615	16 017	20 137	1	30 367	36 395	
40	-	9 642	11 869	14 921	18 756	23 335	28 618	34 563	41 128
45	-	-	11 291	13 919	17 395	21 680	26 735	32 519	38 991
50	-	-	-	13 038	16 082	19 999	24 749	30 294	36 592
55	-	-	-	-	14 845	18 320	22 690	27 918	33 964
60	-	-	-	-	-	16 670	20 586	25 420	31 133
65	-	-	-	-	-	-	18 462	22 825	28 126
Power input in V	v								
30	-	6 084	6 252	6 349	6 405	6 451	6 520	6 642	6 849
35	-	6 693	6 896	7 013	7 074	7 111	7 156	7 240	7 395
40	-	7 339	7 585	7 730	7 805	7 842	7 872	7 926	8 037
45	-	-	8 337	8 519	8 617	8 662	8 686	8 720	8 796
50	-	-	-	9 400	9 529	9 591	9 617	9 639	9 689
55	-	-	-	-	10 559	10 647	10 685	10 704	10 735
60	-	-	-	-	-	11 849	11 907	11 931	11 954
65	-	-	-	-	-	-	13 303	13 342	13 364
•		1	•	•		•	•		
Current consum	ption in A	12.77	12.96	12.05	12.04	12.12	12.21	12.20	12.22
30			12.86	12.95	13.04	13.13	13.21	13.28	13.33
35	-	13.57	13.62	13.69	13.76	13.83	13.90	13.96	14.02
40	-	14.43	14.46	14.50	14.55	14.61	14.67	14.73	14.79
45	-	-	15.42	15.44	15.48	15.53	15.58	15.64	15.70
50	-	-	-	16.57	16.60	16.64	16.69	16.76	16.83
55	-	-	-	-	17.98	18.01	18.07	18.13	18.21
60	-	-	-	-	-	19.70	19.76	19.84	19.93
65	-	-	-	-	-	-	21.84	21.92	22.03
Mass flow in kg/	h								
30	-	238	299	371	455	552	663	790	933
35	-	236	295	366	449	546	656	782	924
40	-	231	290	360	443	538	648	773	914
45	-	-	282	352	434	529	638	763	904
50	-	-	-	340	422	517	627	751	891
55	-	-	-	-	407	502	612	736	877
60	-	-	-	-	-	484	593	718	859
65	-	-	-	-	-	-	571	696	838
Coefficient of pe	rformance (C.	O.P.)							
30	-	1.73	2.16	2.71	3.36	4.10	4.90	5.72	6.50
35	-	1.49	1.83	2.28	2.85	3.51	4.24	5.03	5.81
40	-	1.31	1.56	1.93	2.40	2.98	3.64	4.36	5.12
45	-	-	1.35	1.63	2.02	2.50	3.08	3.73	4.43
50	-	-	-	1.39	1.69	2.09	2.57	3.14	3.78
55	-	-	-	-	1.41	1.72	2.12	2.61	3.16
60	-	-	-	-	-	1.41	1.73	2.13	2.60
65	-	-	_	-	-	-	1.39	1.71	2.10

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

Cooling capacity	30 294	W
Power input	9 639	W
Current consumption	16.76	Α
Mass flow	751	kg/h
C.O.P.	3.14	

to: Evaporating temperature at dew point

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

Pressure switch settings

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

Sound power data

ſ	Sound power level	77	dB(A)
ı	With accoustic hood	72	dB(A)

Tolerance according EN12900

tc: Condensing temperature at dew point



Danfoss scroll compressor. HCP120T4

Performance data at 60 Hz, ARI rating conditions

R407C

Cond. temp. in				Evapora	iting temperature	in °C (to)			
°C (tc)	-30	-25	-20	-15	-10	-5	0	5	10
Cooling capacity	in W								
30	-	11 291	14 480	18 404	23 016	28 270	34 120	40 520	47 423
35		10 762	13 596	17 240	21 648	26 773	32 570	38 992	45 994
					1	1			
40 45	-	10 466	12 864	16 148	20 271	25 186	30 849 28 989	37 212 35 212	44 231 42 166
			12 318	15 160	18 916	23 541			
50	-	-	-	14 308	17 617	21 870 20 206	27 022 24 980	33 025	39 833 37 264
55		-	-	-	16 406	†		30 682	
60	-	-	-	-	-	18 582	22 897	28 216	34 491
65	-	-	-	-	-	-	20 805	25 659	31 546
Power input in W									
30	-	6 084	6 252	6 349	6 405	6 451	6 520	6 642	6 849
35	-	6 693	6 896	7 013	7 074	7 111	7 156	7 240	7 395
40	-	7 339	7 585	7 730	7 805	7 842	7 872	7 926	8 037
45	-	-	8 337	8 519	8 617	8 662	8 686	8 720	8 796
50	-	-	-	9 400	9 529	9 591	9 617	9 639	9 689
55	-	-	-	-	10 559	10 647	10 685	10 704	10 735
60	-	-	-	-	-	11 849	11 907	11 931	11 954
65	_	-	_	_	-	-	13 303	13 342	13 364
		L	l	II.	l	II.			
Current consump	tion in A								
30	-	12.77	12.86	12.95	13.04	13.13	13.21	13.28	13.33
35	-	13.57	13.62	13.69	13.76	13.83	13.90	13.96	14.02
40	-	14.43	14.46	14.50	14.55	14.61	14.67	14.73	14.79
45	-	-	15.42	15.44	15.48	15.53	15.58	15.64	15.70
50	-	-	-	16.57	16.60	16.64	16.69	16.76	16.83
55	-	-	-	-	17.98	18.01	18.07	18.13	18.21
60	-	-	-	-	-	19.70	19.76	19.84	19.93
65	-	-	-	-	-	-	21.84	21.92	22.03
			•		•			•	
Mass flow in kg/h	l								
30	-	237	297	369	452	549	660	786	928
35	-	234	294	364	447	543	652	777	918
40	-	229	288	358	440	535	644	768	909
45	-	-	280	350	431	526	635	758	898
50	-	-	-	338	420	514	623	747	886
55	-	-	-	-	405	500	608	732	872
60	-	-	-	-	-	481	590	714	854
65	-	-	-	-	-	-	568	692	833
Danfflalant of	fa								
30	formance (C.0	1.86	2.32	2.90	3.59	4.38	5.23	6.10	6.92
35		1.61	1.97	2.46	3.06	3.77	4.55	5.39	6.22
40	-	1.43	1.70	2.40	2.60	3.21	3.92	4.69	5.50
				1		1			4.79
45	-	-	1.48	1.78 1.52	2.20	2.72	3.34	4.04	
50	-	-			1.85	2.28	2.81	3.43	4.11
55	-	-	-	-	1.55	1.90	2.34	2.87	3.47
60	-	-	-	-	-	1.57	1.92	2.36	2.89
65	-	-	-	-	-	-	1.56	1.92	2.36

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

recinitial portormaneo acto	. 0, 10 04.4 0	
Cooling capacity	33 775	W
Power input	10 579	W
Current consumption	17.99	Α
Mass flow	793	kg/h
C.O.P.	3.19	

to: Evaporating temperature at dew point

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

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

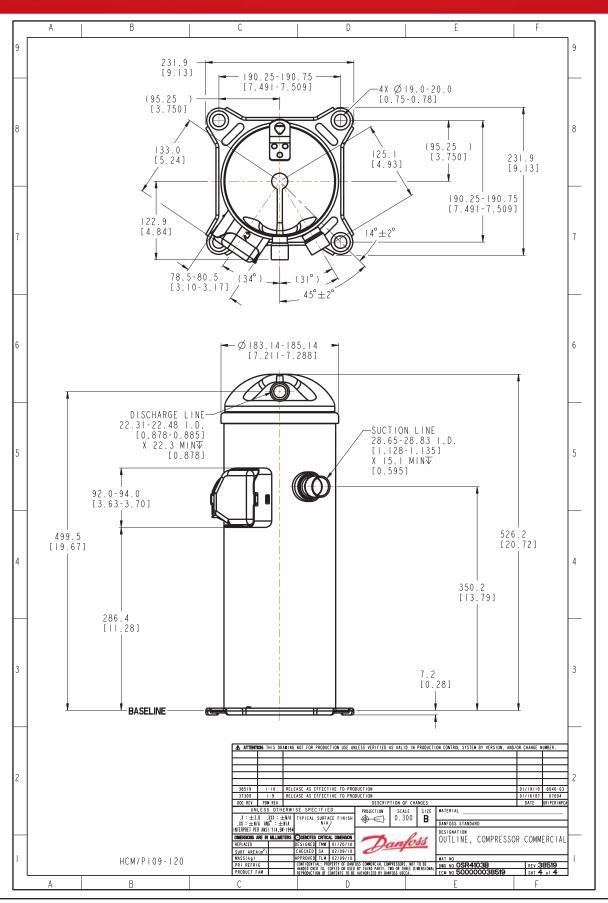
Sound power data

Sound power level	77	dB(A)
With accoustic hood	72	dB(A)

Tolerance according EN12900

tc: Condensing temperature at dew point





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FRCC.PD.0SR4103B-4 page drawings



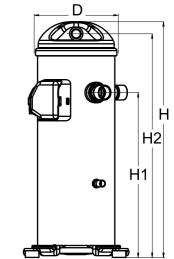
Datasheet, technical data

Danfoss scroll compressor, HCP120T4

General Characteristics

Model number (on compressor nameplate)		HCP120T4LC8		
Code number for Singlepack*		120U0411		
Code number for Industrial pack**		120U0408		
Drawing number		0SR4103B-4		
Suction and discharge connections		Brazed		
Suction connection		1-1/8 " ODF		
Discharge connection		7/8 " ODF		
Oil sight glass		None		
Oil equalisation connection		1/2"		
Oil drain connection		None		
LP gauge port		None		
IPR valve		None		
Swept volume	162.4 c	m3/rev		
Displacement @ Nominal speed	28.3 m3/h @ 2900 rpm	- 34.1 m3/h @ 3500 rpm		
Net weight	45.2	2 kg		
Oil charge	2.66 litro	e, PVE		
Maximum system test pressure Low Side / High side	- bar(g)	/ - bar(g)		
Maximum differential test pressure	- k	- bar		
Maximum number of starts per hour		-		
Refrigerant charge limit	7.20	5 kg		
Approved refrigerants	R40	R407C		

Dimensions



Electrical Characteristics

Electrical characteristics	
Nominal voltage	380-415V/3/50Hz - 460V/3/60Hz
Voltage range	342-457 V @ 50Hz - 414-506 V @ 60Hz
Winding resistance between phases 1-2 +/- 7% at 25°C	1.125 Ω
Winding resistance between phases 1-3 +/- 7% at 25°C	1.110 Ω
Winding resistance between phases 2-3 +/- 7% at 25°C	1.100 Ω
Rated Load Amps (RLA)	19.2 A
Maximum Continuous Current (MCC)	25 A
Locked Rotor Amps (LRA)	140 A
Motor protection	Internal overload protector

D=184 mm H=545 mm H1=369 mm H2=519 mm H3=- mm

Recommended Installation torques

Oil sight glass	52.5 Nm
Power connections / Earth connection	3 Nm / 2 Nm

Terminal box



Parts shipped with compressor

Mounting kit with grommets and sleeves
Initial oil charge
Installation instructions

Approvals: CE certified, UL certified (file SA11565), -

*Singlepack: Compressor in cardboard box

**Industrial pack: 12 or 16 Unboxed compressors on pallet

IP22

1: Screw connectors 10-32 UNF x 9.5

2: Earth connection

3: Power cable passage



Datasheet, accessories and spare parts

Danfoss scroll compressor, HCP120T4

Rotolock accessories, suction side	Code no.
Solder sleeve, P02 (1-3/4" Rotolock, 1-1/8" ODF)	8153004
Angle adapter, C02 (1-3/4" Rotolock, 1-1/8" ODF)	8168005
Rotolock valve, V02 (1-3/4" Rotolock, 1-1/8" ODF)	8168028
Gasket, 1-3/4"	8156132

Rotolock accessories, discharge sideCode no.Rotolock valve, V05 (1-1/4" Rotolock, 7/8" ODF)8168030Gasket, 1-3/4"8156132

Rotolock accessories, sets	Code no.
Solder sleeve adapter set (1-3/4" Rotolock, 1-1/8" ODF), (1-1/4" Rotolock, 7/8" ODF)	120Z0125
Valve set, V02(1"3/4~1"1/8), V05(1"1/4~7/8")	120Z0403
Gasket set, 1", 1-1/4", 1-3/4", OSG gaskets black & white	8156009

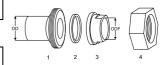
Oil / lubricants	Code no.
PVE lubricant, 320HV (FVC68D), 1 litre can	120Z5034

Crankcase heaters	Code no.		
Belt type crankcase heater, 65 W, 230 V, CE mark, UL	120Z0059		
Belt type crankcase heater, 65 W, 400 V, CE mark, UL	120Z0060		
Belt type crankcase heater, 70 W, 240 V, CE mark, UL	120Z5040		
Belt type crankcase heater, 70 W, 240 V, CE mark, UL	120Z5040		

Miscellaneous accessories	Code no.
Acoustic hood	120Z5045
Discharge thermostat kit	7750009
IP54 upgrade kit	118U0057

Spare parts	Code no.
Mounting kit for 1 scroll compressor including 4 grommets, 4 sleeves, 4 bolts, 4 washers	120Z5005
Mounting kit, including 1 bolt, 1 sleeve, 1 washer	120Z5031
Terminal box cover	12075018

Solder sleeve adapter set



1: Rotolock adapter (Suc & Dis)

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



Danfoss scroll compressor. HCP120T4

Performance data at 50 Hz, EN 12900 rating conditions

R407C

Cond. temp. in	in Evaporating temperature in °C (to)								
°C (tc)	-30	-25	-20	-15	-10	-5	0	5	10
Cooling capacity	in W								
30	-	8 773	11 267	14 335	17 945	22 062	26 653	31 683	37 118
35		8 319	10 525	13 361	16 796	20 795	25 325	30 352	35 842
40	<u>_</u>	8 044	9 901	12 444	15 640	19 456	23 860	28 818	34 296
45	<u>-</u>		9 419	11 607	14 501	18 071	22 283	27 106	32 505
					1				
50	-	-	-	10 872	13 404	16 665	20 621	25 243	30 497
55	-	-	-	-	12 372	15 262	18 900	23 255	28 296
60	-	-	-	-	-	13 885	17 142	21 166	25 928
65	-	-	-	-	-	-	15 369	18 999	23 415
ower input in W									
30	-	4 973	5 090	5 171	5 233	5 291	5 365	5 469	5 622
35	-	5 488	5 642	5 745	5 812	5 862	5 911	5 976	6 074
40	-	6 022	6 224	6 358	6 443	6 495	6 530	6 566	6 619
45	-	-	6 853	7 030	7 142	7 206	7 238	7 256	7 275
50	-	-	-	7 778	7 928	8 014	8 054	8 063	8 059
55	_	_	-	-	8 818	8 937	8 994	9 006	8 990
60	_	-	_	-	-	9 993	10 078	10 103	10 084
65	_	-	_	-	_	-	11 323	11 371	11 360
00		1	ı	1	ı	1	11 020	11071	11 000
Current consump	tion in A								
30	-	12.86	12.95	13.04	13.13	13.22	13.30	13.37	13.42
35	-	13.66	13.72	13.78	13.85	13.93	14.00	14.06	14.11
40	-	14.53	14.56	14.60	14.65	14.71	14.77	14.83	14.89
45	-	-	15.53	15.55	15.58	15.63	15.69	15.75	15.81
50	-	-	-	16.69	16.71	16.75	16.81	16.87	16.94
55	-	-	-	-	18.10	18.13	18.19	18.26	18.34
60	-	-	-	-	-	19.84	19.89	19.97	20.06
65	-	_	-	-	-	-	21.99	22.07	22.18
		<u>I</u>				1			
Mass flow in kg/h			T	1	T	1	T	1	
30	-	199	249	309	379	460	553	659	779
35	-	196	246	306	375	455	547	652	771
40	-	192	242	300	369	449	540	644	762
45	-	-	235	293	362	441	532	636	753
50	-	-	-	284	352	431	522	626	743
55	-	-	-	-	339	419	510	613	731
60	-	-	-	-	-	403	494	598	716
65	-	-	-	-	-	-	475	580	698
Coefficient of per	formance (C.() P)							
30	-	1.76	2.21	2.77	3.43	4.17	4.97	5.79	6.60
35	-	1.52	1.87	2.33	2.89	3.55	4.28	5.08	5.90
40	-	1.34	1.59	1.96	2.43	3.00	3.65	4.39	5.18
45	-	-	1.37	1.65	2.03	2.51	3.08	3.74	4.47
50	-	-	-	1.40	1.69	2.08	2.56	3.13	3.78
55	_	-	_	-	1.40	1.71	2.10	2.58	3.15
55	-	-	-	-	-	1.71	1.70	2.10	2.57
60				1 -	1 -	1.05	1.70	2.10	2.01

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

pooa.	,		
Cooling capacity	25 243	W	
Power input	8 063	W	
Current consumption	16.87	Α	
Mass flow	626	kg/h	
C.O.P.	3.13		

to: Evaporating temperature at dew point

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

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

Sound power data

Sound power level	74	dB(A)
With accoustic hood	69	dB(A)

Tolerance according EN12900

tc: Condensing temperature at dew point



Danfoss scroll compressor. HCP120T4

Performance data at 50 Hz, ARI rating conditions

R407C

Colling capacity in W	Cond. temp. in	Evaporating temperature in °C (to)								
30	°C (tc)	-30	-25	-20				0	5	10
30	Cooling canacity	· in W								
35			9 421	12 084	15 357	19 202	23 583	28 461	33 799	39 559
40		_	+							
45		_								
50										
60			-			1				
Cover Input in W	-	_	_	_	_	-				
Nover input in W		-	+	_	_	_				
30				1	1	ı	1			
35	Power input in W	ı	1			1		1	1	1
40		-								
45		-	+							
So		-					1			
S55 - - - - -		-	-	1		1	•			
Conficient of performance (C.O.P.) Conficien	-	-	-	-	7 778					
Current consumption in A		-	+		-					
Surrent consumption in A 30		-	+	-						
12.86	65	-	-	-	-	-	-	11 323	11 371	11 360
13.66	Current consum	ption in A								
40	30	-	12.86	12.95	13.04	13.13	13.22	13.30	13.37	13.42
45	35	-	13.66	13.72	13.78	13.85	13.93	14.00	14.06	14.11
50	40	-	14.53	14.56	14.60	14.65	14.71	14.77	14.83	14.89
18.10	45	-	-	15.53	15.55	15.58	15.63	15.69	15.75	15.81
60 19.84 19.89 19.97 20.06 65 21.99 22.07 22.18 **Asss flow in kg/h** 30 - 198 248 308 377 458 550 655 774	50	-	-	-	16.69	16.71	16.75	16.81	16.87	16.94
fass flow in kg/h 30 - 198 248 308 377 458 550 655 774 35 - 195 245 304 373 452 544 648 766 40 - 191 241 299 367 446 537 641 758 45 - - 234 292 360 439 529 632 749 50 - - 234 292 350 429 519 622 739 55 - - - 282 350 429 519 622 739 55 - - - - 337 416 507 610 726 60 - - - - - 449 595 712 65 - - - - - - 45 694	55	-	-	-	-	18.10	18.13	18.19	18.26	18.34
Mass flow in kg/h 30	60	-	-	-	-	-	19.84	19.89	19.97	20.06
30 - 198 248 308 377 458 550 655 774 35 - 195 245 304 373 452 544 648 766 40 - 191 241 299 367 446 537 641 758 45 - - 234 292 360 439 529 632 749 50 - - - 282 350 429 519 622 739 55 - - - - 337 416 507 610 726 60 - - - - - 401 491 595 712 65 - - - - - - 472 576 694 **Coefficient of performance (C.O.P.) **Coefficient of performance (C.O.P.) **The company of the company	65	-	-	-	-	-	-	21.99	22.07	22.18
30 - 198 248 308 377 458 550 655 774 35 - 195 245 304 373 452 544 648 766 40 - 191 241 299 367 446 537 641 758 45 - - 234 292 360 439 529 632 749 50 - - - 282 350 429 519 622 739 55 - - - - 337 416 507 610 726 60 - - - - - 401 491 595 712 65 - - - - - - 472 576 694 **Coefficient of performance (C.O.P.) **Coefficient of performance (C.O.P.) **The company of the company	Mara - 61 and 1 and 1 and	i.								
35 - 195 245 304 373 452 544 648 766 40 - 191 241 299 367 446 537 641 758 45 - - 234 292 360 439 529 632 749 50 - - - 282 350 429 519 622 739 55 - - - - 337 416 507 610 726 60 - - - - - 401 491 595 712 65 - - - - - 472 576 694 Soefficient of performance (C.O.P.) 30 - 1.89 2.37 2.97 3.67 4.46 5.31 6.18 7.04 35 - 1.64 2.01 2.50 3.11 3.81 4.59 5			100	249	200	277	459	550	655	774
40 - 191 241 299 367 446 537 641 758 45 - - 234 292 360 439 529 632 749 50 - - - 282 350 429 519 622 739 55 - - - - 337 416 507 610 726 60 - - - - - 401 491 595 712 65 - - - - - - 472 576 694 Soefficient of performance (C.O.P.) 30 - 1.89 2.37 2.97 3.67 4.46 5.31 6.18 7.04 35 - 1.64 2.01 2.50 3.11 3.81 4.59 5.44 6.32 40 - 1.45 1.72 2.12 2.62 3.23										
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35 - 1.64 2.01 2.50 3.11 3.81 4.59 5.44 6.32 40 - 1.45 1.72 2.12 2.62 3.23 3.94 4.73 5.57 45 - - 1.50 1.80 2.21 2.72 3.34 4.05 4.83 50 - - - 1.53 1.85 2.27 2.80 3.41 4.12 55 - - - 1.55 1.88 2.31 2.84 3.45 60 - - - - 1.55 1.89 2.33 2.85			1	0.07	0.07	2.07	1 440	F 04	0.40	704
40 - 1.45 1.72 2.12 2.62 3.23 3.94 4.73 5.57 45 - - 1.50 1.80 2.21 2.72 3.34 4.05 4.83 50 - - - 1.53 1.85 2.27 2.80 3.41 4.12 55 - - - 1.55 1.88 2.31 2.84 3.45 60 - - - - 1.55 1.89 2.33 2.85										
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50 - - - 1.53 1.85 2.27 2.80 3.41 4.12 55 - - - - 1.55 1.88 2.31 2.84 3.45 60 - - - - 1.55 1.89 2.33 2.85							+	1		
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65 - - - - 1.53 1.88 2.31	-			<u> </u>	1	ł				
	65	-	-	-	-	-	-	1.53	1.88	2.31
lominal performance at to = 7.2 °C, tc = 54.4 °C Pressure switch settings	Caslina sanasih.		2, 12 0111 0	7 \\/			Marriagnas LID arri		20	In a art art

Cooling capacity	28 137	W
Power input	8 881	W
Current consumption	18.11	Α
Mass flow	661	kg/h
C.O.P.	3.17	

to: Evaporating temperature at dew point

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

Pressure switch settings

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

Sound power data

I	Sound power level	74	dB(A)
	With accoustic hood	69	dB(A)

Tolerance according EN12900

tc: Condensing temperature at dew point



Danfoss scroll compressor. HCP120T4

Performance data at 50 Hz, EN 12900 rating conditions

R407C

Cond. temp. in Evaporating temperature in °C (to)									
°C (tc)	-30	-25	-20	-15	-10	-5	0	5	10
Cooling capacity	in W								
30	-	8 773	11 267	14 335	17 945	22 062	26 653	31 683	37 118
35		8 319	10 525	13 361	16 796	20 795	25 325	30 352	35 842
40	<u>_</u>	8 044	9 901	12 444	15 640	19 456	23 860	28 818	34 296
45	<u>-</u>		9 419	11 607	14 501	18 071	22 283	27 106	32 505
					1				
50	-	-	-	10 872	13 404	16 665	20 621	25 243	30 497
55	-	-	-	-	12 372	15 262	18 900	23 255	28 296
60	-	-	-	-	-	13 885	17 142	21 166	25 928
65	-	-	-	-	-	-	15 369	18 999	23 415
ower input in W									
30	-	4 973	5 090	5 171	5 233	5 291	5 365	5 469	5 622
35	-	5 488	5 642	5 745	5 812	5 862	5 911	5 976	6 074
40	-	6 022	6 224	6 358	6 443	6 495	6 530	6 566	6 619
45	-	-	6 853	7 030	7 142	7 206	7 238	7 256	7 275
50	-	-	-	7 778	7 928	8 014	8 054	8 063	8 059
55	_	_	-	-	8 818	8 937	8 994	9 006	8 990
60	_	-	_	-	-	9 993	10 078	10 103	10 084
65	_	-	_	-	_	-	11 323	11 371	11 360
00		1	ı	1	ı	1	11 020	11071	11 000
Current consump	tion in A								
30	-	12.86	12.95	13.04	13.13	13.22	13.30	13.37	13.42
35	-	13.66	13.72	13.78	13.85	13.93	14.00	14.06	14.11
40	-	14.53	14.56	14.60	14.65	14.71	14.77	14.83	14.89
45	-	-	15.53	15.55	15.58	15.63	15.69	15.75	15.81
50	-	-	-	16.69	16.71	16.75	16.81	16.87	16.94
55	-	-	-	-	18.10	18.13	18.19	18.26	18.34
60	-	-	-	-	-	19.84	19.89	19.97	20.06
65	-	_	-	-	-	-	21.99	22.07	22.18
		<u>I</u>				1			
Mass flow in kg/h			T	1	T	1	T	1	
30	-	199	249	309	379	460	553	659	779
35	-	196	246	306	375	455	547	652	771
40	-	192	242	300	369	449	540	644	762
45	-	-	235	293	362	441	532	636	753
50	-	-	-	284	352	431	522	626	743
55	-	-	-	-	339	419	510	613	731
60	-	-	-	-	-	403	494	598	716
65	-	-	-	-	-	-	475	580	698
Coefficient of per	formance (C.() P)							
30	-	1.76	2.21	2.77	3.43	4.17	4.97	5.79	6.60
35	-	1.52	1.87	2.33	2.89	3.55	4.28	5.08	5.90
40	-	1.34	1.59	1.96	2.43	3.00	3.65	4.39	5.18
45	-	-	1.37	1.65	2.03	2.51	3.08	3.74	4.47
50	-	-	-	1.40	1.69	2.08	2.56	3.13	3.78
55	_	-	_	-	1.40	1.71	2.10	2.58	3.15
55	-	-	-	-	-	1.71	1.70	2.10	2.57
60				1 -	1 -	1.05	1.70	2.10	2.01

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

pooa.	,		
Cooling capacity	25 243	W	
Power input	8 063	W	
Current consumption	16.87	Α	
Mass flow	626	kg/h	
C.O.P.	3.13		

to: Evaporating temperature at dew point

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

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

Sound power data

Sound power level	74	dB(A)
With accoustic hood	69	dB(A)

Tolerance according EN12900

tc: Condensing temperature at dew point



Danfoss scroll compressor. HCP120T4

Performance data at 50 Hz, ARI rating conditions

R407C

Colling capacity in W	Cond. temp. in	. in Evaporating temperature in °C (to)								
30	°C (tc)	-30	-25	-20				0	5	10
30	Cooling canacity	· in W								
35			9 421	12 084	15 357	19 202	23 583	28 461	33 799	39 559
40		_	+							
45		_								
50				•						
60			-			1	•			
Cover Input in W	-	_	_	_	_	-				
Nover input in W		-	+	_	_	_				
30				1	1	ı	1			
35	Power input in W	ı	1			1		1	1	1
40		-								
45		-	+							
So		-					1			
S55 - - - - -		-	-	1		1	•			
Conficient of performance (C.O.P.) Conficien	-	-	-	-	7 778					
Current consumption in A		-	+		-					
Surrent consumption in A 30		-	+	-						
12.86	65	-	-	-	-	-	-	11 323	11 371	11 360
13.66	Current consum	ption in A								
40	30	-	12.86	12.95	13.04	13.13	13.22	13.30	13.37	13.42
45	35	-	13.66	13.72	13.78	13.85	13.93	14.00	14.06	14.11
50	40	-	14.53	14.56	14.60	14.65	14.71	14.77	14.83	14.89
18.10	45	-	-	15.53	15.55	15.58	15.63	15.69	15.75	15.81
60 19.84 19.89 19.97 20.06 65 21.99 22.07 22.18 **Asss flow in kg/h** 30 - 198 248 308 377 458 550 655 774	50	-	-	-	16.69	16.71	16.75	16.81	16.87	16.94
fass flow in kg/h 30 - 198 248 308 377 458 550 655 774 35 - 195 245 304 373 452 544 648 766 40 - 191 241 299 367 446 537 641 758 45 - - 234 292 360 439 529 632 749 50 - - 234 292 350 429 519 622 739 55 - - - 282 350 429 519 622 739 55 - - - - 337 416 507 610 726 60 - - - - - 449 595 712 65 - - - - - - 45 694	55	-	-	-	-	18.10	18.13	18.19	18.26	18.34
Mass flow in kg/h 30	60	-	-	-	-	-	19.84	19.89	19.97	20.06
30 - 198 248 308 377 458 550 655 774 35 - 195 245 304 373 452 544 648 766 40 - 191 241 299 367 446 537 641 758 45 - - 234 292 360 439 529 632 749 50 - - - 282 350 429 519 622 739 55 - - - - 337 416 507 610 726 60 - - - - - 401 491 595 712 65 - - - - - - 472 576 694 **Coefficient of performance (C.O.P.) **Coefficient of performance (C.O.P.) **The company of the company	65	-	-	-	-	-	-	21.99	22.07	22.18
30 - 198 248 308 377 458 550 655 774 35 - 195 245 304 373 452 544 648 766 40 - 191 241 299 367 446 537 641 758 45 - - 234 292 360 439 529 632 749 50 - - - 282 350 429 519 622 739 55 - - - - 337 416 507 610 726 60 - - - - - 401 491 595 712 65 - - - - - - 472 576 694 **Coefficient of performance (C.O.P.) **Coefficient of performance (C.O.P.) **The company of the company	Mara - 61 and 1 and 1 and	i.								
35 - 195 245 304 373 452 544 648 766 40 - 191 241 299 367 446 537 641 758 45 - - 234 292 360 439 529 632 749 50 - - - 282 350 429 519 622 739 55 - - - - 337 416 507 610 726 60 - - - - - 401 491 595 712 65 - - - - - 472 576 694 Soefficient of performance (C.O.P.) 30 - 1.89 2.37 2.97 3.67 4.46 5.31 6.18 7.04 35 - 1.64 2.01 2.50 3.11 3.81 4.59 5			100	249	200	277	459	550	655	774
40 - 191 241 299 367 446 537 641 758 45 - - 234 292 360 439 529 632 749 50 - - - 282 350 429 519 622 739 55 - - - - 337 416 507 610 726 60 - - - - - 401 491 595 712 65 - - - - - - 472 576 694 Soefficient of performance (C.O.P.) 30 - 1.89 2.37 2.97 3.67 4.46 5.31 6.18 7.04 35 - 1.64 2.01 2.50 3.11 3.81 4.59 5.44 6.32 40 - 1.45 1.72 2.12 2.62 3.23										
45 - - 234 292 360 439 529 632 749 50 - - - 282 350 429 519 622 739 55 - - - - 337 416 507 610 726 60 - - - - - 401 491 595 712 65 - - - - - - 472 576 694 Soefficient of performance (C.O.P.) 30 - 1.89 2.37 2.97 3.67 4.46 5.31 6.18 7.04 35 - 1.64 2.01 2.50 3.11 3.81 4.59 5.44 6.32 40 - 1.45 1.72 2.12 2.62 3.23 3.94 4.73 5.57 45 - - 1.50 1.80 2.21 2.72			+							
50 - - - 282 350 429 519 622 739 55 - - - - 337 416 507 610 726 60 - - - - - 401 491 595 712 65 - - - - - - 472 576 694 Soefficient of performance (C.O.P.) 30 - 1.89 2.37 2.97 3.67 4.46 5.31 6.18 7.04 35 - 1.64 2.01 2.50 3.11 3.81 4.59 5.44 6.32 40 - 1.45 1.72 2.12 2.62 3.23 3.94 4.73 5.57 45 - - 1.50 1.80 2.21 2.72 3.34 4.05 4.83 50 - - - 1.53 1.85 2.27										
55 - - - - 337 416 507 610 726 60 - - - - - 401 491 595 712 65 - - - - - - 472 576 694 Coefficient of performance (C.O.P.) 30 - 1.89 2.37 2.97 3.67 4.46 5.31 6.18 7.04 35 - 1.64 2.01 2.50 3.11 3.81 4.59 5.44 6.32 40 - 1.45 1.72 2.12 2.62 3.23 3.94 4.73 5.57 45 - - 1.50 1.80 2.21 2.72 3.34 4.05 4.83 50 - - - 1.53 1.85 2.27 2.80 3.41 4.12 55 - - - - 1.55 1.88 </td <td></td> <td></td> <td></td> <td>1</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>				1						
60 - - - - 401 491 595 712 65 - - - - - - 472 576 694 Coefficient of performance (C.O.P.) 30 - 1.89 2.37 2.97 3.67 4.46 5.31 6.18 7.04 35 - 1.64 2.01 2.50 3.11 3.81 4.59 5.44 6.32 40 - 1.45 1.72 2.12 2.62 3.23 3.94 4.73 5.57 45 - - 1.50 1.80 2.21 2.72 3.34 4.05 4.83 50 - - - 1.53 1.85 2.27 2.80 3.41 4.12 55 - - - 1.55 1.88 2.31 2.84 3.45 60 - - - - 1.55 1.89 2.33										
65 - - - - - 472 576 694 Coefficient of performance (C.O.P.) 30 - 1.89 2.37 2.97 3.67 4.46 5.31 6.18 7.04 35 - 1.64 2.01 2.50 3.11 3.81 4.59 5.44 6.32 40 - 1.45 1.72 2.12 2.62 3.23 3.94 4.73 5.57 45 - - 1.50 1.80 2.21 2.72 3.34 4.05 4.83 50 - - - 1.53 1.85 2.27 2.80 3.41 4.12 55 - - - 1.55 1.88 2.31 2.84 3.45 60 - - - - - 1.55 1.89 2.33 2.85						1				
Coefficient of performance (C.O.P.) 30 - 1.89 2.37 2.97 3.67 4.46 5.31 6.18 7.04 35 - 1.64 2.01 2.50 3.11 3.81 4.59 5.44 6.32 40 - 1.45 1.72 2.12 2.62 3.23 3.94 4.73 5.57 45 - - 1.50 1.80 2.21 2.72 3.34 4.05 4.83 50 - - - 1.53 1.85 2.27 2.80 3.41 4.12 55 - - - 1.55 1.88 2.31 2.84 3.45 60 - - - - 1.55 1.89 2.33 2.85										
30 - 1.89 2.37 2.97 3.67 4.46 5.31 6.18 7.04 35 - 1.64 2.01 2.50 3.11 3.81 4.59 5.44 6.32 40 - 1.45 1.72 2.12 2.62 3.23 3.94 4.73 5.57 45 - - 1.50 1.80 2.21 2.72 3.34 4.05 4.83 50 - - - 1.53 1.85 2.27 2.80 3.41 4.12 55 - - - 1.55 1.88 2.31 2.84 3.45 60 - - - - 1.55 1.89 2.33 2.85	'		ı	<u> </u>	<u> </u>	I	<u> </u>	7/2	570	034
35 - 1.64 2.01 2.50 3.11 3.81 4.59 5.44 6.32 40 - 1.45 1.72 2.12 2.62 3.23 3.94 4.73 5.57 45 - - 1.50 1.80 2.21 2.72 3.34 4.05 4.83 50 - - - 1.53 1.85 2.27 2.80 3.41 4.12 55 - - - 1.55 1.88 2.31 2.84 3.45 60 - - - - 1.55 1.89 2.33 2.85			1	0.07	0.07	2.07	1 440	F 04	0.40	704
40 - 1.45 1.72 2.12 2.62 3.23 3.94 4.73 5.57 45 - - 1.50 1.80 2.21 2.72 3.34 4.05 4.83 50 - - - 1.53 1.85 2.27 2.80 3.41 4.12 55 - - - 1.55 1.88 2.31 2.84 3.45 60 - - - - 1.55 1.89 2.33 2.85										
45 - - 1.50 1.80 2.21 2.72 3.34 4.05 4.83 50 - - - 1.53 1.85 2.27 2.80 3.41 4.12 55 - - - - 1.55 1.88 2.31 2.84 3.45 60 - - - - 1.55 1.89 2.33 2.85										
50 - - - 1.53 1.85 2.27 2.80 3.41 4.12 55 - - - - 1.55 1.88 2.31 2.84 3.45 60 - - - - 1.55 1.89 2.33 2.85							+	1		
55 - - - 1.55 1.88 2.31 2.84 3.45 60 - - - - 1.55 1.89 2.33 2.85	-									
60 1.55 1.89 2.33 2.85								1		
						1				
65 - - - - 1.53 1.88 2.31	-			<u> </u>	1	ł				
	65	-	-	-	-	-	-	1.53	1.88	2.31
lominal performance at to = 7.2 °C, tc = 54.4 °C Pressure switch settings	Caslina sanasih.		2, 12 0111 0	7 \\/			Marriagnas LID arri		20	In a art art

Cooling capacity	28 137	W
Power input	8 881	W
Current consumption	18.11	Α
Mass flow	661	kg/h
C.O.P.	3.17	

to: Evaporating temperature at dew point

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

Pressure switch settings

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

Sound power data

I	Sound power level	74	dB(A)
	With accoustic hood	69	dB(A)

Tolerance according EN12900

tc: Condensing temperature at dew point



Danfoss scroll compressor. HCP120T4

Performance data at 60 Hz, EN 12900 rating conditions

R407C

Cond. temp. in	. in Evaporating temperature in °C (to)								
°C (tc)	-30	-25	-20	-15	-10	-5	0	5	10
Cooling capacity	ı in W								
30		10 514	13 501	17 179	21 509	26 447	31 952	37 983	44 496
		9 972				24 934			42 974
35			12 615	16 017	20 137	1	30 367	36 395	
40	-	9 642	11 869	14 921	18 756	23 335	28 618	34 563	41 128
45	-	-	11 291	13 919	17 395	21 680	26 735	32 519	38 991
50	-	-	-	13 038	16 082	19 999	24 749	30 294	36 592
55	-	-	-	-	14 845	18 320	22 690	27 918	33 964
60	-	-	-	-	-	16 670	20 586	25 420	31 133
65	-	-	-	-	-	-	18 462	22 825	28 126
Power input in V	v								
30	-	6 084	6 252	6 349	6 405	6 451	6 520	6 642	6 849
35	-	6 693	6 896	7 013	7 074	7 111	7 156	7 240	7 395
40	-	7 339	7 585	7 730	7 805	7 842	7 872	7 926	8 037
45	-	-	8 337	8 519	8 617	8 662	8 686	8 720	8 796
50	-	-	-	9 400	9 529	9 591	9 617	9 639	9 689
55	-	-	-	-	10 559	10 647	10 685	10 704	10 735
60	-	-	-	-	-	11 849	11 907	11 931	11 954
65	-	-	-	-	-	-	13 303	13 342	13 364
•		1	•	•		•	•		
Current consum	ption in A	12.77	12.96	12.05	12.04	12.12	12.21	12.20	12.22
30			12.86	12.95	13.04	13.13	13.21	13.28	13.33
35	-	13.57	13.62	13.69	13.76	13.83	13.90	13.96	14.02
40	-	14.43	14.46	14.50	14.55	14.61	14.67	14.73	14.79
45	-	-	15.42	15.44	15.48	15.53	15.58	15.64	15.70
50	-	-	-	16.57	16.60	16.64	16.69	16.76	16.83
55	-	-	-	-	17.98	18.01	18.07	18.13	18.21
60	-	-	-	-	-	19.70	19.76	19.84	19.93
65	-	-	-	-	-	-	21.84	21.92	22.03
Mass flow in kg/	h								
30	-	238	299	371	455	552	663	790	933
35	-	236	295	366	449	546	656	782	924
40	-	231	290	360	443	538	648	773	914
45	-	-	282	352	434	529	638	763	904
50	-	-	-	340	422	517	627	751	891
55	-	-	-	-	407	502	612	736	877
60	-	-	-	-	-	484	593	718	859
65	-	-	-	-	-	-	571	696	838
Coefficient of pe	rformance (C.	O.P.)							
30	-	1.73	2.16	2.71	3.36	4.10	4.90	5.72	6.50
35	-	1.49	1.83	2.28	2.85	3.51	4.24	5.03	5.81
40	-	1.31	1.56	1.93	2.40	2.98	3.64	4.36	5.12
45	-	-	1.35	1.63	2.02	2.50	3.08	3.73	4.43
50	-	-	-	1.39	1.69	2.09	2.57	3.14	3.78
55	-	-	-	-	1.41	1.72	2.12	2.61	3.16
60	-	-	-	-	-	1.41	1.73	2.13	2.60
65	-	-	_	-	-	-	1.39	1.71	2.10

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

Cooling capacity	30 294	W
Power input	9 639	W
Current consumption	16.76	Α
Mass flow	751	kg/h
C.O.P.	3.14	

to: Evaporating temperature at dew point

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

Pressure switch settings

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

Sound power data

ſ	Sound power level	77	dB(A)
ı	With accoustic hood	72	dB(A)

Tolerance according EN12900

tc: Condensing temperature at dew point



Danfoss scroll compressor. HCP120T4

Performance data at 60 Hz, ARI rating conditions

R407C

Cond. temp. in	Evaporating temperature in °C (to)										
°C (tc)	-30	-25	-20	-15	-10	-5	0	5	10		
Cooling capacity	in W										
30	-	11 291	14 480	18 404	23 016	28 270	34 120	40 520	47 423		
35		10 762	13 596	17 240	21 648	26 773	32 570	38 992	45 994		
					1	1					
40 45	-	10 466	12 864	16 148	20 271	25 186	30 849 28 989	37 212 35 212	44 231 42 166		
			12 318	15 160	18 916	23 541					
50	-	-	-	14 308	17 617	21 870 20 206	27 022 24 980	33 025	39 833 37 264		
55		-	-	-	16 406	†		30 682			
60	-	-	-	-	-	18 582	22 897	28 216	34 491		
65	-	-	-	-	-	-	20 805	25 659	31 546		
Power input in W											
30	-	6 084	6 252	6 349	6 405	6 451	6 520	6 642	6 849		
35	-	6 693	6 896	7 013	7 074	7 111	7 156	7 240	7 395		
40	-	7 339	7 585	7 730	7 805	7 842	7 872	7 926	8 037		
45	-	-	8 337	8 519	8 617	8 662	8 686	8 720	8 796		
50	-	-	-	9 400	9 529	9 591	9 617	9 639	9 689		
55	-	-	-	-	10 559	10 647	10 685	10 704	10 735		
60	-	-	-	-	-	11 849	11 907	11 931	11 954		
65	_	-	_	_	-	-	13 303	13 342	13 364		
		L	l	II.	l	II.					
Current consump	tion in A										
30	-	12.77	12.86	12.95	13.04	13.13	13.21	13.28	13.33		
35	-	13.57	13.62	13.69	13.76	13.83	13.90	13.96	14.02		
40	-	14.43	14.46	14.50	14.55	14.61	14.67	14.73	14.79		
45	-	-	15.42	15.44	15.48	15.53	15.58	15.64	15.70		
50	-	-	-	16.57	16.60	16.64	16.69	16.76	16.83		
55	-	-	-	-	17.98	18.01	18.07	18.13	18.21		
60	-	-	-	-	-	19.70	19.76	19.84	19.93		
65	-	-	-	-	-	-	21.84	21.92	22.03		
			•		•			•			
Mass flow in kg/h	l										
30	-	237	297	369	452	549	660	786	928		
35	-	234	294	364	447	543	652	777	918		
40	-	229	288	358	440	535	644	768	909		
45	-	-	280	350	431	526	635	758	898		
50	-	-	-	338	420	514	623	747	886		
55	-	-	-	-	405	500	608	732	872		
60	-	-	-	-	-	481	590	714	854		
65	-	-	-	-	-	-	568	692	833		
Danfflalant of	fa										
30	formance (C.0	1.86	2.32	2.90	3.59	4.38	5.23	6.10	6.92		
35		1.61	1.97	2.46	3.06	3.77	4.55	5.39	6.22		
40	-	1.43	1.70	2.40	2.60	3.21	3.92	4.69	5.50		
				1		1			4.79		
45	-	-	1.48	1.78 1.52	2.20	2.72	3.34	4.04			
50	-	-			1.85	2.28	2.81	3.43	4.11		
55	-	-	-	-	1.55	1.90	2.34	2.87	3.47		
60	-	-	-	-	-	1.57	1.92	2.36	2.89		
65	-	-	-	-	-	-	1.56	1.92	2.36		

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

recinitial portormaneo acto	. 0, 10 04.4 0	
Cooling capacity	33 775	W
Power input	10 579	W
Current consumption	17.99	Α
Mass flow	793	kg/h
C.O.P.	3.19	

to: Evaporating temperature at dew point

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

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

Sound power data

Sound power level	77	dB(A)
With accoustic hood	72	dB(A)

Tolerance according EN12900

tc: Condensing temperature at dew point



Danfoss scroll compressor. HCP120T4

Performance data at 60 Hz, EN 12900 rating conditions

R407C

Cond. temp. in	Evaporating temperature in °C (to)								
°C (tc)	-30	-25	-20	-15	-10	-5	0	5	10
Cooling capacity	ı in W								
30		10 514	13 501	17 179	21 509	26 447	31 952	37 983	44 496
		9 972				24 934			42 974
35			12 615	16 017	20 137	1	30 367	36 395	
40	-	9 642	11 869	14 921	18 756	23 335	28 618	34 563	41 128
45	-	-	11 291	13 919	17 395	21 680	26 735	32 519	38 991
50	-	-	-	13 038	16 082	19 999	24 749	30 294	36 592
55	-	-	-	-	14 845	18 320	22 690	27 918	33 964
60	-	-	-	-	-	16 670	20 586	25 420	31 133
65	-	-	-	-	-	-	18 462	22 825	28 126
Power input in V	v								
30	-	6 084	6 252	6 349	6 405	6 451	6 520	6 642	6 849
35	-	6 693	6 896	7 013	7 074	7 111	7 156	7 240	7 395
40	-	7 339	7 585	7 730	7 805	7 842	7 872	7 926	8 037
45	-	-	8 337	8 519	8 617	8 662	8 686	8 720	8 796
50	-	-	-	9 400	9 529	9 591	9 617	9 639	9 689
55	-	-	-	-	10 559	10 647	10 685	10 704	10 735
60	-	-	-	-	-	11 849	11 907	11 931	11 954
65	-	-	-	-	-	-	13 303	13 342	13 364
•		•	•	•		•	•		
Current consum	ption in A	12.77	12.96	12.05	12.04	12.12	12.21	12.20	12.22
30			12.86	12.95	13.04	13.13	13.21	13.28	13.33
35	-	13.57	13.62	13.69	13.76	13.83	13.90	13.96	14.02
40	-	14.43	14.46	14.50	14.55	14.61	14.67	14.73	14.79
45	-	-	15.42	15.44	15.48	15.53	15.58	15.64	15.70
50	-	-	-	16.57	16.60	16.64	16.69	16.76	16.83
55	-	-	-	-	17.98	18.01	18.07	18.13	18.21
60	-	-	-	-	-	19.70	19.76	19.84	19.93
65	-	-	-	-	-	-	21.84	21.92	22.03
Mass flow in kg/	h								
30	-	238	299	371	455	552	663	790	933
35	-	236	295	366	449	546	656	782	924
40	-	231	290	360	443	538	648	773	914
45	-	-	282	352	434	529	638	763	904
50	-	-	-	340	422	517	627	751	891
55	-	-	-	-	407	502	612	736	877
60	-	-	-	-	-	484	593	718	859
65	-	-	-	-	-	-	571	696	838
Coefficient of pe	rformance (C.	O.P.)							
30	-	1.73	2.16	2.71	3.36	4.10	4.90	5.72	6.50
35	-	1.49	1.83	2.28	2.85	3.51	4.24	5.03	5.81
40	-	1.31	1.56	1.93	2.40	2.98	3.64	4.36	5.12
45	-	-	1.35	1.63	2.02	2.50	3.08	3.73	4.43
50	-	-	-	1.39	1.69	2.09	2.57	3.14	3.78
55	-	-	-	-	1.41	1.72	2.12	2.61	3.16
60	-	-	-	-	-	1.41	1.73	2.13	2.60
65	-	-	_	-	-	-	1.39	1.71	2.10

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

Cooling capacity	30 294	W
Power input	9 639	W
Current consumption	16.76	Α
Mass flow	751	kg/h
C.O.P.	3.14	

to: Evaporating temperature at dew point

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

Pressure switch settings

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

Sound power data

ſ	Sound power level	77	dB(A)
ı	With accoustic hood	72	dB(A)

Tolerance according EN12900

tc: Condensing temperature at dew point



Danfoss scroll compressor. HCP120T4

Performance data at 60 Hz, ARI rating conditions

R407C

Cond. temp. in	Evaporating temperature in °C (to)										
°C (tc)	-30	-25	-20	-15	-10	-5	0	5	10		
Cooling capacity	in W										
30	-	11 291	14 480	18 404	23 016	28 270	34 120	40 520	47 423		
35		10 762	13 596	17 240	21 648	26 773	32 570	38 992	45 994		
					1	1					
40 45	-	10 466	12 864	16 148	20 271	25 186	30 849 28 989	37 212 35 212	44 231 42 166		
			12 318	15 160	18 916	23 541					
50	-	-	-	14 308	17 617	21 870 20 206	27 022 24 980	33 025	39 833 37 264		
55		-	-	-	16 406	†		30 682			
60	-	-	-	-	-	18 582	22 897	28 216	34 491		
65	-	-	-	-	-	-	20 805	25 659	31 546		
Power input in W											
30	-	6 084	6 252	6 349	6 405	6 451	6 520	6 642	6 849		
35	-	6 693	6 896	7 013	7 074	7 111	7 156	7 240	7 395		
40	-	7 339	7 585	7 730	7 805	7 842	7 872	7 926	8 037		
45	-	-	8 337	8 519	8 617	8 662	8 686	8 720	8 796		
50	-	-	-	9 400	9 529	9 591	9 617	9 639	9 689		
55	-	-	-	-	10 559	10 647	10 685	10 704	10 735		
60	-	-	-	-	-	11 849	11 907	11 931	11 954		
65	_	-	_	_	-	-	13 303	13 342	13 364		
		L	l	II.	l	II.					
Current consump	tion in A										
30	-	12.77	12.86	12.95	13.04	13.13	13.21	13.28	13.33		
35	-	13.57	13.62	13.69	13.76	13.83	13.90	13.96	14.02		
40	-	14.43	14.46	14.50	14.55	14.61	14.67	14.73	14.79		
45	-	-	15.42	15.44	15.48	15.53	15.58	15.64	15.70		
50	-	-	-	16.57	16.60	16.64	16.69	16.76	16.83		
55	-	-	-	-	17.98	18.01	18.07	18.13	18.21		
60	-	-	-	-	-	19.70	19.76	19.84	19.93		
65	-	-	-	-	-	-	21.84	21.92	22.03		
			•		•			•			
Mass flow in kg/h	l										
30	-	237	297	369	452	549	660	786	928		
35	-	234	294	364	447	543	652	777	918		
40	-	229	288	358	440	535	644	768	909		
45	-	-	280	350	431	526	635	758	898		
50	-	-	-	338	420	514	623	747	886		
55	-	-	-	-	405	500	608	732	872		
60	-	-	-	-	-	481	590	714	854		
65	-	-	-	-	-	-	568	692	833		
Danfflalant of	fa										
30	formance (C.0	1.86	2.32	2.90	3.59	4.38	5.23	6.10	6.92		
35		1.61	1.97	2.46	3.06	3.77	4.55	5.39	6.22		
40	-	1.43	1.70	2.40	2.60	3.21	3.92	4.69	5.50		
				1		1			4.79		
45	-	-	1.48	1.78 1.52	2.20	2.72	3.34	4.04			
50	-	-			1.85	2.28	2.81	3.43	4.11		
55	-	-	-	-	1.55	1.90	2.34	2.87	3.47		
60	-	-	-	-	-	1.57	1.92	2.36	2.89		
65	-	-	-	-	-	-	1.56	1.92	2.36		

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

recinitial portormaneo acto	. 0, 10 04.4 0	
Cooling capacity	33 775	W
Power input	10 579	W
Current consumption	17.99	Α
Mass flow	793	kg/h
C.O.P.	3.19	

to: Evaporating temperature at dew point

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

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

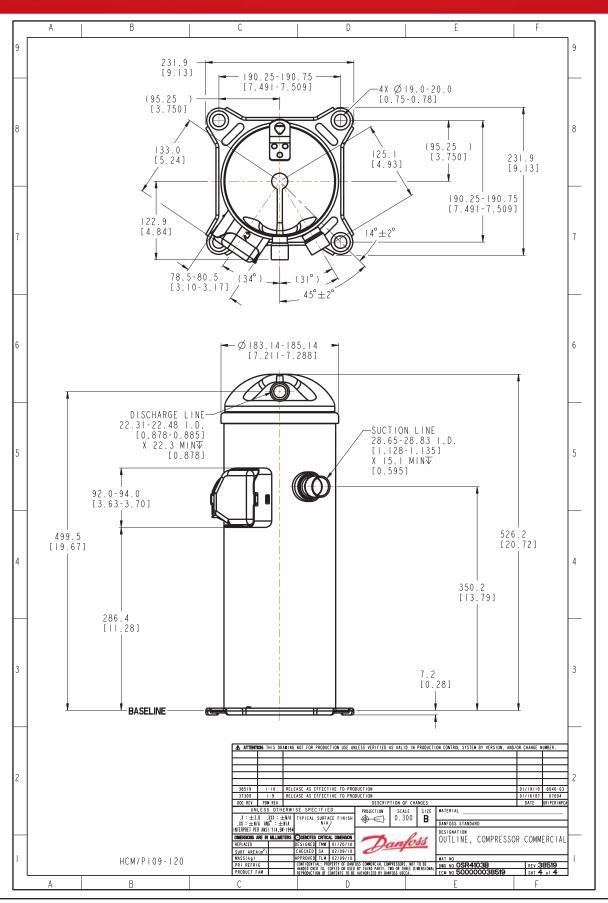
Sound power data

Sound power level	77	dB(A)
With accoustic hood	72	dB(A)

Tolerance according EN12900

tc: Condensing temperature at dew point





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