



Datasheets

## Danfoss scroll compressors **H series**



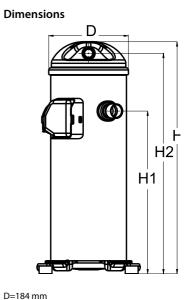
## Danfoss

#### Datasheet, technical data

## Danfoss scroll compressor, HCJ105T4

#### **General Characteristics**

Model number (on compressor nameplate)		HCJ105T4LC6	٦
Code number for Singlepack*		120U2322	
Code number for Industrial pack**		120U2319	
Drawing number		0SR7596B	
Suction and discharge connections		Brazed	
Suction connection		1-1/8 " ODF	
Discharge connection		7/8 " ODF	
Oil sight glass		None	
Oil equalisation connection		None	
Oil drain connection		None	
LP gauge port		None	
IPR valve		None	
Swept volume	101,6 c	m3/rev	
Displacement @ Nominal speed	17.7 m3/h @ 2900 rpm	- 21.3 m3/h @ 3500 rpm	
Net weight	45,2	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	- b	bar	
Maximum number of starts per hour		-	
Refrigerant charge limit	7,26	5 kg	
Approved refrigerants	R41	10A	



#### **Electrical Characteristics**

Nominal voltage	380-415V/3/50Hz - 460V/3/60Hz	H=537 mm
Voltage range	342-457 V @ 50Hz - 414-506 V @ 60Hz	H1=377 mm
Winding resistance between phases 1-2 +/- 7% at 25°C	1.29 Ω	H2=510 mm
Winding resistance between phases 1-3 +/- 7% at 25°C	1.28 Ω	H3=- mm
Winding resistance between phases 2-3 +/- 7% at 25°C	1.33 Ω	
Rated Load Amps (RLA)	16.0 A	
Maximum Continuous Current (MCC)	25.0 A	
Locked Rotor Amps (LRA)	110.0 A	Terminal b
Motor protection	Internal overload protector	

#### **Recommended Installation torgues**

Oil sight glass	52,5 Nm
Power connections / Earth connection	3 Nm / 2 Nm

### Parts shipped with compressor

Mounting kit with grommets and sleeves Initial oil charge Installation instructions

Approvals : CE certified, UL certified (file SA11565), -\*Singlepack: Compressor in cardboard box

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

Terminal box

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- 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, HCJ105T4

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 side	Code no.	Solder sleeve adapter set
Rotolock valve, V05 (1-1/4" Rotolock, 7/8" ODF)	8168030	
Gasket, 1-3/4"	8156132	
Rotolock accessories, sets	Code no.	
Solder sleeve adapter set (1-3/4" Rotolock, 1-1/8" ODF), (1-1/4" Rotolock, 7/8" ODF)	120Z0125	1 2 3 4
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	
		1: Rotolock adapter (Suc & Dis)
Oil / lubricants	Code no.	2: Gasket (Suc & Dis)
PVE lubricant, 320HV (FVC68D), 1 litre can	120Z5034	3: Solder sleeve (Suc & Dis)
		4: Rotolock nut (Suc & Dis)
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	
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	

## Danfoss scroll compressor. HCJ105T4

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**R410A** 

## Performance data at 50 Hz, EN 12900 rating conditions

Cond. temp. in				Evapora	ating temperature	in °C (to)			
°C (tc)	-25	-20	-15	-10	-5	0	5	10	15
Cooling capacity	in W								
30	8 965	11 468	14 212	17 331	20 960	25 233	30 286	36 255	-
35	8 158	10 671	13 356	16 346	19 773	23 772	28 478	34 024	-
40	7 252	9 795	12 441	15 322	18 569	22 316	26 696	31 843	-
45	-	8 815	11 441	14 232	17 320	20 835	24 911	29 679	-
50	-	-	10 329	13 048	15 995	19 298	23 088	27 497	-
55	-	-	-	11 740	14 559	17 665	21 186	25 250	-
60	-	-	-	-	12 968	15 885	19 144	22 872	-
65	-	-	-	-	-	13 868	16 858	20 239	-
Power input in W 30	4 939	4 988	4 999	4 994	4 995	5 025	5 106	5 259	
35	5 402	5 485	5 517	5 522	5 520	5 534	5 586	5 699	
40	5 907	6 030	6 089	6 108	6 107	6 110	6 139	6 216	-
45	-	6 630	6 722	6 759	6 766	6 763	6 773	6 819	-
50	-	-	7 422	7 484	7 502	7 499	7 496	7 516	-
55	-	-	-	8 289	8 324	8 325	8 314	8 313	-
60	-	-	-	-	9 239	9 250	9 235	9 219	-
65	-	-	-	-	-	10 280	10 267	10 240	-
		•	•	•	•			•	
Current consump	otion in A								
30	10.96	11.03	11.11	11.20	11.29	11.36	11.39	11.39	-

88	10.00	11100		11120	11120	11100	11166	11100	
35	11.61	11.62	11.67	11.75	11.84	11.94	12.03	12.10	-
40	12.41	12.35	12.34	12.39	12.47	12.58	12.71	12.84	-
45	-	13.27	13.19	13.19	13.24	13.35	13.49	13.66	-
50	-	-	14.27	14.20	14.21	14.28	14.42	14.61	-
55	-	-	-	15.46	15.41	15.44	15.56	15.75	-
60	-	-	-	-	16.90	16.88	16.96	17.13	-
65	-	-	-	-	-	18.64	18.66	18.80	-

#### Mass flow in kg/h

30	188	236	288	347	415	495	588	699	-
35	181	231	285	344	411	489	580	686	-
40	171	225	280	341	408	484	572	675	-
45	-	216	274	335	403	479	565	666	-
50	-	-	265	328	397	473	558	656	-
55	-	-	-	318	389	465	550	647	-
60	-	-	-	-	378	455	541	636	-
65	-	-	-	-	-	443	529	624	-

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

30	1.82	2.30	2.84	3.47	4.20	5.02	5.93	6.89	-
35	1.51	1.95	2.42	2.96	3.58	4.30	5.10	5.97	-
40	1.23	1.62	2.04	2.51	3.04	3.65	4.35	5.12	-
45	-	1.33	1.70	2.11	2.56	3.08	3.68	4.35	-
50	-	-	1.39	1.74	2.13	2.57	3.08	3.66	-
55	-	-	-	1.42	1.75	2.12	2.55	3.04	-
60	-	-	-	-	1.40	1.72	2.07	2.48	-
65	-	-	-	-	-	1.35	1.64	1.98	-

Nominal performance at to = 5 °C, tc = 50 °C								
Cooling capacity	23 088	W						
Power input	7 496	W						
Current consumption	14.42	A						
Mass flow	558	kg/h						
C.O.P.	3.08							

Pressure switch settings		
Maximum HP switch setting	45	bar(g)
Minimum LP switch setting	1.5	bar(g)
LP pump down setting	2.3	bar(g)
Sound power data		
Sound power level	73	dB(A)
	75	ab(/ ()

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

to: Evaporating temperature at dew point tc: Condensing temperature at dew point

All performance data +/- 5%

## Danfoss scroll compressor. HCJ105T4

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**R410A** 

## Performance data at 50 Hz, ARI rating conditions

Cond. temp. in	Evaporating temperature in °C (to)									
°C (tc)	-25	-20	-15	-10	-5	0	5	10	15	
Cooling capacity	/ in W			r	<b>T</b>			r		
30	9 682	12 372	15 317	18 660	22 547	27 120	32 525	38 904	-	
35	8 867	11 586	14 484	17 707	21 398	25 701	30 761	36 721	-	
40	7 944	10 715	13 593	16 719	20 240	24 298	29 038	34 604	-	
45	-	9 734	12 615	15 671	19 046	22 884	27 329	32 525	-	

40	7 944	10 715	13 593	16 719	20 240	24 298	29 038	34 604	-
45	-	9 734	12 615	15 671	19 046	22 884	27 329	32 525	-
50	-	-	11 524	14 533	17 788	21 431	25 606	30 458	-
55	-	-	-	13 280	16 439	19 911	23 842	28 374	-
60	-	-	-	-	14 971	18 298	22 009	26 247	-
65	-	-	-	-	-	16 564	20 080	24 048	-

#### Power input in W

30	4 939	4 988	4 999	4 994	4 995	5 025	5 106	5 259	-
35	5 402	5 485	5 517	5 522	5 520	5 534	5 586	5 699	-
40	5 907	6 030	6 089	6 108	6 107	6 110	6 139	6 216	-
45	-	6 630	6 722	6 759	6 766	6 763	6 773	6 819	-
50	-	-	7 422	7 484	7 502	7 499	7 496	7 516	-
55	-	-	-	8 289	8 324	8 325	8 314	8 313	-
60	-	-	-	-	9 239	9 250	9 235	9 219	-
65	-	-	-	-	-	10 280	10 267	10 240	-

#### Current consumption in A

30	10.96	11.03	11.11	11.20	11.29	11.36	11.39	11.39	-
35	11.61	11.62	11.67	11.75	11.84	11.94	12.03	12.10	-
40	12.41	12.35	12.34	12.39	12.47	12.58	12.71	12.84	-
45	-	13.27	13.19	13.19	13.24	13.35	13.49	13.66	-
50	-	-	14.27	14.20	14.21	14.28	14.42	14.61	-
55	-	-	-	15.46	15.41	15.44	15.56	15.75	-
60	-	-	-	-	16.90	16.88	16.96	17.13	-
65	-	-	-	-	-	18.64	18.66	18.80	-

#### Mass flow in kg/h

30	186	235	287	345	412	491	584	694	-
35	180	230	283	342	409	486	576	681	-
40	170	223	279	338	405	481	568	670	-
45	-	214	272	333	400	476	562	661	-
50	-	-	263	326	394	470	554	652	-
55	-	-	-	317	386	462	547	642	-
60	-	-	-	-	375	452	537	632	-
65	-	-	-	-	-	440	525	620	-

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

30	1.96	2.48	3.06	3.74	4.51	5.40	6.37	7.40	-
35	1.64	2.11	2.63	3.21	3.88	4.64	5.51	6.44	-
40	1.34	1.78	2.23	2.74	3.31	3.98	4.73	5.57	-
45	-	1.47	1.88	2.32	2.82	3.38	4.03	4.77	-
50	-	-	1.55	1.94	2.37	2.86	3.42	4.05	-
55	-	-	-	1.60	1.97	2.39	2.87	3.41	-
60	-	-	-	-	1.62	1.98	2.38	2.85	-
65	-	-	-	-	-	1.61	1.96	2.35	-

Nominal performance at to = 7.2 °C	, tc = 54.4 °C	
Cooling capacity	25 983	W
Power input	8 208	W
Current consumption	15.49	Α
Mass flow	588	kg/h
C.O.P.	3.17	

Maximum HP switch setting	45	bar(g)
Minimum LP switch setting	1.5	bar(g)
LP pump down setting	2.3	bar(g)
Sound power data		
	=0	
Sound power level	73	dB(A)
Sound power level With accoustic hood	73 68	dB(A) dB(A)

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

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

All performance data +/- 5%

Pressure switch settings

## Danfoss scroll compressor. HCJ105T4

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## Performance data at 60 Hz, EN 12900 rating conditions

Performanc	e data at 60	) Hz, EN 129	00 rating co	nditions					R410A
Cond. temp. in		-		Evapora	ating temperature	in °C (to)		-	
°C (tc)	-25	-20	-15	-10	-5	0	5	10	15
Cooling capacity	y in W								
30	10 623	13 732	17 163	21 018	25 398	30 407	36 146	42 718	-
35	9 731	12 719	15 998	19 670	23 835	28 597	34 057	40 316	-
40	8 832	11 701	14 832	18 324	22 279	26 796	31 979	37 928	-
45	-	10 640	13 624	16 939	20 684	24 960	29 867	35 506	-
50	-	-	12 333	15 470	19 007	23 040	27 671	32 998	-
55	-	-	-	13 873	17 197	20 985	25 334	30 343	-
60	-	-	-	-	15 195	18 725	22 779	27 454	-
65	-	-	-	-	-	16 153	19 878	24 178	-
Power input in V	M								
30	5 423	5 514	5 598	5 691	5 808	5 964	6 177	6 460	
35	6 030	6 126	6 207	6 288	6 385	6 514	6 690	6 929	-
40	6 701	6 809	6 893	6 970	7 054	7 162	7 309	7 511	_
45	-	7 563	7 658	7 737	7 816	7 910	8 034	8 206	_
43 50	_	-	8 502	8 590	8 670	8 757	8 866	9 014	_
55	-			9 530	9 618	9 705	9 806	9 937	_
60	_	-	_	-	10 660	10 754	10 854	10 976	_
65	-	-	-	_	-	11 905	12 011	12 130	-
Current consum									T
30	10.48	10.55	10.63	10.71	10.81	10.93	11.09	11.29	-
35	11.02	11.12	11.21	11.30	11.39	11.49	11.62	11.78	-
40	11.61	11.75	11.87	11.97	12.07	12.16	12.27	12.40	-
45	-	12.45	12.61	12.74	12.85	12.95	13.06	13.17	-
50	-	-	13.44	13.61	13.76	13.88	13.99	14.10	-
55	-	-	-	14.61	14.79	14.95	15.08	15.19	-
60	-	-	-	-	15.97	16.17	16.33	16.47	-
65	-	-	-	-	-	17.55	17.77	17.94	-
/lass flow in kg/	h								
30	236	302	372	449	535	632	743	870	-
35	226	291	361	437	523	619	729	854	-
40	215	280	350	425	510	606	715	838	-
45	-	268	337	412	496	591	699	822	-
50	-	-	322	397	480	574	681	802	-
55	-	-	-	378	461	554	660	780	-
60	-	-	-	-	437	529	634	753	-
65	-	-	-	-	-	499	603	721	-

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

30	1.96	2.49	3.07	3.69	4.37	5.10	5.85	6.61	-
35	1.61	2.08	2.58	3.13	3.73	4.39	5.09	5.82	-
40	1.32	1.72	2.15	2.63	3.16	3.74	4.38	5.05	-
45	-	1.41	1.78	2.19	2.65	3.16	3.72	4.33	-
50	-	-	1.45	1.80	2.19	2.63	3.12	3.66	-
55	-	-	-	1.46	1.79	2.16	2.58	3.05	-
60	-	-	-	-	1.43	1.74	2.10	2.50	-
65	-	-	-	-	-	1.36	1.66	1.99	-

Nominal performa	ance at to = 5 °C, to	= 50 °C		
Cooling capacity		27 671	W	
Power input		8 866	W	
Current consumpti	on	13.99	Α	
Mass flow		681	kg/h	
COP		3 12		

Pressure switch settings Maximum HP switch setting	45	bar(g)
Minimum LP switch setting	1.5	bar(g)
LP pump down setting	2.3	bar(g)
Sound power data		
Sound power level	76	dB(A)
With accoustic hood	71	dB(A)

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

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

All performance data +/- 5%

## Danfoss scroll compressor. HCJ105T4

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**R410A** 

## Performance data at 60 Hz, ARI rating conditions

Cond. temp. in	Evaporating temperature in °C (to)										
°C (tc)	-25	-20	-15	-10	-5	0	5	10	15		
Cooling capacity	/ in W										
30	11 472	14 814	18 497	22 629	27 321	32 680	38 817	45 840	-		
35	10 577	13 808	17 348	21 307	25 794	30 918	36 787	43 512	-		

40	9 676	12 801	16 205	19 996	24 283	29 177	34 785	41 216	-
45	-	11 750	15 022	18 651	22 745	27 414	32 766	38 911	-
50	-	-	13 759	17 231	21 137	25 587	30 689	36 552	-
55	-	-	-	15 693	19 417	23 653	28 510	34 097	-
60	-	-	-	-	17 541	21 569	26 187	31 504	-
65	-	-	-	-	-	19 293	23 677	28 729	-

#### Power input in W

30	5 423	5 514	5 598	5 691	5 808	5 964	6 177	6 460	-
35	6 030	6 126	6 207	6 288	6 385	6 514	6 690	6 929	-
40	6 701	6 809	6 893	6 970	7 054	7 162	7 309	7 511	-
45	-	7 563	7 658	7 737	7 816	7 910	8 034	8 206	-
50	-	-	8 502	8 590	8 670	8 757	8 866	9 014	-
55	-	-	-	9 530	9 618	9 705	9 806	9 937	-
60	-	-	-	-	10 660	10 754	10 854	10 976	-
65	-	-	-	-	-	11 905	12 011	12 130	-

#### Current consumption in A

30	10.48	10.55	10.63	10.71	10.81	10.93	11.09	11.29	-
35	11.02	11.12	11.21	11.30	11.39	11.49	11.62	11.78	-
40	11.61	11.75	11.87	11.97	12.07	12.16	12.27	12.40	-
45	-	12.45	12.61	12.74	12.85	12.95	13.06	13.17	-
50	-	-	13.44	13.61	13.76	13.88	13.99	14.10	-
55	-	-	-	14.61	14.79	14.95	15.08	15.19	-
60	-	-	-	-	15.97	16.17	16.33	16.47	-
65	-	-	-	-	-	17.55	17.77	17.94	-

#### Mass flow in kg/h

30	235	300	370	446	532	628	738	864	-
35	225	289	359	435	519	615	724	848	-
40	214	279	347	423	507	602	710	832	-
45	-	266	335	410	493	587	694	816	-
50	-	-	320	395	477	571	676	797	-
55	-	-	-	376	458	550	655	774	-
60	-	-	-	-	434	526	630	748	-
65	-	-	-	-	-	496	599	716	-

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

30	2.12	2.69	3.30	3.98	4.70	5.48	6.28	7.10	-
35	1.75	2.25	2.79	3.39	4.04	4.75	5.50	6.28	-
40	1.44	1.88	2.35	2.87	3.44	4.07	4.76	5.49	-
45	-	1.55	1.96	2.41	2.91	3.47	4.08	4.74	-
50	-	-	1.62	2.01	2.44	2.92	3.46	4.05	-
55	-	-	-	1.65	2.02	2.44	2.91	3.43	-
60	-	-	-	-	1.65	2.01	2.41	2.87	-
65	-	-	-	-	-	1.62	1.97	2.37	-

Nominal performance at to = 7.2 °C, tc = 54.4 °C							
Cooling capacity	31 154	W					
Power input	9 741	W					
Current consumption	14.99	A					
Mass flow	709	kg/h					
C.O.P.	3.20						

Pressure switch settings		
Maximum HP switch setting	45	bar(g)
Minimum LP switch setting	1.5	bar(g)
LP pump down setting	2.3	bar(g)
LP pump down setting	2.3	bar(g
Sound power data		
Sound power data Sound power level	76	dB(A)

to: Evaporating temperature at dew point

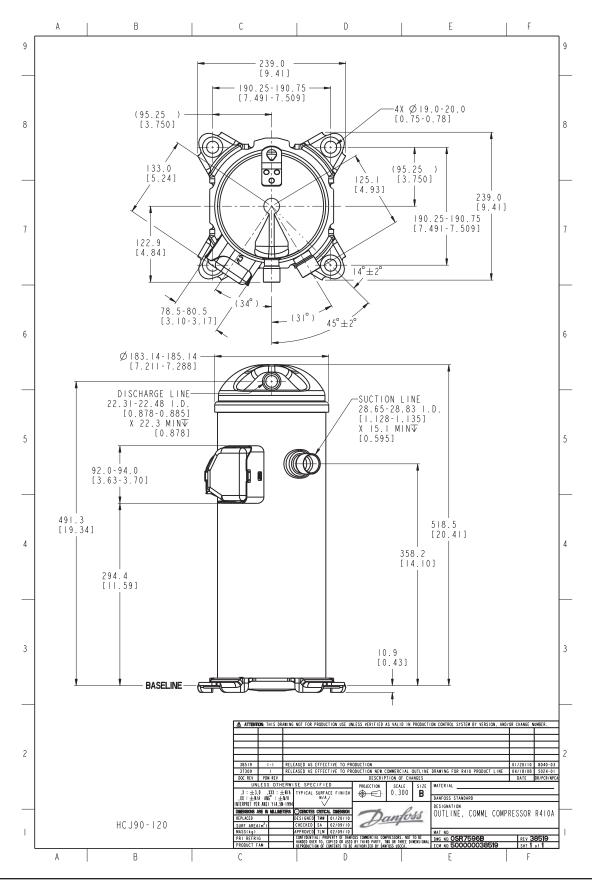
tc: Condensing temperature at dew point

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

All performance data +/- 5%







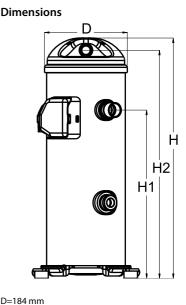
# Danfoss

#### Datasheet, technical data

## Danfoss scroll compressor, HCJ105T4

#### **General Characteristics**

Model number (on compressor nameplate)		HCJ105T4LC7				
Code number for Singlepack*		120U2574				
Code number for Industrial pack**		120U2571				
Drawing number		0SR7509B				
Suction and discharge connections		Brazed				
Suction connection		1-1/8 " ODF				
Discharge connection		7/8 " ODF				
Oil sight glass		Threaded				
Oil equalisation connection		None				
Oil drain connection		None				
LP gauge port		None				
IPR valve		None				
Swept volume	101,6 c	101,6 cm3/rev				
Displacement @ Nominal speed	17.7 m3/h @ 2900 rpm - 21.3 m3/h @ 3500 rpm					
Net weight	45,2	2 kg				
Oil charge	2,66 litr	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	7,26 kg					
Approved refrigerants	R41	10A				



#### **Electrical Characteristics**

Nominal voltage	380-415V/3/50Hz - 460V/3/60Hz	D=184 mm
Voltage range	342-457 V @ 50Hz - 414-506 V @ 60Hz	H=537 mm
Winding resistance between phases 1-2 +/- 7% at 25°C	1.29 Ω	H1=377 mm
Winding resistance between phases 1-3 +/- 7% at 25°C	1.28 Ω	H2=510 mm H3=- mm
Winding resistance between phases 2-3 +/- 7% at 25°C	1.33 Ω	H3=- mm
Rated Load Amps (RLA)	16.0 A	
Maximum Continuous Current (MCC)	25.0 A	
Locked Rotor Amps (LRA)	110.0 A	Terminal b
Motor protection	Internal overload protector	Terminari

## **Recommended Installation torgues**

Oil sight glass	52,5 Nm
Power connections / Earth connection	3 Nm / 2 Nm

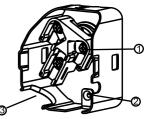
#### Parts shipped with compressor

Mounting kit with grommets and sleeves Initial oil charge Installation instructions

Approvals : CE certified, UL certified (file SA11565), -\*Singlepack: Compressor in cardboard box

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

erminal box



#### 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, HCJ105T4

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 side	Code no.	Solder sleeve adapter set
Rotolock valve, V05 (1-1/4" Rotolock, 7/8" ODF)	8168030	
Gasket, 1-3/4"	8156132	
	_	
Rotolock accessories, sets	Code no.	
Solder sleeve adapter set (1-3/4" Rotolock, 1-1/8" ODF), (1-1/4" Rotolock, 7/8" ODF)	120Z0125	1 2 3 4
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	
		1: Rotolock adapter (Suc & Dis)
Oil / lubricants	Code no.	2: Gasket (Suc & Dis)
PVE lubricant, 320HV (FVC68D), 1 litre can	120Z5034	3: Solder sleeve (Suc & Dis)
		4: Rotolock nut (Suc & Dis)
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	
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	

## Danfoss scroll compressor. HCJ105T4

Danfoss

**R410A** 

## Performance data at 50 Hz, EN 12900 rating conditions

Cond. temp. in				Evapora	ating temperature	in °C (to)			
°C (tc)	-25	-20	-15	-10	-5	0	5	10	15
Cooling capacity	in W								
30	8 965	11 468	14 212	17 331	20 960	25 233	30 286	36 255	-
35	8 158	10 671	13 356	16 346	19 773	23 772	28 478	34 024	-
40	7 252	9 795	12 441	15 322	18 569	22 316	26 696	31 843	-
45	-	8 815	11 441	14 232	17 320	20 835	24 911	29 679	-
50	-	-	10 329	13 048	15 995	19 298	23 088	27 497	-
55	-	-	-	11 740	14 559	17 665	21 186	25 250	-
60	-	-	-	-	12 968	15 885	19 144	22 872	-
65	-	-	-	-	-	13 868	16 858	20 239	-
Power input in W 30	4 939	4 988	4 999	4 994	4 995	5 025	5 106	5 259	
35	5 402	5 485	5 517	5 522	5 520	5 534	5 586	5 699	
40	5 907	6 030	6 089	6 108	6 107	6 110	6 139	6 216	-
45	-	6 630	6 722	6 759	6 766	6 763	6 773	6 819	-
50	-	-	7 422	7 484	7 502	7 499	7 496	7 516	-
55	-	-	-	8 289	8 324	8 325	8 314	8 313	-
60	-	-	-	-	9 239	9 250	9 235	9 219	-
65	-	-	-	-	-	10 280	10 267	10 240	-
		•	•	•	•			•	
Current consump	otion in A								
30	10.96	11.03	11.11	11.20	11.29	11.36	11.39	11.39	-

88	10.00	11100		11120	11120	11100	11166	11100	
35	11.61	11.62	11.67	11.75	11.84	11.94	12.03	12.10	-
40	12.41	12.35	12.34	12.39	12.47	12.58	12.71	12.84	-
45	-	13.27	13.19	13.19	13.24	13.35	13.49	13.66	-
50	-	-	14.27	14.20	14.21	14.28	14.42	14.61	-
55	-	-	-	15.46	15.41	15.44	15.56	15.75	-
60	-	-	-	-	16.90	16.88	16.96	17.13	-
65	-	-	-	-	-	18.64	18.66	18.80	-

#### Mass flow in kg/h

30	188	236	288	347	415	495	588	699	-
35	181	231	285	344	411	489	580	686	-
40	171	225	280	341	408	484	572	675	-
45	-	216	274	335	403	479	565	666	-
50	-	-	265	328	397	473	558	656	-
55	-	-	-	318	389	465	550	647	-
60	-	-	-	-	378	455	541	636	-
65	-	-	-	-	-	443	529	624	-

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

30	1.82	2.30	2.84	3.47	4.20	5.02	5.93	6.89	-
35	1.51	1.95	2.42	2.96	3.58	4.30	5.10	5.97	-
40	1.23	1.62	2.04	2.51	3.04	3.65	4.35	5.12	-
45	-	1.33	1.70	2.11	2.56	3.08	3.68	4.35	-
50	-	-	1.39	1.74	2.13	2.57	3.08	3.66	-
55	-	-	-	1.42	1.75	2.12	2.55	3.04	-
60	-	-	-	-	1.40	1.72	2.07	2.48	-
65	-	-	-	-	-	1.35	1.64	1.98	-

Nominal performance at to = 5 °C, tc = 50 °C						
Cooling capacity	23 088	W				
Power input	7 496	W				
Current consumption	14.42	A				
Mass flow	558	kg/h				
C.O.P.	3.08					

Pressure switch settings		
Maximum HP switch setting	45	bar(g)
Minimum LP switch setting	1.5	bar(g)
LP pump down setting	2.3	bar(g)
Sound power data		
Sound power level	73	dB(A)
	75	ab(/ ()

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

to: Evaporating temperature at dew point tc: Condensing temperature at dew point

All performance data +/- 5%

## Danfoss scroll compressor. HCJ105T4

Danfoss

**R410A** 

## Performance data at 50 Hz, ARI rating conditions

Cond. temp. in	Evaporating temperature in °C (to)								
°C (tc)	-25	-20	-15	-10	-5	0	5	10	15
Cooling capacity	/ in W			r				r	
30	9 682	12 372	15 317	18 660	22 547	27 120	32 525	38 904	-
35	8 867	11 586	14 484	17 707	21 398	25 701	30 761	36 721	-
40	7 944	10 715	13 593	16 719	20 240	24 298	29 038	34 604	-
45	-	9 734	12 615	15 671	19 046	22 884	27 329	32 525	-

40	7 944	10 715	13 593	16 719	20 240	24 298	29 038	34 604	-
45	-	9 734	12 615	15 671	19 046	22 884	27 329	32 525	-
50	-	-	11 524	14 533	17 788	21 431	25 606	30 458	-
55	-	-	-	13 280	16 439	19 911	23 842	28 374	-
60	-	-	-	-	14 971	18 298	22 009	26 247	-
65	-	-	-	-	-	16 564	20 080	24 048	-

#### Power input in W

30	4 939	4 988	4 999	4 994	4 995	5 025	5 106	5 259	-
35	5 402	5 485	5 517	5 522	5 520	5 534	5 586	5 699	-
40	5 907	6 030	6 089	6 108	6 107	6 110	6 139	6 216	-
45	-	6 630	6 722	6 759	6 766	6 763	6 773	6 819	-
50	-	-	7 422	7 484	7 502	7 499	7 496	7 516	-
55	-	-	-	8 289	8 324	8 325	8 314	8 313	-
60	-	-	-	-	9 239	9 250	9 235	9 219	-
65	-	-	-	-	-	10 280	10 267	10 240	-

#### Current consumption in A

30	10.96	11.03	11.11	11.20	11.29	11.36	11.39	11.39	-
35	11.61	11.62	11.67	11.75	11.84	11.94	12.03	12.10	-
40	12.41	12.35	12.34	12.39	12.47	12.58	12.71	12.84	-
45	-	13.27	13.19	13.19	13.24	13.35	13.49	13.66	-
50	-	-	14.27	14.20	14.21	14.28	14.42	14.61	-
55	-	-	-	15.46	15.41	15.44	15.56	15.75	-
60	-	-	-	-	16.90	16.88	16.96	17.13	-
65	-	-	-	-	-	18.64	18.66	18.80	-

#### Mass flow in kg/h

30	186	235	287	345	412	491	584	694	-
35	180	230	283	342	409	486	576	681	-
40	170	223	279	338	405	481	568	670	-
45	-	214	272	333	400	476	562	661	-
50	-	-	263	326	394	470	554	652	-
55	-	-	-	317	386	462	547	642	-
60	-	-	-	-	375	452	537	632	-
65	-	-	-	-	-	440	525	620	-

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

30	1.96	2.48	3.06	3.74	4.51	5.40	6.37	7.40	-
35	1.64	2.11	2.63	3.21	3.88	4.64	5.51	6.44	-
40	1.34	1.78	2.23	2.74	3.31	3.98	4.73	5.57	-
45	-	1.47	1.88	2.32	2.82	3.38	4.03	4.77	-
50	-	-	1.55	1.94	2.37	2.86	3.42	4.05	-
55	-	-	-	1.60	1.97	2.39	2.87	3.41	-
60	-	-	-	-	1.62	1.98	2.38	2.85	-
65	-	-	-	-	-	1.61	1.96	2.35	-

Nominal performance at to = 7.2 °C	, tc = 54.4 °C	
Cooling capacity	25 983	W
Power input	8 208	W
Current consumption	15.49	Α
Mass flow	588	kg/h
C.O.P.	3.17	

Maximum HP switch setting	45	bar(g)
Minimum LP switch setting	1.5	bar(g)
LP pump down setting	2.3	bar(g)
Sound power data		
	=0	
Sound power level	73	dB(A)
Sound power level With accoustic hood	73 68	dB(A) dB(A)

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

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

All performance data +/- 5%

Pressure switch settings

## Danfoss scroll compressor. HCJ105T4

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## Performance data at 60 Hz, EN 12900 rating conditions

Performanc	e data at 60	) Hz, EN 129	00 rating co	nditions					R410A
Cond. temp. in		-		Evapora	ating temperature	in °C (to)		-	
°C (tc)	-25	-20	-15	-10	-5	0	5	10	15
Cooling capacity	y in W								
30	10 623	13 732	17 163	21 018	25 398	30 407	36 146	42 718	-
35	9 731	12 719	15 998	19 670	23 835	28 597	34 057	40 316	-
40	8 832	11 701	14 832	18 324	22 279	26 796	31 979	37 928	-
45	-	10 640	13 624	16 939	20 684	24 960	29 867	35 506	-
50	-	-	12 333	15 470	19 007	23 040	27 671	32 998	-
55	-	-	-	13 873	17 197	20 985	25 334	30 343	-
60	-	-	-	-	15 195	18 725	22 779	27 454	-
65	-	-	-	-	-	16 153	19 878	24 178	-
Power input in V	M								
30	5 423	5 514	5 598	5 691	5 808	5 964	6 177	6 460	
35	6 030	6 126	6 207	6 288	6 385	6 514	6 690	6 929	-
40	6 701	6 809	6 893	6 970	7 054	7 162	7 309	7 511	_
45	-	7 563	7 658	7 737	7 816	7 910	8 034	8 206	_
43 50	_	-	8 502	8 590	8 670	8 757	8 866	9 014	_
55	-			9 530	9 618	9 705	9 806	9 937	_
60	_	-	_	-	10 660	10 754	10 854	10 976	_
65	-	-	-	_	-	11 905	12 011	12 130	-
Current consum									T
30	10.48	10.55	10.63	10.71	10.81	10.93	11.09	11.29	-
35	11.02	11.12	11.21	11.30	11.39	11.49	11.62	11.78	-
40	11.61	11.75	11.87	11.97	12.07	12.16	12.27	12.40	-
45	-	12.45	12.61	12.74	12.85	12.95	13.06	13.17	-
50	-	-	13.44	13.61	13.76	13.88	13.99	14.10	-
55	-	-	-	14.61	14.79	14.95	15.08	15.19	-
60	-	-	-	-	15.97	16.17	16.33	16.47	-
65	-	-	-	-	-	17.55	17.77	17.94	-
/lass flow in kg/	h								
30	236	302	372	449	535	632	743	870	-
35	226	291	361	437	523	619	729	854	-
40	215	280	350	425	510	606	715	838	-
45	-	268	337	412	496	591	699	822	-
50	-	-	322	397	480	574	681	802	-
55	-	-	-	378	461	554	660	780	-
60	-	-	-	-	437	529	634	753	-
65	-	-	-	-	-	499	603	721	-

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

30	1.96	2.49	3.07	3.69	4.37	5.10	5.85	6.61	-
35	1.61	2.08	2.58	3.13	3.73	4.39	5.09	5.82	-
40	1.32	1.72	2.15	2.63	3.16	3.74	4.38	5.05	-
45	-	1.41	1.78	2.19	2.65	3.16	3.72	4.33	-
50	-	-	1.45	1.80	2.19	2.63	3.12	3.66	-
55	-	-	-	1.46	1.79	2.16	2.58	3.05	-
60	-	-	-	-	1.43	1.74	2.10	2.50	-
65	-	-	-	-	-	1.36	1.66	1.99	-

Nominal performance at to = 5 °	°C, tc = 50 °C		
Cooling capacity	27 671	W	
Power input	8 866	W	
Current consumption	13.99	A	
Mass flow	681	kg/h	
COP	3 12		

Pressure switch settings		
Maximum HP switch setting	45	bar(g)
Minimum LP switch setting	1.5	bar(g)
LP pump down setting	2.3	bar(g)
Sound power data		
Sound power level	76	dB(A)
With accoustic hood	71	dB(A)

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

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

All performance data +/- 5%

## Danfoss scroll compressor. HCJ105T4

Danfoss

**R410A** 

## Performance data at 60 Hz, ARI rating conditions

Cond. temp. in				Evapora	iting temperature i	n °C (to)			
°C (tc)	-25	-20	-15	-10	-5	0	5	10	15
Cooling capacity	/ in W								
30	11 472	14 814	18 497	22 629	27 321	32 680	38 817	45 840	-
35	10 577	13 808	17 348	21 307	25 794	30 918	36 787	43 512	-

40	9 676	12 801	16 205	19 996	24 283	29 177	34 785	41 216	-
45	-	11 750	15 022	18 651	22 745	27 414	32 766	38 911	-
50	-	-	13 759	17 231	21 137	25 587	30 689	36 552	-
55	-	-	-	15 693	19 417	23 653	28 510	34 097	-
60	-	-	-	-	17 541	21 569	26 187	31 504	-
65	-	-	-	-	-	19 293	23 677	28 729	-

#### Power input in W

30	5 423	5 514	5 598	5 691	5 808	5 964	6 177	6 460	-
35	6 030	6 126	6 207	6 288	6 385	6 514	6 690	6 929	-
40	6 701	6 809	6 893	6 970	7 054	7 162	7 309	7 511	-
45	-	7 563	7 658	7 737	7 816	7 910	8 034	8 206	-
50	-	-	8 502	8 590	8 670	8 757	8 866	9 014	-
55	-	-	-	9 530	9 618	9 705	9 806	9 937	-
60	-	-	-	-	10 660	10 754	10 854	10 976	-
65	-	-	-	-	-	11 905	12 011	12 130	-

#### Current consumption in A

30	10.48	10.55	10.63	10.71	10.81	10.93	11.09	11.29	-
35	11.02	11.12	11.21	11.30	11.39	11.49	11.62	11.78	-
40	11.61	11.75	11.87	11.97	12.07	12.16	12.27	12.40	-
45	-	12.45	12.61	12.74	12.85	12.95	13.06	13.17	-
50	-	-	13.44	13.61	13.76	13.88	13.99	14.10	-
55	-	-	-	14.61	14.79	14.95	15.08	15.19	-
60	-	-	-	-	15.97	16.17	16.33	16.47	-
65	-	-	-	-	-	17.55	17.77	17.94	-

#### Mass flow in kg/h

30	235	300	370	446	532	628	738	864	-
35	225	289	359	435	519	615	724	848	-
40	214	279	347	423	507	602	710	832	-
45	-	266	335	410	493	587	694	816	-
50	-	-	320	395	477	571	676	797	-
55	-	-	-	376	458	550	655	774	-
60	-	-	-	-	434	526	630	748	-
65	-	-	-	-	-	496	599	716	-

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

30	2.12	2.69	3.30	3.98	4.70	5.48	6.28	7.10	-
35	1.75	2.25	2.79	3.39	4.04	4.75	5.50	6.28	-
40	1.44	1.88	2.35	2.87	3.44	4.07	4.76	5.49	-
45	-	1.55	1.96	2.41	2.91	3.47	4.08	4.74	-
50	-	-	1.62	2.01	2.44	2.92	3.46	4.05	-
55	-	-	-	1.65	2.02	2.44	2.91	3.43	-
60	-	-	-	-	1.65	2.01	2.41	2.87	-
65	-	-	-	-	-	1.62	1.97	2.37	-

Nominal performance at to = 7.2 °	°C, tc = 54.4 °C	
Cooling capacity	31 154	W
Power input	9 741	W
Current consumption	14.99	A
Mass flow	709	kg/h
C.O.P.	3.20	

Pressure switch settings		
Maximum HP switch setting	45	bar(g)
Minimum LP switch setting	1.5	bar(g)
LP pump down setting	2.3	bar(g)
LP pump down setting	2.3	bar(g
Sound power data		
Sound power data Sound power level	76	dB(A)

to: Evaporating temperature at dew point

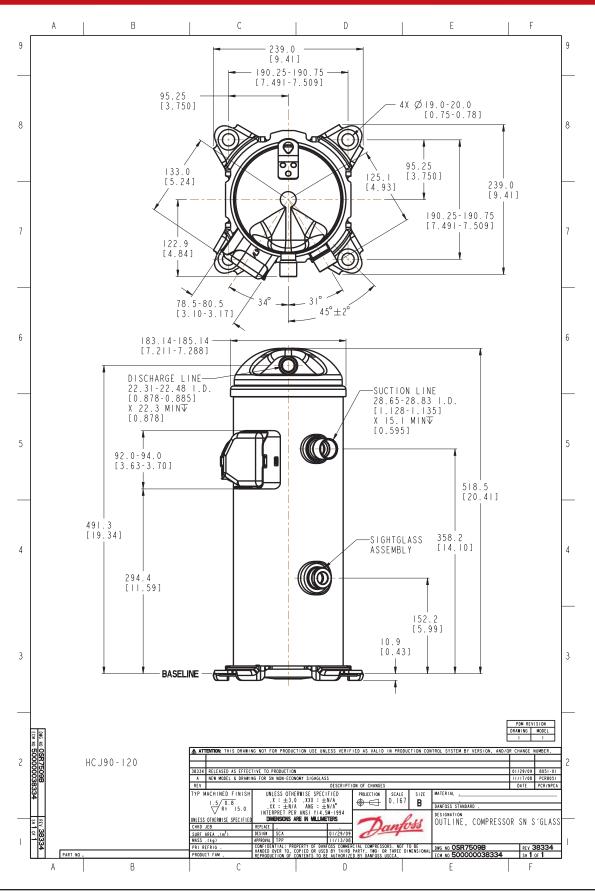
tc: Condensing temperature at dew point

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

All performance data +/- 5%



ENGINEERING TOMORROW



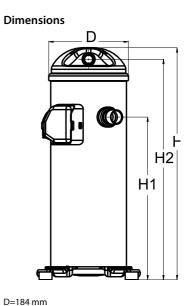
# Danfoss

## Datasheet, technical data

## Danfoss scroll compressor, HCJ105T4

## **General Characteristics**

Model number (on compressor nameplate)	HCJ105T4LC	8
Code number for Singlepack*	120U2578	
Code number for Industrial pack**	120U2575	
Drawing number	0SR7508B	
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	101,6 cm3/rev	
Displacement @ Nominal speed	17.7 m3/h @ 2900 rpm - 21.3 m3/h @ 3500 rpr	n
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	R410A	



#### **Electrical Characteristics**

Nominal voltage	380-415V/3/50Hz - 460V/3/60Hz	H=537 mm
Voltage range	342-457 V @ 50Hz - 414-506 V @ 60Hz	H1=377 mm
Winding resistance between phases 1-2 +/- 7% at 25°C	1.29 Ω	H2=510 mm
Winding resistance between phases 1-3 +/- 7% at 25°C	1.28 Ω	H3=- mm
Winding resistance between phases 2-3 +/- 7% at 25°C	1.33 Ω	
Rated Load Amps (RLA)	16.0 A	
Maximum Continuous Current (MCC)	25.0 A	
Locked Rotor Amps (LRA)	110.0 A	Terminal b
Motor protection	Internal overload protector	

## **Recommended Installation torgues**

Oil sight glass	52,5 Nm
Power connections / Earth connection	3 Nm / 2 Nm

### Parts shipped with compressor

Mounting kit with grommets and sleeves Initial oil charge Installation instructions

Approvals : CE certified, UL certified (file SA11565), -\*Singlepack: Compressor in cardboard box

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

Terminal box



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, HCJ105T4

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 side	Code no.	Solder sleeve adapter set
Rotolock valve, V05 (1-1/4" Rotolock, 7/8" ODF)	8168030	
Gasket, 1-3/4"	8156132	
	_	
Rotolock accessories, sets	Code no.	
Solder sleeve adapter set (1-3/4" Rotolock, 1-1/8" ODF), (1-1/4" Rotolock, 7/8" ODF)	120Z0125	1 2 3 4
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	
		1: Rotolock adapter (Suc & Dis)
Oil / lubricants	Code no.	2: Gasket (Suc & Dis)
PVE lubricant, 320HV (FVC68D), 1 litre can	120Z5034	3: Solder sleeve (Suc & Dis)
		4: Rotolock nut (Suc & Dis)
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	
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	

## Danfoss scroll compressor. HCJ105T4

Danfoss

**R410A** 

## Performance data at 50 Hz, EN 12900 rating conditions

Cond. temp. in		Evaporating temperature in °C (to)								
°C (tc)	-25	-20	-15	-10	-5	0	5	10	15	
Cooling capacity	in W									
30	8 965	11 468	14 212	17 331	20 960	25 233	30 286	36 255	-	
35	8 158	10 671	13 356	16 346	19 773	23 772	28 478	34 024	-	
40	7 252	9 795	12 441	15 322	18 569	22 316	26 696	31 843	-	
45	-	8 815	11 441	14 232	17 320	20 835	24 911	29 679	-	
50	-	-	10 329	13 048	15 995	19 298	23 088	27 497	-	
55	-	-	-	11 740	14 559	17 665	21 186	25 250	-	
60	-	-	-	-	12 968	15 885	19 144	22 872	-	
65	-	-	-	-	-	13 868	16 858	20 239	-	
Power input in W 30	4 939	4 988	4 999	4 994	4 995	5 025	5 106	5 259		
35	5 402	5 485	5 517	5 522	5 520	5 534	5 586	5 699		
40	5 907	6 030	6 089	6 108	6 107	6 110	6 139	6 216	-	
45	-	6 630	6 722	6 759	6 766	6 763	6 773	6 819	-	
50	-	-	7 422	7 484	7 502	7 499	7 496	7 516	-	
55	-	-	-	8 289	8 324	8 325	8 314	8 313	-	
60	-	-	-	-	9 239	9 250	9 235	9 219	-	
65	-	-	-	-	-	10 280	10 267	10 240	-	
		•	•	•	•			•		
Current consump	otion in A									
30	10.96	11.03	11.11	11.20	11.29	11.36	11.39	11.39	-	

88	10.00	11100		11120	11120	11166	11100	11100	
35	11.61	11.62	11.67	11.75	11.84	11.94	12.03	12.10	-
40	12.41	12.35	12.34	12.39	12.47	12.58	12.71	12.84	-
45	-	13.27	13.19	13.19	13.24	13.35	13.49	13.66	-
50	-	-	14.27	14.20	14.21	14.28	14.42	14.61	-
55	-	-	-	15.46	15.41	15.44	15.56	15.75	-
60	-	-	-	-	16.90	16.88	16.96	17.13	-
65	-	-	-	-	-	18.64	18.66	18.80	-

#### Mass flow in kg/h

30	188	236	288	347	415	495	588	699	-
35	181	231	285	344	411	489	580	686	-
40	171	225	280	341	408	484	572	675	-
45	-	216	274	335	403	479	565	666	-
50	-	-	265	328	397	473	558	656	-
55	-	-	-	318	389	465	550	647	-
60	-	-	-	-	378	455	541	636	-
65	-	-	-	-	-	443	529	624	-

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

to: Evaporating temperature at dew point tc: Condensing temperature at dew point

30	1.82	2.30	2.84	3.47	4.20	5.02	5.93	6.89	-
35	1.51	1.95	2.42	2.96	3.58	4.30	5.10	5.97	-
40	1.23	1.62	2.04	2.51	3.04	3.65	4.35	5.12	-
45	-	1.33	1.70	2.11	2.56	3.08	3.68	4.35	-
50	-	-	1.39	1.74	2.13	2.57	3.08	3.66	-
55	-	-	-	1.42	1.75	2.12	2.55	3.04	-
60	-	-	-	-	1.40	1.72	2.07	2.48	-
65	-	-	-	-	-	1.35	1.64	1.98	-

Nominal performance at to = 5 °C, tc = 50 °C								
Cooling capacity	23 088	W						
Power input	7 496	W						
Current consumption	14.42	A						
Mass flow	558	kg/h						
C.O.P.	3.08							

Pressure switch settings		
Maximum HP switch setting	45	bar(g)
Minimum LP switch setting	1.5	bar(g)
LP pump down setting	2.3	bar(g)
Sound power data		
Sound power level	73	dB(A)
	75	ab(/ ()

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

All performance data +/- 5%

## Danfoss scroll compressor. HCJ105T4

Danfoss

**R410A** 

## Performance data at 50 Hz, ARI rating conditions

Cond. temp. in				Evapora	ating temperature i	n °C (to)			
°C (tc)	-25	-20	-15	-10	-5	0	5	10	15
Cooling capacity	/ in W			r				r	
30	9 682	12 372	15 317	18 660	22 547	27 120	32 525	38 904	-
35	8 867	11 586	14 484	17 707	21 398	25 701	30 761	36 721	-
40	7 944	10 715	13 593	16 719	20 240	24 298	29 038	34 604	-
45	-	9 734	12 615	15 671	19 046	22 884	27 329	32 525	-

40	7 944	10 715	13 593	16 719	20 240	24 298	29 038	34 604	-
45	-	9 734	12 615	15 671	19 046	22 884	27 329	32 525	-
50	-	-	11 524	14 533	17 788	21 431	25 606	30 458	-
55	-	-	-	13 280	16 439	19 911	23 842	28 374	-
60	-	-	-	-	14 971	18 298	22 009	26 247	-
65	-	-	-	-	-	16 564	20 080	24 048	-

#### Power input in W

30	4 939	4 988	4 999	4 994	4 995	5 025	5 106	5 259	-
35	5 402	5 485	5 517	5 522	5 520	5 534	5 586	5 699	-
40	5 907	6 030	6 089	6 108	6 107	6 110	6 139	6 216	-
45	-	6 630	6 722	6 759	6 766	6 763	6 773	6 819	-
50	-	-	7 422	7 484	7 502	7 499	7 496	7 516	-
55	-	-	-	8 289	8 324	8 325	8 314	8 313	-
60	-	-	-	-	9 239	9 250	9 235	9 219	-
65	-	-	-	-	-	10 280	10 267	10 240	-

#### Current consumption in A

30	10.96	11.03	11.11	11.20	11.29	11.36	11.39	11.39	-
35	11.61	11.62	11.67	11.75	11.84	11.94	12.03	12.10	-
40	12.41	12.35	12.34	12.39	12.47	12.58	12.71	12.84	-
45	-	13.27	13.19	13.19	13.24	13.35	13.49	13.66	-
50	-	-	14.27	14.20	14.21	14.28	14.42	14.61	-
55	-	-	-	15.46	15.41	15.44	15.56	15.75	-
60	-	-	-	-	16.90	16.88	16.96	17.13	-
65	-	-	-	-	-	18.64	18.66	18.80	-

#### Mass flow in kg/h

30	186	235	287	345	412	491	584	694	-
35	180	230	283	342	409	486	576	681	-
40	170	223	279	338	405	481	568	670	-
45	-	214	272	333	400	476	562	661	-
50	-	-	263	326	394	470	554	652	-
55	-	-	-	317	386	462	547	642	-
60	-	-	-	-	375	452	537	632	-
65	-	-	-	-	-	440	525	620	-

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

30	1.96	2.48	3.06	3.74	4.51	5.40	6.37	7.40	-
35	1.64	2.11	2.63	3.21	3.88	4.64	5.51	6.44	-
40	1.34	1.78	2.23	2.74	3.31	3.98	4.73	5.57	-
45	-	1.47	1.88	2.32	2.82	3.38	4.03	4.77	-
50	-	-	1.55	1.94	2.37	2.86	3.42	4.05	-
55	-	-	-	1.60	1.97	2.39	2.87	3.41	-
60	-	-	-	-	1.62	1.98	2.38	2.85	-
65	-	-	-	-	-	1.61	1.96	2.35	-

Nominal performance at to = 7.2 °C,	tc = 54.4 °C	
Cooling capacity	25 983	W
Power input	8 208	W
Current consumption	15.49	Α
Mass flow	588	kg/h
C.O.P.	3.17	

Maximum HP switch setting	45	bar(g)
Minimum LP switch setting	1.5	bar(g)
LP pump down setting	2.3	bar(g)
Sound power data		
Sound power data Sound power level	73	dB(A)

Pressure switch settings

All performance data +/- 5%

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

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

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FRCC.ED.HCJ105T4.A3.02 / page performance R410A 50 Hz

## Danfoss scroll compressor. HCJ105T4

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## Performance data at 60 Hz, EN 12900 rating conditions

Performanc	e data at 60	) Hz, EN 129	00 rating co	nditions					R410A
Cond. temp. in		-		Evapora	ating temperature	in °C (to)		-	
°C (tc)	-25	-20	-15	-10	-5	0	5	10	15
Cooling capacity	y in W								
30	10 623	13 732	17 163	21 018	25 398	30 407	36 146	42 718	-
35	9 731	12 719	15 998	19 670	23 835	28 597	34 057	40 316	-
40	8 832	11 701	14 832	18 324	22 279	26 796	31 979	37 928	-
45	-	10 640	13 624	16 939	20 684	24 960	29 867	35 506	-
50	-	-	12 333	15 470	19 007	23 040	27 671	32 998	-
55	-	-	-	13 873	17 197	20 985	25 334	30 343	-
60	-	-	-	-	15 195	18 725	22 779	27 454	-
65	-	-	-	-	-	16 153	19 878	24 178	-
Power input in V	M								
30	5 423	5 514	5 598	5 691	5 808	5 964	6 177	6 460	
35	6 030	6 126	6 207	6 288	6 385	6 514	6 690	6 929	-
40	6 701	6 809	6 893	6 970	7 054	7 162	7 309	7 511	_
45	-	7 563	7 658	7 737	7 816	7 910	8 034	8 206	_
43 50	_	-	8 502	8 590	8 670	8 757	8 866	9 014	_
55	-			9 530	9 618	9 705	9 806	9 937	_
60	_	-	_	-	10 660	10 754	10 854	10 976	_
65	-	-	-	_	-	11 905	12 011	12 130	-
Current consum									T
30	10.48	10.55	10.63	10.71	10.81	10.93	11.09	11.29	-
35	11.02	11.12	11.21	11.30	11.39	11.49	11.62	11.78	-
40	11.61	11.75	11.87	11.97	12.07	12.16	12.27	12.40	-
45	-	12.45	12.61	12.74	12.85	12.95	13.06	13.17	-
50	-	-	13.44	13.61	13.76	13.88	13.99	14.10	-
55	-	-	-	14.61	14.79	14.95	15.08	15.19	-
60	-	-	-	-	15.97	16.17	16.33	16.47	-
65	-	-	-	-	-	17.55	17.77	17.94	-
/lass flow in kg/	h								
30	236	302	372	449	535	632	743	870	-
35	226	291	361	437	523	619	729	854	-
40	215	280	350	425	510	606	715	838	-
45	-	268	337	412	496	591	699	822	-
50	-	-	322	397	480	574	681	802	-
55	-	-	-	378	461	554	660	780	-
60	-	-	-	-	437	529	634	753	-
65	-	-	-	-	-	499	603	721	-

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

30	1.96	2.49	3.07	3.69	4.37	5.10	5.85	6.61	-
35	1.61	2.08	2.58	3.13	3.73	4.39	5.09	5.82	-
40	1.32	1.72	2.15	2.63	3.16	3.74	4.38	5.05	-
45	-	1.41	1.78	2.19	2.65	3.16	3.72	4.33	-
50	-	-	1.45	1.80	2.19	2.63	3.12	3.66	-
55	-	-	-	1.46	1.79	2.16	2.58	3.05	-
60	-	-	-	-	1.43	1.74	2.10	2.50	-
65	-	-	-	-	-	1.36	1.66	1.99	-

Nominal performance at to = 5 °	°C, tc = 50 °C		
Cooling capacity	27 671	W	
Power input	8 866	W	
Current consumption	13.99	A	
Mass flow	681	kg/h	
COP	3 12		

Pressure switch settings		
Maximum HP switch setting	45	bar(g)
Minimum LP switch setting	1.5	bar(g)
LP pump down setting	2.3	bar(g)
Sound power data		
Sound power level	76	dB(A)
With accoustic hood	71	dB(A)

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

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

All performance data +/- 5%

## Danfoss scroll compressor. HCJ105T4

Danfoss

**R410A** 

## Performance data at 60 Hz, ARI rating conditions

Cond. temp. in		Evaporating temperature in °C (to)											
°C (tc)	-25	-20	-15	-10	-5	0	5	10	15				
Cooling capacity	/ in W												
30	11 472	14 814	18 497	22 629	27 321	32 680	38 817	45 840	-				
35	10 577	13 808	17 348	21 307	25 794	30 918	36 787	43 512	-				

40	9 676	12 801	16 205	19 996	24 283	29 177	34 785	41 216	-
45	-	11 750	15 022	18 651	22 745	27 414	32 766	38 911	-
50	-	-	13 759	17 231	21 137	25 587	30 689	36 552	-
55	-	-	-	15 693	19 417	23 653	28 510	34 097	-
60	-	-	-	-	17 541	21 569	26 187	31 504	-
65	-	-	-	-	-	19 293	23 677	28 729	-

#### Power input in W

30	5 423	5 514	5 598	5 691	5 808	5 964	6 177	6 460	-
35	6 030	6 126	6 207	6 288	6 385	6 514	6 690	6 929	-
40	6 701	6 809	6 893	6 970	7 054	7 162	7 309	7 511	-
45	-	7 563	7 658	7 737	7 816	7 910	8 034	8 206	-
50	-	-	8 502	8 590	8 670	8 757	8 866	9 014	-
55	-	-	-	9 530	9 618	9 705	9 806	9 937	-
60	-	-	-	-	10 660	10 754	10 854	10 976	-
65	-	-	-	-	-	11 905	12 011	12 130	-

#### Current consumption in A

30	10.48	10.55	10.63	10.71	10.81	10.93	11.09	11.29	-
35	11.02	11.12	11.21	11.30	11.39	11.49	11.62	11.78	-
40	11.61	11.75	11.87	11.97	12.07	12.16	12.27	12.40	-
45	-	12.45	12.61	12.74	12.85	12.95	13.06	13.17	-
50	-	-	13.44	13.61	13.76	13.88	13.99	14.10	-
55	-	-	-	14.61	14.79	14.95	15.08	15.19	-
60	-	-	-	-	15.97	16.17	16.33	16.47	-
65	-	-	-	-	-	17.55	17.77	17.94	-

#### Mass flow in kg/h

30	235	300	370	446	532	628	738	864	-
35	225	289	359	435	519	615	724	848	-
40	214	279	347	423	507	602	710	832	-
45	-	266	335	410	493	587	694	816	-
50	-	-	320	395	477	571	676	797	-
55	-	-	-	376	458	550	655	774	-
60	-	-	-	-	434	526	630	748	-
65	-	-	-	-	-	496	599	716	-

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

30	2.12	2.69	3.30	3.98	4.70	5.48	6.28	7.10	-
35	1.75	2.25	2.79	3.39	4.04	4.75	5.50	6.28	-
40	1.44	1.88	2.35	2.87	3.44	4.07	4.76	5.49	-
45	-	1.55	1.96	2.41	2.91	3.47	4.08	4.74	-
50	-	-	1.62	2.01	2.44	2.92	3.46	4.05	-
55	-	-	-	1.65	2.02	2.44	2.91	3.43	-
60	-	-	-	-	1.65	2.01	2.41	2.87	-
65	-	-	-	-	-	1.62	1.97	2.37	-

Nominal performance at to = 7.2 °	°C, tc = 54.4 °C	
Cooling capacity	31 154	W
Power input	9 741	W
Current consumption	14.99	A
Mass flow	709	kg/h
C.O.P.	3.20	

Pressure switch settings		
Maximum HP switch setting	45	bar(g)
Minimum LP switch setting	1.5	bar(g)
LP pump down setting	2.3	bar(g)
LP pump down setting	2.3	bar(g
Sound power data		
Sound power data Sound power level	76	dB(A)

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

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

All performance data +/- 5%



ENGINEERING TOMORROW

