ENGINEERING



Datasheets

Danfoss scroll compressors **H series**





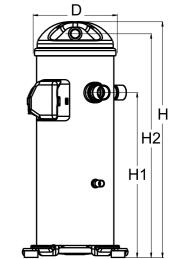
Datasheet, technical data

Danfoss scroll compressor, HLP075T4

General Characteristics

Model number (on compressor nameplate)		HLP075T4LC6
Code number for Singlepack*		120U1766
Code number for Industrial pack**		120U1763
Drawing number		0XR6089B-1
Suction and discharge connections		Brazed
Suction connection		7/8 " ODF
Discharge connection		1/2 " ODF
Oil sight glass		None
Oil equalisation connection		None
Oil drain connection		None
LP gauge port		None
IPR valve		Yes
Swept volume	102,75	cm3/rev
Displacement @ Nominal speed	17.9 m3/h @ 2900 rpm	- 21.6 m3/h @ 3500 rpm
Net weight	37,2	2 kg
Oil charge	1,57 litre	e, PVE
Maximum system test pressure Low Side / High side	- bar(g)	′ - bar(g)
Maximum differential test pressure	- b	ar
Maximum number of starts per hour		-
Refrigerant charge limit	5,44	ł kg
Approved refrigerants	R40)7C

Dimensions

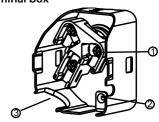


Electrical Characteristics

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℃	1.617 Ω
Winding resistance between phases 1-3 +/- 7% at 25°C	1.600 Ω
Winding resistance between phases 2-3 +/- 7% at 25°C	1.630 Ω
Rated Load Amps (RLA)	10.3 A
Maximum Continuous Current (MCC)	16 A
Locked Rotor Amps (LRA)	100 A
Motor protection	Internal overload protector

D=183,5 mm H=455 mm H1=280 mm H2=422 mm H3=- mm

Terminal box



Recommended Installation torques

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), -

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

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

IP22

1: Screw connectors 10-32 UNF x 9.5

2: Earth connection

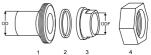
3: Power cable passage



Datasheet, accessories and spare parts

Danfoss scroll compressor, HLP075T4

Rotolock accessories, suction side	Code no.	
Rotolock valve, V05 (1-1/4" Rotolock, 7/8" ODF)	8168030	
Gasket, 1-1/4"	8156131	
Rotolock accessories, discharge side	Code no.	
Solder sleeve, P06 (1" Rotolock, 1/2" ODF)	8153007	
Angle adapter, C06 (1" Rotolock, 1/2" ODF)	8168007	Solder sleeve
Rotolock valve, V06 (1" Rotolock, 1/2" ODF)	8168031	
Gasket, 1"	8156130	
Rotolock accessories, sets	Code no.	
Solder sleeve adapter set (1-1/4" Rotolock, 7/8" ODF), (1" Rotolock, 1/2" ODF)	120Z0127	1 2
Gasket set, 1", 1-1/4", 1-3/4", OSG gaskets black & white	8156009	
Oil / lubricants	Code no.	1: Rotolock adapt
PVE lubricant, 320HV (FVC68D), 1 litre can	120Z5034	2: Gasket (Suc & D
· · · · · · · · · · · · · · · · · · ·		3: Solder sleeve (
Crankcase heaters	Code no.	4: Rotolock nut (S
Belt type crankcase heater, 50 W, 230 V, CE mark, UL	120Z0057	
Belt type crankcase heater, 50 W, 400 V, CE mark, UL	120Z0058	
Miscellaneous accessories	Code no.	
Acoustic hood	120Z5044	
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	



pter (Suc & Dis)

Dis)

(Suc & Dis)

(Suc & Dis)



Danfoss scroll compressor. HLP075T4

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	-	5 469	7 020	8 904	11 158	13 820	16 927	20 517	24 625
35	-	5 141	6 613	8 402	10 543	13 075	16 033	19 456	23 381
40	-	4 795	6 189	7 882	9 911	12 312	15 122	18 379	22 120
45	-	-	5 736	7 334	9 250	11 521	14 183	17 274	20 830
50	-	-	-	6 747	8 551	10 691	13 206	16 130	19 502
55	-	-	-	-	7 803	9 813	12 179	14 936	18 122
60	-	-	-	-	-	8 876	11 092	13 680	16 679
65	-	-	-	-	-	-	9 933	12 351	15 159
ower input in W									
30	-	3 433	3 417	3 405	3 390	3 366	3 324	3 259	3 163
35	-	3 835	3 813	3 796	3 779	3 755	3 715	3 654	3 563
40	-	4 264	4 235	4 216	4 198	4 174	4 138	4 081	3 998
45	-	-	4 693	4 671	4 653	4 632	4 599	4 549	4 474
50	-	-	-	5 170	5 153	5 134	5 107	5 065	4 999
55	-	-	-	-	5 704	5 690	5 669	5 635	5 580
60	-	-	-	-	-	6 306	6 293	6 268	6 225
65	-	-	-	-	-	-	6 985	6 971	6 940
Current consump	tion in A								
30	-	5.72	5.62	5.60	5.63	5.66	5.67	5.62	5.46
35	-	6.12	6.01	5.99	6.01	6.03	6.02	5.95	5.77
40	-	6.56	6.46	6.43	6.45	6.46	6.45	6.36	6.17
45	_	-	6.96	6.94	6.95	6.97	6.95	6.85	6.65
50	-	-	-	7.49	7.51	7.53	7.51	7.42	7.21
55	-	-	-	-	8.13	8.16	8.15	8.06	7.85
60	-	-	-	-	-	8.85	8.85	8.77	8.57
65	-	-	-	-	-	-	9.61	9.54	9.36
		•	•	•	•		•	•	
/lass flow in kg/h									
30	_	122	154	193	237	289	349	416	493
35	_	121	153	191	235	286	346	413	489
40	-	120	151	188	232	284	342	409	485
45	-	-	148	185	229	280	338	405	480
50	-	-	-	181	225	275	334	400	475
55	-	_	-	-	219	269	328	394	469
60	-	-	-	-	-	262	320	386	461
65	-	-	-	-	-	-	310	376	451
<u> </u>		1	•		1	1			
coefficient of per	formance (C.	O.P.)							
30	-	1.59	2.05	2.61	3.29	4.11	5.09	6.30	7.79
35	-	1.34	1.73	2.21	2.79	3.48	4.32	5.33	6.56
40	-	1.12	1.46	1.87	2.36	2.95	3.65	4.50	5.53
45	-	-	1.22	1.57	1.99	2.49	3.08	3.80	4.66
50	-	_	-	1.31	1.66	2.08	2.59	3.18	3.90
55	_	_	-	-	1.37	1.72	2.15	2.65	3.25
60	_	_	_	-	-	1.41	1.76	2.18	2.68
~~		+	+	 	+		1.42	1.77	2.18

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

Cooling capacity	16 130	W
Power input	5 065	W
Current consumption	7.42	Α
Mass flow	400	kg/h
C.O.P.	3.18	

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

Sound power level	71	dB(A)
With accoustic hood	66	dB(A)

All performance data +/- 5%

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tc: Condensing temperature at dew point



Danfoss scroll compressor. HLP075T4

Performance data at 50 Hz, ARI 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	-	5 873	7 529	9 538	11 940	14 773	18 076	21 887	26 245
35		5 549	7 128	9 043	11 334	14 039	17 196	20 845	25 024
40		5 205	6 708	8 530	10 711	13 288	16 301	19 788	23 788
45	-	5 205	6 257	7 988	10 059	12 510	15 379	18 705	22 527
50		-	-	7 404	9 367	11 692	14 418	17 584	21 229
55		-	-	-	8 624	10 824	13 408	16 415	19 883
60		-	_	-	-	9 894	12 337	15 185	18 477
65			-	-	-	9 094	11 193	13 884	17 001
05		-	-	-			11 193	13 004	17 001
Power input in W									
30	-	3 433	3 417	3 405	3 390	3 366	3 324	3 259	3 163
35	-	3 835	3 813	3 796	3 779	3 755	3 715	3 654	3 563
40	-	4 264	4 235	4 216	4 198	4 174	4 138	4 081	3 998
45	-	-	4 693	4 671	4 653	4 632	4 599	4 549	4 474
50	-	-	-	5 170	5 153	5 134	5 107	5 065	4 999
55	-	-	-	-	5 704	5 690	5 669	5 635	5 580
60	-	-	-	-	-	6 306	6 293	6 268	6 225
65	-	-	-	-	-	-	6 985	6 971	6 940
Current consump	tion in A	5.70	5.62	F 60	F 62	F 66	F 67	F 60	E 46
30		5.72		5.60	5.63	5.66	5.67	5.62	5.46
35	-	6.12	6.01	5.99	6.01	6.03	6.02	5.95	5.77
40	-	6.56	6.46	6.43	6.45	6.46	6.45	6.36	6.17
45	-	-	6.96	6.94	6.95	6.97	6.95	6.85	6.65
50	-	-	-	7.49	7.51	7.53	7.51	7.42	7.21
55	-	-	-	-	8.13	8.16	8.15	8.06	7.85
60	-	-	-	-	-	8.85	8.85	8.77	8.57
65	-	-	-	-	-	-	9.61	9.54	9.36
Mass flow in kg/h									
30	-	122	154	192	236	287	347	414	490
35	-	121	152	190	234	285	344	410	486
40	-	119	150	187	231	282	340	407	482
45	-	-	147	184	228	278	337	403	478
50	-	-	-	180	223	274	332	398	472
55	-	-	-	-	218	268	326	392	466
60	-	-	-	-	-	260	318	384	458
65	-	-	-	-	-	-	308	374	449
			1		1				
Coefficient of per		, '	0.00	0.00	0.50	4.00	T =	1 0.70	
30	-	1.71	2.20	2.80	3.52	4.39	5.44	6.72	8.30
35	-	1.45	1.87	2.38	3.00	3.74	4.63	5.71	7.02
40	-	1.22	1.58	2.02	2.55	3.18	3.94	4.85	5.95
45	-	-	1.33	1.71	2.16	2.70	3.34	4.11	5.04
50	-	-	-	1.43	1.82	2.28	2.82	3.47	4.25
55	-	-	-	-	1.51	1.90	2.36	2.91	3.56
60	-	-	-	-	-	1.57	1.96	2.42	2.97
65	-	-	-	-	-	-	1.60	1.99	2.45
lamaimal or a refere		200 4				Dunnan	44i		
Nominal performa	ance at to = 7.	2 °C, tc = 54.4 °C		_		Pressure switch		20	h = =/=)

Cooling capacity

Current consumption

Power input

Mass flow

C.O.P.

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

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

18 034

5 542

7.90

424

3.25

W

W

kg/h

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	71	dB(A)
With accoustic hood	66	dB(A)

All performance data +/- 5%

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Danfoss scroll compressor. HLP075T4

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	-	5 469	7 020	8 904	11 158	13 820	16 927	20 517	24 625
35	-	5 141	6 613	8 402	10 543	13 075	16 033	19 456	23 381
40	-	4 795	6 189	7 882	9 911	12 312	15 122	18 379	22 120
45	-	-	5 736	7 334	9 250	11 521	14 183	17 274	20 830
50	-	-	-	6 747	8 551	10 691	13 206	16 130	19 502
55	-	-	-	-	7 803	9 813	12 179	14 936	18 122
60	-	-	-	-	-	8 876	11 092	13 680	16 679
65	-	-	-	-	-	-	9 933	12 351	15 159
ower input in W									
30	-	3 433	3 417	3 405	3 390	3 366	3 324	3 259	3 163
35	-	3 835	3 813	3 796	3 779	3 755	3 715	3 654	3 563
40	-	4 264	4 235	4 216	4 198	4 174	4 138	4 081	3 998
45	-	-	4 693	4 671	4 653	4 632	4 599	4 549	4 474
50	-	-	-	5 170	5 153	5 134	5 107	5 065	4 999
55	-	-	-	-	5 704	5 690	5 669	5 635	5 580
60	-	-	-	-	-	6 306	6 293	6 268	6 225
65	-	-	-	-	-	-	6 985	6 971	6 940
Current consump	tion in A								
30	-	5.72	5.62	5.60	5.63	5.66	5.67	5.62	5.46
35	-	6.12	6.01	5.99	6.01	6.03	6.02	5.95	5.77
40	-	6.56	6.46	6.43	6.45	6.46	6.45	6.36	6.17
45	_	-	6.96	6.94	6.95	6.97	6.95	6.85	6.65
50	-	-	-	7.49	7.51	7.53	7.51	7.42	7.21
55	-	-	-	-	8.13	8.16	8.15	8.06	7.85
60	-	-	-	-	-	8.85	8.85	8.77	8.57
65	-	-	-	-	-	-	9.61	9.54	9.36
		•	•		•		•	•	
/lass flow in kg/h									
30	_	122	154	193	237	289	349	416	493
35	_	121	153	191	235	286	346	413	489
40	-	120	151	188	232	284	342	409	485
45	-	-	148	185	229	280	338	405	480
50	-	-	-	181	225	275	334	400	475
55	-	_	-	-	219	269	328	394	469
60	-	-	-	-	-	262	320	386	461
65	-	-	-	-	-	-	310	376	451
<u> </u>		1	•		1	1			
coefficient of per	formance (C.	O.P.)							
30	-	1.59	2.05	2.61	3.29	4.11	5.09	6.30	7.79
35	-	1.34	1.73	2.21	2.79	3.48	4.32	5.33	6.56
40	-	1.12	1.46	1.87	2.36	2.95	3.65	4.50	5.53
45	-	-	1.22	1.57	1.99	2.49	3.08	3.80	4.66
50	-	_	-	1.31	1.66	2.08	2.59	3.18	3.90
55	_	_	-	-	1.37	1.72	2.15	2.65	3.25
60	_	_	_	-	-	1.41	1.76	2.18	2.68
~~		+	 	 	+		1.42	1.77	2.18

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

Cooling capacity	16 130	W
Power input	5 065	W
Current consumption	7.42	Α
Mass flow	400	kg/h
C.O.P.	3.18	

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

Sound power level	71	dB(A)
With accoustic hood	66	dB(A)

All performance data +/- 5%

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tc: Condensing temperature at dew point



Danfoss scroll compressor. HLP075T4

Performance data at 50 Hz, ARI rating conditions

R407C

°C (tc) Cooling capacity in 30 35 40 45 50 55	-	-25	-20	-15	-10	-5	0	5	10
30 35 40 45 50	-								
30 35 40 45 50	-								
35 40 45 50		5 873	7 529	9 538	11 940	14 773	18 076	21 887	26 245
40 45 50	-	5 549	7 128	9 043	11 334	14 039	17 196	20 845	25 024
45 50		5 205	6 708	8 530	10 711	13 288	16 301	19 788	23 788
50	-	5 205	6 257	7 988	10 711	12 510	15 379	18 705	22 527
		-	-	7 404	9 367	11 692	14 418	17 584	21 229
55		-	-	-	8 624	10 824	13 408	16 415	19 883
60		-	_	-	-	9 894	12 337	15 185	18 477
65		-	-	-	-	9 094	11 193	13 884	17 001
05		<u> </u>	-				11 193	13 004	17 001
Power input in W									
30	-	3 433	3 417	3 405	3 390	3 366	3 324	3 259	3 163
35	-	3 835	3 813	3 796	3 779	3 755	3 715	3 654	3 563
40	-	4 264	4 235	4 216	4 198	4 174	4 138	4 081	3 998
45	-	-	4 693	4 671	4 653	4 632	4 599	4 549	4 474
50	-	-	-	5 170	5 153	5 134	5 107	5 065	4 999
55	-	-	-	-	5 704	5 690	5 669	5 635	5 580
60	-	-	-	-	-	6 306	6 293	6 268	6 225
65	-	-	-	-	-	-	6 985	6 971	6 940
						•			
Current consumption	on in A		1				1		1
30	-	5.72	5.62	5.60	5.63	5.66	5.67	5.62	5.46
35	-	6.12	6.01	5.99	6.01	6.03	6.02	5.95	5.77
40	-	6.56	6.46	6.43	6.45	6.46	6.45	6.36	6.17
45	-	-	6.96	6.94	6.95	6.97	6.95	6.85	6.65
50	-	-	-	7.49	7.51	7.53	7.51	7.42	7.21
55	-	-	-	-	8.13	8.16	8.15	8.06	7.85
60	-	-	-	-	-	8.85	8.85	8.77	8.57
65	-	-	-	-	-	-	9.61	9.54	9.36
Mass flow in kg/h									
30	_	122	154	192	236	287	347	414	490
35	-	121	152	190	234	285	344	410	486
40	_	119	150	187	231	282	340	407	482
45	_	-	147	184	228	278	337	403	478
50		-	-	180	223	274	332	398	472
55		_	_	-	218	268	326	392	466
60	-	-	-	-	-	260	318	384	458
65		-	_	_	_	-	308	374	449
03			-				308	374	449
Coefficient of performance	rmance (C.O	· ·	ı				ı	T	T
30	-	1.71	2.20	2.80	3.52	4.39	5.44	6.72	8.30
35	-	1.45	1.87	2.38	3.00	3.74	4.63	5.71	7.02
40	-	1.22	1.58	2.02	2.55	3.18	3.94	4.85	5.95
45	-	-	1.33	1.71	2.16	2.70	3.34	4.11	5.04
50	-	-	-	1.43	1.82	2.28	2.82	3.47	4.25
55	-	-	-	-	1.51	1.90	2.36	2.91	3.56
60	-	-	-	-	-	1.57	1.96	2.42	2.97
65	-	-	-	-	-	-	1.60	1.99	2.45

Cooling capacity

Current consumption

Power input

Mass flow

C.O.P.

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

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

18 034

5 542

7.90

424

3.25

W

W

kg/h

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

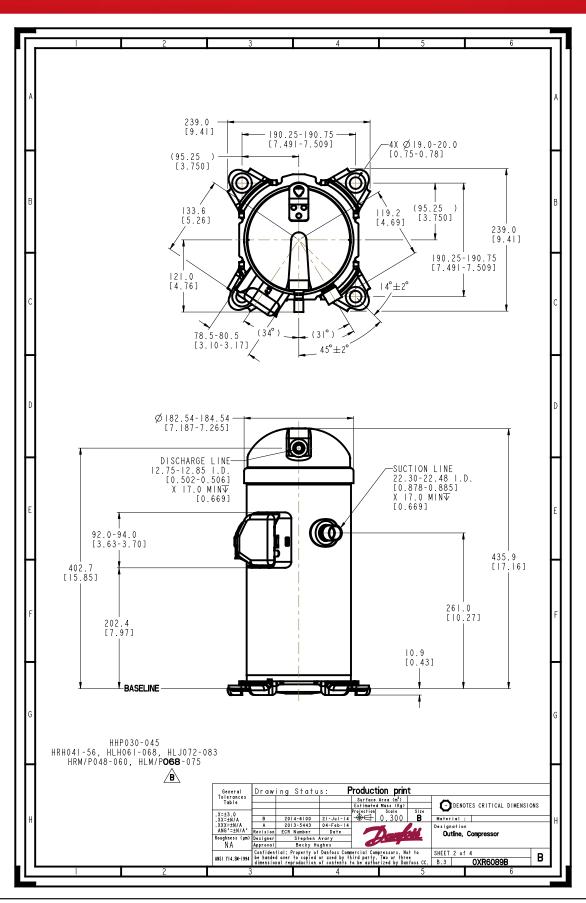
Sound power data

Sound power level	71	dB(A)
With accoustic hood	66	dB(A)

All performance data +/- 5%

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