

ENGINEERING  
TOMORROW

*Danfoss*

Datasheets

# Danfoss scroll compressors **H series**



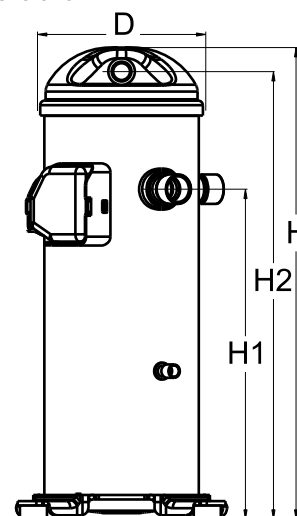
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[www.danfoss.com/odsg](http://www.danfoss.com/odsg)

**General Characteristics**

Model number (on compressor nameplate)		<b>HLM068T4LC6</b>
Code number for Singlepack*		120U1746
Code number for Industrial pack**		120U1743
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		93,08 cm <sup>3</sup> /rev
Displacement @ Nominal speed		16.2 m <sup>3</sup> /h @ 2900 rpm - 19.6 m <sup>3</sup> /h @ 3500 rpm
Net weight		37,2 kg
Oil charge		1,57 litre, Alkylbenzene - -
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		5,44 kg
Approved refrigerants		R22

**Dimensions**

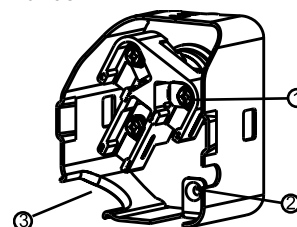


D=183,5 mm  
H=455 mm  
H1=280 mm  
H2=422 mm  
H3=- mm

**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	1.852 Ω
Winding resistance between phases 1-3 +/- 7% at 25°C	1.827 Ω
Winding resistance between phases 2-3 +/- 7% at 25°C	1.867 Ω
Rated Load Amps (RLA)	9.6 A
Maximum Continuous Current (MCC)	15 A
Locked Rotor Amps (LRA)	82 A
Motor protection	Internal overload protector

**Terminal box**



IP22

- 1: Screw connectors 10-32 UNF x 9.5
- 2: Earth connection
- 3: Power cable passage

**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), -

\*Singlepack: Compressor in cardboard box

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

**Rotolock accessories, suction side**

**Code no.**

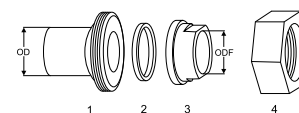
Rotolock valve, V05 (1-1/4" Rotolock, 7/8" ODF)	8168030
Gasket, 1-1/4"	8156131

**Rotolock accessories, discharge side**

**Code no.**

Solder sleeve, P06 (1" Rotolock, 1/2" ODF)	8153007
Angle adapter, C06 (1" Rotolock, 1/2" ODF)	8168007
Rotolock valve, V06 (1" Rotolock, 1/2" ODF)	8168031
Gasket, 1"	8156130

**Solder sleeve adapter set**



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

**Rotolock accessories, sets**

**Code no.**

Solder sleeve adapter set (1-1/4" Rotolock, 7/8" ODF), (1" Rotolock, 1/2" ODF)	120Z0127
Gasket set, 1", 1-1/4", 1-3/4", OSG gaskets black & white	8156009

**Oil / lubricants**

**Code no.**

**Crankcase heaters**

**Code no.**

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

Performance data at 50 Hz, EN 12900 rating conditions

R22

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

Cooling capacity in W

30	6 139	7 171	8 688	10 660	13 058	15 851	19 009	22 502	-
35	5 741	6 762	8 236	10 133	12 422	15 076	18 063	21 353	-
40	5 231	6 265	7 721	9 567	11 774	14 313	17 154	20 266	-
45	-	5 651	7 112	8 932	11 082	13 531	16 251	19 211	-
50	-	-	6 382	8 200	10 316	12 700	15 323	18 155	-
55	-	-	-	7 341	9 447	11 790	14 340	17 068	-
60	-	-	-	-	8 445	10 769	13 270	15 917	-
65	-	-	-	-	-	9 612	12 084	14 673	-

Power input in W

30	2 902	2 822	2 818	2 874	2 976	3 110	3 262	3 416	-
35	3 361	3 250	3 208	3 221	3 275	3 356	3 449	3 540	-
40	3 797	3 676	3 620	3 613	3 642	3 692	3 750	3 799	-
45	-	4 072	4 024	4 020	4 046	4 089	4 133	4 165	-
50	-	-	4 390	4 412	4 459	4 516	4 570	4 606	-
55	-	-	-	4 759	4 849	4 944	5 031	5 094	-
60	-	-	-	-	5 188	5 344	5 486	5 599	-
65	-	-	-	-	-	5 685	5 904	6 091	-

Current consumption in A

30	5.55	5.65	5.73	5.77	5.79	5.79	5.77	5.74	-
35	5.98	6.06	6.11	6.14	6.15	6.15	6.14	6.12	-
40	6.58	6.62	6.65	6.66	6.66	6.65	6.65	6.65	-
45	-	7.35	7.35	7.33	7.32	7.31	7.31	7.32	-
50	-	-	8.21	8.18	8.15	8.14	8.14	8.16	-
55	-	-	-	9.20	9.15	9.13	9.12	9.15	-
60	-	-	-	-	10.32	10.29	10.28	10.31	-
65	-	-	-	-	-	11.63	11.62	11.65	-

Mass flow in kg/h

30	134	154	185	223	270	324	385	451	-
35	130	152	182	221	267	320	379	443	-
40	124	146	178	217	264	316	375	437	-
45	-	138	171	212	259	312	370	432	-
50	-	-	161	203	252	306	364	427	-
55	-	-	-	192	242	298	357	420	-
60	-	-	-	-	230	287	348	412	-
65	-	-	-	-	-	273	336	402	-

Coefficient of performance (C.O.P.)

30	2.12	2.54	3.08	3.71	4.39	5.10	5.83	6.59	-
35	1.71	2.08	2.57	3.15	3.79	4.49	5.24	6.03	-
40	1.38	1.70	2.13	2.65	3.23	3.88	4.57	5.33	-
45	-	1.39	1.77	2.22	2.74	3.31	3.93	4.61	-
50	-	-	1.45	1.86	2.31	2.81	3.35	3.94	-
55	-	-	-	1.54	1.95	2.38	2.85	3.35	-
60	-	-	-	-	1.63	2.02	2.42	2.84	-
65	-	-	-	-	-	1.69	2.05	2.41	-

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

Cooling capacity	15 323	W
Power input	4 570	W
Current consumption	8.14	A
Mass flow	364	kg/h
C.O.P.	3.35	

Pressure switch settings

Maximum HP switch setting	29	bar(g)
Minimum LP switch setting	0.5	bar(g)
LP pump down setting	1.3	bar(g)

Sound power data

Sound power level	71	dB(A)
With acoustic hood	66	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%

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Performance data at 50 Hz, ARI rating conditions

R22

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

Cooling capacity in W

30	6 520	7 610	9 213	11 295	13 826	16 771	20 099	23 777	-
35	6 119	7 201	8 763	10 772	13 196	16 002	19 159	22 632	-
40	5 598	6 699	8 246	10 209	12 554	15 248	18 260	21 556	-
45	-	6 069	7 630	9 573	11 866	14 475	17 369	20 515	-
50	-	-	6 882	8 832	11 099	13 650	16 453	19 476	-
55	-	-	-	7 952	10 221	12 741	15 481	18 407	-
60	-	-	-	-	9 199	11 715	14 418	17 275	-
65	-	-	-	-	-	10 540	13 233	16 047	-

Power input in W

30	2 902	2 822	2 818	2 874	2 976	3 110	3 262	3 416	-
35	3 361	3 250	3 208	3 221	3 275	3 356	3 449	3 540	-
40	3 797	3 676	3 620	3 613	3 642	3 692	3 750	3 799	-
45	-	4 072	4 024	4 020	4 046	4 089	4 133	4 165	-
50	-	-	4 390	4 412	4 459	4 516	4 570	4 606	-
55	-	-	-	4 759	4 849	4 944	5 031	5 094	-
60	-	-	-	-	5 188	5 344	5 486	5 599	-
65	-	-	-	-	-	5 685	5 904	6 091	-

Current consumption in A

30	5.55	5.65	5.73	5.77	5.79	5.79	5.77	5.74	-
35	5.98	6.06	6.11	6.14	6.15	6.15	6.14	6.12	-
40	6.58	6.62	6.65	6.66	6.66	6.65	6.65	6.65	-
45	-	7.35	7.35	7.33	7.32	7.31	7.31	7.32	-
50	-	-	8.21	8.18	8.15	8.14	8.14	8.16	-
55	-	-	-	9.20	9.15	9.13	9.12	9.15	-
60	-	-	-	-	10.32	10.29	10.28	10.31	-
65	-	-	-	-	-	11.63	11.62	11.65	-

Mass flow in kg/h

30	133	154	184	222	269	323	383	448	-
35	130	151	181	220	266	319	377	441	-
40	123	146	177	216	262	315	373	435	-
45	-	137	170	210	257	310	368	430	-
50	-	-	160	202	251	304	362	424	-
55	-	-	-	191	241	296	355	418	-
60	-	-	-	-	228	286	346	410	-
65	-	-	-	-	-	271	334	400	-

Coefficient of performance (C.O.P.)

30	2.25	2.70	3.27	3.93	4.65	5.39	6.16	6.96	-
35	1.82	2.22	2.73	3.34	4.03	4.77	5.55	6.39	-
40	1.47	1.82	2.28	2.83	3.45	4.13	4.87	5.67	-
45	-	1.49	1.90	2.38	2.93	3.54	4.20	4.93	-
50	-	-	1.57	2.00	2.49	3.02	3.60	4.23	-
55	-	-	-	1.67	2.11	2.58	3.08	3.61	-
60	-	-	-	-	1.77	2.19	2.63	3.09	-
65	-	-	-	-	-	1.85	2.24	2.63	-

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

Cooling capacity	16 872	W
Power input	5 005	W
Current consumption	9.00	A
Mass flow	384	kg/h
C.O.P.	3.37	

Pressure switch settings

Maximum HP switch setting	29	bar(g)
Minimum LP switch setting	0.5	bar(g)
LP pump down setting	1.3	bar(g)

Sound power data

Sound power level	71	dB(A)
With acoustic hood	66	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%

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Performance data at 60 Hz, EN 12900 rating conditions

R22

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

Cooling capacity in W

30	7 360	8 599	10 417	12 779	15 650	18 996	22 780	26 969	-
35	6 881	8 106	9 871	12 142	14 883	18 061	21 640	25 585	-
40	6 270	7 509	9 250	11 459	14 101	17 141	20 544	24 276	-
45	-	6 774	8 520	10 696	13 266	16 198	19 455	23 003	-
50	-	-	7 645	9 816	12 345	15 196	18 336	21 730	-
55	-	-	-	8 786	11 300	14 100	17 151	20 419	-
60	-	-	-	-	10 100	12 874	15 863	19 033	-
65	-	-	-	-	-	11 485	14 438	17 535	-

Power input in W

30	3 439	3 345	3 340	3 406	3 528	3 687	3 866	4 049	-
35	3 984	3 852	3 802	3 818	3 883	3 979	4 089	4 196	-
40	4 501	4 357	4 290	4 283	4 318	4 377	4 445	4 504	-
45	-	4 827	4 770	4 766	4 797	4 848	4 900	4 937	-
50	-	-	5 205	5 231	5 287	5 355	5 419	5 461	-
55	-	-	-	5 643	5 750	5 864	5 966	6 041	-
60	-	-	-	-	6 153	6 338	6 506	6 640	-
65	-	-	-	-	-	6 743	7 004	7 224	-

Current consumption in A

30	5.59	5.70	5.77	5.82	5.83	5.83	5.82	5.79	-
35	6.03	6.11	6.16	6.18	6.20	6.19	6.18	6.17	-
40	6.63	6.67	6.70	6.71	6.71	6.70	6.70	6.70	-
45	-	7.41	7.40	7.39	7.38	7.37	7.37	7.38	-
50	-	-	8.28	8.24	8.22	8.20	8.20	8.22	-
55	-	-	-	9.27	9.22	9.20	9.19	9.22	-
60	-	-	-	-	10.41	10.37	10.36	10.39	-
65	-	-	-	-	-	11.72	11.71	11.74	-

Mass flow in kg/h

30	161	185	221	268	324	389	461	540	-
35	156	182	218	265	320	384	455	531	-
40	149	175	213	260	316	379	449	524	-
45	-	166	205	253	310	373	443	517	-
50	-	-	193	244	301	366	436	511	-
55	-	-	-	230	290	356	428	503	-
60	-	-	-	-	275	343	416	493	-
65	-	-	-	-	-	326	402	481	-

Coefficient of performance (C.O.P.)

30	2.14	2.57	3.12	3.75	4.44	5.15	5.89	6.66	-
35	1.73	2.10	2.60	3.18	3.83	4.54	5.29	6.10	-
40	1.39	1.72	2.16	2.68	3.27	3.92	4.62	5.39	-
45	-	1.40	1.79	2.24	2.77	3.34	3.97	4.66	-
50	-	-	1.47	1.88	2.34	2.84	3.38	3.98	-
55	-	-	-	1.56	1.97	2.40	2.87	3.38	-
60	-	-	-	-	1.64	2.03	2.44	2.87	-
65	-	-	-	-	-	1.70	2.06	2.43	-

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

Cooling capacity	18 336	W
Power input	5 419	W
Current consumption	8.20	A
Mass flow	436	kg/h
C.O.P.	3.38	

Pressure switch settings

Maximum HP switch setting	29	bar(g)
Minimum LP switch setting	0.5	bar(g)
LP pump down setting	1.3	bar(g)

Sound power data

Sound power level	74	dB(A)
With acoustic hood	69	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%

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Performance data at 60 Hz, ARI rating conditions

R22

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

Cooling capacity in W

30	7 817	9 125	11 046	13 540	16 570	20 098	24 086	28 496	-
35	7 335	8 632	10 503	12 908	15 810	19 171	22 953	27 118	-
40	6 710	8 028	9 880	12 228	15 034	18 260	21 869	25 821	-
45	-	7 274	9 140	11 463	14 204	17 327	20 793	24 565	-
50	-	-	8 243	10 572	13 281	16 333	19 689	23 311	-
55	-	-	-	9 518	12 227	15 238	18 516	22 021	-
60	-	-	-	-	11 001	14 005	17 236	20 655	-
65	-	-	-	-	-	12 595	15 810	19 176	-

Power input in W

30	3 439	3 345	3 340	3 406	3 528	3 687	3 866	4 049	-
35	3 984	3 852	3 802	3 818	3 883	3 979	4 089	4 196	-
40	4 501	4 357	4 290	4 283	4 318	4 377	4 445	4 504	-
45	-	4 827	4 770	4 766	4 797	4 848	4 900	4 937	-
50	-	-	5 205	5 231	5 287	5 355	5 419	5 461	-
55	-	-	-	5 643	5 750	5 864	5 966	6 041	-
60	-	-	-	-	6 153	6 338	6 506	6 640	-
65	-	-	-	-	-	6 743	7 004	7 224	-

Current consumption in A

30	5.59	5.70	5.77	5.82	5.83	5.83	5.82	5.79	-
35	6.03	6.11	6.16	6.18	6.20	6.19	6.18	6.17	-
40	6.63	6.67	6.70	6.71	6.71	6.70	6.70	6.70	-
45	-	7.41	7.40	7.39	7.38	7.37	7.37	7.38	-
50	-	-	8.28	8.24	8.22	8.20	8.20	8.22	-
55	-	-	-	9.27	9.22	9.20	9.19	9.22	-
60	-	-	-	-	10.41	10.37	10.36	10.39	-
65	-	-	-	-	-	11.72	11.71	11.74	-

Mass flow in kg/h

30	160	184	220	266	322	387	459	537	-
35	156	181	217	263	319	382	452	528	-
40	148	175	212	259	314	377	446	521	-
45	-	165	204	252	308	371	440	515	-
50	-	-	192	242	300	364	434	508	-
55	-	-	-	229	288	354	425	500	-
60	-	-	-	-	273	341	414	490	-
65	-	-	-	-	-	324	400	478	-

Coefficient of performance (C.O.P.)

30	2.27	2.73	3.31	3.98	4.70	5.45	6.23	7.04	-
35	1.84	2.24	2.76	3.38	4.07	4.82	5.61	6.46	-
40	1.49	1.84	2.30	2.86	3.48	4.17	4.92	5.73	-
45	-	1.51	1.92	2.41	2.96	3.57	4.24	4.98	-
50	-	-	1.58	2.02	2.51	3.05	3.63	4.27	-
55	-	-	-	1.69	2.13	2.60	3.10	3.65	-
60	-	-	-	-	1.79	2.21	2.65	3.11	-
65	-	-	-	-	-	1.87	2.26	2.65	-

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

Cooling capacity	20 183	W
Power input	5 935	W
Current consumption	9.07	A
Mass flow	459	kg/h
C.O.P.	3.40	

Pressure switch settings

Maximum HP switch setting	29	bar(g)
Minimum LP switch setting	0.5	bar(g)
LP pump down setting	1.3	bar(g)

Sound power data

Sound power level	74	dB(A)
With acoustic hood	69	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%

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