

Datasheets

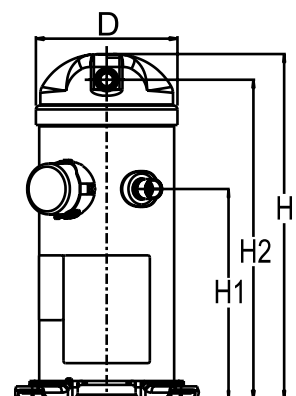
Danfoss scroll compressors **H series**



General Characteristics

Model number (on compressor nameplate)		HRP051T5LP6
Code number for Industrial pack**		120U2189
Drawing number		0XR6002B-2
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	68.83 cm ³ /rev	
Displacement @ Nominal speed	12.0 m ³ /h @ 2900 rpm	
Net weight	37.2 kg	
Oil charge	1.57 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	5.44 kg	
Approved refrigerants	R407C	

Dimensions



D=183.5 mm

H=455 mm

H1=280 mm

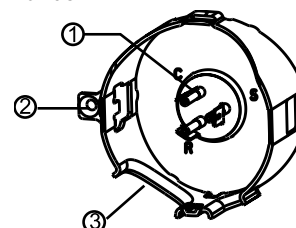
H2=422 mm

H3=- mm

Electrical Characteristics

Nominal voltage	230V/1/50Hz
Voltage range	207-253 V
Winding resistance (main / start) at 25°C	0.42 Ω / 1.309 Ω
Run capacitors A + C	50 μF + - μF
Start capacitor B	161-193 μF
Start relay	3ARR3*24AP*
Rated Load Amps (RLA)	20.5 A
Maximum Continuous Current (MCC)	32.0 A
Locked Rotor Amps (LRA)	127.0 A
Motor protection	Internal overload protector

Terminal box



IP22

1: Spade connectors 1/4"

2: Earth connection

3: Power cable passage

Recommended Installation torques

Oil sight glass	52.5 Nm
Power connections / Earth connection	0 Nm / 0 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.

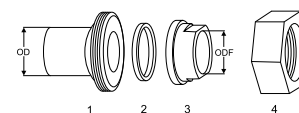
Rotolock valve, V05 (1-1/4" Rotolock, 7/8" ODF)	8168030
Gasket, 1-1/4"	8156131

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.

PVE lubricant, 320HV (FVC68D), 1 litre can	120Z5034
--	----------

Crankcase heaters

Code no.

Belt type crankcase heater, 50 W, 230 V, CE mark, UL	120Z0057
--	----------

Miscellaneous accessories

Code no.

Acoustic hood	120Z5044
Discharge thermostat kit	7750009
IP54 upgrade kit	118U0056

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
No translation for 120Z5015	120Z5015

Performance data at 50 Hz, EN 12900 rating conditions
R407C

Cond. temp. in °C (tc)	Evaporating temperature in °C (to)								
	-30	-25	-20	-15	-10	-5	0	5	10

Cooling capacity in W

30	-	3 236	4 264	5 466	6 871	8 511	10 418	12 624	15 159
35	-	3 049	4 039	5 202	6 567	8 166	10 030	12 192	14 681
40	-	2 887	3 831	4 945	6 261	7 809	9 621	11 729	14 163
45	-	-	3 625	4 682	5 939	7 427	9 177	11 221	13 590
50	-	-	-	4 398	5 587	7 005	8 684	10 654	12 947
55	-	-	-	-	5 191	6 530	8 127	10 014	12 221
60	-	-	-	-	-	5 988	7 494	9 286	11 396
65	-	-	-	-	-	-	6 770	8 457	10 457

Power input in W

30	-	2 431	2 387	2 358	2 334	2 308	2 271	2 216	2 133
35	-	2 688	2 645	2 617	2 597	2 577	2 547	2 500	2 427
40	-	2 968	2 921	2 891	2 871	2 851	2 824	2 781	2 715
45	-	-	3 233	3 197	3 172	3 149	3 121	3 079	3 014
50	-	-	-	3 553	3 519	3 490	3 456	3 410	3 343
55	-	-	-	-	3 931	3 890	3 847	3 793	3 720
60	-	-	-	-	-	4 368	4 311	4 245	4 162
65	-	-	-	-	-	-	4 867	4 785	4 688

Current consumption in A

30	-	11.01	11.09	11.10	11.04	10.90	10.67	10.34	9.92
35	-	12.33	12.37	12.36	12.29	12.17	11.99	11.73	11.40
40	-	13.82	13.79	13.74	13.66	13.54	13.38	13.18	12.91
45	-	-	15.46	15.35	15.23	15.10	14.95	14.77	14.55
50	-	-	-	17.27	17.10	16.93	16.76	16.59	16.41
55	-	-	-	-	19.35	19.13	18.93	18.75	18.58
60	-	-	-	-	-	21.79	21.54	21.33	21.16
65	-	-	-	-	-	-	24.69	24.43	24.22

Mass flow in kg/h

30	-	72	94	118	146	178	214	256	303
35	-	72	93	118	146	179	216	259	307
40	-	72	93	118	147	180	218	261	311
45	-	-	94	118	147	181	219	263	314
50	-	-	-	118	147	180	219	264	316
55	-	-	-	-	145	179	219	264	316
60	-	-	-	-	-	177	216	262	315
65	-	-	-	-	-	-	212	258	311

Coefficient of performance (C.O.P.)

30	-	1.33	1.79	2.32	2.94	3.69	4.59	5.70	7.11
35	-	1.13	1.53	1.99	2.53	3.17	3.94	4.88	6.05
40	-	0.97	1.31	1.71	2.18	2.74	3.41	4.22	5.22
45	-	-	1.12	1.46	1.87	2.36	2.94	3.64	4.51
50	-	-	-	1.24	1.59	2.01	2.51	3.12	3.87
55	-	-	-	-	1.32	1.68	2.11	2.64	3.29
60	-	-	-	-	-	1.37	1.74	2.19	2.74
65	-	-	-	-	-	-	1.39	1.77	2.23

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

Cooling capacity	10 654	W
Power input	3 410	W
Current consumption	16.59	A
Mass flow	264	kg/h
C.O.P.	3.12	

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	69	dB(A)
With accoustic hood	64	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 can accept no responsibility for possible errors in catalogues, brochures and other printed material. Danfoss reserves the right to alter its products without notice. This also applies to products already on order provided that such alternations can be made without subsequential changes being necessary in specifications already agreed. All trademarks in this material are property of the respective companies. Danfoss and the Danfoss logotype are trademarks of Danfoss A/S. All rights reserved.

Performance data at 50 Hz, ARI rating conditions
R407C

Cond. temp. in °C (tc)	Evaporating temperature in °C (to)								
	-30	-25	-20	-15	-10	-5	0	5	10

Cooling capacity in W

30	-	3 475	4 574	5 855	7 352	9 098	11 125	13 467	16 156
35	-	3 290	4 354	5 599	7 059	8 768	10 758	13 062	15 713
40	-	3 134	4 152	5 352	6 766	8 428	10 371	12 628	15 231
45	-	-	3 955	5 099	6 458	8 064	9 951	12 150	14 696
50	-	-	-	4 826	6 120	7 661	9 481	11 614	14 094
55	-	-	-	-	5 737	7 202	8 948	11 005	13 408
60	-	-	-	-	-	6 675	8 335	10 307	12 625
65	-	-	-	-	-	-	7 629	9 506	11 728

Power input in W

30	-	2 431	2 387	2 358	2 334	2 308	2 271	2 216	2 133
35	-	2 688	2 645	2 617	2 597	2 577	2 547	2 500	2 427
40	-	2 968	2 921	2 891	2 871	2 851	2 824	2 781	2 715
45	-	-	3 233	3 197	3 172	3 149	3 121	3 079	3 014
50	-	-	-	3 553	3 519	3 490	3 456	3 410	3 343
55	-	-	-	-	3 931	3 890	3 847	3 793	3 720
60	-	-	-	-	-	4 368	4 311	4 245	4 162
65	-	-	-	-	-	-	4 867	4 785	4 688

Current consumption in A

30	-	11.01	11.09	11.10	11.04	10.90	10.67	10.34	9.92
35	-	12.33	12.37	12.36	12.29	12.17	11.99	11.73	11.40
40	-	13.82	13.79	13.74	13.66	13.54	13.38	13.18	12.91
45	-	-	15.46	15.35	15.23	15.10	14.95	14.77	14.55
50	-	-	-	17.27	17.10	16.93	16.76	16.59	16.41
55	-	-	-	-	19.35	19.13	18.93	18.75	18.58
60	-	-	-	-	-	21.79	21.54	21.33	21.16
65	-	-	-	-	-	-	24.69	24.43	24.22

Mass flow in kg/h

30	-	72	93	118	145	177	213	254	301
35	-	72	93	117	146	178	215	257	305
40	-	72	93	118	146	179	217	260	309
45	-	-	93	118	146	180	218	262	312
50	-	-	-	117	146	179	218	263	314
55	-	-	-	-	145	178	217	263	314
60	-	-	-	-	-	176	215	261	313
65	-	-	-	-	-	-	210	256	309

Coefficient of performance (C.O.P.)

30	-	1.43	1.92	2.48	3.15	3.94	4.90	6.08	7.57
35	-	1.22	1.65	2.14	2.72	3.40	4.22	5.23	6.47
40	-	1.06	1.42	1.85	2.36	2.96	3.67	4.54	5.61
45	-	-	1.22	1.59	2.04	2.56	3.19	3.95	4.88
50	-	-	-	1.36	1.74	2.20	2.74	3.41	4.22
55	-	-	-	-	1.46	1.85	2.33	2.90	3.60
60	-	-	-	-	-	1.53	1.93	2.43	3.03
65	-	-	-	-	-	-	1.57	1.99	2.50

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

Cooling capacity	12 100	W
Power input	3 715	W
Current consumption	18.40	A
Mass flow	285	kg/h
C.O.P.	3.26	

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	69	dB(A)
With acoustic hood	64	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 can accept no responsibility for possible errors in catalogues, brochures and other printed material. Danfoss reserves the right to alter its products without notice. This also applies to products already on order provided that such alterations can be made without subsequential changes being necessary in specifications already agreed. All trademarks in this material are property of the respective companies. Danfoss and the Danfoss logotype are trademarks of Danfoss A/S. All rights reserved.

Performance data at 50 Hz, EN 12900 rating conditions
R407C

Cond. temp. in °C (tc)	Evaporating temperature in °C (to)								
	-30	-25	-20	-15	-10	-5	0	5	10

Cooling capacity in W

30	-	3 236	4 264	5 466	6 871	8 511	10 418	12 624	15 159
35	-	3 049	4 039	5 202	6 567	8 166	10 030	12 192	14 681
40	-	2 887	3 831	4 945	6 261	7 809	9 621	11 729	14 163
45	-	-	3 625	4 682	5 939	7 427	9 177	11 221	13 590
50	-	-	-	4 398	5 587	7 005	8 684	10 654	12 947
55	-	-	-	-	5 191	6 530	8 127	10 014	12 221
60	-	-	-	-	-	5 988	7 494	9 286	11 396
65	-	-	-	-	-	-	6 770	8 457	10 457

Power input in W

30	-	2 431	2 387	2 358	2 334	2 308	2 271	2 216	2 133
35	-	2 688	2 645	2 617	2 597	2 577	2 547	2 500	2 427
40	-	2 968	2 921	2 891	2 871	2 851	2 824	2 781	2 715
45	-	-	3 233	3 197	3 172	3 149	3 121	3 079	3 014
50	-	-	-	3 553	3 519	3 490	3 456	3 410	3 343
55	-	-	-	-	3 931	3 890	3 847	3 793	3 720
60	-	-	-	-	-	4 368	4 311	4 245	4 162
65	-	-	-	-	-	-	4 867	4 785	4 688

Current consumption in A

30	-	11.01	11.09	11.10	11.04	10.90	10.67	10.34	9.92
35	-	12.33	12.37	12.36	12.29	12.17	11.99	11.73	11.40
40	-	13.82	13.79	13.74	13.66	13.54	13.38	13.18	12.91
45	-	-	15.46	15.35	15.23	15.10	14.95	14.77	14.55
50	-	-	-	17.27	17.10	16.93	16.76	16.59	16.41
55	-	-	-	-	19.35	19.13	18.93	18.75	18.58
60	-	-	-	-	-	21.79	21.54	21.33	21.16
65	-	-	-	-	-	-	24.69	24.43	24.22

Mass flow in kg/h

30	-	72	94	118	146	178	214	256	303
35	-	72	93	118	146	179	216	259	307
40	-	72	93	118	147	180	218	261	311
45	-	-	94	118	147	181	219	263	314
50	-	-	-	118	147	180	219	264	316
55	-	-	-	-	145	179	219	264	316
60	-	-	-	-	-	177	216	262	315
65	-	-	-	-	-	-	212	258	311

Coefficient of performance (C.O.P.)

30	-	1.33	1.79	2.32	2.94	3.69	4.59	5.70	7.11
35	-	1.13	1.53	1.99	2.53	3.17	3.94	4.88	6.05
40	-	0.97	1.31	1.71	2.18	2.74	3.41	4.22	5.22
45	-	-	1.12	1.46	1.87	2.36	2.94	3.64	4.51
50	-	-	-	1.24	1.59	2.01	2.51	3.12	3.87
55	-	-	-	-	1.32	1.68	2.11	2.64	3.29
60	-	-	-	-	-	1.37	1.74	2.19	2.74
65	-	-	-	-	-	-	1.39	1.77	2.23

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

Cooling capacity	10 654	W
Power input	3 410	W
Current consumption	16.59	A
Mass flow	264	kg/h
C.O.P.	3.12	

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	69	dB(A)
With accoustic hood	64	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 can accept no responsibility for possible errors in catalogues, brochures and other printed material. Danfoss reserves the right to alter its products without notice. This also applies to products already on order provided that such alternations can be made without subsequential changes being necessary in specifications already agreed. All trademarks in this material are property of the respective companies. Danfoss and the Danfoss logotype are trademarks of Danfoss A/S. All rights reserved.

Performance data at 50 Hz, ARI rating conditions
R407C

Cond. temp. in °C (tc)	Evaporating temperature in °C (to)								
	-30	-25	-20	-15	-10	-5	0	5	10

Cooling capacity in W

30	-	3 475	4 574	5 855	7 352	9 098	11 125	13 467	16 156
35	-	3 290	4 354	5 599	7 059	8 768	10 758	13 062	15 713
40	-	3 134	4 152	5 352	6 766	8 428	10 371	12 628	15 231
45	-	-	3 955	5 099	6 458	8 064	9 951	12 150	14 696
50	-	-	-	4 826	6 120	7 661	9 481	11 614	14 094
55	-	-	-	-	5 737	7 202	8 948	11 005	13 408
60	-	-	-	-	-	6 675	8 335	10 307	12 625
65	-	-	-	-	-	-	7 629	9 506	11 728

Power input in W

30	-	2 431	2 387	2 358	2 334	2 308	2 271	2 216	2 133
35	-	2 688	2 645	2 617	2 597	2 577	2 547	2 500	2 427
40	-	2 968	2 921	2 891	2 871	2 851	2 824	2 781	2 715
45	-	-	3 233	3 197	3 172	3 149	3 121	3 079	3 014
50	-	-	-	3 553	3 519	3 490	3 456	3 410	3 343
55	-	-	-	-	3 931	3 890	3 847	3 793	3 720
60	-	-	-	-	-	4 368	4 311	4 245	4 162
65	-	-	-	-	-	-	4 867	4 785	4 688

Current consumption in A

30	-	11.01	11.09	11.10	11.04	10.90	10.67	10.34	9.92
35	-	12.33	12.37	12.36	12.29	12.17	11.99	11.73	11.40
40	-	13.82	13.79	13.74	13.66	13.54	13.38	13.18	12.91
45	-	-	15.46	15.35	15.23	15.10	14.95	14.77	14.55
50	-	-	-	17.27	17.10	16.93	16.76	16.59	16.41
55	-	-	-	-	19.35	19.13	18.93	18.75	18.58
60	-	-	-	-	-	21.79	21.54	21.33	21.16
65	-	-	-	-	-	-	24.69	24.43	24.22

Mass flow in kg/h

30	-	72	93	118	145	177	213	254	301
35	-	72	93	117	146	178	215	257	305
40	-	72	93	118	146	179	217	260	309
45	-	-	93	118	146	180	218	262	312
50	-	-	-	117	146	179	218	263	314
55	-	-	-	-	145	178	217	263	314
60	-	-	-	-	-	176	215	261	313
65	-	-	-	-	-	-	210	256	309

Coefficient of performance (C.O.P.)

30	-	1.43	1.92	2.48	3.15	3.94	4.90	6.08	7.57
35	-	1.22	1.65	2.14	2.72	3.40	4.22	5.23	6.47
40	-	1.06	1.42	1.85	2.36	2.96	3.67	4.54	5.61
45	-	-	1.22	1.59	2.04	2.56	3.19	3.95	4.88
50	-	-	-	1.36	1.74	2.20	2.74	3.41	4.22
55	-	-	-	-	1.46	1.85	2.33	2.90	3.60
60	-	-	-	-	-	1.53	1.93	2.43	3.03
65	-	-	-	-	-	-	1.57	1.99	2.50

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

Cooling capacity	12 100	W
Power input	3 715	W
Current consumption	18.40	A
Mass flow	285	kg/h
C.O.P.	3.26	

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	69	dB(A)
With accoustic hood	64	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 can accept no responsibility for possible errors in catalogues, brochures and other printed material. Danfoss reserves the right to alter its products without notice. This also applies to products already on order provided that such alterations can be made without subsequential changes being necessary in specifications already agreed. All trademarks in this material are property of the respective companies. Danfoss and the Danfoss logotype are trademarks of Danfoss A/S. All rights reserved.

