

Datasheets

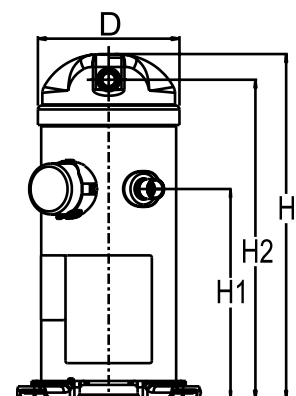
# Danfoss scroll compressors **H series**



### General Characteristics

Model number (on compressor nameplate)		<b>HRH051U5LP6</b>
Code number for Singlepack*		120U1326
Code number for Industrial pack**		120U1323
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	49.32 cm <sup>3</sup> /rev	
Displacement @ Nominal speed	8.6 m <sup>3</sup> /h @ 2900 rpm	
Net weight	37.19 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	R410A	

### Dimensions



D=183.5 mm

H=455 mm

H1=280 mm

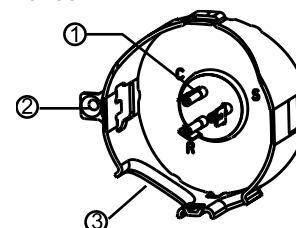
H2=422 mm

H3=- mm

### Electrical Characteristics

Nominal voltage	230V/1/50Hz
Voltage range	207-253 V
Winding resistance (main / start) at 25°C	0.39 Ω / 1.019 Ω
Run capacitors A + C	55 µF + - µF
Start capacitor B	88-108 µF
Start relay	3ARR3*25AS*
Rated Load Amps (RLA)	24.3 A
Maximum Continuous Current (MCC)	38 A
Locked Rotor Amps (LRA)	130 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

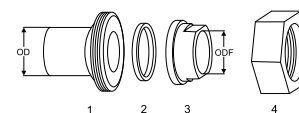
\*\*Industrial pack: 12 or 16 Unboxed compressors on pallet

**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
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**Crankcase heaters**
**Code no.**

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

# Datasheet, performance data

# Danfoss scroll compressor. HRH051U5

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

## R410A

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

### Cooling capacity in W

30	3 785	5 256	6 798	8 470	10 334	12 449	14 877	17 680	-
35	3 298	4 754	6 264	7 889	9 687	11 721	14 050	16 736	-
40	-	4 259	5 733	7 305	9 034	10 982	13 207	15 771	-
45	-	-	5 180	6 694	8 350	10 206	12 323	14 760	-
50	-	-	-	6 034	7 610	9 369	11 371	13 675	-
55	-	-	-	-	6 789	8 444	10 324	12 485	-
60	-	-	-	-	-	7 400	9 145	11 153	-
65	-	-	-	-	-	-	7 786	9 618	-

### Power input in W

30	2 522	2 566	2 575	2 554	2 507	2 439	2 355	2 259	-
35	2 757	2 811	2 832	2 824	2 792	2 740	2 674	2 597	-
40	-	3 117	3 143	3 142	3 119	3 077	3 022	2 958	-
45	-	-	3 517	3 517	3 495	3 457	3 407	3 350	-
50	-	-	-	3 954	3 928	3 887	3 836	3 779	-
55	-	-	-	-	4 426	4 376	4 317	4 254	-
60	-	-	-	-	-	4 929	4 856	4 781	-
65	-	-	-	-	-	-	5 462	5 368	-

### Current consumption in A

30	13.01	12.95	12.87	12.75	12.58	12.36	12.07	11.72	-
35	14.60	14.49	14.37	14.23	14.07	13.86	13.61	13.30	-
40	-	16.24	16.07	15.90	15.72	15.52	15.29	15.02	-
45	-	-	18.03	17.82	17.61	17.40	17.17	16.93	-
50	-	-	-	20.04	19.79	19.55	19.32	19.09	-
55	-	-	-	-	22.33	22.05	21.80	21.56	-
60	-	-	-	-	-	24.95	24.67	24.41	-
65	-	-	-	-	-	-	27.98	27.70	-

### Mass flow in kg/h

30	79	108	138	170	204	244	288	340	-
35	73	103	134	166	201	241	286	337	-
40	-	98	129	162	198	238	283	335	-
45	-	-	124	158	194	235	280	331	-
50	-	-	-	152	189	230	275	327	-
55	-	-	-	-	181	222	268	320	-
60	-	-	-	-	-	212	258	310	-
65	-	-	-	-	-	-	245	296	-

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

30	1.50	2.05	2.64	3.32	4.12	5.10	6.32	7.82	-
35	1.20	1.69	2.21	2.79	3.47	4.28	5.25	6.44	-
40	-	1.37	1.82	2.32	2.90	3.57	4.37	5.33	-
45	-	-	1.47	1.90	2.39	2.95	3.62	4.41	-
50	-	-	-	1.53	1.94	2.41	2.96	3.62	-
55	-	-	-	-	1.53	1.93	2.39	2.94	-
60	-	-	-	-	-	1.50	1.88	2.33	-
65	-	-	-	-	-	-	1.43	1.79	-

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

Cooling capacity	11 371	W
Power input	3 836	W
Current consumption	19.32	A
Mass flow	275	kg/h
C.O.P.	2.96	

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

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

### 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	67	dB(A)
With acoustic hood	62	dB(A)

All performance data +/- 5%

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**Performance data at 50 Hz, ARI rating conditions**
**R410A**

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

**Cooling capacity in W**

30	4 087	5 671	7 326	9 120	11 116	13 380	15 977	18 972	-
35	-	5 162	6 793	8 546	10 483	12 672	15 177	18 062	-
40	-	-	6 263	7 971	9 847	11 957	14 366	17 138	-
45	-	-	5 712	7 371	9 182	11 210	13 519	16 175	-
50	-	-	-	6 721	8 463	10 405	12 611	15 147	-
55	-	-	-	-	7 666	9 518	11 618	14 030	-
60	-	-	-	-	-	8 524	10 514	12 799	-
65	-	-	-	-	-	-	9 274	11 428	-

**Power input in W**

30	2 522	2 566	2 575	2 554	2 507	2 439	2 355	2 259	-
35	-	2 811	2 832	2 824	2 792	2 740	2 674	2 597	-
40	-	-	3 143	3 142	3 119	3 077	3 022	2 958	-
45	-	-	3 517	3 517	3 495	3 457	3 407	3 350	-
50	-	-	-	3 954	3 928	3 887	3 836	3 779	-
55	-	-	-	-	4 426	4 376	4 317	4 254	-
60	-	-	-	-	-	4 929	4 856	4 781	-
65	-	-	-	-	-	-	5 462	5 368	-

**Current consumption in A**

30	13.01	12.95	12.87	12.75	12.58	12.36	12.07	11.72	-
35	-	14.49	14.37	14.23	14.07	13.86	13.61	13.30	-
40	-	-	16.07	15.90	15.72	15.52	15.29	15.02	-
45	-	-	18.03	17.82	17.61	17.40	17.17	16.93	-
50	-	-	-	20.04	19.79	19.55	19.32	19.09	-
55	-	-	-	-	22.33	22.05	21.80	21.56	-
60	-	-	-	-	-	24.95	24.67	24.41	-
65	-	-	-	-	-	-	27.98	27.70	-

**Mass flow in kg/h**

30	79	108	137	169	203	242	286	338	-
35	-	102	133	165	200	239	284	335	-
40	-	-	128	161	197	237	281	332	-
45	-	-	123	157	193	233	278	329	-
50	-	-	-	151	188	228	273	324	-
55	-	-	-	-	180	221	266	317	-
60	-	-	-	-	-	211	256	308	-
65	-	-	-	-	-	-	243	294	-

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

30	1.62	2.21	2.84	3.57	4.43	5.48	6.78	8.40	-
35	-	1.84	2.40	3.03	3.76	4.62	5.68	6.95	-
40	-	-	1.99	2.54	3.16	3.89	4.75	5.79	-
45	-	-	1.62	2.10	2.63	3.24	3.97	4.83	-
50	-	-	-	1.70	2.15	2.68	3.29	4.01	-
55	-	-	-	-	1.73	2.18	2.69	3.30	-
60	-	-	-	-	-	1.73	2.16	2.68	-
65	-	-	-	-	-	-	1.70	2.13	-

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

Cooling capacity	12 768	W
Power input	4 229	W
Current consumption	21.38	A
Mass flow	289	kg/h
C.O.P.	3.02	

**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	67	dB(A)
With acoustic hood	62	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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