

Datasheets

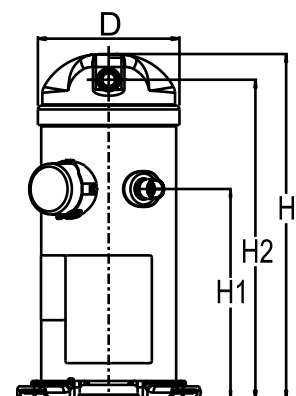
# Danfoss scroll compressors **H series**



### General Characteristics

Model number (on compressor nameplate)		<b>HRH029U5LP6</b>
Code number for Singlepack*		121U3100
Code number for Industrial pack**		121U3099
Drawing number		0XC6301B-2
Suction and discharge connections		Brazed
Suction connection		3/4 " 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	27.79 cm <sup>3</sup> /rev	
Displacement @ Nominal speed	4.8 m <sup>3</sup> /h @ 2900 rpm	
Net weight	30.8 kg	
Oil charge	1.06 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	3.63 kg	
Approved refrigerants	R410A	

### Dimensions



D=164.5 mm

H=413 mm

H1=250 mm

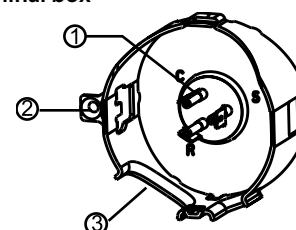
H2=379 mm

H3=- mm

### Electrical Characteristics

Nominal voltage	230V/1/50Hz
Voltage range	207-253 V
Winding resistance (main / start) at 25°C	0.689 Ω / 1.509 Ω
Run capacitors A + C	70 µF + - µF
Start capacitor B	145-175 µF
Start relay	3ARR3*3AL*
Rated Load Amps (RLA)	15,4 A
Maximum Continuous Current (MCC)	22.3 A
Locked Rotor Amps (LRA)	97 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

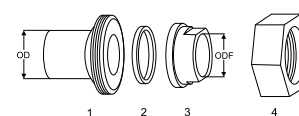
\*\*Industrial pack: 12 or 16 Unboxed compressors on pallet

**Rotolock accessories, suction side**
**Code no.**

Solder sleeve, P04 (1-1/4" Rotolock, 3/4" ODF)	8153008
Angle adapter, C04 (1-1/4" Rotolock, 3/4" ODF)	8168006
Rotolock valve, V04 (1-1/4" Rotolock, 3/4" ODF)	8168029
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, 3/4" ODF), (1" Rotolock, 1/2" ODF)	120Z0126
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, 40 W, 230 V, CE mark, UL	120Z0055
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**Miscellaneous accessories**
**Code no.**

Acoustic hood	120Z5043
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**
**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	2 030	2 625	3 376	4 288	5 365	6 612	8 032	9 630	-
35	1 815	2 412	3 151	4 038	5 077	6 272	7 628	9 148	-
40	-	2 208	2 934	3 795	4 794	5 937	7 226	8 668	-
45	-	-	2 700	3 533	4 491	5 579	6 801	8 162	-
50	-	-	-	3 226	4 142	5 173	6 325	7 603	-
55	-	-	-	-	3 719	4 691	5 771	6 962	-
60	-	-	-	-	-	4 106	5 107	6 206	-
65	-	-	-	-	-	-	4 297	5 294	-

**Power input in W**

30	1 507	1 484	1 455	1 428	1 406	1 396	1 402	1 432	-
35	1 746	1 708	1 669	1 633	1 607	1 595	1 604	1 639	-
40	-	1 991	1 934	1 883	1 845	1 825	1 828	1 861	-
45	-	-	2 249	2 176	2 119	2 083	2 074	2 098	-
50	-	-	-	2 512	2 429	2 370	2 341	2 348	-
55	-	-	-	-	2 773	2 684	2 629	2 612	-
60	-	-	-	-	-	3 025	2 936	2 888	-
65	-	-	-	-	-	-	3 262	3 176	-

**Current consumption in A**

30	8.29	8.04	7.87	7.75	7.65	7.55	7.41	7.21	-
35	8.64	8.32	8.11	7.98	7.90	7.85	7.80	7.71	-
40	-	8.76	8.52	8.39	8.34	8.35	8.39	8.43	-
45	-	-	9.03	8.91	8.90	8.98	9.12	9.29	-
50	-	-	-	9.50	9.54	9.70	9.94	10.25	-
55	-	-	-	-	10.20	10.44	10.80	11.26	-
60	-	-	-	-	-	11.16	11.64	12.26	-
65	-	-	-	-	-	-	12.41	13.19	-

**Mass flow in kg/h**

30	43	55	70	88	109	132	158	187	-
35	41	54	69	87	107	131	157	187	-
40	-	52	67	85	106	130	157	186	-
45	-	-	65	83	104	128	155	185	-
50	-	-	-	81	102	126	153	184	-
55	-	-	-	-	100	124	151	181	-
60	-	-	-	-	-	121	148	178	-
65	-	-	-	-	-	-	144	175	-

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

30	1.35	1.77	2.32	3.00	3.82	4.74	5.73	6.73	-
35	1.04	1.41	1.89	2.47	3.16	3.93	4.76	5.58	-
40	-	1.11	1.52	2.02	2.60	3.25	3.95	4.66	-
45	-	-	1.20	1.62	2.12	2.68	3.28	3.89	-
50	-	-	-	1.28	1.71	2.18	2.70	3.24	-
55	-	-	-	-	1.34	1.75	2.20	2.67	-
60	-	-	-	-	-	1.36	1.74	2.15	-
65	-	-	-	-	-	-	1.32	1.67	-

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

Cooling capacity	6 325	W
Power input	2 341	W
Current consumption	9.94	A
Mass flow	153	kg/h
C.O.P.	2.70	

**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		dB(A)
With acoustic hood		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**
**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	2 192	2 832	3 639	4 617	5 772	7 106	8 625	10 334	-
35	-	2 618	3 417	4 375	5 494	6 781	8 239	9 873	-
40	-	-	3 206	4 141	5 226	6 464	7 860	9 419	-
45	-	-	2 977	3 890	4 939	6 128	7 461	8 944	-
50	-	-	-	3 594	4 606	5 745	7 015	8 421	-
55	-	-	-	-	4 199	5 288	6 494	7 823	-
60	-	-	-	-	-	4 729	5 871	7 122	-
65	-	-	-	-	-	-	5 118	6 290	-

**Power input in W**

30	1 507	1 484	1 455	1 428	1 406	1 396	1 402	1 432	-
35	-	1 708	1 669	1 633	1 607	1 595	1 604	1 639	-
40	-	-	1 934	1 883	1 845	1 825	1 828	1 861	-
45	-	-	2 249	2 176	2 119	2 083	2 074	2 098	-
50	-	-	-	2 512	2 429	2 370	2 341	2 348	-
55	-	-	-	-	2 773	2 684	2 629	2 612	-
60	-	-	-	-	-	3 025	2 936	2 888	-
65	-	-	-	-	-	-	3 262	3 176	-

**Current consumption in A**

30	8.29	8.04	7.87	7.75	7.65	7.55	7.41	7.21	-
35	-	8.32	8.11	7.98	7.90	7.85	7.80	7.71	-
40	-	-	8.52	8.39	8.34	8.35	8.39	8.43	-
45	-	-	9.03	8.91	8.90	8.98	9.12	9.29	-
50	-	-	-	9.50	9.54	9.70	9.94	10.25	-
55	-	-	-	-	10.20	10.44	10.80	11.26	-
60	-	-	-	-	-	11.16	11.64	12.26	-
65	-	-	-	-	-	-	12.41	13.19	-

**Mass flow in kg/h**

30	43	55	70	88	108	131	157	185	-
35	-	53	68	86	107	130	156	186	-
40	-	-	67	84	105	129	156	185	-
45	-	-	65	83	103	127	154	184	-
50	-	-	-	81	101	125	152	182	-
55	-	-	-	-	99	123	150	180	-
60	-	-	-	-	-	120	147	177	-
65	-	-	-	-	-	-	143	173	-

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

30	1.45	1.91	2.50	3.23	4.11	5.09	6.15	7.22	-
35	-	1.53	2.05	2.68	3.42	4.25	5.14	6.02	-
40	-	-	1.66	2.20	2.83	3.54	4.30	5.06	-
45	-	-	1.32	1.79	2.33	2.94	3.60	4.26	-
50	-	-	-	1.43	1.90	2.42	3.00	3.59	-
55	-	-	-	-	1.51	1.97	2.47	3.00	-
60	-	-	-	-	-	1.56	2.00	2.47	-
65	-	-	-	-	-	-	1.57	1.98	-

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

Cooling capacity	7 135	W
Power input	2 582	W
Current consumption	10.88	A
Mass flow	163	kg/h
C.O.P.	2.76	

**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		dB(A)
With acoustic hood		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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