

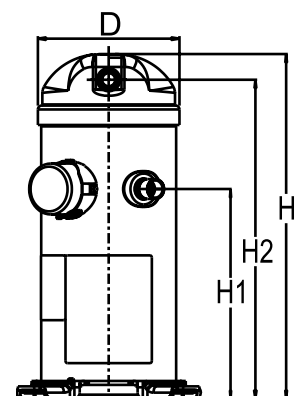
Datasheets

# Danfoss scroll compressors **H series**



**General Characteristics**

Model number (on compressor nameplate)		<b>HRM042U4LP6</b>
Code number for Singlepack*		120U1031
Code number for Industrial pack**		120U1028
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		57.19 cm <sup>3</sup> /rev
Displacement @ Nominal speed		9.9 m <sup>3</sup> /h @ 2900 rpm - 12.0 m <sup>3</sup> /h @ 3500 rpm
Net weight		30.84 kg
Oil charge		1.06 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		3.63 kg
Approved refrigerants		R22

**Dimensions**


D=164.5 mm

H=413 mm

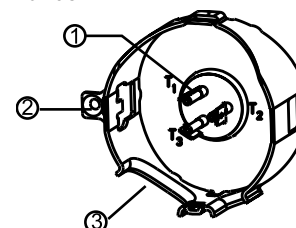
H1=250 mm

H2=379 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	4.664 Ω
Winding resistance between phases 1-3 +/- 7% at 25°C	4.660 Ω
Winding resistance between phases 2-3 +/- 7% at 25°C	3.420 Ω
Rated Load Amps (RLA)	7.1 A
Maximum Continuous Current (MCC)	11 A
Locked Rotor Amps (LRA)	45 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

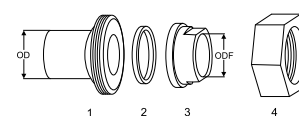
\*\*Industrial pack: 12 or 16 Unboxed compressors on pallet

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

Belt type crankcase heater, 40 W, 230 V, CE mark, UL	120Z0055
Belt type crankcase heater, 40 W, 400 V, CE mark, UL	120Z0056

**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**
**R22**

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

**Cooling capacity in W**

30	3 699	4 321	5 234	6 422	7 867	9 549	11 451	13 555	-
35	3 461	4 076	4 963	6 106	7 486	9 085	10 885	12 868	-
40	-	3 778	4 655	5 768	7 099	8 629	10 342	12 218	-
45	-	-	4 291	5 388	6 685	8 162	9 803	11 588	-
50	-	-	-	4 950	6 226	7 665	9 249	10 958	-
55	-	-	-	-	5 705	7 120	8 660	10 308	-
60	-	-	-	-	-	6 508	8 019	9 619	-
65	-	-	-	-	-	-	7 306	8 873	-

**Power input in W**

30	1 857	1 845	1 839	1 831	1 812	1 775	1 710	1 610	-
35	2 133	2 092	2 068	2 052	2 036	2 013	1 974	1 910	-
40	-	2 391	2 338	2 305	2 283	2 264	2 240	2 202	-
45	-	-	2 665	2 605	2 566	2 541	2 521	2 499	-
50	-	-	-	2 963	2 898	2 857	2 833	2 816	-
55	-	-	-	-	3 293	3 226	3 187	3 166	-
60	-	-	-	-	-	3 662	3 597	3 562	-
65	-	-	-	-	-	-	4 077	4 018	-

**Current consumption in A**

30	4.96	4.70	4.63	4.69	4.76	4.77	4.62	4.22	-
35	5.54	5.13	4.96	4.95	5.00	5.02	4.92	4.61	-
40	-	5.66	5.37	5.28	5.28	5.30	5.23	5.00	-
45	-	-	5.88	5.69	5.64	5.63	5.59	5.42	-
50	-	-	-	6.20	6.08	6.04	6.00	5.87	-
55	-	-	-	-	6.62	6.54	6.49	6.39	-
60	-	-	-	-	-	7.14	7.07	6.98	-
65	-	-	-	-	-	-	7.76	7.67	-

**Mass flow in kg/h**

30	80	93	111	135	163	196	232	272	-
35	78	91	110	133	161	193	229	267	-
40	-	88	107	131	159	191	226	264	-
45	-	-	103	128	156	188	223	261	-
50	-	-	-	123	152	185	220	258	-
55	-	-	-	-	146	180	216	254	-
60	-	-	-	-	-	173	211	249	-
65	-	-	-	-	-	-	203	243	-

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

30	1.99	2.34	2.85	3.51	4.34	5.38	6.70	8.42	-
35	1.62	1.95	2.40	2.98	3.68	4.51	5.52	6.74	-
40	-	1.58	1.99	2.50	3.11	3.81	4.62	5.55	-
45	-	-	1.61	2.07	2.61	3.21	3.89	4.64	-
50	-	-	-	1.67	2.15	2.68	3.27	3.89	-
55	-	-	-	-	1.73	2.21	2.72	3.26	-
60	-	-	-	-	-	1.78	2.23	2.70	-
65	-	-	-	-	-	-	1.79	2.21	-

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

Cooling capacity	9 249	W
Power input	2 833	W
Current consumption	6.00	A
Mass flow	220	kg/h
C.O.P.	3.27	

**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	67	dB(A)
With acoustic hood	62	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.

# Datasheet, performance data

# Danfoss scroll compressor. HRM042U4

## 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	15

### Cooling capacity in W

30	3 929	4 585	5 550	6 805	8 329	10 103	12 108	14 323	-
35	-	4 340	5 281	6 492	7 953	9 644	11 546	13 639	-
40	-	-	4 972	6 155	7 569	9 193	11 009	12 996	-
45	-	-	4 603	5 775	7 158	8 732	10 477	12 375	-
50	-	-	-	5 331	6 699	8 239	9 931	11 755	-
55	-	-	-	-	6 173	7 695	9 349	11 117	-
60	-	-	-	-	-	7 079	8 712	10 439	-
65	-	-	-	-	-	-	8 001	9 703	-

### Power input in W

30	1 857	1 845	1 839	1 831	1 812	1 775	1 710	1 610	-
35	-	2 092	2 068	2 052	2 036	2 013	1 974	1 910	-
40	-	-	2 338	2 305	2 283	2 264	2 240	2 202	-
45	-	-	2 665	2 605	2 566	2 541	2 521	2 499	-
50	-	-	-	2 963	2 898	2 857	2 833	2 816	-
55	-	-	-	-	3 293	3 226	3 187	3 166	-
60	-	-	-	-	-	3 662	3 597	3 562	-
65	-	-	-	-	-	-	4 077	4 018	-

### Current consumption in A

30	4.96	4.70	4.63	4.69	4.76	4.77	4.62	4.22	-
35	-	5.13	4.96	4.95	5.00	5.02	4.92	4.61	-
40	-	-	5.37	5.28	5.28	5.30	5.23	5.00	-
45	-	-	5.88	5.69	5.64	5.63	5.59	5.42	-
50	-	-	-	6.20	6.08	6.04	6.00	5.87	-
55	-	-	-	-	6.62	6.54	6.49	6.39	-
60	-	-	-	-	-	7.14	7.07	6.98	-
65	-	-	-	-	-	-	7.76	7.67	-

### Mass flow in kg/h

30	80	92	111	134	162	195	231	270	-
35	-	91	109	132	160	192	227	266	-
40	-	-	107	130	158	190	225	262	-
45	-	-	103	127	155	187	222	259	-
50	-	-	-	122	151	184	219	256	-
55	-	-	-	-	146	179	215	253	-
60	-	-	-	-	-	173	209	248	-
65	-	-	-	-	-	-	202	242	-

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

30	2.12	2.48	3.02	3.72	4.60	5.69	7.08	8.89	-
35	-	2.07	2.55	3.16	3.91	4.79	5.85	7.14	-
40	-	-	2.13	2.67	3.32	4.06	4.92	5.90	-
45	-	-	1.73	2.22	2.79	3.44	4.16	4.95	-
50	-	-	-	1.80	2.31	2.88	3.51	4.17	-
55	-	-	-	-	1.87	2.39	2.93	3.51	-
60	-	-	-	-	-	1.93	2.42	2.93	-
65	-	-	-	-	-	-	1.96	2.41	-

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

Cooling capacity	10 189	W
Power input	3 131	W
Current consumption	6.39	A
Mass flow	232	kg/h
C.O.P.	3.25	

### 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	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%

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 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	15

**Cooling capacity in W**

30	4 434	5 178	6 272	7 696	9 427	11 443	13 721	16 239	-
35	4 154	4 890	5 954	7 325	8 981	10 900	13 058	15 435	-
40	-	4 540	5 592	6 929	8 528	10 367	12 425	14 678	-
45	-	-	5 164	6 484	8 044	9 822	11 797	13 945	-
50	-	-	-	5 967	7 505	9 240	11 149	13 210	-
55	-	-	-	-	6 889	8 597	10 457	12 448	-
60	-	-	-	-	-	7 871	9 699	11 637	-
65	-	-	-	-	-	-	8 851	10 751	-

**Power input in W**

30	2 262	2 248	2 241	2 230	2 207	2 162	2 084	1 965	-
35	2 588	2 540	2 512	2 493	2 474	2 446	2 398	2 321	-
40	-	2 893	2 831	2 791	2 764	2 741	2 711	2 666	-
45	-	-	3 213	3 141	3 094	3 064	3 041	3 014	-
50	-	-	-	3 559	3 480	3 431	3 402	3 382	-
55	-	-	-	-	3 938	3 858	3 811	3 786	-
60	-	-	-	-	-	4 361	4 284	4 241	-
65	-	-	-	-	-	-	4 836	4 765	-

**Current consumption in A**

30	4.96	4.70	4.63	4.69	4.76	4.77	4.62	4.22	-
35	5.54	5.13	4.96	4.95	5.00	5.02	4.92	4.61	-
40	-	5.66	5.37	5.28	5.28	5.30	5.23	5.00	-
45	-	-	5.88	5.69	5.64	5.63	5.59	5.42	-
50	-	-	-	6.20	6.08	6.04	6.00	5.87	-
55	-	-	-	-	6.62	6.54	6.49	6.39	-
60	-	-	-	-	-	7.14	7.07	6.98	-
65	-	-	-	-	-	-	7.76	7.67	-

**Mass flow in kg/h**

30	97	111	133	161	195	234	277	324	-
35	94	109	131	160	193	231	274	320	-
40	-	106	129	157	191	229	271	316	-
45	-	-	124	153	188	226	268	314	-
50	-	-	-	148	183	222	265	310	-
55	-	-	-	-	177	217	261	307	-
60	-	-	-	-	-	210	255	302	-
65	-	-	-	-	-	-	246	295	-

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

30	1.96	2.30	2.80	3.45	4.27	5.29	6.58	8.26	-
35	1.60	1.92	2.37	2.94	3.63	4.46	5.45	6.65	-
40	-	1.57	1.98	2.48	3.09	3.78	4.58	5.51	-
45	-	-	1.61	2.06	2.60	3.21	3.88	4.63	-
50	-	-	-	1.68	2.16	2.69	3.28	3.91	-
55	-	-	-	-	1.75	2.23	2.74	3.29	-
60	-	-	-	-	-	1.80	2.26	2.74	-
65	-	-	-	-	-	-	1.83	2.26	-

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

Cooling capacity	11 149	W
Power input	3 402	W
Current consumption	6.00	A
Mass flow	265	kg/h
C.O.P.	3.28	

**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%

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 60 Hz, ARI rating conditions**
**R22**

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

**Cooling capacity in W**

30	4 709	5 495	6 651	8 155	9 981	12 107	14 507	17 158	-
35	-	5 207	6 335	7 788	9 541	11 570	13 851	16 360	-
40	-	-	5 973	7 394	9 093	11 045	13 226	15 613	-
45	-	-	5 540	6 949	8 613	10 507	12 608	14 891	-
50	-	-	-	6 427	8 075	9 931	11 971	14 171	-
55	-	-	-	-	7 454	9 291	11 290	13 425	-
60	-	-	-	-	-	8 562	10 538	12 629	-
65	-	-	-	-	-	-	9 692	11 757	-

**Power input in W**

30	2 262	2 248	2 241	2 230	2 207	2 162	2 084	1 965	-
35	-	2 540	2 512	2 493	2 474	2 446	2 398	2 321	-
40	-	-	2 831	2 791	2 764	2 741	2 711	2 666	-
45	-	-	3 213	3 141	3 094	3 064	3 041	3 014	-
50	-	-	-	3 559	3 480	3 431	3 402	3 382	-
55	-	-	-	-	3 938	3 858	3 811	3 786	-
60	-	-	-	-	-	4 361	4 284	4 241	-
65	-	-	-	-	-	-	4 836	4 765	-

**Current consumption in A**

30	4.96	4.70	4.63	4.69	4.76	4.77	4.62	4.22	-
35	-	5.13	4.96	4.95	5.00	5.02	4.92	4.61	-
40	-	-	5.37	5.28	5.28	5.30	5.23	5.00	-
45	-	-	5.88	5.69	5.64	5.63	5.59	5.42	-
50	-	-	-	6.20	6.08	6.04	6.00	5.87	-
55	-	-	-	-	6.62	6.54	6.49	6.39	-
60	-	-	-	-	-	7.14	7.07	6.98	-
65	-	-	-	-	-	-	7.76	7.67	-

**Mass flow in kg/h**

30	96	111	133	161	194	233	276	322	-
35	-	109	131	159	192	230	272	318	-
40	-	-	128	156	190	228	270	315	-
45	-	-	124	153	187	225	267	312	-
50	-	-	-	147	182	221	264	309	-
55	-	-	-	-	176	216	259	305	-
60	-	-	-	-	-	209	253	300	-
65	-	-	-	-	-	-	245	293	-

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

30	2.08	2.44	2.97	3.66	4.52	5.60	6.96	8.73	-
35	-	2.05	2.52	3.12	3.86	4.73	5.78	7.05	-
40	-	-	2.11	2.65	3.29	4.03	4.88	5.86	-
45	-	-	1.72	2.21	2.78	3.43	4.15	4.94	-
50	-	-	-	1.81	2.32	2.89	3.52	4.19	-
55	-	-	-	-	1.89	2.41	2.96	3.55	-
60	-	-	-	-	-	1.96	2.46	2.98	-
65	-	-	-	-	-	-	2.00	2.47	-

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

Cooling capacity	12 301	W
Power input	3 746	W
Current consumption	6.39	A
Mass flow	280	kg/h
C.O.P.	3.28	

**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 accoustic 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%

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.

