

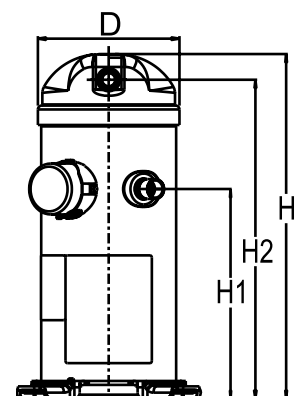
Datasheets

# Danfoss scroll compressors **H series**



**General Characteristics**

Model number (on compressor nameplate)		<b>HRM054U4LP6</b>
Code number for Singlepack*		120U1696
Code number for Industrial pack**		120U1693
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		72.92 cm <sup>3</sup> /rev
Displacement @ Nominal speed		12.7 m <sup>3</sup> /h @ 2900 rpm - 15.3 m <sup>3</sup> /h @ 3500 rpm
Net weight		37.19 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

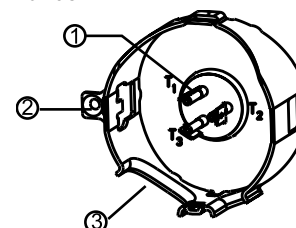
H1=280 mm

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	2.316 Ω
Winding resistance between phases 1-3 +/- 7% at 25°C	2.330 Ω
Winding resistance between phases 2-3 +/- 7% at 25°C	2.360 Ω
Rated Load Amps (RLA)	8.4 A
Maximum Continuous Current (MCC)	13 A
Locked Rotor Amps (LRA)	62 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

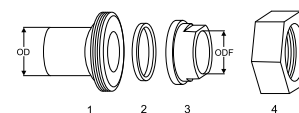
\*\*Industrial pack: 12 or 16 Unboxed compressors on pallet

**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.**
**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
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	4 782	5 582	6 762	8 297	10 163	12 335	14 789	17 499	-
35	4 487	5 279	6 427	7 907	9 695	11 766	14 096	16 659	-
40	-	4 912	6 048	7 493	9 222	11 212	13 437	15 873	-
45	-	-	5 598	7 026	8 716	10 644	12 783	15 111	-
50	-	-	-	6 481	8 150	10 034	12 107	14 346	-
55	-	-	-	-	7 497	9 356	11 381	13 550	-
60	-	-	-	-	-	8 583	10 578	12 694	-
65	-	-	-	-	-	-	9 671	11 752	-

**Power input in W**

30	2 296	2 312	2 323	2 323	2 308	2 272	2 211	2 118	-
35	2 605	2 601	2 600	2 596	2 586	2 562	2 521	2 458	-
40	-	2 932	2 913	2 900	2 888	2 871	2 844	2 803	-
45	-	-	3 279	3 250	3 229	3 212	3 194	3 169	-
50	-	-	-	3 659	3 625	3 602	3 585	3 570	-
55	-	-	-	-	4 089	4 054	4 033	4 022	-
60	-	-	-	-	-	4 584	4 552	4 539	-
65	-	-	-	-	-	-	5 158	5 136	-

**Current consumption in A**

30	4.42	4.51	4.56	4.60	4.61	4.61	4.60	4.58	-
35	4.77	4.83	4.87	4.89	4.90	4.90	4.89	4.88	-
40	-	5.28	5.30	5.30	5.30	5.30	5.30	5.30	-
45	-	-	5.85	5.84	5.83	5.83	5.83	5.84	-
50	-	-	-	6.52	6.50	6.48	6.48	6.50	-
55	-	-	-	-	7.29	7.27	7.27	7.29	-
60	-	-	-	-	-	8.20	8.19	8.22	-
65	-	-	-	-	-	-	9.26	9.28	-

**Mass flow in kg/h**

30	104	120	144	174	211	253	300	351	-
35	101	118	142	172	209	250	296	346	-
40	-	115	139	170	206	248	293	343	-
45	-	-	135	166	204	245	291	340	-
50	-	-	-	161	199	242	288	337	-
55	-	-	-	-	192	236	284	334	-
60	-	-	-	-	-	229	278	329	-
65	-	-	-	-	-	-	269	322	-

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

30	2.08	2.41	2.91	3.57	4.40	5.43	6.69	8.26	-
35	1.72	2.03	2.47	3.05	3.75	4.59	5.59	6.78	-
40	-	1.67	2.08	2.58	3.19	3.91	4.72	5.66	-
45	-	-	1.71	2.16	2.70	3.31	4.00	4.77	-
50	-	-	-	1.77	2.25	2.79	3.38	4.02	-
55	-	-	-	-	1.83	2.31	2.82	3.37	-
60	-	-	-	-	-	1.87	2.32	2.80	-
65	-	-	-	-	-	-	1.88	2.29	-

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

Cooling capacity	12 107	W
Power input	3 585	W
Current consumption	6.48	A
Mass flow	288	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	69	dB(A)
With acoustic 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**
**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	5 079	5 923	7 170	8 791	10 760	13 051	15 636	18 490	-
35	-	5 621	6 838	8 406	10 299	12 490	14 951	17 658	-
40	-	-	6 460	7 996	9 833	11 944	14 303	16 883	-
45	-	-	6 005	7 530	9 333	11 386	13 662	16 137	-
50	-	-	-	6 980	8 769	10 784	13 000	15 390	-
55	-	-	-	-	8 112	10 111	12 287	14 613	-
60	-	-	-	-	-	9 337	11 493	13 776	-
65	-	-	-	-	-	-	10 590	12 852	-

**Power input in W**

30	2 296	2 312	2 323	2 323	2 308	2 272	2 211	2 118	-
35	-	2 601	2 600	2 596	2 586	2 562	2 521	2 458	-
40	-	-	2 913	2 900	2 888	2 871	2 844	2 803	-
45	-	-	3 279	3 250	3 229	3 212	3 194	3 169	-
50	-	-	-	3 659	3 625	3 602	3 585	3 570	-
55	-	-	-	-	4 089	4 054	4 033	4 022	-
60	-	-	-	-	-	4 584	4 552	4 539	-
65	-	-	-	-	-	-	5 158	5 136	-

**Current consumption in A**

30	4.42	4.51	4.56	4.60	4.61	4.61	4.60	4.58	-
35	-	4.83	4.87	4.89	4.90	4.90	4.89	4.88	-
40	-	-	5.30	5.30	5.30	5.30	5.30	5.30	-
45	-	-	5.85	5.84	5.83	5.83	5.83	5.84	-
50	-	-	-	6.52	6.50	6.48	6.48	6.50	-
55	-	-	-	-	7.29	7.27	7.27	7.29	-
60	-	-	-	-	-	8.20	8.19	8.22	-
65	-	-	-	-	-	-	9.26	9.28	-

**Mass flow in kg/h**

30	103	119	143	173	209	251	298	349	-
35	-	118	141	171	207	249	294	344	-
40	-	-	139	169	205	246	292	341	-
45	-	-	134	166	202	244	289	338	-
50	-	-	-	160	198	240	286	335	-
55	-	-	-	-	191	235	282	332	-
60	-	-	-	-	-	228	276	327	-
65	-	-	-	-	-	-	268	320	-

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

30	2.21	2.56	3.09	3.78	4.66	5.74	7.07	8.73	-
35	-	2.16	2.63	3.24	3.98	4.87	5.93	7.18	-
40	-	-	2.22	2.76	3.41	4.16	5.03	6.02	-
45	-	-	1.83	2.32	2.89	3.54	4.28	5.09	-
50	-	-	-	1.91	2.42	2.99	3.63	4.31	-
55	-	-	-	-	1.98	2.49	3.05	3.63	-
60	-	-	-	-	-	2.04	2.52	3.04	-
65	-	-	-	-	-	-	2.05	2.50	-

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

Cooling capacity	13 385	W
Power input	3 970	W
Current consumption	7.17	A
Mass flow	304	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	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 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	5 664	6 614	8 012	9 831	12 042	14 616	17 526	20 742	-
35	5 307	6 246	7 606	9 358	11 474	13 924	16 682	19 718	-
40	-	5 801	7 146	8 853	10 897	13 247	15 876	18 755	-
45	-	-	6 600	8 287	10 280	12 553	15 076	17 821	-
50	-	-	-	7 628	9 594	11 811	14 251	16 885	-
55	-	-	-	-	8 808	10 991	13 370	15 916	-
60	-	-	-	-	-	10 065	12 403	14 882	-
65	-	-	-	-	-	-	11 321	13 752	-

**Power input in W**

30	2 737	2 757	2 770	2 770	2 751	2 708	2 636	2 529	-
35	3 090	3 089	3 089	3 085	3 072	3 044	2 996	2 922	-
40	-	3 465	3 445	3 430	3 416	3 395	3 364	3 316	-
45	-	-	3 857	3 824	3 800	3 780	3 759	3 729	-
50	-	-	-	4 283	4 243	4 216	4 196	4 179	-
55	-	-	-	-	4 761	4 720	4 695	4 682	-
60	-	-	-	-	-	5 308	5 271	5 255	-
65	-	-	-	-	-	-	5 943	5 916	-

**Current consumption in A**

30	4.42	4.51	4.56	4.60	4.61	4.61	4.60	4.58	-
35	4.77	4.83	4.87	4.89	4.90	4.90	4.89	4.88	-
40	-	5.28	5.30	5.30	5.30	5.30	5.30	5.30	-
45	-	-	5.85	5.84	5.83	5.83	5.83	5.84	-
50	-	-	-	6.52	6.50	6.48	6.48	6.50	-
55	-	-	-	-	7.29	7.27	7.27	7.29	-
60	-	-	-	-	-	8.20	8.19	8.22	-
65	-	-	-	-	-	-	9.26	9.28	-

**Mass flow in kg/h**

30	123	142	170	206	250	299	355	416	-
35	120	140	168	204	247	296	350	410	-
40	-	135	165	201	244	293	347	405	-
45	-	-	159	196	240	289	343	401	-
50	-	-	-	189	234	284	339	397	-
55	-	-	-	-	226	278	333	392	-
60	-	-	-	-	-	268	326	386	-
65	-	-	-	-	-	-	315	377	-

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

30	2.07	2.40	2.89	3.55	4.38	5.40	6.65	8.20	-
35	1.72	2.02	2.46	3.03	3.74	4.57	5.57	6.75	-
40	-	1.67	2.07	2.58	3.19	3.90	4.72	5.66	-
45	-	-	1.71	2.17	2.71	3.32	4.01	4.78	-
50	-	-	-	1.78	2.26	2.80	3.40	4.04	-
55	-	-	-	-	1.85	2.33	2.85	3.40	-
60	-	-	-	-	-	1.90	2.35	2.83	-
65	-	-	-	-	-	-	1.90	2.32	-

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

Cooling capacity	14 251	W
Power input	4 196	W
Current consumption	6.48	A
Mass flow	339	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	73	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 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, 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	6 015	7 018	8 496	10 416	12 750	15 465	18 531	21 916	-
35	-	6 652	8 093	9 949	12 188	14 780	17 694	20 900	-
40	-	-	7 632	9 448	11 618	14 112	16 899	19 949	-
45	-	-	7 081	8 881	11 007	13 428	16 113	19 031	-
50	-	-	-	8 215	10 322	12 694	15 302	18 114	-
55	-	-	-	-	9 530	11 879	14 434	17 165	-
60	-	-	-	-	-	10 949	13 477	16 151	-
65	-	-	-	-	-	-	12 397	15 039	-

**Power input in W**

30	2 737	2 757	2 770	2 770	2 751	2 708	2 636	2 529	-
35	-	3 089	3 089	3 085	3 072	3 044	2 996	2 922	-
40	-	-	3 445	3 430	3 416	3 395	3 364	3 316	-
45	-	-	3 857	3 824	3 800	3 780	3 759	3 729	-
50	-	-	-	4 283	4 243	4 216	4 196	4 179	-
55	-	-	-	-	4 761	4 720	4 695	4 682	-
60	-	-	-	-	-	5 308	5 271	5 255	-
65	-	-	-	-	-	-	5 943	5 916	-

**Current consumption in A**

30	4.42	4.51	4.56	4.60	4.61	4.61	4.60	4.58	-
35	-	4.83	4.87	4.89	4.90	4.90	4.89	4.88	-
40	-	-	5.30	5.30	5.30	5.30	5.30	5.30	-
45	-	-	5.85	5.84	5.83	5.83	5.83	5.84	-
50	-	-	-	6.52	6.50	6.48	6.48	6.50	-
55	-	-	-	-	7.29	7.27	7.27	7.29	-
60	-	-	-	-	-	8.20	8.19	8.22	-
65	-	-	-	-	-	-	9.26	9.28	-

**Mass flow in kg/h**

30	122	142	169	205	248	298	353	414	-
35	-	139	167	203	246	294	349	407	-
40	-	-	164	200	243	291	345	403	-
45	-	-	158	195	239	288	341	399	-
50	-	-	-	188	233	283	337	395	-
55	-	-	-	-	225	276	332	390	-
60	-	-	-	-	-	267	324	384	-
65	-	-	-	-	-	-	313	375	-

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

30	2.20	2.55	3.07	3.76	4.63	5.71	7.03	8.67	-
35	-	2.15	2.62	3.23	3.97	4.86	5.91	7.15	-
40	-	-	2.22	2.75	3.40	4.16	5.02	6.02	-
45	-	-	1.84	2.32	2.90	3.55	4.29	5.10	-
50	-	-	-	1.92	2.43	3.01	3.65	4.33	-
55	-	-	-	-	2.00	2.52	3.07	3.67	-
60	-	-	-	-	-	2.06	2.56	3.07	-
65	-	-	-	-	-	-	2.09	2.54	-

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

Cooling capacity	15 727	W
Power input	4 625	W
Current consumption	7.17	A
Mass flow	358	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	73	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.

