

Datasheets

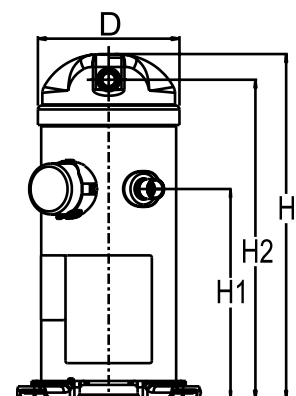
Danfoss scroll compressors **H series**



General Characteristics

Model number (on compressor nameplate)		HRH034U4LP6
Code number for Singlepack*		120U2446
Code number for Industrial pack**		120U2443
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		33.04 cm ³ /rev
Displacement @ Nominal speed		5.8 m ³ /h @ 2900 rpm - 6.9 m ³ /h @ 3500 rpm
Net weight		30.84 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

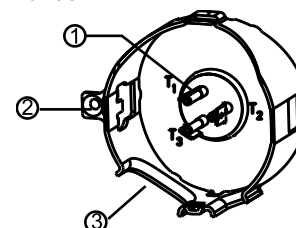
H2=379 mm

H3=- mm

Electrical Characteristics

Nominal voltage	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	2.66 Ω
Winding resistance between phases 1-3 +/- 7% at 25°C	4.66 Ω
Winding resistance between phases 2-3 +/- 7% at 25°C	3.42 Ω
Rated Load Amps (RLA)	6.4 A
Maximum Continuous Current (MCC)	10.0 A
Locked Rotor Amps (LRA)	45.0 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.

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
--	----------

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

Datasheet, performance data

Danfoss scroll compressor. HRH034U4

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	2 478	3 242	4 174	5 287	6 596	8 114	9 857	11 837	-
35	2 228	2 967	3 863	4 929	6 180	7 628	9 289	11 176	-
40	-	2 690	3 549	4 567	5 758	7 135	8 713	10 505	-
45	-	-	3 225	4 193	5 322	6 627	8 120	9 815	-
50	-	-	-	3 800	4 866	6 095	7 501	9 098	-
55	-	-	-	-	4 380	5 531	6 846	8 340	-
60	-	-	-	-	-	4 919	6 138	7 522	-
65	-	-	-	-	-	-	5 347	6 608	-

Power input in W

30	1 659	1 637	1 620	1 606	1 594	1 579	1 561	1 537	-
35	1 913	1 881	1 855	1 833	1 813	1 791	1 766	1 735	-
40	-	2 157	2 123	2 093	2 066	2 037	2 006	1 969	-
45	-	-	2 427	2 390	2 355	2 321	2 284	2 242	-
50	-	-	-	2 726	2 685	2 645	2 602	2 556	-
55	-	-	-	-	3 057	3 012	2 965	2 914	-
60	-	-	-	-	-	3 425	3 374	3 320	-
65	-	-	-	-	-	-	3 834	3 776	-

Current consumption in A

30	3.40	3.40	3.40	3.39	3.38	3.35	3.31	3.25	-
35	3.66	3.66	3.65	3.64	3.63	3.61	3.57	3.52	-
40	-	3.95	3.94	3.93	3.91	3.89	3.85	3.81	-
45	-	-	4.27	4.25	4.23	4.20	4.17	4.13	-
50	-	-	-	4.63	4.60	4.57	4.54	4.50	-
55	-	-	-	-	5.04	5.00	4.97	4.93	-
60	-	-	-	-	-	5.51	5.47	5.42	-
65	-	-	-	-	-	-	6.04	6.00	-

Mass flow in kg/h

30	52	67	85	106	131	159	191	228	-
35	49	64	82	104	129	157	189	225	-
40	-	62	80	102	126	155	187	223	-
45	-	-	77	99	124	152	184	220	-
50	-	-	-	96	121	149	181	217	-
55	-	-	-	-	117	146	178	214	-
60	-	-	-	-	-	141	173	209	-
65	-	-	-	-	-	-	168	204	-

Coefficient of performance (C.O.P.)

30	1.49	1.98	2.58	3.29	4.14	5.14	6.31	7.70	-
35	1.16	1.58	2.08	2.69	3.41	4.26	5.26	6.44	-
40	-	1.25	1.67	2.18	2.79	3.50	4.34	5.33	-
45	-	-	1.33	1.75	2.26	2.86	3.56	4.38	-
50	-	-	-	1.39	1.81	2.30	2.88	3.56	-
55	-	-	-	-	1.43	1.84	2.31	2.86	-
60	-	-	-	-	-	1.44	1.82	2.27	-
65	-	-	-	-	-	-	1.39	1.75	-

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

Cooling capacity	7 501	W
Power input	2 602	W
Current consumption	4.54	A
Mass flow	181	kg/h
C.O.P.	2.88	

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	66	dB(A)
With acoustic hood	61	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
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	2 676	3 498	4 498	5 692	7 095	8 721	10 585	12 702	-
35	-	3 221	4 189	5 340	6 688	8 247	10 034	12 062	-
40	-	-	3 878	4 984	6 276	7 769	9 477	11 415	-
45	-	-	3 556	4 617	5 853	7 278	8 908	10 756	-
50	-	-	-	4 232	5 412	6 769	8 319	10 077	-
55	-	-	-	-	4 945	6 234	7 705	9 372	-
60	-	-	-	-	-	5 667	7 057	8 632	-
65	-	-	-	-	-	-	6 369	7 851	-

Power input in W

30	1 659	1 637	1 620	1 606	1 594	1 579	1 561	1 537	-
35	-	1 881	1 855	1 833	1 813	1 791	1 766	1 735	-
40	-	-	2 123	2 093	2 066	2 037	2 006	1 969	-
45	-	-	2 427	2 390	2 355	2 321	2 284	2 242	-
50	-	-	-	2 726	2 685	2 645	2 602	2 556	-
55	-	-	-	-	3 057	3 012	2 965	2 914	-
60	-	-	-	-	-	3 425	3 374	3 320	-
65	-	-	-	-	-	-	3 834	3 776	-

Current consumption in A

30	3.40	3.40	3.40	3.39	3.38	3.35	3.31	3.25	-
35	-	3.66	3.65	3.64	3.63	3.61	3.57	3.52	-
40	-	-	3.94	3.93	3.91	3.89	3.85	3.81	-
45	-	-	4.27	4.25	4.23	4.20	4.17	4.13	-
50	-	-	-	4.63	4.60	4.57	4.54	4.50	-
55	-	-	-	-	5.04	5.00	4.97	4.93	-
60	-	-	-	-	-	5.51	5.47	5.42	-
65	-	-	-	-	-	-	6.04	6.00	-

Mass flow in kg/h

30	52	66	84	105	130	158	190	226	-
35	-	64	82	103	128	156	188	224	-
40	-	-	80	101	126	154	186	221	-
45	-	-	77	98	123	151	183	219	-
50	-	-	-	95	120	148	180	216	-
55	-	-	-	-	116	145	177	212	-
60	-	-	-	-	-	140	172	208	-
65	-	-	-	-	-	-	167	202	-

Coefficient of performance (C.O.P.)

30	1.61	2.14	2.78	3.54	4.45	5.52	6.78	8.27	-
35	-	1.71	2.26	2.91	3.69	4.60	5.68	6.95	-
40	-	-	1.83	2.38	3.04	3.81	4.72	5.80	-
45	-	-	1.47	1.93	2.48	3.14	3.90	4.80	-
50	-	-	-	1.55	2.02	2.56	3.20	3.94	-
55	-	-	-	-	1.62	2.07	2.60	3.22	-
60	-	-	-	-	-	1.65	2.09	2.60	-
65	-	-	-	-	-	-	1.66	2.08	-

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

Cooling capacity	8 493	W
Power input	2 897	W
Current consumption	4.90	A
Mass flow	192	kg/h
C.O.P.	2.93	

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	66	dB(A)
With acoustic hood	61	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
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	2 927	3 828	4 928	6 242	7 787	9 579	11 635	13 969	-
35	2 635	3 507	4 566	5 826	7 304	9 017	10 979	13 207	-
40	-	3 186	4 201	5 406	6 815	8 446	10 313	12 434	-
45	-	-	3 825	4 972	6 310	7 857	9 628	11 638	-
50	-	-	-	4 514	5 780	7 240	8 910	10 806	-
55	-	-	-	-	5 212	6 581	8 147	9 924	-
60	-	-	-	-	-	5 863	7 317	8 967	-
65	-	-	-	-	-	-	6 383	7 890	-

Power input in W

30	1 999	1 973	1 952	1 936	1 920	1 903	1 881	1 853	-
35	2 291	2 254	2 224	2 198	2 173	2 147	2 118	2 082	-
40	-	2 568	2 529	2 494	2 461	2 427	2 390	2 347	-
45	-	-	2 869	2 827	2 786	2 745	2 701	2 652	-
50	-	-	-	3 200	3 152	3 105	3 055	3 000	-
55	-	-	-	-	3 563	3 510	3 455	3 395	-
60	-	-	-	-	-	3 963	3 903	3 839	-
65	-	-	-	-	-	-	4 404	4 337	-

Current consumption in A

30	3.12	3.12	3.12	3.12	3.10	3.08	3.04	2.99	-
35	3.36	3.36	3.35	3.35	3.33	3.31	3.28	3.23	-
40	-	3.63	3.62	3.61	3.59	3.57	3.54	3.50	-
45	-	-	3.92	3.90	3.88	3.86	3.83	3.79	-
50	-	-	-	4.25	4.23	4.20	4.17	4.13	-
55	-	-	-	-	4.63	4.60	4.56	4.53	-
60	-	-	-	-	-	5.06	5.02	4.98	-
65	-	-	-	-	-	-	5.55	5.51	-

Mass flow in kg/h

30	61	79	100	125	154	188	226	269	-
35	58	76	97	123	152	185	223	266	-
40	-	73	95	120	150	183	221	264	-
45	-	-	91	117	147	181	219	261	-
50	-	-	-	114	143	177	215	258	-
55	-	-	-	-	139	173	212	254	-
60	-	-	-	-	-	168	207	249	-
65	-	-	-	-	-	-	200	243	-

Coefficient of performance (C.O.P.)

30	1.46	1.94	2.52	3.22	4.06	5.03	6.18	7.54	-
35	1.15	1.56	2.05	2.65	3.36	4.20	5.18	6.34	-
40	-	1.24	1.66	2.17	2.77	3.48	4.32	5.30	-
45	-	-	1.33	1.76	2.26	2.86	3.56	4.39	-
50	-	-	-	1.41	1.83	2.33	2.92	3.60	-
55	-	-	-	-	1.46	1.88	2.36	2.92	-
60	-	-	-	-	-	1.48	1.87	2.34	-
65	-	-	-	-	-	-	1.45	1.82	-

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

Cooling capacity	8 910	W
Power input	3 055	W
Current consumption	4.17	A
Mass flow	215	kg/h
C.O.P.	2.92	

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	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 60 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	3 161	4 130	5 311	6 721	8 377	10 296	12 494	14 990	-
35	-	3 808	4 951	6 311	7 905	9 748	11 859	14 254	-
40	-	-	4 590	5 899	7 429	9 196	11 218	13 512	-
45	-	-	4 217	5 474	6 939	8 630	10 562	12 753	-
50	-	-	-	5 028	6 428	8 040	9 882	11 970	-
55	-	-	-	-	5 884	7 418	9 168	11 152	-
60	-	-	-	-	-	6 754	8 411	10 290	-
65	-	-	-	-	-	-	7 603	9 376	-

Power input in W

30	1 999	1 973	1 952	1 936	1 920	1 903	1 881	1 853	-
35	-	2 254	2 224	2 198	2 173	2 147	2 118	2 082	-
40	-	-	2 529	2 494	2 461	2 427	2 390	2 347	-
45	-	-	2 869	2 827	2 786	2 745	2 701	2 652	-
50	-	-	-	3 200	3 152	3 105	3 055	3 000	-
55	-	-	-	-	3 563	3 510	3 455	3 395	-
60	-	-	-	-	-	3 963	3 903	3 839	-
65	-	-	-	-	-	-	4 404	4 337	-

Current consumption in A

30	3.12	3.12	3.12	3.12	3.10	3.08	3.04	2.99	-
35	-	3.36	3.35	3.35	3.33	3.31	3.28	3.23	-
40	-	-	3.62	3.61	3.59	3.57	3.54	3.50	-
45	-	-	3.92	3.90	3.88	3.86	3.83	3.79	-
50	-	-	-	4.25	4.23	4.20	4.17	4.13	-
55	-	-	-	-	4.63	4.60	4.56	4.53	-
60	-	-	-	-	-	5.06	5.02	4.98	-
65	-	-	-	-	-	-	5.55	5.51	-

Mass flow in kg/h

30	61	78	99	124	153	186	224	267	-
35	-	76	97	122	151	184	222	264	-
40	-	-	94	119	149	182	220	262	-
45	-	-	91	116	146	179	217	259	-
50	-	-	-	113	143	176	214	256	-
55	-	-	-	-	138	172	210	252	-
60	-	-	-	-	-	167	205	248	-
65	-	-	-	-	-	-	199	242	-

Coefficient of performance (C.O.P.)

30	1.58	2.09	2.72	3.47	4.36	5.41	6.64	8.09	-
35	-	1.69	2.23	2.87	3.64	4.54	5.60	6.85	-
40	-	-	1.82	2.37	3.02	3.79	4.69	5.76	-
45	-	-	1.47	1.94	2.49	3.14	3.91	4.81	-
50	-	-	-	1.57	2.04	2.59	3.23	3.99	-
55	-	-	-	-	1.65	2.11	2.65	3.28	-
60	-	-	-	-	-	1.70	2.16	2.68	-
65	-	-	-	-	-	-	1.73	2.16	-

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

Cooling capacity	10 104	W
Power input	3 379	W
Current consumption	4.50	A
Mass flow	229	kg/h
C.O.P.	2.99	

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	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.

