ENGINEERING



Datasheets

Danfoss scroll compressors **H series**





Datasheet, technical data

Danfoss scroll compressor, HRH054U4

General Characteristics

Model number (on compressor nameplate)		HRH054U4LP6	
Code number for Singlepack*		120U1376	
Code number for Industrial pack**		120U1373	
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	52.11 c	m3/rev	
Displacement @ Nominal speed	9.1 m3/h @ 2900 rpm -	10.9 m3/h @ 3500 rpm	
Net weight	37.1	9 kg	
Oil charge	1.57 litre, PVE		
Maximum system test pressure Low Side / High side	- bar(g) / - bar(g)		
Maximum differential test pressure		oar	
Maximum number of starts per hour		-	
Refrigerant charge limit	5.44 kg		
Approved refrigerants	R41	10A	

Electrical Characteristics

Licetifear enaracteristics	
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℃	2.316 Ω
Winding resistance between phases 1-3 +/- 7% at 25℃	2.330 Ω
Winding resistance between phases 2-3 +/- 7% at 25°C	2.360 Ω
Rated Load Amps (RLA)	9.6 A
Maximum Continuous Current (MCC)	15 A
Locked Rotor Amps (LRA)	70 A
Motor protection	Internal overload protector

Recommended Installation torques

Oil sight glass	52.5 Nm
Power connections / Earth connection	0 Nm / 0 Nm

Parts shipped with compressor

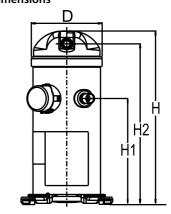
Tarts shipped with compressor	
Mounting kit with grommets and sleeves	
Initial oil charge	
Installation instructions	

Approvals: CE certified, UL certified (file SA11565), -

*Singlepack: Compressor in cardboard box

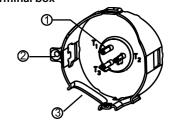
**Industrial pack: 12 or 16 Unboxed compressors on pallet

Dimensions



D=183.5 mm H=455 mm H1=280 mm H2=422 mm H3=- mm

Terminal box



IP22

Spade connectors 1/4" 1: 2:

Earth connection

3: Power cable passage



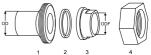
Datasheet, accessories and spare parts

No translation for 120Z5015

Danfoss scroll compressor, HRH054U4

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	S
Rotolock valve, V06 (1" Rotolock, 1/2" ODF)	8168031	
Gasket, 1"	8156130	╝╺
Rotolock accessories, sets	Code no.	ole L
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.	1:
PVE lubricant, 320HV (FVC68D), 1 litre can	120Z5034	2
Crankcase heaters	Code no.	3: 4:
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	

Solder sleeve adapter set



1: Rotolock adapter (Suc & Dis)

: Gasket (Suc & Dis)

120Z5015

3: Solder sleeve (Suc & Dis)

: Rotolock nut (Suc & Dis)



Danfoss scroll compressor. HRH054U4

Performance data at 50 Hz, EN 12900 rating conditions

R410A

Cond. temp. in				Evapora	ating temperature	in °C (to)			
°C (tc)	-25	-20	-15	-10	-5	0	5	10	15
aallaa 2	. : 10/								
ooling capacity		E 051	7 220	9.026	10.922	12,000	15 909	10.040	
30	4 722	5 951	7 328	8 926	10 822	13 090	15 808	19 049	-
35	4 209	5 505	6 883	8 419	10 186	12 259	14 715	17 627	-
40	-	4 915	6 344	7 866	9 554	11 484	13 728	16 363	-
45	-	-	5 659	7 215	8 874	10 708	12 792	15 199	-
50	-	-	-	6 418	8 093	9 879	11 851	14 079	-
55	-	-	-	-	7 160	8 942	10 845	12 940	-
60	-	-	-	-	-	7 837	9 709	11 711	-
65	-	-	-	-	-	-	8 362	10 294	-
Power input in V	v								
30	2 532	2 565	2 586	2 593	2 581	2 548	2 492	2 408	-
35	2 798	2 838	2 868	2 885	2 886	2 867	2 826	2 760	-
40	-	3 152	3 188	3 212	3 222	3 215	3 187	3 134	-
45	-	-	3 552	3 581	3 597	3 597	3 578	3 538	-
50	-	-	-	3 997	4 016	4 021	4 009	3 976	-
55	-	-	-	-	4 485	4 492	4 483	4 456	-
60	-	-	-	-	-	5 017	5 009	4 983	-
65	-	-	-	-	-	-	5 591	5 565	-
U.		•	•	•	•	•	-	· '	
Current consum	ption in A			_					
30	5.00	5.01	5.07	5.12	5.12	5.03	4.80	4.39	-
35	5.25	5.30	5.40	5.50	5.57	5.54	5.39	5.06	-
40	-	5.67	5.79	5.92	6.01	6.03	5.92	5.65	-
45	-	-	6.27	6.40	6.51	6.54	6.46	6.22	-
50	-	-	-	7.02	7.11	7.13	7.05	6.81	-
55	-	-	-	-	7.85	7.84	7.73	7.48	-
60	-	-	-	-	-	8.72	8.56	8.27	-
65	-	-	-	-	-	-	9.59	9.22	-
Mana flam in lan	L								
Mass flow in kg/		122	140	170	214	257	209	360	
30	99	122	149	179	214	257	308	369	
35	93	119	147	177	212	252	300	356	-
40	-	112	143	175	210	249	294	347	-
45	-	+	135	170	206	246	290	341	
50	-	-	-	161	201	242	287	336	-
55	-	-	-	-	191	235	282	332	-
60	-	-	-	-	-	225	274	326	-
65	-	-	-	-	-	-	263	317	-
Coefficient of pe	erformance (C.C	D.P.)	_	.	_	T	_	, ·	
30	1.87	2.32	2.83	3.44	4.19	5.14	6.34	7.91	-
35	1.50	1.94	2.40	2.92	3.53	4.28	5.21	6.39	-
40	-	1.56	1.99	2.45	2.96	3.57	4.31	5.22	-
45	-	-	1.59	2.02	2.47	2.98	3.57	4.30	-
50	-	-	-	1.61	2.02	2.46	2.96	3.54	-
55	-	-	-	-	1.60	1.99	2.42	2.90	-
60	-	-	-	-	-	1.56	1.94	2.35	-
65	_	_	_	_	_	_	1.50	1.85	_

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

Cooling capacity	11 851	W
Power input	4 009	W
Current consumption	7.05	Α
Mass flow	287	kg/h
C.O.P.	2.96	

to: Evaporating 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 accoustic hood	62	dB(A)

All performance data +/- 5%

tc: Condensing temperature at dew point



Danfoss scroll compressor. HRH054U4

Performance data at 50 Hz, ARI rating conditions

R410A

°C (tc) -25 -20 Cooling capacity in W 30 5 100 6 420 35 - 5 977 40 - - 45 - - 50 - - 55 - - 60 - - 65 - - 60 - - 65 - - Power input in W - - 30 2 532 2 565 35 - 2 838 40 - - 45 - - 50 - - 55 - - 60 - - 65 - - Current consumption in A 30 5.00 5.01 35 - 5.30 40 - - 55 - - </th <th>-15</th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th>	-15						
30		-10	-5	0	5	10	15
30							
35	7.007	1 0.040	11.011	44.000	40.070	I 00 444 I	
40	7 897	9 610	11 641	14 069	16 976	20 441	-
45	7 465	9 120	11 023	13 254	15 895	19 024	-
50	6 931	8 583	10 414	12 503	14 932	17 781	-
S5	6 240	7 945	9 758	11 761	14 034	16 657	-
60	-	7 149	9 000	10 971	13 143	15 595	-
Coefficient of performance (C.O.P.) C.O.P. C.O.P.	-	-	8 084	10 079	12 204	14 541	-
Power input in W 30	-	-	-	9 027	11 162	13 439	-
30	-	-	-	-	9 961	12 232	-
30							
35 - 2838 40	2 586	2 593	2 581	2 548	2 492	2 408	-
40	2 868	2 885	2 886	2 867	2 826	2 760	_
45	3 188	3 212	3 222	3 215	3 187	3 134	_
Solution Solution	3 552	3 581	3 597	3 597	3 578	3 538	-
S55	-	3 997	4 016	4 021	4 009	3 976	_
60	_	-	4 485	4 492	4 483	4 456	-
Current consumption in A 30 5.00 5.01 35 - 5.30 40 45 50 60 65 Mass flow in kg/h 30 98 122 35 - 119 40 45 50 Coefficient of performance (C.O.P.) 30 2.01 2.50 35 - 2.11 40 45 Coefficient of performance (C.O.P.)	_	_	-	5 017	5 009	4 983	_
Current consumption in A 30 5.00 5.01 35 - 5.30 40 45 50 60 65 Mass flow in kg/h 30 98 122 35 - 119 40 45 50 Coefficient of performance (C.O.P.) 30 2.01 2.50 35 - 2.11 40 45 Coefficient of performance (C.O.P.)	-	-	_	-	5 591	5 565	_
30 5.00 5.01 35 - 5.30 40 45 50 55 60 65 Mass flow in kg/h 30 98 122 35 - 119 40 45 50 55 60 65 Coefficient of performance (C.O.P.) 30 2.01 2.50 35 - 2.11 40 45 50 35 -			<u> </u>	l		0 000	
30 5.00 5.01 35 - 5.30 40 45 50 55 60 65 Mass flow in kg/h 30 98 122 35 - 119 40 45 50 55 60 55 50 55 60 55 60 55 60 55 60 55 60 55 60 65 Coefficient of performance (C.O.P.) 30 2.01 2.50 35 - 2.11 40 45 50							
40	5.07	5.12	5.12	5.03	4.80	4.39	-
40	5.40	5.50	5.57	5.54	5.39	5.06	_
50 - - 55 - - 60 - - 65 - - 465 - - 30 98 122 35 - 119 40 - - 45 - - 50 - - 60 - - 65 - - 20efficient of performance (C.O.P.) 30 2.01 2.50 35 - 2.11 40 - - 45 - - - - 50 - - - -	5.79	5.92	6.01	6.03	5.92	5.65	-
50 - - 55 - - 60 - - 65 - - 465 - - 30 98 122 35 - 119 40 - - 45 - - 50 - - 60 - - 65 - - 20efficient of performance (C.O.P.) 30 2.01 2.50 35 - 2.11 40 - - 45 - - - - 50 - - - -	6.27	6.40	6.51	6.54	6.46	6.22	-
55 - - 60 - - 65 - - 30 98 122 35 - 119 40 - - 45 - - 50 - - 60 - - 65 - - 20efficient of performance (C.O.P.) 30 2.01 2.50 35 - 2.11 40 - - 45 - - - - 50 - - - -	-	7.02	7.11	7.13	7.05	6.81	-
60	-	-	7.85	7.84	7.73	7.48	_
Mass flow in kg/h - - 30 98 122 35 - 119 40 - - 45 - - 50 - - 60 - - 65 - - Coefficient of performance (C.O.P.) 30 2.01 2.50 35 - 2.11 40 - - 45 - - - - 50 - - -	-	-	-	8.72	8.56	8.27	_
30 98 122 35 - 119 40 45 50 55 60 65 Coefficient of performance (C.O.P.) 30 2.01 2.50 35 - 2.11 40 45 50	-	-	-	-	9.59	9.22	-
30 98 122 35 - 119 40 45 50 55 60 65 Coefficient of performance (C.O.P.) 30 2.01 2.50 35 - 2.11 40 45 50	1	•	•				
35 - 119 40 45 50 55 60 65 Coefficient of performance (C.O.P.) 30 2.01 2.50 35 - 2.11 40 45 50							
40	148	178	213	255	306	367	-
45	146	176	211	251	298	354	-
45	142	174	208	247	292	345	_
50	134	169	205	244	288	338	-
55	-	160	199	240	285	334	_
60	-	-	190	234	280	329	-
65 - - Coefficient of performance (C.O.P.) 30 2.01 2.50 35 - 2.11 40 - - 45 - - 50 - -	-	-	-	223	272	323	-
Coefficient of performance (C.O.P.) 30 2.01 2.50 35 - 2.11 40 - - 45 - - 50 - -	_	-	-	-	261	315	-
30 2.01 2.50 35 - 2.11 40 45 50	L	<u> </u>	1		-		
35 - 2.11 40 45 50	1	1			1	1 1	
40 45 50	3.05	3.71	4.51	5.52	6.81	8.49	-
45 50	2.60	3.16	3.82	4.62	5.62	6.89	-
50	2.17	2.67	3.23	3.89	4.69	5.67	-
	1.76	2.22	2.71	3.27	3.92	4.71	-
55	-	1.79	2.24	2.73	3.28	3.92	-
	-	-	1.80	2.24	2.72	3.26	-
60	-	-	-	1.80	2.23	2.70	-
65	-	-	-	-	1.78	2.20	-

Cooling capacity

Current consumption

Power input

Mass flow

C.O.P.

Rating conditions : Superheat = 11.1 K , Subcooling = 8.3 K

13 322

4 414

7.55

302

3.02

W

W

kg/h

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 accoustic hood	62	dB(A)

All performance data +/- 5%

to: Evaporating temperature at dew point tc: Condensing temperature at dew point



Danfoss scroll compressor. HRH054U4

Performance data at 60 Hz, EN 12900 rating conditions

R410A

Cond. temp. in	Evaporating temperature in °C (to)								
°C (tc)	-25	-20	-15	-10	-5	0	5	10	15
cooling capacit	v in W								
30	5 655	7 127	8 774	10 688	12 958	15 675	18 929	22 810	_
35			8 243	1		14 681			
	5 041	6 592		10 082	12 198		17 621	21 108	
40	-	5 886	7 597	9 420	11 442	13 752	16 440	19 595	-
45	-	-	6 778	8 641	10 628	12 825	15 320	18 203	-
50	-	-	-	7 687	9 693	11 833	14 194	16 863	-
55	-	-	-	-	8 576	10 710	12 990	15 500	-
60	-	-	-	-	-	9 388	11 631	14 029	-
65	-	-	-	-	-	-	10 018	12 333	-
ower input in \	N								
30	2 956	2 995	3 020	3 027	3 014	2 975	2 909	2 811	_
35	3 265	3 312	3 347	3 367	3 368	3 346	3 298	3 221	-
40	-	3 676	3 718	3 747	3 758	3 749	3 717	3 656	-
45	-	-	4 140	4 173	4 192	4 193	4 171	4 123	-
50	-	-	-	4 655	4 677	4 683	4 669	4 631	-
55	-	-	-	-	5 220	5 228	5 217	5 185	-
60	-	-	-	-	-	5 835	5 825	5 795	-
65	-	-	-	_	-	-	6 498	6 467	-
		I.	I.	L					
urrent consum	nption in A								
30	5.18	5.22	5.26	5.30	5.35	5.41	5.49	5.59	-
35	5.45	5.50	5.55	5.59	5.63	5.68	5.75	5.83	-
40	-	5.81	5.87	5.92	5.97	6.02	6.07	6.13	-
45	-	-	6.24	6.30	6.36	6.41	6.46	6.51	-
50	-	-	-	6.73	6.81	6.87	6.92	6.97	-
55	-	-	-	-	7.32	7.39	7.46	7.52	-
60	-	-	-	-	-	8.00	8.08	8.15	-
65	-	-	-	-	-	-	8.79	8.87	-
lass flow in kg		T	_	Т	1	1	T	1	1
30	118	147	178	214	257	308	369	442	-
35	111	143	176	212	254	302	359	426	-
40	-	135	171	209	251	298	352	416	-
45	-	-	162	204	247	295	348	408	-
50	-	-	-	193	240	290	343	403	-
55	-	-	-	-	229	282	337	397	-
60	-	-	-	-	-	269	328	390	-
65	-	-	-	-	-	-	315	380	-
oefficient of pe	erformance (C.C	D.P.)							
30	1.91	2.38	2.91	3.53	4.30	5.27	6.51	8.11	-
35	1.54	1.99	2.46	2.99	3.62	4.39	5.34	6.55	-
40	-	1.60	2.04	2.51	3.04	3.67	4.42	5.36	-
45	-	-	1.64	2.07	2.54	3.06	3.67	4.41	-
50	-	-	-	1.65	2.07	2.53	3.04	3.64	-
55	-	-	-	-	1.64	2.05	2.49	2.99	_
60	-	-	-	-	-	1.61	2.00	2.42	_
65	_	_	-	_	_	-	1.54	1.91	_

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

Cooling capacity	14 194	W
Power input	4 669	W
Current consumption	6.92	Α
Mass flow	343	kg/h
C.O.P.	3.04	

to: Evaporating 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	70	dB(A)
With accoustic hood	65	dB(A)

All performance data +/- 5%

tc: Condensing temperature at dew point



Danfoss scroll compressor. HRH054U4

Performance data at 60 Hz, ARI rating conditions

R410A

Cond. temp. in	Evaporating temperature in °C (to)								
°C (tc)	-25	-20	-15	-10	-5	0	5	10	15
Cooling capacity	in W								
30	6 107	7 688	9 456	11 508	13 939	16 847	20 328	24 477	_
35	-	7 157	8 939	10 921	13 200	15 872	19 034	22 781	_
40		-	8 300	10 321	12 471	14 974	17 883	21 294	
45	<u> </u>	_	7 474	9 515	11 687	14 974	16 807	19 949	
			7 474			1		1	
50	-	-	-	8 562	10 780	13 141	15 742	18 679	-
55	-	-	-		9 683	12 072	14 618	17 418	-
60	-	-	-	-	-	10 814	13 371	16 098	-
65	-	-	-	-	-	-	11 933	14 654	-
Power input in W	1	_	_	_			1		
30	2 956	2 995	3 020	3 027	3 014	2 975	2 909	2 811	-
35	-	3 312	3 347	3 367	3 368	3 346	3 298	3 221	-
40	-	-	3 718	3 747	3 758	3 749	3 717	3 656	-
45	-	-	4 140	4 173	4 192	4 193	4 171	4 123	-
50	-	-	-	4 655	4 677	4 683	4 669	4 631	-
55	-	-	-	-	5 220	5 228	5 217	5 185	-
60	-	-	-	-	-	5 835	5 825	5 795	-
65	-	-	-	-	-	-	6 498	6 467	-
Current consump		T		T	1	T	T	T T	
30	5.18	5.22	5.26	5.30	5.35	5.41	5.49	5.59	-
35	-	5.50	5.55	5.59	5.63	5.68	5.75	5.83	-
40	-	-	5.87	5.92	5.97	6.02	6.07	6.13	-
45	-	-	6.24	6.30	6.36	6.41	6.46	6.51	-
50	-	-	-	6.73	6.81	6.87	6.92	6.97	-
55	-	-	-	-	7.32	7.39	7.46	7.52	-
60	-	-	-	-	-	8.00	8.08	8.15	-
65	-	-	-	-	-	-	8.79	8.87	-
Mass flow in kg/h	•								
30	117	146	177	213	255	306	366	439	
35	-	142	175	211	252	300	356	423	
40		-	170	208	250	296	350	413	
45		-	161	202	246	293	345	405	
50		-	-	192	239	288	341	400	
	-	-	-	192	239	280	335	394	
55 60	-	-	-	-	- 228	268			-
65						200	326 313	387 378	
UU	-	-	-	-	-		313	310	-
Coefficient of per	formance (C.C).P.)	_	1	1	1	ı	, ,	
30	2.07	2.57	3.13	3.80	4.63	5.66	6.99	8.71	-
35	-	2.16	2.67	3.24	3.92	4.74	5.77	7.07	-
40	-	-	2.23	2.74	3.32	3.99	4.81	5.82	-
45	-	-	1.81	2.28	2.79	3.36	4.03	4.84	-
50	-	-	-	1.84	2.30	2.81	3.37	4.03	-
55	-	-	-	-	1.86	2.31	2.80	3.36	-
60	-	-	-	-	-	1.85	2.30	2.78	-
65	_	-	_	-	-	-	1.84	2.27	-

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

	• •		
Cooling capacity	15 958	W	
Power input	5 137	W	
Current consumption	7.41	Α	
Mass flow	361	kg/h	
C.O.P.	3.11		

to: Evaporating temperature at dew point

Rating conditions : Superheat = 11.1 K , Subcooling = 8.3 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)

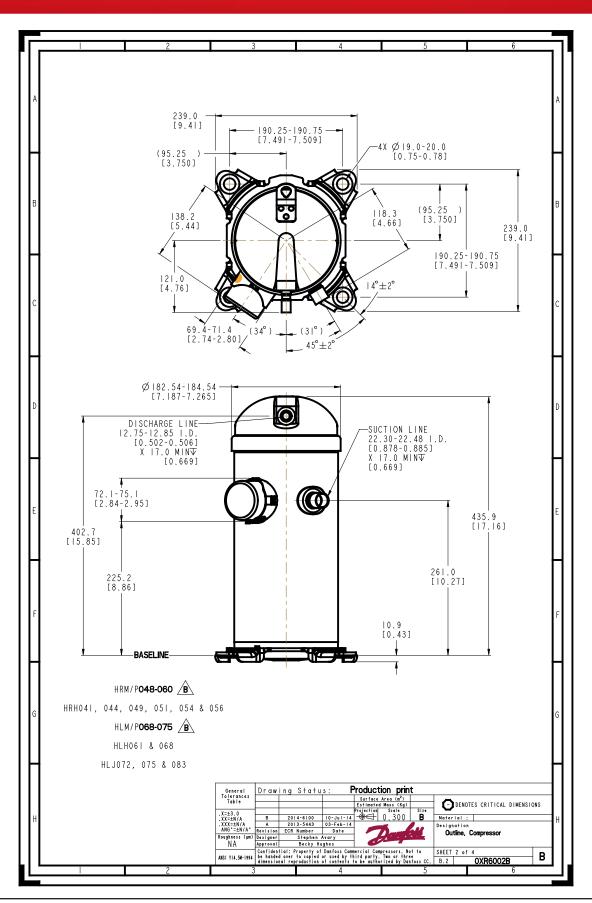
Sound power data

Sound power level	70	dB(A)
With accoustic hood	65	dB(A)

All performance data +/- 5%

tc: Condensing temperature at dew point





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FRCC.PD.0XR6002Bb page drawings



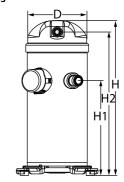
Datasheet, technical data

Danfoss scroll compressor, HRH054U4

General Characteristics

Model number (on compressor nameplate)	HRH054U4LT6			
Code number for Singlepack*	121U3119			
Code number for Industrial pack**		121U3118		
Drawing number		0XR6002B-4		
Suction and discharge connections		Rotolock		
Suction connection		3/4 " Rotolock		
Discharge connection		1/2 " Rotolock		
Oil sight glass		None		
Oil equalisation connection		None		
Oil drain connection		None		
LP gauge port		None		
IPR valve		Yes		
Swept volume	52.11 cm3/rev			
Displacement @ Nominal speed	9.1 m3/h @ 2900 rpm -	10.9 m3/h @ 3500 rpm		
Net weight	37.1	9 kg		
Oil charge	1.57 litre	e, 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	4 kg		
Approved refrigerants	R410A			

Dimensions

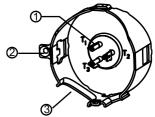


D=183.5 mm H=455 mm H1=280 mm H2=422 mm H3=- mm

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)	9.6 A
Maximum Continuous Current (MCC)	15 A
Locked Rotor Amps (LRA)	70 A
Motor protection	Internal overload protector

Terminal box



Recommended Installation torques

Oil sight glass	52.5 Nm
Power connections / Earth connection	0 Nm / 0 Nm

IP22 1:

2:

3:

Spade connectors 1/4" Earth connection

Power cable passage

Parts shipped with compressor

Mounting kit with grommets and sleeves Initial oil charge

Installation instructions

 $\textbf{Approvals:} \ \mathsf{CE} \ \mathsf{certified}, \ \mathsf{UL} \ \mathsf{certified} \ (\mathsf{file} \ \mathsf{SA11565}), -$

*Singlepack: Compressor in cardboard box

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



Danfoss scroll compressor, HRH054U4 Datasheet, accessories and spare parts Rotolock accessories, suction side Code no. Rotolock accessories, discharge side Code no. Gaskets, sleeves and nuts Rotolock accessories, sets Code no. Oil / lubricants Code no. PVE lubricant, 320HV (FVC68D), 1 litre can 120Z5034 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 1: Gasket 2: Solder sleeve Miscellaneous accessories Code no. 3: Rotolock nut 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

120Z5031

120Z5015

Mounting kit, including 1 bolt, 1 sleeve, 1 washer

No translation for 120Z5015



Danfoss scroll compressor. HRH054U4

Performance data at 50 Hz, EN 12900 rating conditions

R410A

Cond. temp. in				Evapora	ating temperature	in °C (to)			
°C (tc)	-25	-20	-15	-10	-5	0	5	10	15
aallaa 2	. : 10/								
ooling capacity		E 051	7 220	9.026	10.922	12,000	15 909	10.040	
30	4 722	5 951	7 328	8 926	10 822	13 090	15 808	19 049	-
35	4 209	5 505	6 883	8 419	10 186	12 259	14 715	17 627	-
40	-	4 915	6 344	7 866	9 554	11 484	13 728	16 363	-
45	-	-	5 659	7 215	8 874	10 708	12 792	15 199	-
50	-	-	-	6 418	8 093	9 879	11 851	14 079	-
55	-	-	-	-	7 160	8 942	10 845	12 940	-
60	-	-	-	-	-	7 837	9 709	11 711	-
65	-	-	-	-	-	-	8 362	10 294	-
Power input in V	v								
30	2 532	2 565	2 586	2 593	2 581	2 548	2 492	2 408	-
35	2 798	2 838	2 868	2 885	2 886	2 867	2 826	2 760	-
40	-	3 152	3 188	3 212	3 222	3 215	3 187	3 134	-
45	-	-	3 552	3 581	3 597	3 597	3 578	3 538	-
50	-	-	-	3 997	4 016	4 021	4 009	3 976	-
55	-	-	-	-	4 485	4 492	4 483	4 456	-
60	-	-	-	-	-	5 017	5 009	4 983	-
65	-	-	-	-	-	-	5 591	5 565	-
U.		•	•	•	•	•	-	· '	
Current consum	ption in A			_					
30	5.00	5.01	5.07	5.12	5.12	5.03	4.80	4.39	-
35	5.25	5.30	5.40	5.50	5.57	5.54	5.39	5.06	-
40	-	5.67	5.79	5.92	6.01	6.03	5.92	5.65	-
45	-	-	6.27	6.40	6.51	6.54	6.46	6.22	-
50	-	-	-	7.02	7.11	7.13	7.05	6.81	-
55	-	-	-	-	7.85	7.84	7.73	7.48	-
60	-	-	-	-	-	8.72	8.56	8.27	-
65	-	-	-	-	-	-	9.59	9.22	-
Mana flam in lan	L								
Mass flow in kg/		122	140	170	214	257	209	360	
30	99	122	149	179	214	257	308	369	
35	93	119	147	177	212	252	300	356	-
40	-	112	143	175	210	249	294	347	-
45	-	+	135	170	206	246	290	341	
50	-	-	-	161	201	242	287	336	-
55	-	-	-	-	191	235	282	332	-
60	-	-	-	-	-	225	274	326	-
65	-	-	-	-	-	-	263	317	-
Coefficient of pe	erformance (C.C	D.P.)	_	.	_	T	_	, ·	
30	1.87	2.32	2.83	3.44	4.19	5.14	6.34	7.91	-
35	1.50	1.94	2.40	2.92	3.53	4.28	5.21	6.39	-
40	-	1.56	1.99	2.45	2.96	3.57	4.31	5.22	-
45	-	-	1.59	2.02	2.47	2.98	3.57	4.30	-
50	-	-	-	1.61	2.02	2.46	2.96	3.54	-
55	-	-	-	-	1.60	1.99	2.42	2.90	-
60	-	-	-	-	-	1.56	1.94	2.35	-
65	_	_	_	_	_	_	1.50	1.85	_

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

Cooling capacity	11 851	W
Power input	4 009	W
Current consumption	7.05	Α
Mass flow	287	kg/h
C.O.P.	2.96	

to: Evaporating 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 accoustic hood	62	dB(A)

All performance data +/- 5%

tc: Condensing temperature at dew point



Danfoss scroll compressor. HRH054U4

Performance data at 50 Hz, ARI rating conditions

R410A

°C (tc) -25 -20 Cooling capacity in W 30 5 100 6 420 35 - 5 977 40 - - 45 - - 50 - - 55 - - 60 - - 65 - - 60 - - 65 - - Power input in W - - 30 2 532 2 565 35 - 2 838 40 - - 45 - - 50 - - 55 - - 60 - - 65 - - Current consumption in A 30 5.00 5.01 35 - 5.30 40 - - 55 - - </th <th>-15</th> <th></th> <th></th> <th></th> <th></th> <th></th> <th></th>	-15						
30		-10	-5	0	5	10	15
30							
35	7.007	1 0.040	11.011	44.000	40.070	I 00 444 I	
40	7 897	9 610	11 641	14 069	16 976	20 441	-
45	7 465	9 120	11 023	13 254	15 895	19 024	-
50	6 931	8 583	10 414	12 503	14 932	17 781	-
S5	6 240	7 945	9 758	11 761	14 034	16 657	-
60	-	7 149	9 000	10 971	13 143	15 595	-
Coefficient of performance (C.O.P.) C.O.P. C.O.P.	-	-	8 084	10 079	12 204	14 541	-
Power input in W 30	-	-	-	9 027	11 162	13 439	-
30	-	-	-	-	9 961	12 232	-
30							
35 - 2838 40	2 586	2 593	2 581	2 548	2 492	2 408	-
40	2 868	2 885	2 886	2 867	2 826	2 760	_
45	3 188	3 212	3 222	3 215	3 187	3 134	_
Solution Solution	3 552	3 581	3 597	3 597	3 578	3 538	-
S55	-	3 997	4 016	4 021	4 009	3 976	_
60	_	-	4 485	4 492	4 483	4 456	-
Current consumption in A 30 5.00 5.01 35 - 5.30 40 45 50 60 65 Mass flow in kg/h 30 98 122 35 - 119 40 45 50 Coefficient of performance (C.O.P.) 30 2.01 2.50 35 - 2.11 40 45 Coefficient of performance (C.O.P.)	_	_	-	5 017	5 009	4 983	_
Current consumption in A 30 5.00 5.01 35 - 5.30 40 45 50 60 65 Mass flow in kg/h 30 98 122 35 - 119 40 45 50 Coefficient of performance (C.O.P.) 30 2.01 2.50 35 - 2.11 40 45 Coefficient of performance (C.O.P.)	-	-	_	-	5 591	5 565	_
30 5.00 5.01 35 - 5.30 40 45 50 55 60 65 Mass flow in kg/h 30 98 122 35 - 119 40 45 50 55 60 65 Coefficient of performance (C.O.P.) 30 2.01 2.50 35 - 2.11 40 45 50 35 -			<u> </u>	l		0 000	
30 5.00 5.01 35 - 5.30 40 45 50 55 60 65 Mass flow in kg/h 30 98 122 35 - 119 40 45 50 55 60 55 50 55 60 55 60 55 60 55 60 55 60 55 60 65 Coefficient of performance (C.O.P.) 30 2.01 2.50 35 - 2.11 40 45 50							
40	5.07	5.12	5.12	5.03	4.80	4.39	-
40	5.40	5.50	5.57	5.54	5.39	5.06	_
50 - - 55 - - 60 - - 65 - - 465 - - 30 98 122 35 - 119 40 - - 45 - - 50 - - 60 - - 65 - - 20efficient of performance (C.O.P.) 30 2.01 2.50 35 - 2.11 40 - - 45 - - - - 50 - - - -	5.79	5.92	6.01	6.03	5.92	5.65	-
50 - - 55 - - 60 - - 65 - - 465 - - 30 98 122 35 - 119 40 - - 45 - - 50 - - 60 - - 65 - - 20efficient of performance (C.O.P.) 30 2.01 2.50 35 - 2.11 40 - - 45 - - - - 50 - - - -	6.27	6.40	6.51	6.54	6.46	6.22	-
55 - - 60 - - 65 - - 30 98 122 35 - 119 40 - - 45 - - 50 - - 60 - - 65 - - 20efficient of performance (C.O.P.) 30 2.01 2.50 35 - 2.11 40 - - 45 - - - - 50 - - - -	-	7.02	7.11	7.13	7.05	6.81	-
60	-	-	7.85	7.84	7.73	7.48	_
Mass flow in kg/h - - 30 98 122 35 - 119 40 - - 45 - - 50 - - 60 - - 65 - - Coefficient of performance (C.O.P.) 30 2.01 2.50 35 - 2.11 40 - - 45 - - - - 50 - - -	-	-	-	8.72	8.56	8.27	_
30 98 122 35 - 119 40 45 50 55 60 65 Coefficient of performance (C.O.P.) 30 2.01 2.50 35 - 2.11 40 45 50	-	-	-	-	9.59	9.22	-
30 98 122 35 - 119 40 45 50 55 60 65 Coefficient of performance (C.O.P.) 30 2.01 2.50 35 - 2.11 40 45 50	1	•	•				
35 - 119 40 45 50 55 60 65 Coefficient of performance (C.O.P.) 30 2.01 2.50 35 - 2.11 40 45 50							
40	148	178	213	255	306	367	-
45	146	176	211	251	298	354	-
45	142	174	208	247	292	345	_
50	134	169	205	244	288	338	-
55	-	160	199	240	285	334	_
60	-	-	190	234	280	329	-
65 - - Coefficient of performance (C.O.P.) 30 2.01 2.50 35 - 2.11 40 - - 45 - - 50 - -	-	-	-	223	272	323	-
Coefficient of performance (C.O.P.) 30 2.01 2.50 35 - 2.11 40 - - 45 - - 50 - -	_	-	_	-	261	315	-
30 2.01 2.50 35 - 2.11 40 45 50	L	<u> </u>	1		-		
35 - 2.11 40 45 50	1	1			1	1 1	
40 45 50	3.05	3.71	4.51	5.52	6.81	8.49	-
45 50	2.60	3.16	3.82	4.62	5.62	6.89	-
50	2.17	2.67	3.23	3.89	4.69	5.67	-
	1.76	2.22	2.71	3.27	3.92	4.71	-
55	-	1.79	2.24	2.73	3.28	3.92	-
	-	-	1.80	2.24	2.72	3.26	-
60	-	-	-	1.80	2.23	2.70	-
65	-	-	-	-	1.78	2.20	-

Cooling capacity

Current consumption

Power input

Mass flow

C.O.P.

Rating conditions : Superheat = 11.1 K , Subcooling = 8.3 K

13 322

4 414

7.55

302

3.02

W

W

kg/h

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 accoustic hood	62	dB(A)

All performance data +/- 5%

to: Evaporating temperature at dew point tc: Condensing temperature at dew point



Danfoss scroll compressor. HRH054U4

Performance data at 60 Hz, EN 12900 rating conditions

R410A

Cond. temp. in	p. in Evaporating temperature in °C (to)								
°C (tc)	-25	-20	-15	-10	-5	0	5	10	15
cooling capacit	v in W								
30	5 655	7 127	8 774	10 688	12 958	15 675	18 929	22 810	_
35			8 243	1		14 681			
	5 041	6 592		10 082	12 198		17 621	21 108	
40	-	5 886	7 597	9 420	11 442	13 752	16 440	19 595	-
45	-	-	6 778	8 641	10 628	12 825	15 320	18 203	-
50	-	-	-	7 687	9 693	11 833	14 194	16 863	-
55	-	-	-	-	8 576	10 710	12 990	15 500	-
60	-	-	-	-	-	9 388	11 631	14 029	-
65	-	-	-	-	-	-	10 018	12 333	-
ower input in \	N								
30	2 956	2 995	3 020	3 027	3 014	2 975	2 909	2 811	_
35	3 265	3 312	3 347	3 367	3 368	3 346	3 298	3 221	-
40	-	3 676	3 718	3 747	3 758	3 749	3 717	3 656	-
45	-	-	4 140	4 173	4 192	4 193	4 171	4 123	-
50	-	-	-	4 655	4 677	4 683	4 669	4 631	-
55	-	-	-	-	5 220	5 228	5 217	5 185	-
60	-	-	-	-	-	5 835	5 825	5 795	-
65	-	-	-	-	-	-	6 498	6 467	-
		I.	I.	L					
urrent consum	nption in A								
30	5.18	5.22	5.26	5.30	5.35	5.41	5.49	5.59	-
35	5.45	5.50	5.55	5.59	5.63	5.68	5.75	5.83	-
40	-	5.81	5.87	5.92	5.97	6.02	6.07	6.13	-
45	-	-	6.24	6.30	6.36	6.41	6.46	6.51	-
50	-	-	-	6.73	6.81	6.87	6.92	6.97	-
55	-	-	-	-	7.32	7.39	7.46	7.52	-
60	-	-	-	-	-	8.00	8.08	8.15	-
65	-	-	-	-	-	-	8.79	8.87	-
lass flow in kg		T	_	Т	1	1	T	1	1
30	118	147	178	214	257	308	369	442	-
35	111	143	176	212	254	302	359	426	-
40	-	135	171	209	251	298	352	416	-
45	-	-	162	204	247	295	348	408	-
50	-	-	-	193	240	290	343	403	-
55	-	-	-	-	229	282	337	397	-
60	-	-	-	-	-	269	328	390	-
65	-	-	-	-	-	-	315	380	-
oefficient of pe	erformance (C.C	D.P.)							
30	1.91	2.38	2.91	3.53	4.30	5.27	6.51	8.11	-
35	1.54	1.99	2.46	2.99	3.62	4.39	5.34	6.55	-
40	-	1.60	2.04	2.51	3.04	3.67	4.42	5.36	-
45	-	-	1.64	2.07	2.54	3.06	3.67	4.41	-
50	-	-	-	1.65	2.07	2.53	3.04	3.64	-
55	-	-	-	-	1.64	2.05	2.49	2.99	_
60	-	-	-	-	-	1.61	2.00	2.42	_
65	_	_	-	_	_	-	1.54	1.91	_

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

Cooling capacity	14 194	W
Power input	4 669	W
Current consumption	6.92	Α
Mass flow	343	kg/h
C.O.P.	3.04	

to: Evaporating 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	70	dB(A)
With accoustic hood	65	dB(A)

All performance data +/- 5%

tc: Condensing temperature at dew point



Danfoss scroll compressor. HRH054U4

Performance data at 60 Hz, ARI rating conditions

R410A

Cond. temp. in	Evaporating temperature in °C (to)								
°C (tc)	-25	-20	-15	-10	-5	0	5	10	15
Cooling capacity	in W								
30	6 107	7 688	9 456	11 508	13 939	16 847	20 328	24 477	_
35	-	7 157	8 939	10 921	13 200	15 872	19 034	22 781	_
40		-	8 300	10 279	12 471	14 974	17 883	21 294	
45		_	7 474	9 515	11 687	14 085	16 807	19 949	
50		-	7 474	8 562	10 780	13 141	15 742	18 679	
55		-	-		9 683	12 072	14 618	17 418	
60	-	-	-	-	-	10 814	13 371	16 098	
65	-	-	-	-	-	-	11 933	14 654	
00	<u> </u>				<u>-</u>		11 955	14 004	
Power input in W	1								
30	2 956	2 995	3 020	3 027	3 014	2 975	2 909	2 811	-
35	-	3 312	3 347	3 367	3 368	3 346	3 298	3 221	-
40	-	-	3 718	3 747	3 758	3 749	3 717	3 656	-
45	-	-	4 140	4 173	4 192	4 193	4 171	4 123	-
50	-	-	-	4 655	4 677	4 683	4 669	4 631	-
55	-	-	-	-	5 220	5 228	5 217	5 185	-
60	-	-	-	-	-	5 835	5 825	5 795	-
65	-	-	-	-	-	-	6 498	6 467	-
		•	•						
Current consump	otion in A			1	T	T	T	1	
30	5.18	5.22	5.26	5.30	5.35	5.41	5.49	5.59	-
35	-	5.50	5.55	5.59	5.63	5.68	5.75	5.83	-
40	-	-	5.87	5.92	5.97	6.02	6.07	6.13	-
45	-	-	6.24	6.30	6.36	6.41	6.46	6.51	-
50	-	-	-	6.73	6.81	6.87	6.92	6.97	-
55	-	-	-	-	7.32	7.39	7.46	7.52	-
60	-	-	-	-	-	8.00	8.08	8.15	-
65	-	-	-	-	-	-	8.79	8.87	-
Mass flow in kg/h		146	477	242	255	200	200	420	
30	117	146	177	213	255	306	366	439	-
35		142	175	211	252	300	356	423	-
40	-	-	170	208	250	296	350	413	-
45	-	-	161	202	246	293	345	405	-
50	-	-	-	192	239	288	341	400	-
55	-	-	-	-	228	280	335	394	-
60	-	-	-	-	-	268	326	387	-
65	-	-	-	-	-	-	313	378	-
Coefficient of per	formance (C.C).P.)							
30	2.07	2.57	3.13	3.80	4.63	5.66	6.99	8.71	-
35	-	2.16	2.67	3.24	3.92	4.74	5.77	7.07	-
40	-	-	2.23	2.74	3.32	3.99	4.81	5.82	-
45	-	-	1.81	2.28	2.79	3.36	4.03	4.84	-
50	-	-	-	1.84	2.30	2.81	3.37	4.03	-
55	-	-	-	-	1.86	2.31	2.80	3.36	-
60	-	-	-	-	-	1.85	2.30	2.78	-
65	-	-	-	-	-	-	1.84	2.27	-

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

	• •		
Cooling capacity	15 958	W	
Power input	5 137	W	
Current consumption	7.41	Α	
Mass flow	361	kg/h	
C.O.P.	3.11		

to: Evaporating temperature at dew point

Rating conditions : Superheat = 11.1 K , Subcooling = 8.3 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)

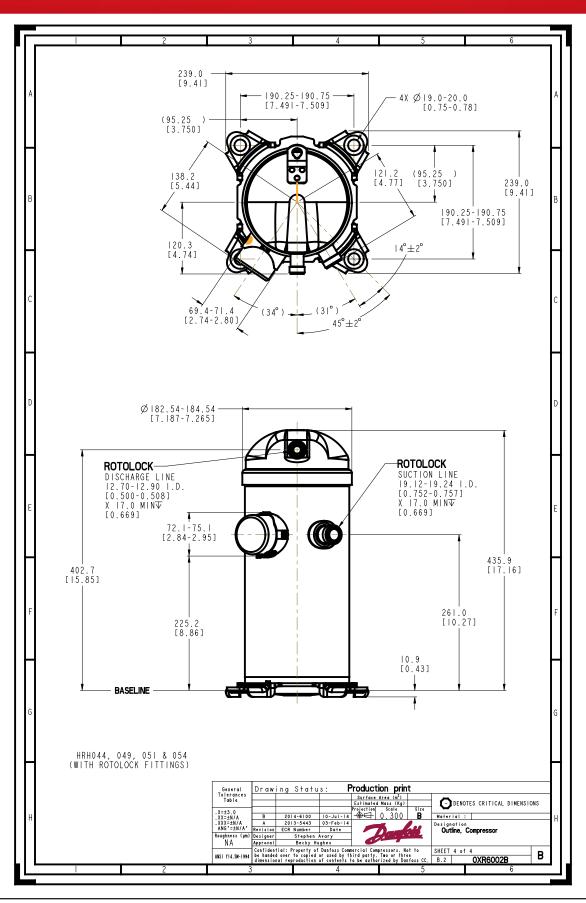
Sound power data

ſ	Sound power level	70	dB(A)
	With accoustic hood	65	dB(A)

All performance data +/- 5%

tc: Condensing temperature at dew point





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