ENGINEERING



Datasheets

Danfoss scroll compressors **H series**





Datasheet, technical data

Danfoss scroll compressor, HRH044U4

General Characteristics

Model number (on compressor nameplate)		HRH044U4LP6	
Code number for Singlepack*		120U1361	
Code number for Industrial pack**		120U1358	
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	42.61 cm3/rev		
Displacement @ Nominal speed	7.4 m3/h @ 2900 rpm -	- 8.9 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	- b	ar	
Maximum number of starts per hour	-	·	
Refrigerant charge limit	5.44	ł kg	
Approved refrigerants	R41	0A	

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℃	2.600 Ω
Winding resistance between phases 1-3 +/- 7% at 25°C	2.610 Ω
Winding resistance between phases 2-3 +/- 7% at 25°C	2.650 Ω
Rated Load Amps (RLA)	8.6 A
Maximum Continuous Current (MCC)	13.5 A
Locked Rotor Amps (LRA)	60 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

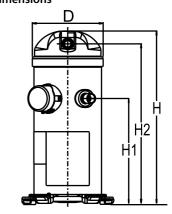
Tarts shipped with compressor							
Mounting kit with grommets and sleeves	1						
Initial oil charge							
Installation instructions							

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

*Singlepack: Compressor in cardboard box

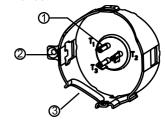
**Industrial pack: 12 or 16 Unboxed compressors on pallet

Dimensions



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

Terminal box



IP22

Spade connectors 1/4"
 Earth connection

3: Power cable passage



Datasheet, accessories and spare parts

IP54 upgrade kit

Spare parts

No translation for 120Z5015

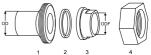
Mounting kit, including 1 bolt, 1 sleeve, 1 washer

Danfoss scroll compressor, HRH044U4

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	
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.	
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	
Miscellaneous accessories	Code no.	
Acoustic hood	120Z5044	
Discharge thermostat kit	7750009	
	1	

Mounting kit for 1 scroll compressor including 4 grommets, 4 sleeves, 4 bolts, 4 washers

Solder sleeve adapter set



1: Rotolock adapter (Suc & Dis)

: Gasket (Suc & Dis)

118U0056

Code no.

120Z5005

120Z5031

120Z5015

3: Solder sleeve (Suc & Dis)

: Rotolock nut (Suc & Dis)



Danfoss scroll compressor. HRH044U4

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
Caaling sanssi	tu in W								
Cooling capacit	3 832	4 829	5 945	7 242	8 780	10 621	12 826	15 456	_
		1		1		9 946			
35	3 415	4 466	5 585	6 830	8 264		11 938	14 301	-
40		3 987	5 146	6 381 5 853	7 751	9 316	11 137	13 274	-
45	-	-	4 591	1	7 198	8 686	10 376	12 329	
50 55	-	-	-	5 206	6 564 5 806	8 013	9 612 8 795	11 419 10 494	-
60						7 251			
65	-	-	-	-	-	6 355	7 873 6 780	9 496 8 347	-
05	-			_	_	-	0 780	6 347	-
ower input in	w								
30	1 965	1 985	2 000	2 006	2 000	1 975	1 928	1 854	-
35	2 229	2 251	2 271	2 283	2 285	2 271	2 237	2 179	-
40	-	2 577	2 598	2 615	2 623	2 618	2 594	2 549	-
45	-	-	2 988	3 006	3 018	3 018	3 004	2 969	-
50	-	-	-	3 462	3 475	3 479	3 470	3 443	-
55	-	-	-	-	3 999	4 004	3 998	3 977	-
60	-	-	-	-	-	4 599	4 594	4 576	-
65	-	-	-	-	-	-	5 262	5 245	-
urrent consur	1	3.79	3.83	3.87	3.87	3.80	3.63	3.32	_
30	3.78	1	1	1		1		1	
35	3.97	4.01	4.09	4.16	4.21	4.19	4.08	3.83	-
40	-	4.29	4.38	4.48	4.55	4.56	4.48	4.28	-
45	-	-	4.75	4.85	4.93	4.95	4.89	4.71	-
50	-	-	-	5.31	5.38	5.40	5.33	5.16	-
55	-	-	-	-	5.94	5.93	5.85	5.66	-
60 65	-	-	-	-	-	6.60	6.48	6.25	-
00	-	-		-	-	<u> </u>	7.25	6.98	-
Mass flow in kg	1	1			45.			1	I
30	80	99	121	145	174	208	250	300	-
35	75	97	119	144	172	205	243	289	-
40	-	91	116	142	170	202	239	282	-
45	-	-	110	138	167	200	236	276	-
50	-	-	-	131	163	196	232	273	-
55	-	-	-	-	155	191	228	269	-
60	-	-	-	-	-	182	222	264	-
65	-	-	-	-	-	-	213	257	-
coefficient of n	erformance (C.C	D.P.)					T		
ocincient of p	1	2.43	2.97	3.61	4.39	5.38	6.65	8.34	-
30	1.95	2.43			2.00	4.00	5.34	6.56	-
-	1.95 1.53	1.98	2.46	2.99	3.62	4.38	0.04		
30			1	2.99 2.44	2.96	3.56	4.29	5.21	-
30 35	1.53	1.98	2.46						-
30 35 40	1.53	1.98 1.55	2.46 1.98	2.44	2.96	3.56	4.29	5.21	
30 35 40 45	1.53 - -	1.98 1.55	2.46 1.98 1.54	2.44 1.95	2.96 2.39	3.56 2.88	4.29 3.45	5.21 4.15	-
30 35 40 45 50	1.53 - - -	1.98 1.55 - -	2.46 1.98 1.54	2.44 1.95 1.50	2.96 2.39 1.89	3.56 2.88 2.30	4.29 3.45 2.77	5.21 4.15 3.32	-

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

Cooling capacity	9 612	W
Power input	3 470	W
Current consumption	5.33	Α
Mass flow	232	kg/h
C.O.P.	2.77	

to: Evaporating temperature at dew point

Rating conditions : Superheat = 10 K , Subcooling = 0 K

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. HRH044U4

Performance data at 50 Hz, ARI rating conditions

R410A

Cond. temp. in	cond. temp. in Evaporating temperature in °C (to)								
°C (tc)	-25	-20	-15	-10	-5	0	5	10	15
Cooling capacity	ı in W			•		•			
30	4 138	5 209	6 407	7 798	9 445	11 416	13 774	16 586	_
35	-	4 849	6 056	7 399	8 943	10 754	12 896	15 435	_
40	_	-	5 623	6 963	8 448	10 143	12 114	14 425	_
45	<u>-</u>	-	5 062	6 445	7 916	9 540	11 384	13 511	-
	<u>-</u>	-		5 798		8 898	10 660		-
50 55	<u>-</u>	-	-	-	7 300 6 556	8 174	9 897	12 649 11 793	_
		+				+	1	10 897	
60	-	-	-	-	-	7 320	9 051	1	-
65	-	-	-	-	-	-	8 076	9 918	-
ower input in V	v								
30	1 965	1 985	2 000	2 006	2 000	1 975	1 928	1 854	-
35	-	2 251	2 271	2 283	2 285	2 271	2 237	2 179	-
40	-	-	2 598	2 615	2 623	2 618	2 594	2 549	-
45	-	-	2 988	3 006	3 018	3 018	3 004	2 969	-
50	-	-	-	3 462	3 475	3 479	3 470	3 443	-
55	-	-	-	-	3 999	4 004	3 998	3 977	-
60	-	-	-	_	-	4 599	4 594	4 576	-
65	-	-	-	_	_	-	5 262	5 245	_
•		1	1						
30	3.78	3.79	3.83	3.87	3.87	3.80	3.63	3.32	_
35	-	4.01	4.09	4.16	4.21	4.19	4.08	3.83	_
40	<u>-</u>	-	4.38	4.10	4.21	4.19	4.48	4.28	-
45	-	-							
		+	4.75	4.85	4.93	4.95	4.89	4.71	-
50	-	-	+	5.31	5.38	5.40 5.93	5.33	5.16	-
55	-	-	-		5.94	+	5.85	5.66	-
60	-	-	-	-	-	6.60	6.48	6.25	-
65	-	-	-	-	-	-	7.25	6.98	-
lass flow in kg/	h								
30	80	99	120	144	173	207	248	298	-
35	-	96	119	143	171	203	242	287	-
40	-	-	115	141	169	201	237	279	-
45	-	-	109	137	166	198	234	274	-
50	-	-	-	130	162	195	231	271	-
55	-	-	-	-	154	190	227	267	-
60	-	-	-	-	-	181	221	262	-
65	-	-	-	-	-	-	212	255	-
coefficient of pe	erformance (C.C	D.P.)							
30	2.11	2.62	3.20	3.89	4.72	5.78	7.15	8.95	-
35	-	2.15	2.67	3.24	3.91	4.73	5.76	7.08	-
40	-	-	2.16	2.66	3.22	3.88	4.67	5.66	-
45	-	-	1.69	2.14	2.62	3.16	3.79	4.55	-
50	-	-	-	1.67	2.10	2.56	3.07	3.67	-
55	_	-	-	-	1.64	2.04	2.48	2.96	_
60	-	-	-	_	-	1.59	1.97	2.38	_
~~		+	1	-	-	-	1.53	1.89	-

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

	• • •	
Cooling capacity	10 804	W
Power input	3 924	W
Current consumption	5.72	Α
Mass flow	245	kg/h
C.O.P.	2.75	

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	67	dB(A)
With accoustic hood	62	dB(A)

All performance data +/- 5%

tc: Condensing temperature at dew point



Danfoss scroll compressor. HRH044U4

Performance data at 60 Hz, EN 12900 rating conditions

R410A

Cond. temp. in	. temp. in Evaporating temperature in °C (to)								
°C (tc)	-25	-20	-15	-10	-5	0	5	10	15
Cooling consoit	r im Mr								
Cooling capacity 30	4 605	5 804	7 145	8 704	10 553	12 765	15 415	18 576	_
35	4 105	5 369	6 713	8 210	9 934	11 956	14 350	17 191	
40	-	4 794	6 188	7 672	9 319	11 201	13 390	15 960	-
45	-	-	5 521	7 039	8 657	10 446	12 479	14 827	-
50	-	-	-	6 262	7 896	9 639	11 562	13 737	-
55	-	-	-	-	6 987	8 726	10 583	12 628	-
60	-	-	-	-	-	7 649	9 476	11 430	-
65	-	-	-	-	-	-	8 163	10 049	-
Power input in W	V								
30	2 402	2 432	2 452	2 458	2 448	2 417	2 362	2 280	-
35	2 668	2 704	2 732	2 748	2 749	2 731	2 692	2 627	-
40	-	3 022	3 054	3 077	3 086	3 079	3 052	3 002	_
45	_	-	3 425	3 452	3 467	3 467	3 449	3 410	_
50	_	-	-	3 878	3 896	3 901	3 889	3 858	_
55		-	-	-	4 380	4 386	4 378	4 352	
60	<u>-</u>	-		-	-	4 930	4 922	4 898	
65	<u>-</u>	-	-	-	-		5 527	5 503	
03				1			3 321	3 303	
Current consum	ption in A								
30	4.61	4.64	4.68	4.71	4.76	4.81	4.88	4.97	-
35	4.85	4.89	4.93	4.97	5.01	5.06	5.11	5.18	-
40	-	5.17	5.22	5.27	5.31	5.35	5.40	5.46	-
45	-	_	5.55	5.61	5.65	5.70	5.74	5.79	_
50	_	_	_	5.99	6.05	6.11	6.15	6.20	_
55	_	_	_	-	6.51	6.58	6.63	6.69	_
60	-	_	_	-	-	7.11	7.19	7.25	_
65	-	_	-	-	-	-	7.82	7.89	_
00		1	1		1	I	1.02	1	
Mass flow in kg/	h			_					
30	96	119	145	174	209	251	300	360	-
35	90	116	143	173	207	246	292	347	-
40	-	110	139	171	205	243	287	338	-
45	-	-	132	166	201	240	283	332	-
50	-	-	-	157	196	236	280	328	-
55	-	-	-	-	187	230	275	324	-
60	-	-	-	-	-	219	268	318	-
65	-	-	-	-	-	-	256	310	-
Coefficient of pe	rformance (C C) P)							
30	1.92	2.39	2.91	3.54	4.31	5.28	6.53	8.15	_
35	1.54	1.99	2.46	2.99	3.61	4.38	5.33	6.54	
40	-	1.59	2.40	2.49	3.02	3.64	4.39	5.32	
45		-	1.61	2.49	2.50	3.04	3.62	4.35	
	-		-	•	•			1	
50	-	-		1.61	2.03	2.47	2.97	3.56	-
55	-	-	-	-	1.60	1.99	2.42	2.90	-
60	-	-	-	-	-	1.55	1.93	2.33	-
65	-	-	-	-	-	-	1.48	1.83	-

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

	•• •	
Cooling capacity	11 562	W
Power input	3 889	W
Current consumption	6.15	Α
Mass flow	280	kg/h
C.O.P.	2.97	

to: Evaporating temperature at dew point

Rating conditions : Superheat = 10 K , Subcooling = 0 K

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. HRH044U4

Performance data at 60 Hz, ARI rating conditions

R410A

Cond. temp. in				Evapora	ting temperature	in °C (to)			
°C (tc)	-25	-20	-15	-10	-5	0	5	10	15
Cooling capacity	in W								
30	4 973	6 261	7 701	9 371	11 352	13 720	16 554	19 933	_
35	-	5 829	7 280	8 894	10 750	12 926	15 501	18 553	_
40	<u> </u>	-	6 760	8 372	10 157	12 196	14 565	17 343	
45		-	6 088	7 750	9 519	11 473	13 690	16 249	
			0 000			1		1	
50	-	-	-	6 975	8 781	10 704	12 823	15 216 14 190	-
55	-	-	-		7 889	9 835	11 909	1	-
60	-	-	-	-	-	8 811	10 894	13 116	-
65	-	-	-	-	-	-	9 723	11 941	-
Power input in W	1	_			1		1		
30	2 402	2 432	2 452	2 458	2 448	2 417	2 362	2 280	-
35	-	2 704	2 732	2 748	2 749	2 731	2 692	2 627	-
40	-	-	3 054	3 077	3 086	3 079	3 052	3 002	-
45		-	3 425	3 452	3 467	3 467	3 449	3 410	-
50	-	-	-	3 878	3 896	3 901	3 889	3 858	-
55	-	-	-	-	4 380	4 386	4 378	4 352	-
60	-	-	-	-	-	4 930	4 922	4 898	-
65	-	-	-	-	-	-	5 527	5 503	-
•								'	
Current consump				T	1		1	T	
30	4.61	4.64	4.68	4.71	4.76	4.81	4.88	4.97	-
35	-	4.89	4.93	4.97	5.01	5.06	5.11	5.18	-
40	-	-	5.22	5.27	5.31	5.35	5.40	5.46	-
45	-	-	5.55	5.61	5.65	5.70	5.74	5.79	-
50	-	-	-	5.99	6.05	6.11	6.15	6.20	-
55	-	-	-	-	6.51	6.58	6.63	6.69	-
60	-	-	-	-	-	7.11	7.19	7.25	-
65	-	-	-	-	-	-	7.82	7.89	-
Mass flow in kg/h	1								
30	96	119	144	173	208	249	298	358	
35	-	116	142	172	205	244	290	345	
40	-	-	139	170	203	241	285	336	_
45	_	_	131	165	200	238	281	330	_
50		-	-	156	195	235	278	326	
55	<u> </u>		_	-	185	228	273	321	
60	-	-	_	-	-	218	266	316	
65	-	-	-	-	-	-	255	308	
		1	1	L	1	1			
Coefficient of per	•	1		T	1		1	T	
30	2.07	2.57	3.14	3.81	4.64	5.68	7.01	8.74	-
35	-	2.16	2.66	3.24	3.91	4.73	5.76	7.06	-
40	-	-	2.21	2.72	3.29	3.96	4.77	5.78	-
45	-	-	1.78	2.25	2.75	3.31	3.97	4.77	-
50	-	-	-	1.80	2.25	2.74	3.30	3.94	-
55	-	-	-	-	1.80	2.24	2.72	3.26	-
60	-	-	-	-	-	1.79	2.21	2.68	-
65	-	-	-	-	-	-	1.76	2.17	-

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

recinitial portormanoc at to 1.2	0, 10 04.4 0	
Cooling capacity	13 000 W	
Power input	4 308 W	
Current consumption	6.60 A	
Mass flow	294 kg/h	
C.O.P.	3.02	

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)

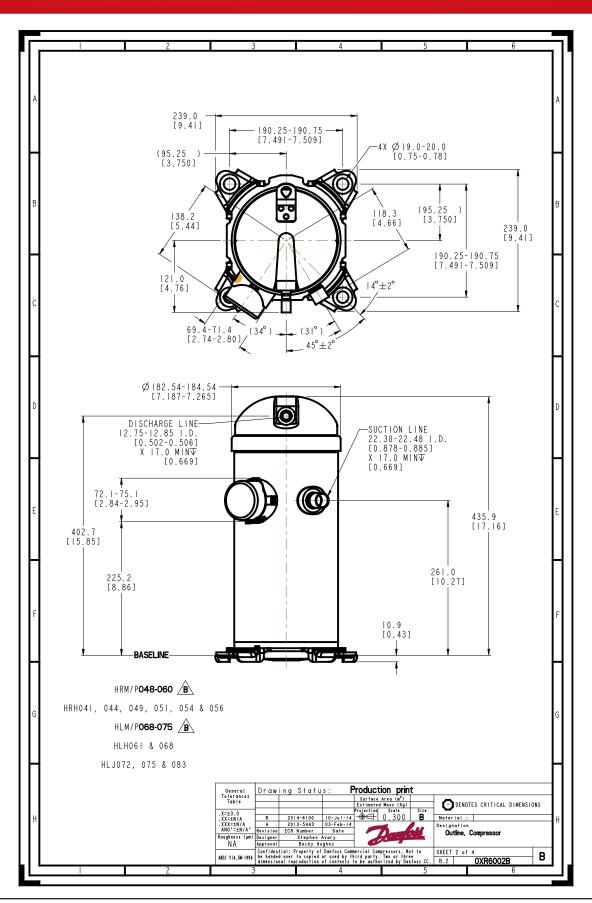
Sound power data

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



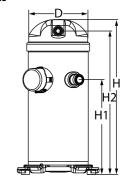
Datasheet, technical data

Danfoss scroll compressor, HRH044U4

General Characteristics

Model number (on compressor nameplate)	HRH044U4LT6		
Code number for Singlepack*	121U3113		
Code number for Industrial pack**		121U3112	
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	42.61 cm3/rev		
Displacement @ Nominal speed	7.4 m3/h @ 2900 rpm	- 8.9 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	1 kg	
Approved refrigerants	R41	10A	

Dimensions

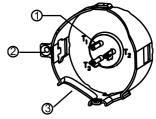


D=183.5 mm H=455 mm H1=280 mm H2=422 mm H3=- mm

Electrical Characteristics

Liectrical 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	2.600 Ω
Winding resistance between phases 1-3 +/- 7% at 25°C	2.610 Ω
Winding resistance between phases 2-3 +/- 7% at 25°C	2.650 Ω
Rated Load Amps (RLA)	8.6 A
Maximum Continuous Current (MCC)	13.5 A
Locked Rotor Amps (LRA)	60 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

Earth connection

Power cable passage

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



Danfoss scroll compressor, HRH044U4 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. HRH044U4

Performance data at 50 Hz, EN 12900 rating conditions

R410A

Cond. temp. in	np. in Evaporating temperature in °C (to)								
°C (tc)	-25	-20	-15	-10	-5	0	5	10	15
Caaling sanssi	tu in W								
Cooling capacit	3 832	4 829	5 945	7 242	8 780	10 621	12 826	15 456	_
		1		1		9 946			
35	3 415	4 466	5 585	6 830	8 264		11 938	14 301	-
40		3 987	5 146	6 381 5 853	7 751	9 316	11 137	13 274	-
45	-	-	4 591	1	7 198	8 686	10 376	12 329	
50 55	-	-	-	5 206	6 564 5 806	8 013	9 612 8 795	11 419 10 494	-
60						7 251			
65	-	-	-	-	-	6 355	7 873 6 780	9 496 8 347	-
05	-			_	_	-	0 780	6 347	-
ower input in	w								
30	1 965	1 985	2 000	2 006	2 000	1 975	1 928	1 854	-
35	2 229	2 251	2 271	2 283	2 285	2 271	2 237	2 179	-
40	-	2 577	2 598	2 615	2 623	2 618	2 594	2 549	-
45	-	-	2 988	3 006	3 018	3 018	3 004	2 969	-
50	-	-	-	3 462	3 475	3 479	3 470	3 443	-
55	-	-	-	-	3 999	4 004	3 998	3 977	-
60	-	-	-	-	-	4 599	4 594	4 576	-
65	-	-	-	-	-	-	5 262	5 245	-
urrent consur	1	3.79	3.83	3.87	3.87	3.80	3.63	3.32	_
30	3.78	1	1	1		1		1	
35	3.97	4.01	4.09	4.16	4.21	4.19	4.08	3.83	-
40	-	4.29	4.38	4.48	4.55	4.56	4.48	4.28	-
45	-	-	4.75	4.85	4.93	4.95	4.89	4.71	-
50	-	-	-	5.31	5.38	5.40	5.33	5.16	-
55	-	-	-	-	5.94	5.93	5.85	5.66	-
60 65	-	-	-	-	-	6.60	6.48	6.25	-
00	-	-		-	-	<u> </u>	7.25	6.98	-
Mass flow in kg	1	1						1	I
30	80	99	121	145	174	208	250	300	-
35	75	97	119	144	172	205	243	289	-
40	-	91	116	142	170	202	239	282	-
45	-	-	110	138	167	200	236	276	-
50	-	-	-	131	163	196	232	273	-
55	-	-	-	-	155	191	228	269	-
60	-	-	-	-	-	182	222	264	-
65	-	-	-	-	-	-	213	257	-
coefficient of n	erformance (C.C	D.P.)					T		
ocincient of p	1	2.43	2.97	3.61	4.39	5.38	6.65	8.34	-
30	1.95	2.43			2.00	4.00	5.34	6.56	-
-	1.95 1.53	1.98	2.46	2.99	3.62	4.38	0.04		
30			1	2.99 2.44	2.96	3.56	4.29	5.21	-
30 35	1.53	1.98	2.46						-
30 35 40	1.53	1.98 1.55	2.46 1.98	2.44	2.96	3.56	4.29	5.21	
30 35 40 45	1.53 - -	1.98 1.55	2.46 1.98 1.54	2.44 1.95	2.96 2.39	3.56 2.88	4.29 3.45	5.21 4.15	-
30 35 40 45 50	1.53 - - -	1.98 1.55 - -	2.46 1.98 1.54	2.44 1.95 1.50	2.96 2.39 1.89	3.56 2.88 2.30	4.29 3.45 2.77	5.21 4.15 3.32	-

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

Cooling capacity	9 612	W
Power input	3 470	W
Current consumption	5.33	Α
Mass flow	232	kg/h
C.O.P.	2.77	

to: Evaporating temperature at dew point

Rating conditions : Superheat = 10 K , Subcooling = 0 K

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. HRH044U4

Performance data at 50 Hz, ARI rating conditions

R410A

Cond. temp. in				Evapora	iting temperature	in °C (to)			
°C (tc)	-25	-20	-15	-10	-5	0	5	10	15
Cooling capacity	ı in W			•		•			
30	4 138	5 209	6 407	7 798	9 445	11 416	13 774	16 586	_
35	-	4 849	6 056	7 399	8 943	10 754	12 896	15 435	_
40	_	-	5 623	6 963	8 448	10 143	12 114	14 425	_
45	<u>-</u>	-	5 062	6 445	7 916	9 540	11 384	13 511	-
	<u>-</u>	-		5 798		8 898	10 660		-
50 55	<u>-</u>	-	-	-	7 300 6 556	8 174	9 897	12 649 11 793	_
		+				1	1	10 897	
60	-	-	-	-	-	7 320	9 051	1	-
65	-	-	-	-	-	-	8 076	9 918	-
ower input in V	v								
30	1 965	1 985	2 000	2 006	2 000	1 975	1 928	1 854	-
35	-	2 251	2 271	2 283	2 285	2 271	2 237	2 179	-
40	-	-	2 598	2 615	2 623	2 618	2 594	2 549	-
45	-	-	2 988	3 006	3 018	3 018	3 004	2 969	-
50	-	-	-	3 462	3 475	3 479	3 470	3 443	-
55	-	-	-	-	3 999	4 004	3 998	3 977	-
60	-	-	-	_	-	4 599	4 594	4 576	-
65	-	-	-	_	_	-	5 262	5 245	_
•		1	1						
30	3.78	3.79	3.83	3.87	3.87	3.80	3.63	3.32	_
35	-	4.01	4.09	4.16	4.21	4.19	4.08	3.83	_
40	<u>-</u>	-	4.38	4.10	4.21	4.19	4.48	4.28	-
45	-	-							
		+	4.75	4.85	4.93	4.95	4.89	4.71	-
50	-	-	+	5.31	5.38	5.40 5.93	5.33	5.16	-
55	-	-	-		5.94	1	5.85	5.66	-
60	-	-	-	-	-	6.60	6.48	6.25	-
65	-	-	-	-	-	-	7.25	6.98	-
lass flow in kg/	h								
30	80	99	120	144	173	207	248	298	-
35	-	96	119	143	171	203	242	287	-
40	-	-	115	141	169	201	237	279	-
45	-	-	109	137	166	198	234	274	-
50	-	-	-	130	162	195	231	271	-
55	-	-	-	-	154	190	227	267	-
60	-	-	-	-	-	181	221	262	-
65	-	-	-	-	-	-	212	255	-
coefficient of pe	erformance (C.C	D.P.)							
30	2.11	2.62	3.20	3.89	4.72	5.78	7.15	8.95	-
35	-	2.15	2.67	3.24	3.91	4.73	5.76	7.08	-
40	-	-	2.16	2.66	3.22	3.88	4.67	5.66	-
45	-	-	1.69	2.14	2.62	3.16	3.79	4.55	-
50	-	-	-	1.67	2.10	2.56	3.07	3.67	-
55	_	-	-	-	1.64	2.04	2.48	2.96	_
60	-	_	-	_	-	1.59	1.97	2.38	_
~~		+	1	-	-	-	1.53	1.89	-

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

	• • •	
Cooling capacity	10 804	W
Power input	3 924	W
Current consumption	5.72	Α
Mass flow	245	kg/h
C.O.P.	2.75	

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	67	dB(A)
With accoustic hood	62	dB(A)

All performance data +/- 5%

tc: Condensing temperature at dew point



Danfoss scroll compressor. HRH044U4

Performance data at 60 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
Cooling consoit	r im Mr								
Cooling capacity 30	4 605	5 804	7 145	8 704	10 553	12 765	15 415	18 576	_
35	4 105	5 369	6 713	8 210	9 934	11 956	14 350	17 191	
40	-	4 794	6 188	7 672	9 319	11 201	13 390	15 960	-
45	-	-	5 521	7 039	8 657	10 446	12 479	14 827	-
50	-	-	-	6 262	7 896	9 639	11 562	13 737	-
55	-	-	-	-	6 987	8 726	10 583	12 628	-
60	-	-	-	-	-	7 649	9 476	11 430	-
65	-	-	-	-	-	-	8 163	10 049	-
Power input in W	V								
30	2 402	2 432	2 452	2 458	2 448	2 417	2 362	2 280	-
35	2 668	2 704	2 732	2 748	2 749	2 731	2 692	2 627	-
40	-	3 022	3 054	3 077	3 086	3 079	3 052	3 002	_
45	_	-	3 425	3 452	3 467	3 467	3 449	3 410	_
50	_	-	-	3 878	3 896	3 901	3 889	3 858	_
55		-	-	-	4 380	4 386	4 378	4 352	
60	<u>-</u>	-		-	-	4 930	4 922	4 898	
65	<u>-</u>	-	-	-	-		5 527	5 503	
03				1			3 321	3 303	
Current consum	ption in A								
30	4.61	4.64	4.68	4.71	4.76	4.81	4.88	4.97	-
35	4.85	4.89	4.93	4.97	5.01	5.06	5.11	5.18	-
40	-	5.17	5.22	5.27	5.31	5.35	5.40	5.46	-
45	-	_	5.55	5.61	5.65	5.70	5.74	5.79	_
50	_	_	_	5.99	6.05	6.11	6.15	6.20	_
55	_	_	_	-	6.51	6.58	6.63	6.69	_
60	-	_	_	-	-	7.11	7.19	7.25	_
65	-	_	-	-	-	-	7.82	7.89	_
00		1	1		1	I	1.02	1	
Mass flow in kg/	h			_					
30	96	119	145	174	209	251	300	360	-
35	90	116	143	173	207	246	292	347	-
40	-	110	139	171	205	243	287	338	-
45	-	-	132	166	201	240	283	332	-
50	-	-	-	157	196	236	280	328	-
55	-	-	-	-	187	230	275	324	-
60	-	-	-	-	-	219	268	318	-
65	-	-	-	-	-	-	256	310	-
Coefficient of pe	rformance (C C) P)							
30	1.92	2.39	2.91	3.54	4.31	5.28	6.53	8.15	_
35	1.54	1.99	2.46	2.99	3.61	4.38	5.33	6.54	
40	-	1.59	2.40	2.49	3.02	3.64	4.39	5.32	
45		-	1.61	2.49	2.50	3.04	3.62	4.35	
	-		-	•	•			1	
50	-	-		1.61	2.03	2.47	2.97	3.56	-
55	-	-	-	-	1.60	1.99	2.42	2.90	-
60	-	-	-	-	-	1.55	1.93	2.33	-
65	-	-	-	-	-	-	1.48	1.83	-

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

	•• •	
Cooling capacity	11 562	W
Power input	3 889	W
Current consumption	6.15	Α
Mass flow	280	kg/h
C.O.P.	2.97	

to: Evaporating temperature at dew point

Rating conditions : Superheat = 10 K , Subcooling = 0 K

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. HRH044U4

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	4 973	6 261	7 701	9 371	11 352	13 720	16 554	19 933	_
35	-	5 829	7 280	8 894	10 750	12 926	15 501	18 553	_
40	<u> </u>	-	6 760	8 372	10 157	12 196	14 565	17 343	
45		-	6 088	7 750	9 519	11 473	13 690	16 249	
			0 000			1		t	
50	-	-	-	6 975	8 781	10 704	12 823	15 216 14 190	-
55	-	-	-	-	7 889	9 835	11 909	1	-
60	-	-	-	-	-	8 811	10 894	13 116	-
65	-	-	-	-	-	-	9 723	11 941	-
Power input in W	1								
30	2 402	2 432	2 452	2 458	2 448	2 417	2 362	2 280	-
35	-	2 704	2 732	2 748	2 749	2 731	2 692	2 627	-
40	-	-	3 054	3 077	3 086	3 079	3 052	3 002	-
45	-	-	3 425	3 452	3 467	3 467	3 449	3 410	-
50	-	-	-	3 878	3 896	3 901	3 889	3 858	-
55	-	-	-	-	4 380	4 386	4 378	4 352	-
60	-	-	-	-	-	4 930	4 922	4 898	-
65	-	_	-	-	_	-	5 527	5 503	_
		•	1		1				
Current consump	otion in A								
30	4.61	4.64	4.68	4.71	4.76	4.81	4.88	4.97	-
35	-	4.89	4.93	4.97	5.01	5.06	5.11	5.18	-
40	-	-	5.22	5.27	5.31	5.35	5.40	5.46	-
45	-	-	5.55	5.61	5.65	5.70	5.74	5.79	-
50	-	-	-	5.99	6.05	6.11	6.15	6.20	-
55	-	-	-	-	6.51	6.58	6.63	6.69	-
60	-	_	-	-	-	7.11	7.19	7.25	-
65	-	-	-	-	-	-	7.82	7.89	-
					•		•		
Mass flow in kg/h	1		T	1	,	T	ı		
30	96	119	144	173	208	249	298	358	-
35	-	116	142	172	205	244	290	345	-
40	-	-	139	170	203	241	285	336	-
45	-	-	131	165	200	238	281	330	-
50	-	-	-	156	195	235	278	326	-
55	-	-	-	-	185	228	273	321	-
60	-	-	-	-	-	218	266	316	-
65	-	-	-	-	-	-	255	308	-
Coefficient of per	rformance (C.C) P)							
30	2.07	2.57	3.14	3.81	4.64	5.68	7.01	8.74	_
35	-	2.16	2.66	3.24	3.91	4.73	5.76	7.06	_
40	-	-	2.21	2.72	3.29	3.96	4.77	5.78	
45		_	1.78	2.72	2.75	3.31	3.97	4.77	
50				1.80	2.75	2.74	3.30	3.94	
	-	-	-			1		t	-
55	-	-	-	-	1.80	2.24	2.72	3.26	-
60	-	-	-	-	-	1.79	2.21	2.68	-
65	-	-	-	-	-	-	1.76	2.17	-

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

recinitial portormanoc at to 1.2	0, 10 04.4 0	
Cooling capacity	13 000 W	
Power input	4 308 W	
Current consumption	6.60 A	
Mass flow	294 kg/h	
C.O.P.	3.02	

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)

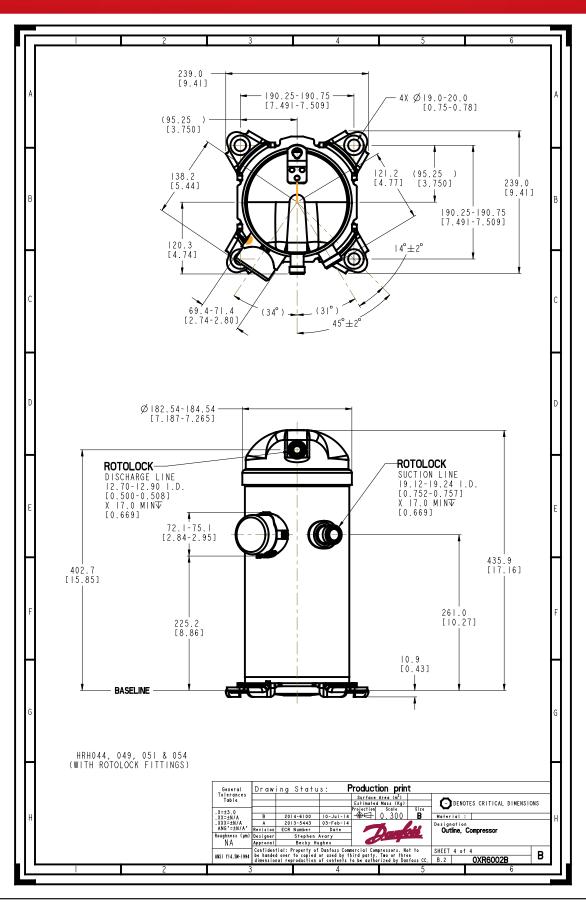
Sound power data

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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