ENGINEERING



Datasheets

Danfoss scroll compressors **H series**





Datasheet, technical data

Danfoss scroll compressor, HRH041U4

General Characteristics

Model number (on compressor nameplate)		HRH041U4LC8		
Code number for Singlepack*		120U2397		
Code number for Industrial pack**		120U2394		
Drawing number		0XR6049B-2		
Suction and discharge connections		Brazed		
Suction connection		7/8 " ODF		
Discharge connection		1/2 " ODF		
Oil sight glass		None		
Oil equalisation connection		1/2"		
Oil drain connection		None		
LP gauge port		None		
IPR valve		Yes		
Swept volume	39.33 c	m3/rev		
Displacement @ Nominal speed	6.8 m3/h @ 2900 rpm	- 8.3 m3/h @ 3500 rpm		
Net weight	37.1	37.19 kg		
Oil charge	1.57 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	5.44 kg			
Approved refrigerants	R41	10A		

Electrical Characteristics

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	2.600 Ω
Winding resistance between phases 1-3 +/- 7% at 25°C	2.611 Ω
Winding resistance between phases 2-3 +/- 7% at 25°C	2.649 Ω
Rated Load Amps (RLA)	8.3 A
Maximum Continuous Current (MCC)	13 A
Locked Rotor Amps (LRA)	60 A
Motor protection	Internal overload protector

Recommended Installation torques

Oil sight glass		52.5 Nm
F	Power connections / Earth connection	3 Nm / 2 Nm

Parts shipped with compressor

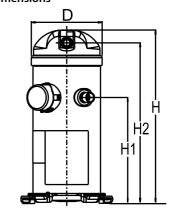
raits shipped with compressor							
Mounting kit with grommets and sleeves							
Initial oil charge							
Installation instructions							

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

3:

1: Screw connectors 10-32 UNF x 9.5 2:

Earth connection

Power cable passage

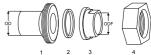


Datasheet, accessories and spare parts

Danfoss scroll compressor, HRH041U4

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	9
Rotolock valve, V06 (1" Rotolock, 1/2" ODF)	8168031	
Gasket, 1"	8156130	
Rotolock accessories, sets	Code no.	c.
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.	3
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.	
Discharge thermostat kit	7750009	
IP54 upgrade kit	118U0057	
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 120Z5018	120Z5018	

Solder sleeve adapter set



1: Rotolock adapter (Suc & Dis)

2: Gasket (Suc & Dis)

: Solder sleeve (Suc & Dis)

: Rotolock nut (Suc & Dis)



Danfoss scroll compressor. HRH041U4

Performance data at 50 Hz, EN 12900 rating conditions

R410A

Cond. temp. in				Evapora	iting temperature	in °C (to)			
°C (tc)	-25	-20	-15	-10	-5	0	5	10	15
Cooling capacit	v in W								
30	3 513	4 425	5 448	6 637	8 047	9 733	11 753	14 160	_
35	3 139	4 102	5 128	6 272	7 589	9 135	10 963	13 131	_
									-
40		3 674	4 739	5 875	7 137	8 579	10 255	12 222	
45	-	-	4 242	5 406	6 649	8 023	9 585	11 388	-
50	-	-	-	4 826	6 083	7 426	8 908	10 584	-
55	-	-	-	-	5 399	6 743	8 179	9 760	-
60	-	-	-	-	-	5 928	7 346	8 862	-
65	-	-	-	-	-	-	6 345	7 814	-
Power input in V	v								
30	1 891	1 915	1 930	1 935	1 927	1 903	1 860	1 795	_
35	2 105	2 133	2 154	2 167	2 168	2 154	2 123	2 071	-
40	-	2 389	2 414	2 432	2 439	2 434	2 412	2 372	-
45	-	-	2 714	2 734	2 746	2 746	2 732	2 701	-
50	-	-	-	3 080	3 094	3 097	3 088	3 064	-
55	-	-	-	-	3 486	3 491	3 485	3 464	-
60	-	-	-	_	-	3 932	3 926	3 908	-
65	-	-	-	_	_	-	4 418	4 399	_
			1	I		I	1		
urrent consum	ption in A	1	T		T	T	1	T	ı
30	3.52	3.53	3.57	3.61	3.61	3.54	3.38	3.09	-
35	3.70	3.74	3.81	3.88	3.92	3.91	3.80	3.56	-
40	-	4.00	4.08	4.17	4.24	4.25	4.18	3.98	-
45	-	-	4.42	4.52	4.59	4.61	4.56	4.39	-
50	-	-	-	4.95	5.01	5.03	4.97	4.80	-
55	-	-	-	-	5.53	5.53	5.45	5.27	-
60	-	-	-	-	-	6.15	6.04	5.83	-
65	-	-	-	-	-	-	6.76	6.50	-
Acce flow in less	n-					•			
Mass flow in kg		04	110	422	450	101	220	275	
30	73	91	110	133	159	191	229	275	-
35	69	89	109	132	158	188	223	265	-
40	-	84	107	131	157	186	220	259	-
45	-	-	101	127	155	184	218	255	-
50	-	-	-	121	151	182	215	253	-
55	-	-	-	-	144	177	212	250	-
60	-	-	-	-	-	170	207	247	-
65	-	-	-	-	-	-	199	241	-
Coefficient of pe	erformance (C.C		T		1			1	
30	1.86	2.31	2.82	3.43	4.18	5.11	6.32	7.89	-
35	1.49	1.92	2.38	2.89	3.50	4.24	5.16	6.34	-
40	-	1.54	1.96	2.42	2.93	3.53	4.25	5.15	-
45	-	-	1.56	1.98	2.42	2.92	3.51	4.22	-
50	-	-	-	1.57	1.97	2.40	2.88	3.45	-
55	-	-	-	-	1.55	1.93	2.35	2.82	-
60	-	-	-	-	-	1.51	1.87	2.27	-
65	-	-	-	-	-	-	1.44	1.78	-

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

Cooling capacity	8 908	W
Power input	3 088	W
Current consumption	4.97	Α
Mass flow	215	kg/h
C.O.P.	2.88	

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

ſ	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. HRH041U4

Performance data at 50 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	r in W					•			
30	3 794	4 774	5 872	7 146	8 656	10 461	12 621	15 195	_
35	-	4 453	5 561	6 795	8 213	9 876	11 842	14 172	_
40		-	5 178	6 411	7 779	9 341	11 155	13 282	_
45		-	4 678	5 953	7 311	8 812	10 515	12 480	-
		-	-			8 247	9 880		-
50 55		-	-	5 375	6 765 6 096	7 600	9 204	11 723 10 968	-
-		+		_		1	1		
60	-	-	-	-	-	6 829	8 445	10 170	-
65	-	-	-	-	-	-	7 558	9 285	-
ower input in W	ı								
30	1 891	1 915	1 930	1 935	1 927	1 903	1 860	1 795	-
35	-	2 133	2 154	2 167	2 168	2 154	2 123	2 071	-
40	-	-	2 414	2 432	2 439	2 434	2 412	2 372	-
45	-	-	2 714	2 734	2 746	2 746	2 732	2 701	-
50	-	-	-	3 080	3 094	3 097	3 088	3 064	-
55	-	-	-	-	3 486	3 491	3 485	3 464	-
60	-	-	-	_	-	3 932	3 926	3 908	-
65	-	-	-	_	_	-	4 418	4 399	-
L		<u> </u>		-1	I.			1	
urrent consum		2.52	2.57	2.04	2.04	2.54	2.20	2.00	
30	3.52	3.53	3.57	3.61	3.61	3.54	3.38	3.09	-
35	-	3.74	3.81	3.88	3.92	3.91	3.80	3.56	-
40	-	-	4.08	4.17	4.24	4.25	4.18	3.98	-
45	-	-	4.42	4.52	4.59	4.61	4.56	4.39	-
50	-	-	-	4.95	5.01	5.03	4.97	4.80	-
55	-	-	-	-	5.53	5.53	5.45	5.27	-
60	-	-	-	-	-	6.15	6.04	5.83	-
65	-	-	-	-	-	-	6.76	6.50	-
/lass flow in kg/l	h								
30	73	90	110	132	158	190	227	273	-
35	-	88	109	131	157	187	222	263	-
40	-	-	106	130	156	185	218	257	-
45	-	-	101	127	154	183	216	254	-
50	-	-	-	121	150	181	214	251	-
55	-	-	-	-	143	176	211	248	-
60	-	-	-	_	-	169	206	245	-
65	-	-	-	-	-	-	198	239	-
) # - # - #									
30	2.01	2.49	3.04	3.69	4.49	5.50	6.79	8.47	-
35	-	2.49	2.58	3.14	3.79	4.58	5.58	6.84	-
40		2.09	2.30	2.64	3.19	3.84	4.62	5.60	-
						1			
45	-	-	1.72	2.18	2.66	3.21	3.85	4.62	-
50	-	-	-	1.75	2.19	2.66	3.20	3.83	-
55	-	-	-	-	1.75	2.18	2.64	3.17	-
60	-	-	-	-	-	1.74	2.15	2.60	-
65	-	-	-	-	-	-	1.71	2.11	-

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

Cooling capacity	10 044	W	
Power input	3 428	W	
Current consumption	5.33	Α	
Mass flow	227	kg/h	
C.O.P.	2.93		

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. HRH041U4

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	ı in W								
Cooling capacity 30	4 247	5 352	6 589	8 026	9 731	11 771	14 213	17 125	
-		1		1					-
35	3 793	4 957	6 198	7 580	9 172	11 039	13 250	15 870	-
40	-	4 435	5 723	7 095	8 618	10 359	12 384	14 759	-
45	-	-	5 117	6 522	8 021	9 679	11 563	13 738	-
50	-	-	-	5 815	7 331	8 950	10 736	12 755	-
55	-	-	-	-	6 500	8 118	9 847	11 750	-
60	-	-	-	-	-	7 130	8 835	10 658	-
65	-	-	-	-	-	-	7 625	9 389	-
Power input in V	v								
30	2 270	2 298	2 317	2 323	2 313	2 284	2 233	2 156	-
35	2 519	2 553	2 579	2 594	2 595	2 579	2 542	2 481	-
40	-	2 849	2 880	2 902	2 911	2 904	2 878	2 831	-
45	_	-	3 226	3 251	3 265	3 265	3 248	3 211	_
50	-	-	-	3 647	3 664	3 669	3 658	3 628	-
55	_	-	-	-	4 114	4 120	4 112	4 087	_
60	_	-	-	-	-	4 624	4 616	4 594	_
65	_	-	_	-	_	-	5 177	5 154	_
•		_	_	_	_	_	1 01//	0.104	
Current consum	ption in A								
30	4.44	4.47	4.50	4.53	4.58	4.63	4.69	4.78	-
35	4.67	4.71	4.75	4.78	4.82	4.86	4.92	4.99	-
40	-	4.98	5.03	5.07	5.11	5.15	5.19	5.25	-
45	-	-	5.34	5.39	5.44	5.48	5.53	5.57	-
50	_	-	-	5.76	5.82	5.88	5.92	5.97	-
55	-	-	-	-	6.26	6.33	6.38	6.43	-
60	-	-	-	-	-	6.84	6.91	6.97	_
65	_	_	_	-	-	-	7.52	7.59	_
•		1			I	I	-	1	
Mass flow in kg/									
30	89	110	134	161	193	231	277	332	-
35	84	107	132	160	191	227	270	321	-
40	-	101	129	158	189	225	265	313	-
45	_	-	122	154	187	222	262	308	-
50	-	-	-	146	182	219	260	305	-
55	-	-	-	-	174	214	256	301	-
60	-	-	-	-	-	205	249	296	-
65	-	-	-	-	-	-	240	289	-
Coefficient of pe	erformance (C.C	D.P.)							
30	1.87	2.33	2.84	3.45	4.21	5.15	6.37	7.94	-
35	1.51	1.94	2.40	2.92	3.53	4.28	5.21	6.40	-
40	-	1.56	1.99	2.45	2.96	3.57	4.30	5.21	-
45	-	-	1.59	2.01	2.46	2.96	3.56	4.28	-
50	-	-	-	1.59	2.00	2.44	2.94	3.52	-
55	-	-	-	-	1.58	1.97	2.39	2.87	-
60	-	-	-	-	-	1.54	1.91	2.32	-
			+	1	+		1		

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

Cooling capacity	10 736	W
Power input	3 658	W
Current consumption	5.92	Α
Mass flow	260	kg/h
C.O.P.	2.94	

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. HRH041U4

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 capacit	v in W								
30	4 587	5 773	7 101	8 642	10 468	12 651	15 263	18 377	_
35	-	5 382	6 721	8 212	9 926	11 935	14 312	17 128	_
40		-	6 252	7 742	9 394	11 279	13 470	16 038	_
45	-	-	5 642	7 181	8 820	10 631	12 686	15 056	_
50	_	-	-	6 477	8 153	9 939	11 907	14 128	_
55	_	-	_	-	7 340	9 150	11 081	13 204	_
60	-	-	_	_	-	8 213	10 157	12 231	_
65	-	-	-	-	_	-	9 082	11 156	-
- 00		1	I	I	1		0 002	11.100	l
Power input in V	W								
30	2 270	2 298	2 317	2 323	2 313	2 284	2 233	2 156	-
35	-	2 553	2 579	2 594	2 595	2 579	2 542	2 481	-
40	-	-	2 880	2 902	2 911	2 904	2 878	2 831	-
45	-	-	3 226	3 251	3 265	3 265	3 248	3 211	-
50	-	-	-	3 647	3 664	3 669	3 658	3 628	-
55	-	-	-	-	4 114	4 120	4 112	4 087	-
60	-	-	-	-	-	4 624	4 616	4 594	-
65	-	-	-	-	-	-	5 177	5 154	-
······	antian in A								
urrent consum 30	4.44	4.47	4.50	4.53	4.58	4.63	4.69	4.78	_
35	-	4.71	4.75	4.78	4.82	4.86	4.92	4.99	_
40		-	5.03	5.07	5.11	5.15	5.19	5.25	_
45		_	5.34	5.39	5.44	5.48	5.53	5.57	_
50	_	_	-	5.76	5.82	5.88	5.92	5.97	_
55	_	-	-	-	6.26	6.33	6.38	6.43	_
60	-	-	-	-	-	6.84	6.91	6.97	_
65	-	-	-	-	-	-	7.52	7.59	_
00						_	1.52	7.55	
lass flow in kg	/h								
30	88	109	133	160	191	229	275	330	-
35	-	107	132	159	190	226	268	318	-
40	-	-	128	157	188	223	264	311	-
45	-	-	122	153	185	221	261	306	-
50	-	-	-	145	181	218	258	302	-
55	-	-	-	-	172	212	254	299	-
60	-	-	-	-	-	203	248	294	-
65	-	-	-	-	-	-	238	287	-
coefficient of pe	erformance (C.C	D.P.)							
30	2.02	2.51	3.06	3.72	4.53	5.54	6.84	8.52	-
35	-	2.11	2.61	3.17	3.82	4.63	5.63	6.90	-
40	-	-	2.17	2.67	3.23	3.88	4.68	5.67	_
	-	-	1.75	2.21	2.70	3.26	3.91	4.69	-
45			-	1.78	2.23	2.71	3.26	3.89	-
45 50	_	-		1.70	2.20	2.71	5.20	0.00	_
50	-	-		_	1 78	2 22	2 60	3 23	_
50 55	-	-	-	-	1.78	2.22	2.69	3.23	-
50		1			1.78	2.22 1.78	2.69 2.20 1.75	3.23 2.66 2.16	-

Cooling capacity	12 094	W
Power input	4 046	W
Current consumption	6.35	Α
Mass flow	274	kg/h
C.O.P.	2.99	

to: Evaporating temperature at dew point

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

Maximum HP switch setting	45	bar(g)
Minimum LP switch setting	1.5	bar(g)
LP pump down setting	2.3	bar(g)

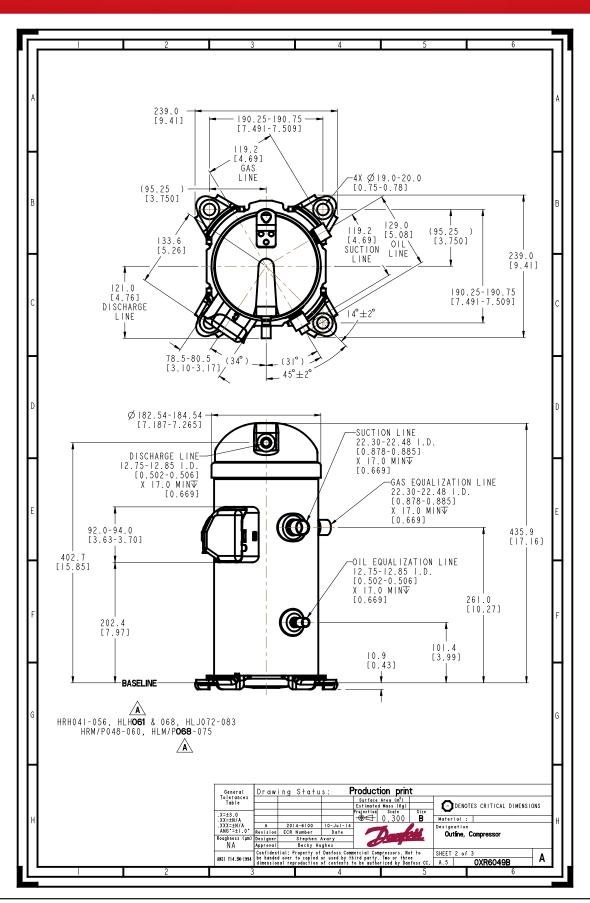
Sound power data

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

All performance data +/- 5%

tc: Condensing temperature at dew point





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FRCC.PD.0XR6049Ba page drawings



Datasheet, technical data

Danfoss scroll compressor, HRH041U4

General Characteristics

Model number (on compressor nameplate)		HRH041U4LP6		
Code number for Singlepack*		120U1356		
Code number for Industrial pack**		120U1353		
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	39.33 c	m3/rev		
Displacement @ Nominal speed	6.8 m3/h @ 2900 rpm	- 8.3 m3/h @ 3500 rpm		
Net weight	37.19 kg			
Oil charge	1.57 litre	1.57 litre, PVE		
Maximum system test pressure Low Side / High side	- bar(g)	- bar(g) / - bar(g)		
Maximum differential test pressure	- b	- bar		
Maximum number of starts per hour		-		
Refrigerant charge limit	5.44	5.44 kg		
Approved refrigerants	R41	10A		

Electrical Characteristics

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	2.600 Ω
Winding resistance between phases 1-3 +/- 7% at 25°C	2.611 Ω
Winding resistance between phases 2-3 +/- 7% at 25°C	2.649 Ω
Rated Load Amps (RLA)	8.3 A
Maximum Continuous Current (MCC)	13 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

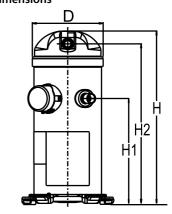
1 arts shipped with compressor						
	Mounting kit with grommets and sleeves					
	Initial oil charge					
	Installation instructions					

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

*Singlepack: Compressor in cardboard box

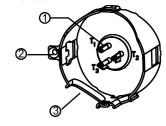
**Industrial pack: 12 or 16 Unboxed compressors on pallet

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

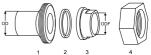


Datasheet, accessories and spare parts

Danfoss scroll compressor, HRH041U4

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	Ш,
Rotolock accessories, sets	Code no.	or Į
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
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.	
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	

Solder sleeve adapter set



1: Rotolock adapter (Suc & Dis)

- : Gasket (Suc & Dis)
- 3: Solder sleeve (Suc & Dis)
- : Rotolock nut (Suc & Dis)



Danfoss scroll compressor. HRH041U4

Performance data at 50 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 capacit	v in W								
30	3 513	4 425	5 448	6 637	8 047	9 733	11 753	14 160	_
35	3 139	4 102	5 128	6 272	7 589	9 135	10 963	13 131	_
									-
40		3 674	4 739	5 875	7 137	8 579	10 255	12 222	
45	-	-	4 242	5 406	6 649	8 023	9 585	11 388	-
50	-	-	-	4 826	6 083	7 426	8 908	10 584	-
55	-	-	-	-	5 399	6 743	8 179	9 760	-
60	-	-	-	-	-	5 928	7 346	8 862	-
65	-	-	-	-	-	-	6 345	7 814	-
Power input in V	v								
30	1 891	1 915	1 930	1 935	1 927	1 903	1 860	1 795	_
35	2 105	2 133	2 154	2 167	2 168	2 154	2 123	2 071	-
40	-	2 389	2 414	2 432	2 439	2 434	2 412	2 372	-
45	-	-	2 714	2 734	2 746	2 746	2 732	2 701	-
50	-	-	-	3 080	3 094	3 097	3 088	3 064	-
55	-	-	-	-	3 486	3 491	3 485	3 464	-
60	-	-	-	_	-	3 932	3 926	3 908	-
65	-	-	-	_	_	-	4 418	4 399	_
			1	I		I	1 112		
urrent consum	ption in A	1	T		T	T	1	T	ı
30	3.52	3.53	3.57	3.61	3.61	3.54	3.38	3.09	-
35	3.70	3.74	3.81	3.88	3.92	3.91	3.80	3.56	-
40	-	4.00	4.08	4.17	4.24	4.25	4.18	3.98	-
45	-	-	4.42	4.52	4.59	4.61	4.56	4.39	-
50	-	-	-	4.95	5.01	5.03	4.97	4.80	-
55	-	-	-	-	5.53	5.53	5.45	5.27	-
60	-	-	-	-	-	6.15	6.04	5.83	-
65	-	-	-	-	-	-	6.76	6.50	-
Acce flow in less	n-					•			
Mass flow in kg		04	110	422	450	101	220	275	
30	73	91	110	133	159	191	229	275	-
35	69	89	109	132	158	188	223	265	-
40	-	84	107	131	157	186	220	259	-
45	-	-	101	127	155	184	218	255	-
50	-	-	-	121	151	182	215	253	-
55	-	-	-	-	144	177	212	250	-
60	-	-	-	-	-	170	207	247	-
65	-	-	-	-	-	-	199	241	-
Coefficient of pe	erformance (C.C		T		1			1	
30	1.86	2.31	2.82	3.43	4.18	5.11	6.32	7.89	-
35	1.49	1.92	2.38	2.89	3.50	4.24	5.16	6.34	-
40	-	1.54	1.96	2.42	2.93	3.53	4.25	5.15	-
45	-	-	1.56	1.98	2.42	2.92	3.51	4.22	-
50	-	-	-	1.57	1.97	2.40	2.88	3.45	-
55	-	-	-	-	1.55	1.93	2.35	2.82	-
60	-	-	-	-	-	1.51	1.87	2.27	-
65	-	-	-	-	-	-	1.44	1.78	-

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

Cooling capacity	8 908	W
Power input	3 088	W
Current consumption	4.97	Α
Mass flow	215	kg/h
C.O.P.	2.88	

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

ſ	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. HRH041U4

Performance data at 50 Hz, ARI 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 capacity	r in W					•			
30	3 794	4 774	5 872	7 146	8 656	10 461	12 621	15 195	_
35	-	4 453	5 561	6 795	8 213	9 876	11 842	14 172	_
40		-	5 178	6 411	7 779	9 341	11 155	13 282	_
45		-	4 678	5 953	7 311	8 812	10 515	12 480	-
		-	-			8 247	9 880		-
50 55		-	-	5 375	6 765 6 096	7 600	9 204	11 723 10 968	-
-		+		_		1	1		
60	-	-	-	-	-	6 829	8 445	10 170	-
65	-	-	-	-	-	-	7 558	9 285	-
ower input in W	ı								
30	1 891	1 915	1 930	1 935	1 927	1 903	1 860	1 795	-
35	-	2 133	2 154	2 167	2 168	2 154	2 123	2 071	-
40	-	-	2 414	2 432	2 439	2 434	2 412	2 372	-
45	-	-	2 714	2 734	2 746	2 746	2 732	2 701	-
50	-	-	-	3 080	3 094	3 097	3 088	3 064	-
55	-	-	-	-	3 486	3 491	3 485	3 464	-
60	-	-	-	_	-	3 932	3 926	3 908	-
65	_	-	-	_	_	-	4 418	4 399	-
L		<u> </u>		-1	I.			1	
urrent consum		2.52	2.57	2.04	2.04	2.54	2.20	2.00	
30	3.52	3.53	3.57	3.61	3.61	3.54	3.38	3.09	-
35	-	3.74	3.81	3.88	3.92	3.91	3.80	3.56	-
40	-	-	4.08	4.17	4.24	4.25	4.18	3.98	-
45	-	-	4.42	4.52	4.59	4.61	4.56	4.39	-
50	-	-	-	4.95	5.01	5.03	4.97	4.80	-
55	-	-	-	-	5.53	5.53	5.45	5.27	-
60	-	-	-	-	-	6.15	6.04	5.83	-
65	-	-	-	-	-	-	6.76	6.50	-
/lass flow in kg/l	h								
30	73	90	110	132	158	190	227	273	-
35	-	88	109	131	157	187	222	263	-
40	-	-	106	130	156	185	218	257	-
45	-	-	101	127	154	183	216	254	-
50	-	-	-	121	150	181	214	251	-
55	-	-	-	-	143	176	211	248	-
60	-	-	-	_	-	169	206	245	-
65	-	-	-	-	-	-	198	239	-
) # - # - #									
30	2.01	2.49	3.04	3.69	4.49	5.50	6.79	8.47	-
35	-	2.49	2.58	3.14	3.79	4.58	5.58	6.84	-
40		2.09	2.30	2.64	3.19	3.84	4.62	5.60	-
						1			
45	-	-	1.72	2.18	2.66	3.21	3.85	4.62	-
50	-	-	-	1.75	2.19	2.66	3.20	3.83	-
55	-	-	-	-	1.75	2.18	2.64	3.17	-
60	-	-	-	-	-	1.74	2.15	2.60	-
65	-	-	-	-	-	-	1.71	2.11	-

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

Cooling capacity	10 044	W	
Power input	3 428	W	
Current consumption	5.33	Α	
Mass flow	227	kg/h	
C.O.P.	2.93		

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. HRH041U4

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	ı in W								
Cooling capacity 30	4 247	5 352	6 589	8 026	9 731	11 771	14 213	17 125	
-		1		1					-
35	3 793	4 957	6 198	7 580	9 172	11 039	13 250	15 870	-
40	-	4 435	5 723	7 095	8 618	10 359	12 384	14 759	-
45	-	-	5 117	6 522	8 021	9 679	11 563	13 738	-
50	-	-	-	5 815	7 331	8 950	10 736	12 755	-
55	-	-	-	-	6 500	8 118	9 847	11 750	-
60	-	-	-	-	-	7 130	8 835	10 658	-
65	-	-	-	-	-	-	7 625	9 389	-
Power input in V	v								
30	2 270	2 298	2 317	2 323	2 313	2 284	2 233	2 156	-
35	2 519	2 553	2 579	2 594	2 595	2 579	2 542	2 481	-
40	-	2 849	2 880	2 902	2 911	2 904	2 878	2 831	-
45	_	-	3 226	3 251	3 265	3 265	3 248	3 211	_
50	-	-	-	3 647	3 664	3 669	3 658	3 628	-
55	_	-	-	-	4 114	4 120	4 112	4 087	_
60	_	-	-	-	-	4 624	4 616	4 594	_
65	_	-	_	-	_	-	5 177	5 154	_
•		_	_	_	_	_	1 01//	0.104	
Current consum	ption in A								
30	4.44	4.47	4.50	4.53	4.58	4.63	4.69	4.78	-
35	4.67	4.71	4.75	4.78	4.82	4.86	4.92	4.99	-
40	-	4.98	5.03	5.07	5.11	5.15	5.19	5.25	-
45	-	-	5.34	5.39	5.44	5.48	5.53	5.57	-
50	_	-	-	5.76	5.82	5.88	5.92	5.97	-
55	-	-	-	-	6.26	6.33	6.38	6.43	-
60	-	-	-	-	-	6.84	6.91	6.97	_
65	_	_	_	-	-	-	7.52	7.59	_
•		1			I	I	-	1	
Mass flow in kg/									
30	89	110	134	161	193	231	277	332	-
35	84	107	132	160	191	227	270	321	-
40	-	101	129	158	189	225	265	313	-
45	_	-	122	154	187	222	262	308	-
50	-	-	-	146	182	219	260	305	-
55	-	-	-	-	174	214	256	301	-
60	-	-	-	-	-	205	249	296	-
65	-	-	-	-	-	-	240	289	-
Coefficient of pe	erformance (C.C	D.P.)							
30	1.87	2.33	2.84	3.45	4.21	5.15	6.37	7.94	-
35	1.51	1.94	2.40	2.92	3.53	4.28	5.21	6.40	-
40	-	1.56	1.99	2.45	2.96	3.57	4.30	5.21	-
45	-	-	1.59	2.01	2.46	2.96	3.56	4.28	-
50	-	-	-	1.59	2.00	2.44	2.94	3.52	-
55	-	-	-	-	1.58	1.97	2.39	2.87	-
60	-	-	-	-	-	1.54	1.91	2.32	-
			+	1	+		1		

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

Cooling capacity	10 736	W
Power input	3 658	W
Current consumption	5.92	Α
Mass flow	260	kg/h
C.O.P.	2.94	

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

ſ	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. HRH041U4

Performance data at 60 Hz, ARI rating conditions

R410A

°C (tc) -25 Cooling capacity in W 30 4 587 35 - 40 - 45 - 50 - 55 - 60 - 65 - Power input in W 30 2 270 35 - 40 - 45 - 50 - 55 - 60 - 65 - Current consumption in A 30 4.44 35 - 40 - 45 - 50 - 55 - 60 - 65 - Current consumption in A 30 4.44 35 - 40 - 45 - 50 - 55 - 60 - 65 - Mass flow in kg/h 30 88 35 - 40 - 45 - 50 - 55 - 60 - 65 - Coefficient of performance 30 2.02	-20 5 773 5 382	7 101 6 721 6 252 5 642	-10 8 642 8 212 7 742	-5 10 468 9 926	12 651	15 263	10	15
30	5 382 - - - - - -	6 721 6 252 5 642	8 212 7 742		12 651	15 263	,	
30	5 382 - - - - - -	6 721 6 252 5 642	8 212 7 742		12 651	15 263		
35 - 40 - 555 - 60 - 65 - 65 - 60 - 65 - 6	5 382 - - - - - -	6 721 6 252 5 642	8 212 7 742		12 00 1		10 277	
40		6 252 5 642	7 742	9 926	11 005		18 377	-
45 - 50 - 55 - 60 - 65 - 20wer input in W 30 2 270 35 - 40 - 45 - 50 - 65 - Current consumption in A 30 4.44 35 - 40 - 45 - 50 - 65 - Current consumption in A 30 8.8 35 - 40 - 65 - Mass flow in kg/h 30 88 35 - 40 - 65 - Coefficient of performance 30 2.02		5 642		0.004	11 935	14 312	17 128	-
SO				9 394	11 279	13 470	16 038	-
S5	-	-	7 181	8 820	10 631	12 686	15 056	-
60	-	1	6 477	8 153	9 939	11 907	14 128	-
65 - Power input in W 30 2 270 35 - 40 - 45 - 50 - 55 - 60 - 65 - Current consumption in A 30 4.44 35 - 40 - 45 - 50 - Solution in kg/h 30 88 35 - 40 - 65 - Mass flow in kg/h 30 88 35 - 40 - 65 - Coefficient of performance and an angle an angle and an angle an angle and an angle an angle and an angle an angle and an angle and an angle an ana		-	-	7 340	9 150	11 081	13 204	-
Power input in W 30	-	-	-	-	8 213	10 157 9 082	12 231 11 156	-
30 2 270 35 - 40 - 45 - 50 - 55 - 60 - 65 - Surrent consumption in A 30 4.44 35 - 40 - 45 - 50 - 55 - 60 - 65 - Mass flow in kg/h 30 88 35 - 40 - 45 - 50 - 65 - Mass flow in kg/h 30 88 35 - 40 - 45 - 50 - 65 - Mass flow in kg/h 30 88 35 - 40 - 45 - 50 - 65 - Mass flow in kg/h 30 88 35 - 40 - 45 - 50 - 65 - Mass flow in kg/h 30 88 35 - 40 - 45 - 50 - 65 - Mass flow in kg/h 30 88 35 - 40 - 45 - 50 - 65 - 60 - 65 - 60 - 65 - 60 - 65 - 60 - 65 - 60 - 65 - 60 - 65 -				_		9 002	11 150	
35 - 40 - 45 - 50 - 55 - 60 - 65 - Surrent consumption in A 30 4.44 35 - 40 - 45 - 50 - 55 - 60 - 65 - Surrent consumption in A 30 8.44 35 - 50 - 55 - 60 - 65 - Surrent consumption in A 30 8.8 35 - 40 - 45 - 50 - 65 - 60 - 65 -								
40 - 45 - 50 - 55 - 60 - 65 - **urrent consumption in A** 30 4.44 35 - 40 - 45 - 50 - 55 - 60 - 65 - **lass flow in kg/h** 30 88 35 - 40 - 45 - 50 - 65 - **lass flow in kg/h** 50 - 65 - 60 - 65 - 60 - 65 - 60 - 65 - 60 - 65 - 60 - 65 - 60 - 65 - 60 - 65 - 60 - 65 - 60 - 65 - 60 - 65 - 60 - 65 - 60 - 65 - 60 - 65 -	2 298	2 317	2 323	2 313	2 284	2 233	2 156	-
45	2 553	2 579	2 594	2 595	2 579	2 542	2 481	-
50	-	2 880	2 902	2 911	2 904	2 878	2 831	-
50	-	3 226	3 251	3 265	3 265	3 248	3 211	-
60	-	-	3 647	3 664	3 669	3 658	3 628	-
65 - urrent consumption in A 30 4.44 35 - 40 - 45 - 50 - 55 - 60 - 65 - lass flow in kg/h 30 88 35 - 40 - 45 - 50 - 65 - 55 - 60 - 65 - 55 - 60 - 65 - 55 - 60 - 65 - 55 - 60 - 65 - 60 - 65 - 50 - 50 - 50 - 50 - 50 - 50 - 50 -	-	-	-	4 114	4 120	4 112	4 087	-
urrent consumption in A 30	-	-	-	-	4 624	4 616	4 594	-
30	-	-	-	-	-	5 177	5 154	-
30 4.44 35 - 40 - 45 - 50 - 55 - 60 - 65 - Mass flow in kg/h 30 88 35 - 40 - 45 - 50 - 55 - 60 - 65 - **Coefficient of performance** 30 2.02								
35 - 40 - 45 - 50 - 55 - 60 - 65 - lass flow in kg/h 30 88 35 - 40 - 45 - 50 - 55 - 60 - 65 - 60 - 65 - coefficient of performance (a)	4.47	4.50	4.53	4.58	4.63	4.69	4.78	_
40 - 45 - 50 - 55 - 60 - 65 - lass flow in kg/h 30 88 35 - 40 - 45 - 50 - 55 - 60 - 65 - 65 - coefficient of performance of the second of t	4.71	4.75	4.78	4.82	4.86	4.92	4.99	_
45 - 50 - 55 - 60 - 65 - lass flow in kg/h 30 88 35 - 40 - 45 - 50 - 55 - 60 - 65 - coefficient of performance and a control of pe	-	5.03	5.07	5.11	5.15	5.19	5.25	_
50 - 55 - 60 - 65 - lass flow in kg/h 30 88 35 - 40 - 45 - 50 - 55 - 60 - 65 - coefficient of performance	_	5.34	5.39	5.44	5.48	5.53	5.57	
55 - 60 - 65 - lass flow in kg/h 30 88 35 - 40 - 45 - 50 - 55 - 60 - 65 - coefficient of performance		-	5.76	5.82	5.88	5.92	5.97	
60 - 65 - lass flow in kg/h 30 88 35 - 40 - 45 - 50 - 55 - 60 - 65 - coefficient of performance of the second	-	-	-	6.26	6.33	6.38	6.43	_
65 - lass flow in kg/h 30 88 35 - 40 - 45 - 50 - 55 - 60 - 65 - coefficient of performance of the second	-	-	-	-	6.84	6.91	6.97	
30 88 35 -	-	-	-	-	-	7.52	7.59	-
30 88 35 - 40 - 45 - 50 - 55 - 60 - 65 - coefficient of performance	I			<u> </u>		7.02	7.00	
35 - 40 - 45 - 50 - 55 - 60 - 65 - Coefficient of performance 30 2.02		T			Т	1	1	
40 - 45 - 50 - 55 - 60 - 65 - coefficient of performance 30 2.02	109	133	160	191	229	275	330	-
45 - 50 - 55 - 60 - 65 - coefficient of performance 30 2.02	107	132	159	190	226	268	318	-
50 - 55 - 60 - 65 - coefficient of performance and a 2.02	-	128	157	188	223	264	311	-
55 - 60 - 65 - oefficient of performance 30 2.02	-	122	153	185	221	261	306	-
60 - 65 - oefficient of performance 30 2.02	-	-	145	181	218	258	302	-
65 - oefficient of performance 30 2.02	-	-	-	172	212	254	299	-
oefficient of performance	-	-	-	-	203	248	294	-
30 2.02	-	-	-	-	-	238	287	-
	(C.O.P.)							
35	2.51	3.06	3.72	4.53	5.54	6.84	8.52	-
-	2.11	2.61	3.17	3.82	4.63	5.63	6.90	1
40 -	-	2.17	2.67	3.23	3.88	4.68	5.67	-
45 -	-	1.75	2.21	2.70	3.26	3.91	4.69	1
50 -	-	-	1.78	2.23	2.71	3.26	3.89	-
55 -	-	-	-	1.78	2.22	2.69	3.23	1
60 -	1	-	-	-	1.78	2.20	2.66	-
65 -	-	-	-	-	-	1.75	2.16	-

Cooling capacity	12 094	W
Power input	4 046	W
Current consumption	6.35	Α
Mass flow	274	kg/h
C.O.P.	2.99	

to: Evaporating temperature at dew point

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

Maximum HP switch setting	45	bar(g)
Minimum LP switch setting	1.5	bar(g)
LP pump down setting	2.3	bar(g)

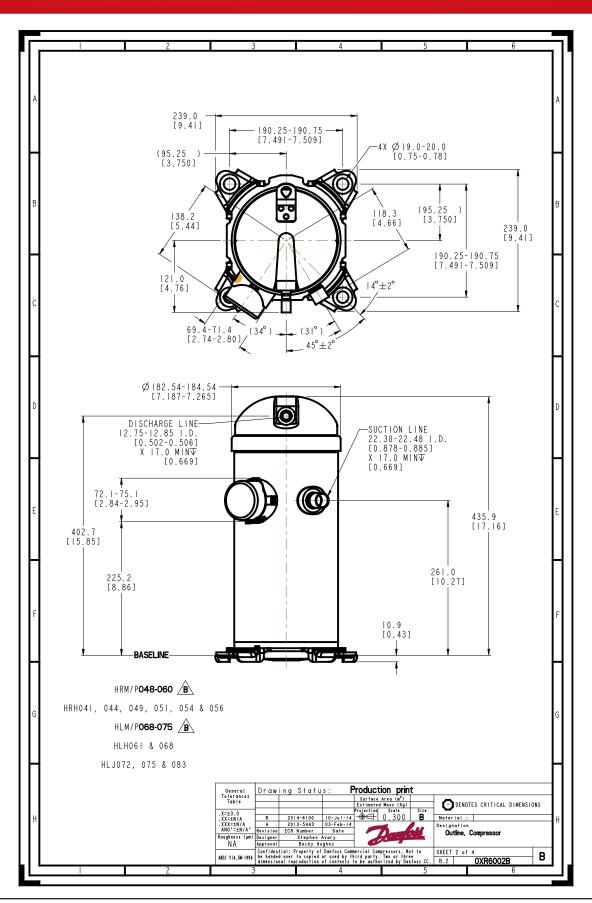
Sound power data

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

All performance data +/- 5%

tc: Condensing temperature at dew point





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