ENGINEERING



Datasheets

Danfoss scroll compressors **H series**





Datasheet, technical data

Danfoss scroll compressor, HRM048U4

General Characteristics

Model number (on compressor nameplate)		HRM048U4LC8		
Code number for Singlepack*		120U1671		
Code number for Industrial pack**		120U1668		
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	64.4 cm3/rev			
Displacement @ Nominal speed	11.2 m3/h @ 2900 rpm - 13.5 m3/h @ 3500 rpm			
Net weight	37.19 kg			
Oil charge	1.57 litre, Alkylbenzene			
Maximum system test pressure Low Side / High side	- bar(g)	/ - bar(g)		
Maximum differential test pressure	- bar			
Maximum number of starts per hour		•		
Refrigerant charge limit	5.44 kg			
Approved refrigerants	R22			

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℃	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 A
Maximum Continuous Current (MCC)	12.5 A
Locked Rotor Amps (LRA)	55.2 A
Motor protection	Internal overload protector

Recommended Installation torques

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

Parts shipped with compressor

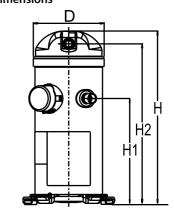
1 arts shipped with compressor	
Mounting kit with grommets and sleeves	
Initial oil charge	
Installation instructions	

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 1:

2:

3:

Screw connectors 10-32 UNF x 9.5

Earth connection

Power cable passage



Datasheet, accessories and spare parts

Danfoss scroll compressor, HRM048U4

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.

 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

Solder sleeve adapter set



1: Rotolock ada	nter (Suc & Dis)	١
1. HOLOIOCK ada	pici (Suc & Dis)	

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

Oil / lubricants	Code no.
Crankcase heaters	Code no.
Belt type crankcase heater, 50 W, 230 V, CE mark, UL	120Z0057
Belt type crankcase heater, 50 W, 400 V, CE mark, UL	120Z0058

Miscellaneous accessories	Code no.
Acoustic hood	120Z5044
Discharge thermostat kit	7750009
IP54 upgrade kit	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



Danfoss scroll compressor. HRM048U4

Performance data at 50 Hz, EN 12900 rating conditions

R22

Cond. temp. in	np. in Evaporating temperature in °C (to)								
°C (tc)	-25	-20	-15	-10	-5	0	5	10	15
Cooling capacity	v in W								
30	4 216	4 927	5 969	7 324	8 971	10 890	13 061	15 463	-
35	3 938	4 641	5 652	6 954	8 525	10 345	12 395	14 655	
40	-	4 293	5 291	6 556	8 068	9 808	11 755	13 888	
45	<u>-</u>	-	4 865	6 111	7 582	9 258	11 118	13 143	_
50	_	-	-	5 600	7 046	8 674	10 466	12 400	_
55	<u>-</u>	-	-	-	6 441	8 039	9 777	11 636	
60	_	-	_	_	-	7 331	9 033	10 833	_
65	<u>-</u>	-	-	_	_	-	8 214	9 971	_
		I	<u> </u>	I		1	02	0 0.1.	
Power input in W	V	1		1	1	1	1		
30	2 087	2 102	2 112	2 112	2 098	2 065	2 010	1 927	-
35	2 362	2 360	2 359	2 356	2 346	2 325	2 288	2 231	-
40	-	2 654	2 638	2 626	2 615	2 599	2 575	2 538	-
45	-	-	2 961	2 935	2 917	2 902	2 885	2 862	-
50	-	-	-	3 296	3 266	3 245	3 230	3 216	-
55	-	-	-	-	3 674	3 643	3 624	3 614	-
60	-	-	-	-	-	4 108	4 080	4 068	-
65	-	-	-	-	-	-	4 612	4 591	-
urrent consum	•	T							
30	3.64	3.71	3.76	3.79	3.80	3.80	3.79	3.77	-
35	3.93	3.98	4.01	4.03	4.03	4.03	4.03	4.02	-
40	-	4.35	4.36	4.37	4.37	4.37	4.36	4.36	-
45	-	-	4.82	4.81	4.81	4.80	4.80	4.81	-
50	-	-	-	5.37	5.35	5.34	5.34	5.35	-
55	-	-	-	-	6.00	5.99	5.99	6.00	-
60	-	-	-	-	-	6.75	6.75	6.77	-
65	-	-	-	-	-	-	7.62	7.64	-
Mass flow in kg/l	h								
30	92	106	127	154	186	223	265	310	-
35	89	104	125	152	183	220	260	305	-
40	-	100	122	149	181	217	257	300	-
45	-	-	117	145	177	213	253	296	-
50	-	-	-	139	172	209	249	291	-
55	-	-	-	-	165	203	244	287	-
60	-	-	-	-	-	195	237	281	-
65	-	-	-	-	-	-	229	274	-
oefficient of pe	orformance (C.C) P)							
30	2.02	2.34	2.83	3.47	4.28	5.27	6.50	8.02	_
35	1.67	1.97	2.40	2.95	3.63	4.45	5.42	6.57	-
40	-	1.62	2.40	2.95	3.09	3.77	4.56	5.47	
45				2.50	2.60	3.17	3.85	4.59	
40	-	-	1.64	1.70	2.60	2.67	3.85	4.59 3.86	-
		1 -	_	1.70			+	+	
50	-				175	2 24		2 22	
	-	-	-	-	1.75	2.21 1.78	2.70 2.21	3.22 2.66	-

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

	•••	
Cooling capacity	10 466	W
Power input	3 230	W
Current consumption	5.34	Α
Mass flow	249	kg/h
C.O.P.	3.24	

to: Evaporating temperature at dew point

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

Pressure switch settings

Maximum HP switch setting	29	bar(g)
Minimum LP switch setting	0.5	bar(g)
LP pump down setting	1.3	bar(g)

Sound power data

Sound power level	69	dB(A)
With accoustic hood	64	dB(A)

All performance data +/- 5%

tc: Condensing temperature at dew point



Danfoss scroll compressor. HRM048U4

Performance data at 50 Hz, ARI rating conditions

R22

Cond. temp. in	Evaporating temperature in °C (to)									
°C (tc)	-25	-20	-15	-10	-5	0	5	10	15	
Cooling capacity	, in W									
30	4 478	5 228	6 330	7 760	9 498	11 522	13 809	16 339	_	
35	-	4 942	6 014	7 393	9 056	10 981	13 148	15 533	_	
40	-		5 651	6 996	8 603	10 449	12 512	14 772	-	
45	-	_	5 220	6 550	8 118	9 903	11 883	14 035	-	
50	-	_	-	6 032	7 581	9 323	11 237	13 302	_	
55	_	-	-	-	6 969	8 688	10 555	12 549	-	
60	-	-	-	-	-	7 976	9 814	11 757	-	
65	-	-	-	-	-	-	8 994	10 904	-	
		ı	1	1						
Power input in V			T	1						
30	2 087	2 102	2 112	2 112	2 098	2 065	2 010	1 927	-	
35	-	2 360	2 359	2 356	2 346	2 325	2 288	2 231	-	
40	-	-	2 638	2 626	2 615	2 599	2 575	2 538	-	
45	-	-	2 961	2 935	2 917	2 902	2 885	2 862	-	
50	-	-	-	3 296	3 266	3 245	3 230	3 216	-	
55	-	-	-	-	3 674	3 643	3 624	3 614	-	
60	-	-	-	-	-	4 108	4 080	4 068	-	
65	-	-	-	-	-	-	4 612	4 591	-	
Current consum	ption in A									
30	3.64	3.71	3.76	3.79	3.80	3.80	3.79	3.77	-	
35	-	3.98	4.01	4.03	4.03	4.03	4.03	4.02	-	
40	-	-	4.36	4.37	4.37	4.37	4.36	4.36	-	
45	-	-	4.82	4.81	4.81	4.80	4.80	4.81	-	
50	-	-	-	5.37	5.35	5.34	5.34	5.35	-	
55	-	-	-	-	6.00	5.99	5.99	6.00	-	
60	-	-	-	-	-	6.75	6.75	6.77	-	
65	-	-	-	-	-	-	7.62	7.64	-	
Mass flow in kg/	h									
30	91	105	126	153	185	222	263	308	_	
35	-	103	124	151	182	219	259	303		
40	_	-	121	148	180	216	255	298	_	
45	<u>-</u>	_	116	144	176	212	252	294		
50	_	-	-	138	171	208	248	290	_	
55	-	-	-	-	165	202	242	285	-	
60	-	-	_	-	-	194	236	279	-	
65	-	-	-	-	-	_	227	272	-	
•		1		•	•	•	•			
Coefficient of pe	•	· ·	2.00	2.07	4.50	F 50	0.07	0.40		
30	2.15	2.49	3.00	3.67	4.53	5.58	6.87	8.48	-	
35	-	2.09	2.55	3.14	3.86	4.72	5.75	6.96	-	
40	-	-	2.14	2.66	3.29	4.02	4.86	5.82	-	
45	-	-	1.76	2.23	2.78	3.41	4.12	4.90	-	
50	-	-	-	1.83	2.32	2.87	3.48	4.14	-	
55	-	-	-	-	1.90	2.39	2.91	3.47	-	
60	-	-	-	-	-	1.94	2.41	2.89	-	
65	-	-	-	-	-	-	1.95	2.37	-	

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

recinition perioritianee at to 7.2	0, 10 04.4 0	
Cooling capacity	11 506	W
Power input	3 568	W
Current consumption	5.91	A
Mass flow	262	kg/h
C.O.P.	3.22	

to: Evaporating temperature at dew point

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

Pressure switch settings

Maximum HP switch setting	29	bar(g)
Minimum LP switch setting	0.5	bar(g)
LP pump down setting	1.3	bar(g)

Sound power data

Sound power level	69	dB(A)
With accoustic hood	64	dB(A)

All performance data +/- 5%

tc: Condensing temperature at dew point



Danfoss scroll compressor. HRM048U4

Performance data at 60 Hz, EN 12900 rating conditions

R22

Cond. temp. in	ond. temp. in Evaporating temperature in °C (to)								
°C (tc)	-25	-20	-15	-10	-5	0	5	10	15
Cooling capacit	v in W								
30	5 002	5 841	7 077	8 683	10 636	12 910	15 481	18 324	_
35	4 682	5 513	6 714	8 260	10 127	12 290	14 724	17 404	
	- 4 002	1							
40 45		5 115	6 301	7 807	9 609	11 681	13 999	16 538	
45	-	-	5 813	7 299	9 055	11 057	13 280	15 698	-
50	-	-	-	6 711	8 441	10 392	12 539	14 857	-
55	-	-	-	-	7 741	9 660	11 751	13 987	-
60	-	-	-	-	-	8 837	10 889	13 064	-
65	-	-	-	-	-	-	9 929	12 059	-
Power input in V	v								
30	2 457	2 474	2 485	2 485	2 469	2 431	2 365	2 266	-
35	2 787	2 783	2 781	2 778	2 766	2 741	2 698	2 630	-
40	-	3 137	3 117	3 103	3 090	3 071	3 043	2 999	-
45	-	-	3 508	3 477	3 455	3 437	3 417	3 391	-
50	-	-	-	3 916	3 878	3 854	3 836	3 820	-
55	-	-	-	-	4 376	4 338	4 316	4 304	-
60	-	-	-	_	-	4 905	4 872	4 857	-
65	-	-	-	_	_	-	5 520	5 496	-
		- L	I.	L	l	L	1		
urrent consum	ption in A	_					1		
30	3.99	4.06	4.12	4.15	4.16	4.16	4.15	4.13	-
35	4.30	4.36	4.39	4.41	4.42	4.42	4.41	4.40	-
40	-	4.76	4.78	4.78	4.78	4.78	4.78	4.78	-
45	-	-	5.28	5.27	5.26	5.26	5.26	5.27	-
50	-	-	-	5.88	5.86	5.85	5.85	5.86	-
55	-	-	-	-	6.58	6.56	6.56	6.58	-
60	-	-	-	-	-	7.39	7.39	7.41	-
65	-	-	-	-	-	-	8.35	8.37	-
loog flow in ka	/la								
Mass flow in kg	109	126	150	182	220	264	314	368	_
	109	123		180	218	261	309	362	
35			148	1		1			
40	-	119	145	177	215	258	306	357	-
45			140	173	211	255	302	353	
50	-	-	-	167	206	250	298	349	-
55	-	-	-	-	199	244	293	345	-
60	-	-	-	-	-	236	286	339	-
65	-	-	-	-	-	-	276	331	-
	erformance (C.C				1		1	T	
30	2.04	2.36	2.85	3.49	4.31	5.31	6.55	8.09	-
35	1.68	1.98	2.41	2.97	3.66	4.48	5.46	6.62	-
40	-	1.63	2.02	2.52	3.11	3.80	4.60	5.51	-
45	-	-	1.66	2.10	2.62	3.22	3.89	4.63	-
50	-	-	-	1.71	2.18	2.70	3.27	3.89	-
55	-	-	-	-	1.77	2.23	2.72	3.25	-
60	-	-	-	-	-	1.80	2.24	2.69	-
65	_	-	_	_	-	-	1.80	2.19	_

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

tronnia portornianos arto o o, to		
Cooling capacity	12 539	W
Power input	3 836	W
Current consumption	5.85	Α
Mass flow	298	kg/h
C.O.P.	3.27	

to: Evaporating temperature at dew point

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

Pressure switch settings

M	aximum HP switch setting	29	bar(g)
M	inimum LP switch setting	0.5	bar(g)
LF	pump down setting	1.3	bar(g)

Sound power data

Sound power level	73	dB(A)
With accoustic hood	66	dB(A)

All performance data +/- 5%

tc: Condensing temperature at dew point



Danfoss scroll compressor. HRM048U4

Performance data at 60 Hz, ARI rating conditions

R22

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	5 312	6 199	7 504	9 200	11 261	13 659	16 368	19 361	-
35	-	5 871	7 143	8 781	10 757	13 045	15 617	18 448	-
40	-	-	6 730	8 331	10 245	12 444	14 902	17 591	-
45	-	-	6 236	7 823	9 696	11 828	14 193	16 764	-
50	-	-	-	7 228	9 082	11 169	13 464	15 937	-
55	-	-	-	-	8 376	10 440	12 686	15 085	-
60	-	-	-	-	-	9 613	11 831	14 177	-
65	-	-	-	-	-	-	10 873	13 188	-
Power input in V			T			1			
30	2 457	2 474	2 485	2 485	2 469	2 431	2 365	2 266	-
35	-	2 783	2 781	2 778	2 766	2 741	2 698	2 630	-
40	-	-	3 117	3 103	3 090	3 071	3 043	2 999	-
45	-	-	3 508	3 477	3 455	3 437	3 417	3 391	-
50	-	-	-	3 916	3 878	3 854	3 836	3 820	-
55	-	-	-	-	4 376	4 338	4 316	4 304	-
60	-	-	-	-	-	4 905	4 872	4 857	-
65	-	-	-	-	-	-	5 520	5 496	-
Current concur	ntion in A								
Current consum 30	3.99	4.06	4.12	4.15	4.16	4.16	4.15	4.13	
35	-	4.36	4.12	4.15	4.10	4.10	4.15	4.13	
40		-	4.78	4.41	4.42	4.42	4.41	4.78	
45			5.28	5.27	5.26	5.26	5.26	5.27	
50	<u>-</u>		5.20	5.88	5.86	5.26	5.26	1	
		-				6.56	6.56	5.86 6.58	
55	-	-	-	-	6.58	+		t	-
60 65	<u> </u>	-	-	-	-	7.39	7.39 8.35	7.41 8.37	-
03				1			0.55	0.57	
Mass flow in kg/	h								
30	108	125	150	181	219	263	312	366	_
35	-	123	148	179	217	260	308	360	_
40	-	_	144	176	214	257	304	355	_
45	-	-	139	172	210	253	301	351	-
50	-	_	-	166	205	249	297	347	_
55	-	-	_	-	198	243	291	343	_
60	-	_	-	-	-	234	284	337	_
65	-	-	-	-	-	-	275	329	-
			L	1	1				
Coefficient of pe	rformance (C.C	D.P.)							
30	2.16	2.51	3.02	3.70	4.56	5.62	6.92	8.54	-
35	-	2.11	2.57	3.16	3.89	4.76	5.79	7.02	-
40	-	-	2.16	2.68	3.32	4.05	4.90	5.87	-
45	-	-	1.78	2.25	2.81	3.44	4.15	4.94	-
50	-	-	-	1.85	2.34	2.90	3.51	4.17	-
55	-	-	-	-	1.91	2.41	2.94	3.50	-
60	-	-	-	-	-	1.96	2.43	2.92	-
65	-	_	-	-	-	-	1.97	2.40	-

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

Homman performance at to = 7.2	o, ic = 04.4 O	
Cooling capacity	13 824	W
Power input	4 248	W
Current consumption	6.47	Α
Mass flow	314	kg/h
C.O.P.	3.25	

to: Evaporating temperature at dew point

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

Pressure switch settings

M	aximum HP switch setting	29	bar(g)
M	inimum LP switch setting	0.5	bar(g)
LF	pump down setting	1.3	bar(g)

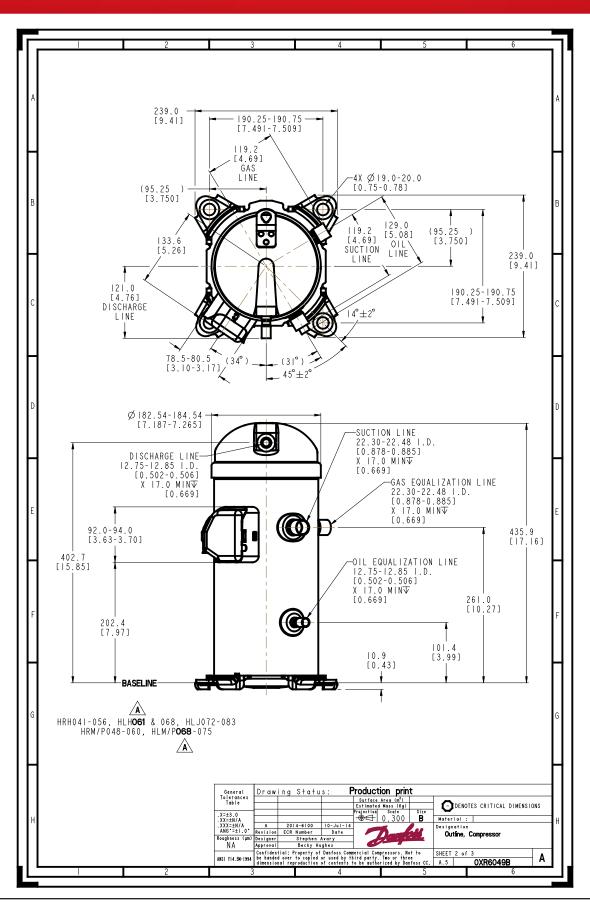
Sound power data

S	ound power level	73	dB(A)
W	/ith accoustic hood	66	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, HRM048U4

General Characteristics

Model number (on compressor nameplate)		HRM048U4LP6
Code number for Singlepack*		120U1666
Code number for Industrial pack**		120U1663
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	64.4 cr	m3/rev
Displacement @ Nominal speed	11.2 m3/h @ 2900 rpm -	- 13.5 m3/h @ 3500 rpm
Net weight	37.19 kg	
Oil charge	1.57 litre, Alkylbenzene	
Maximum system test pressure Low Side / High side	- bar(g) / - bar(g)	
Maximum differential test pressure	- bar	
Maximum number of starts per hour	-	·
Refrigerant charge limit	5.44 kg	
Approved refrigerants	R22	

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℃	2.610 Ω
Winding resistance between phases 2-3 +/- 7% at 25℃	2.650 Ω
Rated Load Amps (RLA)	8 A
Maximum Continuous Current (MCC)	12.5 A
Locked Rotor Amps (LRA)	55.2 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

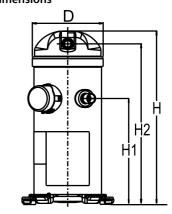
1 arts shipped with compressor	
Mounting kit with grommets and sleeves	١.
Initial oil charge	1
Installation instructions	

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

*Singlepack: Compressor in cardboard box

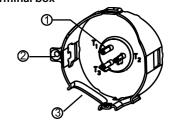
**Industrial pack: 12 or 16 Unboxed compressors on pallet

Dimensions



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

Terminal box



IP22

3:

Spade connectors 1/4"
 Earth connection

Power cable passage



Datasheet, accessories and spare parts

Danfoss scroll compressor, HRM048U4

Rotolock accessories, suction side	Code no.
Rotolock valve, V05 (1-1/4" Rotolock, 7/8" ODF)	8168030
Gasket, 1-1/4"	8156131
Gushel, 1 1/4	0130131

 Rotolock accessories, discharge side
 Code no.

 Solder sleeve, P06 (1" Rotolock, 1/2" ODF)
 8153007

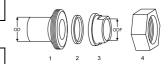
 Angle adapter, C06 (1" Rotolock, 1/2" ODF)
 8168007

 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

Solder sleeve adapter set



Oil / lubricants	Code no.

Crankcase heaters	Code no.
Belt type crankcase heater, 50 W, 230 V, CE mark, UL	120Z0057
Belt type crankcase heater, 50 W, 400 V, CE mark, UL	120Z0058

1: Rotolock adapter (Suc & Dis)

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

Miscellaneous accessories	Code no.
Acoustic hood	120Z5044
Discharge thermostat kit	7750009
IP54 upgrade kit	118U0056

Spare parts	Code no.
Mounting kit for 1 scroll compressor including 4 grommets, 4 sleeves, 4 bolts, 4 washers	120Z5005
Mounting kit, including 1 bolt, 1 sleeve, 1 washer	120Z5031
No translation for 120Z5015	120Z5015



Danfoss scroll compressor. HRM048U4

Performance data at 50 Hz, EN 12900 rating conditions

R22

Cond. temp. in				Evapora	ting temperature	in °C (to)			
°C (tc)	-25	-20	-15	-10	-5	0	5	10	15
Cooling capacity	v in W								
30	4 216	4 927	5 969	7 324	8 971	10 890	13 061	15 463	-
35	3 938	4 641	5 652	6 954	8 525	10 345	12 395	14 655	
40	-	4 293	5 291	6 556	8 068	9 808	11 755	13 888	
45	<u>-</u>	-	4 865	6 111	7 582	9 258	11 118	13 143	_
50	_	-	-	5 600	7 046	8 674	10 466	12 400	_
55	<u>-</u>	-	-	-	6 441	8 039	9 777	11 636	
60	_	-	_	_	-	7 331	9 033	10 833	_
65	<u>-</u>	-	-	_	_	-	8 214	9 971	_
		I	<u> </u>	I		1	02	0 0.1.	
Power input in W	V	1		1	1	1	1		
30	2 087	2 102	2 112	2 112	2 098	2 065	2 010	1 927	-
35	2 362	2 360	2 359	2 356	2 346	2 325	2 288	2 231	-
40	-	2 654	2 638	2 626	2 615	2 599	2 575	2 538	-
45	-	-	2 961	2 935	2 917	2 902	2 885	2 862	-
50	-	-	-	3 296	3 266	3 245	3 230	3 216	-
55	-	-	-	-	3 674	3 643	3 624	3 614	-
60	-	-	-	-	-	4 108	4 080	4 068	-
65	-	-	-	-	-	-	4 612	4 591	-
urrent consum	•	T							
30	3.64	3.71	3.76	3.79	3.80	3.80	3.79	3.77	-
35	3.93	3.98	4.01	4.03	4.03	4.03	4.03	4.02	-
40	-	4.35	4.36	4.37	4.37	4.37	4.36	4.36	-
45	-	-	4.82	4.81	4.81	4.80	4.80	4.81	-
50	-	-	-	5.37	5.35	5.34	5.34	5.35	-
55	-	-	-	-	6.00	5.99	5.99	6.00	-
60	-	-	-	-	-	6.75	6.75	6.77	-
65	-	-	-	-	-	-	7.62	7.64	-
Mass flow in kg/l	h								
30	92	106	127	154	186	223	265	310	-
35	89	104	125	152	183	220	260	305	-
40	-	100	122	149	181	217	257	300	-
45	-	-	117	145	177	213	253	296	-
50	-	-	-	139	172	209	249	291	-
55	-	-	-	-	165	203	244	287	-
60	-	-	-	-	-	195	237	281	-
65	-	-	-	-	-	-	229	274	-
oefficient of pe	orformance (C.C) P)							
30	2.02	2.34	2.83	3.47	4.28	5.27	6.50	8.02	_
35	1.67	1.97	2.40	2.95	3.63	4.45	5.42	6.57	-
40	-	1.62	2.40	2.95	3.09	3.77	4.56	5.47	
45				2.50	2.60	3.17	3.85	4.59	
40	-	-	1.64	1.70	2.60	2.67	3.85	4.59 3.86	-
		1 -	_	1.70			+	+	
50	-				175	2 24		2 22	
	-	-	-	-	1.75	2.21 1.78	2.70 2.21	3.22 2.66	-

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

	•••	
Cooling capacity	10 466	W
Power input	3 230	W
Current consumption	5.34	Α
Mass flow	249	kg/h
C.O.P.	3.24	

to: Evaporating temperature at dew point

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

Pressure switch settings

Maximum HP switch setting	29	bar(g)
Minimum LP switch setting	0.5	bar(g)
LP pump down setting	1.3	bar(g)

Sound power data

Sound power level	69	dB(A)
With accoustic hood	64	dB(A)

All performance data +/- 5%

tc: Condensing temperature at dew point



Danfoss scroll compressor. HRM048U4

Performance data at 50 Hz, ARI rating conditions

R22

Cond. temp. in Evaporating temperature in °C (to)									
°C (tc)	-25	-20	-15	-10	-5	0	5	10	15
Cooling capacity	, in W								
30	4 478	5 228	6 330	7 760	9 498	11 522	13 809	16 339	_
35	-	4 942	6 014	7 393	9 056	10 981	13 148	15 533	_
40	-	-	5 651	6 996	8 603	10 449	12 512	14 772	-
45	-	_	5 220	6 550	8 118	9 903	11 883	14 035	-
50	-	_	-	6 032	7 581	9 323	11 237	13 302	_
55	_	-	-	-	6 969	8 688	10 555	12 549	-
60	-	-	-	-	-	7 976	9 814	11 757	-
65	-	-	-	-	-	-	8 994	10 904	-
		ı	1	1					
Power input in V			T	1					
30	2 087	2 102	2 112	2 112	2 098	2 065	2 010	1 927	-
35	-	2 360	2 359	2 356	2 346	2 325	2 288	2 231	-
40	-	-	2 638	2 626	2 615	2 599	2 575	2 538	-
45	-	-	2 961	2 935	2 917	2 902	2 885	2 862	-
50	-	-	-	3 296	3 266	3 245	3 230	3 216	-
55	-	-	-	-	3 674	3 643	3 624	3 614	-
60	-	-	-	-	-	4 108	4 080	4 068	-
65	-	-	-	-	-	-	4 612	4 591	-
Current consum	ption in A								
30	3.64	3.71	3.76	3.79	3.80	3.80	3.79	3.77	-
35	-	3.98	4.01	4.03	4.03	4.03	4.03	4.02	-
40	-	-	4.36	4.37	4.37	4.37	4.36	4.36	-
45	-	-	4.82	4.81	4.81	4.80	4.80	4.81	-
50	-	-	-	5.37	5.35	5.34	5.34	5.35	-
55	-	-	-	-	6.00	5.99	5.99	6.00	-
60	-	-	-	-	-	6.75	6.75	6.77	-
65	-	-	-	-	-	-	7.62	7.64	-
Mass flow in kg/	h								
30	91	105	126	153	185	222	263	308	_
35	-	103	124	151	182	219	259	303	
40	_	-	121	148	180	216	255	298	_
45	<u>-</u>	_	116	144	176	212	252	294	
50	_	-	-	138	171	208	248	290	_
55	-	-	-	-	165	202	242	285	-
60	-	-	_	-	-	194	236	279	-
65	-	-	-	-	-	_	227	272	-
•		1		•	•	•	•		
Coefficient of pe	•	, 	2.00	2.07	4.50	F 50	0.07	0.40	
30	2.15	2.49	3.00	3.67	4.53	5.58	6.87	8.48	-
35	-	2.09	2.55	3.14	3.86	4.72	5.75	6.96	-
40	-	-	2.14	2.66	3.29	4.02	4.86	5.82	-
45	-	-	1.76	2.23	2.78	3.41	4.12	4.90	-
50	-	-	-	1.83	2.32	2.87	3.48	4.14	-
55	-	-	-	-	1.90	2.39	2.91	3.47	-
60	-	-	-	-	-	1.94	2.41	2.89	-
65	-	-	-	-	-	-	1.95	2.37	-

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

recinition perioritianee at to 7.2	0, 10 04.4 0	
Cooling capacity	11 506	W
Power input	3 568	W
Current consumption	5.91	A
Mass flow	262	kg/h
C.O.P.	3.22	

to: Evaporating temperature at dew point

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

Pressure switch settings

Maximum HP switch setting	29	bar(g)
Minimum LP switch setting	0.5	bar(g)
LP pump down setting	1.3	bar(g)

Sound power data

Sound power level	69	dB(A)
With accoustic hood	64	dB(A)

All performance data +/- 5%

tc: Condensing temperature at dew point



Danfoss scroll compressor. HRM048U4

Performance data at 60 Hz, EN 12900 rating conditions

R22

Cond. temp. in	d. temp. in Evaporating temperature in °C (to)								
°C (tc)	-25	-20	-15	-10	-5	0	5	10	15
Cooling capacit	v in W								
30	5 002	5 841	7 077	8 683	10 636	12 910	15 481	18 324	_
35	4 682	5 513	6 714	8 260	10 127	12 290	14 724	17 404	
	- 4 002	1							
40 45		5 115	6 301	7 807	9 609	11 681	13 999	16 538	
45	-	-	5 813	7 299	9 055	11 057	13 280	15 698	-
50	-	-	-	6 711	8 441	10 392	12 539	14 857	-
55	-	-	-	-	7 741	9 660	11 751	13 987	-
60	-	-	-	-	-	8 837	10 889	13 064	-
65	-	-	-	-	-	-	9 929	12 059	-
Power input in V	v								
30	2 457	2 474	2 485	2 485	2 469	2 431	2 365	2 266	-
35	2 787	2 783	2 781	2 778	2 766	2 741	2 698	2 630	-
40	-	3 137	3 117	3 103	3 090	3 071	3 043	2 999	-
45	-	-	3 508	3 477	3 455	3 437	3 417	3 391	-
50	-	-	-	3 916	3 878	3 854	3 836	3 820	-
55	-	-	-	-	4 376	4 338	4 316	4 304	-
60	-	-	-	_	-	4 905	4 872	4 857	-
65	-	-	-	_	_	-	5 520	5 496	-
		- L	I.	L	l	L	1		
urrent consum	ption in A	_					1		
30	3.99	4.06	4.12	4.15	4.16	4.16	4.15	4.13	-
35	4.30	4.36	4.39	4.41	4.42	4.42	4.41	4.40	-
40	-	4.76	4.78	4.78	4.78	4.78	4.78	4.78	-
45	-	-	5.28	5.27	5.26	5.26	5.26	5.27	-
50	-	-	-	5.88	5.86	5.85	5.85	5.86	-
55	-	-	-	-	6.58	6.56	6.56	6.58	-
60	-	-	-	-	-	7.39	7.39	7.41	-
65	-	-	-	-	-	-	8.35	8.37	-
loog flow in ka	/la								
Mass flow in kg	109	126	150	182	220	264	314	368	_
	109	123		180	218	261	309	362	
35			148	1		1			
40	-	119	145	177	215	258	306	357	-
45			140	173	211	255	302	353	
50	-	-	-	167	206	250	298	349	-
55	-	-	-	-	199	244	293	345	-
60	-	-	-	-	-	236	286	339	-
65	-	-	-	-	-	-	276	331	-
	erformance (C.C				1		1	T	
30	2.04	2.36	2.85	3.49	4.31	5.31	6.55	8.09	-
35	1.68	1.98	2.41	2.97	3.66	4.48	5.46	6.62	-
40	-	1.63	2.02	2.52	3.11	3.80	4.60	5.51	-
45	-	-	1.66	2.10	2.62	3.22	3.89	4.63	-
50	-	-	-	1.71	2.18	2.70	3.27	3.89	-
55	-	-	-	-	1.77	2.23	2.72	3.25	-
60	-	-	-	-	-	1.80	2.24	2.69	-
65	_	-	_	_	-	-	1.80	2.19	_

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

tronnia portornianos arto o o, to		
Cooling capacity	12 539	W
Power input	3 836	W
Current consumption	5.85	Α
Mass flow	298	kg/h
C.O.P.	3.27	

to: Evaporating temperature at dew point

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

Pressure switch settings

M	aximum HP switch setting	29	bar(g)
M	inimum LP switch setting	0.5	bar(g)
LF	pump down setting	1.3	bar(g)

Sound power data

Sound power level	73	dB(A)
With accoustic hood	66	dB(A)

All performance data +/- 5%

tc: Condensing temperature at dew point



Danfoss scroll compressor. HRM048U4

Performance data at 60 Hz, ARI rating conditions

R22

Cond. temp. in				Evapora	ting temperature	in °C (to)			
°C (tc)	-25	-20	-15	-10	-5	0	5	10	15
Cooling capacity			1	1	T	1	1	, , , , , , , , , , , , , , , , , , , 	
30	5 312	6 199	7 504	9 200	11 261	13 659	16 368	19 361	-
35	-	5 871	7 143	8 781	10 757	13 045	15 617	18 448	-
40	-	-	6 730	8 331	10 245	12 444	14 902	17 591	-
45	-	-	6 236	7 823	9 696	11 828	14 193	16 764	-
50	-	-	-	7 228	9 082	11 169	13 464	15 937	-
55	-	-	-	-	8 376	10 440	12 686	15 085	-
60	-	-	-	-	-	9 613	11 831	14 177	-
65	-	-	-	-	-	-	10 873	13 188	-
Power input in V	v								
30	2 457	2 474	2 485	2 485	2 469	2 431	2 365	2 266	_
35	-	2 783	2 781	2 778	2 766	2 741	2 698	2 630	
40		-	3 117	3 103	3 090	3 071	3 043	2 999	
45 50	-	-	3 508	3 477	3 455	3 437	3 417	3 391	-
50	-	-	-	3 916	3 878	3 854	3 836	3 820	-
55 60	-	-	-	-	4 376	4 338	4 316	4 304	-
60	-	-	-	-	-	4 905	4 872	4 857	-
65	-	-	-	-	-		5 520	5 496	-
Current consum	ption in A								
30	3.99	4.06	4.12	4.15	4.16	4.16	4.15	4.13	-
35	-	4.36	4.39	4.41	4.42	4.42	4.41	4.40	-
40	-	-	4.78	4.78	4.78	4.78	4.78	4.78	-
45	-	-	5.28	5.27	5.26	5.26	5.26	5.27	-
50	-	-	-	5.88	5.86	5.85	5.85	5.86	-
55	-	-	-	-	6.58	6.56	6.56	6.58	-
60	-	-	-	-	-	7.39	7.39	7.41	-
65	-	-	-	-	-	-	8.35	8.37	-
Mass flow in kg/		T	1	1	T	1	1	1	
30	108	125	150	181	219	263	312	366	-
35	-	123	148	179	217	260	308	360	-
40	-	-	144	176	214	257	304	355	-
45	-	-	139	172	210	253	301	351	-
50	-	-	-	166	205	249	297	347	-
55	-	-	-	-	198	243	291	343	-
60	-	-	-	-	-	234	284	337	-
65	-	-	-	-	-	-	275	329	-
Coefficient of pe	erformance (C.C).P.)							
30	2.16	2.51	3.02	3.70	4.56	5.62	6.92	8.54	-
35	-	2.11	2.57	3.16	3.89	4.76	5.79	7.02	-
40	-	-	2.16	2.68	3.32	4.05	4.90	5.87	-
45	-	-	1.78	2.25	2.81	3.44	4.15	4.94	-
50	-	-	-	1.85	2.34	2.90	3.51	4.17	-
55	-	-	-	-	1.91	2.41	2.94	3.50	-
60	-	-	-	-	-	1.96	2.43	2.92	-
65	-	-	-	-	-	-	1.97	2.40	_

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

Homman performance at to = 7.2	o, ic = 04.4 O	
Cooling capacity	13 824	W
Power input	4 248	W
Current consumption	6.47	Α
Mass flow	314	kg/h
C.O.P.	3.25	

to: Evaporating temperature at dew point

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

Pressure switch settings

Maximum HP switch setting	29	bar(g)
Minimum LP switch setting	0.5	bar(g)
LP pump down setting	1.3	bar(g)

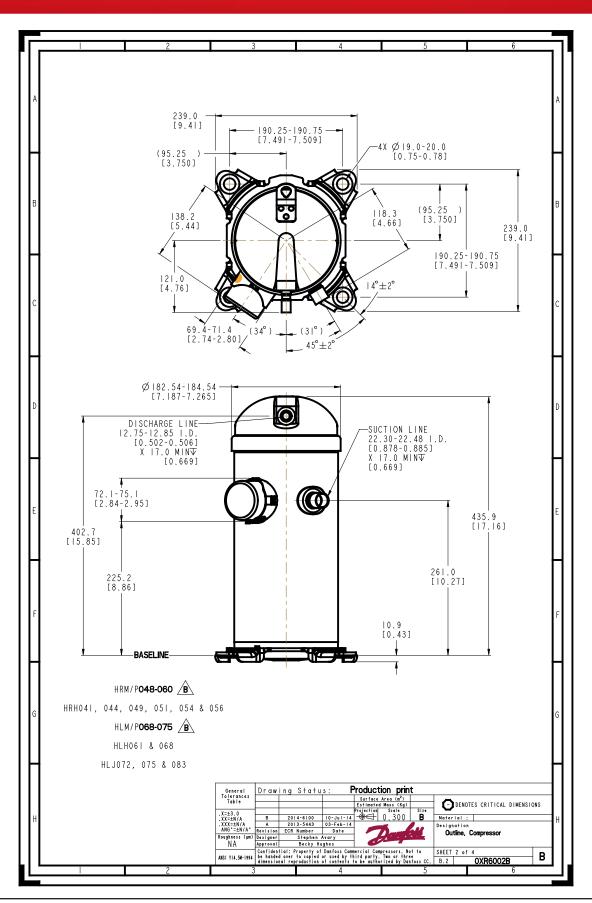
Sound power data

S	ound power level	73	dB(A)
W	/ith accoustic hood	66	dB(A)

All performance data +/- 5%

tc: Condensing temperature at dew point





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