ENGINEERING



Datasheets

# Danfoss scroll compressors **H series**





#### Datasheet, technical data

# Danfoss scroll compressor, HRM060U4

# **General Characteristics**

Model number (on compressor nameplate)		HRM060U4LC8		
Code number for Singlepack*	120U1741			
Code number for Industrial pack**	120U1738			
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	80.95 cm3/rev			
Displacement @ Nominal speed	14.1 m3/h @ 2900 rpm -	- 17.0 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**

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
F	Power connections / Earth connection	3 Nm / 2 Nm

## Parts shipped with compressor

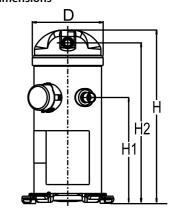
raits shipped with compressor					
	Mounting kit with grommets and sleeves				
	Initial oil charge				
	Installation instructions				

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

\*Singlepack: Compressor in cardboard box

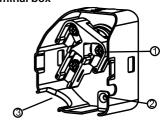
\*\*Industrial pack: 12 or 16 Unboxed compressors on pallet

#### **Dimensions**



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

#### **Terminal box**



IP22 1:

2:

Screw connectors 10-32 UNF x 9.5

Earth connection

3: Power cable passage



#### Datasheet, accessories and spare parts

# Danfoss scroll compressor, HRM060U4

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

# Solder sleeve adapter set



1. Roto	lock ada	nter (Su	c & Dis)

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

Code no.
Code no.
120Z0057
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. HRM060U4

# Performance data at 50 Hz, EN 12900 rating conditions

**R22** 

Cond. temp. in	p. in Evaporating temperature in °C (to)								
°C (tc)	-25	-20	-15	-10	-5	0	5	10	15
Cooling capacit		0.400	7 400	0.204	44.070	12.070	40.404	40.400	
30	5 303	6 190	7 499	9 201	11 270	13 679	16 401	19 408	-
35	4 974	5 852	7 126	8 767	10 749	13 046	15 629	18 471	-
40	-	5 444	6 703	8 305	10 222	12 427	14 893	17 593	-
45	-	-	6 202	7 785	9 658	11 793	14 164	16 743	-
50	-	-	-	7 178	9 027	11 113	13 410	15 889	-
55	-	-	-	-	8 301	10 358	12 601	15 001	-
60	-	-	-	-	-	9 499	11 708	14 049	-
65	-	-	-	-	-	-	10 700	13 002	-
Power input in V	v								
30	2 547	2 564	2 576	2 577	2 560	2 520	2 452	2 350	_
35	2 888	2 884	2 882	2 879	2 867	2 841	2 796	2 725	_
40	-	3 250	3 229	3 215	3 201	3 182	3 153	3 107	_
45	-	-	3 633	3 601	3 578	3 559	3 539	3 511	_
50	-	-	-	4 053	4 015	3 989	3 971	3 954	_
55	-	-	-	-	4 527	4 488	4 465	4 453	_
60	_	-	_	_	-	5 073	5 038	5 023	_
65	-	_	_	_	-	-	5 707	5 682	_
		1	L.	1	ı	1	1		
Current consum	ption in A								
30	4.68	4.77	4.83	4.87	4.88	4.88	4.87	4.85	-
35	5.05	5.11	5.15	5.18	5.19	5.18	5.18	5.17	-
40	-	5.59	5.61	5.62	5.62	5.61	5.61	5.61	-
45	-	-	6.20	6.19	6.18	6.17	6.17	6.18	_
50	-	_	-	6.90	6.88	6.86	6.86	6.88	_
55	_	_	_	-	7.72	7.70	7.70	7.72	_
60	-	_	_	_	-	8.68	8.67	8.70	_
65	-	_	-	-	-	-	9.80	9.83	-
		L	1		1	l		1 2.22	
Mass flow in kg/	/h								
30	115	133	159	193	234	280	332	389	-
35	112	131	157	191	231	277	328	384	-
40	-	127	154	189	229	275	325	380	_
45	-	-	149	184	226	272	322	377	-
50	-	-	-	178	221	268	319	374	_
55	-	_	_	-	213	262	314	370	_
60	-	-	-	-	-	253	307	364	-
65	-	-	_	-	_	-	298	357	_
'		· L	1	<u>.</u>	1	<u> </u>			
	erformance (C.C	· ·	1		1	1		1 1	
30	2.08	2.41	2.91	3.57	4.40	5.43	6.69	8.26	-
35	1.72	2.03	2.47	3.05	3.75	4.59	5.59	6.78	-
40	-	1.68	2.08	2.58	3.19	3.91	4.72	5.66	-
45	-	-	1.71	2.16	2.70	3.31	4.00	4.77	-
50	-	-	-	1.77	2.25	2.79	3.38	4.02	-
55	-	-	-	-	1.83	2.31	2.82	3.37	-
	-	-	-	-	-	1.87	2.32	2.80	-
60 65	-	+					1.88	2.29	

Cooling capacity	13 410	W
Power input	3 971	W
Current consumption	6.86	Α
Mass flow	319	kg/h
C.O.P.	3.38	

to: Evaporating temperature at dew point

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

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

Г	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. HRM060U4

# 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	r in W									
30	5 632	6 569	7 951	9 749	11 933	14 473	17 341	20 507	-	
35	-	6 232	7 582	9 321	11 419	13 848	16 577	19 578		
40		-	7 160	8 863	10 899	13 239	15 853	18 713		
45		-	6 654	8 344	10 341	12 615	15 138	17 879	_	
50	_	_	-	7 731	9 712	11 945	14 399	17 045	_	
55		-	-	-	8 981	11 195	13 604	16 178		
60	_	_	_	-	-	10 334	12 721	15 247	_	
65		-	-	_	-	-	11 717	14 218	_	
				I	1					
Power input in W	ı	1	1	1	,	1	,	, ,		
30	2 547	2 564	2 576	2 577	2 560	2 520	2 452	2 350	-	
35	-	2 884	2 882	2 879	2 867	2 841	2 796	2 725	-	
40	-	-	3 229	3 215	3 201	3 182	3 153	3 107	-	
45	-	-	3 633	3 601	3 578	3 559	3 539	3 511	-	
50	-	-	-	4 053	4 015	3 989	3 971	3 954	-	
55	-	-	-	-	4 527	4 488	4 465	4 453	-	
60	-	-	-	-	-	5 073	5 038	5 023	-	
65	-	-	-	-	-	-	5 707	5 682	-	
Current consum		T	T	T		T		T		
30	4.68	4.77	4.83	4.87	4.88	4.88	4.87	4.85	-	
35	-	5.11	5.15	5.18	5.19	5.18	5.18	5.17	-	
40	-	-	5.61	5.62	5.62	5.61	5.61	5.61	-	
45	-	-	6.20	6.19	6.18	6.17	6.17	6.18	-	
50	-	-	-	6.90	6.88	6.86	6.86	6.88	-	
55	-	-	-	-	7.72	7.70	7.70	7.72	-	
60	-	-	-	-	-	8.68	8.67	8.70	-	
65	-	-	-	-	-	-	9.80	9.83	-	
Mass flow in kg/l	h									
30	115	132	159	192	232	279	331	387	-	
35	-	130	157	190	230	276	326	382	-	
40	-	-	154	188	228	273	323	378	-	
45	-	-	148	184	224	270	321	375	-	
50	-	-	-	177	219	266	317	371	-	
55	-	-	-	-	212	260	312	368	-	
60	-	-	-	-	-	252	306	362	-	
65	-	-	-	-	-	-	296	355	-	
<u> </u>		•	•	•	•	•	•			
Coefficient of pe	•	1	T	1	T	T	1	,		
30	2.21	2.56	3.09	3.78	4.66	5.74	7.07	8.73	-	
35	-	2.16	2.63	3.24	3.98	4.87	5.93	7.18	-	
40	-	-	2.22	2.76	3.41	4.16	5.03	6.02	-	
45	-	-	1.83	2.32	2.89	3.54	4.28	5.09	-	
50	-	-	-	1.91	2.42	2.99	3.63	4.31	-	
55	-	-	-	-	1.98	2.49	3.05	3.63	-	
60	-	-	-	-	-	2.04	2.52	3.04	-	
65	-	-	-	-	-	-	2.05	2.50	-	

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

	• •	
Cooling capacity	14 820	W
Power input	4 396	W
Current consumption	7.60	Α
Mass flow	337	kg/h
C.O.P.	3.37	

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	70	dB(A)	
With accoustic hood	65	dB(A)	

All performance data +/- 5%

tc: Condensing temperature at dew point



# Danfoss scroll compressor. HRM060U4

# Performance data at 60 Hz, EN 12900 rating conditions

**R22** 

Cond. temp. in				Evapora	ating temperature	in °C (to)			
°C (tc)	-25	-20	-15	-10	-5	0	5	10	15
0 11 14									
Cooling capacit		7.000	0.000	40.004	42.250	40.044	40.420	22.002	
30	6 283	7 336	8 886	10 904	13 356	16 211	19 438	23 003	-
35	5 889	6 931	8 439	10 383	12 730	15 449	18 509	21 876	-
40	-	6 440	7 932	9 827	12 095	14 704	17 623	20 818	-
45	-	-	7 331	9 203	11 417	13 941	16 743	19 792	-
50	-	-	-	8 476	10 660	13 124	15 836	18 763	-
55	-	-	-	-	9 793	12 220	14 865	17 696	-
60	-	-	-	-	-	11 196	13 798	16 555	-
65	-	-	-	-	-	-	12 599	15 307	-
Power input in V	v								
30	3 028	3 049	3 063	3 064	3 043	2 996	2 915	2 795	-
35	3 428	3 424	3 423	3 419	3 405	3 374	3 320	3 237	-
40	-	3 853	3 829	3 812	3 796	3 773	3 738	3 685	-
45	-	-	4 300	4 262	4 236	4 214	4 189	4 157	_
50	-	-	-	4 789	4 744	4 714	4 693	4 673	_
55	-	-	-	-	5 341	5 294	5 267	5 252	_
60	-	-	-	-	-	5 974	5 933	5 915	_
65	-	-	_	-	_	-	6 709	6 679	_
		I	I	1	I	1			
Current consum	ption in A								
30	4.77	4.86	4.92	4.96	4.97	4.97	4.96	4.93	-
35	5.14	5.21	5.25	5.27	5.28	5.28	5.27	5.26	-
40	-	5.69	5.71	5.72	5.72	5.72	5.71	5.71	-
45	-	-	6.31	6.30	6.29	6.28	6.28	6.30	-
50	-	-	-	7.03	7.01	6.99	6.99	7.01	-
55	-	-	-	-	7.86	7.84	7.84	7.86	-
60	-	-	-	-	-	8.84	8.83	8.86	-
65	-	-	-	-	-	-	9.98	10.01	-
		•		•		•			
Mass flow in kg	'h								
30	137	158	189	229	277	332	394	461	-
35	133	155	187	226	274	328	389	455	-
40	-	150	183	223	271	325	385	449	-
45	-	-	176	218	267	321	381	445	-
50	-	-	-	210	260	316	377	441	-
55	-	-	-	-	251	309	371	436	-
60	-	-	-	-	-	299	362	429	-
65	-	-	-	-	-	-	351	420	-
•									
Coefficient of pe	•	· ·	2.00	2.50	4.20	E 44	6.07	0.00	
30	2.08	2.41	2.90	3.56	4.39	5.41	6.67	8.23	-
35	1.72	2.02	2.47	3.04	3.74	4.58	5.57	6.76	-
40	-	1.67	2.07	2.58	3.19	3.90	4.71	5.65	-
45	-	-	1.70	2.16	2.70	3.31	4.00	4.76	-
50	-	-	-	1.77	2.25	2.78	3.37	4.02	-
55	-	-	-	-	1.83	2.31	2.82	3.37	-
	-	-	-	-	-	1.87	2.33	2.80	-
60 65	-	-	-	-	_	-	1.88	2.29	-

Cooling capacity	15 836	W
Power input	4 693	W
Current consumption	6.99	Α
Mass flow	377	kg/h
C.O.P.	3.37	

to: Evaporating temperature at dew point

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

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	74	dB(A)
١	With accoustic hood	69	dB(A)

All performance data +/- 5%

tc: Condensing temperature at dew point



# Danfoss scroll compressor. HRM060U4

# 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
			1	•		•			
Cooling capacity	/ in W								
30	6 673	7 784	9 423	11 553	14 141	17 152	20 552	24 306	-
35	-	7 381	8 979	11 038	13 523	16 399	19 632	23 187	-
40	-	-	8 472	10 487	12 896	15 665	18 759	22 143	-
45	-	-	7 864	9 863	12 224	14 913	17 895	21 136	-
50	-	-	-	9 129	11 469	14 106	17 003	20 128	-
55	-	-	-	-	10 595	13 207	16 048	19 084	-
60	-	-	-	-	-	12 179	14 991	17 967	-
65	-	-	-	-	-	-	13 797	16 739	-
Power input in V			T	T		1	T		
30	3 028	3 049	3 063	3 064	3 043	2 996	2 915	2 795	-
35	-	3 424	3 423	3 419	3 405	3 374	3 320	3 237	-
40	-	-	3 829	3 812	3 796	3 773	3 738	3 685	-
45	-	-	4 300	4 262	4 236	4 214	4 189	4 157	-
50	-	-	-	4 789	4 744	4 714	4 693	4 673	-
55	-	-	-	-	5 341	5 294	5 267	5 252	-
60	-	-	-	-	-	5 974	5 933	5 915	-
65	-	-	-	-	-	-	6 709	6 679	-
Current consum	•	4.96	4.02	4.06	4.07	4.07	4.06	4.02	
30	4.77	4.86	4.92	4.96	4.97	4.97	4.96	4.93	
35	-	5.21	5.25	5.27	5.28	5.28	5.27	5.26	-
40	-	-	5.71	5.72	5.72	5.72	5.71	5.71	-
45	-	-	6.31	6.30	6.29	6.28	6.28	6.30	-
50	-	-	-	7.03	7.01	6.99	6.99	7.01	-
55	-	-	-	-	7.86	7.84	7.84	7.86	-
60	-	-	-	-	-	8.84	8.83	8.86	-
65	-	-	-	-	-	-	9.98	10.01	-
Mass flow in kg/	h								
30	136	157	188	228	275	330	392	459	
35	-	154	186	225	272	327	387	452	
40	_	-	182	222	269	323	383	447	
45		-	175	217	265	319	379	443	_
50	_	_	-	209	259	314	375	439	_
55				-	250	307	369	434	
60			_	-	-	297	360	427	
65	_	_	_	_	_	-	349	417	
•••							0 10	1111	
Coefficient of pe	erformance (C.C	).P.)							
30	2.20	2.55	3.08	3.77	4.65	5.73	7.05	8.70	-
35	-	2.16	2.62	3.23	3.97	4.86	5.91	7.16	-
40	-	-	2.21	2.75	3.40	4.15	5.02	6.01	-
45	-	-	1.83	2.31	2.89	3.54	4.27	5.08	-
50	-	-	-	1.91	2.42	2.99	3.62	4.31	-
55	-	-	-	-	1.98	2.49	3.05	3.63	-
60	-	-	-	-	-	2.04	2.53	3.04	-
65	-	-	-	-	-	-	2.06	2.51	_

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

	• •	
Cooling capacity	17 485	W
Power input	5 186	W
Current consumption	7.74	Α
Mass flow	398	kg/h
C.O.P.	3.37	

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)

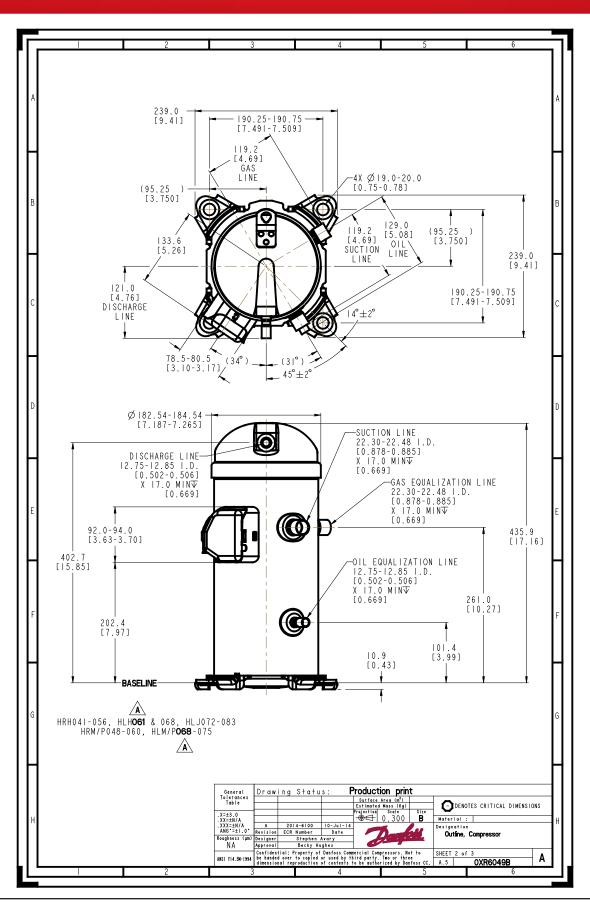
## Sound power data

Sound power level	74	dB(A)
With accoustic hood	69	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, HRM060U4

# **General Characteristics**

Model number (on compressor nameplate)		HRM060U4LP6
Code number for Singlepack*		120U1736
Code number for Industrial pack**		120U1733
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	80.95 c	m3/rev
Displacement @ Nominal speed	14.1 m3/h @ 2900 rpm - 17.0 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℃	2.316 Ω
Winding resistance between phases 1-3 +/- 7% at 25℃	2.330 Ω
Winding resistance between phases 2-3 +/- 7% at 25℃	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

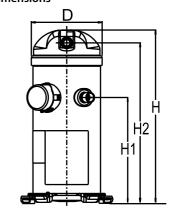
r arts simpped with compressor
Mounting kit with grommets and sleeves
Initial oil charge
Installation instructions

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

 $\hbox{*Singlepack: Compressor in cardboard box}\\$ 

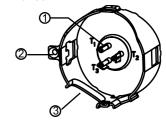
\*\*Industrial pack: 12 or 16 Unboxed compressors on pallet

#### **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, HRM060U4

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

# Solder sleeve adapter set



1: Rotolock ad	danter (S	uc & Dis)

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

Code no.
Code no.
120Z0057
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
No translation for 120Z5015	120Z5015



# Danfoss scroll compressor. HRM060U4

# Performance data at 50 Hz, EN 12900 rating conditions

**R22** 

Cond. temp. in				Evapora	ating temperature	in °C (to)			
°C (tc)	-25	-20	-15	-10	-5	0	5	10	15
Cooling capacit		0.400	7 400	0.204	44.070	12.070	40.404	40.400	
30	5 303	6 190	7 499	9 201	11 270	13 679	16 401	19 408	-
35	4 974	5 852	7 126	8 767	10 749	13 046	15 629	18 471	-
40	-	5 444	6 703	8 305	10 222	12 427	14 893	17 593	-
45	-	-	6 202	7 785	9 658	11 793	14 164	16 743	-
50	-	-	-	7 178	9 027	11 113	13 410	15 889	-
55	-	-	-	-	8 301	10 358	12 601	15 001	-
60	-	-	-	-	-	9 499	11 708	14 049	-
65	-	-	-	-	-	-	10 700	13 002	-
Power input in V	v								
30	2 547	2 564	2 576	2 577	2 560	2 520	2 452	2 350	_
35	2 888	2 884	2 882	2 879	2 867	2 841	2 796	2 725	_
40	-	3 250	3 229	3 215	3 201	3 182	3 153	3 107	_
45	-	-	3 633	3 601	3 578	3 559	3 539	3 511	_
50	-	-	-	4 053	4 015	3 989	3 971	3 954	_
55	-	-	-	-	4 527	4 488	4 465	4 453	_
60	_	-	_	_	-	5 073	5 038	5 023	_
65	-	_	_	_	-	-	5 707	5 682	_
		1	ı.	1	ı	1	1		
Current consum	ption in A								
30	4.68	4.77	4.83	4.87	4.88	4.88	4.87	4.85	-
35	5.05	5.11	5.15	5.18	5.19	5.18	5.18	5.17	-
40	-	5.59	5.61	5.62	5.62	5.61	5.61	5.61	-
45	-	-	6.20	6.19	6.18	6.17	6.17	6.18	_
50	-	_	-	6.90	6.88	6.86	6.86	6.88	_
55	_	_	_	-	7.72	7.70	7.70	7.72	_
60	-	_	_	_	-	8.68	8.67	8.70	_
65	-	_	-	-	-	-	9.80	9.83	-
		L	1		1	l		1 2.22	
Mass flow in kg/	/h								
30	115	133	159	193	234	280	332	389	-
35	112	131	157	191	231	277	328	384	-
40	-	127	154	189	229	275	325	380	_
45	-	-	149	184	226	272	322	377	-
50	-	-	-	178	221	268	319	374	_
55	-	_	_	-	213	262	314	370	_
60	-	-	-	-	-	253	307	364	-
65	-	-	_	-	_	-	298	357	_
'		· L	1	<u>.</u>	1	<u> </u>			
	erformance (C.C	· ·	1		1	1		1 1	
30	2.08	2.41	2.91	3.57	4.40	5.43	6.69	8.26	-
35	1.72	2.03	2.47	3.05	3.75	4.59	5.59	6.78	-
40	-	1.68	2.08	2.58	3.19	3.91	4.72	5.66	-
45	-	-	1.71	2.16	2.70	3.31	4.00	4.77	-
50	-	-	-	1.77	2.25	2.79	3.38	4.02	-
55	-	-	-	-	1.83	2.31	2.82	3.37	-
	-	-	-	-	-	1.87	2.32	2.80	-
60 65	-	+					1.88	2.29	

Cooling capacity	13 410	W
Power input	3 971	W
Current consumption	6.86	Α
Mass flow	319	kg/h
C.O.P.	3.38	

to: Evaporating temperature at dew point

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

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

Г	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. HRM060U4

# 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	r in W								
30	5 632	6 569	7 951	9 749	11 933	14 473	17 341	20 507	-
35	-	6 232	7 582	9 321	11 419	13 848	16 577	19 578	
40		-	7 160	8 863	10 899	13 239	15 853	18 713	
45		-	6 654	8 344	10 341	12 615	15 138	17 879	_
50	_	_	-	7 731	9 712	11 945	14 399	17 045	_
55		-	-	-	8 981	11 195	13 604	16 178	
60	_	_	_	_	-	10 334	12 721	15 247	_
65		-	-	_	-	-	11 717	14 218	_
				I	1				
Power input in W	ı	1	1	1	,	1	,	, ,	
30	2 547	2 564	2 576	2 577	2 560	2 520	2 452	2 350	-
35	-	2 884	2 882	2 879	2 867	2 841	2 796	2 725	-
40	-	-	3 229	3 215	3 201	3 182	3 153	3 107	-
45	-	-	3 633	3 601	3 578	3 559	3 539	3 511	-
50	-	-	-	4 053	4 015	3 989	3 971	3 954	-
55	-	-	-	-	4 527	4 488	4 465	4 453	-
60	-	-	-	-	-	5 073	5 038	5 023	-
65	-	-	-	-	-	-	5 707	5 682	-
Current consum		T	T	T		T		T	
30	4.68	4.77	4.83	4.87	4.88	4.88	4.87	4.85	-
35	-	5.11	5.15	5.18	5.19	5.18	5.18	5.17	-
40	-	-	5.61	5.62	5.62	5.61	5.61	5.61	-
45	-	-	6.20	6.19	6.18	6.17	6.17	6.18	-
50	-	-	-	6.90	6.88	6.86	6.86	6.88	-
55	-	-	-	-	7.72	7.70	7.70	7.72	-
60	-	-	-	-	-	8.68	8.67	8.70	-
65	-	-	-	-	-	-	9.80	9.83	-
Mass flow in kg/l	h								
30	115	132	159	192	232	279	331	387	-
35	-	130	157	190	230	276	326	382	-
40	-	-	154	188	228	273	323	378	-
45	-	-	148	184	224	270	321	375	-
50	-	-	-	177	219	266	317	371	-
55	-	-	-	-	212	260	312	368	-
60	-	-	-	-	-	252	306	362	-
65	-	-	-	-	-	-	296	355	-
<u> </u>		•	•	•	•	•	•		
Coefficient of pe	•	1	T	1	1	T	1	,	
30	2.21	2.56	3.09	3.78	4.66	5.74	7.07	8.73	-
35	-	2.16	2.63	3.24	3.98	4.87	5.93	7.18	-
40	-	-	2.22	2.76	3.41	4.16	5.03	6.02	-
45	-	-	1.83	2.32	2.89	3.54	4.28	5.09	-
50	-	-	-	1.91	2.42	2.99	3.63	4.31	-
55	-	-	-	-	1.98	2.49	3.05	3.63	-
60	-	-	-	-	-	2.04	2.52	3.04	-
65	-	-	-	-	-	-	2.05	2.50	-

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

	• •	
Cooling capacity	14 820	W
Power input	4 396	W
Current consumption	7.60	Α
Mass flow	337	kg/h
C.O.P.	3.37	

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	70	dB(A)	
With accoustic hood	65	dB(A)	

All performance data +/- 5%

tc: Condensing temperature at dew point



# Danfoss scroll compressor. HRM060U4

# Performance data at 60 Hz, EN 12900 rating conditions

**R22** 

Cond. temp. in				Evapora	ating temperature	in °C (to)			
°C (tc)	-25	-20	-15	-10	-5	0	5	10	15
0 11 14									
Cooling capacit		7.000	0.000	40.004	42.250	40.044	40.420	22.002	
30	6 283	7 336	8 886	10 904	13 356	16 211	19 438	23 003	-
35	5 889	6 931	8 439	10 383	12 730	15 449	18 509	21 876	-
40	-	6 440	7 932	9 827	12 095	14 704	17 623	20 818	-
45	-	-	7 331	9 203	11 417	13 941	16 743	19 792	-
50	-	-	-	8 476	10 660	13 124	15 836	18 763	-
55	-	-	-	-	9 793	12 220	14 865	17 696	-
60	-	-	-	-	-	11 196	13 798	16 555	-
65	-	-	-	-	-	-	12 599	15 307	-
Power input in V	v								
30	3 028	3 049	3 063	3 064	3 043	2 996	2 915	2 795	-
35	3 428	3 424	3 423	3 419	3 405	3 374	3 320	3 237	-
40	-	3 853	3 829	3 812	3 796	3 773	3 738	3 685	-
45	-	-	4 300	4 262	4 236	4 214	4 189	4 157	_
50	-	-	-	4 789	4 744	4 714	4 693	4 673	_
55	-	-	-	-	5 341	5 294	5 267	5 252	_
60	-	-	-	-	-	5 974	5 933	5 915	_
65	-	-	_	-	_	-	6 709	6 679	_
		I	I	1	I	1			
Current consum	ption in A								
30	4.77	4.86	4.92	4.96	4.97	4.97	4.96	4.93	-
35	5.14	5.21	5.25	5.27	5.28	5.28	5.27	5.26	-
40	-	5.69	5.71	5.72	5.72	5.72	5.71	5.71	-
45	-	-	6.31	6.30	6.29	6.28	6.28	6.30	-
50	-	-	-	7.03	7.01	6.99	6.99	7.01	-
55	-	-	-	-	7.86	7.84	7.84	7.86	-
60	-	-	-	-	-	8.84	8.83	8.86	-
65	-	-	-	-	-	-	9.98	10.01	-
				•		•			
Mass flow in kg	'h								
30	137	158	189	229	277	332	394	461	-
35	133	155	187	226	274	328	389	455	-
40	-	150	183	223	271	325	385	449	-
45	-	-	176	218	267	321	381	445	-
50	-	-	-	210	260	316	377	441	-
55	-	-	-	-	251	309	371	436	-
60	-	-	-	-	-	299	362	429	-
65	-	-	-	-	-	-	351	420	-
•									
Coefficient of pe	•	· ·	2.00	2.50	4.20	E 44	6.07	0.00	
30	2.08	2.41	2.90	3.56	4.39	5.41	6.67	8.23	-
35	1.72	2.02	2.47	3.04	3.74	4.58	5.57	6.76	-
40	-	1.67	2.07	2.58	3.19	3.90	4.71	5.65	-
45	-	-	1.70	2.16	2.70	3.31	4.00	4.76	-
50	-	-	-	1.77	2.25	2.78	3.37	4.02	-
55	-	-	-	-	1.83	2.31	2.82	3.37	-
	-	-	-	-	-	1.87	2.33	2.80	-
60 65	-	-	-	-	_	-	1.88	2.29	-

Cooling capacity	15 836	W
Power input	4 693	W
Current consumption	6.99	Α
Mass flow	377	kg/h
C.O.P.	3.37	

to: Evaporating temperature at dew point

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

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	74	dB(A)
١	With accoustic hood	69	dB(A)

All performance data +/- 5%

tc: Condensing temperature at dew point



# Danfoss scroll compressor. HRM060U4

# 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
<u>.</u>			•	•	•	•	•		
Cooling capacity	y in W			_	_	_	1		
30	6 673	7 784	9 423	11 553	14 141	17 152	20 552	24 306	-
35	-	7 381	8 979	11 038	13 523	16 399	19 632	23 187	-
40	-	-	8 472	10 487	12 896	15 665	18 759	22 143	-
45	-	-	7 864	9 863	12 224	14 913	17 895	21 136	-
50	-	-	-	9 129	11 469	14 106	17 003	20 128	-
55	-	-	-	-	10 595	13 207	16 048	19 084	-
60	-	-	-	-	-	12 179	14 991	17 967	-
65	-	-	-	-	-	-	13 797	16 739	-
Power input in V			T	1		1	T		
30	3 028	3 049	3 063	3 064	3 043	2 996	2 915	2 795	-
35	-	3 424	3 423	3 419	3 405	3 374	3 320	3 237	-
40	-	-	3 829	3 812	3 796	3 773	3 738	3 685	-
45	-	-	4 300	4 262	4 236	4 214	4 189	4 157	-
50	-	-	-	4 789	4 744	4 714	4 693	4 673	-
55	-	-	-	-	5 341	5 294	5 267	5 252	-
60	-	-	-	-	-	5 974	5 933	5 915	-
65	-	-	-	-	-	-	6 709	6 679	-
Current consum	•	4.00	4.00	4.00	4.07	4.07	1.00	4.00	
30	4.77	4.86	4.92	4.96	4.97	4.97	4.96	4.93	-
35	-	5.21	5.25	5.27	5.28	5.28	5.27	5.26	-
40	-	-	5.71	5.72	5.72	5.72	5.71	5.71	-
45	-	-	6.31	6.30	6.29	6.28	6.28	6.30	-
50	-	-	-	7.03	7.01	6.99	6.99	7.01	-
55	-	-	-	-	7.86	7.84	7.84	7.86	-
60	-	-	-	-	-	8.84	8.83	8.86	-
65	-	-	-	-	-	-	9.98	10.01	-
Mass flow in kg/	h								
Mass flow in kg/ 30	136	157	188	228	275	330	392	459	
35	-	154	186	225	272	327	387	459	
40	<u> </u>	-	182	222	269	323	383	452	
45	-	-	175	217	265	319	383	447	<u> </u>
50	-	-	-	209	259	314	375	439	-
	-	-	-	- 209				t	
55 60	<u> </u>	-	-	-	250	307 297	369 360	434 427	<u> </u>
+	-	<del>-</del>	-	-	-	291		427	-
65	-						349	41/	
Coefficient of pe	erformance (C.C	).P.)							
30	2.20	2.55	3.08	3.77	4.65	5.73	7.05	8.70	_
35	-	2.16	2.62	3.23	3.97	4.86	5.91	7.16	
40		-	2.02	2.75	3.40	4.15	5.02	6.01	
45		-	1.83	2.73	2.89	3.54	4.27	5.08	
50		-	-	1.91	2.42	2.99	3.62	4.31	
55	<u> </u>	-	-	-	1.98	2.49	3.05	3.63	
60	-	-	-	-	-	2.49	2.53	3.04	
00		ļ -	-	-	-	-	2.55	2.51	-

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

	• •	
Cooling capacity	17 485	W
Power input	5 186	W
Current consumption	7.74	Α
Mass flow	398	kg/h
C.O.P.	3.37	

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)

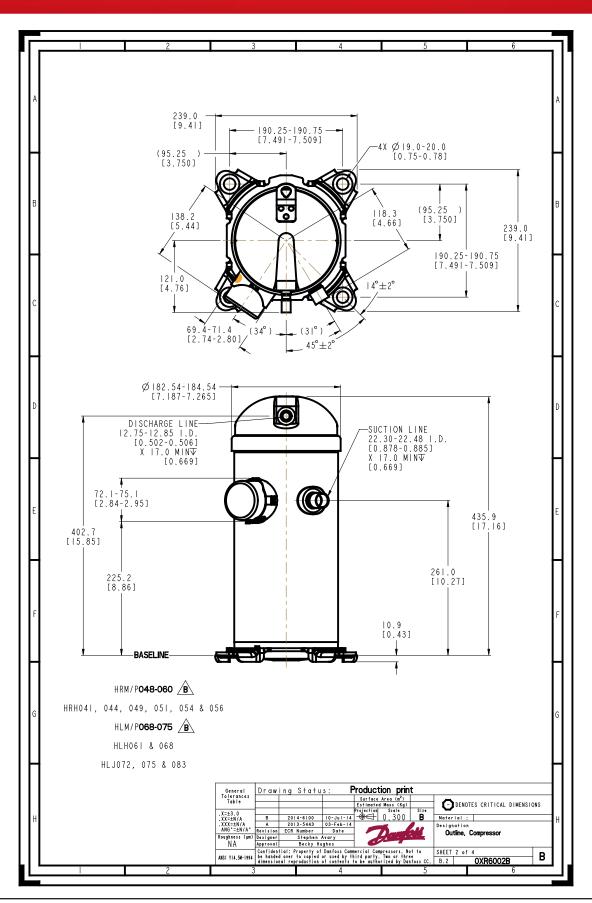
## Sound power data

Sound power level	74	dB(A)
With accoustic hood	69	dB(A)

All performance data +/- 5%

tc: Condensing temperature at dew point





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