

ENGINEERING  
TOMORROW

*Danfoss*

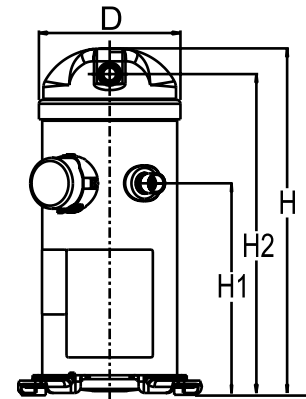
Datasheets

# Danfoss scroll compressors **H series**



**General Characteristics**

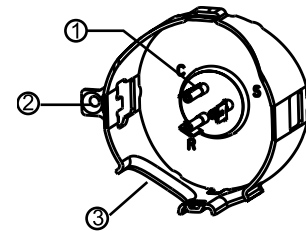
Model number (on compressor nameplate)		<b>HRM051U1LP6A</b>
Code number for Singlepack		<b>120U3211</b>
Code number for Industrial pack		
Drawing number		0XR6002B-2
Suction and discharge connections		Brazed
Suction connection		7/8" ODF
Discharge connection		1/2" ODF
Oil sight glass		None
Oil equalization connection		None
Oil drain connection		None
LP gauge port		None
IPR valve		Yes
Swept volume		4.2 in <sup>3</sup> /rev
Displacement @ Nominal speed		510 cfh @ 3500 rpm
Net weight		82 lbs
Oil charge		53 oz, PVE --
Maximum system test pressure Low Side / High side		- psi / - psi
Maximum differential test pressure		- psi
Maximum number of starts per hour		-
Refrigerant charge limit		12 lbs
Approved refrigerants		R22

**Dimensions**


D=7.2 inch, H=17.9 inch,  
H1=11 inch, H2=16.6 inch, H3=- inch

**Electrical Characteristics**

Nominal voltage	208-230V/1/60Hz
Voltage range	187-253 V
Winding resistance (main / start) at 25°C	0.32 Ω / 0.82 Ω
Run capacitors A + C	60 uF + - uF
Start capacitor B	161-193 uF
Start relay	3ARR3*3L*
Rated Load Amps (RLA)	25.6 A
Maximum Continuous Current (MCC)	40 A
Locked Rotor Amps (LRA)	150 A
Motor protection	Internal overload protector

**Terminal box**


IP22

- 1: Spade connectors 1/4"
- 2: Earth connection
- 3: Power cable passage

**Recommended Installation torques**

Oil sight glass	39 ft.lbs
Power connections / Earth connection	0 ft.lbs / 0 ft.lbs

**Parts shipped with compressor**

Mounting kit with grommets and sleeves
Initial oil charge
Installation instructions

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

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"~7/8"), (1"~1/2")	120Z0127
Gasket set, 1", 1-1/4", 1-3/4", OSG gaskets black & white	8156009

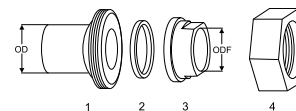
Oil / lubricants	Code no.
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Crankcase heaters	Code no.
Belt type crankcase heater, 50 W, 230 V, CE mark, UL	120Z0057

Miscellaneous accessories	Code no.
Acoustic hood	120Z5084
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	120Z5064
Mounting kit for 1 scroll compressor including 4 grommets, 4 sleeves, 4 bolts, 4 washers	120Z5031
No translation for 120Z5015	120Z5015

Solder sleeve adapter set



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

**Performance data at 60 Hz, ARI rating conditions**
**R22**

Cond. temp. in °F (tc)	Evaporating temperature in °F (to)								
	-10	0	10	20	30	40	45	50	55

**Cooling capacity in Btu/h**

90	19 882	24 115	30 140	37 819	47 009	57 572	63 325	69 368	75 684
100	-	22 675	28 556	35 965	44 762	54 808	60 255	65 962	71 910
110	-	-	26 728	33 978	42 492	52 130	57 327	62 752	68 388
120	-	-	-	31 703	40 044	49 384	54 386	59 585	64 963
130	-	-	-	-	37 264	46 418	51 279	56 306	61 483
140	-	-	-	-	34 001	43 076	47 852	52 764	57 793
150	-	-	-	-	-	39 207	43 953	48 803	53 740

**Power input in W**

90	2 819	2 790	2 773	2 752	2 712	2 636	2 579	2 508	2 420
100	-	3 197	3 149	3 119	3 089	3 045	3 012	2 970	2 917
110	-	-	3 601	3 541	3 502	3 471	3 452	3 430	3 401
120	-	-	-	4 045	3 978	3 940	3 926	3 912	3 898
130	-	-	-	-	4 543	4 477	4 458	4 445	4 436
140	-	-	-	-	5 223	5 111	5 076	5 053	5 039
150	-	-	-	-	-	5 866	5 806	5 763	5 735

**Current consumption in A**

90	12.14	12.33	12.45	12.50	12.51	12.48	12.46	12.44	12.41
100	-	13.44	13.50	13.52	13.52	13.51	13.50	13.50	13.50
110	-	-	14.96	14.94	14.93	14.92	14.93	14.94	14.97
120	-	-	-	16.79	16.75	16.74	16.76	16.79	16.83
130	-	-	-	-	19.00	18.99	19.01	19.05	19.11
140	-	-	-	-	21.71	21.68	21.70	21.75	21.82
150	-	-	-	-	-	24.83	24.85	24.90	24.98

**Mass flow in lbs/h**

90	265	318	391	485	595	720	787	858	931
100	-	311	386	479	588	712	778	846	918
110	-	-	377	472	582	705	770	838	908
120	-	-	-	460	573	697	763	831	901
130	-	-	-	-	559	686	753	822	893
140	-	-	-	-	537	669	739	809	881
150	-	-	-	-	-	645	717	790	865

**Energy Efficiency Ratio (E.E.R.)**

90	7.05	8.64	10.87	13.74	17.33	21.84	24.55	27.66	31.28
100	-	7.09	9.07	11.53	14.49	18.00	20.00	22.21	24.66
110	-	-	7.42	9.60	12.13	15.02	16.60	18.30	20.11
120	-	-	-	7.84	10.07	12.54	13.85	15.23	16.66
130	-	-	-	-	8.20	10.37	11.50	12.67	13.86
140	-	-	-	-	6.51	8.43	9.43	10.44	11.47
150	-	-	-	-	-	6.68	7.57	8.47	9.37

**Nominal performance at to = 45 °F, tc = 130 °F**

Cooling capacity	51 279	Btu/h	Current consumption	19.01	A
Power input	4 458	W	Mass flow	753	lbs/h
E.E.R.	11.50				

**Pressure switch settings**

Maximum HP switch setting	421	psi(g)
Minimum LP switch setting	7	psi(g)
LP pump down setting	19	psi(g)

T 0 : Evaporating temperature at dew point

T C : Condensing temperature at dew point

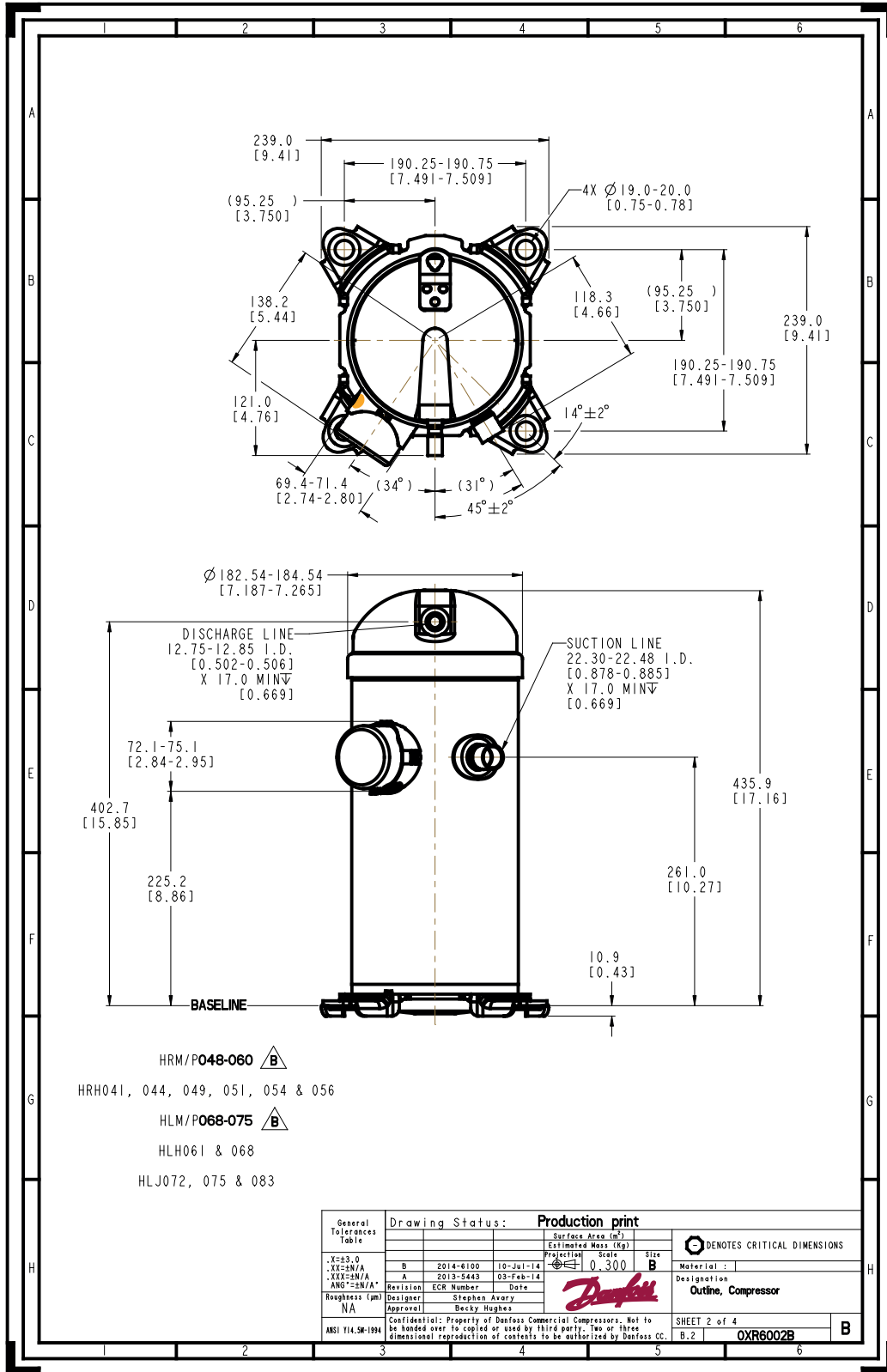
Rating conditions : Superheat = 20 °F , Subcooling = 15 °F

All performance data +/- 5%

**Sound power data**

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

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