

ENGINEERING
TOMORROW

Danfoss

Datasheets

Danfoss scroll compressors **H series**



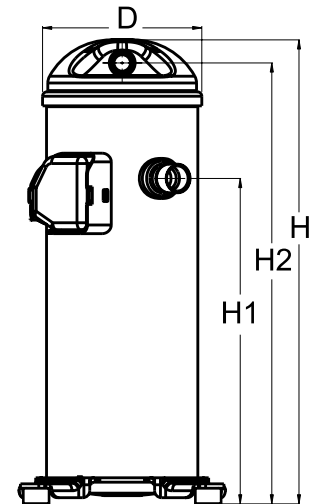
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General Characteristics

Model number (on compressor nameplate)		HLJ083T4LC6
Code number for Singlepack*		120U1401
Code number for Industrial pack**		120U1398
Drawing number		0XR6089B-1
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		4.76 in ³ /rev
Displacement @ Nominal speed		480 cfh @ 2900 rpm - 579 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		R410A

Dimensions

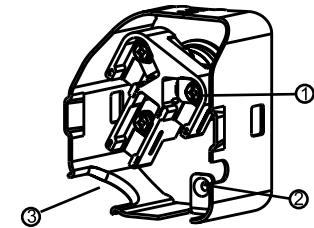


D=7.2 inch, H=17.9 inch,
H1=11 inch, H2=16.6 inch, H3=- inch

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 77°F	1.617 Ω
Winding resistance between phases 1-3 +/- 7% at 77°F	1.595 Ω
Winding resistance between phases 2-3 +/- 7% at 77°F	1.630 Ω
Rated Load Amps (RLA)	13 A
Maximum Continuous Current (MCC)	19 A
Locked Rotor Amps (LRA)	100 A
Motor protection	Internal overload protector

Terminal box



IP22
1: Screw connectors 10-32 UNF x 9.5
2: Earth connection
3: Power cable passage

Recommended Installation torques

Oil sight glass	39 ft.lbs
Power connections / Earth connection	2 ft.lbs / 1 ft.lbs

Parts shipped with compressor

Mounting kit with grommets and sleeves
Initial oil charge
Installation instructions

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

*Singlepack: Compressor in cardboard box

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

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

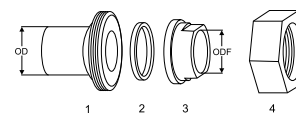
Rotolock accessories, sets	Code no.
Solder sleeve adapter set (1-1/4"~7/8"), (1"~1/2")	120Z0127
Gasket set, 1", 1-1/4", 1-3/4", OSG gaskets black & white	8156009

Oil / lubricants	Code no.
PVE lubricant, 320HV (FVC68D), 1 litre can	120Z5034

Crankcase heaters	Code no.
Belt type crankcase heater, 65 W, 230 V, CE mark, UL	120Z0059
Belt type crankcase heater, 65 W, 400 V, CE mark, UL	120Z0060
Belt type crankcase heater, 70 W, 240 V, CE mark, UL	120Z5040
Belt type crankcase heater, 70 W, 240 V, CE mark, UL	120Z5040

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 for 1 scroll compressor including 4 grommets, 4 sleeves, 4 bolts, 4 washers	120Z5031
Terminal box cover	120Z5018

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 50 Hz, ARI rating conditions
R410A

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

Cooling capacity in Btu/h

90	27 853	35 920	45 027	55 751	68 668	84 355	93 418	103 390	114 343
100	24 491	33 084	42 219	52 474	64 425	78 649	86 794	95 723	105 509
110	19 683	29 197	38 757	48 938	60 318	73 474	80 898	88 983	97 799
120	-	23 861	34 239	44 742	55 947	68 429	75 330	82 767	90 812
130	-	-	28 267	39 486	50 910	63 115	69 690	76 677	84 148
140	-	-	-	32 770	44 808	57 130	63 577	70 312	77 406
150	-	-	-	-	37 240	50 074	56 591	63 271	70 186

Power input in W

90	4 058	4 119	4 152	4 153	4 117	4 042	3 988	3 923	3 846
100	4 472	4 549	4 600	4 622	4 609	4 560	4 520	4 469	4 407
110	4 940	5 027	5 090	5 125	5 129	5 099	5 069	5 030	4 979
120	-	5 565	5 633	5 676	5 691	5 673	5 651	5 619	5 577
130	-	-	6 245	6 289	6 307	6 296	6 277	6 250	6 213
140	-	-	-	6 976	6 992	6 980	6 962	6 936	6 901
150	-	-	-	-	7 758	7 739	7 718	7 691	7 655

Current consumption in A

90	9.05	9.02	8.99	8.97	8.95	8.94	8.94	8.94	8.95
100	9.46	9.49	9.50	9.50	9.49	9.47	9.46	9.45	9.43
110	9.99	10.07	10.13	10.15	10.15	10.12	10.10	10.07	10.03
120	-	10.81	10.91	10.95	10.95	10.91	10.87	10.83	10.77
130	-	-	11.86	11.93	11.93	11.87	11.82	11.76	11.68
140	-	-	-	13.11	13.11	13.04	12.97	12.89	12.79
150	-	-	-	-	14.52	14.43	14.35	14.25	14.12

Mass flow in lbs/h

90	351	446	551	673	820	999	1 102	1 216	1 341
100	325	432	544	667	808	975	1 070	1 175	1 289
110	277	402	526	656	798	960	1 050	1 148	1 255
120	-	350	493	635	784	947	1 035	1 130	1 232
130	-	-	437	598	759	929	1 019	1 114	1 214
140	-	-	-	537	718	901	995	1 093	1 194
150	-	-	-	-	654	856	958	1 061	1 166

Energy Efficiency Ratio (E.E.R.)

90	6.86	8.72	10.84	13.43	16.68	20.87	23.42	26.35	29.73
100	5.48	7.27	9.18	11.35	13.98	17.25	19.20	21.42	23.94
110	3.98	5.81	7.61	9.55	11.76	14.41	15.96	17.69	19.64
120	-	4.29	6.08	7.88	9.83	12.06	13.33	14.73	16.28
130	-	-	4.53	6.28	8.07	10.03	11.10	12.27	13.54
140	-	-	-	4.70	6.41	8.19	9.13	10.14	11.22
150	-	-	-	-	4.80	6.47	7.33	8.23	9.17

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

Cooling capacity	69 690	Btu/h	Current consumption	11.82	A
Power input	6 277	W	Mass flow	1 019	lbs/h
E.E.R.	11.10				

Pressure switch settings

Maximum HP switch setting	653	psi(g)
Minimum LP switch setting	22	psi(g)
LP pump down setting	33	psi(g)

T 0 : Evaporating temperature at dew point

T C : Condensing temperature at dew point

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

Tolerance according EN12900

Sound power data

Sound power level	71	dB(A)
With acoustic hood	66	dB(A)

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Performance data at 60 Hz, ARI rating conditions
R410A

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

Cooling capacity in Btu/h

90	33 058	42 627	53 434	66 161	81 491	100 105	110 856	122 685	135 676
100	29 102	39 300	50 148	62 330	76 528	93 423	103 095	113 698	125 316
110	23 437	34 731	46 090	58 196	71 731	87 376	96 204	105 815	116 296
120	-	28 436	40 775	53 274	66 615	81 480	89 698	98 552	108 129
130	-	-	33 718	47 079	60 696	75 250	83 092	91 424	100 332
140	-	-	-	39 128	53 489	68 201	75 902	83 946	92 420
150	-	-	-	-	44 509	59 848	67 642	75 634	83 907

Power input in W

90	4 868	4 941	4 981	4 982	4 939	4 849	4 784	4 706	4 614
100	5 369	5 461	5 522	5 547	5 533	5 473	5 425	5 364	5 289
110	5 936	6 038	6 113	6 156	6 161	6 125	6 089	6 042	5 981
120	-	6 691	6 772	6 824	6 841	6 820	6 793	6 755	6 704
130	-	-	7 513	7 566	7 588	7 574	7 552	7 520	7 475
140	-	-	-	8 400	8 419	8 404	8 383	8 352	8 310
150	-	-	-	-	9 348	9 325	9 301	9 268	9 225

Current consumption in A

90	7.86	7.92	7.99	8.06	8.15	8.26	8.33	8.40	8.49
100	8.33	8.42	8.50	8.57	8.65	8.74	8.79	8.85	8.92
110	8.85	8.98	9.08	9.17	9.25	9.34	9.38	9.43	9.48
120	-	9.61	9.76	9.87	9.97	10.06	10.10	10.15	10.19
130	-	-	10.53	10.69	10.82	10.92	10.97	11.02	11.06
140	-	-	-	11.62	11.79	11.93	11.99	12.05	12.10
150	-	-	-	-	12.92	13.10	13.18	13.25	13.31

Mass flow in lbs/h

90	417	529	654	799	973	1 185	1 307	1 442	1 591
100	387	513	646	792	960	1 158	1 271	1 395	1 531
110	330	479	626	780	949	1 141	1 249	1 366	1 492
120	-	417	587	756	933	1 127	1 233	1 346	1 467
130	-	-	521	713	905	1 108	1 215	1 328	1 447
140	-	-	-	642	857	1 076	1 188	1 304	1 425
150	-	-	-	-	782	1 023	1 145	1 268	1 394

Energy Efficiency Ratio (E.E.R.)

90	6.79	8.63	10.73	13.28	16.50	20.64	23.17	26.07	29.41
100	5.42	7.20	9.08	11.24	13.83	17.07	19.00	21.20	23.69
110	3.95	5.75	7.54	9.45	11.64	14.27	15.80	17.51	19.44
120	-	4.25	6.02	7.81	9.74	11.95	13.20	14.59	16.13
130	-	-	4.49	6.22	8.00	9.94	11.00	12.16	13.42
140	-	-	-	4.66	6.35	8.12	9.05	10.05	11.12
150	-	-	-	-	4.76	6.42	7.27	8.16	9.10

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

Cooling capacity	83 092	Btu/h	Current consumption	10.97	A
Power input	7 552	W	Mass flow	1 215	lbs/h
E.E.R.	11.00				

Pressure switch settings

Maximum HP switch setting	653	psi(g)
Minimum LP switch setting	22	psi(g)
LP pump down setting	33	psi(g)

T 0 : Evaporating temperature at dew point

T C : Condensing temperature at dew point

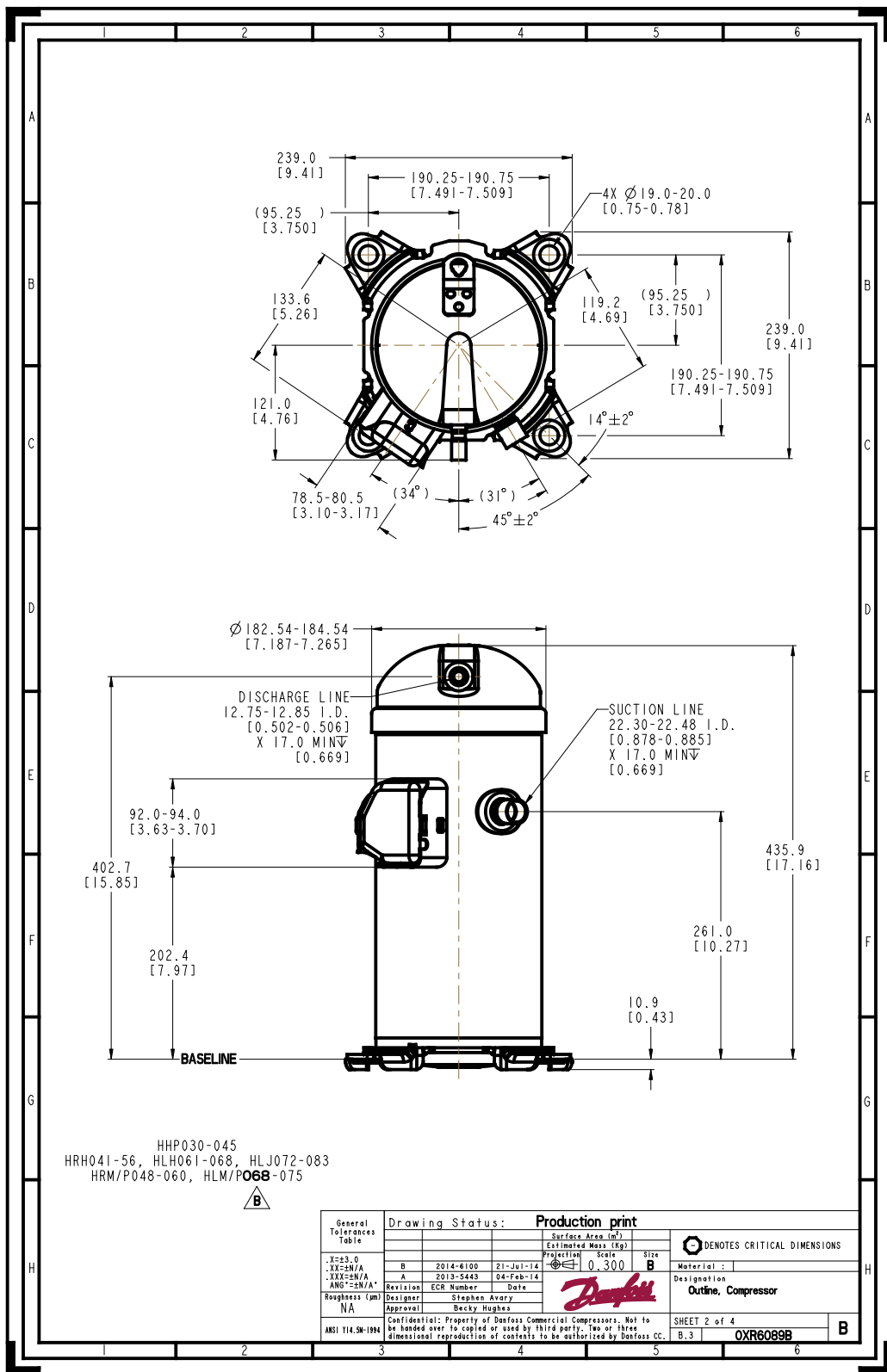
Rating conditions : Superheat = 20 °F , Subcooling = 15 °F

Tolerance according EN12900

Sound power data

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

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