

ENGINEERING
TOMORROW

Danfoss

Datasheets

Danfoss scroll compressors **H series**



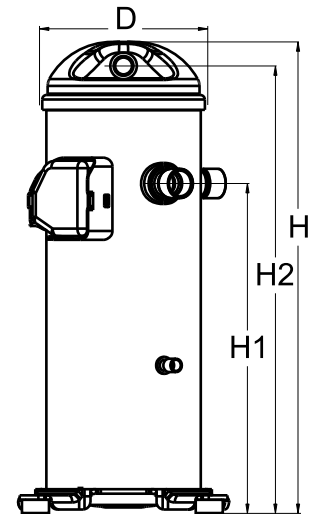
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www.danfoss.com/odsg

General Characteristics

Model number (on compressor nameplate)		HCP120T4LC6
Code number for Singlepack*		120U0401
Code number for Industrial pack**		120U0398
Drawing number		0SR4103B-2
Suction and discharge connections		Brazed
Suction connection		1-1/8" ODF
Discharge connection		7/8" ODF
Oil sight glass		None
Oil equalization connection		None
Oil drain connection		None
LP gauge port		None
IPR valve		None
Swept volume		9.91 in ³ /rev
Displacement @ Nominal speed		998 cfh @ 2900 rpm - 1204 cfh @ 3500 rpm
Net weight		100 lbs
Oil charge		90 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		16 lbs
Approved refrigerants		R407C

Dimensions

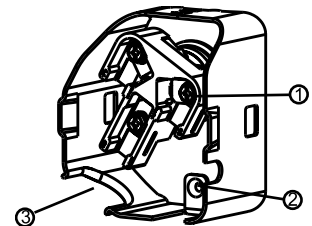


D=7.2 inch, H=21.5 inch,
H1=14.5 inch, H2=20.4 inch, H3=- inch

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	1.125 Ω
Winding resistance between phases 1-3 +/- 7% at 77°F	1.110 Ω
Winding resistance between phases 2-3 +/- 7% at 77°F	1.100 Ω
Rated Load Amps (RLA)	19.2 A
Maximum Continuous Current (MCC)	25 A
Locked Rotor Amps (LRA)	140 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.

Solder sleeve, P02 (1-3/4" Rotolock, 1-1/8" ODF)	8153004
Angle adapter, C02 (1-3/4" Rotolock, 1-1/8" ODF)	8168005
Rotolock valve, V02 (1-3/4" Rotolock, 1-1/8" ODF)	8168028
Gasket, 1-3/4"	8156132

Rotolock accessories, discharge side
Code no.

Rotolock valve, V05 (1-1/4" Rotolock, 7/8" ODF)	8168030
Gasket, 1-3/4"	8156132

Rotolock accessories, sets
Code no.

Solder sleeve adapter set, 1-1/8" ODF & 7/8" ODF	120Z0125
Valve set, V02(1"3/4~1"1/8), V05(1"1/4~7/8")	120Z0403
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
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Crankcase heaters
Code no.

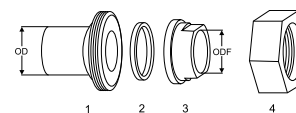
Belt type crankcase heater, 65 W, 230 V, CE mark, UL	120Z0059
Belt type crankcase heater, 65 W, 400 V, CE mark, UL	120Z0060
Belt type crankcase heater, 70 W, 240 V, CE mark, UL	120Z5040
Belt type crankcase heater, 70 W, 240 V, CE mark, UL	120Z5040

Miscellaneous accessories
Code no.

Acoustic hood	120Z5045
Discharge thermostat kit	7750009

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

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
R407C

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

Cooling capacity in Btu/h

90	31 488	40 811	53 501	69 340	88 113	109 603	133 595	146 461	173 800
100	-	38 702	49 848	64 497	82 434	103 442	127 304	140 239	167 979
110	-	37 541	46 763	59 842	76 563	96 709	120 063	132 876	160 638
120	-	-	44 397	55 528	70 653	89 557	112 024	124 525	151 930
130	-	-	-	51 705	64 855	82 138	103 337	115 338	142 005
140	-	-	-	-	59 321	74 603	94 155	105 465	131 016
150	-	-	-	-	-	67 104	84 629	95 058	119 114

Power input in W

90	6 135	6 423	6 588	6 674	6 723	6 778	6 883	6 968	7 228
100	-	7 134	7 340	7 447	7 496	7 533	7 599	7 657	7 849
110	-	7 907	8 165	8 304	8 367	8 397	8 436	8 473	8 609
120	-	-	9 089	9 272	9 360	9 395	9 420	9 442	9 533
130	-	-	-	10 377	10 501	10 553	10 575	10 589	10 647
140	-	-	-	-	11 818	11 898	11 929	11 940	11 978
150	-	-	-	-	-	13 455	13 507	13 521	13 551

Current consumption in A

90	13.07	13.14	13.23	13.32	13.41	13.50	13.57	13.60	13.65
100	-	14.04	14.10	14.16	14.23	14.30	14.37	14.40	14.46
110	-	15.07	15.09	15.13	15.18	15.25	15.31	15.35	15.41
120	-	-	16.30	16.31	16.36	16.41	16.48	16.52	16.59
130	-	-	-	17.80	17.83	17.88	17.96	18.00	18.09
140	-	-	-	-	19.69	19.75	19.83	19.88	19.99
150	-	-	-	-	-	22.08	22.17	22.23	22.36

Mass flow in lbs/h

90	433	562	719	907	1 130	1 390	1 691	1 858	2 226
100	-	552	707	894	1 114	1 372	1 671	1 836	2 202
110	-	535	690	875	1 094	1 351	1 648	1 812	2 176
120	-	-	664	849	1 068	1 324	1 620	1 784	2 147
130	-	-	-	813	1 033	1 289	1 586	1 750	2 113
140	-	-	-	-	987	1 245	1 543	1 707	2 071
150	-	-	-	-	-	1 188	1 488	1 654	2 020

Energy Efficiency Ratio (E.E.R.)

90	5.13	6.35	8.12	10.39	13.11	16.17	19.41	21.02	24.05
100	-	5.42	6.79	8.66	11.00	13.73	16.75	18.31	21.40
110	-	4.75	5.73	7.21	9.15	11.52	14.23	15.68	18.66
120	-	-	4.88	5.99	7.55	9.53	11.89	13.19	15.94
130	-	-	-	4.98	6.18	7.78	9.77	10.89	13.34
140	-	-	-	-	5.02	6.27	7.89	8.83	10.94
150	-	-	-	-	-	4.99	6.27	7.03	8.79

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

Cooling capacity	115 338	Btu/h	Current consumption	18.00	A
Power input	10 589	W	Mass flow	1 750	lbs/h
E.E.R.	10.89				

Pressure switch settings

Maximum HP switch setting	435	psi(g)
Minimum LP switch setting	7	psi(g)
LP pump down setting	15	psi(g)

T 0 : Evaporating temperature at dew point

T C : Condensing temperature at dew point

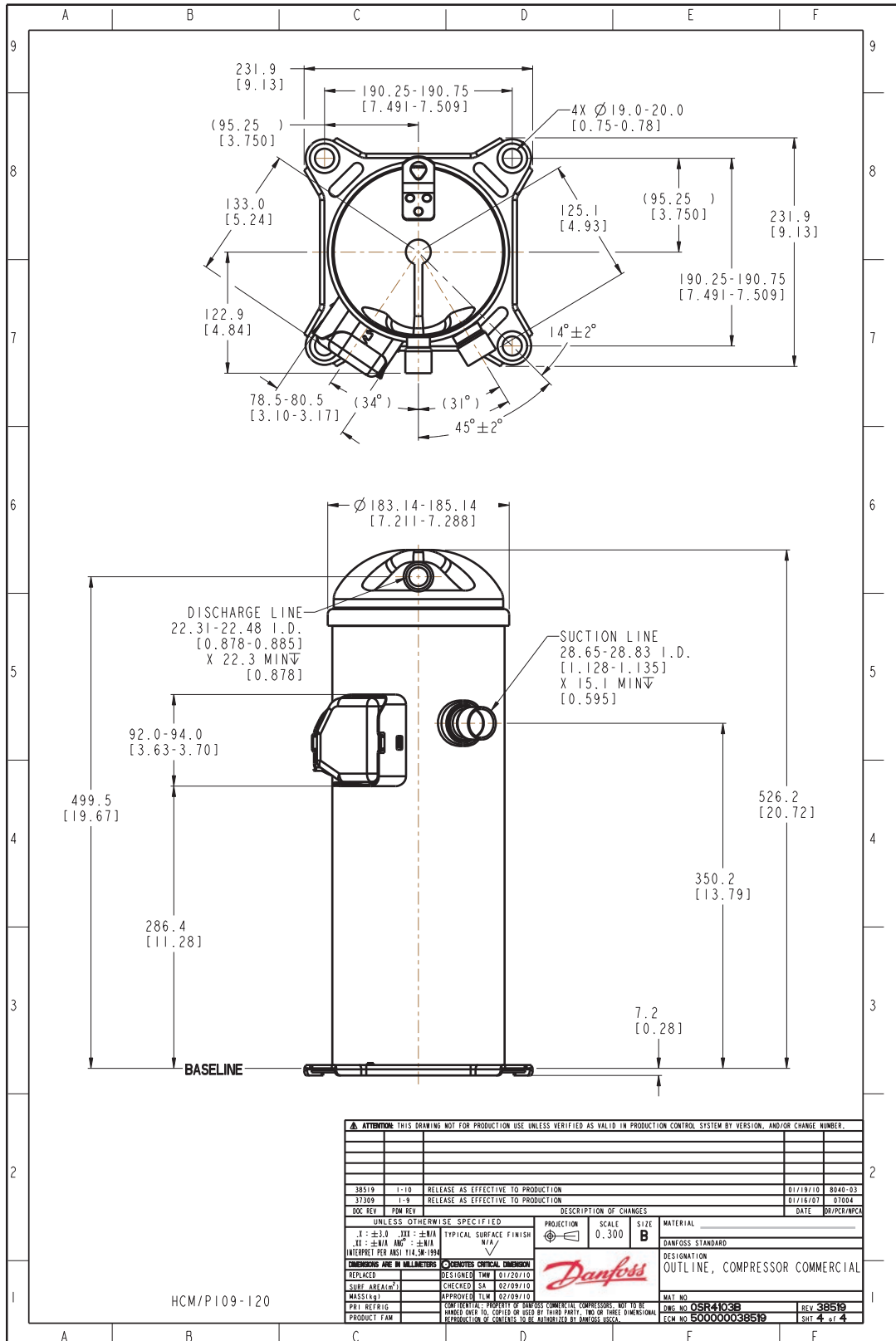
Rating conditions : Superheat = 20 °F , Subcooling = 15 °F

All performance data +/- 5%

Sound power data

Sound power level	77	dB(A)
With acoustic hood	72	dB(A)

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