

Datasheets

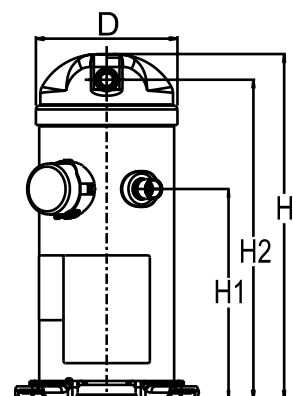
Danfoss scroll compressors **H series**



General Characteristics

Model number (on compressor nameplate)		HRH031U4LP6
Code number for Singlepack*		120U1191
Code number for Industrial pack**		120U1188
Drawing number		0XC6301B-2
Suction and discharge connections		Brazed
Suction connection		3/4 " 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		29.69 cm ³ /rev
Displacement @ Nominal speed		5.2 m ³ /h @ 2900 rpm - 6.2 m ³ /h @ 3500 rpm
Net weight		30.84 kg
Oil charge		1.06 litre, PVE --
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		3.63 kg
Approved refrigerants		R410A

Dimensions

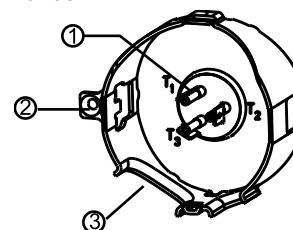


D=164.5 mm
H=413 mm
H1=250 mm
H2=379 mm
H3=- mm

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°C	4.664 Ω
Winding resistance between phases 1-3 +/- 7% at 25°C	4.660 Ω
Winding resistance between phases 2-3 +/- 7% at 25°C	3.420 Ω
Rated Load Amps (RLA)	6.4 A
Maximum Continuous Current (MCC)	10 A
Locked Rotor Amps (LRA)	45 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	52.5 Nm
Power connections / Earth connection	0 Nm / 0 Nm

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.

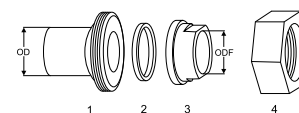
Solder sleeve, P04 (1-1/4" Rotolock, 3/4" ODF)	8153008
Angle adapter, C04 (1-1/4" Rotolock, 3/4" ODF)	8168006
Rotolock valve, V04 (1-1/4" Rotolock, 3/4" ODF)	8168029
Gasket, 1-1/4"	8156131

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

Solder sleeve adapter set



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

Rotolock accessories, sets

Code no.

Solder sleeve adapter set (1-1/4" Rotolock, 3/4" ODF), (1" Rotolock, 1/2" ODF)	120Z0126
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, 40 W, 230 V, CE mark, UL	120Z0055
Belt type crankcase heater, 40 W, 400 V, CE mark, UL	120Z0056

Miscellaneous accessories

Code no.

Acoustic hood	120Z5043
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

Performance data at 50 Hz, EN 12900 rating conditions

R410A

Cond. temp. in °C (tc)	Evaporating temperature in °C (to)							
	-25	-20	-15	-10	-5	0	5	10

Cooling capacity in W

30	2 206	2 886	3 715	4 706	5 871	7 224	8 775	10 539	-
35	1 981	2 639	3 437	4 385	5 497	6 786	8 263	9 943	-
40	-	2 390	3 154	4 059	5 118	6 341	7 744	9 337	-
45	-	-	2 863	3 723	4 726	5 884	7 210	8 715	-
50	-	-	-	3 370	4 316	5 407	6 654	8 070	-
55	-	-	-	-	3 881	4 901	6 066	7 389	-
60	-	-	-	-	-	4 355	5 434	6 658	-
65	-	-	-	-	-	-	4 729	5 843	-

Power input in W

30	1 531	1 510	1 495	1 482	1 470	1 457	1 441	1 418	-
35	1 765	1 736	1 712	1 692	1 673	1 653	1 630	1 601	-
40	-	1 991	1 959	1 932	1 906	1 880	1 851	1 817	-
45	-	-	2 240	2 206	2 174	2 142	2 108	2 069	-
50	-	-	-	2 516	2 478	2 441	2 402	2 359	-
55	-	-	-	-	2 822	2 780	2 737	2 690	-
60	-	-	-	-	-	3 162	3 115	3 065	-
65	-	-	-	-	-	-	3 540	3 487	-

Current consumption in A

30	3.52	3.53	3.53	3.52	3.50	3.48	3.43	3.37	-
35	3.80	3.79	3.79	3.78	3.76	3.74	3.70	3.65	-
40	-	4.10	4.08	4.07	4.05	4.03	3.99	3.95	-
45	-	-	4.43	4.41	4.38	4.36	4.33	4.28	-
50	-	-	-	4.80	4.77	4.74	4.71	4.67	-
55	-	-	-	-	5.22	5.19	5.15	5.11	-
60	-	-	-	-	-	5.71	5.67	5.62	-
65	-	-	-	-	-	-	6.27	6.22	-

Mass flow in kg/h

30	46	59	75	94	116	142	170	203	-
35	44	57	73	92	114	140	168	200	-
40	-	55	71	90	112	138	166	198	-
45	-	-	68	88	110	135	164	196	-
50	-	-	-	85	107	132	161	193	-
55	-	-	-	-	104	129	158	189	-
60	-	-	-	-	-	125	153	185	-
65	-	-	-	-	-	-	148	180	-

Coefficient of performance (C.O.P.)

30	1.44	1.91	2.49	3.18	3.99	4.96	6.09	7.43	-
35	1.12	1.52	2.01	2.59	3.29	4.11	5.07	6.21	-
40	-	1.20	1.61	2.10	2.68	3.37	4.18	5.14	-
45	-	-	1.28	1.69	2.17	2.75	3.42	4.21	-
50	-	-	-	1.34	1.74	2.21	2.77	3.42	-
55	-	-	-	-	1.38	1.76	2.22	2.75	-
60	-	-	-	-	-	1.38	1.74	2.17	-
65	-	-	-	-	-	-	1.34	1.68	-

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

Cooling capacity	6 654	W
Power input	2 402	W
Current consumption	4.71	A
Mass flow	161	kg/h
C.O.P.	2.77	

Pressure switch settings

Maximum HP switch setting	45	bar(g)
Minimum LP switch setting	1.5	bar(g)
LP pump down setting	2.3	bar(g)

Sound power data

Sound power level	65	dB(A)
With acoustic hood	60	dB(A)

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

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

All performance data +/- 5%

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Performance data at 50 Hz, ARI rating conditions

R410A

Cond. temp. in °C (tc)	Evaporating temperature in °C (to)								
	-25	-20	-15	-10	-5	0	5	10	15

Cooling capacity in W

30	2 382	3 113	4 004	5 067	6 316	7 764	9 424	11 309	-
35	-	2 866	3 727	4 750	5 949	7 337	8 926	10 731	-
40	-	-	3 446	4 430	5 578	6 905	8 423	10 146	-
45	-	-	3 157	4 099	5 197	6 463	7 909	9 551	-
50	-	-	-	3 754	4 800	6 004	7 379	8 939	-
55	-	-	-	-	4 382	5 524	6 827	8 304	-
60	-	-	-	-	-	5 017	6 247	7 640	-
65	-	-	-	-	-	-	5 632	6 943	-

Power input in W

30	1 531	1 510	1 495	1 482	1 470	1 457	1 441	1 418	-
35	-	1 736	1 712	1 692	1 673	1 653	1 630	1 601	-
40	-	-	1 959	1 932	1 906	1 880	1 851	1 817	-
45	-	-	2 240	2 206	2 174	2 142	2 108	2 069	-
50	-	-	-	2 516	2 478	2 441	2 402	2 359	-
55	-	-	-	-	2 822	2 780	2 737	2 690	-
60	-	-	-	-	-	3 162	3 115	3 065	-
65	-	-	-	-	-	-	3 540	3 487	-

Current consumption in A

30	3.52	3.53	3.53	3.52	3.50	3.48	3.43	3.37	-
35	-	3.79	3.79	3.78	3.76	3.74	3.70	3.65	-
40	-	-	4.08	4.07	4.05	4.03	3.99	3.95	-
45	-	-	4.43	4.41	4.38	4.36	4.33	4.28	-
50	-	-	-	4.80	4.77	4.74	4.71	4.67	-
55	-	-	-	-	5.22	5.19	5.15	5.11	-
60	-	-	-	-	-	5.71	5.67	5.62	-
65	-	-	-	-	-	-	6.27	6.22	-

Mass flow in kg/h

30	46	59	75	94	116	141	169	201	-
35	-	57	73	92	114	139	167	199	-
40	-	-	71	90	112	137	165	197	-
45	-	-	68	87	109	134	163	194	-
50	-	-	-	84	106	132	160	191	-
55	-	-	-	-	103	128	156	188	-
60	-	-	-	-	-	124	152	184	-
65	-	-	-	-	-	-	147	179	-

Coefficient of performance (C.O.P.)

30	1.56	2.06	2.68	3.42	4.30	5.33	6.54	7.98	-
35	-	1.65	2.18	2.81	3.56	4.44	5.48	6.70	-
40	-	-	1.76	2.29	2.93	3.67	4.55	5.58	-
45	-	-	1.41	1.86	2.39	3.02	3.75	4.62	-
50	-	-	-	1.49	1.94	2.46	3.07	3.79	-
55	-	-	-	-	1.55	1.99	2.49	3.09	-
60	-	-	-	-	-	1.59	2.01	2.49	-
65	-	-	-	-	-	-	1.59	1.99	-

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

Cooling capacity	7 526	W
Power input	2 675	W
Current consumption	5.08	A
Mass flow	170	kg/h
C.O.P.	2.81	

Pressure switch settings

Maximum HP switch setting	45	bar(g)
Minimum LP switch setting	1.5	bar(g)
LP pump down setting	2.3	bar(g)

Sound power data

Sound power level	65	dB(A)
With acoustic hood	60	dB(A)

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

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

All performance data +/- 5%

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Performance data at 60 Hz, EN 12900 rating conditions
R410A

Cond. temp. in °C (tc)	Evaporating temperature in °C (to)							
	-25	-20	-15	-10	-5	0	5	10

Cooling capacity in W

30	2 641	3 455	4 448	5 634	7 029	8 647	10 503	12 612	-
35	2 376	3 164	4 119	5 255	6 589	8 133	9 903	11 914	-
40	-	2 870	3 786	4 872	6 142	7 612	9 295	11 206	-
45	-	-	3 443	4 476	5 682	7 074	8 668	10 478	-
50	-	-	-	4 060	5 198	6 512	8 014	9 719	-
55	-	-	-	-	4 682	5 913	7 319	8 916	-
60	-	-	-	-	-	5 263	6 567	8 048	-
65	-	-	-	-	-	-	5 723	7 074	-

Power input in W

30	1 817	1 793	1 775	1 760	1 745	1 729	1 710	1 685	-
35	2 078	2 045	2 018	1 995	1 972	1 948	1 922	1 889	-
40	-	2 324	2 289	2 258	2 228	2 198	2 164	2 125	-
45	-	-	2 591	2 553	2 516	2 479	2 440	2 395	-
50	-	-	-	2 882	2 839	2 797	2 752	2 702	-
55	-	-	-	-	3 200	3 153	3 103	3 049	-
60	-	-	-	-	-	3 550	3 497	3 439	-
65	-	-	-	-	-	-	3 935	3 875	-

Current consumption in A

30	3.03	3.03	3.03	3.03	3.01	2.99	2.95	2.90	-
35	3.27	3.26	3.26	3.25	3.24	3.22	3.18	3.14	-
40	-	3.52	3.51	3.50	3.49	3.47	3.44	3.40	-
45	-	-	3.81	3.79	3.77	3.75	3.72	3.68	-
50	-	-	-	4.13	4.10	4.08	4.05	4.01	-
55	-	-	-	-	4.49	4.46	4.43	4.39	-
60	-	-	-	-	-	4.91	4.87	4.84	-
65	-	-	-	-	-	-	5.39	5.35	-

Mass flow in kg/h

30	55	71	90	113	139	169	204	243	-
35	52	69	88	111	137	167	202	240	-
40	-	66	85	108	135	165	199	238	-
45	-	-	82	106	132	163	197	235	-
50	-	-	-	102	129	159	194	232	-
55	-	-	-	-	125	156	190	228	-
60	-	-	-	-	-	151	185	224	-
65	-	-	-	-	-	-	180	218	-

Coefficient of performance (C.O.P.)

30	1.45	1.93	2.51	3.20	4.03	5.00	6.14	7.49	-
35	1.14	1.55	2.04	2.63	3.34	4.17	5.15	6.31	-
40	-	1.23	1.65	2.16	2.76	3.46	4.30	5.27	-
45	-	-	1.33	1.75	2.26	2.85	3.55	4.37	-
50	-	-	-	1.41	1.83	2.33	2.91	3.60	-
55	-	-	-	-	1.46	1.88	2.36	2.92	-
60	-	-	-	-	-	1.48	1.88	2.34	-
65	-	-	-	-	-	-	1.45	1.83	-

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

Cooling capacity	8 014	W
Power input	2 752	W
Current consumption	4.05	A
Mass flow	194	kg/h
C.O.P.	2.91	

Pressure switch settings

Maximum HP switch setting	45	bar(g)
Minimum LP switch setting	1.5	bar(g)
LP pump down setting	2.3	bar(g)

Sound power data

Sound power level	68	dB(A)
With acoustic hood	63	dB(A)

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

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

All performance data +/- 5%

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Performance data at 60 Hz, ARI rating conditions
R410A

Cond. temp. in °C (tc)	Evaporating temperature in °C (to)							
	-25	-20	-15	-10	-5	0	5	10

Cooling capacity in W

30	2 853	3 728	4 794	6 066	7 561	9 294	11 280	13 534	-
35	-	3 435	4 466	5 693	7 130	8 793	10 698	12 859	-
40	-	-	4 137	5 316	6 695	8 288	10 110	12 178	-
45	-	-	3 796	4 929	6 248	7 770	9 509	11 483	-
50	-	-	-	4 522	5 781	7 231	8 888	10 766	-
55	-	-	-	-	5 287	6 665	8 237	10 019	-
60	-	-	-	-	-	6 062	7 549	9 235	-
65	-	-	-	-	-	-	6 817	8 406	-

Power input in W

30	1 817	1 793	1 775	1 760	1 745	1 729	1 710	1 685	-
35	-	2 045	2 018	1 995	1 972	1 948	1 922	1 889	-
40	-	-	2 289	2 258	2 228	2 198	2 164	2 125	-
45	-	-	2 591	2 553	2 516	2 479	2 440	2 395	-
50	-	-	-	2 882	2 839	2 797	2 752	2 702	-
55	-	-	-	-	3 200	3 153	3 103	3 049	-
60	-	-	-	-	-	3 550	3 497	3 439	-
65	-	-	-	-	-	-	3 935	3 875	-

Current consumption in A

30	3.03	3.03	3.03	3.03	3.01	2.99	2.95	2.90	-
35	-	3.26	3.26	3.25	3.24	3.22	3.18	3.14	-
40	-	-	3.51	3.50	3.49	3.47	3.44	3.40	-
45	-	-	3.81	3.79	3.77	3.75	3.72	3.68	-
50	-	-	-	4.13	4.10	4.08	4.05	4.01	-
55	-	-	-	-	4.49	4.46	4.43	4.39	-
60	-	-	-	-	-	4.91	4.87	4.84	-
65	-	-	-	-	-	-	5.39	5.35	-

Mass flow in kg/h

30	55	71	90	112	138	168	202	241	-
35	-	68	87	110	136	166	200	238	-
40	-	-	85	108	134	164	198	236	-
45	-	-	82	105	131	161	195	233	-
50	-	-	-	101	128	158	192	230	-
55	-	-	-	-	124	155	189	227	-
60	-	-	-	-	-	150	184	222	-
65	-	-	-	-	-	-	178	217	-

Coefficient of performance (C.O.P.)

30	1.57	2.08	2.70	3.45	4.33	5.37	6.60	8.03	-
35	-	1.68	2.21	2.85	3.62	4.51	5.57	6.81	-
40	-	-	1.81	2.35	3.00	3.77	4.67	5.73	-
45	-	-	1.47	1.93	2.48	3.13	3.90	4.79	-
50	-	-	-	1.57	2.04	2.59	3.23	3.98	-
55	-	-	-	-	1.65	2.11	2.65	3.29	-
60	-	-	-	-	-	1.71	2.16	2.69	-
65	-	-	-	-	-	-	1.73	2.17	-

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

Cooling capacity	9 079	W
Power input	3 036	W
Current consumption	4.37	A
Mass flow	205	kg/h
C.O.P.	2.99	

Pressure switch settings

Maximum HP switch setting	45	bar(g)
Minimum LP switch setting	1.5	bar(g)
LP pump down setting	2.3	bar(g)

Sound power data

Sound power level	68	dB(A)
With acoustic hood	63	dB(A)

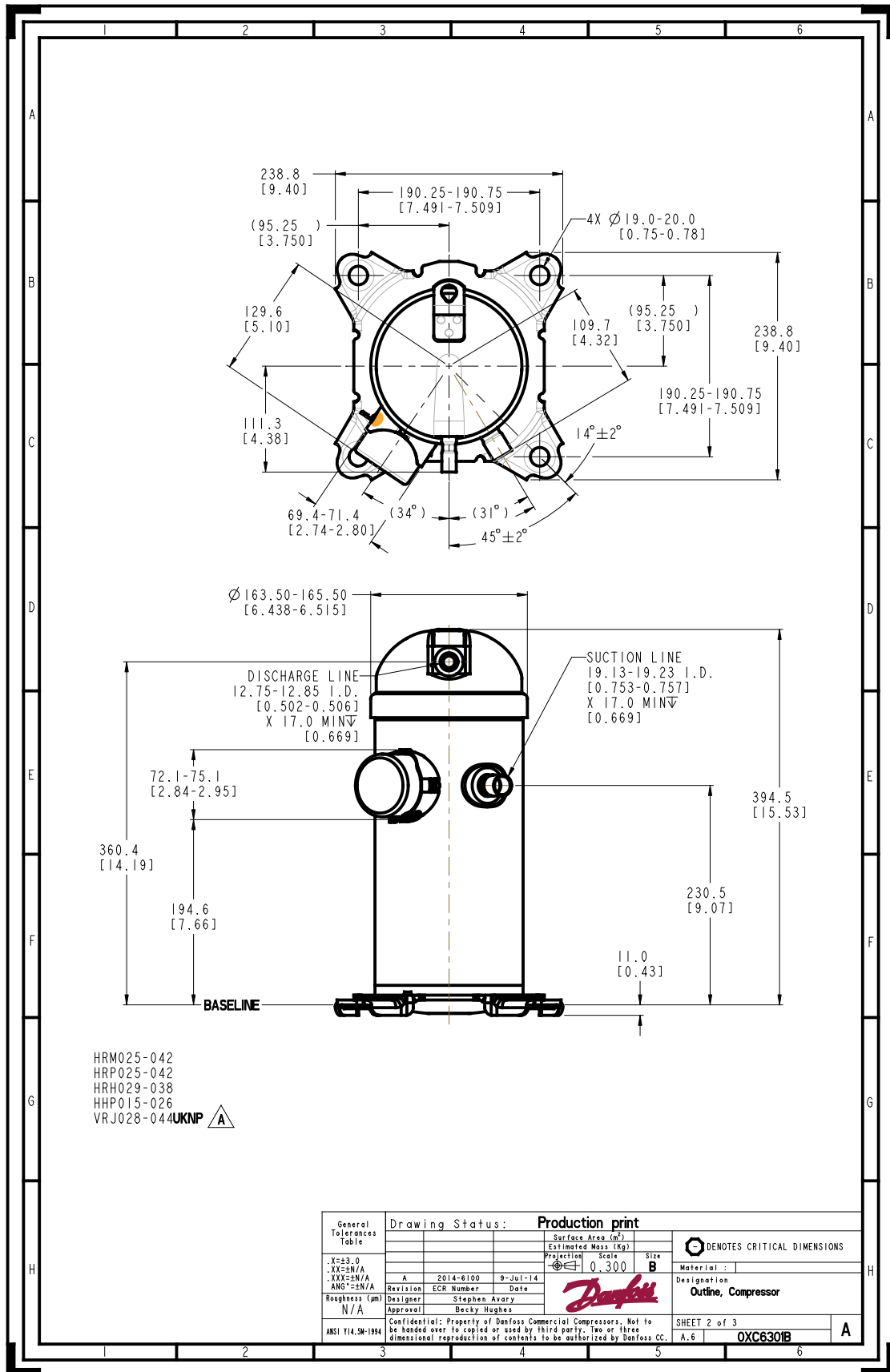
to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

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

All performance data +/- 5%

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