

Datasheets

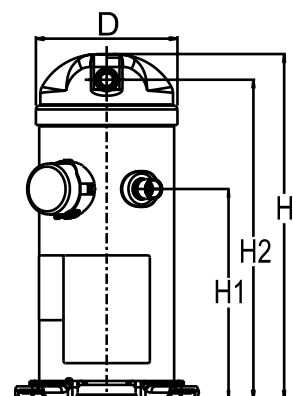
Danfoss scroll compressors **H series**



General Characteristics

Model number (on compressor nameplate)		HRH029U4LP6
Code number for Singlepack*		120U2287
Code number for Industrial pack**		120U2284
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		27.79 cm ³ /rev
Displacement @ Nominal speed		4.8 m ³ /h @ 2900 rpm - 5.8 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

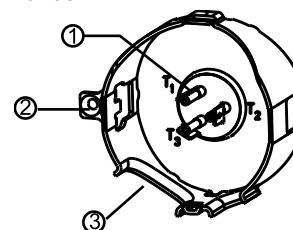


D=164.5 mm
H=413 mm
H1=250 mm
H2=379 mm
H3=- mm

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	4.664 Ω
Winding resistance between phases 2-3 +/- 7% at 25°C	3.422 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.

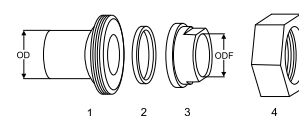
Solder sleeve, P04 (1-1/4" Rotolock, 3/4" ODF)	8153008
Angle adapter, C04 (1-1/4" Rotolock, 3/4" ODF)	8168006
Rotolock valve, V04 (1-1/4" Rotolock, 3/4" ODF)	8168029
Gasket, 1-1/4"	8156131

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	2 055	2 687	3 459	4 382	5 467	6 725	8 167	9 804	-
35	1 851	2 463	3 207	4 092	5 130	6 333	7 711	9 275	-
40	-	2 239	2 953	3 799	4 790	5 936	7 248	8 738	-
45	-	-	2 690	3 497	4 438	5 526	6 771	8 185	-
50	-	-	-	3 178	4 068	5 096	6 272	7 606	-
55	-	-	-	-	3 671	4 636	5 739	6 991	-
60	-	-	-	-	-	4 133	5 158	6 322	-
65	-	-	-	-	-	-	4 502	5 567	-

Power input in W

30	1 434	1 415	1 401	1 389	1 377	1 365	1 350	1 329	-
35	1 644	1 618	1 596	1 577	1 560	1 541	1 520	1 494	-
40	-	1 843	1 815	1 790	1 767	1 742	1 715	1 684	-
45	-	-	2 060	2 030	2 001	1 971	1 940	1 904	-
50	-	-	-	2 298	2 264	2 230	2 194	2 155	-
55	-	-	-	-	2 560	2 522	2 482	2 439	-
60	-	-	-	-	-	2 848	2 805	2 759	-
65	-	-	-	-	-	-	3 166	3 118	-

Current consumption in A

30	3.22	3.22	3.22	3.21	3.20	3.18	3.14	3.08	-
35	3.47	3.46	3.46	3.45	3.44	3.41	3.38	3.33	-
40	-	3.74	3.73	3.72	3.70	3.68	3.65	3.60	-
45	-	-	4.04	4.02	4.01	3.98	3.95	3.91	-
50	-	-	-	4.38	4.36	4.33	4.30	4.26	-
55	-	-	-	-	4.77	4.74	4.70	4.67	-
60	-	-	-	-	-	5.21	5.18	5.13	-
65	-	-	-	-	-	-	5.72	5.68	-

Mass flow in kg/h

30	43	55	70	88	108	132	159	189	-
35	41	53	68	86	107	130	157	187	-
40	-	51	67	84	105	129	155	185	-
45	-	-	64	82	103	127	154	184	-
50	-	-	-	80	101	125	152	182	-
55	-	-	-	-	98	122	149	179	-
60	-	-	-	-	-	119	146	176	-
65	-	-	-	-	-	-	141	172	-

Coefficient of performance (C.O.P.)

30	1.43	1.90	2.47	3.16	3.97	4.93	6.05	7.37	-
35	1.13	1.52	2.01	2.59	3.29	4.11	5.07	6.21	-
40	-	1.21	1.63	2.12	2.71	3.41	4.23	5.19	-
45	-	-	1.31	1.72	2.22	2.80	3.49	4.30	-
50	-	-	-	1.38	1.80	2.28	2.86	3.53	-
55	-	-	-	-	1.43	1.84	2.31	2.87	-
60	-	-	-	-	-	1.45	1.84	2.29	-
65	-	-	-	-	-	-	1.42	1.79	-

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

Cooling capacity	6 272	W
Power input	2 194	W
Current consumption	4.30	A
Mass flow	152	kg/h
C.O.P.	2.86	

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	2 219	2 899	3 728	4 718	5 881	7 227	8 770	10 521	-
35	-	2 675	3 477	4 433	5 552	6 847	8 329	10 011	-
40	-	-	3 226	4 146	5 221	6 463	7 884	9 496	-
45	-	-	2 966	3 850	4 881	6 070	7 429	8 970	-
50	-	-	-	3 539	4 524	5 659	6 956	8 425	-
55	-	-	-	-	4 145	5 225	6 458	7 856	-
60	-	-	-	-	-	4 761	5 930	7 255	-
65	-	-	-	-	-	-	5 363	6 614	-

Power input in W

30	1 434	1 415	1 401	1 389	1 377	1 365	1 350	1 329	-
35	-	1 618	1 596	1 577	1 560	1 541	1 520	1 494	-
40	-	-	1 815	1 790	1 767	1 742	1 715	1 684	-
45	-	-	2 060	2 030	2 001	1 971	1 940	1 904	-
50	-	-	-	2 298	2 264	2 230	2 194	2 155	-
55	-	-	-	-	2 560	2 522	2 482	2 439	-
60	-	-	-	-	-	2 848	2 805	2 759	-
65	-	-	-	-	-	-	3 166	3 118	-

Current consumption in A

30	3.22	3.22	3.22	3.21	3.20	3.18	3.14	3.08	-
35	-	3.46	3.46	3.45	3.44	3.41	3.38	3.33	-
40	-	-	3.73	3.72	3.70	3.68	3.65	3.60	-
45	-	-	4.04	4.02	4.01	3.98	3.95	3.91	-
50	-	-	-	4.38	4.36	4.33	4.30	4.26	-
55	-	-	-	-	4.77	4.74	4.70	4.67	-
60	-	-	-	-	-	5.21	5.18	5.13	-
65	-	-	-	-	-	-	5.72	5.68	-

Mass flow in kg/h

30	43	55	70	87	108	131	157	187	-
35	-	53	68	86	106	129	156	186	-
40	-	-	66	84	104	128	154	184	-
45	-	-	64	82	103	126	153	182	-
50	-	-	-	79	100	124	151	180	-
55	-	-	-	-	97	121	148	178	-
60	-	-	-	-	-	118	145	175	-
65	-	-	-	-	-	-	140	170	-

Coefficient of performance (C.O.P.)

30	1.55	2.05	2.66	3.40	4.27	5.29	6.50	7.91	-
35	-	1.65	2.18	2.81	3.56	4.44	5.48	6.70	-
40	-	-	1.78	2.32	2.96	3.71	4.60	5.64	-
45	-	-	1.44	1.90	2.44	3.08	3.83	4.71	-
50	-	-	-	1.54	2.00	2.54	3.17	3.91	-
55	-	-	-	-	1.62	2.07	2.60	3.22	-
60	-	-	-	-	-	1.67	2.11	2.63	-
65	-	-	-	-	-	-	1.69	2.12	-

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

Cooling capacity	7 117	W
Power input	2 428	W
Current consumption	4.64	A
Mass flow	161	kg/h
C.O.P.	2.93	

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	2 470	3 230	4 159	5 268	6 572	8 084	9 820	11 791	-
35	2 221	2 958	3 851	4 914	6 161	7 605	9 260	11 140	-
40	-	2 684	3 540	4 556	5 744	7 118	8 692	10 479	-
45	-	-	3 220	4 186	5 314	6 616	8 107	9 799	-
50	-	-	-	3 797	4 862	6 091	7 496	9 091	-
55	-	-	-	-	4 380	5 531	6 847	8 341	-
60	-	-	-	-	-	4 924	6 144	7 530	-
65	-	-	-	-	-	-	5 355	6 620	-

Power input in W

30	1 698	1 676	1 659	1 645	1 632	1 617	1 599	1 575	-
35	1 943	1 912	1 887	1 865	1 844	1 822	1 797	1 766	-
40	-	2 173	2 141	2 112	2 084	2 055	2 023	1 987	-
45	-	-	2 423	2 388	2 353	2 319	2 282	2 240	-
50	-	-	-	2 696	2 656	2 616	2 574	2 527	-
55	-	-	-	-	2 994	2 949	2 903	2 853	-
60	-	-	-	-	-	3 322	3 272	3 218	-
65	-	-	-	-	-	-	3 682	3 626	-

Current consumption in A

30	2.81	2.82	2.82	2.81	2.80	2.78	2.74	2.70	-
35	3.03	3.03	3.03	3.02	3.01	2.99	2.96	2.92	-
40	-	3.27	3.26	3.25	3.24	3.22	3.19	3.15	-
45	-	-	3.54	3.52	3.50	3.48	3.46	3.42	-
50	-	-	-	3.84	3.81	3.79	3.76	3.73	-
55	-	-	-	-	4.17	4.15	4.12	4.08	-
60	-	-	-	-	-	4.56	4.53	4.49	-
65	-	-	-	-	-	-	5.01	4.97	-

Mass flow in kg/h

30	52	66	84	106	130	158	191	227	-
35	49	64	82	103	128	156	188	225	-
40	-	61	80	101	126	154	186	222	-
45	-	-	77	99	124	152	184	220	-
50	-	-	-	96	121	149	181	217	-
55	-	-	-	-	117	146	178	214	-
60	-	-	-	-	-	141	174	209	-
65	-	-	-	-	-	-	168	204	-

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	7 496	W
Power input	2 574	W
Current consumption	3.76	A
Mass flow	181	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	2 667	3 485	4 482	5 672	7 069	8 689	10 545	12 653	-
35	-	3 211	4 176	5 323	6 667	8 222	10 002	12 023	-
40	-	-	3 868	4 971	6 261	7 750	9 454	11 388	-
45	-	-	3 550	4 609	5 843	7 267	8 894	10 739	-
50	-	-	-	4 230	5 408	6 764	8 313	10 070	-
55	-	-	-	-	4 946	6 235	7 706	9 373	-
60	-	-	-	-	-	5 672	7 063	8 641	-
65	-	-	-	-	-	-	6 379	7 866	-

Power input in W

30	1 698	1 676	1 659	1 645	1 632	1 617	1 599	1 575	-
35	-	1 912	1 887	1 865	1 844	1 822	1 797	1 766	-
40	-	-	2 141	2 112	2 084	2 055	2 023	1 987	-
45	-	-	2 423	2 388	2 353	2 319	2 282	2 240	-
50	-	-	-	2 696	2 656	2 616	2 574	2 527	-
55	-	-	-	-	2 994	2 949	2 903	2 853	-
60	-	-	-	-	-	3 322	3 272	3 218	-
65	-	-	-	-	-	-	3 682	3 626	-

Current consumption in A

30	2.81	2.82	2.82	2.81	2.80	2.78	2.74	2.70	-
35	-	3.03	3.03	3.02	3.01	2.99	2.96	2.92	-
40	-	-	3.26	3.25	3.24	3.22	3.19	3.15	-
45	-	-	3.54	3.52	3.50	3.48	3.46	3.42	-
50	-	-	-	3.84	3.81	3.79	3.76	3.73	-
55	-	-	-	-	4.17	4.15	4.12	4.08	-
60	-	-	-	-	-	4.56	4.53	4.49	-
65	-	-	-	-	-	-	5.01	4.97	-

Mass flow in kg/h

30	51	66	84	105	129	157	189	225	-
35	-	64	82	103	127	155	187	223	-
40	-	-	79	101	125	153	185	221	-
45	-	-	77	98	123	151	183	218	-
50	-	-	-	95	120	148	180	216	-
55	-	-	-	-	116	145	177	212	-
60	-	-	-	-	-	140	172	208	-
65	-	-	-	-	-	-	167	203	-

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	8 493	W
Power input	2 840	W
Current consumption	4.06	A
Mass flow	192	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)

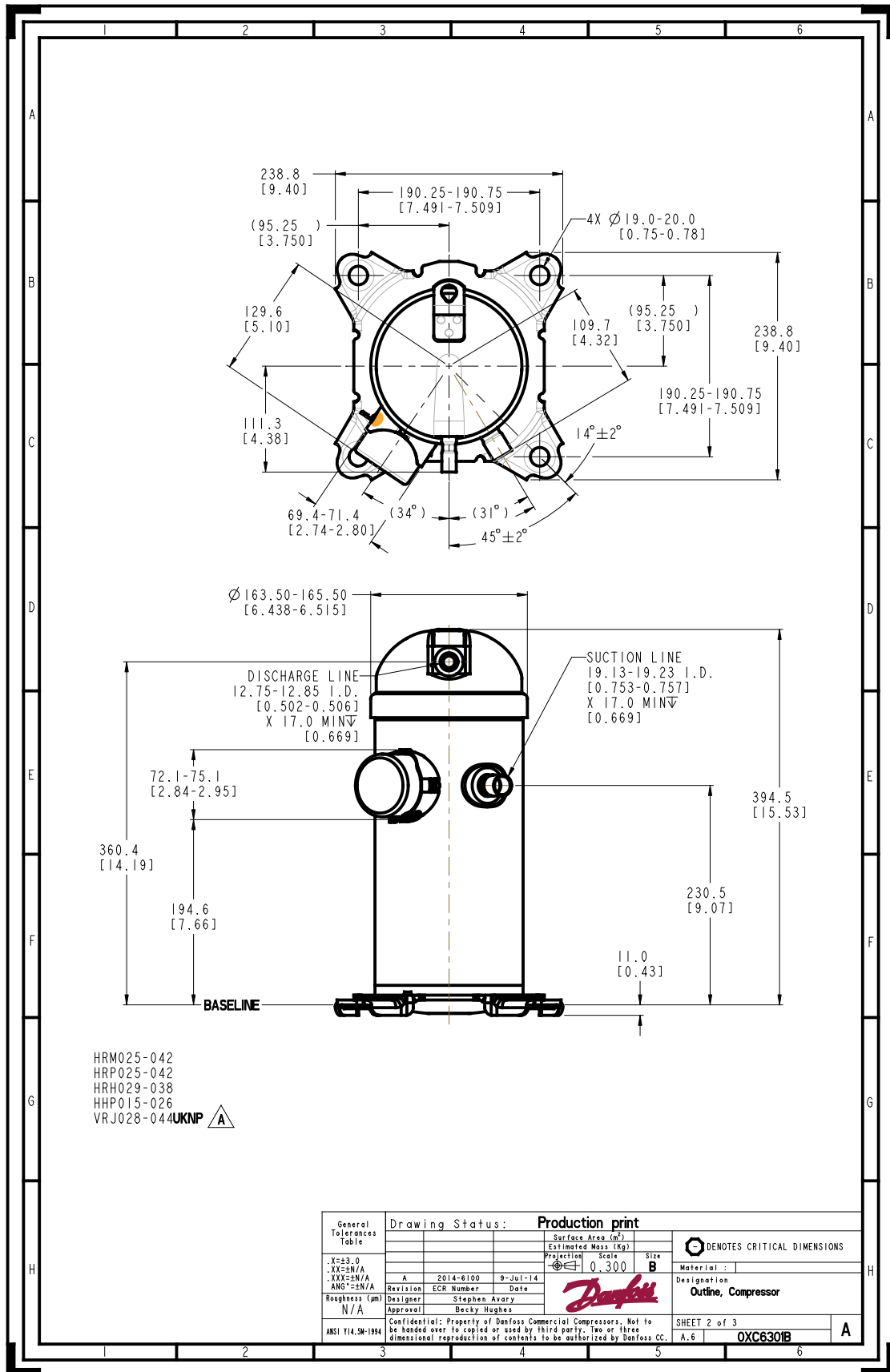
to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

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

All performance data +/- 5%

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