

Datasheets

Danfoss scroll compressors H series



www.damoon-co.com

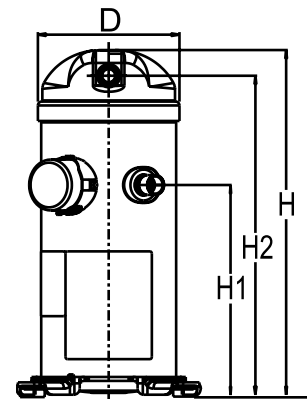
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www.danfoss.com/odsg

General Characteristics

Model number (on compressor nameplate)		HRM025T4LP6
Code number for Singlepack*		120U2784
Code number for Industrial pack**		120U2781
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		33.77 cm ³ /rev
Displacement @ Nominal speed		5.9 m ³ /h @ 2900 rpm - 7.1 m ³ /h @ 3500 rpm
Net weight		30.84 kg
Oil charge		1.06 litre, Alkylbenzene - -
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		R22

Dimensions

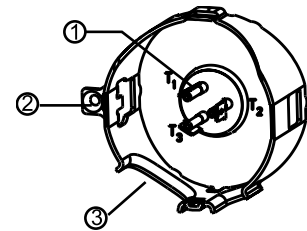


D=164.5 mm
H=413 mm
H1=250 mm
H2=379 mm
H3=- mm

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		6.72 Ω
Winding resistance between phases 1-3 +/- 7% at 25°C		4.95 Ω
Winding resistance between phases 2-3 +/- 7% at 25°C		6.72 Ω
Rated Load Amps (RLA)		4.5 A
Maximum Continuous Current (MCC)		7 A
Locked Rotor Amps (LRA)		30 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.

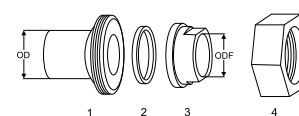
Solder sleeve, P04 (1-1/4" Rotolock, 3/4" ODF)	8153008
Angle adapter, C04 (1-1/4" Rotolock, 3/4" ODF)	8168006
Rotolock valve, V04 (1-1/4" Rotolock, 3/4" ODF)	8168029
Gasket, 1-1/4"	8156131

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.

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

Datasheet, performance data

Danfoss scroll compressor. HRM025T4

Performance data at 50 Hz, EN 12900 rating conditions

R22

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

Cooling capacity in W

30	2 174	2 541	3 078	3 777	4 626	5 616	6 735	7 974	-
35	2 032	2 394	2 916	3 587	4 397	5 336	6 394	7 559	-
40	-	2 215	2 730	3 383	4 163	5 061	6 066	7 167	-
45	-	-	2 512	3 155	3 914	4 779	5 740	6 785	-
50	-	-	-	2 892	3 639	4 480	5 405	6 404	-
55	-	-	-	-	3 328	4 154	5 052	6 013	-
60	-	-	-	-	-	3 790	4 669	5 600	-
65	-	-	-	-	-	-	4 248	5 157	-

Power input in W

30	1 195	1 189	1 185	1 179	1 167	1 143	1 104	1 045	-
35	1 352	1 330	1 316	1 306	1 296	1 281	1 257	1 219	-
40	-	1 494	1 465	1 446	1 432	1 419	1 404	1 381	-
45	-	-	1 639	1 604	1 581	1 566	1 553	1 540	-
50	-	-	-	1 790	1 752	1 727	1 712	1 702	-
55	-	-	-	-	1 952	1 913	1 889	1 876	-
60	-	-	-	-	-	2 129	2 091	2 069	-
65	-	-	-	-	-	-	2 326	2 290	-

Current consumption in A

30	2.95	2.79	2.75	2.78	2.83	2.83	2.74	2.51	-
35	3.29	3.05	2.95	2.94	2.97	2.98	2.92	2.74	-
40	-	3.36	3.19	3.13	3.14	3.15	3.11	2.97	-
45	-	-	3.49	3.38	3.35	3.35	3.32	3.22	-
50	-	-	-	3.68	3.61	3.59	3.57	3.49	-
55	-	-	-	-	3.93	3.88	3.85	3.79	-
60	-	-	-	-	-	4.24	4.20	4.15	-
65	-	-	-	-	-	-	4.61	4.55	-

Mass flow in kg/h

30	47	55	65	79	96	115	136	160	-
35	46	54	64	78	95	113	134	157	-
40	-	52	63	77	93	112	132	155	-
45	-	-	60	75	91	110	131	153	-
50	-	-	-	72	89	108	129	151	-
55	-	-	-	-	85	105	126	148	-
60	-	-	-	-	-	101	123	145	-
65	-	-	-	-	-	-	118	141	-

Coefficient of performance (C.O.P.)

30	1.82	2.14	2.60	3.20	3.97	4.91	6.10	7.63	-
35	1.50	1.80	2.22	2.75	3.39	4.17	5.09	6.20	-
40	-	1.48	1.86	2.34	2.91	3.57	4.32	5.19	-
45	-	-	1.53	1.97	2.48	3.05	3.70	4.41	-
50	-	-	-	1.62	2.08	2.59	3.16	3.76	-
55	-	-	-	-	1.70	2.17	2.67	3.21	-
60	-	-	-	-	-	1.78	2.23	2.71	-
65	-	-	-	-	-	-	1.83	2.25	-

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

Cooling capacity	5 405	W
Power input	1 712	W
Current consumption	3.57	A
Mass flow	129	kg/h
C.O.P.	3.16	

Pressure switch settings

Maximum HP switch setting	29	bar(g)
Minimum LP switch setting	0.5	bar(g)
LP pump down setting	1.3	bar(g)

Sound power data

Sound power level	67	dB(A)
With acoustic hood	62	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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Datasheet, performance data

Danfoss scroll compressor. HRM025T4

Performance data at 50 Hz, ARI rating conditions

R22

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

Cooling capacity in W

30	2 309	2 696	3 264	4 002	4 898	5 942	7 121	8 425	-
35	-	2 549	3 102	3 813	4 671	5 664	6 782	8 012	-
40	-	-	2 916	3 610	4 439	5 392	6 457	7 623	-
45	-	-	2 695	3 381	4 191	5 112	6 134	7 246	-
50	-	-	-	3 115	3 915	4 815	5 804	6 870	-
55	-	-	-	-	3 601	4 489	5 454	6 484	-
60	-	-	-	-	-	4 123	5 074	6 078	-
65	-	-	-	-	-	-	4 651	5 639	-

Power input in W

30	1 195	1 189	1 185	1 179	1 167	1 143	1 104	1 045	-
35	-	1 330	1 316	1 306	1 296	1 281	1 257	1 219	-
40	-	-	1 465	1 446	1 432	1 419	1 404	1 381	-
45	-	-	1 639	1 604	1 581	1 566	1 553	1 540	-
50	-	-	-	1 790	1 752	1 727	1 712	1 702	-
55	-	-	-	-	1 952	1 913	1 889	1 876	-
60	-	-	-	-	-	2 129	2 091	2 069	-
65	-	-	-	-	-	-	2 326	2 290	-

Current consumption in A

30	2.95	2.79	2.75	2.78	2.83	2.83	2.74	2.51	-
35	-	3.05	2.95	2.94	2.97	2.98	2.92	2.74	-
40	-	-	3.19	3.13	3.14	3.15	3.11	2.97	-
45	-	-	3.49	3.38	3.35	3.35	3.32	3.22	-
50	-	-	-	3.68	3.61	3.59	3.57	3.49	-
55	-	-	-	-	3.93	3.88	3.85	3.79	-
60	-	-	-	-	-	4.24	4.20	4.15	-
65	-	-	-	-	-	-	4.61	4.55	-

Mass flow in kg/h

30	47	54	65	79	95	114	136	159	-
35	-	53	64	78	94	113	134	156	-
40	-	-	63	76	93	111	132	154	-
45	-	-	60	74	91	110	130	152	-
50	-	-	-	71	88	107	128	150	-
55	-	-	-	-	85	104	125	147	-
60	-	-	-	-	-	100	122	144	-
65	-	-	-	-	-	-	118	141	-

Coefficient of performance (C.O.P.)

30	1.93	2.27	2.75	3.39	4.20	5.20	6.45	8.06	-
35	-	1.92	2.36	2.92	3.60	4.42	5.40	6.57	-
40	-	-	1.99	2.50	3.10	3.80	4.60	5.52	-
45	-	-	1.64	2.11	2.65	3.27	3.95	4.71	-
50	-	-	-	1.74	2.23	2.79	3.39	4.04	-
55	-	-	-	-	1.84	2.35	2.89	3.46	-
60	-	-	-	-	-	1.94	2.43	2.94	-
65	-	-	-	-	-	-	2.00	2.46	-

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

Cooling capacity	5 945	W
Power input	1 860	W
Current consumption	3.80	A
Mass flow	135	kg/h
C.O.P.	3.20	

Pressure switch settings

Maximum HP switch setting	29	bar(g)
Minimum LP switch setting	0.5	bar(g)
LP pump down setting	1.3	bar(g)

Sound power data

Sound power level	67	dB(A)
With acoustic hood	62	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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Datasheet, performance data

Danfoss scroll compressor. HRM025T4

Performance data at 60 Hz, EN 12900 rating conditions

R22

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

Cooling capacity in W

30	2 585	3 019	3 658	4 488	5 498	6 674	8 004	9 475	-
35	2 416	2 846	3 466	4 265	5 228	6 345	7 602	8 987	-
40	-	2 636	3 248	4 025	4 953	6 021	7 216	8 526	-
45	-	-	2 991	3 756	4 660	5 690	6 833	8 078	-
50	-	-	-	3 446	4 335	5 337	6 440	7 630	-
55	-	-	-	-	3 968	4 952	6 023	7 169	-
60	-	-	-	-	-	4 521	5 571	6 682	-
65	-	-	-	-	-	-	5 071	6 157	-

Power input in W

30	1 430	1 423	1 419	1 412	1 396	1 368	1 321	1 251	-
35	1 617	1 591	1 575	1 563	1 551	1 533	1 503	1 458	-
40	-	1 786	1 751	1 728	1 712	1 697	1 678	1 651	-
45	-	-	1 958	1 916	1 888	1 870	1 855	1 839	-
50	-	-	-	2 136	2 091	2 061	2 043	2 031	-
55	-	-	-	-	2 327	2 280	2 251	2 236	-
60	-	-	-	-	-	2 536	2 489	2 464	-
65	-	-	-	-	-	-	2 767	2 724	-

Current consumption in A

30	2.72	2.57	2.54	2.56	2.61	2.61	2.53	2.31	-
35	3.03	2.81	2.71	2.71	2.73	2.75	2.69	2.52	-
40	-	3.10	2.94	2.89	2.89	2.90	2.86	2.73	-
45	-	-	3.22	3.11	3.08	3.08	3.06	2.96	-
50	-	-	-	3.39	3.32	3.30	3.28	3.21	-
55	-	-	-	-	3.62	3.58	3.55	3.49	-
60	-	-	-	-	-	3.91	3.87	3.82	-
65	-	-	-	-	-	-	4.24	4.19	-

Mass flow in kg/h

30	56	65	78	94	114	137	162	190	-
35	55	64	77	93	112	135	160	187	-
40	-	61	75	91	111	133	158	184	-
45	-	-	72	89	109	131	155	182	-
50	-	-	-	86	106	129	153	179	-
55	-	-	-	-	102	125	150	177	-
60	-	-	-	-	-	121	146	173	-
65	-	-	-	-	-	-	141	169	-

Coefficient of performance (C.O.P.)

30	1.81	2.12	2.58	3.18	3.94	4.88	6.06	7.57	-
35	1.49	1.79	2.20	2.73	3.37	4.14	5.06	6.16	-
40	-	1.48	1.85	2.33	2.89	3.55	4.30	5.16	-
45	-	-	1.53	1.96	2.47	3.04	3.68	4.39	-
50	-	-	-	1.61	2.07	2.59	3.15	3.76	-
55	-	-	-	-	1.70	2.17	2.68	3.21	-
60	-	-	-	-	-	1.78	2.24	2.71	-
65	-	-	-	-	-	-	1.83	2.26	-

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

Cooling capacity	6 440	W
Power input	2 043	W
Current consumption	3.28	A
Mass flow	153	kg/h
C.O.P.	3.15	

Pressure switch settings

Maximum HP switch setting	29	bar(g)
Minimum LP switch setting	0.5	bar(g)
LP pump down setting	1.3	bar(g)

Sound power data

Sound power level	71	dB(A)
With acoustic hood	66	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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Datasheet, performance data

Danfoss scroll compressor. HRM025T4

Performance data at 60 Hz, ARI rating conditions

R22

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

Cooling capacity in W

30	2 745	3 204	3 879	4 756	5 821	7 061	8 462	10 011	-
35	-	3 031	3 688	4 534	5 554	6 735	8 063	9 526	-
40	-	-	3 469	4 295	5 281	6 414	7 681	9 068	-
45	-	-	3 208	4 025	4 989	6 086	7 303	8 626	-
50	-	-	-	3 712	4 664	5 737	6 914	8 185	-
55	-	-	-	-	4 293	5 352	6 502	7 731	-
60	-	-	-	-	-	4 919	6 053	7 252	-
65	-	-	-	-	-	-	5 553	6 734	-

Power input in W

30	1 430	1 423	1 419	1 412	1 396	1 368	1 321	1 251	-
35	-	1 591	1 575	1 563	1 551	1 533	1 503	1 458	-
40	-	-	1 751	1 728	1 712	1 697	1 678	1 651	-
45	-	-	1 958	1 916	1 888	1 870	1 855	1 839	-
50	-	-	-	2 136	2 091	2 061	2 043	2 031	-
55	-	-	-	-	2 327	2 280	2 251	2 236	-
60	-	-	-	-	-	2 536	2 489	2 464	-
65	-	-	-	-	-	-	2 767	2 724	-

Current consumption in A

30	2.72	2.57	2.54	2.56	2.61	2.61	2.53	2.31	-
35	-	2.81	2.71	2.71	2.73	2.75	2.69	2.52	-
40	-	-	2.94	2.89	2.89	2.90	2.86	2.73	-
45	-	-	3.22	3.11	3.08	3.08	3.06	2.96	-
50	-	-	-	3.39	3.32	3.30	3.28	3.21	-
55	-	-	-	-	3.62	3.58	3.55	3.49	-
60	-	-	-	-	-	3.91	3.87	3.82	-
65	-	-	-	-	-	-	4.24	4.19	-

Mass flow in kg/h

30	56	65	77	94	113	136	161	189	-
35	-	63	76	92	112	134	159	186	-
40	-	-	74	91	110	132	157	183	-
45	-	-	72	89	108	130	155	181	-
50	-	-	-	85	105	128	152	178	-
55	-	-	-	-	101	124	149	176	-
60	-	-	-	-	-	120	145	172	-
65	-	-	-	-	-	-	140	168	-

Coefficient of performance (C.O.P.)

30	1.92	2.25	2.73	3.37	4.17	5.16	6.40	8.00	-
35	-	1.91	2.34	2.90	3.58	4.39	5.36	6.53	-
40	-	-	1.98	2.49	3.09	3.78	4.58	5.49	-
45	-	-	1.64	2.10	2.64	3.25	3.94	4.69	-
50	-	-	-	1.74	2.23	2.78	3.38	4.03	-
55	-	-	-	-	1.84	2.35	2.89	3.46	-
60	-	-	-	-	-	1.94	2.43	2.94	-
65	-	-	-	-	-	-	2.01	2.47	-

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

Cooling capacity	7 087	W
Power input	2 217	W
Current consumption	3.50	A
Mass flow	161	kg/h
C.O.P.	3.20	

Pressure switch settings

Maximum HP switch setting	29	bar(g)
Minimum LP switch setting	0.5	bar(g)
LP pump down setting	1.3	bar(g)

Sound power data

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

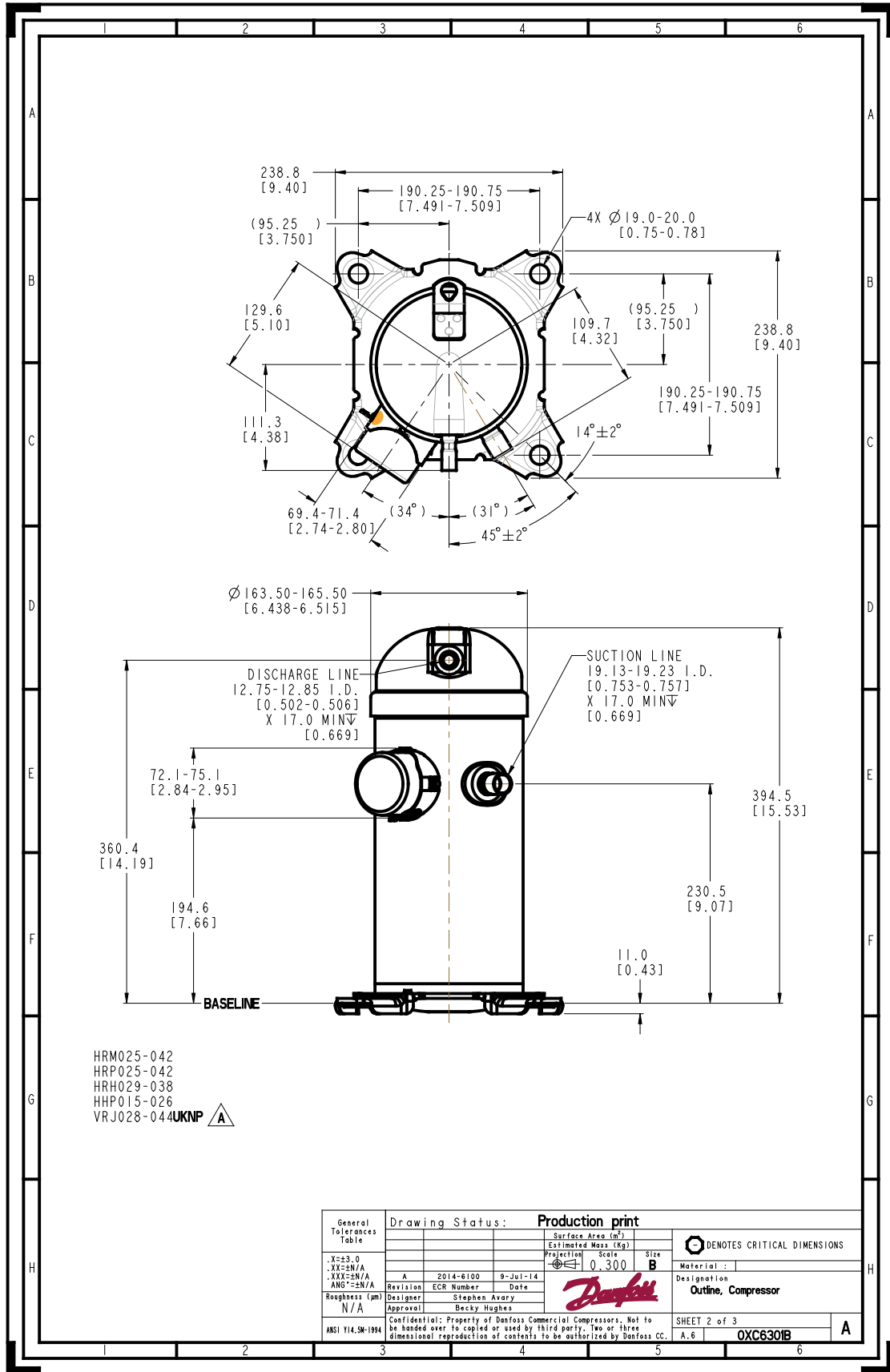
to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

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

All performance data +/- 5%

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