

Datasheets

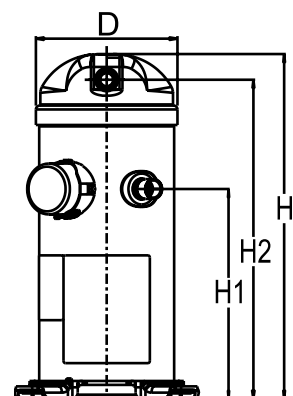
Danfoss scroll compressors **H series**



General Characteristics

Model number (on compressor nameplate)		HRM038T4LP6
Code number for Singlepack*		120U2372
Code number for Industrial pack**		120U2369
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		51.67 cm ³ /rev
Displacement @ Nominal speed		9.0 m ³ /h @ 2900 rpm - 10.9 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

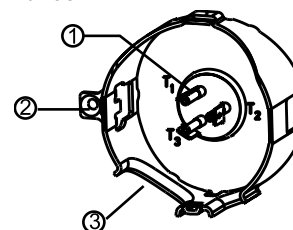


D=164.5 mm
H=413 mm
H1=250 mm
H2=379 mm
H3=- mm

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	4.66 Ω
Winding resistance between phases 1-3 +/- 7% at 25°C	4.66 Ω
Winding resistance between phases 2-3 +/- 7% at 25°C	3.42 Ω
Rated Load Amps (RLA)	6.4 A
Maximum Continuous Current (MCC)	10.0 A
Locked Rotor Amps (LRA)	45.0 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.

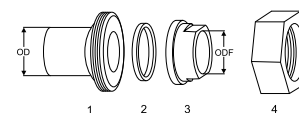
Solder sleeve, P04 (1-1/4" Rotolock, 3/4" ODF)	8153008
Angle adapter, C04 (1-1/4" Rotolock, 3/4" ODF)	8168006
Rotolock valve, V04 (1-1/4" Rotolock, 3/4" ODF)	8168029
Gasket, 1-1/4"	8156131

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

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

Cooling capacity in W

30	3 351	3 914	4 742	5 818	7 127	8 651	10 374	12 280	-
35	3 135	3 692	4 496	5 531	6 781	8 230	9 860	11 656	-
40	2 857	3 422	4 216	5 224	6 430	7 816	9 367	11 067	-
45	-	3 088	3 886	4 880	6 054	7 392	8 878	10 495	-
50	-	-	3 489	4 482	5 638	6 941	8 375	9 923	-
55	-	-	-	4 015	5 166	6 446	7 841	9 333	-
60	-	-	-	-	4 620	5 891	7 259	8 708	-
65	-	-	-	-	-	5 260	6 614	8 031	-

Power input in W

30	1 737	1 728	1 722	1 714	1 696	1 661	1 603	1 515	-
35	1 976	1 942	1 921	1 906	1 892	1 870	1 834	1 777	-
40	2 263	2 195	2 150	2 121	2 101	2 083	2 060	2 026	-
45	-	2 501	2 422	2 369	2 335	2 312	2 294	2 274	-
50	-	-	2 749	2 663	2 606	2 569	2 546	2 531	-
55	-	-	-	3 015	2 925	2 866	2 830	2 811	-
60	-	-	-	-	3 304	3 214	3 156	3 124	-
65	-	-	-	-	-	3 625	3 536	3 483	-

Current consumption in A

30	4.37	4.13	4.08	4.13	4.19	4.20	4.07	3.71	-
35	4.88	4.51	4.37	4.35	4.40	4.42	4.33	4.05	-
40	5.49	4.98	4.73	4.64	4.65	4.66	4.61	4.40	-
45	-	5.55	5.18	5.01	4.96	4.96	4.92	4.77	-
50	-	-	5.73	5.46	5.35	5.32	5.28	5.17	-
55	-	-	-	6.02	5.83	5.75	5.71	5.62	-
60	-	-	-	-	6.42	6.28	6.22	6.14	-
65	-	-	-	-	-	6.92	6.82	6.75	-

Mass flow in kg/h

30	73	84	101	122	148	177	210	246	-
35	71	83	99	121	146	175	207	242	-
40	67	80	97	119	144	173	205	239	-
45	-	75	93	116	141	170	202	236	-
50	-	-	88	111	138	167	199	233	-
55	-	-	-	105	133	163	196	230	-
60	-	-	-	-	126	157	191	226	-
65	-	-	-	-	-	149	184	220	-

Coefficient of performance (C.O.P.)

30	1.93	2.27	2.75	3.39	4.20	5.21	6.47	8.11	-
35	1.59	1.90	2.34	2.90	3.58	4.40	5.38	6.56	-
40	1.26	1.56	1.96	2.46	3.06	3.75	4.55	5.46	-
45	-	1.24	1.60	2.06	2.59	3.20	3.87	4.62	-
50	-	-	1.27	1.68	2.16	2.70	3.29	3.92	-
55	-	-	-	1.33	1.77	2.25	2.77	3.32	-
60	-	-	-	-	1.40	1.83	2.30	2.79	-
65	-	-	-	-	-	1.45	1.87	2.31	-

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

Cooling capacity	8 375	W
Power input	2 546	W
Current consumption	5.28	A
Mass flow	199	kg/h
C.O.P.	3.29	

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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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

Cooling capacity in W

30	3 559	4 154	5 028	6 165	7 546	9 153	10 969	12 975	-
35	3 341	3 931	4 784	5 881	7 204	8 736	10 459	12 355	-
40	3 058	3 659	4 503	5 575	6 855	8 327	9 971	11 771	-
45	-	3 317	4 169	5 230	6 482	7 908	9 489	11 207	-
50	-	-	3 762	4 827	6 066	7 460	8 993	10 645	-
55	-	-	-	4 349	5 589	6 967	8 465	10 065	-
60	-	-	-	-	5 033	6 409	7 887	9 451	-
65	-	-	-	-	-	5 768	7 242	8 783	-

Power input in W

30	1 737	1 728	1 722	1 714	1 696	1 661	1 603	1 515	-
35	1 976	1 942	1 921	1 906	1 892	1 870	1 834	1 777	-
40	2 263	2 195	2 150	2 121	2 101	2 083	2 060	2 026	-
45	-	2 501	2 422	2 369	2 335	2 312	2 294	2 274	-
50	-	-	2 749	2 663	2 606	2 569	2 546	2 531	-
55	-	-	-	3 015	2 925	2 866	2 830	2 811	-
60	-	-	-	-	3 304	3 214	3 156	3 124	-
65	-	-	-	-	-	3 625	3 536	3 483	-

Current consumption in A

30	4.37	4.13	4.08	4.13	4.19	4.20	4.07	3.71	-
35	4.88	4.51	4.37	4.35	4.40	4.42	4.33	4.05	-
40	5.49	4.98	4.73	4.64	4.65	4.66	4.61	4.40	-
45	-	5.55	5.18	5.01	4.96	4.96	4.92	4.77	-
50	-	-	5.73	5.46	5.35	5.32	5.28	5.17	-
55	-	-	-	6.02	5.83	5.75	5.71	5.62	-
60	-	-	-	-	6.42	6.28	6.22	6.14	-
65	-	-	-	-	-	6.92	6.82	6.75	-

Mass flow in kg/h

30	72	84	100	121	147	176	209	245	-
35	70	82	99	120	145	174	206	241	-
40	67	79	97	118	143	172	203	238	-
45	-	75	93	115	141	169	201	235	-
50	-	-	88	111	137	166	198	232	-
55	-	-	-	104	132	162	194	229	-
60	-	-	-	-	125	156	190	225	-
65	-	-	-	-	-	148	183	219	-

Coefficient of performance (C.O.P.)

30	2.05	2.40	2.92	3.60	4.45	5.51	6.84	8.57	-
35	1.69	2.02	2.49	3.08	3.81	4.67	5.70	6.95	-
40	1.35	1.67	2.09	2.63	3.26	4.00	4.84	5.81	-
45	-	1.33	1.72	2.21	2.78	3.42	4.14	4.93	-
50	-	-	1.37	1.81	2.33	2.90	3.53	4.21	-
55	-	-	-	1.44	1.91	2.43	2.99	3.58	-
60	-	-	-	-	1.52	1.99	2.50	3.03	-
65	-	-	-	-	-	1.59	2.05	2.52	-

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

Cooling capacity	9 225	W
Power input	2 784	W
Current consumption	5.63	A
Mass flow	210	kg/h
C.O.P.	3.31	

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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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	3 987	4 656	5 640	6 920	8 477	10 289	12 337	14 601	-
35	3 736	4 397	5 354	6 588	8 077	9 802	11 743	13 880	-
40	3 413	4 084	5 030	6 232	7 671	9 325	11 176	13 202	-
45	-	3 695	4 646	5 833	7 237	8 836	10 613	12 545	-
50	-	-	4 182	5 369	6 753	8 314	10 032	11 886	-
55	-	-	-	4 820	6 200	7 737	9 412	11 204	-
60	-	-	-	-	5 557	7 085	8 731	10 476	-
65	-	-	-	-	-	6 337	7 969	9 680	-

Power input in W

30	2 082	2 072	2 066	2 055	2 033	1 992	1 923	1 820	-
35	2 357	2 319	2 295	2 278	2 260	2 234	2 191	2 125	-
40	2 685	2 608	2 556	2 522	2 498	2 477	2 450	2 410	-
45	-	2 953	2 863	2 802	2 761	2 734	2 712	2 689	-
50	-	-	3 229	3 130	3 063	3 020	2 993	2 975	-
55	-	-	-	3 521	3 417	3 347	3 305	3 283	-
60	-	-	-	-	3 836	3 730	3 662	3 625	-
65	-	-	-	-	-	4 182	4 078	4 016	-

Current consumption in A

30	4.37	4.13	4.08	4.13	4.19	4.20	4.07	3.71	-
35	4.88	4.51	4.37	4.35	4.40	4.42	4.33	4.05	-
40	5.49	4.98	4.73	4.64	4.65	4.66	4.61	4.40	-
45	-	5.55	5.18	5.01	4.96	4.96	4.92	4.77	-
50	-	-	5.73	5.46	5.35	5.32	5.28	5.17	-
55	-	-	-	6.02	5.83	5.75	5.71	5.62	-
60	-	-	-	-	6.42	6.28	6.22	6.14	-
65	-	-	-	-	-	6.92	6.82	6.75	-

Mass flow in kg/h

30	87	100	120	145	176	211	250	293	-
35	84	98	118	144	174	208	247	288	-
40	80	95	116	141	172	206	244	285	-
45	-	90	112	138	169	204	242	282	-
50	-	-	106	133	165	200	239	279	-
55	-	-	-	126	159	196	235	276	-
60	-	-	-	-	151	189	229	272	-
65	-	-	-	-	-	180	222	266	-

Coefficient of performance (C.O.P.)

30	1.91	2.25	2.73	3.37	4.17	5.17	6.41	8.02	-
35	1.58	1.90	2.33	2.89	3.57	4.39	5.36	6.53	-
40	1.27	1.57	1.97	2.47	3.07	3.77	4.56	5.48	-
45	-	1.25	1.62	2.08	2.62	3.23	3.91	4.67	-
50	-	-	1.30	1.72	2.20	2.75	3.35	4.00	-
55	-	-	-	1.37	1.81	2.31	2.85	3.41	-
60	-	-	-	-	1.45	1.90	2.38	2.89	-
65	-	-	-	-	-	1.52	1.95	2.41	-

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

Cooling capacity	10 032	W
Power input	2 993	W
Current consumption	5.28	A
Mass flow	239	kg/h
C.O.P.	3.35	

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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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

Cooling capacity in W

30	4 235	4 941	5 981	7 333	8 975	10 886	13 044	15 428	-
35	3 982	4 683	5 697	7 003	8 580	10 405	12 456	14 712	-
40	3 653	4 366	5 373	6 651	8 179	9 934	11 896	14 043	-
45	-	3 968	4 984	6 252	7 748	9 452	11 342	13 397	-
50	-	-	4 509	5 783	7 266	8 936	10 772	12 751	-
55	-	-	-	5 222	6 708	8 362	10 161	12 083	-
60	-	-	-	-	6 053	7 707	9 486	11 369	-
65	-	-	-	-	-	6 949	8 726	10 586	-

Power input in W

30	2 082	2 072	2 066	2 055	2 033	1 992	1 923	1 820	-
35	2 357	2 319	2 295	2 278	2 260	2 234	2 191	2 125	-
40	2 685	2 608	2 556	2 522	2 498	2 477	2 450	2 410	-
45	-	2 953	2 863	2 802	2 761	2 734	2 712	2 689	-
50	-	-	3 229	3 130	3 063	3 020	2 993	2 975	-
55	-	-	-	3 521	3 417	3 347	3 305	3 283	-
60	-	-	-	-	3 836	3 730	3 662	3 625	-
65	-	-	-	-	-	4 182	4 078	4 016	-

Current consumption in A

30	4.37	4.13	4.08	4.13	4.19	4.20	4.07	3.71	-
35	4.88	4.51	4.37	4.35	4.40	4.42	4.33	4.05	-
40	5.49	4.98	4.73	4.64	4.65	4.66	4.61	4.40	-
45	-	5.55	5.18	5.01	4.96	4.96	4.92	4.77	-
50	-	-	5.73	5.46	5.35	5.32	5.28	5.17	-
55	-	-	-	6.02	5.83	5.75	5.71	5.62	-
60	-	-	-	-	6.42	6.28	6.22	6.14	-
65	-	-	-	-	-	6.92	6.82	6.75	-

Mass flow in kg/h

30	86	100	119	144	175	210	249	291	-
35	84	98	118	143	173	207	245	287	-
40	80	95	115	141	171	205	243	283	-
45	-	90	111	137	168	203	240	281	-
50	-	-	105	133	164	199	237	278	-
55	-	-	-	125	158	195	233	274	-
60	-	-	-	-	150	188	228	270	-
65	-	-	-	-	-	179	221	264	-

Coefficient of performance (C.O.P.)

30	2.03	2.38	2.90	3.57	4.41	5.47	6.78	8.48	-
35	1.69	2.02	2.48	3.07	3.80	4.66	5.68	6.92	-
40	1.36	1.67	2.10	2.64	3.27	4.01	4.86	5.83	-
45	-	1.34	1.74	2.23	2.81	3.46	4.18	4.98	-
50	-	-	1.40	1.85	2.37	2.96	3.60	4.29	-
55	-	-	-	1.48	1.96	2.50	3.07	3.68	-
60	-	-	-	-	1.58	2.07	2.59	3.14	-
65	-	-	-	-	-	1.66	2.14	2.64	-

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

Cooling capacity	11 071	W
Power input	3 254	W
Current consumption	5.63	A
Mass flow	252	kg/h
C.O.P.	3.40	

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)

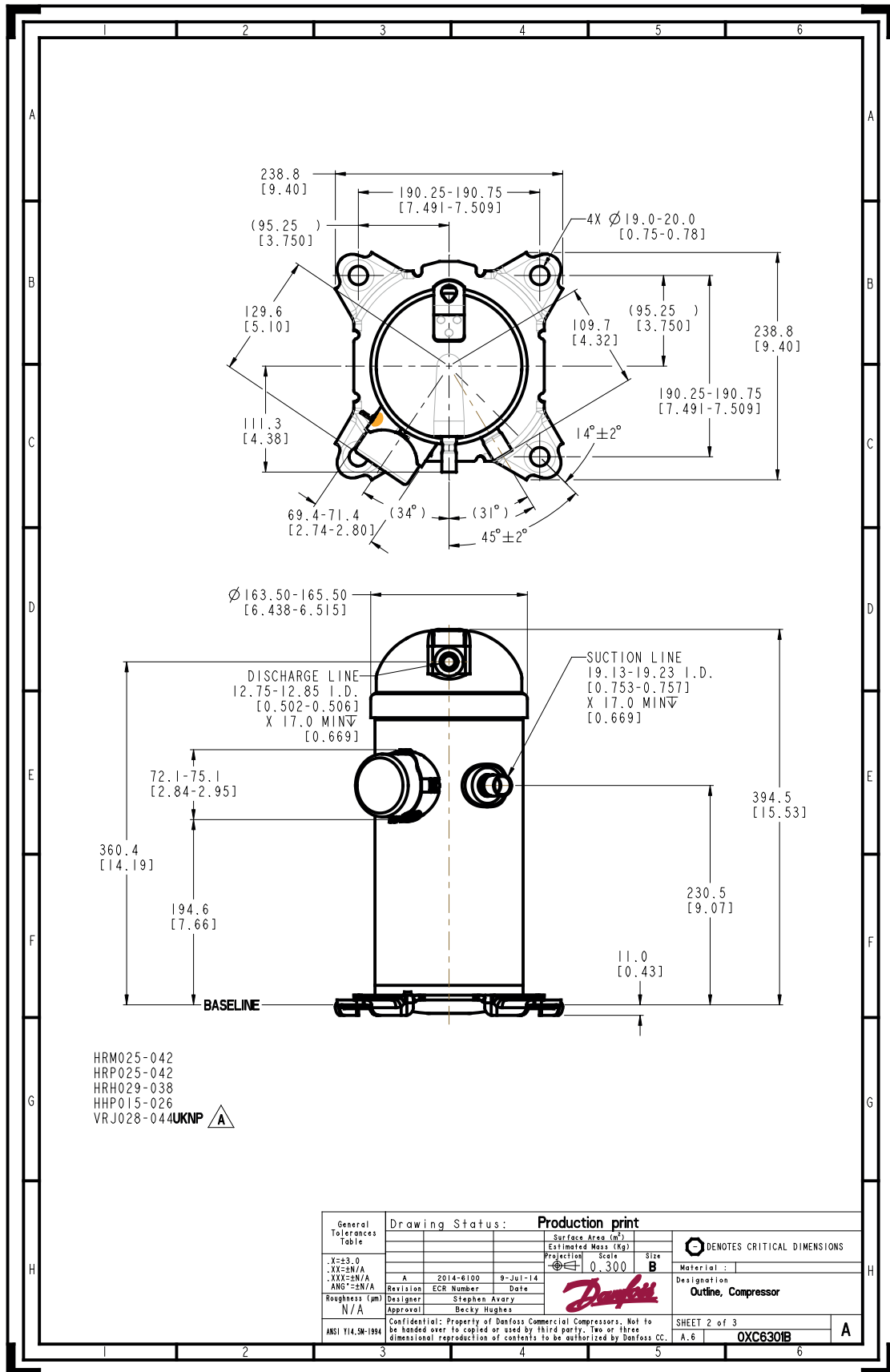
to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

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

All performance data +/- 5%

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