

Datasheets

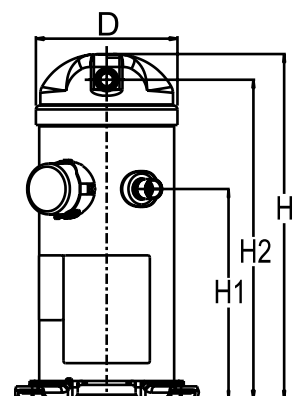
# Danfoss scroll compressors **H series**



**General Characteristics**

Model number (on compressor nameplate)		<b>HRM040T4LP6</b>
Code number for Singlepack*		120U2377
Code number for Industrial pack**		120U2374
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		54.39 cm <sup>3</sup> /rev
Displacement @ Nominal speed		9.5 m <sup>3</sup> /h @ 2900 rpm - 11.4 m <sup>3</sup> /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**

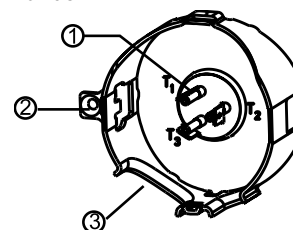


D=164.5 mm  
H=413 mm  
H1=250 mm  
H2=379 mm  
H3=- mm

**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.**

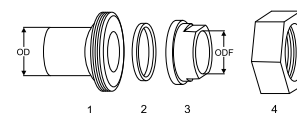
Solder sleeve, P04 (1-1/4" Rotolock, 3/4" ODF)	8153008
Angle adapter, C04 (1-1/4" Rotolock, 3/4" ODF)	8168006
Rotolock valve, V04 (1-1/4" Rotolock, 3/4" ODF)	8168029
Gasket, 1-1/4"	8156131

**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	3 492	4 079	4 941	6 063	7 427	9 015	10 810	12 796	-
35	3 268	3 849	4 687	5 766	7 069	8 579	10 279	12 150	-
40	2 981	3 569	4 397	5 448	6 705	8 151	9 769	11 541	-
45	-	3 223	4 055	5 092	6 317	7 713	9 264	10 951	-
50	-	-	3 643	4 679	5 886	7 246	8 743	10 359	-
55	-	-	-	4 194	5 395	6 733	8 190	9 749	-
60	-	-	-	-	4 828	6 157	7 586	9 101	-
65	-	-	-	-	-	5 500	6 915	8 398	-

Power input in W

30	1 877	1 869	1 863	1 853	1 833	1 796	1 735	1 644	-
35	2 118	2 085	2 064	2 049	2 033	2 009	1 971	1 912	-
40	2 403	2 336	2 291	2 261	2 240	2 220	2 196	2 161	-
45	-	2 634	2 556	2 502	2 466	2 442	2 422	2 401	-
50	-	-	2 870	2 783	2 724	2 685	2 661	2 645	-
55	-	-	-	3 116	3 024	2 963	2 926	2 905	-
60	-	-	-	-	3 380	3 287	3 227	3 193	-
65	-	-	-	-	-	3 669	3 577	3 521	-

Current consumption in A

30	4.57	4.32	4.26	4.31	4.38	4.39	4.25	3.88	-
35	5.10	4.72	4.57	4.55	4.60	4.62	4.52	4.24	-
40	5.74	5.21	4.94	4.85	4.86	4.87	4.82	4.60	-
45	-	5.81	5.41	5.23	5.18	5.18	5.14	4.98	-
50	-	-	5.99	5.71	5.59	5.56	5.52	5.40	-
55	-	-	-	6.29	6.09	6.01	5.97	5.88	-
60	-	-	-	-	6.71	6.57	6.50	6.42	-
65	-	-	-	-	-	7.24	7.13	7.05	-

Mass flow in kg/h

30	76	88	105	127	154	185	219	257	-
35	74	86	104	126	152	182	216	252	-
40	70	83	101	124	150	180	213	249	-
45	-	79	98	121	148	178	211	246	-
50	-	-	92	116	144	175	208	244	-
55	-	-	-	110	139	170	204	240	-
60	-	-	-	-	131	164	199	236	-
65	-	-	-	-	-	156	192	230	-

Coefficient of performance (C.O.P.)

30	1.86	2.18	2.65	3.27	4.05	5.02	6.23	7.78	-
35	1.54	1.85	2.27	2.81	3.48	4.27	5.22	6.35	-
40	1.24	1.53	1.92	2.41	2.99	3.67	4.45	5.34	-
45	-	1.22	1.59	2.04	2.56	3.16	3.82	4.56	-
50	-	-	1.27	1.68	2.16	2.70	3.29	3.92	-
55	-	-	-	1.35	1.78	2.27	2.80	3.36	-
60	-	-	-	-	1.43	1.87	2.35	2.85	-
65	-	-	-	-	-	1.50	1.93	2.38	-

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

Cooling capacity	8 743	W
Power input	2 661	W
Current consumption	5.52	A
Mass flow	208	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	15

**Cooling capacity in W**

30	3 709	4 328	5 240	6 424	7 863	9 538	11 430	13 520	-
35	3 483	4 098	4 987	6 130	7 510	9 107	10 902	12 878	-
40	3 190	3 816	4 697	5 814	7 149	8 684	10 399	12 276	-
45	-	3 462	4 350	5 457	6 764	8 251	9 901	11 694	-
50	-	-	3 928	5 040	6 333	7 788	9 388	11 113	-
55	-	-	-	4 543	5 838	7 277	8 842	10 514	-
60	-	-	-	-	5 259	6 697	8 243	9 877	-
65	-	-	-	-	-	6 031	7 572	9 184	-

**Power input in W**

30	1 877	1 869	1 863	1 853	1 833	1 796	1 735	1 644	-
35	2 118	2 085	2 064	2 049	2 033	2 009	1 971	1 912	-
40	2 403	2 336	2 291	2 261	2 240	2 220	2 196	2 161	-
45	-	2 634	2 556	2 502	2 466	2 442	2 422	2 401	-
50	-	-	2 870	2 783	2 724	2 685	2 661	2 645	-
55	-	-	-	3 116	3 024	2 963	2 926	2 905	-
60	-	-	-	-	3 380	3 287	3 227	3 193	-
65	-	-	-	-	-	3 669	3 577	3 521	-

**Current consumption in A**

30	4.57	4.32	4.26	4.31	4.38	4.39	4.25	3.88	-
35	5.10	4.72	4.57	4.55	4.60	4.62	4.52	4.24	-
40	5.74	5.21	4.94	4.85	4.86	4.87	4.82	4.60	-
45	-	5.81	5.41	5.23	5.18	5.18	5.14	4.98	-
50	-	-	5.99	5.71	5.59	5.56	5.52	5.40	-
55	-	-	-	6.29	6.09	6.01	5.97	5.88	-
60	-	-	-	-	6.71	6.57	6.50	6.42	-
65	-	-	-	-	-	7.24	7.13	7.05	-

**Mass flow in kg/h**

30	76	87	104	127	153	184	218	255	-
35	73	86	103	125	151	181	215	251	-
40	70	83	101	123	149	179	212	248	-
45	-	78	97	120	147	177	210	245	-
50	-	-	92	116	143	174	207	242	-
55	-	-	-	109	138	169	203	239	-
60	-	-	-	-	131	163	198	235	-
65	-	-	-	-	-	155	191	229	-

**Coefficient of performance (C.O.P.)**

30	1.98	2.32	2.81	3.47	4.29	5.31	6.59	8.22	-
35	1.64	1.97	2.42	2.99	3.69	4.53	5.53	6.73	-
40	1.33	1.63	2.05	2.57	3.19	3.91	4.74	5.68	-
45	-	1.31	1.70	2.18	2.74	3.38	4.09	4.87	-
50	-	-	1.37	1.81	2.33	2.90	3.53	4.20	-
55	-	-	-	1.46	1.93	2.46	3.02	3.62	-
60	-	-	-	-	1.56	2.04	2.55	3.09	-
65	-	-	-	-	-	1.64	2.12	2.61	-

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

Cooling capacity	9 635	W
Power input	2 882	W
Current consumption	5.88	A
Mass flow	219	kg/h
C.O.P.	3.34	

**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	4 160	4 858	5 885	7 221	8 845	10 736	12 874	15 237	-
35	3 895	4 586	5 584	6 870	8 423	10 222	12 247	14 476	-
40	3 555	4 255	5 242	6 495	7 994	9 718	11 647	13 759	-
45	-	3 846	4 838	6 074	7 536	9 201	11 051	13 064	-
50	-	-	4 350	5 586	7 027	8 651	10 438	12 367	-
55	-	-	-	5 010	6 446	8 044	9 784	11 647	-
60	-	-	-	-	5 772	7 360	9 069	10 880	-
65	-	-	-	-	-	6 578	8 271	10 046	-

Power input in W

30	2 226	2 216	2 209	2 198	2 174	2 130	2 058	1 950	-
35	2 511	2 472	2 447	2 429	2 410	2 382	2 337	2 267	-
40	2 848	2 769	2 716	2 680	2 655	2 632	2 603	2 561	-
45	-	3 121	3 028	2 964	2 922	2 893	2 870	2 845	-
50	-	-	3 399	3 296	3 226	3 181	3 152	3 133	-
55	-	-	-	3 690	3 581	3 508	3 464	3 440	-
60	-	-	-	-	4 001	3 891	3 819	3 780	-
65	-	-	-	-	-	4 341	4 232	4 166	-

Current consumption in A

30	4.57	4.32	4.26	4.31	4.38	4.39	4.25	3.88	-
35	5.10	4.72	4.57	4.55	4.60	4.62	4.52	4.24	-
40	5.74	5.21	4.94	4.85	4.86	4.87	4.82	4.60	-
45	-	5.81	5.41	5.23	5.18	5.18	5.14	4.98	-
50	-	-	5.99	5.71	5.59	5.56	5.52	5.40	-
55	-	-	-	6.29	6.09	6.01	5.97	5.88	-
60	-	-	-	-	6.71	6.57	6.50	6.42	-
65	-	-	-	-	-	7.24	7.13	7.05	-

Mass flow in kg/h

30	90	105	125	151	183	220	261	306	-
35	88	103	123	150	181	217	257	301	-
40	84	99	121	147	179	215	254	297	-
45	-	94	116	144	176	212	251	294	-
50	-	-	110	139	172	208	248	291	-
55	-	-	-	131	165	203	244	287	-
60	-	-	-	-	157	196	238	282	-
65	-	-	-	-	-	187	230	276	-

Coefficient of performance (C.O.P.)

30	1.87	2.19	2.66	3.29	4.07	5.04	6.26	7.81	-
35	1.55	1.85	2.28	2.83	3.49	4.29	5.24	6.38	-
40	1.25	1.54	1.93	2.42	3.01	3.69	4.47	5.37	-
45	-	1.23	1.60	2.05	2.58	3.18	3.85	4.59	-
50	-	-	1.28	1.69	2.18	2.72	3.31	3.95	-
55	-	-	-	1.36	1.80	2.29	2.82	3.39	-
60	-	-	-	-	1.44	1.89	2.37	2.88	-
65	-	-	-	-	-	1.52	1.95	2.41	-

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

Cooling capacity	10 438	W
Power input	3 152	W
Current consumption	5.52	A
Mass flow	248	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	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	4 418	5 155	6 240	7 651	9 365	11 359	13 612	16 100	-
35	4 151	4 883	5 942	7 304	8 948	10 850	12 990	15 344	-
40	3 805	4 550	5 599	6 931	8 523	10 353	12 397	14 635	-
45	-	4 131	5 190	6 510	8 068	9 843	11 811	13 950	-
50	-	-	4 690	6 017	7 560	9 298	11 207	13 267	-
55	-	-	-	5 428	6 974	8 693	10 563	12 560	-
60	-	-	-	-	6 287	8 006	9 854	11 808	-
65	-	-	-	-	-	7 213	9 058	10 987	-

Power input in W

30	2 226	2 216	2 209	2 198	2 174	2 130	2 058	1 950	-
35	2 511	2 472	2 447	2 429	2 410	2 382	2 337	2 267	-
40	2 848	2 769	2 716	2 680	2 655	2 632	2 603	2 561	-
45	-	3 121	3 028	2 964	2 922	2 893	2 870	2 845	-
50	-	-	3 399	3 296	3 226	3 181	3 152	3 133	-
55	-	-	-	3 690	3 581	3 508	3 464	3 440	-
60	-	-	-	-	4 001	3 891	3 819	3 780	-
65	-	-	-	-	-	4 341	4 232	4 166	-

Current consumption in A

30	4.57	4.32	4.26	4.31	4.38	4.39	4.25	3.88	-
35	5.10	4.72	4.57	4.55	4.60	4.62	4.52	4.24	-
40	5.74	5.21	4.94	4.85	4.86	4.87	4.82	4.60	-
45	-	5.81	5.41	5.23	5.18	5.18	5.14	4.98	-
50	-	-	5.99	5.71	5.59	5.56	5.52	5.40	-
55	-	-	-	6.29	6.09	6.01	5.97	5.88	-
60	-	-	-	-	6.71	6.57	6.50	6.42	-
65	-	-	-	-	-	7.24	7.13	7.05	-

Mass flow in kg/h

30	90	104	124	151	182	219	259	304	-
35	88	102	123	149	180	216	256	299	-
40	83	99	120	147	178	214	253	295	-
45	-	93	116	143	175	211	250	292	-
50	-	-	109	138	171	207	247	289	-
55	-	-	-	130	165	202	243	285	-
60	-	-	-	-	156	195	237	281	-
65	-	-	-	-	-	186	229	274	-

Coefficient of performance (C.O.P.)

30	1.98	2.33	2.82	3.48	4.31	5.33	6.61	8.26	-
35	1.65	1.98	2.43	3.01	3.71	4.56	5.56	6.77	-
40	1.34	1.64	2.06	2.59	3.21	3.93	4.76	5.71	-
45	-	1.32	1.71	2.20	2.76	3.40	4.12	4.90	-
50	-	-	1.38	1.83	2.34	2.92	3.56	4.23	-
55	-	-	-	1.47	1.95	2.48	3.05	3.65	-
60	-	-	-	-	1.57	2.06	2.58	3.12	-
65	-	-	-	-	-	1.66	2.14	2.64	-

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

Cooling capacity	11 510	W
Power input	3 413	W
Current consumption	5.88	A
Mass flow	262	kg/h
C.O.P.	3.37	

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)

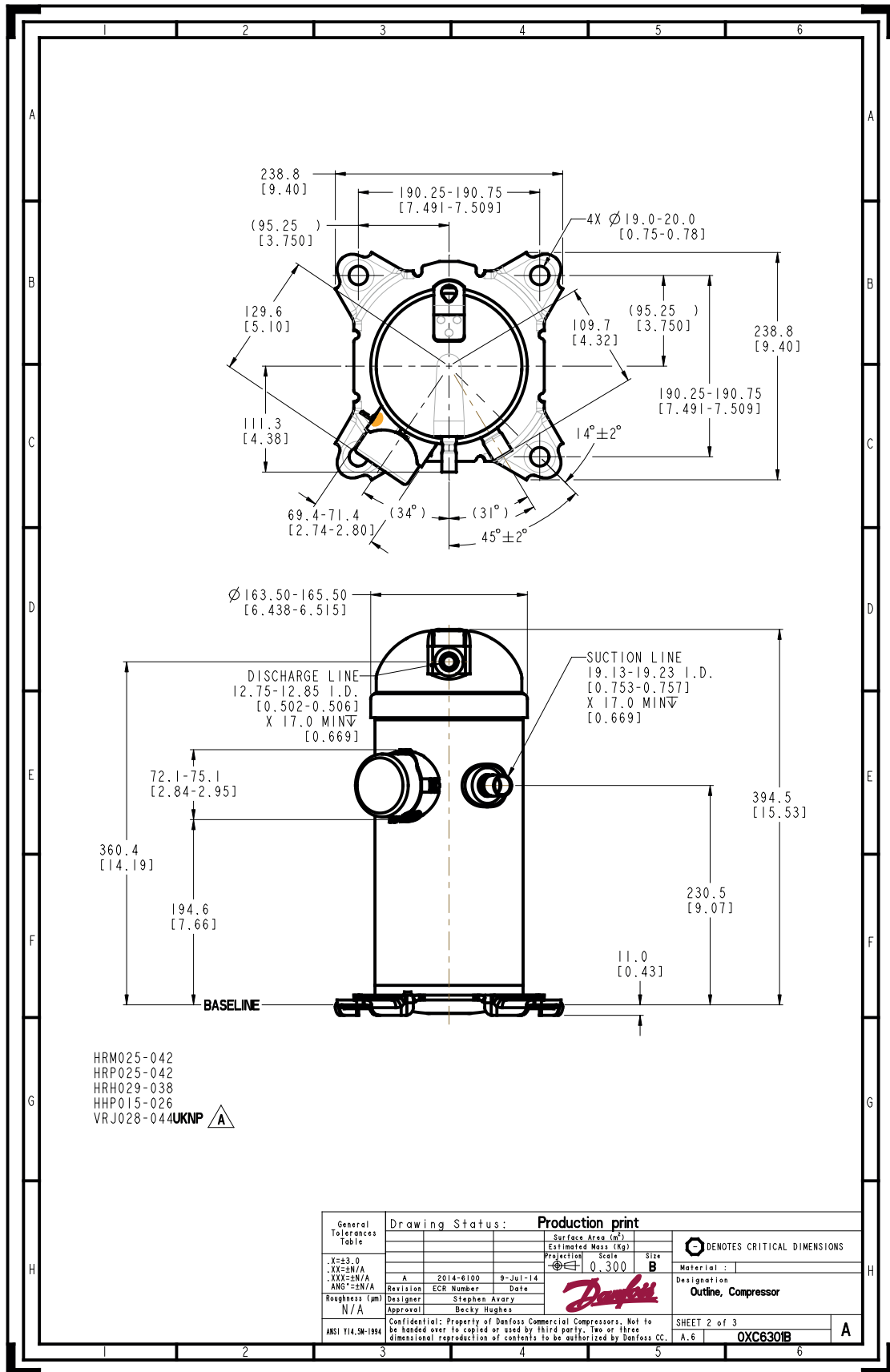
to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

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

All performance data +/- 5%

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