

ENGINEERING
TOMORROW

Danfoss

Datasheets

Danfoss scroll compressors **H series**



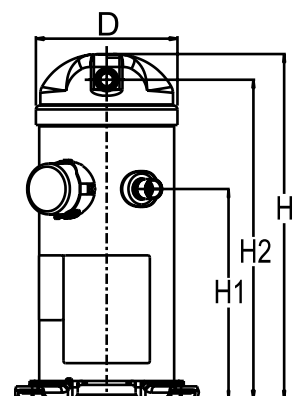
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General Characteristics

Model number (on compressor nameplate)		HRP038T4LP6
Code number for Singlepack*		120U1006
Code number for Industrial pack**		120U1003
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		51.62 cm ³ /rev
Displacement @ Nominal speed		9.0 m ³ /h @ 2900 rpm - 10.8 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		R407C

Dimensions

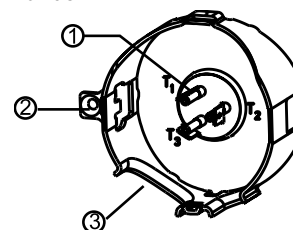


D=164.5 mm
H=413 mm
H1=250 mm
H2=379 mm
H3=- mm

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)	7 A
Maximum Continuous Current (MCC)	11 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

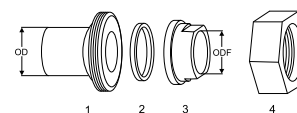
**Industrial pack: 12 or 16 Unboxed compressors on pallet

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

R407C

Cond. temp. in °C (tc)	Evaporating temperature in °C (to)								
	-30	-25	-20	-15	-10	-5	0	5	10

Cooling capacity in W

30	-	2 668	3 423	4 342	5 442	6 740	8 255	10 004	12 006
35	-	2 510	3 228	4 100	5 145	6 381	7 824	9 495	11 409
40	-	2 344	3 024	3 850	4 840	6 013	7 386	8 977	10 804
45	-	-	2 806	3 586	4 522	5 632	6 934	8 446	10 184
50	-	-	-	3 304	4 185	5 232	6 463	7 894	9 545
55	-	-	-	-	3 824	4 808	5 967	7 318	8 879
60	-	-	-	-	-	4 353	5 439	6 710	8 181
65	-	-	-	-	-	-	4 876	6 063	7 443

Power input in W

30	-	1 634	1 624	1 618	1 612	1 601	1 582	1 550	1 501
35	-	1 848	1 833	1 823	1 815	1 803	1 785	1 755	1 709
40	-	2 084	2 065	2 052	2 042	2 030	2 013	1 985	1 943
45	-	-	2 323	2 308	2 297	2 285	2 269	2 245	2 208
50	-	-	-	2 595	2 583	2 573	2 559	2 538	2 506
55	-	-	-	-	2 906	2 897	2 886	2 869	2 843
60	-	-	-	-	-	3 261	3 254	3 242	3 221
65	-	-	-	-	-	-	3 666	3 659	3 645

Current consumption in A

30	-	3.46	3.41	3.48	3.62	3.78	3.93	4.02	4.00
35	-	4.37	4.22	4.21	4.28	4.38	4.48	4.52	4.47
40	-	5.00	4.78	4.70	4.71	4.77	4.83	4.85	4.77
45	-	-	5.19	5.06	5.03	5.06	5.10	5.11	5.03
50	-	-	-	5.41	5.36	5.37	5.41	5.42	5.36
55	-	-	-	-	5.79	5.81	5.86	5.89	5.86
60	-	-	-	-	-	6.50	6.57	6.64	6.66
65	-	-	-	-	-	-	7.65	7.78	7.86

Mass flow in kg/h

30	-	60	75	94	116	141	170	203	240
35	-	59	75	93	115	140	169	201	238
40	-	58	74	92	114	138	167	200	237
45	-	-	72	91	112	137	165	198	235
50	-	-	-	89	110	135	163	196	233
55	-	-	-	-	107	132	160	193	230
60	-	-	-	-	-	128	157	189	226
65	-	-	-	-	-	-	152	185	222

Coefficient of performance (C.O.P.)

30	-	1.63	2.11	2.68	3.38	4.21	5.22	6.45	8.00
35	-	1.36	1.76	2.25	2.84	3.54	4.38	5.41	6.67
40	-	1.12	1.46	1.88	2.37	2.96	3.67	4.52	5.56
45	-	-	1.21	1.55	1.97	2.46	3.06	3.76	4.61
50	-	-	-	1.27	1.62	2.03	2.53	3.11	3.81
55	-	-	-	-	1.32	1.66	2.07	2.55	3.12
60	-	-	-	-	-	1.33	1.67	2.07	2.54
65	-	-	-	-	-	-	1.33	1.66	2.04

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

Cooling capacity	7 894	W
Power input	2 538	W
Current consumption	5.42	A
Mass flow	196	kg/h
C.O.P.	3.11	

Pressure switch settings

Maximum HP switch setting	30	bar(g)
Minimum LP switch setting	0.5	bar(g)
LP pump down setting	1	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
R407C

Cond. temp. in °C (tc)	Evaporating temperature in °C (to)								
	-30	-25	-20	-15	-10	-5	0	5	10

Cooling capacity in W

30	-	2 865	3 672	4 652	5 823	7 205	8 815	10 673	12 796
35	-	2 709	3 479	4 413	5 531	6 851	8 392	10 172	12 211
40	-	2 545	3 277	4 166	5 231	6 490	7 962	9 665	11 618
45	-	-	3 061	3 906	4 918	6 116	7 519	9 145	11 013
50	-	-	-	3 625	4 585	5 722	7 056	8 606	10 390
55	-	-	-	-	4 226	5 303	6 569	8 042	9 742
60	-	-	-	-	-	4 852	6 050	7 447	9 063
65	-	-	-	-	-	-	5 494	6 816	8 347

Power input in W

30	-	1 634	1 624	1 618	1 612	1 601	1 582	1 550	1 501
35	-	1 848	1 833	1 823	1 815	1 803	1 785	1 755	1 709
40	-	2 084	2 065	2 052	2 042	2 030	2 013	1 985	1 943
45	-	-	2 323	2 308	2 297	2 285	2 269	2 245	2 208
50	-	-	-	2 595	2 583	2 573	2 559	2 538	2 506
55	-	-	-	-	2 906	2 897	2 886	2 869	2 843
60	-	-	-	-	-	3 261	3 254	3 242	3 221
65	-	-	-	-	-	-	3 666	3 659	3 645

Current consumption in A

30	-	3.46	3.41	3.48	3.62	3.78	3.93	4.02	4.00
35	-	4.37	4.22	4.21	4.28	4.38	4.48	4.52	4.47
40	-	5.00	4.78	4.70	4.71	4.77	4.83	4.85	4.77
45	-	-	5.19	5.06	5.03	5.06	5.10	5.11	5.03
50	-	-	-	5.41	5.36	5.37	5.41	5.42	5.36
55	-	-	-	-	5.79	5.81	5.86	5.89	5.86
60	-	-	-	-	-	6.50	6.57	6.64	6.66
65	-	-	-	-	-	-	7.65	7.78	7.86

Mass flow in kg/h

30	-	59	75	93	115	140	169	202	239
35	-	59	74	93	114	139	168	200	237
40	-	58	73	92	113	138	166	199	235
45	-	-	72	90	111	136	165	197	234
50	-	-	-	88	109	134	162	195	231
55	-	-	-	-	107	131	160	192	228
60	-	-	-	-	-	128	156	188	225
65	-	-	-	-	-	-	151	184	220

Coefficient of performance (C.O.P.)

30	-	1.75	2.26	2.87	3.61	4.50	5.57	6.89	8.52
35	-	1.47	1.90	2.42	3.05	3.80	4.70	5.80	7.14
40	-	1.22	1.59	2.03	2.56	3.20	3.96	4.87	5.98
45	-	-	1.32	1.69	2.14	2.68	3.31	4.07	4.99
50	-	-	-	1.40	1.77	2.22	2.76	3.39	4.15
55	-	-	-	-	1.45	1.83	2.28	2.80	3.43
60	-	-	-	-	-	1.49	1.86	2.30	2.81
65	-	-	-	-	-	-	1.50	1.86	2.29

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

Cooling capacity	8 835	W
Power input	2 817	W
Current consumption	5.82	A
Mass flow	208	kg/h
C.O.P.	3.14	

Pressure switch settings

Maximum HP switch setting	30	bar(g)
Minimum LP switch setting	0.5	bar(g)
LP pump down setting	1	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 50 Hz, EN 12900 rating conditions

R407C

Cond. temp. in °C (tc)	Evaporating temperature in °C (to)								
	-30	-25	-20	-15	-10	-5	0	5	10

Cooling capacity in W

30	-	2 668	3 423	4 342	5 442	6 740	8 255	10 004	12 006
35	-	2 510	3 228	4 100	5 145	6 381	7 824	9 495	11 409
40	-	2 344	3 024	3 850	4 840	6 013	7 386	8 977	10 804
45	-	-	2 806	3 586	4 522	5 632	6 934	8 446	10 184
50	-	-	-	3 304	4 185	5 232	6 463	7 894	9 545
55	-	-	-	-	3 824	4 808	5 967	7 318	8 879
60	-	-	-	-	-	4 353	5 439	6 710	8 181
65	-	-	-	-	-	-	4 876	6 063	7 443

Power input in W

30	-	1 634	1 624	1 618	1 612	1 601	1 582	1 550	1 501
35	-	1 848	1 833	1 823	1 815	1 803	1 785	1 755	1 709
40	-	2 084	2 065	2 052	2 042	2 030	2 013	1 985	1 943
45	-	-	2 323	2 308	2 297	2 285	2 269	2 245	2 208
50	-	-	-	2 595	2 583	2 573	2 559	2 538	2 506
55	-	-	-	-	2 906	2 897	2 886	2 869	2 843
60	-	-	-	-	-	3 261	3 254	3 242	3 221
65	-	-	-	-	-	-	3 666	3 659	3 645

Current consumption in A

30	-	3.46	3.41	3.48	3.62	3.78	3.93	4.02	4.00
35	-	4.37	4.22	4.21	4.28	4.38	4.48	4.52	4.47
40	-	5.00	4.78	4.70	4.71	4.77	4.83	4.85	4.77
45	-	-	5.19	5.06	5.03	5.06	5.10	5.11	5.03
50	-	-	-	5.41	5.36	5.37	5.41	5.42	5.36
55	-	-	-	-	5.79	5.81	5.86	5.89	5.86
60	-	-	-	-	-	6.50	6.57	6.64	6.66
65	-	-	-	-	-	-	7.65	7.78	7.86

Mass flow in kg/h

30	-	60	75	94	116	141	170	203	240
35	-	59	75	93	115	140	169	201	238
40	-	58	74	92	114	138	167	200	237
45	-	-	72	91	112	137	165	198	235
50	-	-	-	89	110	135	163	196	233
55	-	-	-	-	107	132	160	193	230
60	-	-	-	-	-	128	157	189	226
65	-	-	-	-	-	-	152	185	222

Coefficient of performance (C.O.P.)

30	-	1.63	2.11	2.68	3.38	4.21	5.22	6.45	8.00
35	-	1.36	1.76	2.25	2.84	3.54	4.38	5.41	6.67
40	-	1.12	1.46	1.88	2.37	2.96	3.67	4.52	5.56
45	-	-	1.21	1.55	1.97	2.46	3.06	3.76	4.61
50	-	-	-	1.27	1.62	2.03	2.53	3.11	3.81
55	-	-	-	-	1.32	1.66	2.07	2.55	3.12
60	-	-	-	-	-	1.33	1.67	2.07	2.54
65	-	-	-	-	-	-	1.33	1.66	2.04

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

Cooling capacity	7 894	W
Power input	2 538	W
Current consumption	5.42	A
Mass flow	196	kg/h
C.O.P.	3.11	

Pressure switch settings

Maximum HP switch setting	30	bar(g)
Minimum LP switch setting	0.5	bar(g)
LP pump down setting	1	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
R407C

Cond. temp. in °C (tc)	Evaporating temperature in °C (to)								
	-30	-25	-20	-15	-10	-5	0	5	10

Cooling capacity in W

30	-	2 865	3 672	4 652	5 823	7 205	8 815	10 673	12 796
35	-	2 709	3 479	4 413	5 531	6 851	8 392	10 172	12 211
40	-	2 545	3 277	4 166	5 231	6 490	7 962	9 665	11 618
45	-	-	3 061	3 906	4 918	6 116	7 519	9 145	11 013
50	-	-	-	3 625	4 585	5 722	7 056	8 606	10 390
55	-	-	-	-	4 226	5 303	6 569	8 042	9 742
60	-	-	-	-	-	4 852	6 050	7 447	9 063
65	-	-	-	-	-	-	5 494	6 816	8 347

Power input in W

30	-	1 634	1 624	1 618	1 612	1 601	1 582	1 550	1 501
35	-	1 848	1 833	1 823	1 815	1 803	1 785	1 755	1 709
40	-	2 084	2 065	2 052	2 042	2 030	2 013	1 985	1 943
45	-	-	2 323	2 308	2 297	2 285	2 269	2 245	2 208
50	-	-	-	2 595	2 583	2 573	2 559	2 538	2 506
55	-	-	-	-	2 906	2 897	2 886	2 869	2 843
60	-	-	-	-	-	3 261	3 254	3 242	3 221
65	-	-	-	-	-	-	3 666	3 659	3 645

Current consumption in A

30	-	3.46	3.41	3.48	3.62	3.78	3.93	4.02	4.00
35	-	4.37	4.22	4.21	4.28	4.38	4.48	4.52	4.47
40	-	5.00	4.78	4.70	4.71	4.77	4.83	4.85	4.77
45	-	-	5.19	5.06	5.03	5.06	5.10	5.11	5.03
50	-	-	-	5.41	5.36	5.37	5.41	5.42	5.36
55	-	-	-	-	5.79	5.81	5.86	5.89	5.86
60	-	-	-	-	-	6.50	6.57	6.64	6.66
65	-	-	-	-	-	-	7.65	7.78	7.86

Mass flow in kg/h

30	-	59	75	93	115	140	169	202	239
35	-	59	74	93	114	139	168	200	237
40	-	58	73	92	113	138	166	199	235
45	-	-	72	90	111	136	165	197	234
50	-	-	-	88	109	134	162	195	231
55	-	-	-	-	107	131	160	192	228
60	-	-	-	-	-	128	156	188	225
65	-	-	-	-	-	-	151	184	220

Coefficient of performance (C.O.P.)

30	-	1.75	2.26	2.87	3.61	4.50	5.57	6.89	8.52
35	-	1.47	1.90	2.42	3.05	3.80	4.70	5.80	7.14
40	-	1.22	1.59	2.03	2.56	3.20	3.96	4.87	5.98
45	-	-	1.32	1.69	2.14	2.68	3.31	4.07	4.99
50	-	-	-	1.40	1.77	2.22	2.76	3.39	4.15
55	-	-	-	-	1.45	1.83	2.28	2.80	3.43
60	-	-	-	-	-	1.49	1.86	2.30	2.81
65	-	-	-	-	-	-	1.50	1.86	2.29

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

Cooling capacity	8 835	W
Power input	2 817	W
Current consumption	5.82	A
Mass flow	208	kg/h
C.O.P.	3.14	

Pressure switch settings

Maximum HP switch setting	30	bar(g)
Minimum LP switch setting	0.5	bar(g)
LP pump down setting	1	bar(g)

Sound power data

Sound power level	67	dB(A)
With acoustic hood	62	dB(A)

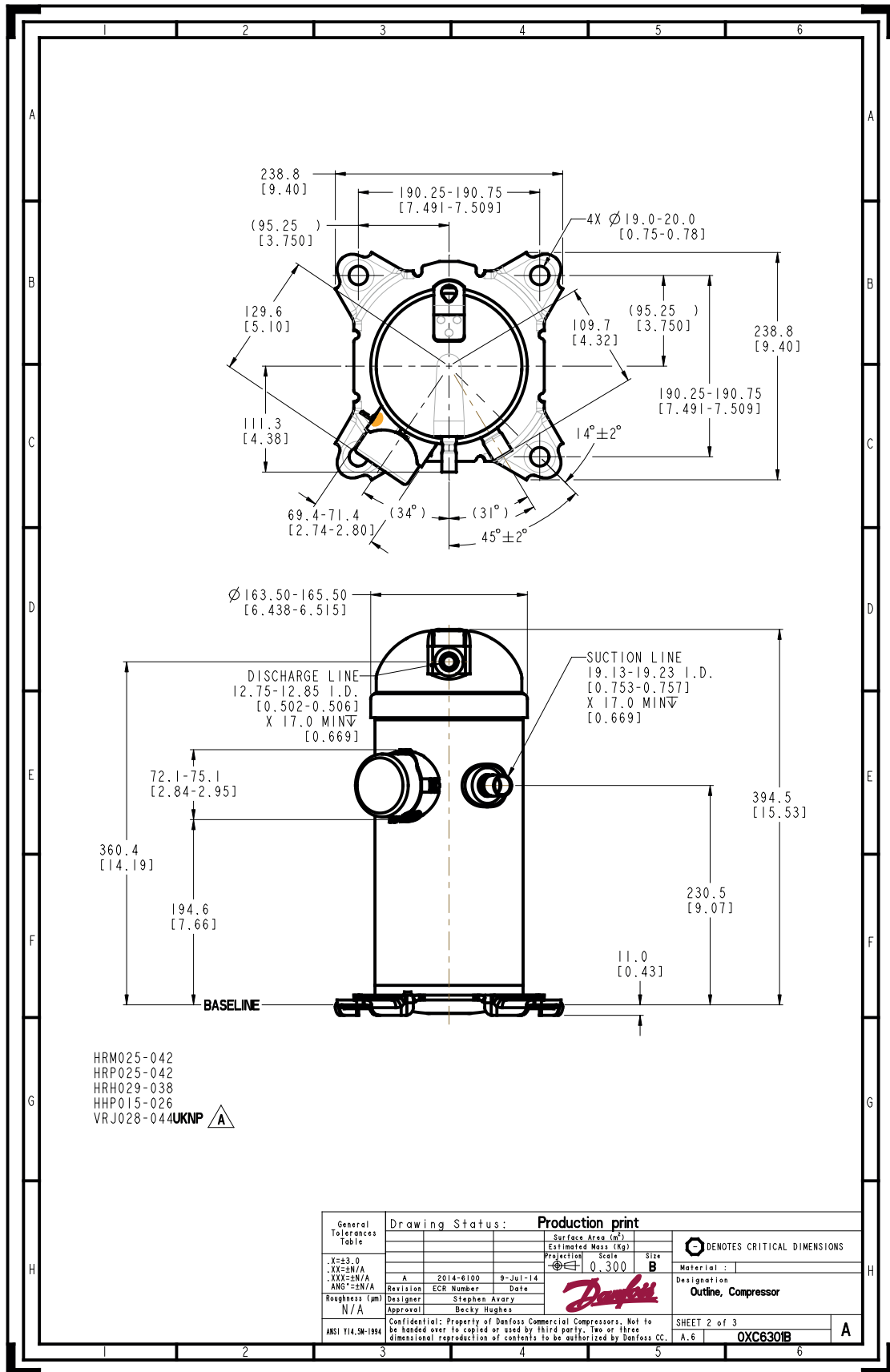
to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

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

All performance data +/- 5%

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