

Datasheets

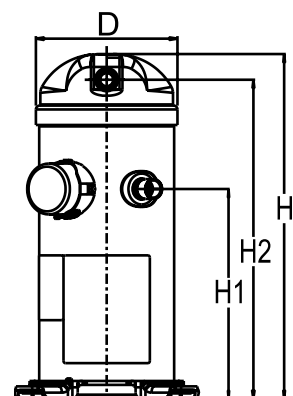
Danfoss scroll compressors **H series**



General Characteristics

Model number (on compressor nameplate)		HRM047T4LP6
Code number for Singlepack*		120U2132
Code number for Industrial pack**		120U2129
Drawing number		0XC6301B-3
Suction and discharge connections		Brazed
Suction connection		" ODF
Oil sight glass		None
Oil equalisation connection		None
Oil drain connection		None
LP gauge port		None
IPR valve		Yes
Swept volume		64.07 cm ³ /rev
Displacement @ Nominal speed		11.2 m ³ /h @ 2900 rpm - 13.4 m ³ /h @ 3500 rpm
Net weight		30.84 kg
Oil charge		1.33 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

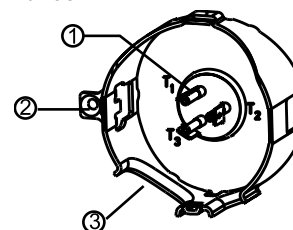


D=164.5 mm
H=439 mm
H1=275 mm
H2=405 mm
H3=- mm

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		3.873 Ω
Winding resistance between phases 1-3 +/- 7% at 25°C		3.873 Ω
Winding resistance between phases 2-3 +/- 7% at 25°C		2.854 Ω
Rated Load Amps (RLA)		7.7 A
Maximum Continuous Current (MCC)		12 A
Locked Rotor Amps (LRA)		50 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.
No translation for	
No translation for	
No translation for	
No translation for	
No translation for	
No translation for	

Rotolock accessories, discharge side	Code no.
No translation for	
No translation for	
No translation for	
No translation for	
No translation for	
No translation for	

Rotolock accessories, sets	Code no.
No translation for	
No translation for	
No translation for	
No translation for	

Oil / lubricants	Code no.
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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

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	4 182	4 885	5 918	7 262	8 895	10 797	12 948	15 327	-
35	3 912	4 607	5 611	6 903	8 464	10 271	12 306	14 547	-
40	3 566	4 270	5 262	6 520	8 024	9 754	11 690	13 811	-
45	-	3 854	4 849	6 089	7 555	9 224	11 078	13 096	-
50	-	-	4 353	5 592	7 035	8 661	10 450	12 381	-
55	-	-	-	5 009	6 445	8 043	9 782	11 644	-
60	-	-	-	-	5 764	7 349	9 056	10 863	-
65	-	-	-	-	-	6 562	8 250	10 018	-

Power input in W

30	2 128	2 116	2 109	2 099	2 077	2 035	1 963	1 853	-
35	2 427	2 383	2 357	2 340	2 322	2 295	2 251	2 180	-
40	2 788	2 703	2 646	2 610	2 585	2 563	2 535	2 493	-
45	-	3 089	2 991	2 925	2 882	2 854	2 831	2 806	-
50	-	-	3 406	3 299	3 227	3 181	3 154	3 135	-
55	-	-	-	3 746	3 634	3 561	3 516	3 493	-
60	-	-	-	-	4 120	4 007	3 935	3 896	-
65	-	-	-	-	-	4 534	4 423	4 357	-

Current consumption in A

30	5.04	4.77	4.71	4.76	4.84	4.85	4.70	4.29	-
35	5.63	5.21	5.04	5.03	5.08	5.10	5.00	4.68	-
40	6.34	5.75	5.46	5.36	5.37	5.38	5.32	5.08	-
45	-	6.41	5.98	5.78	5.73	5.72	5.68	5.50	-
50	-	-	6.61	6.30	6.17	6.14	6.10	5.97	-
55	-	-	-	6.95	6.73	6.64	6.59	6.49	-
60	-	-	-	-	7.41	7.26	7.18	7.09	-
65	-	-	-	-	-	8.00	7.88	7.79	-

Mass flow in kg/h

30	91	105	126	152	184	221	262	307	-
35	88	103	124	151	182	218	259	302	-
40	84	100	121	148	180	216	255	298	-
45	-	94	117	144	176	213	252	295	-
50	-	-	110	139	172	209	249	291	-
55	-	-	-	131	165	203	244	287	-
60	-	-	-	-	157	196	238	282	-
65	-	-	-	-	-	186	230	275	-

Coefficient of performance (C.O.P.)

30	1.97	2.31	2.81	3.46	4.28	5.31	6.60	8.27	-
35	1.61	1.93	2.38	2.95	3.65	4.48	5.47	6.67	-
40	1.28	1.58	1.99	2.50	3.10	3.81	4.61	5.54	-
45	-	1.25	1.62	2.08	2.62	3.23	3.91	4.67	-
50	-	-	1.28	1.70	2.18	2.72	3.31	3.95	-
55	-	-	-	1.34	1.77	2.26	2.78	3.33	-
60	-	-	-	-	1.40	1.83	2.30	2.79	-
65	-	-	-	-	-	1.45	1.87	2.30	-

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

Cooling capacity	10 450	W
Power input	3 154	W
Current consumption	6.10	A
Mass flow	249	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		dB(A)
With acoustic hood		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	4 442	5 184	6 276	7 694	9 418	11 424	13 690	16 195	-
35	4 170	4 907	5 970	7 339	8 991	10 903	13 053	15 419	-
40	3 816	4 566	5 620	6 957	8 555	10 391	12 444	14 690	-
45	-	4 139	5 202	6 526	8 089	9 868	11 840	13 985	-
50	-	-	4 694	6 023	7 569	9 309	11 220	13 282	-
55	-	-	-	5 426	6 973	8 692	10 561	12 557	-
60	-	-	-	-	6 278	7 995	9 840	11 789	-
65	-	-	-	-	-	7 195	9 034	10 956	-

Power input in W

30	2 128	2 116	2 109	2 099	2 077	2 035	1 963	1 853	-
35	2 427	2 383	2 357	2 340	2 322	2 295	2 251	2 180	-
40	2 788	2 703	2 646	2 610	2 585	2 563	2 535	2 493	-
45	-	3 089	2 991	2 925	2 882	2 854	2 831	2 806	-
50	-	-	3 406	3 299	3 227	3 181	3 154	3 135	-
55	-	-	-	3 746	3 634	3 561	3 516	3 493	-
60	-	-	-	-	4 120	4 007	3 935	3 896	-
65	-	-	-	-	-	4 534	4 423	4 357	-

Current consumption in A

30	5.04	4.77	4.71	4.76	4.84	4.85	4.70	4.29	-
35	5.63	5.21	5.04	5.03	5.08	5.10	5.00	4.68	-
40	6.34	5.75	5.46	5.36	5.37	5.38	5.32	5.08	-
45	-	6.41	5.98	5.78	5.73	5.72	5.68	5.50	-
50	-	-	6.61	6.30	6.17	6.14	6.10	5.97	-
55	-	-	-	6.95	6.73	6.64	6.59	6.49	-
60	-	-	-	-	7.41	7.26	7.18	7.09	-
65	-	-	-	-	-	8.00	7.88	7.79	-

Mass flow in kg/h

30	90	105	125	152	183	220	261	306	-
35	88	103	123	150	181	217	257	301	-
40	83	99	121	147	179	214	254	297	-
45	-	94	116	144	175	211	251	293	-
50	-	-	109	138	171	207	247	289	-
55	-	-	-	130	165	202	243	285	-
60	-	-	-	-	156	195	236	280	-
65	-	-	-	-	-	185	228	273	-

Coefficient of performance (C.O.P.)

30	2.09	2.45	2.98	3.67	4.53	5.61	6.98	8.74	-
35	1.72	2.06	2.53	3.14	3.87	4.75	5.80	7.07	-
40	1.37	1.69	2.12	2.67	3.31	4.05	4.91	5.89	-
45	-	1.34	1.74	2.23	2.81	3.46	4.18	4.98	-
50	-	-	1.38	1.83	2.35	2.93	3.56	4.24	-
55	-	-	-	1.45	1.92	2.44	3.00	3.59	-
60	-	-	-	-	1.52	2.00	2.50	3.03	-
65	-	-	-	-	-	1.59	2.04	2.51	-

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

Cooling capacity	11 510	W
Power input	3 459	W
Current consumption	6.50	A
Mass flow	262	kg/h
C.O.P.	3.33	

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		dB(A)
With acoustic hood		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	4 968	5 799	7 025	8 620	10 559	12 816	15 365	18 181	-
35	4 662	5 485	6 678	8 216	10 074	12 226	14 647	17 310	-
40	4 270	5 104	6 285	7 786	9 584	11 651	13 963	16 494	-
45	-	4 630	5 818	7 302	9 059	11 061	13 285	15 704	-
50	-	-	5 249	6 736	8 471	10 429	12 584	14 910	-
55	-	-	-	6 061	7 793	9 725	11 830	14 084	-
60	-	-	-	-	6 998	8 922	10 996	13 196	-
65	-	-	-	-	-	7 993	10 054	12 217	-

Power input in W

30	2 504	2 489	2 481	2 469	2 444	2 393	2 308	2 176	-
35	2 863	2 810	2 779	2 758	2 737	2 705	2 653	2 568	-
40	3 300	3 196	3 128	3 084	3 055	3 029	2 996	2 946	-
45	-	3 665	3 547	3 467	3 416	3 383	3 357	3 327	-
50	-	-	4 052	3 924	3 838	3 784	3 751	3 729	-
55	-	-	-	4 471	4 337	4 249	4 197	4 169	-
60	-	-	-	-	4 932	4 797	4 712	4 665	-
65	-	-	-	-	-	5 445	5 313	5 235	-

Current consumption in A

30	5.28	4.99	4.93	4.98	5.06	5.07	4.91	4.48	-
35	5.89	5.45	5.27	5.26	5.31	5.33	5.23	4.90	-
40	6.63	6.02	5.71	5.61	5.61	5.63	5.56	5.31	-
45	-	6.71	6.25	6.05	5.99	5.99	5.94	5.76	-
50	-	-	6.92	6.59	6.46	6.42	6.38	6.24	-
55	-	-	-	7.27	7.04	6.95	6.90	6.79	-
60	-	-	-	-	7.75	7.59	7.51	7.42	-
65	-	-	-	-	-	8.36	8.24	8.15	-

Mass flow in kg/h

30	108	125	149	181	219	263	311	365	-
35	105	123	148	179	217	260	308	360	-
40	100	119	145	177	215	257	305	356	-
45	-	113	140	173	212	255	302	353	-
50	-	-	132	167	207	251	299	350	-
55	-	-	-	159	200	246	295	347	-
60	-	-	-	-	190	238	289	342	-
65	-	-	-	-	-	227	280	335	-

Coefficient of performance (C.O.P.)

30	1.98	2.33	2.83	3.49	4.32	5.35	6.66	8.35	-
35	1.63	1.95	2.40	2.98	3.68	4.52	5.52	6.74	-
40	1.29	1.60	2.01	2.52	3.14	3.85	4.66	5.60	-
45	-	1.26	1.64	2.11	2.65	3.27	3.96	4.72	-
50	-	-	1.30	1.72	2.21	2.76	3.35	4.00	-
55	-	-	-	1.36	1.80	2.29	2.82	3.38	-
60	-	-	-	-	1.42	1.86	2.33	2.83	-
65	-	-	-	-	-	1.47	1.89	2.33	-

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

Cooling capacity	12 584	W
Power input	3 751	W
Current consumption	6.38	A
Mass flow	299	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		dB(A)
With acoustic hood		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	5 277	6 154	7 449	9 134	11 180	13 560	16 246	19 211	-
35	4 969	5 841	7 105	8 735	10 702	12 978	15 536	18 347	-
40	4 570	5 457	6 713	8 309	10 218	12 412	14 863	17 544	-
45	-	4 972	6 241	7 826	9 699	11 833	14 199	16 770	-
50	-	-	5 660	7 255	9 114	11 209	13 512	15 995	-
55	-	-	-	6 565	8 432	10 510	12 771	15 189	-
60	-	-	-	-	7 623	9 705	11 947	14 321	-
65	-	-	-	-	-	8 765	11 009	13 360	-

Power input in W

30	2 504	2 489	2 481	2 469	2 444	2 393	2 308	2 176	-
35	2 863	2 810	2 779	2 758	2 737	2 705	2 653	2 568	-
40	3 300	3 196	3 128	3 084	3 055	3 029	2 996	2 946	-
45	-	3 665	3 547	3 467	3 416	3 383	3 357	3 327	-
50	-	-	4 052	3 924	3 838	3 784	3 751	3 729	-
55	-	-	-	4 471	4 337	4 249	4 197	4 169	-
60	-	-	-	-	4 932	4 797	4 712	4 665	-
65	-	-	-	-	-	5 445	5 313	5 235	-

Current consumption in A

30	5.28	4.99	4.93	4.98	5.06	5.07	4.91	4.48	-
35	5.89	5.45	5.27	5.26	5.31	5.33	5.23	4.90	-
40	6.63	6.02	5.71	5.61	5.61	5.63	5.56	5.31	-
45	-	6.71	6.25	6.05	5.99	5.99	5.94	5.76	-
50	-	-	6.92	6.59	6.46	6.42	6.38	6.24	-
55	-	-	-	7.27	7.04	6.95	6.90	6.79	-
60	-	-	-	-	7.75	7.59	7.51	7.42	-
65	-	-	-	-	-	8.36	8.24	8.15	-

Mass flow in kg/h

30	107	124	149	180	218	261	310	363	-
35	105	122	147	178	216	258	306	358	-
40	100	118	144	176	213	256	303	354	-
45	-	112	139	172	210	254	301	351	-
50	-	-	132	166	206	250	298	349	-
55	-	-	-	158	199	244	293	345	-
60	-	-	-	-	189	237	287	340	-
65	-	-	-	-	-	226	278	333	-

Coefficient of performance (C.O.P.)

30	2.11	2.47	3.00	3.70	4.58	5.67	7.04	8.83	-
35	1.74	2.08	2.56	3.17	3.91	4.80	5.86	7.14	-
40	1.38	1.71	2.15	2.69	3.34	4.10	4.96	5.95	-
45	-	1.36	1.76	2.26	2.84	3.50	4.23	5.04	-
50	-	-	1.40	1.85	2.37	2.96	3.60	4.29	-
55	-	-	-	1.47	1.94	2.47	3.04	3.64	-
60	-	-	-	-	1.55	2.02	2.54	3.07	-
65	-	-	-	-	-	1.61	2.07	2.55	-

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

Cooling capacity	13 913	W
Power input	4 126	W
Current consumption	6.80	A
Mass flow	316	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		dB(A)
With acoustic hood		dB(A)

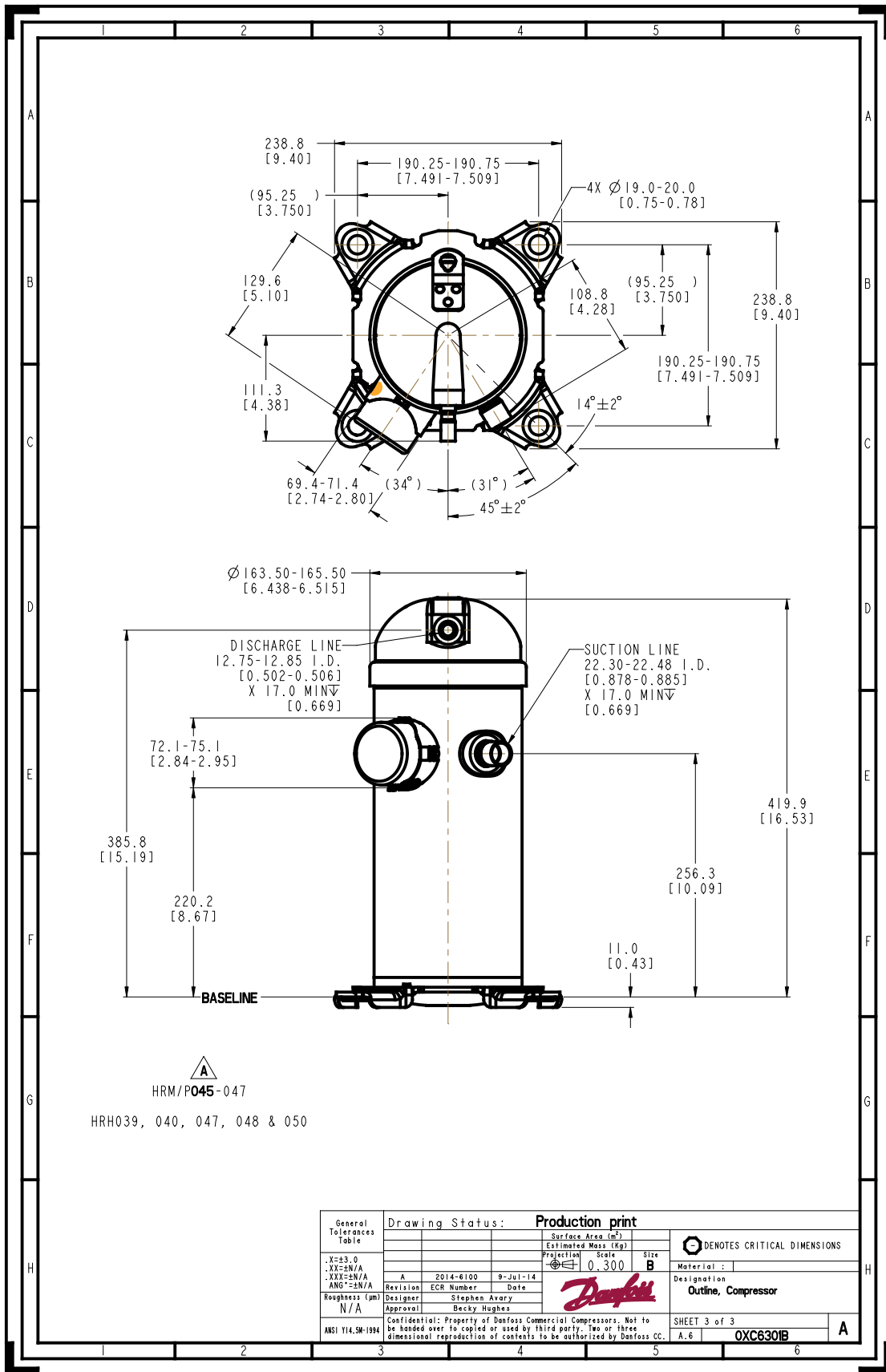
to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

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

All performance data +/- 5%

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General Tolerances Table	Drawing Status: Production print			Surface Area (m ²)	DENOTES CRITICAL DIMENSIONS
				Estimated Mass (kg)	
X=±3.0				Projection Scale	Size
.XX=±N/A				0.300	B
.XXX=±N/A	Revision	ECR Number	Date	Material:	
ANG=±N/A	A	2014-6100	9-Jul-14	Designation	
	Designer	Stephen Avary		Outline, Compressor	
Roughness (µm)	Approval	Becky Hughes		SHEET 3 of 3	
N/A				A.6	OXC6301B

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