

Datasheets

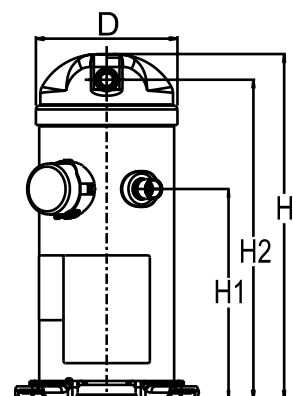
Danfoss scroll compressors **H series**



General Characteristics

Model number (on compressor nameplate)		HRM060T4LP6
Code number for Singlepack*		120U1721
Code number for Industrial pack**		120U1718
Drawing number		0XR6002B-2
Suction and discharge connections		Brazed
Suction connection		7/8 " 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		80.95 cm ³ /rev
Displacement @ Nominal speed		14.1 m ³ /h @ 2900 rpm - 17.0 m ³ /h @ 3500 rpm
Net weight		37.19 kg
Oil charge		1.57 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		5.44 kg
Approved refrigerants		R22

Dimensions

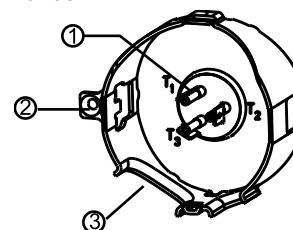


D=183.5 mm
H=455 mm
H1=280 mm
H2=422 mm
H3=- mm

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		2.316 Ω
Winding resistance between phases 1-3 +/- 7% at 25°C		2.330 Ω
Winding resistance between phases 2-3 +/- 7% at 25°C		2.360 Ω
Rated Load Amps (RLA)		9.6 A
Maximum Continuous Current (MCC)		15 A
Locked Rotor Amps (LRA)		70 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.

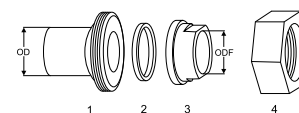
Rotolock valve, V05 (1-1/4" Rotolock, 7/8" ODF)	8168030
Gasket, 1-1/4"	8156131

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, 7/8" ODF), (1" Rotolock, 1/2" ODF)	120Z0127
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, 50 W, 230 V, CE mark, UL	120Z0057
Belt type crankcase heater, 50 W, 400 V, CE mark, UL	120Z0058

Miscellaneous accessories

Code no.

Acoustic hood	120Z5044
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	5 217	6 084	7 377	9 065	11 119	13 507	16 200	19 166	-
35	4 887	5 751	7 013	8 641	10 606	12 877	15 424	18 215	-
40	4 450	5 336	6 590	8 182	10 082	12 259	14 684	17 326	-
45	-	4 811	6 080	7 659	9 518	11 626	13 953	16 468	-
50	-	-	5 457	7 046	8 886	10 947	13 199	15 612	-
55	-	-	-	6 314	8 158	10 195	12 395	14 728	-
60	-	-	-	-	7 308	9 342	11 512	13 788	-
65	-	-	-	-	-	8 362	10 523	12 762	-

Power input in W

30	2 457	2 386	2 382	2 433	2 523	2 640	2 769	2 897	-
35	2 850	2 753	2 719	2 733	2 783	2 854	2 932	3 003	-
40	3 221	3 118	3 073	3 072	3 100	3 145	3 192	3 227	-
45	-	3 457	3 421	3 423	3 451	3 490	3 526	3 545	-
50	-	-	3 736	3 763	3 810	3 862	3 907	3 930	-
55	-	-	-	4 065	4 151	4 237	4 311	4 357	-
60	-	-	-	-	4 449	4 589	4 712	4 802	-
65	-	-	-	-	-	4 894	5 085	5 239	-

Current consumption in A

30	4.68	4.77	4.83	4.87	4.88	4.88	4.87	4.85	-
35	5.05	5.11	5.15	5.18	5.19	5.19	5.18	5.17	-
40	5.55	5.59	5.61	5.62	5.62	5.61	5.61	5.61	-
45	-	6.20	6.20	6.19	6.18	6.17	6.17	6.18	-
50	-	-	6.93	6.90	6.88	6.86	6.86	6.88	-
55	-	-	-	7.76	7.72	7.70	7.70	7.72	-
60	-	-	-	-	8.71	8.68	8.67	8.70	-
65	-	-	-	-	-	9.81	9.80	9.83	-

Mass flow in kg/h

30	114	131	157	190	230	276	328	384	-
35	111	129	155	188	228	274	324	378	-
40	105	125	152	186	226	271	321	374	-
45	-	118	146	181	222	268	318	370	-
50	-	-	138	175	217	264	314	367	-
55	-	-	-	165	209	258	309	363	-
60	-	-	-	-	199	249	302	357	-
65	-	-	-	-	-	237	293	350	-

Coefficient of performance (C.O.P.)

30	2.12	2.55	3.10	3.73	4.41	5.12	5.85	6.62	-
35	1.71	2.09	2.58	3.16	3.81	4.51	5.26	6.07	-
40	1.38	1.71	2.14	2.66	3.25	3.90	4.60	5.37	-
45	-	1.39	1.78	2.24	2.76	3.33	3.96	4.65	-
50	-	-	1.46	1.87	2.33	2.83	3.38	3.97	-
55	-	-	-	1.55	1.97	2.41	2.88	3.38	-
60	-	-	-	-	1.64	2.04	2.44	2.87	-
65	-	-	-	-	-	1.71	2.07	2.44	-

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

Cooling capacity	13 199	W
Power input	3 907	W
Current consumption	6.86	A
Mass flow	314	kg/h
C.O.P.	3.38	

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	70	dB(A)
With acoustic hood	65	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	5 541	6 456	7 822	9 605	11 773	14 291	17 128	20 251	-
35	5 208	6 124	7 461	9 186	11 266	13 668	16 360	19 307	-
40	4 763	5 705	7 039	8 731	10 749	13 060	15 631	18 428	-
45	-	5 167	6 523	8 209	10 191	12 436	14 912	17 586	-
50	-	-	5 884	7 588	9 560	11 766	14 172	16 747	-
55	-	-	-	6 840	8 827	11 018	13 381	15 884	-
60	-	-	-	-	7 960	10 163	12 509	14 964	-
65	-	-	-	-	-	9 170	11 523	13 957	-

Power input in W

30	2 457	2 386	2 382	2 433	2 523	2 640	2 769	2 897	-
35	2 850	2 753	2 719	2 733	2 783	2 854	2 932	3 003	-
40	3 221	3 118	3 073	3 072	3 100	3 145	3 192	3 227	-
45	-	3 457	3 421	3 423	3 451	3 490	3 526	3 545	-
50	-	-	3 736	3 763	3 810	3 862	3 907	3 930	-
55	-	-	-	4 065	4 151	4 237	4 311	4 357	-
60	-	-	-	-	4 449	4 589	4 712	4 802	-
65	-	-	-	-	-	4 894	5 085	5 239	-

Current consumption in A

30	4.68	4.77	4.83	4.87	4.88	4.88	4.87	4.85	-
35	5.05	5.11	5.15	5.18	5.19	5.19	5.18	5.17	-
40	5.55	5.59	5.61	5.62	5.62	5.61	5.61	5.61	-
45	-	6.20	6.20	6.19	6.18	6.17	6.17	6.18	-
50	-	-	6.93	6.90	6.88	6.86	6.86	6.88	-
55	-	-	-	7.76	7.72	7.70	7.70	7.72	-
60	-	-	-	-	8.71	8.68	8.67	8.70	-
65	-	-	-	-	-	9.81	9.80	9.83	-

Mass flow in kg/h

30	113	130	156	189	229	275	326	382	-
35	110	128	154	187	227	272	322	376	-
40	105	124	151	185	225	270	319	372	-
45	-	117	145	180	221	266	316	368	-
50	-	-	137	174	216	262	312	365	-
55	-	-	-	164	208	256	307	361	-
60	-	-	-	-	198	248	301	355	-
65	-	-	-	-	-	236	291	348	-

Coefficient of performance (C.O.P.)

30	2.25	2.71	3.28	3.95	4.67	5.41	6.19	6.99	-
35	1.83	2.22	2.74	3.36	4.05	4.79	5.58	6.43	-
40	1.48	1.83	2.29	2.84	3.47	4.15	4.90	5.71	-
45	-	1.49	1.91	2.40	2.95	3.56	4.23	4.96	-
50	-	-	1.57	2.02	2.51	3.05	3.63	4.26	-
55	-	-	-	1.68	2.13	2.60	3.10	3.65	-
60	-	-	-	-	1.79	2.21	2.65	3.12	-
65	-	-	-	-	-	1.87	2.27	2.66	-

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

Cooling capacity	14 569	W
Power input	4 285	W
Current consumption	7.60	A
Mass flow	331	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	70	dB(A)
With acoustic hood	65	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

Cooling capacity in W

30	6 264	7 306	8 858	10 885	13 350	16 217	19 450	23 011	-
35	5 867	6 905	8 420	10 374	12 733	15 459	18 517	21 869	-
40	5 344	6 407	7 911	9 822	12 102	14 716	17 627	20 799	-
45	-	5 777	7 299	9 194	11 424	13 954	16 747	19 767	-
50	-	-	6 551	8 457	10 664	13 137	15 841	18 737	-
55	-	-	-	7 578	9 790	12 233	14 874	17 674	-
60	-	-	-	-	8 769	11 209	13 813	16 544	-
65	-	-	-	-	-	10 032	12 624	15 311	-

Power input in W

30	2 951	2 865	2 861	2 921	3 030	3 170	3 325	3 478	-
35	3 422	3 306	3 264	3 282	3 341	3 426	3 519	3 605	-
40	3 868	3 744	3 690	3 688	3 722	3 775	3 832	3 875	-
45	-	4 150	4 107	4 109	4 142	4 189	4 232	4 255	-
50	-	-	4 485	4 516	4 572	4 635	4 689	4 717	-
55	-	-	-	4 879	4 981	5 084	5 173	5 229	-
60	-	-	-	-	5 338	5 506	5 653	5 762	-
65	-	-	-	-	-	5 871	6 100	6 286	-

Current consumption in A

30	4.68	4.77	4.83	4.87	4.88	4.88	4.87	4.85	-
35	5.05	5.11	5.15	5.18	5.19	5.19	5.18	5.17	-
40	5.55	5.59	5.61	5.62	5.62	5.61	5.61	5.61	-
45	-	6.20	6.20	6.19	6.18	6.17	6.17	6.18	-
50	-	-	6.93	6.90	6.88	6.86	6.86	6.88	-
55	-	-	-	7.76	7.72	7.70	7.70	7.72	-
60	-	-	-	-	8.71	8.68	8.67	8.70	-
65	-	-	-	-	-	9.81	9.80	9.83	-

Mass flow in kg/h

30	137	157	188	228	276	332	394	461	-
35	133	155	186	226	274	329	389	454	-
40	127	150	182	223	271	325	385	449	-
45	-	141	176	218	267	322	381	445	-
50	-	-	165	210	260	316	377	440	-
55	-	-	-	198	251	309	371	435	-
60	-	-	-	-	238	299	363	429	-
65	-	-	-	-	-	285	351	420	-

Coefficient of performance (C.O.P.)

30	2.12	2.55	3.10	3.73	4.41	5.12	5.85	6.62	-
35	1.71	2.09	2.58	3.16	3.81	4.51	5.26	6.07	-
40	1.38	1.71	2.14	2.66	3.25	3.90	4.60	5.37	-
45	-	1.39	1.78	2.24	2.76	3.33	3.96	4.65	-
50	-	-	1.46	1.87	2.33	2.83	3.38	3.97	-
55	-	-	-	1.55	1.97	2.41	2.88	3.38	-
60	-	-	-	-	1.64	2.04	2.44	2.87	-
65	-	-	-	-	-	1.71	2.07	2.44	-

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

Cooling capacity	15 841	W
Power input	4 689	W
Current consumption	6.86	A
Mass flow	377	kg/h
C.O.P.	3.38	

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	74	dB(A)
With acoustic hood	69	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	6 653	7 753	9 393	11 533	14 135	17 159	20 565	24 315	-
35	6 254	7 354	8 959	11 029	13 526	16 409	19 640	23 179	-
40	5 719	6 850	8 450	10 481	12 904	15 677	18 764	22 123	-
45	-	6 204	7 831	9 853	12 231	14 926	17 899	21 109	-
50	-	-	7 064	9 108	11 473	14 120	17 009	20 100	-
55	-	-	-	8 209	10 592	13 221	16 057	19 061	-
60	-	-	-	-	9 552	12 194	15 008	17 954	-
65	-	-	-	-	-	11 001	13 823	16 743	-

Power input in W

30	2 951	2 865	2 861	2 921	3 030	3 170	3 325	3 478	-
35	3 422	3 306	3 264	3 282	3 341	3 426	3 519	3 605	-
40	3 868	3 744	3 690	3 688	3 722	3 775	3 832	3 875	-
45	-	4 150	4 107	4 109	4 142	4 189	4 232	4 255	-
50	-	-	4 485	4 516	4 572	4 635	4 689	4 717	-
55	-	-	-	4 879	4 981	5 084	5 173	5 229	-
60	-	-	-	-	5 338	5 506	5 653	5 762	-
65	-	-	-	-	-	5 871	6 100	6 286	-

Current consumption in A

30	4.68	4.77	4.83	4.87	4.88	4.88	4.87	4.85	-
35	5.05	5.11	5.15	5.18	5.19	5.19	5.18	5.17	-
40	5.55	5.59	5.61	5.62	5.62	5.61	5.61	5.61	-
45	-	6.20	6.20	6.19	6.18	6.17	6.17	6.18	-
50	-	-	6.93	6.90	6.88	6.86	6.86	6.88	-
55	-	-	-	7.76	7.72	7.70	7.70	7.72	-
60	-	-	-	-	8.71	8.68	8.67	8.70	-
65	-	-	-	-	-	9.81	9.80	9.83	-

Mass flow in kg/h

30	136	157	187	227	275	330	392	458	-
35	133	154	185	225	272	327	387	451	-
40	126	149	181	222	270	324	383	446	-
45	-	140	175	217	265	320	379	442	-
50	-	-	165	209	259	315	375	438	-
55	-	-	-	197	250	307	369	433	-
60	-	-	-	-	237	297	361	426	-
65	-	-	-	-	-	283	349	417	-

Coefficient of performance (C.O.P.)

30	2.25	2.71	3.28	3.95	4.67	5.41	6.19	6.99	-
35	1.83	2.22	2.74	3.36	4.05	4.79	5.58	6.43	-
40	1.48	1.83	2.29	2.84	3.47	4.15	4.90	5.71	-
45	-	1.49	1.91	2.40	2.95	3.56	4.23	4.96	-
50	-	-	1.57	2.02	2.51	3.05	3.63	4.26	-
55	-	-	-	1.68	2.13	2.60	3.10	3.65	-
60	-	-	-	-	1.79	2.21	2.65	3.12	-
65	-	-	-	-	-	1.87	2.27	2.66	-

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

Cooling capacity	17 483	W
Power input	5 142	W
Current consumption	7.60	A
Mass flow	397	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	74	dB(A)
With acoustic hood	69	dB(A)

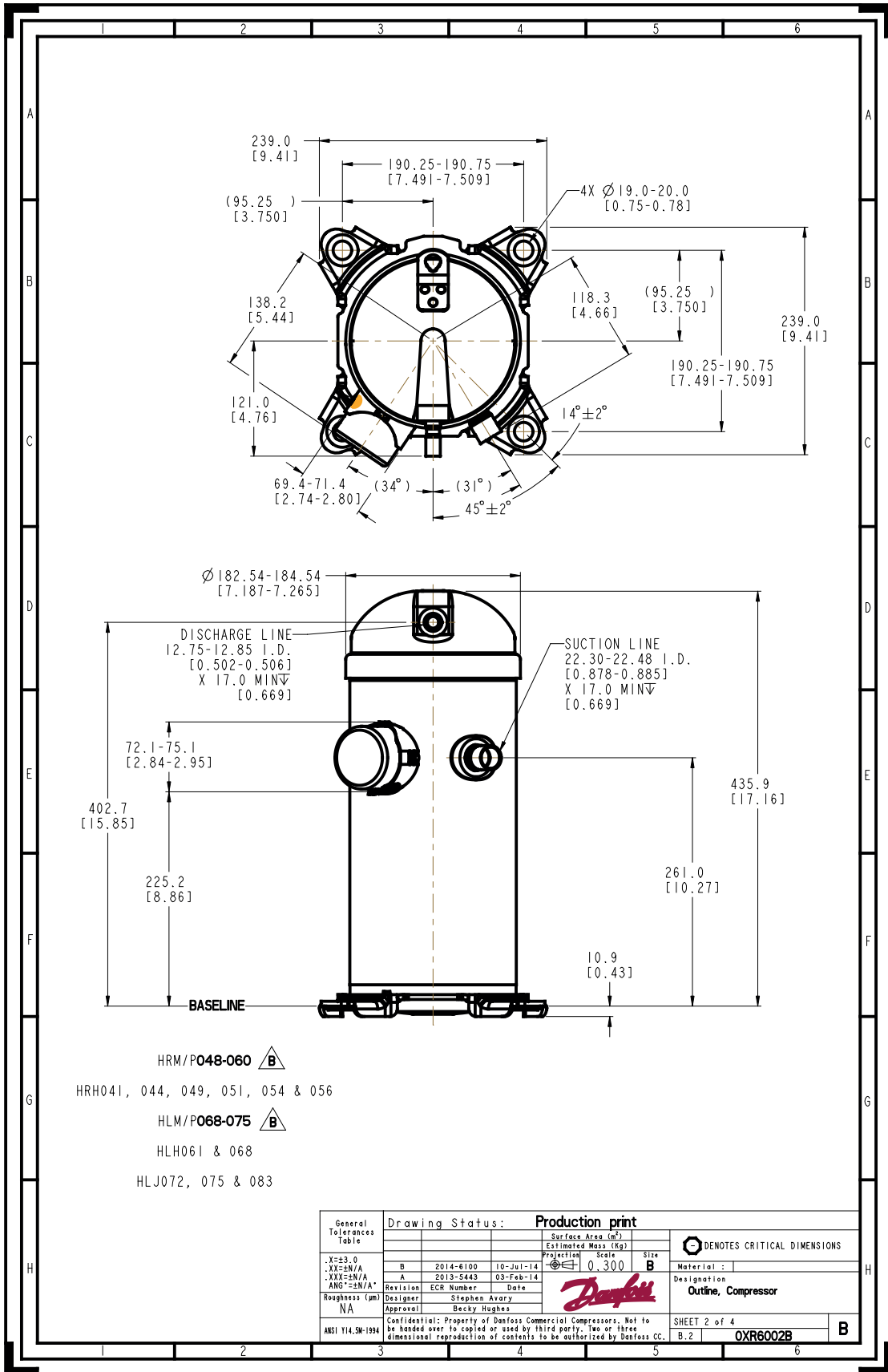
to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

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

All performance data +/- 5%

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