

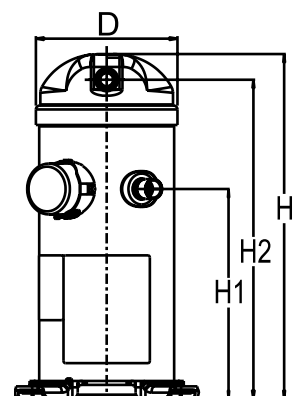
Datasheets

Danfoss scroll compressors **H series**



General Characteristics

Model number (on compressor nameplate)		HRP045T4LP6
Code number for Singlepack*		120U1036
Code number for Industrial pack**		120U1033
Drawing number		0XC6301B-3
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		61.45 cm ³ /rev
Displacement @ Nominal speed		10.7 m ³ /h @ 2900 rpm - 12.9 m ³ /h @ 3500 rpm
Net weight		30.84 kg
Oil charge		1.33 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=439 mm

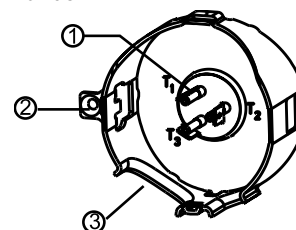
H1=275 mm

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	2.850 Ω
Winding resistance between phases 2-3 +/- 7% at 25°C	3.870 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

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

IP22

1: Spade connectors 1/4"

2: Earth connection

3: Power cable passage

Approvals : CE certified, UL certified (file SA11565), -

*Singlepack: Compressor in cardboard box

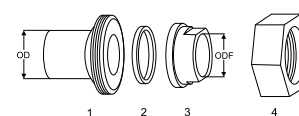
**Industrial pack: 12 or 16 Unboxed compressors on pallet

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.

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	-	3 211	4 118	5 223	6 546	8 107	9 928	12 028	14 429
35	-	3 032	3 893	4 943	6 203	7 694	9 435	11 448	13 752
40	-	2 847	3 662	4 657	5 855	7 274	8 936	10 860	13 068
45	-	-	3 416	4 357	5 491	6 838	8 419	10 255	12 365
50	-	-	-	4 033	5 103	6 377	7 877	9 623	11 634
55	-	-	-	-	4 682	5 883	7 301	8 955	10 866
60	-	-	-	-	-	5 346	6 680	8 242	10 051
65	-	-	-	-	-	-	6 006	7 473	9 178

Power input in W

30	-	1 902	1 887	1 879	1 874	1 863	1 842	1 803	1 741
35	-	2 189	2 164	2 150	2 140	2 127	2 106	2 070	2 012
40	-	2 518	2 485	2 465	2 451	2 436	2 416	2 383	2 331
45	-	-	2 855	2 829	2 811	2 796	2 777	2 748	2 702
50	-	-	-	3 247	3 227	3 212	3 195	3 170	3 131
55	-	-	-	-	3 704	3 689	3 675	3 655	3 623
60	-	-	-	-	-	4 232	4 221	4 207	4 183
65	-	-	-	-	-	-	4 840	4 832	4 817

Current consumption in A

30	-	5.53	5.44	5.42	5.44	5.48	5.49	5.43	5.28
35	-	5.92	5.82	5.79	5.81	5.83	5.82	5.75	5.58
40	-	6.35	6.25	6.22	6.24	6.25	6.24	6.15	5.97
45	-	-	6.73	6.71	6.72	6.74	6.72	6.63	6.43
50	-	-	-	7.24	7.27	7.29	7.27	7.18	6.98
55	-	-	-	-	7.86	7.89	7.88	7.79	7.60
60	-	-	-	-	-	8.56	8.56	8.48	8.29
65	-	-	-	-	-	-	9.29	9.23	9.05

Mass flow in kg/h

30	-	72	91	113	139	170	204	244	289
35	-	71	90	112	138	169	203	243	287
40	-	71	89	111	137	168	202	242	286
45	-	-	88	110	136	166	201	241	285
50	-	-	-	108	134	164	199	239	284
55	-	-	-	-	131	161	196	236	281
60	-	-	-	-	-	158	193	233	278
65	-	-	-	-	-	-	188	228	273

Coefficient of performance (C.O.P.)

30	-	1.69	2.18	2.78	3.49	4.35	5.39	6.67	8.29
35	-	1.39	1.80	2.30	2.90	3.62	4.48	5.53	6.83
40	-	1.13	1.47	1.89	2.39	2.99	3.70	4.56	5.61
45	-	-	1.20	1.54	1.95	2.45	3.03	3.73	4.58
50	-	-	-	1.24	1.58	1.99	2.47	3.04	3.72
55	-	-	-	-	1.26	1.59	1.99	2.45	3.00
60	-	-	-	-	-	1.26	1.58	1.96	2.40
65	-	-	-	-	-	-	1.24	1.55	1.91

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

Cooling capacity	9 623	W
Power input	3 170	W
Current consumption	7.18	A
Mass flow	239	kg/h
C.O.P.	3.04	

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 accoustic 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	-	3 448	4 417	5 595	7 005	8 666	10 601	12 831	15 378
35	-	3 272	4 195	5 321	6 669	8 262	10 120	12 265	14 719
40	-	3 091	3 969	5 040	6 328	7 851	9 632	11 693	14 053
45	-	-	3 727	4 745	5 971	7 425	9 129	11 104	13 372
50	-	-	-	4 426	5 590	6 974	8 601	10 490	12 665
55	-	-	-	-	5 174	6 489	8 037	9 841	11 922
60	-	-	-	-	-	5 959	7 430	9 148	11 135
65	-	-	-	-	-	-	6 769	8 401	10 294

Power input in W

30	-	1 902	1 887	1 879	1 874	1 863	1 842	1 803	1 741
35	-	2 189	2 164	2 150	2 140	2 127	2 106	2 070	2 012
40	-	2 518	2 485	2 465	2 451	2 436	2 416	2 383	2 331
45	-	-	2 855	2 829	2 811	2 796	2 777	2 748	2 702
50	-	-	-	3 247	3 227	3 212	3 195	3 170	3 131
55	-	-	-	-	3 704	3 689	3 675	3 655	3 623
60	-	-	-	-	-	4 232	4 221	4 207	4 183
65	-	-	-	-	-	-	4 840	4 832	4 817

Current consumption in A

30	-	5.53	5.44	5.42	5.44	5.48	5.49	5.43	5.28
35	-	5.92	5.82	5.79	5.81	5.83	5.82	5.75	5.58
40	-	6.35	6.25	6.22	6.24	6.25	6.24	6.15	5.97
45	-	-	6.73	6.71	6.72	6.74	6.72	6.63	6.43
50	-	-	-	7.24	7.27	7.29	7.27	7.18	6.98
55	-	-	-	-	7.86	7.89	7.88	7.79	7.60
60	-	-	-	-	-	8.56	8.56	8.48	8.29
65	-	-	-	-	-	-	9.29	9.23	9.05

Mass flow in kg/h

30	-	71	90	112	138	169	203	243	287
35	-	71	90	112	138	168	202	241	286
40	-	71	89	111	137	167	201	240	285
45	-	-	88	109	135	165	200	239	284
50	-	-	-	108	133	163	198	237	282
55	-	-	-	-	131	161	195	235	280
60	-	-	-	-	-	157	192	231	276
65	-	-	-	-	-	-	187	226	272

Coefficient of performance (C.O.P.)

30	-	1.81	2.34	2.98	3.74	4.65	5.76	7.12	8.83
35	-	1.49	1.94	2.47	3.12	3.88	4.81	5.93	7.31
40	-	1.23	1.60	2.04	2.58	3.22	3.99	4.91	6.03
45	-	-	1.31	1.68	2.12	2.66	3.29	4.04	4.95
50	-	-	-	1.36	1.73	2.17	2.69	3.31	4.05
55	-	-	-	-	1.40	1.76	2.19	2.69	3.29
60	-	-	-	-	-	1.41	1.76	2.17	2.66
65	-	-	-	-	-	-	1.40	1.74	2.14

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

Cooling capacity	10 806	W
Power input	3 580	W
Current consumption	7.65	A
Mass flow	254	kg/h
C.O.P.	3.02	

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	-	3 211	4 118	5 223	6 546	8 107	9 928	12 028	14 429
35	-	3 032	3 893	4 943	6 203	7 694	9 435	11 448	13 752
40	-	2 847	3 662	4 657	5 855	7 274	8 936	10 860	13 068
45	-	-	3 416	4 357	5 491	6 838	8 419	10 255	12 365
50	-	-	-	4 033	5 103	6 377	7 877	9 623	11 634
55	-	-	-	-	4 682	5 883	7 301	8 955	10 866
60	-	-	-	-	-	5 346	6 680	8 242	10 051
65	-	-	-	-	-	-	6 006	7 473	9 178

Power input in W

30	-	1 902	1 887	1 879	1 874	1 863	1 842	1 803	1 741
35	-	2 189	2 164	2 150	2 140	2 127	2 106	2 070	2 012
40	-	2 518	2 485	2 465	2 451	2 436	2 416	2 383	2 331
45	-	-	2 855	2 829	2 811	2 796	2 777	2 748	2 702
50	-	-	-	3 247	3 227	3 212	3 195	3 170	3 131
55	-	-	-	-	3 704	3 689	3 675	3 655	3 623
60	-	-	-	-	-	4 232	4 221	4 207	4 183
65	-	-	-	-	-	-	4 840	4 832	4 817

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40	-	6.35	6.25	6.22	6.24	6.25	6.24	6.15	5.97
45	-	-	6.73	6.71	6.72	6.74	6.72	6.63	6.43
50	-	-	-	7.24	7.27	7.29	7.27	7.18	6.98
55	-	-	-	-	7.86	7.89	7.88	7.79	7.60
60	-	-	-	-	-	8.56	8.56	8.48	8.29
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Mass flow in kg/h

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30	-	1.69	2.18	2.78	3.49	4.35	5.39	6.67	8.29
35	-	1.39	1.80	2.30	2.90	3.62	4.48	5.53	6.83
40	-	1.13	1.47	1.89	2.39	2.99	3.70	4.56	5.61
45	-	-	1.20	1.54	1.95	2.45	3.03	3.73	4.58
50	-	-	-	1.24	1.58	1.99	2.47	3.04	3.72
55	-	-	-	-	1.26	1.59	1.99	2.45	3.00
60	-	-	-	-	-	1.26	1.58	1.96	2.40
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Cooling capacity	9 623	W
Power input	3 170	W
Current consumption	7.18	A
Mass flow	239	kg/h
C.O.P.	3.04	

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 accoustic 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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Datasheet, performance data

Danfoss scroll compressor. HRP045T4

Performance data at 50 Hz, ARI rating conditions

R407C

Cond. temp. in °C (tc)	Evaporating temperature in °C (to)								
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45	-	-	3 727	4 745	5 971	7 425	9 129	11 104	13 372
50	-	-	-	4 426	5 590	6 974	8 601	10 490	12 665
55	-	-	-	-	5 174	6 489	8 037	9 841	11 922
60	-	-	-	-	-	5 959	7 430	9 148	11 135
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Power input in W

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40	-	2 518	2 485	2 465	2 451	2 436	2 416	2 383	2 331
45	-	-	2 855	2 829	2 811	2 796	2 777	2 748	2 702
50	-	-	-	3 247	3 227	3 212	3 195	3 170	3 131
55	-	-	-	-	3 704	3 689	3 675	3 655	3 623
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Current consumption in A

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40	-	6.35	6.25	6.22	6.24	6.25	6.24	6.15	5.97
45	-	-	6.73	6.71	6.72	6.74	6.72	6.63	6.43
50	-	-	-	7.24	7.27	7.29	7.27	7.18	6.98
55	-	-	-	-	7.86	7.89	7.88	7.79	7.60
60	-	-	-	-	-	8.56	8.56	8.48	8.29
65	-	-	-	-	-	-	9.29	9.23	9.05

Mass flow in kg/h

30	-	71	90	112	138	169	203	243	287
35	-	71	90	112	138	168	202	241	286
40	-	71	89	111	137	167	201	240	285
45	-	-	88	109	135	165	200	239	284
50	-	-	-	108	133	163	198	237	282
55	-	-	-	-	131	161	195	235	280
60	-	-	-	-	-	157	192	231	276
65	-	-	-	-	-	-	187	226	272

Coefficient of performance (C.O.P.)

30	-	1.81	2.34	2.98	3.74	4.65	5.76	7.12	8.83
35	-	1.49	1.94	2.47	3.12	3.88	4.81	5.93	7.31
40	-	1.23	1.60	2.04	2.58	3.22	3.99	4.91	6.03
45	-	-	1.31	1.68	2.12	2.66	3.29	4.04	4.95
50	-	-	-	1.36	1.73	2.17	2.69	3.31	4.05
55	-	-	-	-	1.40	1.76	2.19	2.69	3.29
60	-	-	-	-	-	1.41	1.76	2.17	2.66
65	-	-	-	-	-	-	1.40	1.74	2.14

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

Cooling capacity	10 806	W
Power input	3 580	W
Current consumption	7.65	A
Mass flow	254	kg/h
C.O.P.	3.02	

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 accoustic 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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