

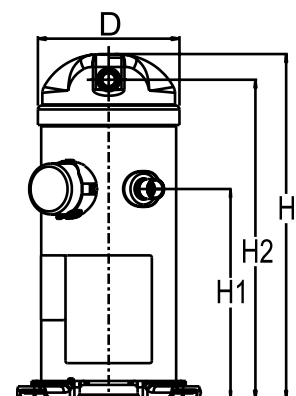
Datasheets

# Danfoss scroll compressors **H series**



**General Characteristics**

Model number (on compressor nameplate)		<b>HRP054T4LP6</b>
Code number for Singlepack*		120U1691
Code number for Industrial pack**		120U1688
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		72.76 cm <sup>3</sup> /rev
Displacement @ Nominal speed		12.7 m <sup>3</sup> /h @ 2900 rpm - 15.3 m <sup>3</sup> /h @ 3500 rpm
Net weight		37.19 kg
Oil charge		1.57 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		5.44 kg
Approved refrigerants		R407C

**Dimensions**


D=183.5 mm

H=455 mm

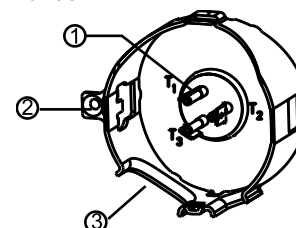
H1=280 mm

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	2.300 Ω
Winding resistance between phases 1-3 +/- 7% at 25°C	2.300 Ω
Winding resistance between phases 2-3 +/- 7% at 25°C	2.300 Ω
Rated Load Amps (RLA)	8 A
Maximum Continuous Current (MCC)	12.5 A
Locked Rotor Amps (LRA)	62 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.**

PVE lubricant, 320HV (FVC68D), 1 litre can	120Z5034
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**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**
**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	-	3 909	4 978	6 286	7 859	9 723	11 904	14 428	17 321
35	-	3 631	4 652	5 899	7 397	9 173	11 251	13 659	16 423
40	-	3 362	4 333	5 515	6 935	8 619	10 592	12 880	15 510
45	-	-	4 013	5 127	6 466	8 054	9 918	12 083	14 575
50	-	-	-	4 729	5 982	7 471	9 222	11 261	13 612
55	-	-	-	-	5 478	6 864	8 499	10 406	12 612
60	-	-	-	-	-	6 226	7 740	9 512	11 568
65	-	-	-	-	-	-	6 938	8 570	10 472

**Power input in W**

30	-	2 001	2 068	2 136	2 204	2 274	2 348	2 426	2 510
35	-	2 435	2 464	2 495	2 529	2 566	2 609	2 658	2 715
40	-	2 883	2 878	2 876	2 879	2 888	2 904	2 927	2 960
45	-	-	3 316	3 286	3 262	3 246	3 238	3 241	3 254
50	-	-	-	3 731	3 684	3 647	3 620	3 605	3 602
55	-	-	-	-	4 152	4 098	4 056	4 027	4 013
60	-	-	-	-	-	4 606	4 553	4 514	4 492
65	-	-	-	-	-	-	5 117	5 073	5 047

**Current consumption in A**

30	-	3.17	3.12	3.18	3.31	3.46	3.60	3.68	3.66
35	-	4.00	3.86	3.85	3.91	4.01	4.10	4.14	4.09
40	-	4.57	4.37	4.30	4.31	4.36	4.42	4.43	4.37
45	-	-	4.75	4.63	4.61	4.63	4.67	4.67	4.60
50	-	-	-	4.95	4.90	4.92	4.95	4.96	4.90
55	-	-	-	-	5.30	5.32	5.36	5.39	5.36
60	-	-	-	-	-	5.94	6.01	6.08	6.09
65	-	-	-	-	-	-	7.00	7.12	7.19

**Mass flow in kg/h**

30	-	89	111	137	168	204	245	292	346
35	-	87	109	135	166	201	242	290	344
40	-	85	107	133	163	198	239	287	341
45	-	-	104	129	159	195	236	283	337
50	-	-	-	125	155	190	231	279	333
55	-	-	-	-	149	184	225	273	328
60	-	-	-	-	-	177	218	266	321
65	-	-	-	-	-	-	210	258	313

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

30	-	1.95	2.41	2.94	3.57	4.28	5.07	5.95	6.90
35	-	1.49	1.89	2.36	2.93	3.57	4.31	5.14	6.05
40	-	1.17	1.51	1.92	2.41	2.98	3.65	4.40	5.24
45	-	-	1.21	1.56	1.98	2.48	3.06	3.73	4.48
50	-	-	-	1.27	1.62	2.05	2.55	3.12	3.78
55	-	-	-	-	1.32	1.67	2.10	2.58	3.14
60	-	-	-	-	-	1.35	1.70	2.11	2.58
65	-	-	-	-	-	-	1.36	1.69	2.08

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

Cooling capacity	11 261	W
Power input	3 605	W
Current consumption	4.96	A
Mass flow	279	kg/h
C.O.P.	3.12	

**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	69	dB(A)
With accoustic hood	64	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	-	4 197	5 339	6 735	8 410	10 394	12 712	15 392	18 461
35	-	3 918	5 014	6 350	7 953	9 849	12 068	14 634	17 577
40	-	3 650	4 696	5 969	7 495	9 302	11 417	13 868	16 680
45	-	-	4 378	5 585	7 031	8 745	10 754	13 084	15 763
50	-	-	-	5 190	6 553	8 171	10 069	12 276	14 818
55	-	-	-	-	6 054	7 571	9 356	11 436	13 838
60	-	-	-	-	-	6 940	8 608	10 558	12 816
65	-	-	-	-	-	-	7 818	9 634	11 745

**Power input in W**

30	-	2 001	2 068	2 136	2 204	2 274	2 348	2 426	2 510
35	-	2 435	2 464	2 495	2 529	2 566	2 609	2 658	2 715
40	-	2 883	2 878	2 876	2 879	2 888	2 904	2 927	2 960
45	-	-	3 316	3 286	3 262	3 246	3 238	3 241	3 254
50	-	-	-	3 731	3 684	3 647	3 620	3 605	3 602
55	-	-	-	-	4 152	4 098	4 056	4 027	4 013
60	-	-	-	-	-	4 606	4 553	4 514	4 492
65	-	-	-	-	-	-	5 117	5 073	5 047

**Current consumption in A**

30	-	3.17	3.12	3.18	3.31	3.46	3.60	3.68	3.66
35	-	4.00	3.86	3.85	3.91	4.01	4.10	4.14	4.09
40	-	4.57	4.37	4.30	4.31	4.36	4.42	4.43	4.37
45	-	-	4.75	4.63	4.61	4.63	4.67	4.67	4.60
50	-	-	-	4.95	4.90	4.92	4.95	4.96	4.90
55	-	-	-	-	5.30	5.32	5.36	5.39	5.36
60	-	-	-	-	-	5.94	6.01	6.08	6.09
65	-	-	-	-	-	-	7.00	7.12	7.19

**Mass flow in kg/h**

30	-	88	111	137	167	203	244	291	344
35	-	87	109	135	165	200	241	288	342
40	-	85	106	132	162	197	238	285	339
45	-	-	103	129	158	194	234	281	335
50	-	-	-	124	154	189	230	277	331
55	-	-	-	-	148	183	224	271	326
60	-	-	-	-	-	176	217	265	319
65	-	-	-	-	-	-	208	256	311

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

30	-	2.10	2.58	3.15	3.82	4.57	5.41	6.34	7.35
35	-	1.61	2.03	2.54	3.14	3.84	4.63	5.51	6.47
40	-	1.27	1.63	2.08	2.60	3.22	3.93	4.74	5.63
45	-	-	1.32	1.70	2.16	2.69	3.32	4.04	4.84
50	-	-	-	1.39	1.78	2.24	2.78	3.41	4.11
55	-	-	-	-	1.46	1.85	2.31	2.84	3.45
60	-	-	-	-	-	1.51	1.89	2.34	2.85
65	-	-	-	-	-	-	1.53	1.90	2.33

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

Cooling capacity	12 562	W
Power input	3 966	W
Current consumption	5.32	A
Mass flow	295	kg/h
C.O.P.	3.17	

**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	69	dB(A)
With accoustic hood	64	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	-	3 909	4 978	6 286	7 859	9 723	11 904	14 428	17 321
35	-	3 631	4 652	5 899	7 397	9 173	11 251	13 659	16 423
40	-	3 362	4 333	5 515	6 935	8 619	10 592	12 880	15 510
45	-	-	4 013	5 127	6 466	8 054	9 918	12 083	14 575
50	-	-	-	4 729	5 982	7 471	9 222	11 261	13 612
55	-	-	-	-	5 478	6 864	8 499	10 406	12 612
60	-	-	-	-	-	6 226	7 740	9 512	11 568
65	-	-	-	-	-	-	6 938	8 570	10 472

**Power input in W**

30	-	2 001	2 068	2 136	2 204	2 274	2 348	2 426	2 510
35	-	2 435	2 464	2 495	2 529	2 566	2 609	2 658	2 715
40	-	2 883	2 878	2 876	2 879	2 888	2 904	2 927	2 960
45	-	-	3 316	3 286	3 262	3 246	3 238	3 241	3 254
50	-	-	-	3 731	3 684	3 647	3 620	3 605	3 602
55	-	-	-	-	4 152	4 098	4 056	4 027	4 013
60	-	-	-	-	-	4 606	4 553	4 514	4 492
65	-	-	-	-	-	-	5 117	5 073	5 047

**Current consumption in A**

30	-	3.17	3.12	3.18	3.31	3.46	3.60	3.68	3.66
35	-	4.00	3.86	3.85	3.91	4.01	4.10	4.14	4.09
40	-	4.57	4.37	4.30	4.31	4.36	4.42	4.43	4.37
45	-	-	4.75	4.63	4.61	4.63	4.67	4.67	4.60
50	-	-	-	4.95	4.90	4.92	4.95	4.96	4.90
55	-	-	-	-	5.30	5.32	5.36	5.39	5.36
60	-	-	-	-	-	5.94	6.01	6.08	6.09
65	-	-	-	-	-	-	7.00	7.12	7.19

**Mass flow in kg/h**

30	-	89	111	137	168	204	245	292	346
35	-	87	109	135	166	201	242	290	344
40	-	85	107	133	163	198	239	287	341
45	-	-	104	129	159	195	236	283	337
50	-	-	-	125	155	190	231	279	333
55	-	-	-	-	149	184	225	273	328
60	-	-	-	-	-	177	218	266	321
65	-	-	-	-	-	-	210	258	313

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

30	-	1.95	2.41	2.94	3.57	4.28	5.07	5.95	6.90
35	-	1.49	1.89	2.36	2.93	3.57	4.31	5.14	6.05
40	-	1.17	1.51	1.92	2.41	2.98	3.65	4.40	5.24
45	-	-	1.21	1.56	1.98	2.48	3.06	3.73	4.48
50	-	-	-	1.27	1.62	2.05	2.55	3.12	3.78
55	-	-	-	-	1.32	1.67	2.10	2.58	3.14
60	-	-	-	-	-	1.35	1.70	2.11	2.58
65	-	-	-	-	-	-	1.36	1.69	2.08

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

Cooling capacity	11 261	W
Power input	3 605	W
Current consumption	4.96	A
Mass flow	279	kg/h
C.O.P.	3.12	

**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	69	dB(A)
With accoustic hood	64	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	-	4 197	5 339	6 735	8 410	10 394	12 712	15 392	18 461
35	-	3 918	5 014	6 350	7 953	9 849	12 068	14 634	17 577
40	-	3 650	4 696	5 969	7 495	9 302	11 417	13 868	16 680
45	-	-	4 378	5 585	7 031	8 745	10 754	13 084	15 763
50	-	-	-	5 190	6 553	8 171	10 069	12 276	14 818
55	-	-	-	-	6 054	7 571	9 356	11 436	13 838
60	-	-	-	-	-	6 940	8 608	10 558	12 816
65	-	-	-	-	-	-	7 818	9 634	11 745

**Power input in W**

30	-	2 001	2 068	2 136	2 204	2 274	2 348	2 426	2 510
35	-	2 435	2 464	2 495	2 529	2 566	2 609	2 658	2 715
40	-	2 883	2 878	2 876	2 879	2 888	2 904	2 927	2 960
45	-	-	3 316	3 286	3 262	3 246	3 238	3 241	3 254
50	-	-	-	3 731	3 684	3 647	3 620	3 605	3 602
55	-	-	-	-	4 152	4 098	4 056	4 027	4 013
60	-	-	-	-	-	4 606	4 553	4 514	4 492
65	-	-	-	-	-	-	5 117	5 073	5 047

**Current consumption in A**

30	-	3.17	3.12	3.18	3.31	3.46	3.60	3.68	3.66
35	-	4.00	3.86	3.85	3.91	4.01	4.10	4.14	4.09
40	-	4.57	4.37	4.30	4.31	4.36	4.42	4.43	4.37
45	-	-	4.75	4.63	4.61	4.63	4.67	4.67	4.60
50	-	-	-	4.95	4.90	4.92	4.95	4.96	4.90
55	-	-	-	-	5.30	5.32	5.36	5.39	5.36
60	-	-	-	-	-	5.94	6.01	6.08	6.09
65	-	-	-	-	-	-	7.00	7.12	7.19

**Mass flow in kg/h**

30	-	88	111	137	167	203	244	291	344
35	-	87	109	135	165	200	241	288	342
40	-	85	106	132	162	197	238	285	339
45	-	-	103	129	158	194	234	281	335
50	-	-	-	124	154	189	230	277	331
55	-	-	-	-	148	183	224	271	326
60	-	-	-	-	-	176	217	265	319
65	-	-	-	-	-	-	208	256	311

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

30	-	2.10	2.58	3.15	3.82	4.57	5.41	6.34	7.35
35	-	1.61	2.03	2.54	3.14	3.84	4.63	5.51	6.47
40	-	1.27	1.63	2.08	2.60	3.22	3.93	4.74	5.63
45	-	-	1.32	1.70	2.16	2.69	3.32	4.04	4.84
50	-	-	-	1.39	1.78	2.24	2.78	3.41	4.11
55	-	-	-	-	1.46	1.85	2.31	2.84	3.45
60	-	-	-	-	-	1.51	1.89	2.34	2.85
65	-	-	-	-	-	-	1.53	1.90	2.33

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

Cooling capacity	12 562	W
Power input	3 966	W
Current consumption	5.32	A
Mass flow	295	kg/h
C.O.P.	3.17	

**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	69	dB(A)
With accoustic hood	64	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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