

Datasheets

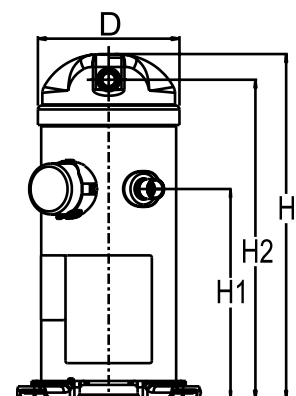
# Danfoss scroll compressors **H series**



## General Characteristics

Model number (on compressor nameplate)		<b>HRH041U4LC8</b>
Code number for Singlepack*		120U2397
Code number for Industrial pack**		120U2394
Drawing number		0XR6049B-2
Suction and discharge connections		Brazed
Suction connection		7/8 " ODF
Discharge connection		1/2 " ODF
Oil sight glass		None
Oil equalisation connection		1/2"
Oil drain connection		None
LP gauge port		None
IPR valve		Yes
Swept volume		39.33 cm <sup>3</sup> /rev
Displacement @ Nominal speed		6.8 m <sup>3</sup> /h @ 2900 rpm - 8.3 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		R410A

## Dimensions



D=183.5 mm

H=455 mm

H1=280 mm

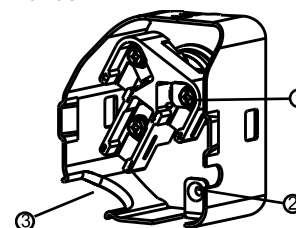
H2=422 mm

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	2.600 Ω
Winding resistance between phases 1-3 +/- 7% at 25°C	2.611 Ω
Winding resistance between phases 2-3 +/- 7% at 25°C	2.649 Ω
Rated Load Amps (RLA)	8.3 A
Maximum Continuous Current (MCC)	13 A
Locked Rotor Amps (LRA)	60 A
Motor protection	Internal overload protector

## Terminal box



IP22

1: Screw connectors 10-32 UNF x 9.5

2: Earth connection

3: Power cable passage

## Recommended Installation torques

Oil sight glass	52.5 Nm
Power connections / Earth connection	3 Nm / 2 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.**

Discharge thermostat kit	7750009
IP54 upgrade kit	118U0057

**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 120Z5018	120Z5018

**Performance data at 50 Hz, EN 12900 rating conditions**
**R410A**

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

**Cooling capacity in W**

30	3 513	4 425	5 448	6 637	8 047	9 733	11 753	14 160	-
35	3 139	4 102	5 128	6 272	7 589	9 135	10 963	13 131	-
40	-	3 674	4 739	5 875	7 137	8 579	10 255	12 222	-
45	-	-	4 242	5 406	6 649	8 023	9 585	11 388	-
50	-	-	-	4 826	6 083	7 426	8 908	10 584	-
55	-	-	-	-	5 399	6 743	8 179	9 760	-
60	-	-	-	-	-	5 928	7 346	8 862	-
65	-	-	-	-	-	-	6 345	7 814	-

**Power input in W**

30	1 891	1 915	1 930	1 935	1 927	1 903	1 860	1 795	-
35	2 105	2 133	2 154	2 167	2 168	2 154	2 123	2 071	-
40	-	2 389	2 414	2 432	2 439	2 434	2 412	2 372	-
45	-	-	2 714	2 734	2 746	2 746	2 732	2 701	-
50	-	-	-	3 080	3 094	3 097	3 088	3 064	-
55	-	-	-	-	3 486	3 491	3 485	3 464	-
60	-	-	-	-	-	3 932	3 926	3 908	-
65	-	-	-	-	-	-	4 418	4 399	-

**Current consumption in A**

30	3.52	3.53	3.57	3.61	3.61	3.54	3.38	3.09	-
35	3.70	3.74	3.81	3.88	3.92	3.91	3.80	3.56	-
40	-	4.00	4.08	4.17	4.24	4.25	4.18	3.98	-
45	-	-	4.42	4.52	4.59	4.61	4.56	4.39	-
50	-	-	-	4.95	5.01	5.03	4.97	4.80	-
55	-	-	-	-	5.53	5.53	5.45	5.27	-
60	-	-	-	-	-	6.15	6.04	5.83	-
65	-	-	-	-	-	-	6.76	6.50	-

**Mass flow in kg/h**

30	73	91	110	133	159	191	229	275	-
35	69	89	109	132	158	188	223	265	-
40	-	84	107	131	157	186	220	259	-
45	-	-	101	127	155	184	218	255	-
50	-	-	-	121	151	182	215	253	-
55	-	-	-	-	144	177	212	250	-
60	-	-	-	-	-	170	207	247	-
65	-	-	-	-	-	-	199	241	-

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

30	1.86	2.31	2.82	3.43	4.18	5.11	6.32	7.89	-
35	1.49	1.92	2.38	2.89	3.50	4.24	5.16	6.34	-
40	-	1.54	1.96	2.42	2.93	3.53	4.25	5.15	-
45	-	-	1.56	1.98	2.42	2.92	3.51	4.22	-
50	-	-	-	1.57	1.97	2.40	2.88	3.45	-
55	-	-	-	-	1.55	1.93	2.35	2.82	-
60	-	-	-	-	-	1.51	1.87	2.27	-
65	-	-	-	-	-	-	1.44	1.78	-

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

Cooling capacity	8 908	W
Power input	3 088	W
Current consumption	4.97	A
Mass flow	215	kg/h
C.O.P.	2.88	

**Pressure switch settings**

Maximum HP switch setting	45	bar(g)
Minimum LP switch setting	1.5	bar(g)
LP pump down setting	2.3	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**
**R410A**

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

**Cooling capacity in W**

30	3 794	4 774	5 872	7 146	8 656	10 461	12 621	15 195	-
35	-	4 453	5 561	6 795	8 213	9 876	11 842	14 172	-
40	-	-	5 178	6 411	7 779	9 341	11 155	13 282	-
45	-	-	4 678	5 953	7 311	8 812	10 515	12 480	-
50	-	-	-	5 375	6 765	8 247	9 880	11 723	-
55	-	-	-	-	6 096	7 600	9 204	10 968	-
60	-	-	-	-	-	6 829	8 445	10 170	-
65	-	-	-	-	-	-	7 558	9 285	-

**Power input in W**

30	1 891	1 915	1 930	1 935	1 927	1 903	1 860	1 795	-
35	-	2 133	2 154	2 167	2 168	2 154	2 123	2 071	-
40	-	-	2 414	2 432	2 439	2 434	2 412	2 372	-
45	-	-	2 714	2 734	2 746	2 746	2 732	2 701	-
50	-	-	-	3 080	3 094	3 097	3 088	3 064	-
55	-	-	-	-	3 486	3 491	3 485	3 464	-
60	-	-	-	-	-	3 932	3 926	3 908	-
65	-	-	-	-	-	-	4 418	4 399	-

**Current consumption in A**

30	3.52	3.53	3.57	3.61	3.61	3.54	3.38	3.09	-
35	-	3.74	3.81	3.88	3.92	3.91	3.80	3.56	-
40	-	-	4.08	4.17	4.24	4.25	4.18	3.98	-
45	-	-	4.42	4.52	4.59	4.61	4.56	4.39	-
50	-	-	-	4.95	5.01	5.03	4.97	4.80	-
55	-	-	-	-	5.53	5.53	5.45	5.27	-
60	-	-	-	-	-	6.15	6.04	5.83	-
65	-	-	-	-	-	-	6.76	6.50	-

**Mass flow in kg/h**

30	73	90	110	132	158	190	227	273	-
35	-	88	109	131	157	187	222	263	-
40	-	-	106	130	156	185	218	257	-
45	-	-	101	127	154	183	216	254	-
50	-	-	-	121	150	181	214	251	-
55	-	-	-	-	143	176	211	248	-
60	-	-	-	-	-	169	206	245	-
65	-	-	-	-	-	-	198	239	-

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

30	2.01	2.49	3.04	3.69	4.49	5.50	6.79	8.47	-
35	-	2.09	2.58	3.14	3.79	4.58	5.58	6.84	-
40	-	-	2.14	2.64	3.19	3.84	4.62	5.60	-
45	-	-	1.72	2.18	2.66	3.21	3.85	4.62	-
50	-	-	-	1.75	2.19	2.66	3.20	3.83	-
55	-	-	-	-	1.75	2.18	2.64	3.17	-
60	-	-	-	-	-	1.74	2.15	2.60	-
65	-	-	-	-	-	-	1.71	2.11	-

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

Cooling capacity	10 044	W
Power input	3 428	W
Current consumption	5.33	A
Mass flow	227	kg/h
C.O.P.	2.93	

**Pressure switch settings**

Maximum HP switch setting	45	bar(g)
Minimum LP switch setting	1.5	bar(g)
LP pump down setting	2.3	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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**Performance data at 60 Hz, EN 12900 rating conditions**
**R410A**

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

**Cooling capacity in W**

30	4 247	5 352	6 589	8 026	9 731	11 771	14 213	17 125	-
35	3 793	4 957	6 198	7 580	9 172	11 039	13 250	15 870	-
40	-	4 435	5 723	7 095	8 618	10 359	12 384	14 759	-
45	-	-	5 117	6 522	8 021	9 679	11 563	13 738	-
50	-	-	-	5 815	7 331	8 950	10 736	12 755	-
55	-	-	-	-	6 500	8 118	9 847	11 750	-
60	-	-	-	-	-	7 130	8 835	10 658	-
65	-	-	-	-	-	-	7 625	9 389	-

**Power input in W**

30	2 270	2 298	2 317	2 323	2 313	2 284	2 233	2 156	-
35	2 519	2 553	2 579	2 594	2 595	2 579	2 542	2 481	-
40	-	2 849	2 880	2 902	2 911	2 904	2 878	2 831	-
45	-	-	3 226	3 251	3 265	3 265	3 248	3 211	-
50	-	-	-	3 647	3 664	3 669	3 658	3 628	-
55	-	-	-	-	4 114	4 120	4 112	4 087	-
60	-	-	-	-	-	4 624	4 616	4 594	-
65	-	-	-	-	-	-	5 177	5 154	-

**Current consumption in A**

30	4.44	4.47	4.50	4.53	4.58	4.63	4.69	4.78	-
35	4.67	4.71	4.75	4.78	4.82	4.86	4.92	4.99	-
40	-	4.98	5.03	5.07	5.11	5.15	5.19	5.25	-
45	-	-	5.34	5.39	5.44	5.48	5.53	5.57	-
50	-	-	-	5.76	5.82	5.88	5.92	5.97	-
55	-	-	-	-	6.26	6.33	6.38	6.43	-
60	-	-	-	-	-	6.84	6.91	6.97	-
65	-	-	-	-	-	-	7.52	7.59	-

**Mass flow in kg/h**

30	89	110	134	161	193	231	277	332	-
35	84	107	132	160	191	227	270	321	-
40	-	101	129	158	189	225	265	313	-
45	-	-	122	154	187	222	262	308	-
50	-	-	-	146	182	219	260	305	-
55	-	-	-	-	174	214	256	301	-
60	-	-	-	-	-	205	249	296	-
65	-	-	-	-	-	-	240	289	-

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

30	1.87	2.33	2.84	3.45	4.21	5.15	6.37	7.94	-
35	1.51	1.94	2.40	2.92	3.53	4.28	5.21	6.40	-
40	-	1.56	1.99	2.45	2.96	3.57	4.30	5.21	-
45	-	-	1.59	2.01	2.46	2.96	3.56	4.28	-
50	-	-	-	1.59	2.00	2.44	2.94	3.52	-
55	-	-	-	-	1.58	1.97	2.39	2.87	-
60	-	-	-	-	-	1.54	1.91	2.32	-
65	-	-	-	-	-	-	1.47	1.82	-

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

Cooling capacity	10 736	W
Power input	3 658	W
Current consumption	5.92	A
Mass flow	260	kg/h
C.O.P.	2.94	

**Pressure switch settings**

Maximum HP switch setting	45	bar(g)
Minimum LP switch setting	1.5	bar(g)
LP pump down setting	2.3	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 60 Hz, ARI rating conditions**
**R410A**

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

**Cooling capacity in W**

30	4 587	5 773	7 101	8 642	10 468	12 651	15 263	18 377	-
35	-	5 382	6 721	8 212	9 926	11 935	14 312	17 128	-
40	-	-	6 252	7 742	9 394	11 279	13 470	16 038	-
45	-	-	5 642	7 181	8 820	10 631	12 686	15 056	-
50	-	-	-	6 477	8 153	9 939	11 907	14 128	-
55	-	-	-	-	7 340	9 150	11 081	13 204	-
60	-	-	-	-	-	8 213	10 157	12 231	-
65	-	-	-	-	-	-	9 082	11 156	-

**Power input in W**

30	2 270	2 298	2 317	2 323	2 313	2 284	2 233	2 156	-
35	-	2 553	2 579	2 594	2 595	2 579	2 542	2 481	-
40	-	-	2 880	2 902	2 911	2 904	2 878	2 831	-
45	-	-	3 226	3 251	3 265	3 265	3 248	3 211	-
50	-	-	-	3 647	3 664	3 669	3 658	3 628	-
55	-	-	-	-	4 114	4 120	4 112	4 087	-
60	-	-	-	-	-	4 624	4 616	4 594	-
65	-	-	-	-	-	-	5 177	5 154	-

**Current consumption in A**

30	4.44	4.47	4.50	4.53	4.58	4.63	4.69	4.78	-
35	-	4.71	4.75	4.78	4.82	4.86	4.92	4.99	-
40	-	-	5.03	5.07	5.11	5.15	5.19	5.25	-
45	-	-	5.34	5.39	5.44	5.48	5.53	5.57	-
50	-	-	-	5.76	5.82	5.88	5.92	5.97	-
55	-	-	-	-	6.26	6.33	6.38	6.43	-
60	-	-	-	-	-	6.84	6.91	6.97	-
65	-	-	-	-	-	-	7.52	7.59	-

**Mass flow in kg/h**

30	88	109	133	160	191	229	275	330	-
35	-	107	132	159	190	226	268	318	-
40	-	-	128	157	188	223	264	311	-
45	-	-	122	153	185	221	261	306	-
50	-	-	-	145	181	218	258	302	-
55	-	-	-	-	172	212	254	299	-
60	-	-	-	-	-	203	248	294	-
65	-	-	-	-	-	-	238	287	-

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

30	2.02	2.51	3.06	3.72	4.53	5.54	6.84	8.52	-
35	-	2.11	2.61	3.17	3.82	4.63	5.63	6.90	-
40	-	-	2.17	2.67	3.23	3.88	4.68	5.67	-
45	-	-	1.75	2.21	2.70	3.26	3.91	4.69	-
50	-	-	-	1.78	2.23	2.71	3.26	3.89	-
55	-	-	-	-	1.78	2.22	2.69	3.23	-
60	-	-	-	-	-	1.78	2.20	2.66	-
65	-	-	-	-	-	-	1.75	2.16	-

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

Cooling capacity	12 094	W
Power input	4 046	W
Current consumption	6.35	A
Mass flow	274	kg/h
C.O.P.	2.99	

**Pressure switch settings**

Maximum HP switch setting	45	bar(g)
Minimum LP switch setting	1.5	bar(g)
LP pump down setting	2.3	bar(g)

**Sound power data**

Sound power level	70	dB(A)
With acoustic hood	65	dB(A)

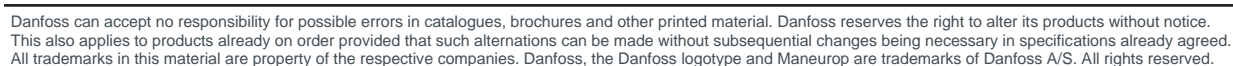
to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

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

All performance data +/- 5%

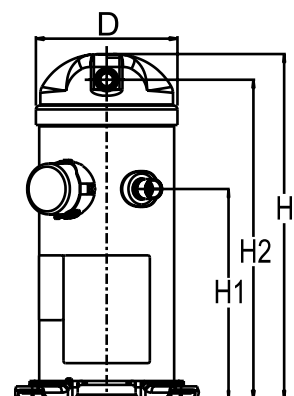
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**General Characteristics**

Model number (on compressor nameplate)		<b>HRH041U4LP6</b>
Code number for Singlepack*		120U1356
Code number for Industrial pack**		120U1353
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		39.33 cm <sup>3</sup> /rev
Displacement @ Nominal speed		6.8 m <sup>3</sup> /h @ 2900 rpm - 8.3 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		R410A

**Dimensions**


D=183.5 mm

H=455 mm

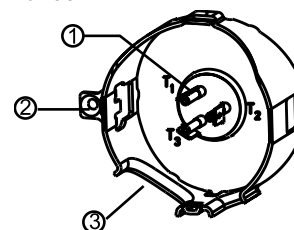
H1=280 mm

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	2.600 Ω
Winding resistance between phases 1-3 +/- 7% at 25°C	2.611 Ω
Winding resistance between phases 2-3 +/- 7% at 25°C	2.649 Ω
Rated Load Amps (RLA)	8.3 A
Maximum Continuous Current (MCC)	13 A
Locked Rotor Amps (LRA)	60 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

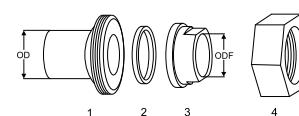
\*\*Industrial pack: 12 or 16 Unboxed compressors on pallet

**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, 50 W, 230 V, CE mark, UL	120Z0057
Belt type crankcase heater, 50 W, 400 V, CE mark, UL	120Z0058

**Miscellaneous accessories**
**Code no.**

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**
**R410A**

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

**Cooling capacity in W**

30	3 513	4 425	5 448	6 637	8 047	9 733	11 753	14 160	-
35	3 139	4 102	5 128	6 272	7 589	9 135	10 963	13 131	-
40	-	3 674	4 739	5 875	7 137	8 579	10 255	12 222	-
45	-	-	4 242	5 406	6 649	8 023	9 585	11 388	-
50	-	-	-	4 826	6 083	7 426	8 908	10 584	-
55	-	-	-	-	5 399	6 743	8 179	9 760	-
60	-	-	-	-	-	5 928	7 346	8 862	-
65	-	-	-	-	-	-	6 345	7 814	-

**Power input in W**

30	1 891	1 915	1 930	1 935	1 927	1 903	1 860	1 795	-
35	2 105	2 133	2 154	2 167	2 168	2 154	2 123	2 071	-
40	-	2 389	2 414	2 432	2 439	2 434	2 412	2 372	-
45	-	-	2 714	2 734	2 746	2 746	2 732	2 701	-
50	-	-	-	3 080	3 094	3 097	3 088	3 064	-
55	-	-	-	-	3 486	3 491	3 485	3 464	-
60	-	-	-	-	-	3 932	3 926	3 908	-
65	-	-	-	-	-	-	4 418	4 399	-

**Current consumption in A**

30	3.52	3.53	3.57	3.61	3.61	3.54	3.38	3.09	-
35	3.70	3.74	3.81	3.88	3.92	3.91	3.80	3.56	-
40	-	4.00	4.08	4.17	4.24	4.25	4.18	3.98	-
45	-	-	4.42	4.52	4.59	4.61	4.56	4.39	-
50	-	-	-	4.95	5.01	5.03	4.97	4.80	-
55	-	-	-	-	5.53	5.53	5.45	5.27	-
60	-	-	-	-	-	6.15	6.04	5.83	-
65	-	-	-	-	-	-	6.76	6.50	-

**Mass flow in kg/h**

30	73	91	110	133	159	191	229	275	-
35	69	89	109	132	158	188	223	265	-
40	-	84	107	131	157	186	220	259	-
45	-	-	101	127	155	184	218	255	-
50	-	-	-	121	151	182	215	253	-
55	-	-	-	-	144	177	212	250	-
60	-	-	-	-	-	170	207	247	-
65	-	-	-	-	-	-	199	241	-

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

30	1.86	2.31	2.82	3.43	4.18	5.11	6.32	7.89	-
35	1.49	1.92	2.38	2.89	3.50	4.24	5.16	6.34	-
40	-	1.54	1.96	2.42	2.93	3.53	4.25	5.15	-
45	-	-	1.56	1.98	2.42	2.92	3.51	4.22	-
50	-	-	-	1.57	1.97	2.40	2.88	3.45	-
55	-	-	-	-	1.55	1.93	2.35	2.82	-
60	-	-	-	-	-	1.51	1.87	2.27	-
65	-	-	-	-	-	-	1.44	1.78	-

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

Cooling capacity	8 908	W
Power input	3 088	W
Current consumption	4.97	A
Mass flow	215	kg/h
C.O.P.	2.88	

**Pressure switch settings**

Maximum HP switch setting	45	bar(g)
Minimum LP switch setting	1.5	bar(g)
LP pump down setting	2.3	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**
**R410A**

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

**Cooling capacity in W**

30	3 794	4 774	5 872	7 146	8 656	10 461	12 621	15 195	-
35	-	4 453	5 561	6 795	8 213	9 876	11 842	14 172	-
40	-	-	5 178	6 411	7 779	9 341	11 155	13 282	-
45	-	-	4 678	5 953	7 311	8 812	10 515	12 480	-
50	-	-	-	5 375	6 765	8 247	9 880	11 723	-
55	-	-	-	-	6 096	7 600	9 204	10 968	-
60	-	-	-	-	-	6 829	8 445	10 170	-
65	-	-	-	-	-	-	7 558	9 285	-

**Power input in W**

30	1 891	1 915	1 930	1 935	1 927	1 903	1 860	1 795	-
35	-	2 133	2 154	2 167	2 168	2 154	2 123	2 071	-
40	-	-	2 414	2 432	2 439	2 434	2 412	2 372	-
45	-	-	2 714	2 734	2 746	2 746	2 732	2 701	-
50	-	-	-	3 080	3 094	3 097	3 088	3 064	-
55	-	-	-	-	3 486	3 491	3 485	3 464	-
60	-	-	-	-	-	3 932	3 926	3 908	-
65	-	-	-	-	-	-	4 418	4 399	-

**Current consumption in A**

30	3.52	3.53	3.57	3.61	3.61	3.54	3.38	3.09	-
35	-	3.74	3.81	3.88	3.92	3.91	3.80	3.56	-
40	-	-	4.08	4.17	4.24	4.25	4.18	3.98	-
45	-	-	4.42	4.52	4.59	4.61	4.56	4.39	-
50	-	-	-	4.95	5.01	5.03	4.97	4.80	-
55	-	-	-	-	5.53	5.53	5.45	5.27	-
60	-	-	-	-	-	6.15	6.04	5.83	-
65	-	-	-	-	-	-	6.76	6.50	-

**Mass flow in kg/h**

30	73	90	110	132	158	190	227	273	-
35	-	88	109	131	157	187	222	263	-
40	-	-	106	130	156	185	218	257	-
45	-	-	101	127	154	183	216	254	-
50	-	-	-	121	150	181	214	251	-
55	-	-	-	-	143	176	211	248	-
60	-	-	-	-	-	169	206	245	-
65	-	-	-	-	-	-	198	239	-

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

30	2.01	2.49	3.04	3.69	4.49	5.50	6.79	8.47	-
35	-	2.09	2.58	3.14	3.79	4.58	5.58	6.84	-
40	-	-	2.14	2.64	3.19	3.84	4.62	5.60	-
45	-	-	1.72	2.18	2.66	3.21	3.85	4.62	-
50	-	-	-	1.75	2.19	2.66	3.20	3.83	-
55	-	-	-	-	1.75	2.18	2.64	3.17	-
60	-	-	-	-	-	1.74	2.15	2.60	-
65	-	-	-	-	-	-	1.71	2.11	-

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

Cooling capacity	10 044	W
Power input	3 428	W
Current consumption	5.33	A
Mass flow	227	kg/h
C.O.P.	2.93	

**Pressure switch settings**

Maximum HP switch setting	45	bar(g)
Minimum LP switch setting	1.5	bar(g)
LP pump down setting	2.3	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 60 Hz, EN 12900 rating conditions**
**R410A**

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

**Cooling capacity in W**

30	4 247	5 352	6 589	8 026	9 731	11 771	14 213	17 125	-
35	3 793	4 957	6 198	7 580	9 172	11 039	13 250	15 870	-
40	-	4 435	5 723	7 095	8 618	10 359	12 384	14 759	-
45	-	-	5 117	6 522	8 021	9 679	11 563	13 738	-
50	-	-	-	5 815	7 331	8 950	10 736	12 755	-
55	-	-	-	-	6 500	8 118	9 847	11 750	-
60	-	-	-	-	-	7 130	8 835	10 658	-
65	-	-	-	-	-	-	7 625	9 389	-

**Power input in W**

30	2 270	2 298	2 317	2 323	2 313	2 284	2 233	2 156	-
35	2 519	2 553	2 579	2 594	2 595	2 579	2 542	2 481	-
40	-	2 849	2 880	2 902	2 911	2 904	2 878	2 831	-
45	-	-	3 226	3 251	3 265	3 265	3 248	3 211	-
50	-	-	-	3 647	3 664	3 669	3 658	3 628	-
55	-	-	-	-	4 114	4 120	4 112	4 087	-
60	-	-	-	-	-	4 624	4 616	4 594	-
65	-	-	-	-	-	-	5 177	5 154	-

**Current consumption in A**

30	4.44	4.47	4.50	4.53	4.58	4.63	4.69	4.78	-
35	4.67	4.71	4.75	4.78	4.82	4.86	4.92	4.99	-
40	-	4.98	5.03	5.07	5.11	5.15	5.19	5.25	-
45	-	-	5.34	5.39	5.44	5.48	5.53	5.57	-
50	-	-	-	5.76	5.82	5.88	5.92	5.97	-
55	-	-	-	-	6.26	6.33	6.38	6.43	-
60	-	-	-	-	-	6.84	6.91	6.97	-
65	-	-	-	-	-	-	7.52	7.59	-

**Mass flow in kg/h**

30	89	110	134	161	193	231	277	332	-
35	84	107	132	160	191	227	270	321	-
40	-	101	129	158	189	225	265	313	-
45	-	-	122	154	187	222	262	308	-
50	-	-	-	146	182	219	260	305	-
55	-	-	-	-	174	214	256	301	-
60	-	-	-	-	-	205	249	296	-
65	-	-	-	-	-	-	240	289	-

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

30	1.87	2.33	2.84	3.45	4.21	5.15	6.37	7.94	-
35	1.51	1.94	2.40	2.92	3.53	4.28	5.21	6.40	-
40	-	1.56	1.99	2.45	2.96	3.57	4.30	5.21	-
45	-	-	1.59	2.01	2.46	2.96	3.56	4.28	-
50	-	-	-	1.59	2.00	2.44	2.94	3.52	-
55	-	-	-	-	1.58	1.97	2.39	2.87	-
60	-	-	-	-	-	1.54	1.91	2.32	-
65	-	-	-	-	-	-	1.47	1.82	-

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

Cooling capacity	10 736	W
Power input	3 658	W
Current consumption	5.92	A
Mass flow	260	kg/h
C.O.P.	2.94	

**Pressure switch settings**

Maximum HP switch setting	45	bar(g)
Minimum LP switch setting	1.5	bar(g)
LP pump down setting	2.3	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 60 Hz, ARI rating conditions**
**R410A**

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

**Cooling capacity in W**

30	4 587	5 773	7 101	8 642	10 468	12 651	15 263	18 377	-
35	-	5 382	6 721	8 212	9 926	11 935	14 312	17 128	-
40	-	-	6 252	7 742	9 394	11 279	13 470	16 038	-
45	-	-	5 642	7 181	8 820	10 631	12 686	15 056	-
50	-	-	-	6 477	8 153	9 939	11 907	14 128	-
55	-	-	-	-	7 340	9 150	11 081	13 204	-
60	-	-	-	-	-	8 213	10 157	12 231	-
65	-	-	-	-	-	-	9 082	11 156	-

**Power input in W**

30	2 270	2 298	2 317	2 323	2 313	2 284	2 233	2 156	-
35	-	2 553	2 579	2 594	2 595	2 579	2 542	2 481	-
40	-	-	2 880	2 902	2 911	2 904	2 878	2 831	-
45	-	-	3 226	3 251	3 265	3 265	3 248	3 211	-
50	-	-	-	3 647	3 664	3 669	3 658	3 628	-
55	-	-	-	-	4 114	4 120	4 112	4 087	-
60	-	-	-	-	-	4 624	4 616	4 594	-
65	-	-	-	-	-	-	5 177	5 154	-

**Current consumption in A**

30	4.44	4.47	4.50	4.53	4.58	4.63	4.69	4.78	-
35	-	4.71	4.75	4.78	4.82	4.86	4.92	4.99	-
40	-	-	5.03	5.07	5.11	5.15	5.19	5.25	-
45	-	-	5.34	5.39	5.44	5.48	5.53	5.57	-
50	-	-	-	5.76	5.82	5.88	5.92	5.97	-
55	-	-	-	-	6.26	6.33	6.38	6.43	-
60	-	-	-	-	-	6.84	6.91	6.97	-
65	-	-	-	-	-	-	7.52	7.59	-

**Mass flow in kg/h**

30	88	109	133	160	191	229	275	330	-
35	-	107	132	159	190	226	268	318	-
40	-	-	128	157	188	223	264	311	-
45	-	-	122	153	185	221	261	306	-
50	-	-	-	145	181	218	258	302	-
55	-	-	-	-	172	212	254	299	-
60	-	-	-	-	-	203	248	294	-
65	-	-	-	-	-	-	238	287	-

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

30	2.02	2.51	3.06	3.72	4.53	5.54	6.84	8.52	-
35	-	2.11	2.61	3.17	3.82	4.63	5.63	6.90	-
40	-	-	2.17	2.67	3.23	3.88	4.68	5.67	-
45	-	-	1.75	2.21	2.70	3.26	3.91	4.69	-
50	-	-	-	1.78	2.23	2.71	3.26	3.89	-
55	-	-	-	-	1.78	2.22	2.69	3.23	-
60	-	-	-	-	-	1.78	2.20	2.66	-
65	-	-	-	-	-	-	1.75	2.16	-

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

Cooling capacity	12 094	W
Power input	4 046	W
Current consumption	6.35	A
Mass flow	274	kg/h
C.O.P.	2.99	

**Pressure switch settings**

Maximum HP switch setting	45	bar(g)
Minimum LP switch setting	1.5	bar(g)
LP pump down setting	2.3	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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