ENGINEERING



Datasheets

# Danfoss scroll compressors **H series**





#### Datasheet, technical data

#### Danfoss scroll compressor, HRP042T4

#### **General Characteristics**

Model number (on compressor nameplate)		HRP042T4LP6	
Code number for Singlepack*		120U1026	
Code number for Industrial pack**		120U1023	
Drawing number		0XC6301B-2	
Suction and discharge connections		Brazed	
Suction connection		3/4 " 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	57.19 c	m3/rev	
Displacement @ Nominal speed	9.9 m3/h @ 2900 rpm -	12.0 m3/h @ 3500 rpm	
Net weight	30.84 kg		
Oil charge	1.06 litre	e, PVE	
Maximum system test pressure Low Side / High side	- bar(g) /	′ - bar(g)	
Maximum differential test pressure	- b	ar	
Maximum number of starts per hour	-	·	
Refrigerant charge limit	3.63	B kg	
Approved refrigerants	R407C		

#### **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℃	4.664 Ω
Winding resistance between phases 1-3 +/- 7% at 25℃	4.660 Ω
Winding resistance between phases 2-3 +/- 7% at 25°C	3.420 Ω
Rated Load Amps (RLA)	6.4 A
Maximum Continuous Current (MCC)	10 A
Locked Rotor Amps (LRA)	45 A
Motor protection	Internal overload protector

#### **Recommended Installation torques**

Oil sight glass	52.5 Nm
Power connections / Earth connection	0 Nm / 0 Nm

#### Parts shipped with compressor

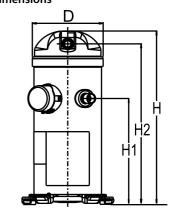
r arts shipped with compressor
Mounting kit with grommets and sleeves
Initial oil charge
Installation instructions

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

\*Singlepack: Compressor in cardboard box

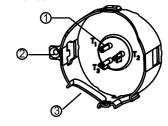
\*\*Industrial pack: 12 or 16 Unboxed compressors on pallet

#### **Dimensions**



D=164.5 mm H=413 mm H1=250 mm H2=379 mm H3=- mm

#### **Terminal box**



IP22

Spade connectors 1/4" 1:

2: Earth connection 3:

Power cable passage



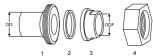
#### Datasheet, accessories and spare parts

#### Danfoss scroll compressor, HRP042T4

Rotolock accessories, suction side	Code no.
Solder sleeve, P04 (1-1/4" Rotolock, 3/4" ODF)	8153008
Angle adapter, C04 (1-1/4" Rotolock, 3/4" ODF)	8168006
Rotolock valve, V04 (1-1/4" Rotolock, 3/4" ODF)	8168029
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



Rotolock accessories, sets	Code no.
Solder sleeve adapter set (1-1/4" Rotolock, 3/4" ODF), (1" Rotolock, 1/2" ODF)	120Z0126
Gasket set. 1", 1-1/4", 1-3/4", OSG gaskets black & white	8156009

1: Rotolock adapter (Suc & Dis) 2: Gasket (Suc & Dis)

Oil / lubricants	Code no.
PVE lubricant, 320HV (FVC68D), 1 litre can	120Z5034

3: Solder sleeve (Suc & Dis) 4: Rotolock nut (Suc & Dis)

Crankcase heaters	Code no.
Belt type crankcase heater, 40 W, 230 V, CE mark, UL	120Z0055
Belt type crankcase heater, 40 W, 400 V, CF mark, UI	12070056

Miscellaneous accessories	Code no.
Belt type crankcase heater, 40 W, 400 V, CE mark, UL	120Z0056
beit type Clariccase fleater, 40 W, 250 V, CL Mark, OL	12020033

Miscendificous decessories	eoue 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



#### Danfoss scroll compressor. HRP042T4

#### Performance data at 50 Hz, EN 12900 rating conditions

# **R407C**

Cond. temp. in	Evaporating temperature in °C (to)								
°C (tc)	-30	-25	-20	-15	-10	-5	0	5	10
Cooling capacity	in W								
30	-	2 969	3 814	4 838	6 063	7 510	9 200	11 156	13 398
35	_	2 778	3 581	4 551	5 711	7 081	8 683	10 538	12 669
40		2 571	3 332	4 250	5 345	6 639	8 153	9 909	11 929
45	_	-	3 065	3 931	4 962	6 181	7 609	9 266	11 175
50		_	-	3 592	4 561	5 705	7 046	8 606	10 405
55		_	_	-	4 137	5 207	6 463	7 925	9 614
60	_	_	_	_	-	4 685	5 855	7 219	8 798
65	<u> </u>	_	_	-	-	-	5 219	6 485	7 954
00							0210	0 400	7 354
Power input in W	٧								
30	-	1 876	1 864	1 857	1 850	1 838	1 816	1 779	1 722
35	-	2 130	2 111	2 099	2 090	2 077	2 055	2 021	1 967
40	-	2 413	2 388	2 373	2 360	2 347	2 327	2 295	2 246
45	-	-	2 700	2 681	2 667	2 654	2 635	2 607	2 564
50	-	-	-	3 029	3 014	3 002	2 986	2 962	2 924
55	-	-	-	-	3 407	3 395	3 383	3 363	3 333
60	-	-	-	-	-	3 840	3 831	3 817	3 793
65	-	-	-	-	-	-	4 334	4 327	4 311
Current consum	ption in A								
30	-	3.09	3.05	3.11	3.23	3.38	3.52	3.59	3.58
35	-	3.90	3.77	3.76	3.82	3.91	4.00	4.04	3.99
40	-	4.47	4.27	4.20	4.21	4.26	4.32	4.33	4.26
45	-	-	4.64	4.52	4.50	4.52	4.56	4.56	4.49
50	-	-	-	4.83	4.79	4.80	4.83	4.84	4.79
55	-	-	-	-	5.18	5.19	5.24	5.26	5.24
60	-	-	-	-	-	5.80	5.87	5.93	5.95
65	-	-	-	-	-	-	6.84	6.95	7.02
Mass flow in kg/l	h	•		·		·			
30	-	66	84	105	129	157	189	226	268
35	-	66	83	103	127	155	187	224	265
40	-	64	81	102	125	153	185	221	261
45	-	-	79	99	123	150	182	217	258
50	-	-	-	96	120	147	178	213	254
55	-	_	-	-	116	143	174	209	249
60	-	_	-	_	-	138	169	204	243
65	-	-	-	-	-	-	163	198	237
Coefficient of pe	erformance (C.	 O.P.)							
30	-	1.58	2.05	2.61	3.28	4.09	5.07	6.27	7.78
35	-	1.30	1.70	2.17	2.73	3.41	4.22	5.22	6.44
40	-	1.07	1.40	1.79	2.26	2.83	3.50	4.32	5.31
45	-	-	1.14	1.47	1.86	2.33	2.89	3.55	4.36
50	-	-	-	1.19	1.51	1.90	2.36	2.91	3.56
55	-	_	-	-	1.21	1.53	1.91	2.36	2.88
60	-	_	-	-	-	1.22	1.53	1.89	2.32
~~		-1	1	+	<u> </u>				02

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

Cooling capacity	8 606	W	
Power input	2 962	W	
Current consumption	4.84	Α	
Mass flow	213	kg/h	
C.O.P.	2.91		

to: Evaporating temperature at dew point

Rating conditions : Superheat = 10 K , Subcooling = 0 K

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)

All performance data +/- 5%

tc: Condensing temperature at dew point



#### Danfoss scroll compressor. HRP042T4

#### Performance data at 50 Hz, ARI rating conditions

**R407C** 

Cond. temp. in	Evaporating temperature in °C (to)										
°C (tc)	-30	-25	-20	-15	-10	-5	0	5	10		
Cooling capacity	in W										
30	-	3 189	4 091	5 183	6 488	8 028	9 824	11 901	14 280		
35	_	2 998	3 859	4 899	6 139	7 603	9 313	11 290	13 559		
40		2 791	3 611	4 599	5 776	7 165	8 789	10 669	12 829		
45		2 / 9 /	3 344	4 281	5 396	6 712	8 250	10 003	12 025		
50		-	3 344	3 942	4 996	6 239	7 693	9 382	11 326		
55		-	-		4 572	5 744	7 115	8 709	10 548		
60	-	-	-	-		5 223	6 512	8 013	9 747		
65		-		-	-	-	5 882	7 290	8 921		
03				<u> </u>	<u>-</u>		3 002	7 290	0 921		
Power input in W		_	1		1						
30	-	1 876	1 864	1 857	1 850	1 838	1 816	1 779	1 722		
35	-	2 130	2 111	2 099	2 090	2 077	2 055	2 021	1 967		
40	-	2 413	2 388	2 373	2 360	2 347	2 327	2 295	2 246		
45	-	-	2 700	2 681	2 667	2 654	2 635	2 607	2 564		
50	-	-	-	3 029	3 014	3 002	2 986	2 962	2 924		
55	-	-	-	-	3 407	3 395	3 383	3 363	3 333		
60	-	-	-	-	-	3 840	3 831	3 817	3 793		
65	-	-	-	-	-	-	4 334	4 327	4 311		
Current consump		0.00	0.05	1 044	0.00	0.00	0.50	0.50	0.50		
30	-	3.09	3.05	3.11	3.23	3.38	3.52	3.59	3.58		
35	-	3.90	3.77	3.76	3.82	3.91	4.00	4.04	3.99		
40	-	4.47	4.27	4.20	4.21	4.26	4.32	4.33	4.26		
45	-	-	4.64	4.52	4.50	4.52	4.56	4.56	4.49		
50	-	-	-	4.83	4.79	4.80	4.83	4.84	4.79		
55	-	-	-	-	5.18	5.19	5.24	5.26	5.24		
60	-	-	-	-	-	5.80	5.87	5.93	5.95		
65	-	-	-	-	-	-	6.84	6.95	7.02		
Mass flow in kg/h											
30	-	66	83	104	128	156	188	225	266		
35	-	65	82	103	127	154	186	222	263		
40	-	64	81	101	125	152	184	219	260		
45	-	-	79	99	122	149	181	216	256		
50	-	-	-	96	119	146	177	212	252		
55	-	-	-	-	115	142	173	208	247		
60	-	-	-	-	-	137	168	203	242		
65	-	-	-	-	-	-	162	196	235		
Coefficient of per	formance (C.C	D.P.)									
30	-	1.70	2.19	2.79	3.51	4.37	5.41	6.69	8.29		
35	-	1.41	1.83	2.33	2.94	3.66	4.53	5.59	6.89		
40	-	1.16	1.51	1.94	2.45	3.05	3.78	4.65	5.71		
45	-	-	1.24	1.60	2.02	2.53	3.13	3.85	4.71		
50	-	-	-	1.30	1.66	2.08	2.58	3.17	3.87		
55	_	-	-	-	1.34	1.69	2.10	2.59	3.17		
60	_	-	-	-	-	1.36	1.70	2.10	2.57		
65		-	_	-	-	-	1.36	1.68	2.07		

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

Cooling capacity	9 574	W	
Power input	3 300	W	
Current consumption	5.20	Α	
Mass flow	225	kg/h	
C.O.P.	2.90		

to: Evaporating temperature at dew point

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

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)

All performance data +/- 5%

tc: Condensing temperature at dew point



#### Danfoss scroll compressor. HRP042T4

#### Performance data at 50 Hz, EN 12900 rating conditions

# **R407C**

Cond. temp. in										
°C (tc)	-30	-25	-20	-15	-10	-5	0	5	10	
Cooling capacity	in W									
30	-	2 969	3 814	4 838	6 063	7 510	9 200	11 156	13 398	
35	_	2 778	3 581	4 551	5 711	7 081	8 683	10 538	12 669	
40		2 571	3 332	4 250	5 345	6 639	8 153	9 909	11 929	
45	_	-	3 065	3 931	4 962	6 181	7 609	9 266	11 175	
50		_	-	3 592	4 561	5 705	7 046	8 606	10 405	
55		_	_	-	4 137	5 207	6 463	7 925	9 614	
60	_	_	_	_	-	4 685	5 855	7 219	8 798	
65	<u> </u>	_	_	-	-	-	5 219	6 485	7 954	
00							0210	0 400	7 354	
Power input in W	٧									
30	-	1 876	1 864	1 857	1 850	1 838	1 816	1 779	1 722	
35	-	2 130	2 111	2 099	2 090	2 077	2 055	2 021	1 967	
40	-	2 413	2 388	2 373	2 360	2 347	2 327	2 295	2 246	
45	-	-	2 700	2 681	2 667	2 654	2 635	2 607	2 564	
50	-	-	-	3 029	3 014	3 002	2 986	2 962	2 924	
55	-	-	-	-	3 407	3 395	3 383	3 363	3 333	
60	-	-	-	-	-	3 840	3 831	3 817	3 793	
65	-	-	-	-	-	-	4 334	4 327	4 311	
Current consum	ption in A									
30	-	3.09	3.05	3.11	3.23	3.38	3.52	3.59	3.58	
35	-	3.90	3.77	3.76	3.82	3.91	4.00	4.04	3.99	
40	-	4.47	4.27	4.20	4.21	4.26	4.32	4.33	4.26	
45	-	-	4.64	4.52	4.50	4.52	4.56	4.56	4.49	
50	-	-	-	4.83	4.79	4.80	4.83	4.84	4.79	
55	-	-	-	-	5.18	5.19	5.24	5.26	5.24	
60	-	-	-	-	-	5.80	5.87	5.93	5.95	
65	-	-	-	-	-	-	6.84	6.95	7.02	
Mass flow in kg/l	h	•		·		·				
30	-	66	84	105	129	157	189	226	268	
35	-	66	83	103	127	155	187	224	265	
40	-	64	81	102	125	153	185	221	261	
45	-	-	79	99	123	150	182	217	258	
50	-	-	-	96	120	147	178	213	254	
55	-	_	-	-	116	143	174	209	249	
60	-	_	-	_	-	138	169	204	243	
65	-	-	-	-	-	-	163	198	237	
Coefficient of pe	erformance (C.	 O.P.)								
30	-	1.58	2.05	2.61	3.28	4.09	5.07	6.27	7.78	
35	-	1.30	1.70	2.17	2.73	3.41	4.22	5.22	6.44	
40	-	1.07	1.40	1.79	2.26	2.83	3.50	4.32	5.31	
45	-	-	1.14	1.47	1.86	2.33	2.89	3.55	4.36	
50	-	-	-	1.19	1.51	1.90	2.36	2.91	3.56	
55	-	_	-	-	1.21	1.53	1.91	2.36	2.88	
60	-	_	-	-	-	1.22	1.53	1.89	2.32	
~~		-1	1	+	<u> </u>				02	

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

Cooling capacity	8 606	W	
Power input	2 962	W	
Current consumption	4.84	Α	
Mass flow	213	kg/h	
C.O.P.	2.91		

to: Evaporating temperature at dew point

Rating conditions : Superheat = 10 K , Subcooling = 0 K

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)

All performance data +/- 5%

tc: Condensing temperature at dew point



#### Danfoss scroll compressor. HRP042T4

#### Performance data at 50 Hz, ARI rating conditions

**R407C** 

Cond. temp. in	Evaporating temperature in °C (to)										
°C (tc)	-30	-25	-20	-15	-10	-5	0	5	10		
Cooling capacity	in W										
30	-	3 189	4 091	5 183	6 488	8 028	9 824	11 901	14 280		
35	_	2 998	3 859	4 899	6 139	7 603	9 313	11 290	13 559		
40		2 791	3 611	4 599	5 776	7 165	8 789	10 669	12 829		
45		2 7 9 1	3 344	4 281	5 396	6 712	8 250	10 003	12 025		
50		-	3 344	3 942	4 996	6 239	7 693	9 382	11 326		
55		-	-		4 572	5 744	7 115	8 709	10 548		
60	-	-	-	-		5 223	6 512	8 013	9 747		
65		-		-	-	-	5 882	7 290	8 921		
03				<u> </u>	<u>-</u>		3 002	7 290	0 921		
Power input in W		_	1		1						
30	-	1 876	1 864	1 857	1 850	1 838	1 816	1 779	1 722		
35	-	2 130	2 111	2 099	2 090	2 077	2 055	2 021	1 967		
40	-	2 413	2 388	2 373	2 360	2 347	2 327	2 295	2 246		
45	-	-	2 700	2 681	2 667	2 654	2 635	2 607	2 564		
50	-	-	-	3 029	3 014	3 002	2 986	2 962	2 924		
55	-	-	-	-	3 407	3 395	3 383	3 363	3 333		
60	-	-	-	-	-	3 840	3 831	3 817	3 793		
65	-	-	-	-	-	-	4 334	4 327	4 311		
Current consump		0.00	0.05	1 044	0.00	0.00	0.50	0.50	0.50		
30	-	3.09	3.05	3.11	3.23	3.38	3.52	3.59	3.58		
35	-	3.90	3.77	3.76	3.82	3.91	4.00	4.04	3.99		
40	-	4.47	4.27	4.20	4.21	4.26	4.32	4.33	4.26		
45	-	-	4.64	4.52	4.50	4.52	4.56	4.56	4.49		
50	-	-	-	4.83	4.79	4.80	4.83	4.84	4.79		
55	-	-	-	-	5.18	5.19	5.24	5.26	5.24		
60	-	-	-	-	-	5.80	5.87	5.93	5.95		
65	-	-	-	-	-	-	6.84	6.95	7.02		
Mass flow in kg/h											
30	-	66	83	104	128	156	188	225	266		
35	-	65	82	103	127	154	186	222	263		
40	-	64	81	101	125	152	184	219	260		
45	-	-	79	99	122	149	181	216	256		
50	-	-	-	96	119	146	177	212	252		
55	-	-	-	-	115	142	173	208	247		
60	-	-	-	-	-	137	168	203	242		
65	-	-	-	-	-	-	162	196	235		
Coefficient of per	formance (C.C	D.P.)									
30	-	1.70	2.19	2.79	3.51	4.37	5.41	6.69	8.29		
35	-	1.41	1.83	2.33	2.94	3.66	4.53	5.59	6.89		
40	-	1.16	1.51	1.94	2.45	3.05	3.78	4.65	5.71		
45	-	-	1.24	1.60	2.02	2.53	3.13	3.85	4.71		
50	-	-	-	1.30	1.66	2.08	2.58	3.17	3.87		
55	_	-	-	-	1.34	1.69	2.10	2.59	3.17		
60	_	-	-	-	-	1.36	1.70	2.10	2.57		
65		-	_	-	-	-	1.36	1.68	2.07		

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

Cooling capacity	9 574	W	
Power input	3 300	W	
Current consumption	5.20	Α	
Mass flow	225	kg/h	
C.O.P.	2.90		

to: Evaporating temperature at dew point

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

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)

All performance data +/- 5%

tc: Condensing temperature at dew point



#### Danfoss scroll compressor. HRP042T4

#### Performance data at 60 Hz, EN 12900 rating conditions

# **R407C**

Cond. temp. in Evaporating temperature in °C (to)									
°C (tc)	-30	-25	-20	-15	-10	-5	0	5	10
Cooling capacity		2.504	4.040	5.050	7.240	0.000	44.420	42.500	40.000
30	-	3 594	4 618	5 858	7 340	9 092	11 139	13 508	16 226
35	-	3 360	4 332	5 506	6 909	8 567	10 505	12 750	15 329
40	-	3 104	4 026	5 137	6 461	8 025	9 855	11 978	14 420
45	-	-	3 698	4 745	5 992	7 464	9 188	11 189	13 494
50	-	-	-	4 330	5 500	6 881	8 499	10 379	12 549
55	-	-	-	-	4 983	6 273	7 786	9 547	11 581
60	-	-	-	-	-	5 638	7 046	8 687	10 586
65	-	-	-	-	-	-	6 275	7 795	9 559
Power input in W									
30	-	2 209	2 194	2 186	2 178	2 164	2 138	2 095	2 027
35	-	2 509	2 487	2 473	2 461	2 446	2 421	2 380	2 317
40	-	2 844	2 815	2 796	2 782	2 766	2 742	2 705	2 647
45	-	-	3 185	3 162	3 146	3 130	3 108	3 075	3 024
50	-	-	-	3 575	3 558	3 543	3 524	3 495	3 451
55	_	-	_	-	4 024	4 010	3 995	3 972	3 936
60	_	-	-	-	-	4 538	4 527	4 511	4 483
65	-	-	-	-	_	-	5 126	5 117	5 099
00			I	I	1	I	0 120	0 111	0 000
Current consump	tion in A								
30	-	3.31	3.26	3.33	3.46	3.62	3.77	3.85	3.83
35	-	4.18	4.04	4.03	4.09	4.19	4.29	4.33	4.28
40	-	4.78	4.58	4.50	4.51	4.57	4.62	4.64	4.57
45	-	-	4.97	4.85	4.82	4.85	4.88	4.89	4.82
50	-	-	-	5.18	5.13	5.14	5.18	5.19	5.13
55	-	-	-	-	5.55	5.57	5.61	5.64	5.61
60	-	-	-	-	-	6.22	6.29	6.36	6.37
65	-	-	-	-	-	-	7.33	7.45	7.52
Mara - 61 1 1 10									
Mass flow in kg/h		1 00	100	107	150	100	T 200	074	205
30	-	80	102	127	156	190	229	274	325
35	-	79	100	125	154	188	226	271	320
40	-	77	98	123	152	185	223	267	316
45	-	-	96	120	148	181	219	262	311
50	-	-	-	116	145	177	215	257	306
55	-	-	-	-	140	172	209	252	300
60	-	-	-	-	-	166	203	245	293
65	-	-	-	-	-	-	196	238	285
Coefficient of per	formance (C.C	D.P.)							
30	-	1.63	2.10	2.68	3.37	4.20	5.21	6.45	8.00
35	-	1.34	1.74	2.23	2.81	3.50	4.34	5.36	6.62
40	-	1.09	1.43	1.84	2.32	2.90	3.59	4.43	5.45
45	-	-	1.16	1.50	1.90	2.38	2.96	3.64	4.46
50	-	-	-	1.21	1.55	1.94	2.41	2.97	3.64
55	-	-	-	-	1.24	1.56	1.95	2.40	2.94
60	-	-	-	-	-	1.24	1.56	1.93	2.36
65	_	-	_	_	_	-	1.22	1.52	1.87

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

Cooling capacity	10 379	W
Power input	3 495	W
Current consumption	5.19	Α
Mass flow	257	kg/h
C.O.P.	2.97	

to: Evaporating temperature at dew point

Rating conditions : Superheat = 10 K , Subcooling = 0 K

Pressure switch settings

Maximum HP switch	n setting	30	bar(g)
Minimum LP switch	setting	0.5	bar(g)
LP pump down setti	ng	1	bar(g)

#### Sound power data

Sound power level	71	dB(A)
With accoustic hood	66	dB(A)

All performance data +/- 5%

tc: Condensing temperature at dew point



#### Danfoss scroll compressor. HRP042T4

#### Performance data at 60 Hz, ARI rating conditions

# **R407C**

Cond. temp. in Evaporating temperature in °C (to)									
°C (tc)	-30	-25	-20	-15	-10	-5	0	5	10
Cooling capacity	in W								
30		3 860	4 953	6 275	7 855	9 719	11 895	14 411	17 293
35		3 626	4 669	5 927	7 428	9 199	11 267	13 660	16 406
						<u> </u>			
40	-	3 370	4 364	5 559	6 982	8 661	10 624	12 896	15 507
45			4 035	5 168	6 516	8 105	9 962	12 116	14 593
50	-	-		4 752	6 025	7 525 6 919	9 279 8 572	11 315 10 492	13 660
55			-	-	5 507				12 706
60	-	-	-	-	-	6 284	7 837	9 642	11 728
65	-	-	-	-	-	-	7 071	8 763	10 721
Power input in W									
30	-	2 209	2 194	2 186	2 178	2 164	2 138	2 095	2 027
35	-	2 509	2 487	2 473	2 461	2 446	2 421	2 380	2 317
40	-	2 844	2 815	2 796	2 782	2 766	2 742	2 705	2 647
45	-	-	3 185	3 162	3 146	3 130	3 108	3 075	3 024
50	-	-	-	3 575	3 558	3 543	3 524	3 495	3 451
55	-	-	-	-	4 024	4 010	3 995	3 972	3 936
60	-	-	-	-	-	4 538	4 527	4 511	4 483
65	-	-	-	-	-	-	5 126	5 117	5 099
30	tion in A	2 24	3.26	2 22	3.46	3.62	2 77	2.05	3.83
		3.31		3.33	1	+	3.77	3.85	
35		4.18	4.04	4.03	4.09	4.19	4.29	4.33	4.28
40	-	4.78	4.58	4.50	4.51	4.57	4.62	4.64	4.57
45	-	-	4.97	4.85	4.82	4.85	4.88	4.89	4.82
50	-	-	-	5.18	5.13	5.14	5.18	5.19	5.13
55	<u>-</u>	-	-	-	5.55	5.57	5.61	5.64	5.61
60	-	-	-	-	-	6.22	6.29	6.36	6.37
65	-	-	-	-	-	-	7.33	7.45	7.52
Mass flow in kg/h	l								
30	-	80	101	126	155	189	228	272	323
35	-	79	100	124	153	187	225	269	319
40	-	77	98	122	151	184	222	265	314
45	-	-	95	119	148	180	218	261	309
50	-	-	-	116	144	176	214	256	304
55	-	-	-	-	139	171	208	250	298
60	-	-	-	-	-	165	202	244	291
65	-	-	-	-	-	-	195	236	283
<u> </u>									
Coefficient of per	,	<del>, , , , , , , , , , , , , , , , , , , </del>	0.00	0.07	0.04	1 40	5.50	0.00	0.50
30	-	1.75	2.26	2.87	3.61	4.49	5.56	6.88	8.53
35	-	1.45	1.88	2.40	3.02	3.76	4.65	5.74	7.08
40	-	1.18	1.55	1.99	2.51	3.13	3.87	4.77	5.86
45	-	-	1.27	1.63	2.07	2.59	3.21	3.94	4.83
50	-	-	-	1.33	1.69	2.12	2.63	3.24	3.96
55	-	-	-	-	1.37	1.73	2.15	2.64	3.23
60	-	-	-	-	-	1.38	1.73	2.14	2.62
65	-	-	-	-	-	-	1.38	1.71	2.10
laminal resuferior		.2 °C, tc = 54.4 °C				Drooming and the	a attimus		
iominai periorma	ance at 10 - 7.	.2 °C, tc = 54.4 °C			г	Pressure switch		20	h = =/=\

Mass flow C.O.P.

Cooling capacity

Current consumption

Power input

to: Evaporating temperature at dew point tc: Condensing temperature at dew point

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

11 535

3 898

5.57

271

2.96

W

W

kg/h

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	00	dB(A)	
With accoustic hood	66	dB(A)	

All performance data +/- 5%



#### Danfoss scroll compressor. HRP042T4

#### Performance data at 60 Hz, EN 12900 rating conditions

# **R407C**

Cond. temp. in Evaporating temperature in °C (to)									
°C (tc)	-30	-25	-20	-15	-10	-5	0	5	10
Cooling capacity		2.504	4.040	5.050	7.240	0.000	44.420	42.500	40.000
30	-	3 594	4 618	5 858	7 340	9 092	11 139	13 508	16 226
35	-	3 360	4 332	5 506	6 909	8 567	10 505	12 750	15 329
40	-	3 104	4 026	5 137	6 461	8 025	9 855	11 978	14 420
45	-	-	3 698	4 745	5 992	7 464	9 188	11 189	13 494
50	-	-	-	4 330	5 500	6 881	8 499	10 379	12 549
55	-	-	-	-	4 983	6 273	7 786	9 547	11 581
60	-	-	-	-	-	5 638	7 046	8 687	10 586
65	-	-	-	-	-	-	6 275	7 795	9 559
Power input in W									
30	-	2 209	2 194	2 186	2 178	2 164	2 138	2 095	2 027
35	-	2 509	2 487	2 473	2 461	2 446	2 421	2 380	2 317
40	-	2 844	2 815	2 796	2 782	2 766	2 742	2 705	2 647
45	-	-	3 185	3 162	3 146	3 130	3 108	3 075	3 024
50	-	-	-	3 575	3 558	3 543	3 524	3 495	3 451
55	_	-	_	-	4 024	4 010	3 995	3 972	3 936
60	_	-	-	-	-	4 538	4 527	4 511	4 483
65	-	-	-	-	_	-	5 126	5 117	5 099
00			I	I	<u> </u>	I	0 120	0 111	0 000
Current consump	tion in A								
30	-	3.31	3.26	3.33	3.46	3.62	3.77	3.85	3.83
35	-	4.18	4.04	4.03	4.09	4.19	4.29	4.33	4.28
40	-	4.78	4.58	4.50	4.51	4.57	4.62	4.64	4.57
45	-	-	4.97	4.85	4.82	4.85	4.88	4.89	4.82
50	-	-	-	5.18	5.13	5.14	5.18	5.19	5.13
55	-	-	-	-	5.55	5.57	5.61	5.64	5.61
60	-	-	-	-	-	6.22	6.29	6.36	6.37
65	-	-	-	-	-	-	7.33	7.45	7.52
Mara - 61 1 1 10									
Mass flow in kg/h		1 00	100	107	150	100	T 200	074	205
30	-	80	102	127	156	190	229	274	325
35	-	79	100	125	154	188	226	271	320
40	-	77	98	123	152	185	223	267	316
45	-	-	96	120	148	181	219	262	311
50	-	-	-	116	145	177	215	257	306
55	-	-	-	-	140	172	209	252	300
60	-	-	-	-	-	166	203	245	293
65	-	-	-	-	-	-	196	238	285
Coefficient of per	formance (C.C	D.P.)							
30	-	1.63	2.10	2.68	3.37	4.20	5.21	6.45	8.00
35	-	1.34	1.74	2.23	2.81	3.50	4.34	5.36	6.62
40	-	1.09	1.43	1.84	2.32	2.90	3.59	4.43	5.45
45	-	-	1.16	1.50	1.90	2.38	2.96	3.64	4.46
50	-	-	-	1.21	1.55	1.94	2.41	2.97	3.64
55	-	-	-	-	1.24	1.56	1.95	2.40	2.94
60	-	-	-	-	-	1.24	1.56	1.93	2.36
65	_	-	_	_	_	-	1.22	1.52	1.87

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

Cooling capacity	10 379	W
Power input	3 495	W
Current consumption	5.19	Α
Mass flow	257	kg/h
C.O.P.	2.97	

to: Evaporating temperature at dew point

Rating conditions : Superheat = 10 K , Subcooling = 0 K

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	71	dB(A)
With accoustic hood	66	dB(A)

All performance data +/- 5%

tc: Condensing temperature at dew point



#### Danfoss scroll compressor. HRP042T4

#### Performance data at 60 Hz, ARI rating conditions

# **R407C**

Cond. temp. in Evaporating temperature in °C (to)									
°C (tc)	-30	-25	-20	-15	-10	-5	0	5	10
Cooling capacity	in W								
30	-	3 860	4 953	6 275	7 855	9 719	11 895	14 411	17 293
35		3 626	4 669	5 927	7 428	9 199	11 267	13 660	16 406
								1	
40	-	3 370	4 364	5 559	6 982	8 661	10 624	12 896	15 507
45			4 035	5 168	6 516	8 105	9 962	12 116	14 593
50 55	-	-		4 752	6 025	7 525 6 919	9 279 8 572	11 315 10 492	13 660
55			-	-	5 507				12 706
60	-	-	-	-	-	6 284	7 837	9 642	11 728
65	-	-	-		-	-	7 071	8 763	10 721
Power input in W									
30	-	2 209	2 194	2 186	2 178	2 164	2 138	2 095	2 027
35	-	2 509	2 487	2 473	2 461	2 446	2 421	2 380	2 317
40	-	2 844	2 815	2 796	2 782	2 766	2 742	2 705	2 647
45	-	-	3 185	3 162	3 146	3 130	3 108	3 075	3 024
50	-	-	-	3 575	3 558	3 543	3 524	3 495	3 451
55	-	-	-	-	4 024	4 010	3 995	3 972	3 936
60	-	-	-	-	-	4 538	4 527	4 511	4 483
65	-	-	-	-	-	-	5 126	5 117	5 099
urrent consump	otion in A	2.24	2.00	2.22	2.40	2.00	2.77	2.05	2.02
30		3.31	3.26	3.33	3.46	3.62	3.77	3.85	3.83
35	-	4.18	4.04	4.03	4.09	4.19	4.29	4.33	4.28
40	-	4.78	4.58	4.50	4.51	4.57	4.62	4.64	4.57
45	-	-	4.97	4.85	4.82	4.85	4.88	4.89	4.82
50	-	-	-	5.18	5.13	5.14	5.18	5.19	5.13
55	-	-	-	-	5.55	5.57	5.61	5.64	5.61
60	-	-	-	-	-	6.22	6.29	6.36	6.37
65	-	-	-	-	-	-	7.33	7.45	7.52
Mass flow in kg/h	l								
30	-	80	101	126	155	189	228	272	323
35	-	79	100	124	153	187	225	269	319
40	-	77	98	122	151	184	222	265	314
45	-	-	95	119	148	180	218	261	309
50	-	-	-	116	144	176	214	256	304
55	-	_	-	-	139	171	208	250	298
60	-	-	-	-	-	165	202	244	291
65	-	-	-	-	-	-	195	236	283
Coefficient of per	`	<del>, , , , , , , , , , , , , , , , , , , </del>	1 000	1 007	0.04		5.50	1 000	0.50
30	-	1.75	2.26	2.87	3.61	4.49	5.56	6.88	8.53
35	-	1.45	1.88	2.40	3.02	3.76	4.65	5.74	7.08
40	-	1.18	1.55	1.99	2.51	3.13	3.87	4.77	5.86
45	-	-	1.27	1.63	2.07	2.59	3.21	3.94	4.83
50	-	-	-	1.33	1.69	2.12	2.63	3.24	3.96
55	-	-	-	-	1.37	1.73	2.15	2.64	3.23
60	-	-	-	-	-	1.38	1.73	2.14	2.62
65	-	-	-	-	-	-	1.38	1.71	2.10
laminal confer	+ + <b>-</b>	0.00 4 54 4.00				Dunnanus	44:		
Nominal performa	ance at to = 7.	.2 °C, tc = 54.4 °C			Г	Pressure switch		20	h = =/=\

Mass flow C.O.P.

Cooling capacity

Current consumption

Power input

to: Evaporating temperature at dew point tc: Condensing temperature at dew point

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

11 535

3 898

5.57

271

2.96

W

W

kg/h

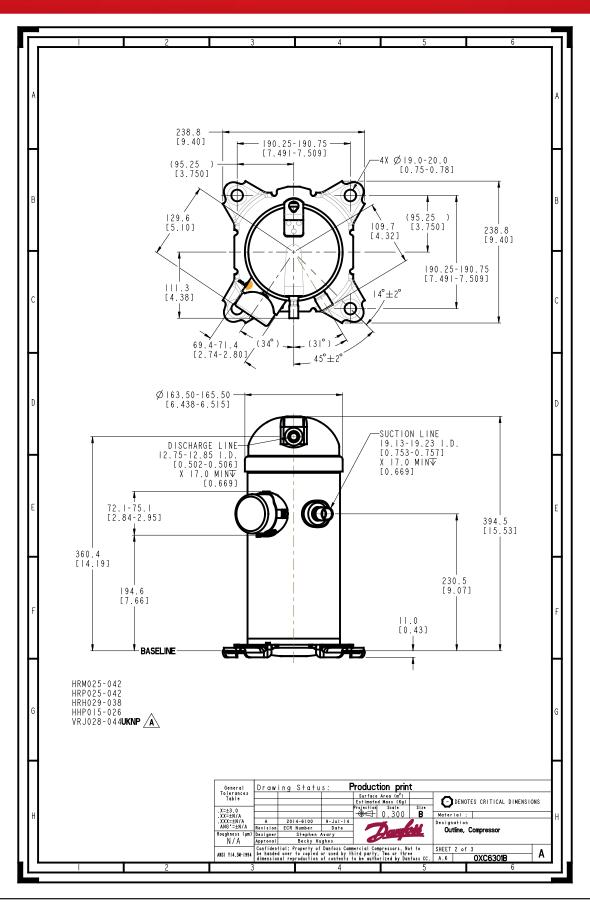
Maximum HP switch setting	30	bar(g)
Minimum LP switch setting	0.5	bar(g)
LP pump down setting	1	bar(g)

#### Sound power data

Sound power level	66	dB(A)	
With accoustic hood	66	dB(A)	

All performance data +/- 5%





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