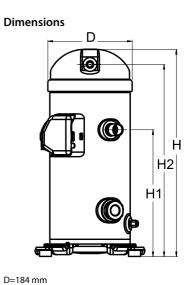
# Scroll compressor, MLZ030T5

Jantoss

#### Datasheet, technical data

## **General Characteristics**

Model number (on compressor nameplate)	MLZ030T5LC9	MLZ030T5LC9			
Code number for Singlepack*	121U8032	120U8032			
Code number for Industrial pack**	121U8031	120U8031			
Drawing number	0XR6025B-2	0XR6025B-2			
Suction and discharge connections	Brazed	Brazed			
Suction connection	7/8 " ODF	7/8 " ODF			
Discharge connection	1/2 " ODF	1/2 " ODF			
Oil sight glass	Threaded	Threaded			
Oil equalisation connection	None	None			
Oil drain connection	1/4" flare	1/4" flare			
LP gauge port	None	None			
IPR valve	32 bar	32 bar			
Swept volume	68,79 0	cm3/rev			
Displacement @ Nominal speed	12.0 m3/h	@ 2900 rpm			
Net weight	41	kg			
Oil charge	1,57 litr	e, PVE			
Maximum system test pressure Low Side / High side	- bar(g)	/ - bar(g)			
Maximum differential test pressure	-	bar			
Maximum number of starts per hour		12			
Refrigerant charge limit	5,4	4 kg			
Approved refrigerants	R404A, R507, R134a, R407A, R407C, R407F, R22				



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

**Electrical Characteristics** 

Nominal voltage	230V/1/50Hz	H2
Voltage range	207-253 V	H3
Winding resistance (main / start) at 25°C	0,42 Ω / 1,309 Ω	115
Run capacitors A + C	50 μF + - μF	
Start capacitor B	161-193 μF	
Start relay	RVA3EKL	Τe
Rated Load Amps (RLA)	20.5 A	
Maximum Continuous Current (MCC)	32 A	
Locked Rotor Amps (LRA)	127 A	
Motor protection	Internal overload protector	

#### **Recommended Installation torques**

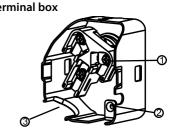
Suction Rotolock nut or valve	0 Nm	
Discharge Rotolock nut or valve	0 Nm	
Oil sight glass	52,5 Nm	
Power connections / Earth connection	3 Nm / 2 Nm	1000
		IP22

## Parts shipped with compressor

Mounting kit with grommets and sleeves Initial oil charge Installation instructions

Approvals : CE certified, -, -

\*Singlepack: Compressor in cardboard box. 121U... optimised for Danfoss pallet, 120U... optimised for US pallet \*\*Industrial pack: 121U..: 12 unboxed compressors on Danfoss pallet. 120U..: 16 unboxed compressors on US pallet



.

1:

3:

Screw connectors 10-32 UNF x 9.5

2: Earth connection

Power cable passage



## Datasheet, accessories and spare parts

Scroll compressor, MLZ030T5

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	Solder sleeve adapter set
Rotolock valve, V06 (1" Rotolock, 1/2" ODF)	8168031	
Gasket, 1"	8156130	
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.	1: Rotolock adapter (Suc & Dis)
PVE lubricant, 320HV (FVC68D), 1 litre can	120Z5034	2: Gasket (Suc & Dis)
		3: Solder sleeve (Suc & Dis)
Crankcase heaters	Code no.	4: Rotolock nut (Suc & Dis)
Belt type crankcase heater, 70 W, 230 V, UL	120Z5011	
Belt type crankcase heater, 65 W, 230 V, CE mark, UL	120Z0059	
Belt type crankcase heater, 70 W, 575 V, UL	120Z5013	
Miscellaneous accessories	Code no.	
Acoustic hood	120Z5044	
Discharge thermostat kit	7750009	
Spare parts	Code no.	
Mounting kit for 1 scroll compressor including 4 grommets, 4 sleeves, 4 bolts, 4 washers	120Z5005	

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## Datasheet, performance data

# Scroll compressor. MLZ030T5

Cond. temp. in				Evapora	ating temperatu	re in °C (to)			
°C (tc)	-15	-10	-5	0	5	10	15		
ooling capacity		E 407	C 474	7.004	0.000				
22	4 094	5 167	6 471	7 964	9 608	-	-	-	-
30	3 860	4 815	6 028	7 457	9 064	10 807	-	-	-
40	3 576	4 350	5 415	6 731	8 258	9 955	11 782	-	-
50	-	3 883	4 764	5 929	7 339	8 953	10 730	-	-
60	-	-	4 101	5 079	6 335	7 828	9 518	-	-
70	-	-	-	4 209	5 273	6 608	8 175	-	-
73	-	-	-	3 948	4 948	6 228	7 750	-	-
ower input in W	1								
22	1 449	1 458	1 499	1 560	1 631	-	-	-	-
30	1 690	1 683	1 708	1 754	1 811	1 866	_	_	-
40	2 035	2 018	2 033	2 070	2 118	2 165	2 202	-	-
50	-	2 412	2 428	2 467	2 517	2 568	2 608	-	-
60	-	-	2 895	2 946	3 010	3 075	3 129	-	
70	-	-	-	3 509	3 597	3 686	3 767	-	_
73	-	_	-	3 694	3 791	3 890	3 980	-	-
10				0001	0701	0 000	0 000		
urrent consum	ption in A	_	-						
22	7.75	7.80	8.01	8.34	8.72	-	-	-	-
30	9.04	9.00	9.13	9.38	9.68	9.98	-	-	-
40	10.88	10.79	10.87	11.07	11.33	11.58	11.77	-	-
50	-	12.90	12.98	13.19	13.46	13.73	13.95	-	-
60	-	-	15.48	15.76	16.10	16.44	16.74	-	-
70	-	-	-	18.76	19.23	19.71	20.14	-	-
73	-	-	-	19.75	20.27	20.80	21.29	-	-
lass flow in kg/l				1		1			
22	95	112	134	161	191	-	-	-	-
30	94	111	134	162	193	227	-	-	-
40	93	109	132	161	193	228	265	-	-
50	-	106	129	158	191	227	266	-	-
60	-	-	125	154	187	225	265	-	-
70	-	-	-	148	183	221	263	-	-
73	-	-	-	147	181	220	262	-	-
oefficient of pe	rformance (C.(	ופו							
22	2.83	3.54	4.32	5.11	5.89	-	_	_	-
30	2.28	2.86	3.53	4.25	5.01	5.79	-	-	-
40	1.76	2.16	2.66	3.25	3.90	4.60	5.35	-	-
50	-	1.61	1.96	2.40	2.92	3.49	4.11	-	-
60	-	-	1.42	1.72	2.10	2.55	3.04	-	-
70	-	-	-	1.20	1.47	1.79	2.17	-	-
73	-	-	-	1.07	1.31	1.60	1.95	-	-
•		•	•		1				
ominal perform	ance at to = -1					Pressure switch	-		
ooling capacity		4 115	W			Maximum HP swite	•	23.6	bar(g)
ower input Current consumpt	tion	2 207 11.80	W A			Minimum LP switc LP pump down se	•	0.45 0.85	bar(g) bar(g)
lass flow		108	A kg/h				ung	0.00	bar(y)
C.O.P.		1.86	Ng/11			Sound power dat	а		
				1		Sound power level		69	dB(A)
: Evaporating te	mperature at de	ew point				With accoustic hoo		61	dB(A)
: Condensing te	mperature at de	w point							

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### Datasheet, performance data

# Scroll compressor. MLZ030T5

# Performance data at 50 Hz, EN 12900 rating conditions, Suction temp. = 20 °C

R134a

Cond. temp. in	Evaporating temperature in °C (to)								
°C (tc)	-15	-10	-5	0	5	10	15		
Cooling capacity	/ in W								
	·					1	1		
22	4 160	5 228	6 521	7 999	9 624	-	-	-	-
22 30	4 160	5 228 4 904	6 521 6 105	7 999 7 515	9 624 9 094	- 10 807	-	-	-

40		-	-	5 526	6818	8 307	9 955	11/2/	-	-
50	)	-	-	4 908	6 044	7 406	8 953	10 645	-	-
60	)	-	-	-	5 221	6 420	7 828	-	-	-
70	)	-	-	-	-	5 375	6 608	-	-	-
73		-	-	-	-	5 054	6 228	-	-	-

## Power input in W

22	1 449	1 458	1 499	1 560	1 631	-	-	-	-
30	-	1 683	1 708	1 754	1 811	1 866	-	-	-
40	-	-	2 033	2 070	2 118	2 165	2 202	-	-
50	-	-	2 428	2 467	2 517	2 568	2 608	-	-
60	-	-	-	2 946	3 010	3 075	-	-	-
70	-	-	-	-	3 597	3 686	-	-	-
73	-	-	-	-	3 791	3 890	-	-	-

#### Current consumption in A

22	7.75	7.80	8.01	8.34	8.72	-	-	-	-
30	-	9.00	9.13	9.38	9.68	9.98	-	-	-
40	-	-	10.87	11.07	11.33	11.58	11.77	-	-
50	-	-	12.98	13.19	13.46	13.73	13.95	-	-
60	-	-	-	15.76	16.10	16.44	-	-	-
70	-	-	-	-	19.23	19.71	-	-	-
73	-	-	-	-	20.27	20.80	-	-	-

#### Mass flow in kg/h

22	85	102	125	154	187	-	-	-	-
30	-	102	125	154	188	227	-	-	-
40	-	-	124	153	188	228	272	-	-
50	-	-	121	151	186	227	273	-	-
60	-	-	-	147	183	225	-	-	-
70	-	-	-	-	179	221	-	-	-
73	-	-	-	-	177	220	-	-	-

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

22	2.87	3.59	4.35	5.13	5.90	-	-	-	-
30	-	2.91	3.57	4.28	5.02	5.79	-	-	-
40	-	-	2.72	3.29	3.92	4.60	5.33	-	-
50	-	-	2.02	2.45	2.94	3.49	4.08	-	-
60	-	-	-	1.77	2.13	2.55	-	-	-
70	-	-	-	-	1.49	1.79	-	-	-
73	-	-	-	-	1.33	1.60	-	-	-

#### Nominal performance at to = -10 °C, tc = 45 °C

Cooling capacity	-	W
Power input	-	W
Current consumption	-	Α
Mass flow	-	kg/h
C.O.P.	-	

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

Rating conditions : Suction gas temp. = 20  $^\circ\text{C}$  , Subcooling = 0 K

Pressure switch settings		
Maximum HP switch setting	23.6	bar(g)
Minimum LP switch setting	0.45	bar(g)
LP pump down setting	0.85	bar(g)

Sound power data

oouna ponor auta		
Sound power level	69	dB(A)
With accoustic hood	61	dB(A)

All performance data +/- 5%

Danfoss

**R404A** 

### Datasheet, performance data

# Scroll compressor. MLZ030T5

# Performance data at 50 Hz, EN 12900 rating conditions, Suction temp. = 20 °C

Cond. temp. in Evaporating temperature in °C (to)									
°C (tc)	-30	-25	-20	-15	-10	-5	0	5	10

### Cooling capacity in W

10	4 954	6 073	7 423	9 027	10 909	-	-	-	-
20	4 405	5 460	6 716	8 196	9 923	11 921	14 212	-	-
30	3 839	4 814	5 960	7 299	8 854	10 650	12 709	15 054	17 708
40	-	4 131	5 149	6 330	7 697	9 274	11 083	13 148	15 492
50	-	-	4 277	5 284	6 446	7 787	9 330	11 098	13 114
60	-	-	-	-	5 095	6 183	7 443	8 898	10 570

#### Power input in W

10	1 503	1 530	1 554	1 574	1 593	-	-	-	-
20	1 872	1 903	1 929	1 952	1 971	1 989	2 006	-	-
30	2 355	2 385	2 409	2 429	2 445	2 459	2 471	2 482	2 493
40	-	3 019	3 037	3 049	3 057	3 062	3 064	3 065	3 065
50	-	-	3 856	3 856	3 852	3 843	3 831	3 817	3 801
60	-	-	-	-	4 872	4 845	4 814	4 780	4 744

#### Current consumption in A

	•								
10	11.52	11.49	11.49	11.51	11.52	-	-	-	-
20	12.25	12.28	12.36	12.45	12.54	12.61	12.62	-	-
30	13.46	13.49	13.58	13.70	13.82	13.92	13.98	13.97	13.87
40	-	15.44	15.49	15.57	15.67	15.75	15.80	15.79	15.70
50	-	-	18.42	18.41	18.42	18.44	18.42	18.36	18.22
60	-	-	-	-	22.42	22.30	22.17	21.99	21.76

#### Mass flow in kg/h

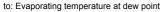
10	99	123	152	185	225	-	-	-	-
20	96	121	149	183	223	270	326	-	-
30	93	118	146	180	220	267	323	389	465
40	-	113	141	175	215	262	318	384	461
50	-	-	135	169	209	256	312	378	455
60	-	-	-	-	201	248	304	370	446

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

10	3.30	3.97	4.78	5.73	6.85	-	-	-	-
20	2.35	2.87	3.48	4.20	5.03	5.99	7.08	-	-
30	1.63	2.02	2.47	3.01	3.62	4.33	5.14	6.07	7.10
40	-	1.37	1.70	2.08	2.52	3.03	3.62	4.29	5.05
50	-	-	1.11	1.37	1.67	2.03	2.44	2.91	3.45
60	-	-	-	-	1.05	1.28	1.55	1.86	2.23

#### Nominal performance at to = -10 °C, tc = 45 °C

Cooling capacity	7 083	W	
Power input	3 429	W	
Current consumption	16.91	А	
Mass flow	212	kg/h	
C.O.P.	2.07		



tc: Condensing temperature at dew point

Rating conditions : Suction gas temp. = 20  $^\circ\text{C}$  , Subcooling = 0 K



#### Pressure switch settings

Maximum HP switch setting	29.7	bar(g)
Minimum LP switch setting	1.4	bar(g)
LP pump down setting	2	bar(g)

Sound power data							
Sound power level	69	dB(A)					
With accoustic hood	61	dB(A)					

All performance data +/- 5%

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### Datasheet, performance data

# Scroll compressor. MLZ030T5

## Performance data at 50 Hz, EN 12900 rating conditions, Superheat = 10 K

R40	<b>4A</b>
-----	-----------

Cond. temp. in		Evaporating temperature in °C (to)							
°C (tc)	-30	-25	-20	-15	-10	-5	0	5	10

#### Cooling capacity in W

10	4 761	5 877	7 233	8 853	10 763	-	-	-	-
20	4 142	5 185	6 439	7 930	9 684	11 726	14 077	-	-
30	3 511	4 463	5 597	6 940	8 521	10 365	12 498	14 940	17 708
40	2 865	3 706	4 702	5 881	7 271	8 899	10 796	12 985	15 492
50	-	-	3 752	4 748	5 928	7 323	8 964	10 885	13 114
60	-	-	-	-	4 484	5 626	6 994	8 628	10 570

#### Power input in W

10	1 503	1 530	1 554	1 574	1 593	-	-	-	-
20	1 872	1 903	1 929	1 952	1 971	1 989	2 006	-	-
30	2 355	2 385	2 409	2 429	2 445	2 459	2 471	2 482	2 493
40	2 996	3 019	3 037	3 049	3 057	3 062	3 064	3 065	3 065
50	-	-	3 856	3 856	3 852	3 843	3 831	3 817	3 801
60	-	-	-	-	4 872	4 845	4 814	4 780	4 744

#### Current consumption in A

10	11.52	11.49	11.49	11.51	11.52	-	-	-	-
20	12.25	12.28	12.36	12.45	12.54	12.61	12.62	-	-
30	13.46	13.49	13.58	13.70	13.82	13.92	13.98	13.97	13.87
40	15.46	15.44	15.49	15.57	15.67	15.75	15.80	15.79	15.70
50	-	-	18.42	18.41	18.42	18.44	18.42	18.36	18.22
60	-	-	-	-	22.42	22.30	22.17	21.99	21.76

## Mass flow in kg/h

10	118	144	174	208	248	-	-	-	-
20	115	141	172	206	246	292	344	-	-
30	111	138	168	202	242	288	341	400	465
40	106	132	162	197	237	283	336	396	461
50	-	-	155	190	230	277	330	389	455
60	-	-	-	-	221	268	321	380	446

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

10	3.17	3.84	4.66	5.62	6.76	-	-	-	-
20	2.21	2.72	3.34	4.06	4.91	5.89	7.02	-	-
30	1.49	1.87	2.32	2.86	3.49	4.22	5.06	6.02	7.10
40	0.96	1.23	1.55	1.93	2.38	2.91	3.52	4.24	5.05
50	-	-	0.97	1.23	1.54	1.91	2.34	2.85	3.45
60	-	-	-	-	0.92	1.16	1.45	1.81	2.23

## Nominal performance at to = -10 °C, tc = 45 °C

Cooling capacity	6 611	W	
Power input	3 429	W	
Current consumption	16.91	А	
Mass flow	234	kg/h	
C.O.P.	1.93		

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

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

Pressure switch settings		
Maximum HP switch setting	29.7	bar(g)
Minimum LP switch setting	1.4	bar(g)
LP pump down setting	2	bar(g)

# Sound power data

Sound power level	69	dB(A)
With accoustic hood	61	dB(A)

All performance data +/- 5%



