ENGINEERING
TOMORROW

Datasheets

Danfoss Reciprocating compressors
MT / MTZ / NTZ

FRCC.UD.151029.124401

www.danfoss.com/odsg

General Characteristics

Model number (on compressor nameplate)		NTZ068A4LR1A
Code number for Singlepack*		120F0002
Code number for Industrial pack**		120F0009
Drawing number		8501026f
Suction and discharge connections		Rotolock
Suction connection		1-1/4 " Rotolock
Discharge connection		1 " Rotolock
Suction connection with supplied sleeve		5/8 " ODF
Discharge connection with supplied sleeve		1/2 " ODF
Oil sight glass		Threaded
Oil equalisation connection		3/8" flare SAE
Oil drain connection		None
LP gauge port		Schrader
IPR valve		30 bar / 8 bar
Cylinders	1	
Swept volume	68 cm3/rev	
Displacement @ Nominal speed	11.8 m3/h @ 2900 rpm - 14.3 m3/h @ 3500 rpm	
Net weight	23 kg	
Oil charge	0,95 litre, POE - 160Z	
Maximum system test pressure Low Side / High side	25 bar(g) / 30 bar(g)	
Maximum differential test pressure	30 bar	
Maximum number of starts per hour	12	
Refrigerant charge limit	2,5 kg	
Approved refrigerants	R404A, R507A	

Electrical Characteristics

Nominal voltage	380-400V/3/50Hz - 460V/3/60Hz
Voltage range	340-440 V @ 50Hz - 414-506 V @ 60Hz
Winding resistance (between phases) +/- 7% at 25ºC	7.11 Ω
Maximum Continuous Current (MCC)	8.4 A
Locked Rotor Amps (LRA)	25 A
Motor protection	Internal overload protector

Recommended Installation torques

Oil sight glass	50 Nm
Power connections / Earth connection	Nm / 2 Nm
Mounting bolts	15 Nm

Parts shipped with compressor

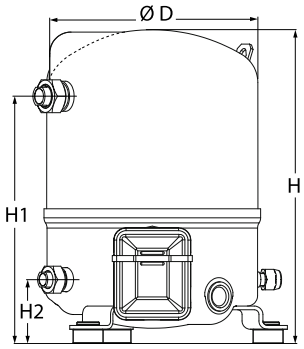
Mounting kit with grommets, bolts, nuts, sleeves and washers
Suction & Discharge solder sleeves, rotolock nuts and gaskets (shipped with rotolock version only)
Initial oil charge
Installation instructions

Approvals : CE certified, UL certified (file SA6873), -

*Singlepack: Compressor in cardboard box

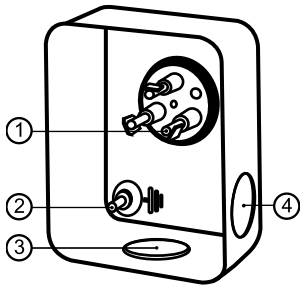
**Industrial pack: 12 Unboxed compressors on pallet (order per multiples of 12)

Dimensions



D=224 mm
H=333 mm
H1=263 mm
H2=68 mm
H3=- mm

Terminal box



IP55 (with cable gland)

1: Spade connectors 1/4"
2: Earth M4-12
3: Knock-out Ø 21 mm (0.83")
4: Hole Ø 21 mm (0.83")

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Rotolock accessories, suction side	Code no.
Solder sleeve, P09 (1-1/4" Rotolock, 5/8" ODF)	8153011
Angle adapter, C09 (1-1/4" Rotolock, 5/8" ODF)	8168009
Rotolock valve, V09 (1-1/4" Rotolock, 5/8" ODF)	8168033
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

Rotolock accessories, sets	Code no.
Angle adapter set, C09 (1-1/4"~5/8"), C06 (1"~1/2")	7703012
Valve set, V09 (1-1/4"~5/8"), V06 (1"~1/2")	7703005
Gasket set, 1", 1-1/4", 1-3/4", OSG gaskets black & white	8156009

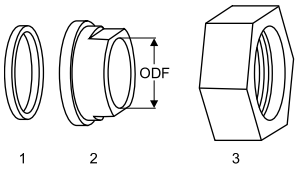
Oil / lubricants	Code no.
POE lubricant, 160PZ, 1 litre can	7754019
POE lubricant, 160PZ, 2.5 litre can	120Z0573

Crankcase heaters	Code no.
PTC heater 27W,CE mark, UL	120Z0459
Belt type crankcase heater, 54 W, 230 V, CE mark, UL	7773106
Belt type crankcase heater, 54 W, 400 V, UL	7773013

Miscellaneous accessories	Code no.
Acoustic hood for 1 cylinder compressor	120Z0471
Oil equalisation nut	8153127

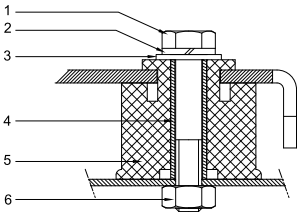
Spare parts	Code no.
Mounting kit for 1 and 2 cylinder compressor, including 3 grommets, 3 bolts	8156001
Oil sight glass with gaskets (black & white)	8156019
Gasket for oil sight glass (black chloroprene)	8156145
Service kit for terminal box 80 x 96 mm, including 1 cover, 1 clamp	8156134

Gaskets, sleeves and nuts



1: Gasket
2: Solder sleeve
3: Rotolock nut

Mounting kit



1: Bolt (3x)
2: Lock washer (3x)
3: Flat washer (3x)
4: Sleeve (3x)
5: Grommet (3x)
6: Nut (3x)

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

R404A

Cond. temp. in °C (tc)	Evaporating temperature in °C (to)								
	-45	-40	-35	-30	-25	-20	-15	-10	
Cooling capacity in W									
30	-	1 604	2 228	2 976	3 859	4 891	6 083	7 447	-
35	-	-	1 979	2 667	3 479	4 427	5 524	6 782	-
40	-	-	1 750	2 379	3 121	3 988	4 992	6 146	-
45	-	-	-	2 111	2 785	3 572	4 485	5 536	-
50	-	-	-	-	2 468	3 177	4 001	4 951	-
55	-	-	-	-	-	2 801	3 537	4 388	-
60	-	-	-	-	-	2 440	3 091	3 844	-
Power input in W									
30	-	1 243	1 448	1 655	1 866	2 085	2 314	2 554	-
35	-	-	1 484	1 710	1 942	2 183	2 433	2 697	-
40	-	-	1 516	1 763	2 017	2 280	2 555	2 843	-
45	-	-	-	1 812	2 090	2 378	2 678	2 993	-
50	-	-	-	-	2 161	2 475	2 802	3 145	-
55	-	-	-	-	-	2 572	2 928	3 301	-
60	-	-	-	-	-	2 668	3 055	3 459	-
Current consumption in A									
30	-	3.13	3.36	3.58	3.81	4.07	4.37	4.73	-
35	-	-	3.40	3.66	3.93	4.21	4.54	4.91	-
40	-	-	3.42	3.73	4.04	4.37	4.72	5.13	-
45	-	-	-	3.78	4.14	4.52	4.92	5.37	-
50	-	-	-	-	4.22	4.66	5.12	5.62	-
55	-	-	-	-	-	4.79	5.32	5.88	-
60	-	-	-	-	-	4.89	5.50	6.13	-
Mass flow in kg/h									
30	-	39	54	72	94	120	150	186	-
35	-	-	50	68	89	115	144	179	-
40	-	-	47	65	85	110	138	172	-
45	-	-	-	61	81	105	133	166	-
50	-	-	-	-	78	101	128	160	-
55	-	-	-	-	-	97	124	155	-
60	-	-	-	-	-	94	120	150	-
Coefficient of performance (C.O.P.)									
30	-	1.29	1.54	1.80	2.07	2.35	2.63	2.92	-
35	-	-	1.33	1.56	1.79	2.03	2.27	2.51	-
40	-	-	1.15	1.35	1.55	1.75	1.95	2.16	-
45	-	-	-	1.16	1.33	1.50	1.67	1.85	-
50	-	-	-	-	1.14	1.28	1.43	1.57	-
55	-	-	-	-	-	1.09	1.21	1.33	-
60	-	-	-	-	-	0.91	1.01	1.11	-

Nominal performance at to = -35 °C, tc = 40 °C

Cooling capacity	1 750	W
Power input	1 516	W
Current consumption	3.42	A
Mass flow	47	kg/h
C.O.P.	1.15	

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Pressure switch settings

Maximum HP switch setting	27.7	bar(g)
Minimum LP switch setting	0.1	bar(g)
LP pump down setting	0.1	bar(g)

Sound power data

Sound power level	64	dB(A)
With accoustic hood	54	dB(A)

to: Evaporating temperature at dew point
tc: Condensing temperature at dew point
Rating conditions : Suction gas temp. = 20 °C , Subcooling = 0 K

All performance data +/- 5%

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

R404A

Cond. temp. in °C (tc)	Evaporating temperature in °C (to)								
	-45	-40	-35	-30	-25	-20	-15	-10	
Cooling capacity in W									
30	956	1 427	2 010	2 722	3 577	4 593	5 784	7 167	-
35	793	1 221	1 751	2 398	3 177	4 104	5 197	6 471	-
40	647	1 035	1 513	2 096	2 800	3 642	4 638	5 805	-
45	517	865	1 293	1 815	2 446	3 204	4 105	5 167	-
50	-	711	1 089	1 551	2 112	2 787	3 595	4 553	-
55	-	-	899	1 302	1 793	2 388	3 104	3 960	-
60	-	-	719	1 064	1 487	2 002	2 628	3 383	-
Power input in W									
30	1 039	1 243	1 448	1 655	1 866	2 085	2 314	2 554	-
35	1 039	1 261	1 484	1 710	1 942	2 183	2 433	2 697	-
40	1 032	1 273	1 516	1 763	2 017	2 280	2 555	2 843	-
45	1 017	1 278	1 543	1 812	2 090	2 378	2 678	2 993	-
50	-	1 276	1 564	1 858	2 161	2 475	2 802	3 145	-
55	-	-	1 580	1 900	2 230	2 572	2 928	3 301	-
60	-	-	1 591	1 939	2 297	2 668	3 055	3 459	-
Current consumption in A									
30	2.89	3.13	3.36	3.58	3.81	4.07	4.37	4.73	-
35	2.84	3.13	3.40	3.66	3.93	4.21	4.54	4.91	-
40	2.75	3.10	3.42	3.73	4.04	4.37	4.72	5.13	-
45	2.61	3.02	3.41	3.78	4.14	4.52	4.92	5.37	-
50	-	2.90	3.36	3.79	4.22	4.66	5.12	5.62	-
55	-	-	3.26	3.78	4.28	4.79	5.32	5.88	-
60	-	-	3.11	3.71	4.30	4.89	5.50	6.13	-
Mass flow in kg/h									
30	33	48	65	86	110	137	169	205	-
35	29	44	61	81	105	131	162	197	-
40	26	41	57	77	100	126	156	190	-
45	23	37	54	73	95	121	150	183	-
50	-	34	51	69	91	116	144	177	-
55	-	-	48	66	87	112	139	171	-
60	-	-	45	63	84	108	135	166	-
Coefficient of performance (C.O.P.)									
30	0.92	1.15	1.39	1.65	1.92	2.20	2.50	2.81	-
35	0.76	0.97	1.18	1.40	1.64	1.88	2.14	2.40	-
40	0.63	0.81	1.00	1.19	1.39	1.60	1.82	2.04	-
45	0.51	0.68	0.84	1.00	1.17	1.35	1.53	1.73	-
50	-	0.56	0.70	0.83	0.98	1.13	1.28	1.45	-
55	-	-	0.57	0.69	0.80	0.93	1.06	1.20	-
60	-	-	0.45	0.55	0.65	0.75	0.86	0.98	-

Nominal performance at to = -35 °C, tc = 40 °C

Cooling capacity	1 513	W
Power input	1 516	W
Current consumption	3.42	A
Mass flow	57	kg/h
C.O.P.	1.00	

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	27.7	bar(g)
Minimum LP switch setting	0.1	bar(g)
LP pump down setting	0.1	bar(g)

Sound power data

Sound power level	64	dB(A)
With accoustic hood	54	dB(A)

All performance data +/- 5%

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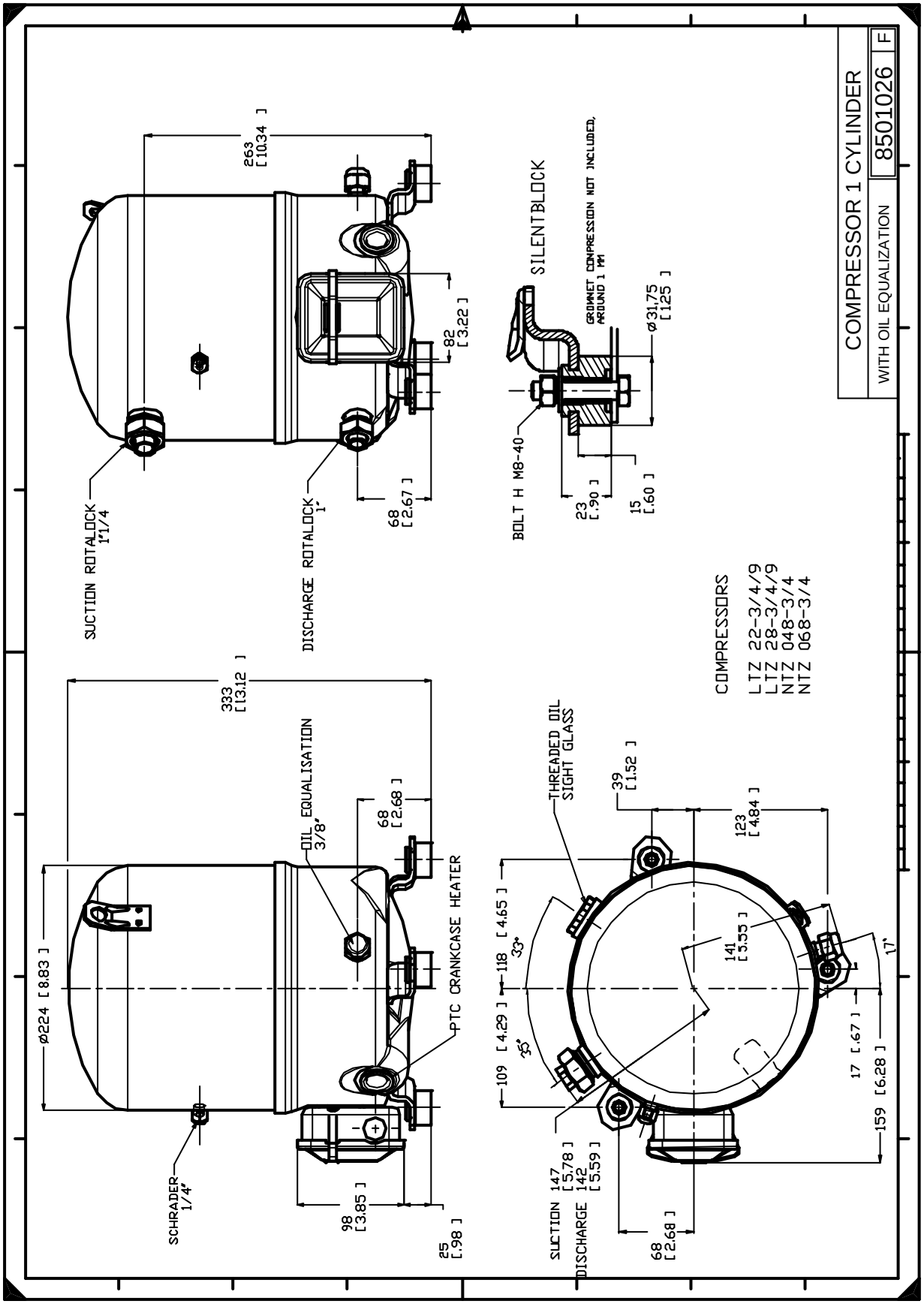

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