

Datasheets

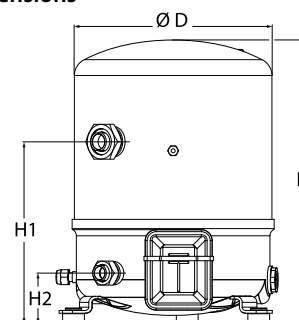
Danfoss Reciprocating compressors **MT / MTZ / NTZ**



General Characteristics

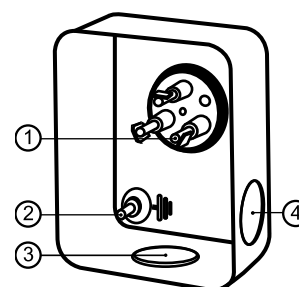
Model number (on compressor nameplate)		NTZ136A4LR1A
Code number for Singlepack*		120F0005
Code number for Industrial pack**		120F0012
Drawing number		8502012g
Suction and discharge connections		Rotolock
Suction connection		1-3/4 " Rotolock
Discharge connection		1-1/4 " Rotolock
Suction connection with supplied sleeve		1-1/8 " ODF
Discharge connection with supplied sleeve		3/4 " 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		2
Swept volume		136 cm3/rev
Displacement @ Nominal speed		23.7 m3/h @ 2900 rpm - 28.6 m3/h @ 3500 rpm
Net weight		35 kg
Oil charge		1,8 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		5 kg
Approved refrigerants		R404A, R507A

Dimensions



D=288 mm
H=413 mm
H1=265 mm
H2=74 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")

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 25°C	3.8 Ω
Maximum Continuous Current (MCC)	14.3 A
Locked Rotor Amps (LRA)	51 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), CCC certified

*Singlepack: Compressor in cardboard box

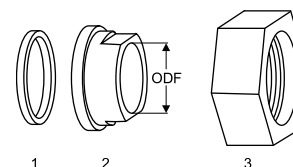
**Industrial pack: 6 Unboxed compressors on pallet (order per multiples of 6)

Rotolock accessories, suction side

Code no.

Solder sleeve, P02 (1-3/4" Rotolock, 1-1/8" ODF)	8153004
Angle adapter, C02 (1-3/4" Rotolock, 1-1/8" ODF)	8168005
Rotolock valve, V02 (1-3/4" Rotolock, 1-1/8" ODF)	8168028
Gasket, 1-3/4"	8156132

Gaskets, sleeves and nuts



- 1: Gasket
- 2: Solder sleeve
- 3: Rotolock nut

Rotolock accessories, discharge 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, sets

Code no.

Angle adapter set, C02 (1-3/4"~1-1/8"), C04 (1-1/4"~3/4")	7703014
Valve set, V02 (1-3/4"~1-1/8"), V04 (1-1/4"~3/4")	7703009
Gasket set, 1", 1-1/4", 1-3/4", OSG gaskets black & white	8156009

Oil / lubricants

Code no.

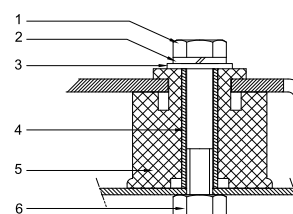
POE lubricant, 160PZ, 1 litre can	7754019
POE lubricant, 160PZ, 2.5 litre can	120Z0573

Crankcase heaters

Code no.

PTC heater 27W, CE mark, UL	120Z0459
Belt type crankcase heater, 65 W, 230 V, CE mark, UL	7773107
Belt type crankcase heater, 65 W, 400 V, CE mark, UL	7773117
Belt type crankcase heater, 65 W, 460 V, CE mark, UL	120Z0466

Mounting kit



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

Miscellaneous accessories

Code no.

Acoustic hood for 2 cylinder compressor	120Z0472
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

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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	-	2 943	4 059	5 425	7 068	9 019	11 303	13 951	-
35	-	-	3 644	4 918	6 452	8 272	10 406	12 884	-
40	-	-	3 225	4 407	5 827	7 514	9 496	11 801	-
45	-	-	-	3 892	5 197	6 748	8 575	10 706	-
50	-	-	-	-	4 564	5 977	7 646	9 599	-
55	-	-	-	-	-	5 204	6 713	8 486	-
60	-	-	-	-	-	4 430	5 776	7 367	-

Power input in W

30	-	2 400	2 893	3 358	3 787	4 173	4 509	4 788	-
35	-	-	2 911	3 429	3 924	4 390	4 820	5 205	-
40	-	-	2 896	3 461	4 017	4 557	5 073	5 560	-
45	-	-	-	3 468	4 079	4 687	5 285	5 866	-
50	-	-	-	-	4 126	4 796	5 470	6 140	-
55	-	-	-	-	-	4 899	5 642	6 395	-
60	-	-	-	-	-	5 010	5 817	6 647	-

Current consumption in A

30	-	5.59	6.07	6.59	7.13	7.68	8.24	8.80	-
35	-	-	6.11	6.70	7.32	7.96	8.61	9.25	-
40	-	-	6.10	6.77	7.47	8.20	8.94	9.68	-
45	-	-	-	6.79	7.58	8.40	9.23	10.08	-
50	-	-	-	-	7.65	8.56	9.50	10.45	-
55	-	-	-	-	-	8.69	9.73	10.79	-
60	-	-	-	-	-	8.78	9.94	11.11	-

Mass flow in kg/h

30	-	71	98	131	172	221	279	348	-
35	-	-	93	126	166	214	272	339	-
40	-	-	87	120	159	207	263	331	-
45	-	-	-	113	152	199	255	321	-
50	-	-	-	-	144	190	245	311	-
55	-	-	-	-	-	181	235	300	-
60	-	-	-	-	-	170	224	288	-

Coefficient of performance (C.O.P.)

30	-	1.23	1.40	1.62	1.87	2.16	2.51	2.91	-
35	-	-	1.25	1.43	1.64	1.88	2.16	2.48	-
40	-	-	1.11	1.27	1.45	1.65	1.87	2.12	-
45	-	-	-	1.12	1.27	1.44	1.62	1.82	-
50	-	-	-	-	1.11	1.25	1.40	1.56	-
55	-	-	-	-	-	1.06	1.19	1.33	-
60	-	-	-	-	-	0.88	0.99	1.11	-

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

Cooling capacity	3 225	W
Power input	2 896	W
Current consumption	6.10	A
Mass flow	87	kg/h
C.O.P.	1.11	



to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

Rating conditions : Suction gas temp. = 20 °C , 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	77.3	dB(A)
With acoustic hood	71.3	dB(A)

All performance data +/- 5%

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	1 796	2 617	3 661	4 961	6 552	8 469	10 749	13 426	-
35	1 502	2 261	3 223	4 421	5 891	7 669	9 790	12 293	-
40	-	1 911	2 788	3 882	5 228	6 862	8 823	11 147	-
45	-	1 570	2 359	3 346	4 565	6 053	7 848	9 992	-
50	-	1 243	1 941	2 817	3 905	5 243	6 871	8 828	-
55	-	-	1 536	2 298	3 252	4 437	5 891	7 659	-
60	-	-	-	1 793	2 609	3 635	4 911	6 483	-

Power input in W

30	1 885	2 400	2 893	3 358	3 787	4 173	4 509	4 788	-
35	1 837	2 378	2 911	3 429	3 924	4 390	4 820	5 205	-
40	-	2 329	2 896	3 461	4 017	4 557	5 073	5 560	-
45	-	2 268	2 862	3 468	4 079	4 687	5 285	5 866	-
50	-	2 209	2 825	3 467	4 126	4 796	5 470	6 140	-
55	-	-	2 800	3 471	4 173	4 899	5 642	6 395	-
60	-	-	-	3 495	4 234	5 010	5 817	6 647	-

Current consumption in A

30	5.15	5.59	6.07	6.59	7.13	7.68	8.24	8.80	-
35	5.05	5.56	6.11	6.70	7.32	7.96	8.61	9.25	-
40	-	5.47	6.10	6.77	7.47	8.20	8.94	9.68	-
45	-	5.32	6.03	6.79	7.58	8.40	9.23	10.08	-
50	-	5.11	5.91	6.76	7.65	8.56	9.50	10.45	-
55	-	-	5.74	6.68	7.67	8.69	9.73	10.79	-
60	-	-	-	6.56	7.65	8.78	9.94	11.11	-

Mass flow in kg/h

30	62	88	119	156	201	253	314	384	-
35	56	82	113	150	194	246	306	375	-
40	-	75	106	143	186	237	297	365	-
45	-	68	98	134	177	228	287	354	-
50	-	60	90	126	168	218	276	343	-
55	-	-	81	116	158	207	265	331	-
60	-	-	-	106	147	196	252	317	-

Coefficient of performance (C.O.P.)

30	0.95	1.09	1.27	1.48	1.73	2.03	2.38	2.80	-
35	0.82	0.95	1.11	1.29	1.50	1.75	2.03	2.36	-
40	-	0.82	0.96	1.12	1.30	1.51	1.74	2.01	-
45	-	0.69	0.82	0.96	1.12	1.29	1.49	1.70	-
50	-	0.56	0.69	0.81	0.95	1.09	1.26	1.44	-
55	-	-	0.55	0.66	0.78	0.91	1.04	1.20	-
60	-	-	-	0.51	0.62	0.73	0.84	0.98	-

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

Cooling capacity	2 788	W
Power input	2 896	W
Current consumption	6.10	A
Mass flow	106	kg/h
C.O.P.	0.96	

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

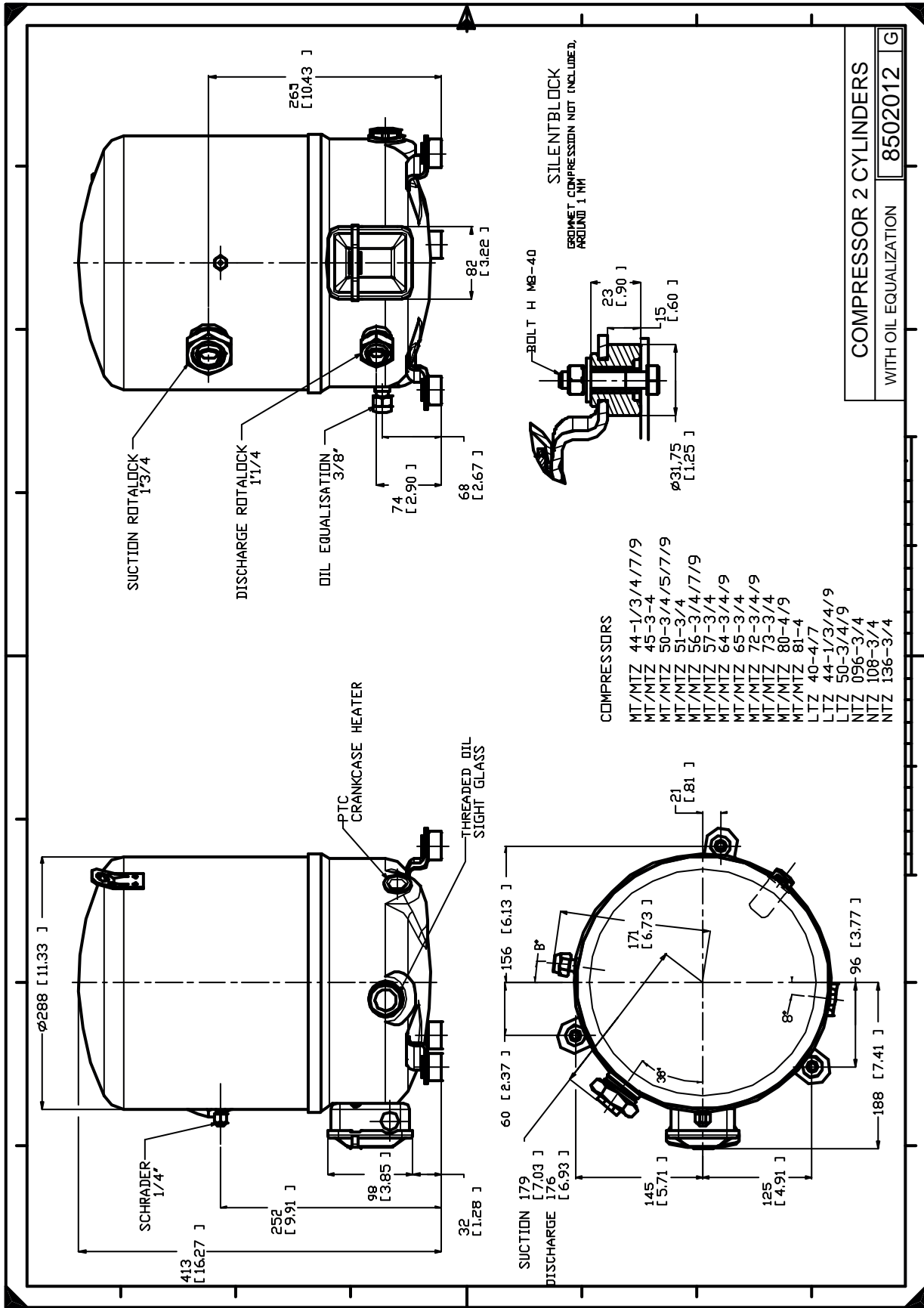
Sound power level	77.3	dB(A)
With acoustic hood	71.3	dB(A)

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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