



Datasheets

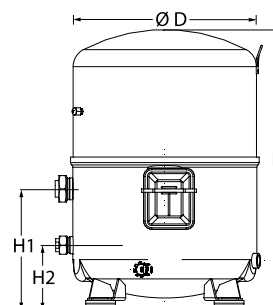
# Maneurop® Reciprocating compressors MT / MTZ / MPZ / NTZ



### General Characteristics

Model number (on compressor nameplate)		<b>NTZ215A4LR1A</b>
Code number for Singlepack*		120F0006
Code number for Industrial pack**		120F0013
Drawing number		8504010f
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		4
Swept volume		215 cm <sup>3</sup> /rev
Displacement @ Nominal speed		37.4 m <sup>3</sup> /h @ 2900 rpm - 45.1 m <sup>3</sup> /h @ 3500 rpm
Net weight		62 kg
Oil charge		3,9 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		10 kg
Approved refrigerants		R404A, R507A

### Dimensions



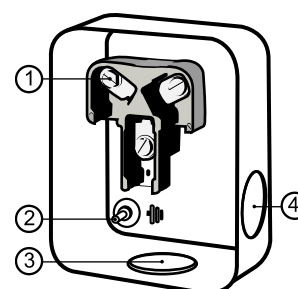
D=352 mm

H=519 mm

H1=233 mm

H2=125 mm

### Terminal box



IP54 (with cable gland)

- 1: Screw connectors 10-32 UNF x 9.5
- 2: Earth M4-12
- 3: Knock-out Ø 29 mm (1.14")
- 4: Knock-out Ø 25.5 mm (1.00")

### 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	2.23 #
Maximum Continuous Current (MCC)	22.3 A
Locked Rotor Amps (LRA)	74 A
Motor protection	Internal overload protector

### Recommended Installation torques

Oil sight glass	50 Nm
Power connections / Earth connection	3 Nm / 2 Nm
Mounting bolts	50 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

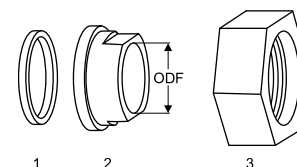
**Approvals :** CE certified, UL certified (file SA6873), -

\*Singlepack: Compressor in cardboard box

\*\*Industrial pack: 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.**

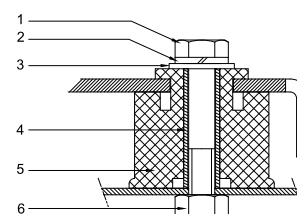
Angle adapter set, C02 (1-3/4"~1-1/8"), C04 (1-1/4"~3/4")	7703014
Valve set, V02 (1-3/4"~1-1/8"), V04 (1-1/4"~3/4")	7703009
Gasket set, 1", 1-1/4", 1-3/4", OSG gaskets black & white	8156009

**Oil / lubricants**
**Code no.**

POE lubricant, 160PZ, 1 litre can	7754019
POE lubricant, 160PZ, 2 litre can	7754020

**Crankcase heaters**
**Code no.**

PTC heater 27W, CE mark, UL	120Z0459
Belt type crankcase heater, 75 W, 230 V, CE mark, UL	7773108
Belt type crankcase heater, 75 W, 400 V, CE mark, UL	7773118
Belt type crankcase heater, 75 W, 460 V, CE mark, UL	120Z0464

**Mounting kit**


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

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

Acoustic hood for 4 cylinder compressor	120Z0473
Oil equalisation nut	8153127

**Spare parts**
**Code no.**

Mounting kit for 4 cylinder compressor & MS, including 4 grommets, 4 bolts	8156007
Oil sight glass with gaskets (black & white)	8156019
Gasket for oil sight glass (black chloroprene)	8156145
Service kit for terminal box 96 x 115 mm, including 1 cover, 1 clamp, 1 T block connector 52 x 57 mm	8156135
T block connector 52 x 57 mm	8173230

# Datasheet, performance data

# Maneurop reciprocating compressor. NTZ215-4

## 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	-	4 519	6 254	8 335	10 797	13 675	17 003	20 817	-
35	-	-	5 636	7 623	9 967	12 702	15 864	19 485	-
40	-	-	4 948	6 828	9 039	11 618	14 598	18 014	-
45	-	-	-	5 966	8 031	10 439	13 224	16 420	-
50	-	-	-	-	6 959	9 181	11 757	14 720	-
55	-	-	-	-	-	7 862	10 214	12 929	-
60	-	-	-	-	-	6 497	8 612	11 065	-

### Power input in W

30	-	3 426	4 096	4 730	5 307	5 800	6 188	6 447	-
35	-	-	4 154	4 895	5 597	6 237	6 790	7 234	-
40	-	-	4 149	4 990	5 811	6 590	7 303	7 926	-
45	-	-	-	5 009	5 944	6 856	7 722	8 518	-
50	-	-	-	-	5 991	7 030	8 043	9 006	-
55	-	-	-	-	-	7 107	8 260	9 384	-
60	-	-	-	-	-	7 083	8 370	9 648	-

### Current consumption in A

30	-	6.66	7.43	8.23	9.11	10.12	11.29	12.66	-
35	-	-	7.50	8.40	9.34	10.36	11.52	12.84	-
40	-	-	7.52	8.55	9.59	10.67	11.85	13.15	-
45	-	-	-	8.66	9.82	11.00	12.23	13.56	-
50	-	-	-	-	10.00	11.31	12.63	14.01	-
55	-	-	-	-	-	11.55	13.01	14.48	-
60	-	-	-	-	-	11.68	13.31	14.91	-

### Mass flow in kg/h

30	-	109	151	202	262	334	419	518	-
35	-	-	144	195	256	329	414	513	-
40	-	-	134	185	247	320	405	505	-
45	-	-	-	173	235	307	393	493	-
50	-	-	-	-	219	292	377	477	-
55	-	-	-	-	-	273	357	456	-
60	-	-	-	-	-	250	334	432	-

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

30	-	1.32	1.53	1.76	2.03	2.36	2.75	3.23	-
35	-	-	1.36	1.56	1.78	2.04	2.34	2.69	-
40	-	-	1.19	1.37	1.56	1.76	2.00	2.27	-
45	-	-	-	1.19	1.35	1.52	1.71	1.93	-
50	-	-	-	-	1.16	1.31	1.46	1.63	-
55	-	-	-	-	-	1.11	1.24	1.38	-
60	-	-	-	-	-	0.92	1.03	1.15	-

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

Cooling capacity	4 948	W
Power input	4 149	W
Current consumption	7.52	A
Mass flow	134	kg/h
C.O.P.	1.19	



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	84.2	dB(A)
With acoustic hood	78.2	dB(A)

All performance data +/- 5%

# Datasheet, performance data

# Maneurop reciprocating compressor. NTZ215-4

## 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	2 714	4 019	5 641	7 623	10 008	12 842	16 169	20 034	-
35	2 217	3 454	4 985	6 853	9 101	11 777	14 925	18 593	-
40	1 701	2 854	4 277	6 014	8 110	10 611	13 564	17 017	-
45	1 186	2 238	3 538	5 128	7 054	9 363	12 104	15 326	-
50	-	1 627	2 787	4 214	5 955	8 054	10 565	13 538	-
55	-	-	2 047	3 295	4 831	6 704	8 965	11 669	-
60	-	-	1 342	2 391	3 704	5 330	7 322	9 737	-

### Power input in W

30	2 744	3 426	4 096	4 730	5 307	5 800	6 188	6 447	-
35	2 651	3 398	4 154	4 895	5 597	6 237	6 790	7 234	-
40	2 506	3 314	4 149	4 990	5 811	6 590	7 303	7 926	-
45	2 306	3 167	4 076	5 009	5 944	6 856	7 722	8 518	-
50	-	2 954	3 929	4 950	5 991	7 030	8 043	9 006	-
55	-	-	3 705	4 806	5 948	7 107	8 260	9 384	-
60	-	-	3 398	4 574	5 810	7 083	8 370	9 648	-

### Current consumption in A

30	5.89	6.66	7.43	8.23	9.11	10.12	11.29	12.66	-
35	5.66	6.60	7.50	8.40	9.34	10.36	11.52	12.84	-
40	5.30	6.45	7.52	8.55	9.59	10.67	11.85	13.15	-
45	4.78	6.18	7.45	8.66	9.82	11.00	12.23	13.56	-
50	-	5.73	7.25	8.66	10.00	11.31	12.63	14.01	-
55	-	-	6.87	8.52	10.07	11.55	13.01	14.48	-
60	-	-	6.27	8.20	9.99	11.68	13.31	14.91	-

### Mass flow in kg/h

30	93	135	183	240	307	384	472	572	-
35	82	125	174	232	300	377	466	567	-
40	69	112	162	221	289	367	456	558	-
45	53	97	147	206	274	353	443	544	-
50	-	79	129	188	256	335	425	526	-
55	-	-	108	167	235	313	403	504	-
60	-	-	84	142	209	287	376	477	-

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

30	0.99	1.17	1.38	1.61	1.89	2.21	2.61	3.11	-
35	0.84	1.02	1.20	1.40	1.63	1.89	2.20	2.57	-
40	0.68	0.86	1.03	1.21	1.40	1.61	1.86	2.15	-
45	0.51	0.71	0.87	1.02	1.19	1.37	1.57	1.80	-
50	-	0.55	0.71	0.85	0.99	1.15	1.31	1.50	-
55	-	-	0.55	0.69	0.81	0.94	1.09	1.24	-
60	-	-	0.39	0.52	0.64	0.75	0.87	1.01	-

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

Cooling capacity	4 277	W
Power input	4 149	W
Current consumption	7.52	A
Mass flow	162	kg/h
C.O.P.	1.03	

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	84.2	dB(A)
With acoustic hood	78.2	dB(A)

All performance data +/- 5%

