



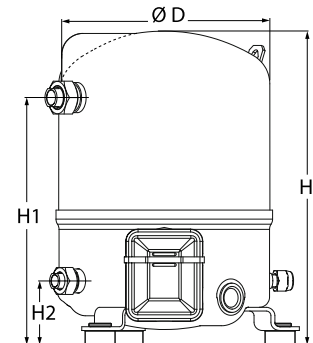
Datasheets

# Maneurop<sup>®</sup> Reciprocating compressors MT / MTZ / MPZ / NTZ

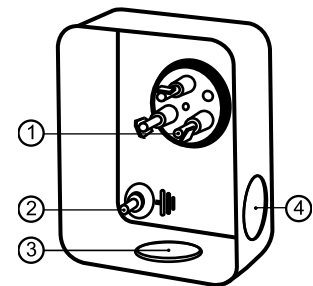


**General Characteristics**

Model number (on compressor nameplate)		<b>MTZ36JG3AVE</b>
Code number for Singlepack*		MTZ36-3VI
Code number for Industrial pack**		MTZ36-3VM
Drawing number		8501025f
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 equalization connection		3/8" flare SAE
Oil drain connection		None
LP gauge port		Schrader
IPR valve		435 psi / 115 psi
Cylinders		1
Swept volume		3.69 in <sup>3</sup> /rev
Displacement @ Nominal speed		448 cfh @ 3500 rpm
Net weight		55 lbs
Oil charge		32 oz. POE - 160PZ
Maximum system test pressure Low Side / High side		363 psi / 435 psi
Maximum differential test pressure		435 psi
Maximum number of starts per hour		12
Refrigerant charge limit		6 lbs
Approved refrigerants		R404A, R507A, R134a, R407C

**Dimensions**


D=8.8 inch, H=14 inch,  
H1=10.4 inch, H2=2.7 inch

**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	200-230V/3/60Hz
Voltage range	180-253 V
Winding resistance (between phases) +/- 7% at 77°F	1.16 #
Maximum Continuous Current (MCC)	17 A
Locked Rotor Amps (LRA)	74 A
Motor protection	Internal overload protector

**Recommended Installation torques**

Oil sight glass	37 ft.lbs
Power connections / Earth connection	ft.lbs / 1 ft.lbs
Mounting bolts	11 ft.lbs

**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)

**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 liter can	7754019
POE lubricant, 160PZ, 2 liter can	7754020

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

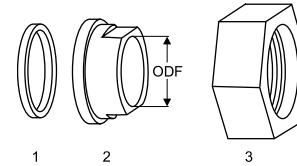
PTC heater 27W, CE mark, UL	120Z0459
Belt type crankcase heater, 54 W, 230 V, CE mark, UL	7773106

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

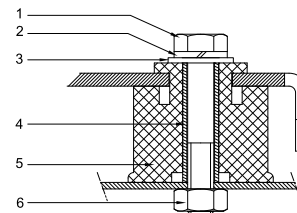
Acoustic hood for 1 cylinder compressor	120Z0471
Oil equalisation nut	8153127

**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)

**Performance data at 60 Hz, ARI rating conditions**
**R407C**

Cond. temp. in °F (tc)	Evaporating temperature in °F (to)							
	10	20	25	30	35	40	45	50

**Cooling capacity in Btu/h**

100	17 409	23 312	26 775	30 607	34 830	39 466	44 536	50 061	56 063
110	15 965	21 389	24 579	28 115	32 018	36 311	41 015	46 152	51 741
120	-	19 537	22 446	25 679	29 256	33 200	37 531	42 272	47 443
130	-	17 773	20 396	23 319	26 564	30 151	34 104	38 443	43 189
140	-	-	18 449	21 055	23 961	27 186	30 753	34 683	38 998
150	-	-	-	-	21 467	24 323	27 498	31 013	34 890

**Power input in W**

100	2 300	2 615	2 758	2 891	3 011	3 117	3 207	3 280	3 334
110	2 372	2 723	2 888	3 044	3 190	3 324	3 445	3 551	3 640
120	-	2 834	3 019	3 197	3 367	3 527	3 676	3 813	3 935
130	-	2 952	3 154	3 352	3 544	3 729	3 904	4 070	4 224
140	-	-	3 298	3 513	3 725	3 932	4 133	4 326	4 508
150	-	-	-	-	3 915	4 142	4 365	4 583	4 793

**Current consumption in A**

100	8.02	8.74	9.06	9.36	9.62	9.87	10.09	10.30	10.49
110	8.16	9.00	9.38	9.73	10.07	10.38	10.68	10.96	11.22
120	-	9.29	9.73	10.15	10.55	10.93	11.30	11.65	11.99
130	-	9.59	10.09	10.58	11.04	11.49	11.93	12.36	12.78
140	-	-	10.43	10.98	11.51	12.03	12.54	13.04	13.54
150	-	-	-	-	11.92	12.51	13.10	13.68	14.25

**Mass flow in lbs/h**

100	229	301	343	389	439	493	553	617	686
110	221	291	331	375	424	477	534	597	664
120	-	280	319	362	409	460	515	576	641
130	-	271	308	349	393	442	496	554	617
140	-	-	297	336	378	425	476	532	593
150	-	-	-	-	364	408	457	510	568

**Energy Efficiency Ratio (E.E.R.)**

100	7.57	8.92	9.71	10.59	11.57	12.66	13.89	15.26	16.81
110	6.73	7.86	8.51	9.24	10.04	10.92	11.91	13.00	14.21
120	-	6.89	7.44	8.03	8.69	9.41	10.21	11.09	12.06
130	-	6.02	6.47	6.96	7.50	8.09	8.73	9.45	10.23
140	-	-	5.59	5.99	6.43	6.91	7.44	8.02	8.65
150	-	-	-	-	5.48	5.87	6.30	6.77	7.28

**Nominal performance at to = 45 °F, tc = 130 °F**

Cooling capacity	34 104	Btu/h	Current consumption	11.93	A
Power input	3 904	W	Mass flow	496	lbs/h
E.E.R.	8.73				

**Pressure switch settings**

Maximum HP switch setting	426	psi(g)
Minimum LP switch setting	3	psi(g)
LP pump down setting	19	psi(g)

T 0 : Evaporating temperature at dew point

T C : Condensing temperature at dew point

Rating conditions : Superheat = 20 °F , Subcooling = 15 °F

All performance data +/- 5%

**Sound power data**

Sound power level	0	dB(A)
With acoustic hood	0	dB(A)

Performance data at 60 Hz, ARI rating conditions

R134a

Cond. temp. in °F (tc)	Evaporating temperature in °F (to)							
	10	20	30	40	45	50	55	60

Cooling capacity in Btu/h

100	12 211	16 472	21 586	27 654	31 077	34 777	38 766	43 056	47 661
110	10 926	14 997	19 879	25 673	28 945	32 482	36 298	40 405	44 816
120	9 672	13 526	18 149	23 644	26 749	30 111	33 740	37 651	41 856
130	8 440	12 049	16 387	21 555	24 482	27 654	31 084	34 785	38 770
140	-	10 558	14 584	19 398	22 133	25 103	28 320	31 798	35 549
150	-	-	-	17 164	19 693	22 447	25 439	28 680	32 185
160	-	-	-	-	-	19 679	22 431	25 422	28 666

Power input in W

100	1 636	1 889	2 117	2 308	2 386	2 451	2 500	2 534	2 549
110	1 670	1 945	2 199	2 422	2 517	2 601	2 670	2 725	2 762
120	1 683	1 982	2 267	2 524	2 639	2 742	2 833	2 911	2 972
130	1 672	2 000	2 317	2 612	2 747	2 873	2 987	3 088	3 175
140	-	1 994	2 347	2 683	2 841	2 990	3 129	3 256	3 370
150	-	-	-	2 736	2 917	3 091	3 256	3 411	3 553
160	-	-	-	-	-	3 174	3 367	3 550	3 723

Current consumption in A

100	6.34	6.85	7.32	7.75	7.93	8.11	8.25	8.38	8.48
110	6.38	6.93	7.46	7.95	8.17	8.38	8.57	8.74	8.89
120	6.40	7.00	7.59	8.15	8.42	8.67	8.90	9.12	9.31
130	6.40	7.06	7.71	8.35	8.66	8.95	9.24	9.50	9.75
140	-	7.09	7.82	8.54	8.89	9.24	9.57	9.89	10.19
150	-	-	-	8.71	9.12	9.51	9.90	10.27	10.63
160	-	-	-	-	-	9.76	10.21	10.64	11.07

Mass flow in lbs/h

100	178	235	301	377	420	465	514	565	620
110	168	225	291	368	410	456	504	556	611
120	157	214	280	357	399	445	493	544	599
130	145	202	268	344	387	432	480	531	585
140	-	190	255	331	372	417	465	515	569
150	-	-	-	316	357	401	448	498	551
160	-	-	-	-	-	383	430	479	531

Energy Efficiency Ratio (E.E.R.)

100	7.46	8.72	10.20	11.98	13.02	14.19	15.50	16.99	18.70
110	6.54	7.71	9.04	10.60	11.50	12.49	13.59	14.83	16.22
120	5.75	6.82	8.01	9.37	10.14	10.98	11.91	12.94	14.08
130	5.05	6.03	7.07	8.25	8.91	9.63	10.41	11.26	12.21
140	-	5.29	6.21	7.23	7.79	8.40	9.05	9.77	10.55
150	-	-	-	6.27	6.75	7.26	7.81	8.41	9.06
160	-	-	-	-	-	6.20	6.66	7.16	7.70

Nominal performance at to = 45 °F, tc = 130 °F

Cooling capacity	24 482	Btu/h	Current consumption	8.66	A
Power input	2 747	W	Mass flow	387	lbs/h
E.E.R.	8.91				

Pressure switch settings

Maximum HP switch setting	328	psi(g)
Minimum LP switch setting	3	psi(g)
LP pump down setting	7	psi(g)

T 0 : Evaporating temperature at dew point

T C : Condensing temperature at dew point

Rating conditions : Superheat = 20 °F , Subcooling = 15 °F

All performance data +/- 5%

Sound power data

Sound power level	0	dB(A)
With acoustic hood	0	dB(A)

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**Performance data at 60 Hz, ARI rating conditions**
**R404A**

Cond. temp. in °F (tc)	Evaporating temperature in °F (to)							
	-20	-10	0	10	20	30	40	45

**Cooling capacity in Btu/h**

90	8 135	11 840	16 455	22 113	28 944	37 083	46 660	52 030	57 808
100	6 904	10 324	14 564	19 758	26 036	33 532	42 377	47 347	52 703
110	5 703	8 828	12 684	17 403	23 118	29 961	38 064	42 629	47 559
120	4 531	7 350	10 812	15 047	20 189	26 369	33 720	37 875	42 373
130	-	5 891	8 948	12 690	17 248	22 755	29 344	33 085	37 146
140	-	4 449	7 091	10 329	14 294	19 118	24 935	28 256	31 875

**Power input in W**

90	1 747	2 057	2 358	2 646	2 913	3 155	3 366	3 459	3 541
100	1 753	2 093	2 428	2 755	3 066	3 357	3 622	3 743	3 855
110	1 749	2 117	2 487	2 852	3 207	3 546	3 864	4 014	4 156
120	1 734	2 131	2 534	2 937	3 336	3 723	4 094	4 272	4 444
130	-	2 134	2 571	3 012	3 453	3 888	4 312	4 518	4 719
140	-	2 128	2 597	3 076	3 560	4 042	4 518	4 752	4 982

**Current consumption in A**

90	6.75	7.33	8.01	8.72	9.42	10.03	10.51	10.68	10.79
100	6.76	7.42	8.18	9.00	9.80	10.54	11.15	11.40	11.59
110	6.75	7.48	8.33	9.25	10.17	11.03	11.79	12.11	12.38
120	6.70	7.51	8.46	9.48	10.52	11.51	12.42	12.81	13.16
130	-	7.51	8.55	9.68	10.84	11.98	13.03	13.50	13.94
140	-	7.46	8.61	9.85	11.14	12.42	13.62	14.18	14.70

**Mass flow in lbs/h**

90	168	239	322	420	535	668	823	908	999
100	155	225	308	405	518	649	801	885	974
110	141	211	293	389	500	629	778	861	949
120	125	195	276	371	481	608	755	836	922
130	-	177	258	352	461	586	730	810	895
140	-	157	238	331	438	562	704	782	866

**Energy Efficiency Ratio (E.E.R.)**

90	4.66	5.76	6.98	8.36	9.94	11.75	13.86	15.04	16.32
100	3.94	4.93	6.00	7.17	8.49	9.99	11.70	12.65	13.67
110	3.26	4.17	5.10	6.10	7.21	8.45	9.85	10.62	11.44
120	2.61	3.45	4.27	5.12	6.05	7.08	8.24	8.87	9.54
130	-	2.76	3.48	4.21	4.99	5.85	6.80	7.32	7.87
140	-	2.09	2.73	3.36	4.02	4.73	5.52	5.95	6.40

**Nominal performance at to = 20 °F, tc = 120 °F**

Cooling capacity	20 189	Btu/h	Current consumption	10.52	A
Power input	3 336	W	Mass flow	481	lbs/h
E.E.R.	6.05				

**Pressure switch settings**

Maximum HP switch setting	402	psi(g)
Minimum LP switch setting	3	psi(g)
LP pump down setting	13	psi(g)

T 0 : Evaporating temperature at dew point

T C : Condensing temperature at dew point

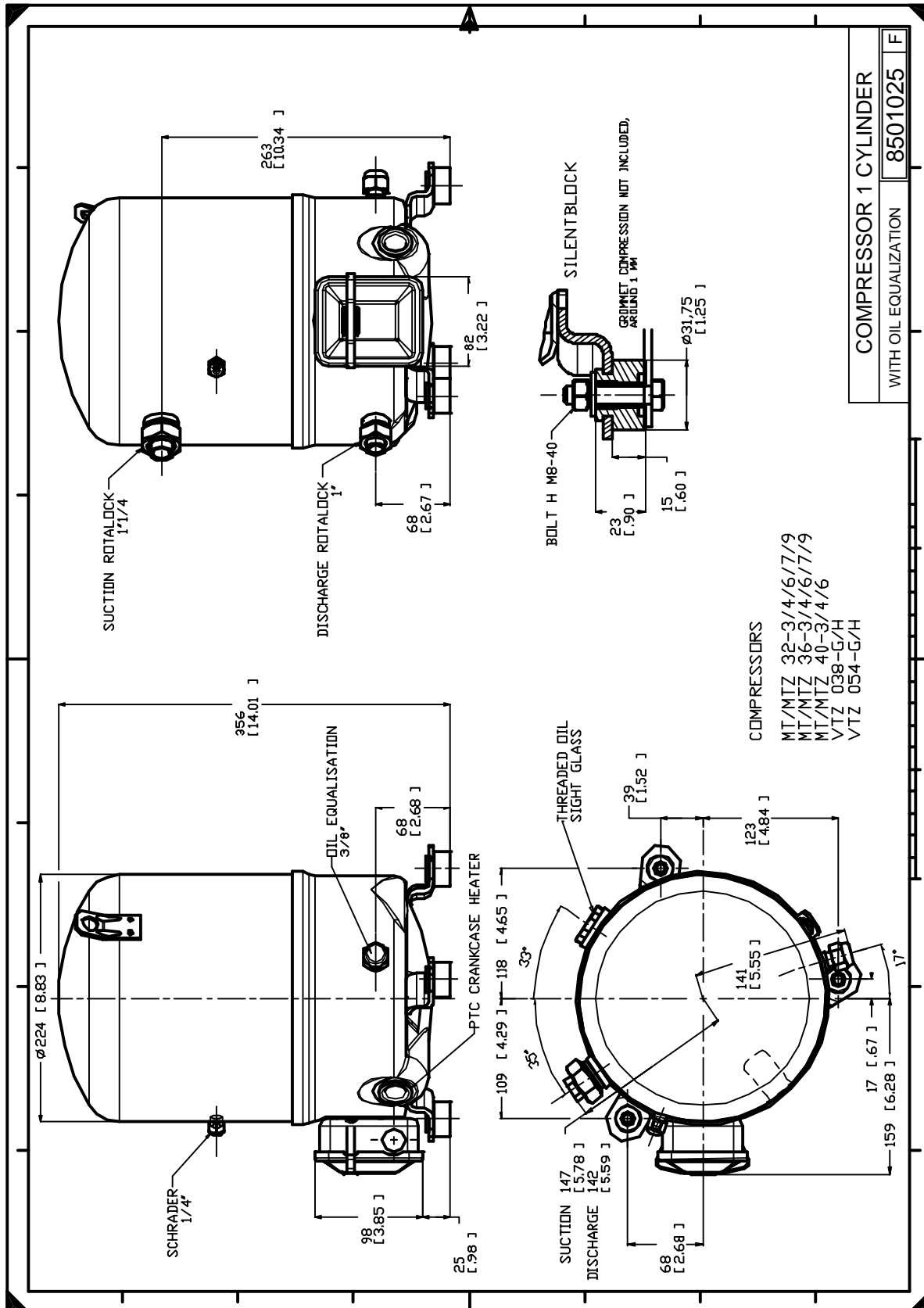
Rating conditions : Superheat = 20 °F , Subcooling = 0 °F

All performance data +/- 5%

**Sound power data**

Sound power level	76	dB(A)
With acoustic hood	69	dB(A)





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