



Datasheets

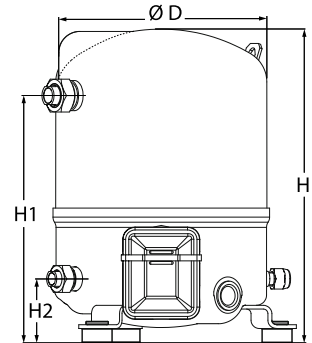
Maneurop[®] Reciprocating compressors MT / MTZ / MPZ / NTZ



General Characteristics

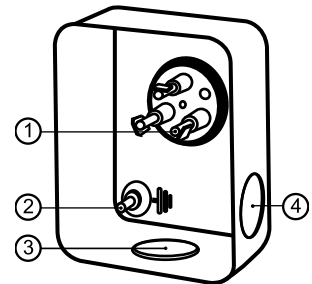
Model number (on compressor nameplate)		MTZ22JC3AVE
Code number for Singlepack*		MTZ22-3VI
Code number for Industrial pack**		MTZ22-3VM
Drawing number		8501024e
Suction and discharge connections		Rotolock
Suction connection		1 " Rotolock
Discharge connection		1 " Rotolock
Suction connection with supplied sleeve		1/2 " ODF
Discharge connection with supplied sleeve		3/8 " 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		2.33 in3/rev
Displacement @ Nominal speed		283 cfh @ 3500 rpm
Net weight		46 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=13.1 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	2.49 Ω
Maximum Continuous Current (MCC)	11 A
Locked Rotor Amps (LRA)	38 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)

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Rotolock accessories, suction 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, discharge side
Code no.

Solder sleeve, P01 (1" Rotolock, 3/8" ODF)	8153010
Angle adapter, C01 (1" Rotolock, 3/8" ODF)	8168004
Rotolock valve, V01 (1" Rotolock, 3/8" ODF)	8168027
Gasket, 1"	8156130

Rotolock accessories, sets
Code no.

Angle adapter set, C06 (1"~1/2"), C01 (1"~3/8")	7703011
Valve set, V06 (1"~1/2"), V01 (1"~3/8")	7703004
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.

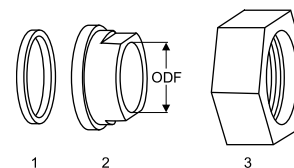
PTC heater 27W	120Z0459
Belt type crankcase heater, 54 W, 230 V, CE mark, UL	7773106

Miscellaneous accessories
Code no.

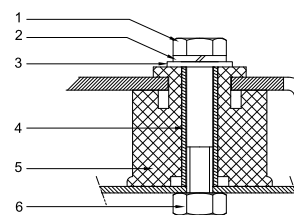
Acoustic hood for 1 cylinder compressor	7755001
Oil equalisation nut	8153127

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	10 709	14 623	16 879	19 351	22 054	25 000	28 203	31 675	35 431
110	9 758	13 400	15 485	17 763	20 248	22 954	25 892	29 077	32 522
120	-	12 183	14 107	16 202	18 480	20 954	23 639	26 547	29 692
130	-	10 960	12 734	14 655	16 736	18 991	21 432	24 073	26 927
140	-	-	11 356	13 113	15 008	17 052	19 260	21 645	24 219
150	-	-	-	-	13 282	15 127	17 112	19 250	21 554

Power input in W

100	1 347	1 497	1 562	1 620	1 673	1 720	1 762	1 801	1 835
110	1 416	1 599	1 677	1 749	1 813	1 871	1 922	1 969	2 011
120	-	1 694	1 790	1 877	1 957	2 028	2 093	2 150	2 202
130	-	1 772	1 889	1 996	2 093	2 182	2 262	2 335	2 400
140	-	-	1 964	2 093	2 213	2 322	2 421	2 511	2 594
150	-	-	-	-	2 304	2 436	2 558	2 670	2 772

Current consumption in A

100	5.28	5.59	5.73	5.86	5.98	6.09	6.18	6.26	6.34
110	5.44	5.82	5.99	6.15	6.30	6.44	6.56	6.67	6.77
120	-	6.03	6.25	6.45	6.64	6.81	6.97	7.12	7.25
130	-	6.22	6.49	6.73	6.97	7.19	7.39	7.58	7.75
140	-	-	6.68	6.98	7.27	7.54	7.80	8.04	8.26
150	-	-	-	-	7.52	7.85	8.17	8.46	8.74

Mass flow in lbs/h

100	141	189	216	246	278	313	350	390	433
110	135	182	209	237	268	301	337	376	417
120	-	175	201	228	258	290	325	361	401
130	-	167	192	219	248	279	312	347	385
140	-	-	183	209	237	267	298	332	368
150	-	-	-	-	225	254	284	317	351

Energy Efficiency Ratio (E.E.R.)

100	7.95	9.77	10.81	11.94	13.19	14.54	16.00	17.59	19.30
110	6.89	8.38	9.23	10.16	11.17	12.27	13.47	14.77	16.18
120	-	7.19	7.88	8.63	9.44	10.33	11.30	12.35	13.48
130	-	6.19	6.74	7.34	8.00	8.70	9.47	10.31	11.22
140	-	-	5.78	6.26	6.78	7.35	7.96	8.62	9.34
150	-	-	-	-	5.77	6.21	6.69	7.21	7.78

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

Cooling capacity	21 432	Btu/h	Current consumption	7.39	A
Power input	2 262	W	Mass flow	312	lbs/h
E.E.R.	9.47				

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	6 775	9 425	12 731	16 788	19 127	21 689	24 486	27 528	30 829
110	6 114	8 615	11 740	15 583	17 803	20 238	22 899	25 798	28 947
120	5 430	7 761	10 683	14 291	16 382	18 679	21 195	23 940	26 927
130	4 708	6 847	9 546	12 898	14 849	16 998	19 357	21 939	24 754
140	-	5 858	8 313	11 389	13 189	15 179	17 372	19 779	22 411
150	-	-	-	9 747	11 386	13 208	15 223	17 445	19 884
160	-	-	-	-	-	11 068	12 896	14 921	17 157

Power input in W

100	936	1 052	1 151	1 227	1 255	1 273	1 283	1 283	1 273
110	966	1 099	1 219	1 320	1 361	1 395	1 420	1 437	1 444
120	977	1 130	1 274	1 402	1 458	1 507	1 550	1 584	1 610
130	967	1 142	1 312	1 470	1 542	1 609	1 670	1 723	1 769
140	-	1 133	1 331	1 521	1 611	1 696	1 776	1 850	1 917
150	-	-	-	1 552	1 661	1 765	1 866	1 961	2 051
160	-	-	-	-	-	1 814	1 937	2 055	2 168

Current consumption in A

100	4.27	4.48	4.66	4.82	4.88	4.93	4.97	5.00	5.01
110	4.33	4.57	4.80	5.00	5.09	5.17	5.25	5.31	5.36
120	4.36	4.64	4.92	5.18	5.30	5.41	5.52	5.62	5.70
130	4.37	4.69	5.02	5.34	5.50	5.65	5.79	5.93	6.05
140	-	4.72	5.11	5.50	5.69	5.87	6.06	6.23	6.41
150	-	-	-	5.63	5.86	6.09	6.32	6.54	6.75
160	-	-	-	-	-	6.29	6.56	6.83	7.10

Mass flow in lbs/h

100	99	134	177	229	258	290	324	362	401
110	94	129	172	223	252	284	318	355	395
120	88	123	165	216	245	276	310	346	386
130	81	115	156	206	234	265	299	335	374
140	-	105	146	194	222	252	285	320	359
150	-	-	-	180	207	236	268	303	340
160	-	-	-	-	-	217	248	282	318

Energy Efficiency Ratio (E.E.R.)

100	7.24	8.96	11.06	13.68	15.25	17.03	19.08	21.45	24.22
110	6.33	7.84	9.63	11.81	13.08	14.51	16.13	17.96	20.05
120	5.56	6.87	8.39	10.20	11.24	12.39	13.68	15.11	16.72
130	4.87	5.99	7.27	8.78	9.63	10.56	11.59	12.73	13.99
140	-	5.17	6.24	7.49	8.19	8.95	9.78	10.69	11.69
150	-	-	-	6.28	6.86	7.48	8.16	8.89	9.69
160	-	-	-	-	-	6.10	6.66	7.26	7.91

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

Cooling capacity	14 849	Btu/h	Current consumption	5.50	A
Power input	1 542	W	Mass flow	234	lbs/h
E.E.R.	9.63				

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	4 632	6 797	9 525	12 902	17 013	21 945	27 784	31 070	34 615
100	4 027	6 074	8 635	11 795	15 641	20 259	25 735	28 821	32 154
110	3 353	5 247	7 606	10 516	14 062	18 331	23 409	26 278	29 381
120	2 641	4 347	6 470	9 094	12 306	16 191	20 837	23 471	26 327
130	-	3 406	5 257	7 561	10 403	13 871	18 049	20 431	23 024
140	-	2 452	3 997	5 946	8 385	11 400	15 076	17 190	19 500

Power input in W

90	1 117	1 293	1 449	1 584	1 700	1 795	1 870	1 900	1 925
100	1 136	1 339	1 522	1 684	1 826	1 947	2 048	2 091	2 128
110	1 132	1 366	1 579	1 772	1 943	2 094	2 223	2 280	2 332
120	1 102	1 370	1 616	1 842	2 046	2 229	2 391	2 464	2 532
130	-	1 346	1 629	1 891	2 131	2 350	2 548	2 638	2 723
140	-	1 289	1 612	1 914	2 194	2 452	2 688	2 797	2 901

Current consumption in A

90	4.94	5.27	5.60	5.91	6.19	6.42	6.59	6.65	6.68
100	4.99	5.37	5.75	6.12	6.46	6.76	6.99	7.08	7.15
110	4.98	5.43	5.89	6.33	6.75	7.12	7.43	7.56	7.66
120	4.90	5.44	5.98	6.51	7.01	7.47	7.87	8.05	8.20
130	-	5.35	5.99	6.62	7.23	7.79	8.30	8.52	8.73
140	-	5.14	5.90	6.64	7.36	8.04	8.67	8.96	9.22

Mass flow in lbs/h

90	96	137	186	245	314	395	489	541	597
100	91	133	183	242	311	393	487	539	595
110	83	125	175	235	304	385	479	531	587
120	73	115	165	224	293	374	467	518	574
130	-	102	151	209	277	357	449	500	554
140	-	86	134	191	257	335	425	476	529

Energy Efficiency Ratio (E.E.R.)

90	4.15	5.26	6.57	8.14	10.01	12.22	14.85	16.35	17.98
100	3.55	4.54	5.67	7.00	8.57	10.40	12.56	13.78	15.11
110	2.96	3.84	4.82	5.94	7.24	8.76	10.53	11.52	12.60
120	2.40	3.17	4.00	4.94	6.01	7.26	8.71	9.52	10.40
130	-	2.53	3.23	4.00	4.88	5.90	7.08	7.75	8.46
140	-	1.90	2.48	3.11	3.82	4.65	5.61	6.15	6.72

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

Cooling capacity	12 306	Btu/h	Current consumption	7.01	A
Power input	2 046	W	Mass flow	293	lbs/h
E.E.R.	6.01				

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

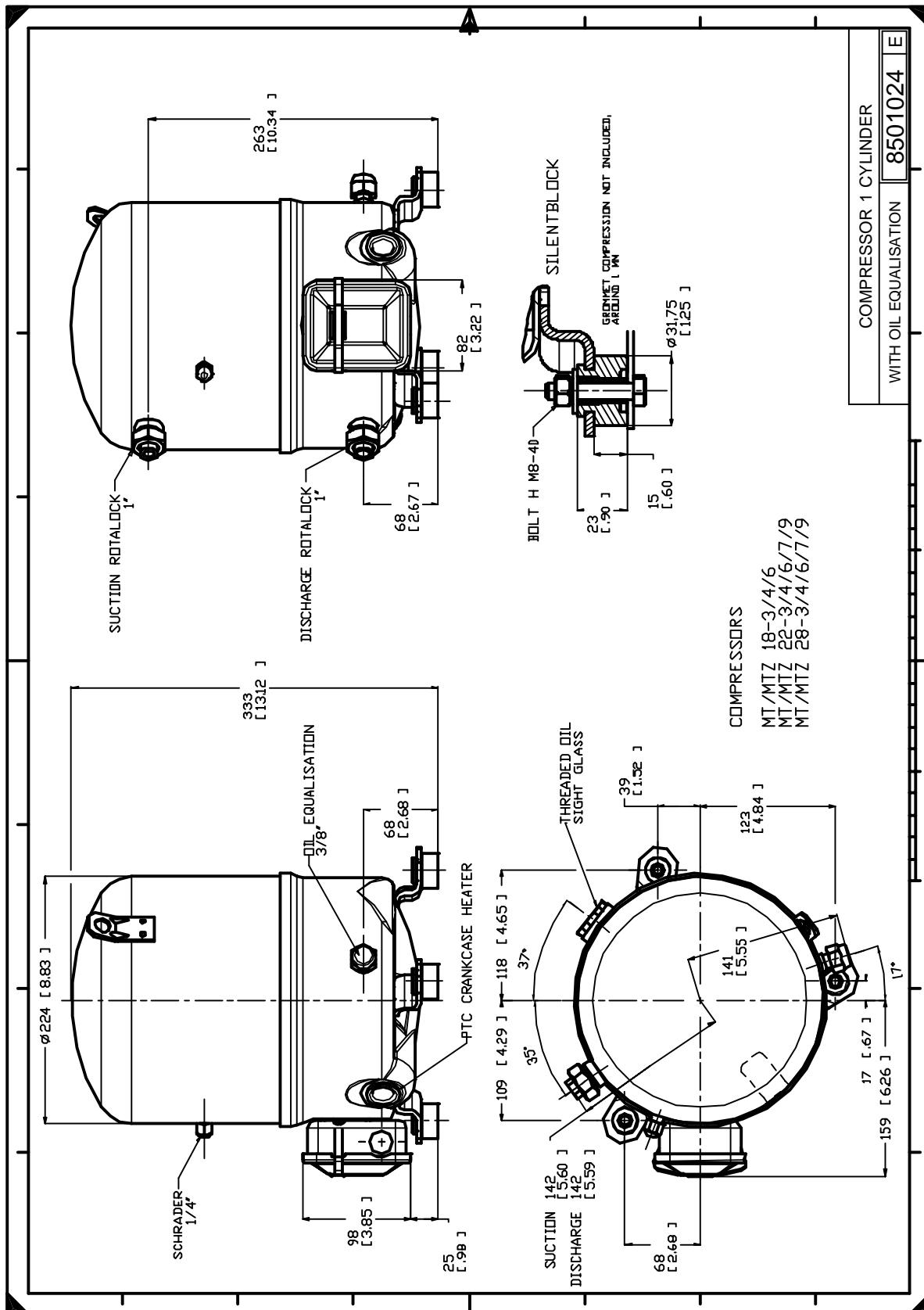
T C : Condensing temperature at dew point

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

All performance data +/- 5%

Sound power data

Sound power level	77	dB(A)
With acoustic hood	71	dB(A)



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