



Datasheets

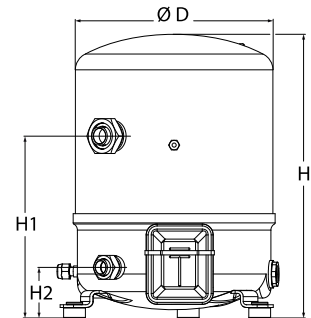
Maneurop[®] Reciprocating compressors MT / MTZ / MPZ / NTZ



General Characteristics

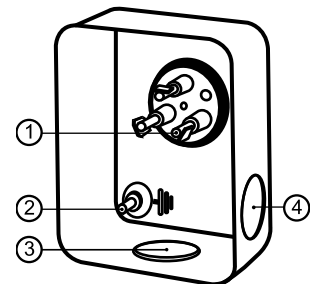
Model number (on compressor nameplate)		MTZ64HM3AVE
Code number for Singlepack*		MTZ64-3VI
Code number for Industrial pack**		MTZ64-3VM
Drawing number		8502012g
Suction and discharge connections		Rotolock
Suction connection		1-3/4 " Rotolock
Discharge connection		1-1/4 " Rotolock
Suction connection with supplied sleeve		7/8 " ODF
Discharge connection with supplied sleeve		3/4 " 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		2
Swept volume		6.57 in ³ /rev
Displacement @ Nominal speed		799 cfh @ 3500 rpm
Net weight		82 lbs
Oil charge		61 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		11 lbs
Approved refrigerants		R404A, R507A, R134a, R407C

Dimensions



D=11.3 inch, H=16.3 inch,
H1=10.4 inch, H2=2.9 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		0.57 Ω
Maximum Continuous Current (MCC)		29 A
Locked Rotor Amps (LRA)		137 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: 6 Unboxed compressors on pallet (order per multiples of 6)

Rotolock accessories, suction side
Code no.

Solder sleeve, P07 (1-3/4" Rotolock, 7/8" ODF)	8153013
Angle adapter, C07 (1-3/4" Rotolock, 7/8" ODF)	8168008
Rotolock valve, V07 (1-3/4" Rotolock, 7/8" ODF)	8168032
Gasket, 1-3/4"	8156132

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, C07 (1-3/4"~7/8"), C04 (1-1/4"~3/4")	7703013
Valve set, V07 (1-3/4"~7/8"), V04 (1-1/4"~3/4")	7703006
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.

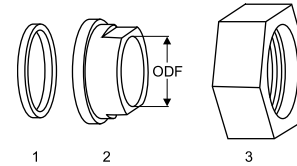
PTC heater 27W	120Z0459
Belt type crankcase heater, 65 W, 110 V, CE mark, UL	7773109
Belt type crankcase heater, 65 W, 230 V, CE mark, UL	7773107

Miscellaneous accessories
Code no.

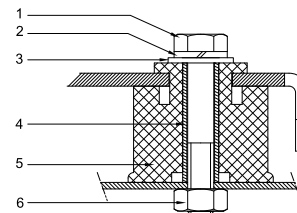
Acoustic hood for 2 cylinder compressor	7755002
Oil equalisation nut	8153127

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	30 816	41 453	47 560	54 233	61 501	69 395	77 944	87 180	97 131
110	27 942	38 006	43 778	50 085	56 955	64 420	72 509	81 252	90 679
120	-	34 363	39 758	45 656	52 085	59 078	66 662	74 869	83 729
130	-	30 546	35 520	40 964	46 910	53 386	60 423	68 051	76 300
140	-	-	31 080	36 029	41 446	47 363	53 809	60 814	68 409
150	-	-	-	-	35 714	41 028	46 840	53 179	60 076

Power input in W

100	3 766	4 249	4 470	4 675	4 859	5 021	5 158	5 267	5 346
110	3 913	4 457	4 713	4 956	5 182	5 389	5 574	5 735	5 869
120	-	4 628	4 924	5 210	5 483	5 739	5 978	6 195	6 388
130	-	4 756	5 096	5 429	5 753	6 064	6 360	6 638	6 895
140	-	-	5 220	5 605	5 984	6 354	6 712	7 056	7 382
150	-	-	-	-	6 169	6 602	7 027	7 441	7 840

Current consumption in A

100	14.15	15.41	16.01	16.57	17.11	17.60	18.05	18.44	18.79
110	14.52	15.95	16.65	17.32	17.97	18.59	19.17	19.71	20.21
120	-	16.42	17.23	18.02	18.80	19.56	20.29	20.99	21.65
130	-	16.80	17.73	18.66	19.58	20.49	21.38	22.24	23.08
140	-	-	18.14	19.21	20.29	21.36	22.42	23.47	24.50
150	-	-	-	-	20.91	22.16	23.41	24.66	25.89

Mass flow in lbs/h

100	401	529	601	678	762	853	950	1 054	1 166
110	383	511	583	660	744	834	931	1 034	1 145
120	-	490	561	638	720	809	905	1 007	1 117
130	-	465	534	610	691	779	873	973	1 081
140	-	-	503	577	656	742	833	932	1 037
150	-	-	-	-	615	698	787	883	985

Energy Efficiency Ratio (E.E.R.)

100	8.18	9.76	10.64	11.60	12.66	13.82	15.11	16.55	18.17
110	7.14	8.53	9.29	10.11	10.99	11.95	13.01	14.17	15.45
120	-	7.42	8.07	8.76	9.50	10.29	11.15	12.09	13.11
130	-	6.42	6.97	7.54	8.15	8.80	9.50	10.25	11.07
140	-	-	5.95	6.43	6.93	7.45	8.02	8.62	9.27
150	-	-	-	-	5.79	6.21	6.67	7.15	7.66

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

Cooling capacity	60 423	Btu/h	Current consumption	21.38	A
Power input	6 360	W	Mass flow	873	lbs/h
E.E.R.	9.50				

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	65

Cooling capacity in Btu/h

100	22 082	30 070	39 575	50 765	57 044	63 807	71 075	78 870	87 211
110	20 041	27 658	36 712	47 369	53 351	59 798	66 730	74 167	82 132
120	17 954	25 148	33 697	43 770	49 430	55 534	62 103	69 157	76 719
130	15 822	22 540	30 532	39 967	45 279	51 014	57 194	63 839	70 972
140	-	19 833	27 216	35 962	40 899	46 239	52 003	58 214	64 891
150	-	-	-	31 754	36 289	41 208	46 531	52 280	58 475
160	-	-	-	-	-	35 921	40 777	46 038	51 726

Power input in W

100	2 842	3 224	3 579	3 893	4 029	4 150	4 252	4 336	4 397
110	2 913	3 330	3 729	4 094	4 259	4 410	4 545	4 663	4 761
120	2 955	3 413	3 860	4 281	4 478	4 662	4 832	4 986	5 123
130	2 967	3 471	3 972	4 455	4 685	4 904	5 112	5 306	5 484
140	-	3 504	4 063	4 613	4 879	5 136	5 384	5 620	5 842
150	-	-	-	4 754	5 058	5 357	5 647	5 928	6 196
160	-	-	-	-	-	5 564	5 900	6 227	6 545

Current consumption in A

100	11.69	12.50	13.29	14.03	14.38	14.71	15.02	15.30	15.55
110	11.81	12.72	13.63	14.52	14.94	15.36	15.75	16.13	16.48
120	11.88	12.90	13.95	14.99	15.50	16.01	16.50	16.98	17.44
130	11.89	13.04	14.23	15.44	16.05	16.65	17.25	17.84	18.42
140	-	13.13	14.48	15.88	16.59	17.29	18.00	18.71	19.41
150	-	-	-	16.29	17.10	17.92	18.75	19.58	20.41
160	-	-	-	-	-	18.54	19.49	20.45	21.41

Mass flow in lbs/h

100	322	428	551	693	771	854	942	1 036	1 135
110	307	414	538	679	756	839	927	1 020	1 119
120	291	398	521	661	738	820	907	1 000	1 098
130	273	379	500	639	715	796	883	974	1 071
140	-	356	476	613	688	768	853	943	1 039
150	-	-	-	582	656	734	818	906	1 000
160	-	-	-	-	-	695	776	863	955

Energy Efficiency Ratio (E.E.R.)

100	7.77	9.33	11.06	13.04	14.16	15.38	16.71	18.19	19.83
110	6.88	8.30	9.85	11.57	12.53	13.56	14.68	15.91	17.25
120	6.08	7.37	8.73	10.22	11.04	11.91	12.85	13.87	14.97
130	5.33	6.49	7.69	8.97	9.67	10.40	11.19	12.03	12.94
140	-	5.66	6.70	7.80	8.38	9.00	9.66	10.36	11.11
150	-	-	-	6.68	7.17	7.69	8.24	8.82	9.44
160	-	-	-	-	-	6.46	6.91	7.39	7.90

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

Cooling capacity	45 279	Btu/h	Current consumption	16.05	A
Power input	4 685	W	Mass flow	715	lbs/h
E.E.R.	9.67				

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	50

Cooling capacity in Btu/h

90	17 316	23 789	31 730	41 318	52 733	66 155	81 762	90 441	99 734
100	14 089	20 237	27 713	36 694	47 358	59 882	74 446	82 548	91 227
110	11 125	16 849	23 759	32 032	41 844	53 370	66 788	74 262	82 275
120	8 424	13 620	19 865	27 328	36 185	46 610	58 777	65 569	72 862
130	-	10 551	16 024	22 574	30 370	39 585	50 390	56 443	62 959
140	-	7 639	12 231	17 755	24 375	32 260	41 578	46 828	52 500

Power input in W

90	3 292	3 896	4 495	5 069	5 598	6 064	6 446	6 600	6 726
100	3 344	3 970	4 603	5 222	5 808	6 342	6 804	7 002	7 175
110	3 329	3 986	4 660	5 332	5 983	6 593	7 143	7 390	7 614
120	3 243	3 937	4 661	5 395	6 119	6 814	7 460	7 758	8 038
130	-	3 822	4 603	5 406	6 211	6 998	7 748	8 104	8 442
140	-	3 634	4 482	5 362	6 256	7 144	8 006	8 421	8 823

Current consumption in A

90	13.27	14.69	16.11	17.51	18.84	20.07	21.16	21.64	22.08
100	13.36	14.84	16.36	17.88	19.37	20.78	22.09	22.70	23.26
110	13.31	14.88	16.51	18.18	19.85	21.47	23.02	23.76	24.47
120	13.11	14.78	16.55	18.39	20.26	22.12	23.93	24.81	25.67
130	-	14.53	16.46	18.49	20.57	22.69	24.79	25.83	26.85
140	-	14.09	16.20	18.44	20.78	23.17	25.58	26.78	27.98

Mass flow in lbs/h

90	355	478	621	785	974	1 189	1 433	1 567	1 708
100	318	445	590	757	947	1 163	1 408	1 541	1 682
110	280	409	557	724	915	1 131	1 375	1 507	1 648
120	241	372	520	688	878	1 093	1 334	1 466	1 605
130	-	331	479	646	835	1 047	1 286	1 415	1 552
140	-	288	434	599	785	994	1 228	1 356	1 491

Energy Efficiency Ratio (E.E.R.)

90	5.26	6.11	7.06	8.15	9.42	10.91	12.68	13.70	14.83
100	4.21	5.10	6.02	7.03	8.15	9.44	10.94	11.79	12.71
110	3.34	4.23	5.10	6.01	6.99	8.09	9.35	10.05	10.81
120	2.60	3.46	4.26	5.07	5.91	6.84	7.88	8.45	9.07
130	-	2.76	3.48	4.18	4.89	5.66	6.50	6.97	7.46
140	-	2.10	2.73	3.31	3.90	4.52	5.19	5.56	5.95

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

Cooling capacity	36 185	Btu/h	Current consumption	20.26	A
Power input	6 119	W	Mass flow	878	lbs/h
E.E.R.	5.91				

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

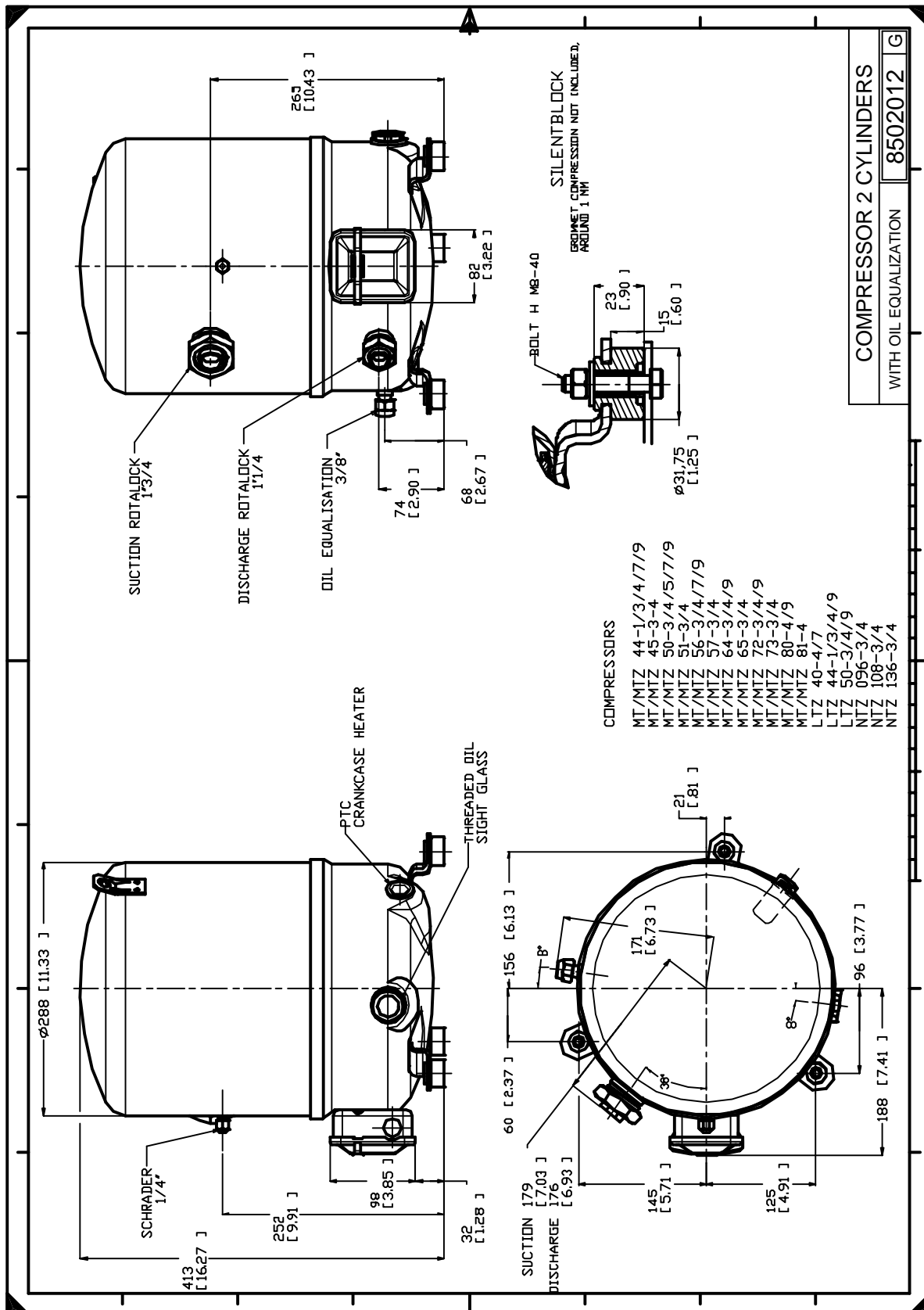
T C : Condensing temperature at dew point

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

All performance data +/- 5%

Sound power data

Sound power level	84	dB(A)
With acoustic hood	78	dB(A)



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