

Model: MTZ50

Data

Type: Hermetic piston compressors

Producer: Danfoss-Maneurop

Series: MTZ

Model: MTZ50

Technical data

Cylinder count:	2
Displacement [m ³ /h]:	14,9
Cylinder capacity [cm ³]:	85,6
RPM [min ⁻¹]:	2900
Weight [kg]:	35
Oil charge [dm ³]:	2
Oil type:	160PZ
Crankcase heater type:	PTC 35 W
Maximum system test pressure low side / high side:	25 / 30
Maximum number of starts without softstart [1/h]:	12
Refrigerant charge limit [dm ³]:	5
Refrigerant:	R134a, 404A/R507, R407C
Sound power [dB]:	83
Sound power with accoustic hood [dB]:	76

Connections

	<u>inches</u>
Suction Rotolock valve connection:	1 3/4"
Discharge Rotolock valve connection:	1 1/4"
Suction connection with supplied sleeve:	7/8"
Discharge connection with supplied sleeve:	3/4"

Approvals

CCC	+
CE	+
UL	+

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Capacity

R404A/R507

Cooling capacity [W]

$t_c \setminus t_e$	-30	-25	-20	-15	-10	-5	0	5	10
30	3 523	4 582	5 951	7 676	9 807	12 389	15 471	19 100	23 323
35	2 899	3 917	5 217	6 847	8 854	11 286	14 190	17 614	21 604
40	2 371	3 328	4 541	6 056	7 921	10 183	12 891	16 090	19 830
45	1 943	2 821	3 927	5 308	7 012	9 086	11 578	14 534	18 003
50	1 619	2 399	3 380	4 608	6 132	7 999	10 255	12 950	16 129
55	-	2 068	2 904	3 961	5 285	6 925	8 928	11 341	14 212
60	-	1 831	2 504	3 370	4 476	5 870	7 601	9 714	12 257

Power input [W]

$t_c \setminus t_e$	-30	-25	-20	-15	-10	-5	0	5	10
30	2 108	2 404	2 686	2 943	3 163	3 337	3 453	3 500	3 469
35	2 199	2 505	2 802	3 081	3 331	3 539	3 697	3 792	3 814
40	2 253	2 573	2 891	3 197	3 479	3 727	3 930	4 078	4 159
45	2 271	2 609	2 952	3 289	3 609	3 901	4 154	4 358	4 502
50	2 253	2 614	2 986	3 358	3 720	4 061	4 369	4 634	4 845
55	-	2 588	2 994	3 406	3 814	4 207	4 575	4 905	5 188
60	-	2 532	2 976	3 433	3 892	4 342	4 772	5 173	5 532

Current [A]

$t_c \setminus t_e$	-30	-25	-20	-15	-10	-5	0	5	10
30	4.80	5.13	5.44	5.73	5.97	6.16	6.29	6.34	6.31
35	4.90	5.24	5.58	5.89	6.17	6.41	6.60	6.72	6.76
40	4.95	5.32	5.68	6.03	6.36	6.66	6.91	7.10	7.22
45	4.97	5.36	5.75	6.15	6.53	6.89	7.21	7.48	7.68
50	4.94	5.36	5.79	6.24	6.68	7.10	7.50	7.85	8.15
55	-	5.31	5.80	6.30	6.80	7.30	7.77	8.22	8.62
60	-	5.22	5.76	6.32	6.89	7.47	8.03	8.58	9.09

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Capacity

Mass flow [kg/s]

$t_c \setminus t_e$	-30	-25	-20	-15	-10	-5	0	5	10
30	97.23	126.02	160.96	202.95	252.88	311.63	380.09	459.14	549.66
35	85.58	114.54	149.68	191.87	242.01	300.97	369.65	448.92	539.68
40	76.17	104.68	139.37	181.13	230.83	289.37	357.63	436.49	526.85
45	69.25	96.68	130.28	170.96	219.60	277.07	344.28	422.09	511.41
50	65.07	90.76	122.65	161.61	208.54	264.32	329.83	405.96	493.60
55	-	87.18	116.71	153.33	197.91	251.35	314.53	388.34	473.66
60	-	86.18	112.71	146.34	187.94	238.40	298.61	369.46	451.83

C.O.P. [W/W]

$t_c \setminus t_e$	-30	-25	-20	-15	-10	-5	0	5	10
30	1.67	1.91	2.22	2.61	3.10	3.71	4.48	5.46	6.72
35	1.32	1.56	1.86	2.22	2.66	3.19	3.84	4.64	5.66
40	1.05	1.29	1.57	1.89	2.28	2.73	3.28	3.95	4.77
45	0.86	1.08	1.33	1.61	1.94	2.33	2.79	3.33	4.00
50	0.72	0.92	1.13	1.37	1.65	1.97	2.35	2.79	3.33
55	-	0.80	0.97	1.16	1.39	1.65	1.95	2.31	2.74
60	-	0.72	0.84	0.98	1.15	1.35	1.59	1.88	2.22

Operating conditions: suction superheat: 11.1 K, subcooling: 8.3 K

t_c - Condensing temperature [°C]

t_e - Evaporating temperature [°C]

Application range

