

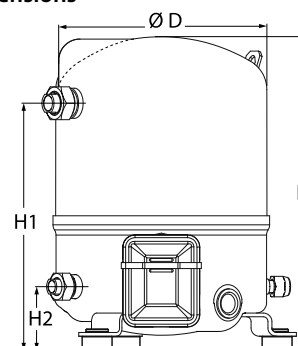
Datasheets

Danfoss Reciprocating compressors **MT / MTZ / NTZ**



General Characteristics

Model number (on compressor nameplate)		MTZ36JG4AVE
Code number for Singlepack*		MTZ36-4VI
Code number for Industrial pack**		MTZ36-4VM
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 equalisation connection		3/8" flare SAE
Oil drain connection		None
LP gauge port		Schrader
IPR valve		30 bar / 8 bar
Cylinders		1
Swept volume		60,47 cm ³ /rev
Displacement @ Nominal speed		10.5 m ³ /h @ 2900 rpm - 12.7 m ³ /h @ 3500 rpm
Net weight		25 kg
Oil charge		0,95 litre, POE - 160PZ
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		2,5 kg
Approved refrigerants		R404A, R507A, R134a, R407C, R407A, R407F

Dimensions


D=224 mm

H=356 mm

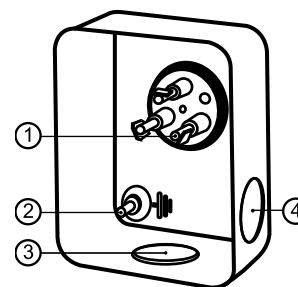
H1=263 mm

H2=68 mm

H3=- mm

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	5.57 Ω
Maximum Continuous Current (MCC)	9 A
Locked Rotor Amps (LRA)	30 A
Motor protection	Internal overload protector

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")

Recommended Installation torques

Oil sight glass	50 Nm
Power connections / Earth connection	Nm / 2 Nm
Mounting bolts	15 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

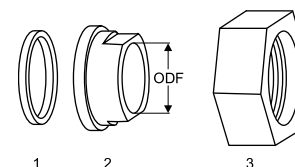
Approvals : CE certified, UL certified (file SA6873), CCC certified

*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

Gaskets, sleeves and nuts


- 1: Gasket
- 2: Solder sleeve
- 3: Rotolock nut

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.

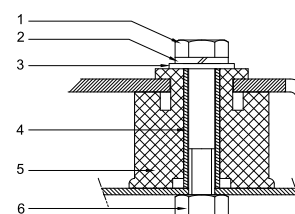
Angle adapter set, C09 (1-1/4"~5/8"), C06 (1"~1/2")	7703012
Valve set, V09 (1-1/4"~5/8"), V06 (1"~1/2")	7703005
Gasket set, 1", 1-1/4", 1-3/4", OSG gaskets black & white	8156009

Oil / lubricants
Code no.

POE lubricant, 160PZ, 1 litre can	7754019
POE lubricant, 160PZ, 2.5 litre can	120Z0573

Crankcase heaters
Code no.

PTC heater 27W, CE mark, UL	120Z0459
Belt type crankcase heater, 54 W, 230 V, CE mark, UL	7773106
Belt type crankcase heater, 54 W, 400 V, UL	7773013

Mounting kit


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

Miscellaneous accessories
Code no.

Electronic soft start kit, MCI 15 C	7705006
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

Performance data at 50 Hz, EN 12900 rating conditions
R404A

Cond. temp. in °C (tc)	Evaporating temperature in °C (to)								
	-30	-25	-20	-15	-10	-5	0	5	10

Cooling capacity in W

30	2 064	2 857	3 827	4 996	6 384	8 013	9 904	12 078	14 557
35	1 809	2 550	3 451	4 533	5 817	7 324	9 076	11 093	13 398
40	1 554	2 243	3 073	4 067	5 245	6 630	8 241	10 101	12 230
45	1 300	1 934	2 693	3 598	4 670	5 930	7 400	9 101	11 054
50	1 046	1 624	2 311	3 125	4 089	5 225	6 552	8 093	9 868
55	-	1 313	1 926	2 649	3 504	4 513	5 697	7 077	8 674
60	-	1 001	1 538	2 169	2 914	3 796	4 835	6 052	7 469

Power input in W

30	1 473	1 685	1 882	2 060	2 216	2 346	2 446	2 512	2 541
35	1 495	1 730	1 953	2 159	2 344	2 506	2 640	2 743	2 811
40	1 504	1 764	2 013	2 248	2 465	2 660	2 830	2 970	3 078
45	1 498	1 784	2 061	2 327	2 576	2 806	3 013	3 192	3 340
50	1 476	1 789	2 096	2 393	2 677	2 942	3 187	3 407	3 598
55	-	1 778	2 116	2 446	2 764	3 068	3 352	3 613	3 848
60	-	1 748	2 119	2 483	2 838	3 180	3 505	3 809	4 089

Current consumption in A

30	3.53	3.76	4.01	4.27	4.52	4.74	4.91	5.02	5.05
35	3.56	3.81	4.08	4.37	4.64	4.89	5.09	5.23	5.29
40	3.59	3.86	4.17	4.48	4.79	5.07	5.31	5.49	5.60
45	3.59	3.90	4.25	4.60	4.95	5.28	5.57	5.80	5.95
50	3.56	3.92	4.31	4.71	5.12	5.50	5.84	6.13	6.34
55	-	3.89	4.34	4.80	5.27	5.71	6.12	6.48	6.76
60	-	3.81	4.32	4.86	5.39	5.91	6.39	6.82	7.19

Mass flow in kg/h

30	65	88	115	146	182	223	270	324	384
35	61	84	111	142	177	217	263	315	374
40	57	80	106	137	171	211	256	307	364
45	52	75	101	131	166	204	248	298	353
50	47	70	96	126	159	197	240	288	342
55	-	64	90	119	152	189	231	278	331
60	-	57	82	111	144	180	221	267	319

Coefficient of performance (C.O.P.)

30	1.40	1.70	2.03	2.42	2.88	3.42	4.05	4.81	5.73
35	1.21	1.47	1.77	2.10	2.48	2.92	3.44	4.04	4.77
40	1.03	1.27	1.53	1.81	2.13	2.49	2.91	3.40	3.97
45	0.87	1.08	1.31	1.55	1.81	2.11	2.46	2.85	3.31
50	0.71	0.91	1.10	1.31	1.53	1.78	2.06	2.38	2.74
55	-	0.74	0.91	1.08	1.27	1.47	1.70	1.96	2.25
60	-	0.57	0.73	0.87	1.03	1.19	1.38	1.59	1.83

Nominal performance at to = -10 °C, tc = 45 °C

Cooling capacity	4 670	W
Power input	2 576	W
Current consumption	4.95	A
Mass flow	166	kg/h
C.O.P.	1.81	


Pressure switch settings

Maximum HP switch setting	27.7	bar(g)
Minimum LP switch setting	0.2	bar(g)
LP pump down setting	0.9	bar(g)

Sound power data

Sound power level	70	dB(A)
With acoustic hood	64	dB(A)

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

Rating conditions : Superheat = 10 K , Subcooling = 0 K

All performance data +/- 5%

Performance data at 50 Hz, ARI rating conditions
R404A

Cond. temp. in °C (tc)	Evaporating temperature in °C (to)							
	-30	-25	-20	-15	-10	-5	0	5

Cooling capacity in W

30	2 297	3 172	4 238	5 518	7 036	8 812	10 869	13 228	15 913
35	2 035	2 860	3 859	5 054	6 469	8 124	10 044	12 249	14 763
40	1 772	2 547	3 478	4 587	5 898	7 432	9 214	11 264	13 605
45	1 507	2 231	3 093	4 116	5 323	6 736	8 378	10 273	12 441
50	1 239	1 913	2 707	3 643	4 745	6 036	7 540	9 278	11 275
55	-	1 592	2 317	3 167	4 165	5 336	6 701	8 286	10 112
60	-	1 265	1 926	2 692	3 589	4 641	5 872	7 306	8 966

Power input in W

30	1 473	1 685	1 882	2 060	2 216	2 346	2 446	2 512	2 541
35	1 495	1 730	1 953	2 159	2 344	2 506	2 640	2 743	2 811
40	1 504	1 764	2 013	2 248	2 465	2 660	2 830	2 970	3 078
45	1 498	1 784	2 061	2 327	2 576	2 806	3 013	3 192	3 340
50	1 476	1 789	2 096	2 393	2 677	2 942	3 187	3 407	3 598
55	-	1 778	2 116	2 446	2 764	3 068	3 352	3 613	3 848
60	-	1 748	2 119	2 483	2 838	3 180	3 505	3 809	4 089

Current consumption in A

30	3.53	3.76	4.01	4.27	4.52	4.74	4.91	5.02	5.05
35	3.56	3.81	4.08	4.37	4.64	4.89	5.09	5.23	5.29
40	3.59	3.86	4.17	4.48	4.79	5.07	5.31	5.49	5.60
45	3.59	3.90	4.25	4.60	4.95	5.28	5.57	5.80	5.95
50	3.56	3.92	4.31	4.71	5.12	5.50	5.84	6.13	6.34
55	-	3.89	4.34	4.80	5.27	5.71	6.12	6.48	6.76
60	-	3.81	4.32	4.86	5.39	5.91	6.39	6.82	7.19

Mass flow in kg/h

30	65	87	114	145	181	222	269	321	381
35	61	84	110	141	176	216	262	313	371
40	57	80	106	136	170	210	254	305	361
45	52	75	101	131	165	203	247	296	351
50	47	69	95	125	158	196	238	286	340
55	-	63	89	118	151	188	230	276	329
60	-	56	82	111	143	179	220	266	317

Coefficient of performance (C.O.P.)

30	1.56	1.88	2.25	2.68	3.17	3.76	4.44	5.27	6.26
35	1.36	1.65	1.98	2.34	2.76	3.24	3.80	4.47	5.25
40	1.18	1.44	1.73	2.04	2.39	2.79	3.26	3.79	4.42
45	1.01	1.25	1.50	1.77	2.07	2.40	2.78	3.22	3.72
50	0.84	1.07	1.29	1.52	1.77	2.05	2.37	2.72	3.13
55	-	0.90	1.10	1.29	1.51	1.74	2.00	2.29	2.63
60	-	0.72	0.91	1.08	1.26	1.46	1.68	1.92	2.19

Nominal performance at to = -10 °C, tc = 45 °C

Cooling capacity	5 323	W
Power input	2 576	W
Current consumption	4.95	A
Mass flow	165	kg/h
C.O.P.	2.07	

Pressure switch settings

Maximum HP switch setting	27.7	bar(g)
Minimum LP switch setting	0.2	bar(g)
LP pump down setting	0.9	bar(g)

Sound power data

Sound power level	70	dB(A)
With acoustic hood	64	dB(A)

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

Rating conditions : Superheat = 11.1 K , Subcooling = 8.3 K

All performance data +/- 5%

