

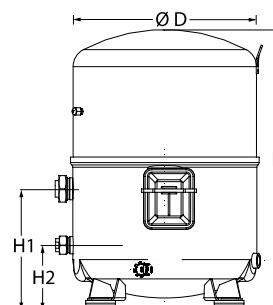
Datasheets

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



General Characteristics

Model number (on compressor nameplate)		MTZ125HU4VE
Code number for Singlepack*		MTZ125-4VI
Code number for Industrial pack**		MTZ125-4VM
Drawing number		8504010f
Suction and discharge connections		Rotolock
Suction connection		1-3/4 " Rotolock
Discharge connection		1-1/4 " Rotolock
Suction connection with supplied sleeve		1-1/8 " ODF
Discharge connection with supplied sleeve		3/4 " 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		4
Swept volume		215,44 cm ³ /rev
Displacement @ Nominal speed		37.5 m ³ /h @ 2900 rpm - 45.2 m ³ /h @ 3500 rpm
Net weight		64 kg
Oil charge		3.9 litre, POE - 175PZ
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		10 kg
Approved refrigerants		R404A, R134a, R407C, R407A/F, R448A, R449A, R452A

Dimensions


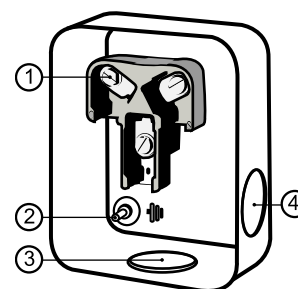
D=352 mm

H=519 mm

H1=233 mm

H2=125 mm

H3=- mm

Terminal box


IP54 (with cable gland)

1: Screw connectors 10-32 UNF x 9.5

2: Earth M4-12

3: Knock-out Ø 29 mm (1.14")

4: Knock-out Ø 25.5 mm (1.00")

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	1.57 Ω
Maximum Continuous Current (MCC)	27 A
Locked Rotor Amps (LRA)	105 A
Motor protection	Internal overload protector

Recommended Installation torques

Oil sight glass	50 Nm
Power connections / Earth connection	3 Nm / 2 Nm
Mounting bolts	50 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

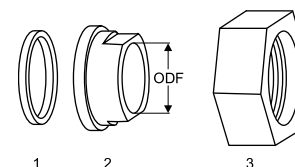
Approvals : CE certified, UL certified (file SA6873), -

*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, P02 (1-3/4" Rotolock, 1-1/8" ODF)	8153004
Angle adapter, C02 (1-3/4" Rotolock, 1-1/8" ODF)	8168005
Rotolock valve, V02 (1-3/4" Rotolock, 1-1/8" ODF)	8168028
Gasket, 1-3/4"	8156132

Gaskets, sleeves and nuts


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

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.

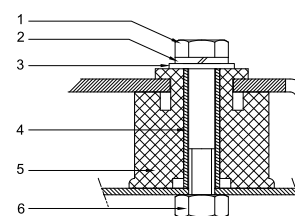
Angle adapter set, C02 (1-3/4"~1-1/8"), C04 (1-1/4"~3/4")	7703014
Valve set, V02 (1-3/4"~1-1/8"), V04 (1-1/4"~3/4")	7703009
Gasket set, 1", 1-1/4", 1-3/4", OSG gaskets black & white	8156009

Oil / lubricants
Code no.

POE lubricant, 175PZ, 1 litre can	120Z0638
POE lubricant, 175PZ, 2.5 litre can	120Z0639

Crankcase heaters
Code no.

PTC heater 27W, CE mark, UL	120Z0459
Belt type crankcase heater, 75 W, 230 V, CE mark, UL	7773108
Belt type crankcase heater, 75 W, 400 V, CE mark, UL	7773118
Belt type crankcase heater, 75 W, 460 V, CE mark, UL	120Z0464

Mounting kit


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

Miscellaneous accessories
Code no.

Electronic soft start kit, MCI 25 C	7705007
Soft start kit with statoric resistors, prewired box, SCR03	7705001
Acoustic hood for 4 cylinder compressor	120Z0473
Oil equalisation nut	8153127

Spare parts
Code no.

Mounting kit for 4 cylinder compressor & MS, including 4 grommets, 4 bolts	8156007
Oil sight glass with gaskets (black & white)	8156019
Gasket for oil sight glass (black chloroprene)	8156145
Service kit for terminal box 96 x 115 mm, including 1 cover, 1 clamp	8156135
T block connector 52 x 57 mm	8173230

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

Cooling capacity in W

30	7 283	9 943	13 245	17 267	22 089	27 791	34 451	42 148	50 963
35	6 328	8 755	11 770	15 453	19 884	25 142	31 306	38 455	46 669
40	5 457	7 649	10 377	13 721	17 760	22 574	28 242	34 842	42 455
45	4 660	6 616	9 057	12 061	15 708	20 078	25 248	31 300	38 311
50	3 927	5 648	7 800	10 464	13 719	17 643	22 316	27 818	34 227
55	-	4 734	6 598	8 921	11 782	15 261	19 436	24 387	30 194
60	-	3 865	5 440	7 422	9 889	12 922	16 599	20 999	26 202

Power input in W

30	5 064	5 716	6 320	6 867	7 350	7 764	8 100	8 351	8 510
35	5 125	5 849	6 533	7 168	7 748	8 266	8 714	9 086	9 374
40	5 154	5 949	6 711	7 433	8 108	8 729	9 289	9 780	10 195
45	5 159	6 023	6 863	7 671	8 439	9 162	9 831	10 440	10 981
50	5 147	6 079	6 995	7 887	8 747	9 570	10 348	11 073	11 740
55	-	6 124	7 114	8 088	9 040	9 962	10 847	11 687	12 477
60	-	6 164	7 228	8 284	9 325	10 344	11 335	12 289	13 201

Current consumption in A

30	9.46	10.24	11.02	11.76	12.43	13.00	13.45	13.75	13.87
35	9.55	10.40	11.26	12.10	12.89	13.59	14.19	14.65	14.94
40	9.61	10.54	11.50	12.44	13.35	14.19	14.93	15.56	16.03
45	9.64	10.65	11.70	12.76	13.79	14.78	15.68	16.48	17.14
50	9.61	10.72	11.87	13.05	14.22	15.35	16.42	17.40	18.25
55	-	10.73	12.00	13.30	14.61	15.90	17.14	18.30	19.36
60	-	10.67	12.06	13.49	14.95	16.40	17.82	19.18	20.44

Mass flow in kg/h

30	229	306	397	505	630	774	939	1 127	1 338
35	214	289	378	483	605	746	908	1 093	1 301
40	200	273	359	461	581	719	878	1 059	1 264
45	188	257	341	440	557	692	847	1 025	1 226
50	176	243	324	420	533	665	817	992	1 189
55	-	230	307	400	510	639	788	958	1 152
60	-	218	292	382	489	614	759	926	1 116

Coefficient of performance (C.O.P.)

30	1.44	1.74	2.10	2.51	3.01	3.58	4.25	5.05	5.99
35	1.23	1.50	1.80	2.16	2.57	3.04	3.59	4.23	4.98
40	1.06	1.29	1.55	1.85	2.19	2.59	3.04	3.56	4.16
45	0.90	1.10	1.32	1.57	1.86	2.19	2.57	3.00	3.49
50	0.76	0.93	1.12	1.33	1.57	1.84	2.16	2.51	2.92
55	-	0.77	0.93	1.10	1.30	1.53	1.79	2.09	2.42
60	-	0.63	0.75	0.90	1.06	1.25	1.46	1.71	1.98

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

Cooling capacity	15 708	W
Power input	8 439	W
Current consumption	13.79	A
Mass flow	557	kg/h
C.O.P.	1.86	


Pressure switch settings

Maximum HP switch setting	27.7	bar(g)
Minimum LP switch setting	1	bar(g)
LP pump down setting	1.3	bar(g)

Sound power data

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

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

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

Tolerance according EN12900

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	8 108	11 039	14 666	19 073	24 344	30 560	37 806	46 162	55 712
35	7 121	9 819	13 161	17 231	22 113	27 890	34 646	42 462	51 423
40	6 221	8 686	11 743	15 476	19 969	25 307	31 574	38 853	47 226
45	5 401	7 633	10 404	13 800	17 906	22 806	28 586	35 329	43 119
50	4 652	6 651	9 138	12 198	15 917	20 383	25 680	31 893	39 106
55	-	5 736	7 939	10 666	14 005	18 041	22 863	28 554	35 202
60	-	4 886	6 812	9 213	12 179	15 798	20 159	25 349	31 453

Power input in W

30	5 064	5 716	6 320	6 867	7 350	7 764	8 100	8 351	8 510
35	5 125	5 849	6 533	7 168	7 748	8 266	8 714	9 086	9 374
40	5 154	5 949	6 711	7 433	8 108	8 729	9 289	9 780	10 195
45	5 159	6 023	6 863	7 671	8 439	9 162	9 831	10 440	10 981
50	5 147	6 079	6 995	7 887	8 747	9 570	10 348	11 073	11 740
55	-	6 124	7 114	8 088	9 040	9 962	10 847	11 687	12 477
60	-	6 164	7 228	8 284	9 325	10 344	11 335	12 289	13 201

Current consumption in A

30	9.46	10.24	11.02	11.76	12.43	13.00	13.45	13.75	13.87
35	9.55	10.40	11.26	12.10	12.89	13.59	14.19	14.65	14.94
40	9.61	10.54	11.50	12.44	13.35	14.19	14.93	15.56	16.03
45	9.64	10.65	11.70	12.76	13.79	14.78	15.68	16.48	17.14
50	9.61	10.72	11.87	13.05	14.22	15.35	16.42	17.40	18.25
55	-	10.73	12.00	13.30	14.61	15.90	17.14	18.30	19.36
60	-	10.67	12.06	13.49	14.95	16.40	17.82	19.18	20.44

Mass flow in kg/h

30	228	304	395	502	626	769	933	1 119	1 329
35	213	287	376	480	602	742	903	1 086	1 292
40	199	271	357	459	577	715	872	1 052	1 255
45	187	256	339	438	553	688	842	1 018	1 218
50	175	242	322	417	530	661	812	985	1 181
55	-	228	306	398	507	635	783	952	1 145
60	-	216	291	380	486	610	754	920	1 109

Coefficient of performance (C.O.P.)

30	1.60	1.93	2.32	2.78	3.31	3.94	4.67	5.53	6.55
35	1.39	1.68	2.01	2.40	2.85	3.37	3.98	4.67	5.49
40	1.21	1.46	1.75	2.08	2.46	2.90	3.40	3.97	4.63
45	1.05	1.27	1.52	1.80	2.12	2.49	2.91	3.38	3.93
50	0.90	1.09	1.31	1.55	1.82	2.13	2.48	2.88	3.33
55	-	0.94	1.12	1.32	1.55	1.81	2.11	2.44	2.82
60	-	0.79	0.94	1.11	1.31	1.53	1.78	2.06	2.38

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

Cooling capacity	17 906	W
Power input	8 439	W
Current consumption	13.79	A
Mass flow	553	kg/h
C.O.P.	2.12	

Pressure switch settings

Maximum HP switch setting	27.7	bar(g)
Minimum LP switch setting	1	bar(g)
LP pump down setting	1.3	bar(g)

Sound power data

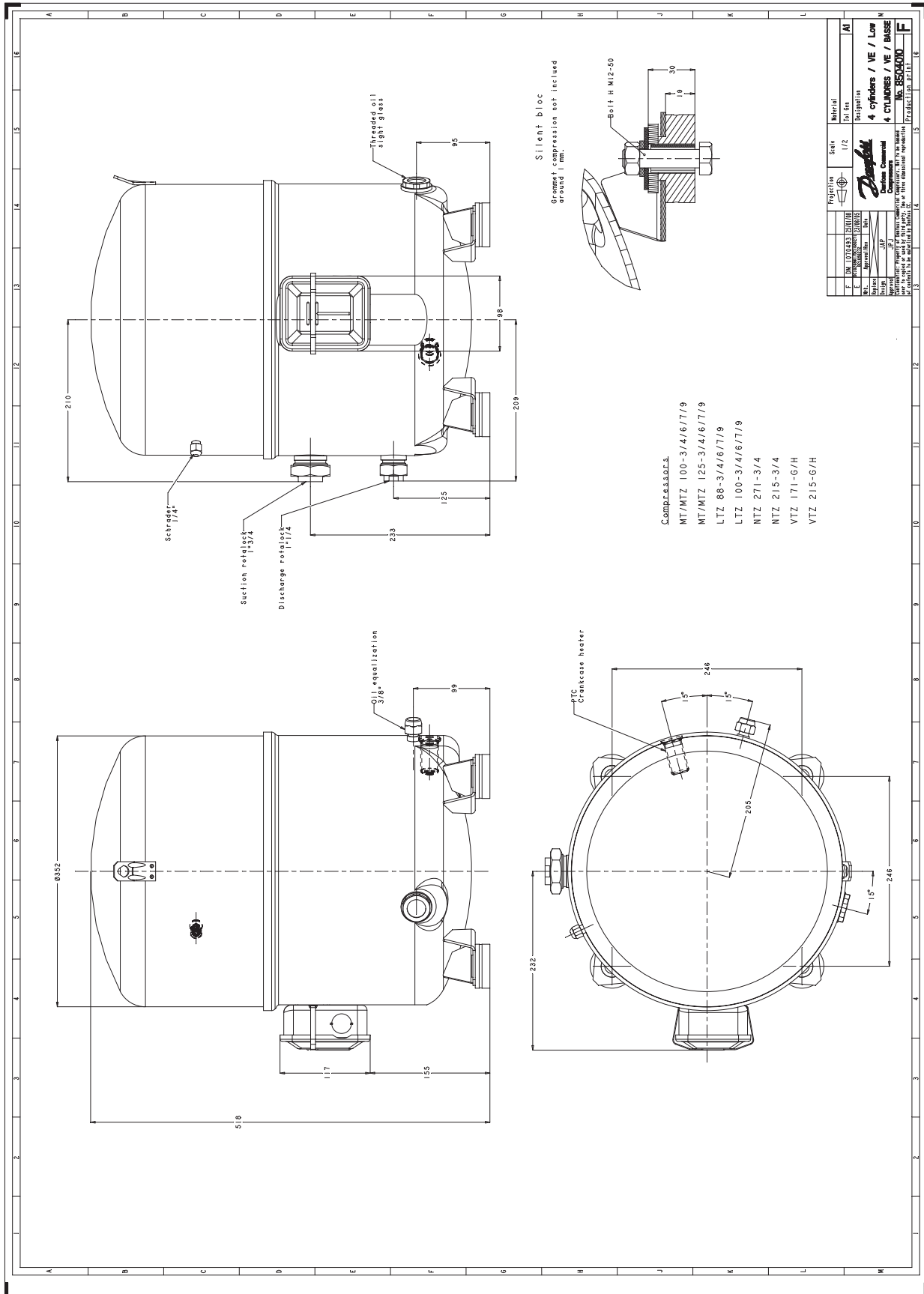
Sound power level	84	dB(A)
With acoustic hood	78	dB(A)

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

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

Tolerance according EN12900



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