

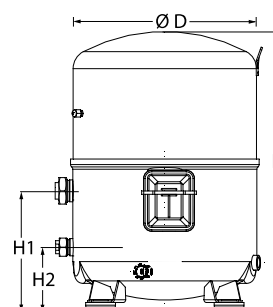
Datasheets

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



General Characteristics

Model number (on compressor nameplate)		MT125HU4DVE
Code number for Singlepack*		MT125-4VI
Code number for Industrial pack**		MT125-4VM
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, Mineral - 160P	
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	R22, R417A-160PZ	

Dimensions


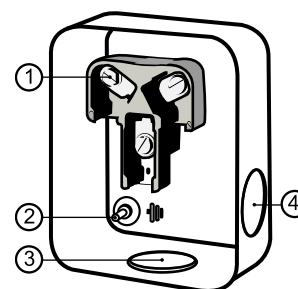
D=352 mm

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

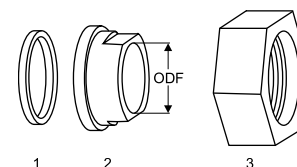
**Industrial pack: 6 Unboxed compressors on pallet (order per multiples of 6)

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.

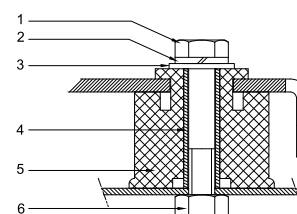
Mineral oil, 160P, 2 litre can	7754001
Mineral oil, 160P, 5 litre can	7754002

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
R22

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

Cooling capacity in W

30	8 794	11 705	15 221	19 422	24 385	30 191	36 919	44 648	53 459
35	7 857	10 650	14 012	18 021	22 757	28 299	34 726	42 117	50 552
40	6 998	9 649	12 834	16 630	21 116	26 370	32 473	39 502	47 537
45	6 225	8 713	11 698	15 257	19 470	24 415	30 170	36 814	44 427
50	-	7 853	10 615	13 916	17 833	22 445	27 829	34 065	41 232
55	-	-	9 595	12 614	16 214	20 470	25 462	31 267	37 963
60	-	-	-	11 364	14 623	18 502	23 078	28 429	34 632
65	-	-	-	-	13 072	16 550	20 688	25 562	31 249

Power input in W

30	4 821	5 395	5 939	6 430	6 848	7 172	7 381	7 453	7 367
35	5 081	5 689	6 276	6 822	7 305	7 705	7 999	8 168	8 189
40	5 301	5 950	6 588	7 196	7 752	8 234	8 622	8 894	9 030
45	5 476	6 173	6 870	7 547	8 182	8 754	9 243	9 626	9 884
50	-	6 352	7 115	7 868	8 590	9 259	9 856	10 358	10 744
55	-	-	7 316	8 153	8 969	9 743	10 454	11 082	11 604
60	-	-	-	8 396	9 313	10 199	11 033	11 793	12 459
65	-	-	-	-	9 617	10 622	11 585	12 485	13 301

Current consumption in A

30	8.57	9.27	9.98	10.66	11.26	11.74	12.05	12.15	11.99
35	8.90	9.65	10.44	11.21	11.92	12.53	12.99	13.26	13.29
40	9.18	10.00	10.88	11.75	12.59	13.35	13.97	14.43	14.66
45	9.40	10.31	11.28	12.28	13.26	14.18	14.98	15.63	16.08
50	-	10.56	11.65	12.78	13.91	15.00	16.00	16.86	17.54
55	-	-	11.95	13.24	14.54	15.81	17.01	18.10	19.02
60	-	-	-	13.63	15.11	16.59	18.01	19.33	20.52
65	-	-	-	-	15.64	17.32	18.98	20.55	22.01

Mass flow in kg/h

30	192	253	324	408	505	617	745	892	1 057
35	178	239	310	393	489	601	728	874	1 039
40	165	225	295	377	473	583	709	853	1 016
45	154	212	281	361	455	563	687	828	989
50	-	201	267	345	436	541	662	801	958
55	-	-	254	329	416	518	635	770	923
60	-	-	-	313	396	494	607	737	885
65	-	-	-	-	376	468	576	701	845

Coefficient of performance (C.O.P.)

30	1.82	2.17	2.56	3.02	3.56	4.21	5.00	5.99	7.26
35	1.55	1.87	2.23	2.64	3.12	3.67	4.34	5.16	6.17
40	1.32	1.62	1.95	2.31	2.72	3.20	3.77	4.44	5.26
45	1.14	1.41	1.70	2.02	2.38	2.79	3.26	3.82	4.49
50	-	1.24	1.49	1.77	2.08	2.42	2.82	3.29	3.84
55	-	-	1.31	1.55	1.81	2.10	2.44	2.82	3.27
60	-	-	-	1.35	1.57	1.81	2.09	2.41	2.78
65	-	-	-	-	1.36	1.56	1.79	2.05	2.35

Nominal performance at to = 5 °C, tc = 50 °C

Cooling capacity	27 829	W
Power input	9 856	W
Current consumption	16.00	A
Mass flow	662	kg/h
C.O.P.	2.82	

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	81	dB(A)
With acoustic hood	75	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%

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Performance data at 50 Hz, ARI rating conditions
R22

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

Cooling capacity in W

30	9 340	12 422	16 140	20 578	25 819	31 943	39 035	47 177	56 450
35	8 375	11 342	14 909	19 159	24 175	30 039	36 833	44 641	53 545
40	7 489	10 316	13 708	17 746	22 514	28 093	34 566	42 016	50 525
45	6 693	9 358	12 550	16 352	20 847	26 117	32 245	39 313	47 404
50	-	8 477	11 445	14 988	19 186	24 123	29 882	36 544	44 192
55	-	-	10 407	13 665	17 543	22 123	27 487	33 720	40 901
60	-	-	-	12 396	15 929	20 127	25 074	30 852	37 544
65	-	-	-	-	14 355	18 149	22 654	27 954	34 130

Power input in W

30	4 821	5 395	5 939	6 430	6 848	7 172	7 381	7 453	7 367
35	5 081	5 689	6 276	6 822	7 305	7 705	7 999	8 168	8 189
40	5 301	5 950	6 588	7 196	7 752	8 234	8 622	8 894	9 030
45	5 476	6 173	6 870	7 547	8 182	8 754	9 243	9 626	9 884
50	-	6 352	7 115	7 868	8 590	9 259	9 856	10 358	10 744
55	-	-	7 316	8 153	8 969	9 743	10 454	11 082	11 604
60	-	-	-	8 396	9 313	10 199	11 033	11 793	12 459
65	-	-	-	-	9 617	10 622	11 585	12 485	13 301

Current consumption in A

30	8.57	9.27	9.98	10.66	11.26	11.74	12.05	12.15	11.99
35	8.90	9.65	10.44	11.21	11.92	12.53	12.99	13.26	13.29
40	9.18	10.00	10.88	11.75	12.59	13.35	13.97	14.43	14.66
45	9.40	10.31	11.28	12.28	13.26	14.18	14.98	15.63	16.08
50	-	10.56	11.65	12.78	13.91	15.00	16.00	16.86	17.54
55	-	-	11.95	13.24	14.54	15.81	17.01	18.10	19.02
60	-	-	-	13.63	15.11	16.59	18.01	19.33	20.52
65	-	-	-	-	15.64	17.32	18.98	20.55	22.01

Mass flow in kg/h

30	191	251	322	405	502	613	741	886	1 051
35	177	237	308	391	487	598	724	869	1 033
40	164	224	294	375	470	580	705	848	1 010
45	153	211	280	360	452	560	683	824	983
50	-	200	266	343	434	538	659	796	952
55	-	-	253	327	414	515	632	766	918
60	-	-	-	311	394	491	603	733	880
65	-	-	-	-	374	466	573	697	840

Coefficient of performance (C.O.P.)

30	1.94	2.30	2.72	3.20	3.77	4.45	5.29	6.33	7.66
35	1.65	1.99	2.38	2.81	3.31	3.90	4.60	5.47	6.54
40	1.41	1.73	2.08	2.47	2.90	3.41	4.01	4.72	5.60
45	1.22	1.52	1.83	2.17	2.55	2.98	3.49	4.08	4.80
50	-	1.33	1.61	1.90	2.23	2.61	3.03	3.53	4.11
55	-	-	1.42	1.68	1.96	2.27	2.63	3.04	3.52
60	-	-	-	1.48	1.71	1.97	2.27	2.62	3.01
65	-	-	-	-	1.49	1.71	1.96	2.24	2.57

Nominal performance at to = 7.2 °C, tc = 54.4 °C

Cooling capacity	30 429	W
Power input	10 664	W
Current consumption	17.37	A
Mass flow	692	kg/h
C.O.P.	2.85	

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	81	dB(A)
With accoustic hood	75	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%

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