

Datasheets

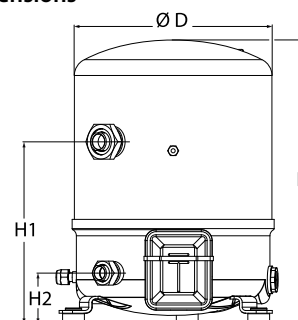
Danfoss Reciprocating compressors **MT / MTZ / NTZ**



General Characteristics

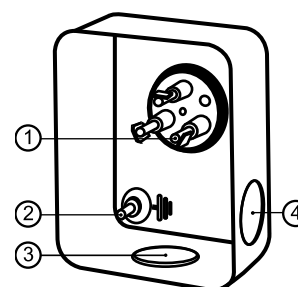
Model number (on compressor nameplate)		MT64HM4DVE
Code number for Singlepack*		MT64-4VI
Code number for Industrial pack**		MT64-4VM
Drawing number		8502012g
Suction and discharge connections		Rotolock
Suction connection		1-3/4" Rotolock
Discharge connection		1-1/4" Rotolock
Suction connection with supplied sleeve		7/8" ODF
Discharge connection with supplied sleeve		3/4" ODF
Oil sight glass		Threaded
Oil equalisation connection		3/8" flare SAE
Oil drain connection		None
LP gauge port		Schrader
IPR valve		30 bar / 8 bar
Cylinders	2	
Swept volume	107,71 cm ³ /rev	
Displacement @ Nominal speed	18.7 m ³ /h @ 2900 rpm - 22.6 m ³ /h @ 3500 rpm	
Net weight	39 kg	
Oil charge	1,8 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	5 kg	
Approved refrigerants	R22, R417A-160PZ	

Dimensions



D=288 mm
H=413 mm
H1=265 mm
H2=74 mm
H3=- mm

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	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	2.39 Ω
Maximum Continuous Current (MCC)	14 A
Locked Rotor Amps (LRA)	64 A
Motor protection	Internal overload protector

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

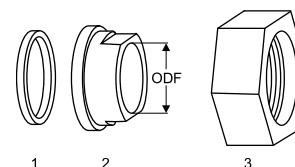
**Industrial pack: 6 Unboxed compressors on pallet (order per multiples of 6)

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

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, 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.

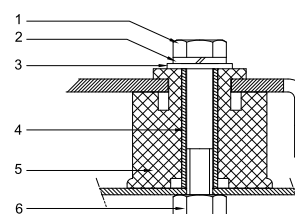
Mineral oil, 160P, 2 litre can	7754001
Mineral oil, 160P, 5 litre can	7754002

Crankcase heaters

Code no.

PTC heater 27W, CE mark, UL	120Z0459
Belt type crankcase heater, 65 W, 230 V, CE mark, UL	7773107
Belt type crankcase heater, 65 W, 400 V, CE mark, UL	7773117
Belt type crankcase heater, 65 W, 460 V, CE mark, UL	120Z0466

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 2 cylinder compressor	120Z0472
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
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	4 151	5 704	7 573	9 791	12 392	15 408	18 872	22 819	27 280
35	3 736	5 224	7 009	9 125	11 604	14 480	17 786	21 556	25 822
40	3 324	4 741	6 435	8 442	10 794	13 524	16 666	20 252	24 316
45	2 923	4 261	5 860	7 751	9 970	12 547	15 518	18 915	22 771
50	-	3 793	5 289	7 059	9 138	11 557	14 350	17 551	21 193
55	-	-	4 731	6 374	8 306	10 560	13 170	16 169	19 590
60	-	-	-	5 701	7 481	9 564	11 985	14 776	17 970
65	-	-	-	-	6 671	8 577	10 802	13 378	16 339

Power input in W

30	2 297	2 598	2 861	3 087	3 277	3 432	3 553	3 642	3 699
35	2 356	2 704	3 012	3 282	3 516	3 713	3 875	4 004	4 100
40	2 391	2 791	3 150	3 469	3 751	3 995	4 204	4 377	4 517
45	2 397	2 852	3 267	3 641	3 976	4 272	4 532	4 755	4 944
50	-	2 882	3 357	3 790	4 183	4 537	4 852	5 131	5 374
55	-	-	3 412	3 910	4 366	4 782	5 158	5 497	5 799
60	-	-	-	3 993	4 517	5 000	5 443	5 846	6 212
65	-	-	-	-	4 630	5 185	5 699	6 172	6 606

Current consumption in A

30	5.52	5.84	6.14	6.42	6.67	6.89	7.07	7.20	7.28
35	5.60	5.95	6.30	6.62	6.91	7.16	7.38	7.55	7.67
40	5.64	6.05	6.45	6.83	7.17	7.48	7.75	7.97	8.13
45	5.63	6.12	6.59	7.03	7.45	7.82	8.16	8.44	8.67
50	-	6.12	6.68	7.21	7.71	8.17	8.58	8.95	9.25
55	-	-	6.71	7.34	7.94	8.49	9.00	9.46	9.86
60	-	-	-	7.40	8.11	8.78	9.40	9.97	10.48
65	-	-	-	-	8.22	9.01	9.76	10.45	11.08

Mass flow in kg/h

30	90	122	161	205	256	315	381	456	540
35	84	117	154	198	249	307	373	447	530
40	78	110	148	191	241	298	363	436	518
45	72	104	140	183	232	288	352	424	505
50	-	97	133	175	223	278	340	411	491
55	-	-	125	166	213	266	328	397	475
60	-	-	-	156	202	254	314	382	458
65	-	-	-	-	191	241	299	365	439

Coefficient of performance (C.O.P.)

30	1.81	2.20	2.65	3.17	3.78	4.49	5.31	6.27	7.38
35	1.59	1.93	2.33	2.78	3.30	3.90	4.59	5.38	6.30
40	1.39	1.70	2.04	2.43	2.88	3.39	3.96	4.63	5.38
45	1.22	1.49	1.79	2.13	2.51	2.94	3.42	3.98	4.61
50	-	1.32	1.58	1.86	2.18	2.55	2.96	3.42	3.94
55	-	-	1.39	1.63	1.90	2.21	2.55	2.94	3.38
60	-	-	-	1.43	1.66	1.91	2.20	2.53	2.89
65	-	-	-	-	1.44	1.65	1.90	2.17	2.47

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

Cooling capacity	14 350	W
Power input	4 852	W
Current consumption	8.58	A
Mass flow	340	kg/h
C.O.P.	2.96	

Pressure switch settings

Maximum HP switch setting	27.9	bar(g)
Minimum LP switch setting	0.7	bar(g)
LP pump down setting	0.9	bar(g)

Sound power data

Sound power level	77	dB(A)
With accoustic hood	71	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	4 409	6 053	8 030	10 374	13 120	16 302	19 954	24 111	28 807
35	3 982	5 563	7 458	9 701	12 327	15 370	18 866	22 848	27 351
40	3 558	5 068	6 874	9 009	11 509	14 408	17 740	21 541	25 845
45	3 143	4 576	6 286	8 307	10 674	13 422	16 585	20 199	24 297
50	-	4 095	5 703	7 603	9 831	12 421	15 409	18 828	22 715
55	-	-	5 131	6 904	8 987	11 413	14 218	17 438	21 106
60	-	-	-	6 219	8 149	10 405	13 022	16 035	19 480
65	-	-	-	-	7 326	9 405	11 828	14 630	17 845

Power input in W

30	2 297	2 598	2 861	3 087	3 277	3 432	3 553	3 642	3 699
35	2 356	2 704	3 012	3 282	3 516	3 713	3 875	4 004	4 100
40	2 391	2 791	3 150	3 469	3 751	3 995	4 204	4 377	4 517
45	2 397	2 852	3 267	3 641	3 976	4 272	4 532	4 755	4 944
50	-	2 882	3 357	3 790	4 183	4 537	4 852	5 131	5 374
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60	-	-	-	3 993	4 517	5 000	5 443	5 846	6 212
65	-	-	-	-	4 630	5 185	5 699	6 172	6 606

Current consumption in A

30	5.52	5.84	6.14	6.42	6.67	6.89	7.07	7.20	7.28
35	5.60	5.95	6.30	6.62	6.91	7.16	7.38	7.55	7.67
40	5.64	6.05	6.45	6.83	7.17	7.48	7.75	7.97	8.13
45	5.63	6.12	6.59	7.03	7.45	7.82	8.16	8.44	8.67
50	-	6.12	6.68	7.21	7.71	8.17	8.58	8.95	9.25
55	-	-	6.71	7.34	7.94	8.49	9.00	9.46	9.86
60	-	-	-	7.40	8.11	8.78	9.40	9.97	10.48
65	-	-	-	-	8.22	9.01	9.76	10.45	11.08

Mass flow in kg/h

30	89	122	160	204	255	313	379	453	537
35	84	116	154	197	248	305	371	444	527
40	78	110	147	190	240	297	361	434	515
45	72	103	140	182	231	287	350	422	502
50	-	96	132	174	222	276	339	409	488
55	-	-	124	165	211	265	326	395	472
60	-	-	-	155	201	253	312	379	455
65	-	-	-	-	190	240	298	363	437

Coefficient of performance (C.O.P.)

30	1.92	2.33	2.81	3.36	4.00	4.75	5.62	6.62	7.79
35	1.69	2.06	2.48	2.96	3.51	4.14	4.87	5.71	6.67
40	1.49	1.82	2.18	2.60	3.07	3.61	4.22	4.92	5.72
45	1.31	1.60	1.92	2.28	2.69	3.14	3.66	4.25	4.91
50	-	1.42	1.70	2.01	2.35	2.74	3.18	3.67	4.23
55	-	-	1.50	1.77	2.06	2.39	2.76	3.17	3.64
60	-	-	-	1.56	1.80	2.08	2.39	2.74	3.14
65	-	-	-	-	1.58	1.81	2.08	2.37	2.70

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

Cooling capacity	15 736	W
Power input	5 273	W
Current consumption	9.16	A
Mass flow	357	kg/h
C.O.P.	2.98	

Pressure switch settings

Maximum HP switch setting	27.9	bar(g)
Minimum LP switch setting	0.7	bar(g)
LP pump down setting	0.9	bar(g)

Sound power data

Sound power level	77	dB(A)
With acoustic hood	71	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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