

Reciprocating Compressors

Datasheets

Maneurop[®] Reciprocating compressors MT / MTZ / MPZ / NTZ



FRCC.UD.1112144075826danfoss.com/odsg

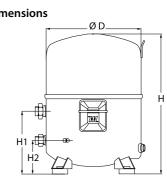
Danfoss

Datasheet, technical data

Maneurop reciprocating compressor, MT144-4

General Characteristics

Model number (on compressor nameplate)		MT144HV4
Code number for Industrial pack**		MT144-4M
Drawing number		8504014e
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		Brazed
Oil equalisation connection		None
Oil drain connection		None
LP gauge port		Schrader
IPR valve		30 bar / 8 bar
Cylinders	4	ł
Swept volume	241,87 c	:m3/rev
Displacement @ Nominal speed	42.1 m3/h @ 2900 rpm -	50.8 m3/h @ 3500 rpm
Net weight	67	kg
Oil charge	3,9 litre, Mir	neral - 160P
Maximum system test pressure Low Side / High side	25 bar(g) /	' 30 bar(g)
Maximum differential test pressure	301	bar
Maximum number of starts per hour	1	2
Refrigerant charge limit	10	kg
Approved refrigerants	R22, R417	7A-160PZ



D=352 mm H=540 mm H1=233 mm H2=125 mm

Terminal box

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	1.19 Ω
Maximum Continuous Current (MCC)	30 A
Locked Rotor Amps (LRA)	115 A
Motor protection	Internal overload protector

Recommended Installation torques

Oil sight glass	0 Nm	
Power connections / Earth connection	3 Nm / 2 Nm	
Mounting bolts	50 Nm	IP54 (with

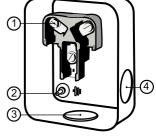
Parts shipped with compressor

Mounting kit with grommets, bolts, nuts, sleeves and washers 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)



54 (with cable gland)

2:

3:

4:

- 1: Screw connectors 10-32 UNF x 9.5
 - Earth M4-12
 - Knock-out Ø 29 mm (1.14")
 - Knock-out Ø 25.5 mm (1.00'')



Danfoss

Datasheet, accessories and spare parts

Maneurop reciprocating compressor, MT144-4

6: Nut (3x)

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	Gaskets, sleeves and nuts
Gasket, 1-3/4"	8156132	
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	1 2 3
Rotolock accessories, sets	Code no.	1: Gasket
Angle adapter set, C02 (1-3/4"~1-1/8"), C04 (1-1/4"~3/4")	7703014	2: Solder sleeve
Valve set, V02 (1-3/4"~1-1/8"), V04 (1-1/4"~3/4")	7703009	3: Rotolock nut
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	
Complement has to me	Calana	NA
Crankcase heaters	Code no.	Mounting kit
PTC heater 27W	120Z0459	
Belt type crankcase heater, 75 W, 230 V, CE mark, UL	7773108	1
Belt type crankcase heater, 75 W, 400 V, CE mark, UL	7773118	3
Belt type crankcase heater, 75 W, 460 V, CE mark, UL	120Z0464	
Miscellaneous accessories	Code no.	
Electronic soft start kit, MCI 25 C	7705007	
Soft start kit with statoric resistors, prewired box, SCR03	7705007	
Acoustic hood for 4 cylinder compressor	7755003	6
הכטונות הסטו היד באווועבו בטוווףובנגטו	// 55005	
Spare parts	Code no.	
	Code no. 8156001	1: Bolt (3x)
Spare parts		1: Bolt (3x) 2: Lock washer (3x)
Spare parts Mounting kit for 1 and 2 cylinder compressor, including 3 grommets, 3 bolts	8156001	. ,
Spare parts Mounting kit for 1 and 2 cylinder compressor, including 3 grommets, 3 bolts Service kit for terminal box 96 x 115 mm, including 1 cover, 1 clamp, 1 T block connector	8156001	2: Lock washer (3x)



Maneurop reciprocating compressor. MT144-4

Performance data at 50 Hz, EN 12900 rating conditions

	,			ting temperatu			,	
-25	-20	-15	-10	-5	0	5	10	15
	· · · · · ·			1			· · ·	
10 162	13 430	17 401	22 169	27 829	34 475	42 204	51 109	61 287
9 063	12 191	15 979	20 520	25 909	32 242	39 611	48 114	57 844
8 060	11 022	14 600	18 889	23 982	29 975	36 961	45 035	54 292
7 159	9 926	13 266	17 273	22 041	27 664	34 235	41 850	50 602
-	8 927	12 005	15 706	20 124	25 352	31 486	38 618	46 842
-	-	10 819	14 187	18 228	23 035	28 702	35 323	42 990
-	-	-	12 726	16 363	20 720	25 892	31 971	39 051
-	-	-	-	14 560	18 445	23 098	28 613	35 081
			1	T				
5 449	6 085	6 687	7 231	7 695	8 054	8 286	8 366	8 272
5 732	6 406	7 058	7 664	8 200	8 645	8 974	9 164	9 191
5 972	6 692	7 402	8 077	8 696	9 234	9 669	9 976	10 133
6 162	6 936	7 712	8 465	9 174	9 814	10 362	10 795	11 089
-	7 131	7 981	8 821	9 627	10 377	11 047	11 614	12 054
-	-	8 202	9 136	10 049	10 917	11 717	12 426	13 020
-	-	-	9 404	10 432	11 426	12 365	13 223	13 979
-	-	-	-	10 768	11 897	12 982	13 999	14 926
tion in A				1				
13.09	13.88	14.65	15.38	16.01	16.50	16.82	16.93	16.77
13.48	14.30	15.13	15.95	16.69	17.33	17.82	18.12	18.20
13.79	14.67	15.59	16.51	17.39	18.20	18.88	19.40	19.73
14.03	14.98	16.00	17.06	18.10	19.09	19.99	20.75	21.35
-	15.23	16.38	17.58	18.80	20.00	21.14	22.16	23.05
-	-	16.69	18.07	19.50	20.93	22.32	23.63	24.82
-	-	-	18.52	20.17	21.85	23.52	25.14	26.67
-	-	-	-	20.82	22.77	24.74	26.68	28.57
ı								
222	290	371	465	576	704	851	1 020	1 212
205	273	353	447	557	684	831	998	1 188
190	257	336	429	537	662	807	972	1 160
177	242	319	409	515	638	779	942	1 126
-	228	302	389	492	611	749	907	1 088
-	-	287	370	468	583	716	870	1 045
-	-	-	350	443	553	681	829	998
-	-	-	-	418	522	643	785	948
				•	•			
formance (C.C).P.)							
1.86	2.21	2.60	3.07	3.62	4.28	5.09	6.11	7.41
1.58	1.90	2.26	2.68	3.16	3.73	4.41	5.25	6.29
1.35	1.65	1.97	2.34	2.76	3.25	3.82	4.51	5.36
1.16	1.43	1.72	2.04	2.40	2.82	3.30	3.88	4.56
-	1.25	1.50	1.78	2.09	2.44	2.85	3.33	3.89
-	-	1.32	1.55	1.81	2.11	2.45	2.84	3.30
	-	-	1.35	1.57	1.81	2.09	2.42	2.79
-		-	-	1.35	1.55	1.78	2.04	2.35
-	-		1					
	-							
					Pressure switch s	settings		
-		W			Pressure switch s Maximum HP swite	-	27.7	bar(g)
- ance at to = 5 °	° C, tc = 50 °C 31 486 11 047	W			Maximum HP swite Minimum LP swite	ch setting h setting	0.2	bar(g)
-	°C, tc = 50 °C 31 486 11 047 21.14	W A			Maximum HP swite	ch setting h setting		(0)
- ance at to = 5 °	2 ℃, tc = 50 ℃ 31 486 11 047 21.14 749	W]		Maximum HP switc Minimum LP switc LP pump down set	ch setting h setting tting	0.2	bar(g)
- ance at to = 5 °	°C, tc = 50 °C 31 486 11 047 21.14	W A			Maximum HP swite Minimum LP swite	ch setting h setting tting a	0.2	bar(g)
	in W 10 162 9 063 8 060 7 159 - - - - - - 5 449 5 732 5 972 6 162 - - - - - - - - - - - - -	in W 10 162 13 430 9 063 12 191 8 060 11 022 7 159 9 926 - 8 927 	in W 10 162 13 430 17 401 9 063 12 191 15 979 8 060 11 022 14 600 7 159 9 926 13 266 - 8 927 12 005 - - 10 819 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - 7131 7 981 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - 13.09 <td>in W 10 162 13 430 17 401 22 169 9 063 12 191 15 979 20 520 8 060 11 022 14 600 18 889 7 159 9 926 13 266 17 273 - 8 927 12 005 15 706 - - 10 819 14 187 - - - 12 726 - - - - 12 726 - - - - - - - 5 449 6 085 6 687 7 731 5 732 6 406 7 058 7 664 5 972 6 6936 7 712 8 465 - 7</td> <td>in W 10 162 13 430 17 401 22 169 27 829 9 063 12 191 15 979 20 620 25 909 8 060 11 022 14 600 18 889 23 982 7 159 9 926 13 266 17 273 22 041 - 8 927 12 005 15 706 20 124 - - 10 819 14 187 18 228 - - - 12 726 16 363 - - - 14 560 5 732 6 406 7 058 7 664 8 200 5 972 6 692 7 402 8 077 8 696 6 162 6 936 7 712 8 465 9 174 - 7 131 7 981 8 821 9 627 - - - 9 404 10 432 - - - 10 768 Motion in A - - - 10 766 13.09 13.88 <</td> <td>in W 10 12 13 430 17 401 22 169 27 829 34 475 9 063 12 191 15 979 20 520 25 909 32 242 8 060 11 022 14 600 18 889 23 982 29 975 7 159 9 926 13 206 17 273 22 041 27 664 - - 10 019 14 187 18 228 23 035 - - - 12 766 16 363 20 700 - - - 14 560 18 445 5 732 6 6087 7 731 7 695 8 644 5 5732 6 6087 712 8 465 9<td>in W 10 16 13 430 17 401 22 169 27 829 34 475 42 204 9 063 12 191 15 979 20 520 25 909 32 242 39 611 8 060 11 022 14 600 18 889 23 982 29 975 36 691 7 159 9 926 13 266 17 273 22 041 27 664 34 235 - 8 927 12 005 15 706 20 124 28 362 31 486 - - 10 819 14 187 18 228 23 035 28 702 - - - 12 726 16 363 20 720 25 892 - - - 14 560 18 445 23 098 964 5 649 6 085 6 687 7 7231 7 095 8 054 8 286 5 732 6 406 7 058 7 664 8 200 8 645 9 674 5 972 6 692 7 402 8 077 8 967 10 377 11 047 <t< td=""><td>In W 10 162 13 430 17 401 22 169 27 829 34 475 42 204 51 109 9 063 12 191 15 979 20 520 25 909 32 242 36 611 48 114 8 060 11 022 14 600 18 889 23 982 29 975 36 961 45 035 7 159 9 926 13 286 17 273 22 041 27 684 34 235 41 850 - - 10 819 14 187 18 228 23 035 28 702 35 323 - - - 12 726 18 033 20 720 25 882 31 971 - - - 14 276 18 033 20 720 25 892 31 971 - - - 14 276 8 064 8 286 8 044 5 972 6 492 7 402 8 077 8 966 9 234 9 669 9 976 - - - 10 377 110 47 11 614 - -</td></t<></td></td>	in W 10 162 13 430 17 401 22 169 9 063 12 191 15 979 20 520 8 060 11 022 14 600 18 889 7 159 9 926 13 266 17 273 - 8 927 12 005 15 706 - - 10 819 14 187 - - - 12 726 - - - - 12 726 - - - - - - - 5 449 6 085 6 687 7 731 5 732 6 406 7 058 7 664 5 972 6 6936 7 712 8 465 - 7	in W 10 162 13 430 17 401 22 169 27 829 9 063 12 191 15 979 20 620 25 909 8 060 11 022 14 600 18 889 23 982 7 159 9 926 13 266 17 273 22 041 - 8 927 12 005 15 706 20 124 - - 10 819 14 187 18 228 - - - 12 726 16 363 - - - 14 560 5 732 6 406 7 058 7 664 8 200 5 972 6 692 7 402 8 077 8 696 6 162 6 936 7 712 8 465 9 174 - 7 131 7 981 8 821 9 627 - - - 9 404 10 432 - - - 10 768 Motion in A - - - 10 766 13.09 13.88 <	in W 10 12 13 430 17 401 22 169 27 829 34 475 9 063 12 191 15 979 20 520 25 909 32 242 8 060 11 022 14 600 18 889 23 982 29 975 7 159 9 926 13 206 17 273 22 041 27 664 - - 10 019 14 187 18 228 23 035 - - - 12 766 16 363 20 700 - - - 14 560 18 445 5 732 6 6087 7 731 7 695 8 644 5 5732 6 6087 712 8 465 9 <td>in W 10 16 13 430 17 401 22 169 27 829 34 475 42 204 9 063 12 191 15 979 20 520 25 909 32 242 39 611 8 060 11 022 14 600 18 889 23 982 29 975 36 691 7 159 9 926 13 266 17 273 22 041 27 664 34 235 - 8 927 12 005 15 706 20 124 28 362 31 486 - - 10 819 14 187 18 228 23 035 28 702 - - - 12 726 16 363 20 720 25 892 - - - 14 560 18 445 23 098 964 5 649 6 085 6 687 7 7231 7 095 8 054 8 286 5 732 6 406 7 058 7 664 8 200 8 645 9 674 5 972 6 692 7 402 8 077 8 967 10 377 11 047 <t< td=""><td>In W 10 162 13 430 17 401 22 169 27 829 34 475 42 204 51 109 9 063 12 191 15 979 20 520 25 909 32 242 36 611 48 114 8 060 11 022 14 600 18 889 23 982 29 975 36 961 45 035 7 159 9 926 13 286 17 273 22 041 27 684 34 235 41 850 - - 10 819 14 187 18 228 23 035 28 702 35 323 - - - 12 726 18 033 20 720 25 882 31 971 - - - 14 276 18 033 20 720 25 892 31 971 - - - 14 276 8 064 8 286 8 044 5 972 6 492 7 402 8 077 8 966 9 234 9 669 9 976 - - - 10 377 110 47 11 614 - -</td></t<></td>	in W 10 16 13 430 17 401 22 169 27 829 34 475 42 204 9 063 12 191 15 979 20 520 25 909 32 242 39 611 8 060 11 022 14 600 18 889 23 982 29 975 36 691 7 159 9 926 13 266 17 273 22 041 27 664 34 235 - 8 927 12 005 15 706 20 124 28 362 31 486 - - 10 819 14 187 18 228 23 035 28 702 - - - 12 726 16 363 20 720 25 892 - - - 14 560 18 445 23 098 964 5 649 6 085 6 687 7 7231 7 095 8 054 8 286 5 732 6 406 7 058 7 664 8 200 8 645 9 674 5 972 6 692 7 402 8 077 8 967 10 377 11 047 <t< td=""><td>In W 10 162 13 430 17 401 22 169 27 829 34 475 42 204 51 109 9 063 12 191 15 979 20 520 25 909 32 242 36 611 48 114 8 060 11 022 14 600 18 889 23 982 29 975 36 961 45 035 7 159 9 926 13 286 17 273 22 041 27 684 34 235 41 850 - - 10 819 14 187 18 228 23 035 28 702 35 323 - - - 12 726 18 033 20 720 25 882 31 971 - - - 14 276 18 033 20 720 25 892 31 971 - - - 14 276 8 064 8 286 8 044 5 972 6 492 7 402 8 077 8 966 9 234 9 669 9 976 - - - 10 377 110 47 11 614 - -</td></t<>	In W 10 162 13 430 17 401 22 169 27 829 34 475 42 204 51 109 9 063 12 191 15 979 20 520 25 909 32 242 36 611 48 114 8 060 11 022 14 600 18 889 23 982 29 975 36 961 45 035 7 159 9 926 13 286 17 273 22 041 27 684 34 235 41 850 - - 10 819 14 187 18 228 23 035 28 702 35 323 - - - 12 726 18 033 20 720 25 882 31 971 - - - 14 276 18 033 20 720 25 892 31 971 - - - 14 276 8 064 8 286 8 044 5 972 6 492 7 402 8 077 8 966 9 234 9 669 9 976 - - - 10 377 110 47 11 614 - -

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

All performance data +/- 5% Danfoss can accept no responsibility for possible errors in catalogues, brochures and other printed material. Danfoss reserves the right to alter its products without notice. This also applies to products already on order provided that such alternations can be made without subsequential changes being necessary in specifications already agreed. All trademarks in this material are property of the respective companies. Danfoss, the Danfoss logotype and Maneurop are trademarks of Danfoss A/S. All rights reserved.





R22

Maneurop reciprocating compressor. MT144-4

Danfoss

R22

38 308

Performance data at 50 Hz, ARI rating conditions

Cond. temp. in				Evapora	ting temperature i	n °C (to)			
°C (tc)	-25	-20	-15	-10	-5	0	5	10	15
Cooling capacit	y in W								
30	10 790	14 249	18 448	23 485	29 460	36 470	44 615	53 994	64 706
35	9 659	12 982	17 000	21 814	27 521	34 221	42 013	50 994	61 265
40	8 624	11 780	15 590	20 151	25 563	31 924	39 333	47 889	57 690
45	7 697	10 660	14 232	18 513	23 600	29 593	36 591	44 692	53 995
50	-	9 635	12 941	16 912	21 646	27 243	33 801	41 418	50 195
55	-	-	11 731	15 363	19 716	24 888	30 977	38 083	46 304
60	-	-	-	13 882	17 824	22 542	28 134	34 700	42 337

Power input in W

65

30	5 449	6 085	6 687	7 231	7 695	8 054	8 286	8 366	8 272
35	5 732	6 406	7 058	7 664	8 200	8 645	8 974	9 164	9 191
40	5 972	6 692	7 402	8 077	8 696	9 234	9 669	9 976	10 133
45	6 162	6 936	7 712	8 465	9 174	9 814	10 362	10 795	11 089
50	-	7 131	7 981	8 821	9 627	10 377	11 047	11 614	12 054
55	-	-	8 202	9 136	10 049	10 917	11 717	12 426	13 020
60	-	-	-	9 404	10 432	11 426	12 365	13 223	13 979
65	-	-	-	-	10 768	11 897	12 982	13 999	14 926

15 986

20 221

25 287

31 283

Current consumption in A

30	13.09	13.88	14.65	15.38	16.01	16.50	16.82	16.93	16.77
35	13.48	14.30	15.13	15.95	16.69	17.33	17.82	18.12	18.20
40	13.79	14.67	15.59	16.51	17.39	18.20	18.88	19.40	19.73
45	14.03	14.98	16.00	17.06	18.10	19.09	19.99	20.75	21.35
50	-	15.23	16.38	17.58	18.80	20.00	21.14	22.16	23.05
55	-	-	16.69	18.07	19.50	20.93	22.32	23.63	24.82
60	-	-	-	18.52	20.17	21.85	23.52	25.14	26.67
65	-	-	-	-	20.82	22.77	24.74	26.68	28.57

Mass flow in kg/h

30	221	289	369	463	573	700	847	1 014	1 205
35	204	272	351	445	554	681	826	993	1 182
40	189	256	334	426	534	659	802	967	1 153
45	176	241	317	407	512	634	775	936	1 120
50	-	227	301	387	489	608	745	902	1 082
55	-	-	285	368	465	580	712	865	1 039
60	-	-	-	348	441	550	677	824	993
65	-	-	-	-	416	519	640	780	942

Coefficient of performance (C.O.P.)

30	1.98	2.34	2.76	3.25	3.83	4.53	5.38	6.45	7.82
35	1.69	2.03	2.41	2.85	3.36	3.96	4.68	5.56	6.67
40	1.44	1.76	2.11	2.49	2.94	3.46	4.07	4.80	5.69
45	1.25	1.54	1.85	2.19	2.57	3.02	3.53	4.14	4.87
50	-	1.35	1.62	1.92	2.25	2.63	3.06	3.57	4.16
55	-	-	1.43	1.68	1.96	2.28	2.64	3.06	3.56
60	-	-	-	1.48	1.71	1.97	2.28	2.62	3.03
65	-	-	-	-	1.48	1.70	1.95	2.23	2.57

Nominal performance at to = 7.2 °C,	tc = 54.4 °C	
Cooling capacity	34 340	W
Power input	11 955	W
Current consumption	22.75	Α
Mass flow	781	kg/h

2.87

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 data Sound power level	0	dB(A)

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

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

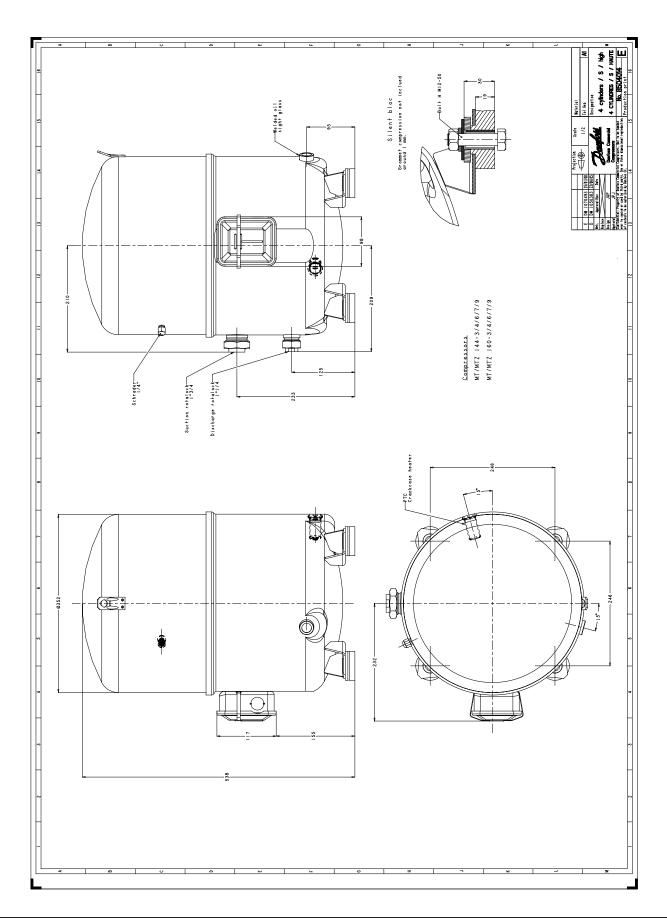
All performance data +/- 5%

Pressure switch settings Maximum HP switch setting

Danfoss can accept no responsibility for possible errors in catalogues, brochures and other printed material. Danfoss reserves the right to alter its products without notice. This also applies to products already on order provided that such alternations can be made without subsequential changes being necessary in specifications already agreed. All trademarks in this material are property of the respective companies. Danfoss, the Danfoss logotype and Maneurop are trademarks of Danfoss A/S. All rights reserved.



C.O.P.



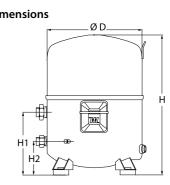


Datasheet, technical data

Maneurop reciprocating compressor, MT144-4

General Characteristics

Model number (on compressor nameplate)		MT144HV4VE
Code number for Singlepack*		MT144-4VI
Code number for Industrial pack**		MT144-4VM
Drawing number		8504011e
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	ł
Swept volume	241,87 c	m3/rev
Displacement @ Nominal speed	42.1 m3/h @ 2900 rpm -	50.8 m3/h @ 3500 rpm
Net weight	67	kg
Oil charge	3,9 litre, Mir	neral - 160P
Maximum system test pressure Low Side / High side	25 bar(g) /	30 bar(g)
Maximum differential test pressure	301	oar
Maximum number of starts per hour	1:	2
Refrigerant charge limit	10	kg
Approved refrigerants	R22, R417	'A-160PZ



Dantoss

D=352 mm H=540 mm H1=233 mm H2=125 mm

Terminal box

1

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	1.19 Ω
Maximum Continuous Current (MCC)	30 A
Locked Rotor Amps (LRA)	115 A
Motor protection	Internal overload protector

(4)

Recommended Installation torques

Oil sight glass	50 Nm	
Power connections / Earth connection	3 Nm / 2 Nm	IP54 (
Mounting bolts	50 Nm	1:
		2:

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)

P54 (with cable gland)

- Screw connectors 10-32 UNF x 9.5
- Earth M4-12

3:

4:

- Knock-out Ø 29 mm (1.14")
- Knock-out Ø 25.5 mm (1.00'')



Danfoss

Datasheet, accessories and spare parts

Maneurop reciprocating compressor, MT144-4

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	Gaskets, sleeves and nuts
Gasket, 1-3/4"	8156132	
· · · · · ·		
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	1 2 3
Rotolock accessories, sets	Code no.	1: Gasket
Angle adapter set, C02 (1-3/4"~1-1/8"), C04 (1-1/4"~3/4")	7703014	2: Solder sleeve
Valve set, V02 (1-3/4"~1-1/8"), V04 (1-1/4"~3/4")	7703009	3: Rotolock nut
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.	Mounting kit
PTC heater 27W		
	120Z0459 7773108	1
Belt type crankcase heater, 75 W, 230 V, CE mark, UL		
Belt type crankcase heater, 75 W, 400 V, CE mark, UL	7773118	3
Belt type crankcase heater, 75 W, 460 V, CE mark, UL	120Z0464	
Miscellaneous accessories	Code no.	4
Miscellaneous accessories Electronic soft start kit. MCI 25 C	Code no.	
Electronic soft start kit, MCI 25 C	7705007	
Electronic soft start kit, MCI 25 C Soft start kit with statoric resistors, prewired box, SCR03	7705007 7705001	
Electronic soft start kit, MCI 25 C Soft start kit with statoric resistors, prewired box, SCR03 Acoustic hood for 4 cylinder compressor	7705007	
Electronic soft start kit, MCI 25 C Soft start kit with statoric resistors, prewired box, SCR03	7705007 7705001 7755003	
Electronic soft start kit, MCI 25 C Soft start kit with statoric resistors, prewired box, SCR03 Acoustic hood for 4 cylinder compressor	7705007 7705001 7755003	4 4 5 6 1: Bolt (4x)
Electronic soft start kit, MCI 25 C Soft start kit with statoric resistors, prewired box, SCR03 Acoustic hood for 4 cylinder compressor Oil equalisation nut	7705007 7705001 7755003 8153127	4
Electronic soft start kit, MCl 25 C Soft start kit with statoric resistors, prewired box, SCR03 Acoustic hood for 4 cylinder compressor Oil equalisation nut Spare parts	7705007 7705001 7755003 8153127 Code no.	. ,
Electronic soft start kit, MCI 25 C Soft start kit with statoric resistors, prewired box, SCR03 Acoustic hood for 4 cylinder compressor Oil equalisation nut Spare parts Mounting kit for 4 cylinder compressor & MS, including 4 grommets, 4 bolts	7705007 7705001 7755003 8153127 Code no. 8156007	2: Lock washer (4x)
Electronic soft start kit, MCI 25 C Soft start kit with statoric resistors, prewired box, SCR03 Acoustic hood for 4 cylinder compressor Oil equalisation nut Spare parts Mounting kit for 4 cylinder compressor & MS, including 4 grommets, 4 bolts Oil sight glass with gaskets (black & white)	7705007 7705001 7755003 8153127 Code no. 8156007 8156019	2: Lock washer (4x) 3: Flat washer (4x)
Electronic soft start kit, MCI 25 C Soft start kit with statoric resistors, prewired box, SCR03 Acoustic hood for 4 cylinder compressor Oil equalisation nut Spare parts Mounting kit for 4 cylinder compressor & MS, including 4 grommets, 4 bolts Oil sight glass with gaskets (black & white) Gasket for oil sight glass (black chloroprene)	7705007 7705001 7755003 8153127 Code no. 8156007 8156019 8156145	2: Lock washer (4x) 3: Flat washer (4x) 4: Sleeve (4x)



Maneurop reciprocating compressor. MT144-4

Performance data at 50 Hz, EN 12900 rating conditions

	,			ting temperatu			,	
-25	-20	-15	-10	-5	0	5	10	15
	· · · · · ·			1			· · ·	
10 162	13 430	17 401	22 169	27 829	34 475	42 204	51 109	61 287
9 063	12 191	15 979	20 520	25 909	32 242	39 611	48 114	57 844
8 060	11 022	14 600	18 889	23 982	29 975	36 961	45 035	54 292
7 159	9 926	13 266	17 273	22 041	27 664	34 235	41 850	50 602
-	8 927	12 005	15 706	20 124	25 352	31 486	38 618	46 842
-	-	10 819	14 187	18 228	23 035	28 702	35 323	42 990
-	-	-	12 726	16 363	20 720	25 892	31 971	39 051
-	-	-	-	14 560	18 445	23 098	28 613	35 081
			1	T				
5 449	6 085	6 687	7 231	7 695	8 054	8 286	8 366	8 272
5 732	6 406	7 058	7 664	8 200	8 645	8 974	9 164	9 191
5 972	6 692	7 402	8 077	8 696	9 234	9 669	9 976	10 133
6 162	6 936	7 712	8 465	9 174	9 814	10 362	10 795	11 089
-	7 131	7 981	8 821	9 627	10 377	11 047	11 614	12 054
-	-	8 202	9 136	10 049	10 917	11 717	12 426	13 020
-	-	-	9 404	10 432	11 426	12 365	13 223	13 979
-	-	-	-	10 768	11 897	12 982	13 999	14 926
tion in A				1				
13.09	13.88	14.65	15.38	16.01	16.50	16.82	16.93	16.77
13.48	14.30	15.13	15.95	16.69	17.33	17.82	18.12	18.20
13.79	14.67	15.59	16.51	17.39	18.20	18.88	19.40	19.73
14.03	14.98	16.00	17.06	18.10	19.09	19.99	20.75	21.35
-	15.23	16.38	17.58	18.80	20.00	21.14	22.16	23.05
-	-	16.69	18.07	19.50	20.93	22.32	23.63	24.82
-	-	-	18.52	20.17	21.85	23.52	25.14	26.67
-	-	-	-	20.82	22.77	24.74	26.68	28.57
ı								
222	290	371	465	576	704	851	1 020	1 212
205	273	353	447	557	684	831	998	1 188
190	257	336	429	537	662	807	972	1 160
177	242	319	409	515	638	779	942	1 126
-	228	302	389	492	611	749	907	1 088
-	-	287	370	468	583	716	870	1 045
-	-	-	350	443	553	681	829	998
-	-	-	-	418	522	643	785	948
				•	•			
formance (C.C).P.)							
1.86	2.21	2.60	3.07	3.62	4.28	5.09	6.11	7.41
1.58	1.90	2.26	2.68	3.16	3.73	4.41	5.25	6.29
1.35	1.65	1.97	2.34	2.76	3.25	3.82	4.51	5.36
1.16	1.43	1.72	2.04	2.40	2.82	3.30	3.88	4.56
-	1.25	1.50	1.78	2.09	2.44	2.85	3.33	3.89
-	-	1.32	1.55	1.81	2.11	2.45	2.84	3.30
	-	-	1.35	1.57	1.81	2.09	2.42	2.79
-		-	-	1.35	1.55	1.78	2.04	2.35
-	-		1					
	-							
					Pressure switch s	settings		
-		W			Pressure switch s Maximum HP swite	-	27.7	bar(g)
- ance at to = 5 °	° C, tc = 50 °C 31 486 11 047	W			Maximum HP swite Minimum LP swite	ch setting h setting	0.2	bar(g)
-	°C, tc = 50 °C 31 486 11 047 21.14	W A			Maximum HP swite	ch setting h setting		(0)
- ance at to = 5 °	2 ℃, tc = 50 ℃ 31 486 11 047 21.14 749	W]		Maximum HP switc Minimum LP switc LP pump down set	ch setting h setting tting	0.2	bar(g)
- ance at to = 5 °	°C, tc = 50 °C 31 486 11 047 21.14	W A			Maximum HP swite Minimum LP swite	ch setting h setting tting a	0.2	bar(g)
	in W 10 162 9 063 8 060 7 159 - - - - - - 5 449 5 732 5 972 6 162 - - - - - - - - - - - - -	in W 10 162 13 430 9 063 12 191 8 060 11 022 7 159 9 926 - 8 927 	in W 10 162 13 430 17 401 9 063 12 191 15 979 8 060 11 022 14 600 7 159 9 926 13 266 - 8 927 12 005 - - 10 819 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - 7131 7 981 - - - - - - - - - - - - - - - - - - - - - - - - - - - - - - 13.09 <td>in W 10 162 13 430 17 401 22 169 9 063 12 191 15 979 20 520 8 060 11 022 14 600 18 889 7 159 9 926 13 266 17 273 - 8 927 12 005 15 706 - - 10 819 14 187 - - - 12 726 - - - - 12 726 - - - - - - - 5 449 6 085 6 687 7 731 5 732 6 406 7 058 7 664 5 972 6 6936 7 712 8 465 - 7</td> <td>in W 10 162 13 430 17 401 22 169 27 829 9 063 12 191 15 979 20 620 25 909 8 060 11 022 14 600 18 889 23 982 7 159 9 926 13 266 17 273 22 041 - 8 927 12 005 15 706 20 124 - - 10 819 14 187 18 228 - - - 12 726 16 363 - - - 14 560 5 732 6 406 7 058 7 664 8 200 5 972 6 692 7 402 8 077 8 696 6 162 6 936 7 712 8 465 9 174 - 7 131 7 981 8 821 9 627 - - - 9 404 10 432 - - - 10 768 Motion in A - - - 10 766 13.09 13.88 <</td> <td>in W 10 12 13 430 17 401 22 169 27 829 34 475 9 063 12 191 15 979 20 520 25 909 32 242 8 060 11 022 14 600 18 889 23 982 29 975 7 159 9 926 13 206 17 273 22 041 27 664 - - 10 019 14 187 18 228 23 035 - - - 12 766 16 363 20 700 - - - 14 560 18 445 5 732 6 6087 7 731 7 695 8 644 5 5732 6 6087 712 8 465 9<td>in W 10 16 13 430 17 401 22 169 27 829 34 475 42 204 9 063 12 191 15 979 20 520 25 909 32 242 39 611 8 060 11 022 14 600 18 889 23 982 29 975 36 691 7 159 9 926 13 266 17 273 22 041 27 664 34 235 - 8 927 12 005 15 706 20 124 28 362 31 486 - - 10 819 14 187 18 228 23 035 28 702 - - - 12 726 16 363 20 720 25 892 - - - 14 560 18 445 23 098 964 5 649 6 085 6 687 7 7231 7 095 8 054 8 286 5 732 6 406 7 058 7 664 8 200 8 645 9 674 5 972 6 692 7 402 8 077 8 967 10 377 11 047 <t< td=""><td>In W 10 162 13 430 17 401 22 169 27 829 34 475 42 204 51 109 9 063 12 191 15 979 20 520 25 909 32 242 36 611 48 114 8 060 11 022 14 600 18 889 23 982 29 975 36 961 45 035 7 159 9 926 13 286 17 273 22 041 27 684 34 235 41 850 - - 10 819 14 187 18 228 23 035 28 702 35 323 - - - 12 726 18 033 20 720 25 882 31 971 - - - 14 276 18 033 20 720 25 892 31 971 - - - 14 276 8 064 8 286 8 044 5 972 6 492 7 402 8 077 8 966 9 234 9 669 9 976 - - - 10 377 110 47 11 614 - -</td></t<></td></td>	in W 10 162 13 430 17 401 22 169 9 063 12 191 15 979 20 520 8 060 11 022 14 600 18 889 7 159 9 926 13 266 17 273 - 8 927 12 005 15 706 - - 10 819 14 187 - - - 12 726 - - - - 12 726 - - - - - - - 5 449 6 085 6 687 7 731 5 732 6 406 7 058 7 664 5 972 6 6936 7 712 8 465 - 7	in W 10 162 13 430 17 401 22 169 27 829 9 063 12 191 15 979 20 620 25 909 8 060 11 022 14 600 18 889 23 982 7 159 9 926 13 266 17 273 22 041 - 8 927 12 005 15 706 20 124 - - 10 819 14 187 18 228 - - - 12 726 16 363 - - - 14 560 5 732 6 406 7 058 7 664 8 200 5 972 6 692 7 402 8 077 8 696 6 162 6 936 7 712 8 465 9 174 - 7 131 7 981 8 821 9 627 - - - 9 404 10 432 - - - 10 768 Motion in A - - - 10 766 13.09 13.88 <	in W 10 12 13 430 17 401 22 169 27 829 34 475 9 063 12 191 15 979 20 520 25 909 32 242 8 060 11 022 14 600 18 889 23 982 29 975 7 159 9 926 13 206 17 273 22 041 27 664 - - 10 019 14 187 18 228 23 035 - - - 12 766 16 363 20 700 - - - 14 560 18 445 5 732 6 6087 7 731 7 695 8 644 5 5732 6 6087 712 8 465 9 <td>in W 10 16 13 430 17 401 22 169 27 829 34 475 42 204 9 063 12 191 15 979 20 520 25 909 32 242 39 611 8 060 11 022 14 600 18 889 23 982 29 975 36 691 7 159 9 926 13 266 17 273 22 041 27 664 34 235 - 8 927 12 005 15 706 20 124 28 362 31 486 - - 10 819 14 187 18 228 23 035 28 702 - - - 12 726 16 363 20 720 25 892 - - - 14 560 18 445 23 098 964 5 649 6 085 6 687 7 7231 7 095 8 054 8 286 5 732 6 406 7 058 7 664 8 200 8 645 9 674 5 972 6 692 7 402 8 077 8 967 10 377 11 047 <t< td=""><td>In W 10 162 13 430 17 401 22 169 27 829 34 475 42 204 51 109 9 063 12 191 15 979 20 520 25 909 32 242 36 611 48 114 8 060 11 022 14 600 18 889 23 982 29 975 36 961 45 035 7 159 9 926 13 286 17 273 22 041 27 684 34 235 41 850 - - 10 819 14 187 18 228 23 035 28 702 35 323 - - - 12 726 18 033 20 720 25 882 31 971 - - - 14 276 18 033 20 720 25 892 31 971 - - - 14 276 8 064 8 286 8 044 5 972 6 492 7 402 8 077 8 966 9 234 9 669 9 976 - - - 10 377 110 47 11 614 - -</td></t<></td>	in W 10 16 13 430 17 401 22 169 27 829 34 475 42 204 9 063 12 191 15 979 20 520 25 909 32 242 39 611 8 060 11 022 14 600 18 889 23 982 29 975 36 691 7 159 9 926 13 266 17 273 22 041 27 664 34 235 - 8 927 12 005 15 706 20 124 28 362 31 486 - - 10 819 14 187 18 228 23 035 28 702 - - - 12 726 16 363 20 720 25 892 - - - 14 560 18 445 23 098 964 5 649 6 085 6 687 7 7231 7 095 8 054 8 286 5 732 6 406 7 058 7 664 8 200 8 645 9 674 5 972 6 692 7 402 8 077 8 967 10 377 11 047 <t< td=""><td>In W 10 162 13 430 17 401 22 169 27 829 34 475 42 204 51 109 9 063 12 191 15 979 20 520 25 909 32 242 36 611 48 114 8 060 11 022 14 600 18 889 23 982 29 975 36 961 45 035 7 159 9 926 13 286 17 273 22 041 27 684 34 235 41 850 - - 10 819 14 187 18 228 23 035 28 702 35 323 - - - 12 726 18 033 20 720 25 882 31 971 - - - 14 276 18 033 20 720 25 892 31 971 - - - 14 276 8 064 8 286 8 044 5 972 6 492 7 402 8 077 8 966 9 234 9 669 9 976 - - - 10 377 110 47 11 614 - -</td></t<>	In W 10 162 13 430 17 401 22 169 27 829 34 475 42 204 51 109 9 063 12 191 15 979 20 520 25 909 32 242 36 611 48 114 8 060 11 022 14 600 18 889 23 982 29 975 36 961 45 035 7 159 9 926 13 286 17 273 22 041 27 684 34 235 41 850 - - 10 819 14 187 18 228 23 035 28 702 35 323 - - - 12 726 18 033 20 720 25 882 31 971 - - - 14 276 18 033 20 720 25 892 31 971 - - - 14 276 8 064 8 286 8 044 5 972 6 492 7 402 8 077 8 966 9 234 9 669 9 976 - - - 10 377 110 47 11 614 - -

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

All performance data +/- 5% Danfoss can accept no responsibility for possible errors in catalogues, brochures and other printed material. Danfoss reserves the right to alter its products without notice. This also applies to products already on order provided that such alternations can be made without subsequential changes being necessary in specifications already agreed. All trademarks in this material are property of the respective companies. Danfoss, the Danfoss logotype and Maneurop are trademarks of Danfoss A/S. All rights reserved.





R22

Maneurop reciprocating compressor. MT144-4

Danfoss

R22

38 308

Performance data at 50 Hz, ARI rating conditions

Cond. temp. in				Evapora	ting temperature i	n °C (to)			
°C (tc)	-25	-20	-15	-10	-5	0	5	10	15
Cooling capacit	y in W								
30	10 790	14 249	18 448	23 485	29 460	36 470	44 615	53 994	64 706
35	9 659	12 982	17 000	21 814	27 521	34 221	42 013	50 994	61 265
40	8 624	11 780	15 590	20 151	25 563	31 924	39 333	47 889	57 690
45	7 697	10 660	14 232	18 513	23 600	29 593	36 591	44 692	53 995
50	-	9 635	12 941	16 912	21 646	27 243	33 801	41 418	50 195
55	-	-	11 731	15 363	19 716	24 888	30 977	38 083	46 304
60	-	-	-	13 882	17 824	22 542	28 134	34 700	42 337

Power input in W

65

30	5 449	6 085	6 687	7 231	7 695	8 054	8 286	8 366	8 272
35	5 732	6 406	7 058	7 664	8 200	8 645	8 974	9 164	9 191
40	5 972	6 692	7 402	8 077	8 696	9 234	9 669	9 976	10 133
45	6 162	6 936	7 712	8 465	9 174	9 814	10 362	10 795	11 089
50	-	7 131	7 981	8 821	9 627	10 377	11 047	11 614	12 054
55	-	-	8 202	9 136	10 049	10 917	11 717	12 426	13 020
60	-	-	-	9 404	10 432	11 426	12 365	13 223	13 979
65	-	-	-	-	10 768	11 897	12 982	13 999	14 926

15 986

20 221

25 287

31 283

Current consumption in A

30	13.09	13.88	14.65	15.38	16.01	16.50	16.82	16.93	16.77
35	13.48	14.30	15.13	15.95	16.69	17.33	17.82	18.12	18.20
40	13.79	14.67	15.59	16.51	17.39	18.20	18.88	19.40	19.73
45	14.03	14.98	16.00	17.06	18.10	19.09	19.99	20.75	21.35
50	-	15.23	16.38	17.58	18.80	20.00	21.14	22.16	23.05
55	-	-	16.69	18.07	19.50	20.93	22.32	23.63	24.82
60	-	-	-	18.52	20.17	21.85	23.52	25.14	26.67
65	-	-	-	-	20.82	22.77	24.74	26.68	28.57

Mass flow in kg/h

30	221	289	369	463	573	700	847	1 014	1 205
35	204	272	351	445	554	681	826	993	1 182
40	189	256	334	426	534	659	802	967	1 153
45	176	241	317	407	512	634	775	936	1 120
50	-	227	301	387	489	608	745	902	1 082
55	-	-	285	368	465	580	712	865	1 039
60	-	-	-	348	441	550	677	824	993
65	-	-	-	-	416	519	640	780	942

Coefficient of performance (C.O.P.)

30	1.98	2.34	2.76	3.25	3.83	4.53	5.38	6.45	7.82
35	1.69	2.03	2.41	2.85	3.36	3.96	4.68	5.56	6.67
40	1.44	1.76	2.11	2.49	2.94	3.46	4.07	4.80	5.69
45	1.25	1.54	1.85	2.19	2.57	3.02	3.53	4.14	4.87
50	-	1.35	1.62	1.92	2.25	2.63	3.06	3.57	4.16
55	-	-	1.43	1.68	1.96	2.28	2.64	3.06	3.56
60	-	-	-	1.48	1.71	1.97	2.28	2.62	3.03
65	-	-	-	-	1.48	1.70	1.95	2.23	2.57

Nominal performance at to = 7.2 °C,	tc = 54.4 °C	
Cooling capacity	34 340	W
Power input	11 955	W
Current consumption	22.75	Α
Mass flow	781	kg/h

2.87

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 data Sound power level	0	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%

Pressure switch settings Maximum HP switch setting

Danfoss can accept no responsibility for possible errors in catalogues, brochures and other printed material. Danfoss reserves the right to alter its products without notice. This also applies to products already on order provided that such alternations can be made without subsequential changes being necessary in specifications already agreed. All trademarks in this material are property of the respective companies. Danfoss, the Danfoss logotype and Maneurop are trademarks of Danfoss A/S. All rights reserved.



C.O.P.

<u>Danfoss</u>

