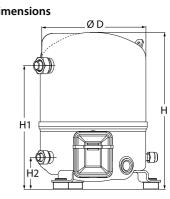
Datasheet, technical data

Maneurop reciprocating compressor, MTZ028-4

Dantoss

General Characteristics

Model number (on compressor nameplate)		MTZ28JE4AVE
Code number for Singlepack*		MTZ28-4VI
Code number for Industrial pack**		MTZ28-4VM
Drawing number		8501024e
Suction and discharge connections		Rotolock
Suction connection		1 " Rotolock
Discharge connection		1 " Rotolock
Suction connection with supplied sleeve		1/2 " ODF
Discharge connection with supplied sleeve		3/8 " ODF
Oil sight glass		Threaded
Oil equalisation connection		3/8" flare SAE
Oil drain connection		None
LP gauge port		Schrader
IPR valve		None
Cylinders	1	I
Swept volume	48.06 c	m3/rev
Displacement @ Nominal speed	8.4 m3/h @ 2900 rpm -	10.1 m3/h @ 3500 rpm
Net weight	23	kg
Oil charge	0.95 litre, P	OE - 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	1	2
Refrigerant charge limit	2.5	kg
Approved refrigerants	R404A, R507A, R134a,	R407C, R407A, R407F



D=224 mm H=333 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	6.23 Ω
Maximum Continuous Current (MCC)	7.5 A
Locked Rotor Amps (LRA)	29 A
Motor protection	Internal overload protector

Recommended Installation torques

Oil sight glass	50 Nm
Power connections / Earth connection	2 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

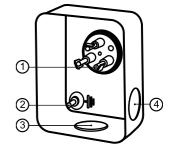
Installation instructions

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)

Terminal box



IP55 (with cable gland)

1:

2:

- Spade connectors 1/4"
- Earth M4-12
- 3: Knock-out Ø 21 mm (0.83")
- 4: Hole Ø 21 mm (0.83")



Maneurop reciprocating compressor. MTZ028-4

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R407C

Performance data at 50 Hz, EN 12900 rating conditions

Cond. temp. in	Evaporating temperature in °C (to)									
°C (tc)	-15	-10	-5	0	5	10	15			
Cooling consoity	in 14/									
Cooling capacity 35	2 544	3 518	4 673	6 032	7 616	9 449	11 550	-	-	
40	2 262	3 187	4 278	5 558	7 049	8 772	10 751	-	-	
45	1 975	2 849	3 875	5 075	6 470	8 084	9 938	_	-	
50	-	2 509	3 467	4 585	5 885	7 387	9 115	-	-	
55	-	-	3 058	4 093	5 294	6 684	8 284	-	-	
60	-	-	-	3 601	4 703	5 978	7 450	-	-	
65	-	-	-	3 112	4 113	5 273	6 614	-	-	
		1								
Power input in W				-						
35	1 262	1 422	1 555	1 660	1 735	1 778	1 789	-	-	
40	1 289	1 480	1 644	1 779	1 883	1 956	1 995	-	-	
45	1 297	1 523	1 721	1 890	2 028	2 133	2 206	-	-	
50	-	1 548	1 784	1 990	2 165	2 308	2 417	-	-	
55	-	-	1 830	2 077	2 294	2 477	2 626	-	-	
60	-	-	-	2 148	2 409	2 636	2 829	-	-	
65	-	-	-	2 199	2 508	2 784	3 025	-	-	
Current consump	tion in A									
35	3.22	3.38	3.53	3.65	3.74	3.82	3.88	-	-	
40	3.25	3.46	3.64	3.79	3.92	4.02	4.10	-	-	
45	3.25	3.51	3.74	3.94	4.11	4.25	4.36	-	-	
50	-	3.54	3.83	4.08	4.30	4.48	4.64	-	-	
55	-	-	3.89	4.21	4.49	4.73	4.94	-	-	
60	-	-	-	4.31	4.66	4.97	5.24	-	-	
65	-	-	-	4.39	4.82	5.20	5.55	-	-	
Mass flow in kg/h										
35	55	75	98	125	155	190	229	-	-	
40	52	71	94	120	150	184	223	-	-	
45	48	67	90	116	145	179	216	-	-	
50	-	63	85	111	140	172	209	-	-	
55	-	-	80	105	134	166	202	-	-	
60	-	-	-	99	127	158	194	-	-	
65	-	-	-	93	120	150	185	-	-	
Coefficient of per	formance (C.O).P.)								
35	2.02	2.47	3.00	3.63	4.39	5.31	6.46	-	-	
40	1.76	2.15	2.60	3.12	3.74	4.49	5.39	-	-	
45	1.52	1.87	2.25	2.69	3.19	3.79	4.51	-	-	
50	-	1.62	1.94	2.30	2.72	3.20	3.77	-	-	
55	-	-	1.67	1.97	2.31	2.70	3.16	-	-	
60	-	-	-	1.68	1.95	2.27	2.63	-	-	
65	-	_	_	1.42	1.64	1.89	2.19	_	_	

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

Cooling capacity	5 885	W
Power input	2 165	W
Current consumption	4.30	A
Mass flow	140	kg/h
C.O.P.	2.72	



Pressure switch settings		
Maximum HP switch setting	29.4	bar(g)
Minimum LP switch setting	1.4	bar(g)
LP pump down setting	1.7	bar(g)

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

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

Sound power data
Sound power level

Sound power level	73	dB(A)
With accoustic hood	66	dB(A)

Tolerance according EN12900



Maneurop reciprocating compressor. MTZ028-4

Danfoss

R407C

Performance data at 50 Hz, ARI rating conditions

Cond. temp. in	Evaporating temperature in °C (to)									
°C (tc)	-15	-10	-5	0	5	10	15			
Cooling capacit	v in W									
35	2 738	3 782	5 018	6 470	8 160	10 112	12 350	-	-	
40	2 448	3 444	4 617	5 991	7 589	9 434	11 549	-	-	
45	2 151	3 098	4 208	5 502	7 006	8 742	10 734	-	-	
50	-	2 748	3 792	5 006	6 415	8 041	9 909	-	-	
55	-	-	3 373	4 506	5 818	7 334	9 075	-	-	
60	-	-	-	4 005	5 220	6 623	8 238	-	-	
65	-	-	-	3 506	4 623	5 914	7 402	-	-	

Power input in W

35	1 262	1 422	1 555	1 660	1 735	1 778	1 789	-	-
40	1 289	1 480	1 644	1 779	1 883	1 956	1 995	-	-
45	1 297	1 523	1 721	1 890	2 028	2 133	2 206	-	-
50	-	1 548	1 784	1 990	2 165	2 308	2 417	-	-
55	-	-	1 830	2 077	2 294	2 477	2 626	-	-
60	-	-	-	2 148	2 409	2 636	2 829	-	-
65	-	-	-	2 199	2 508	2 784	3 025	-	-

Current consumption in A

35	3.22	3.38	3.53	3.65	3.74	3.82	3.88	-	-
40	3.25	3.46	3.64	3.79	3.92	4.02	4.10	-	-
45	3.25	3.51	3.74	3.94	4.11	4.25	4.36	-	-
50	-	3.54	3.83	4.08	4.30	4.48	4.64	-	-
55	-	-	3.89	4.21	4.49	4.73	4.94	-	-
60	-	-	-	4.31	4.66	4.97	5.24	-	-
65	-	-	_	4.39	4.82	5.20	5.55	-	-

Mass flow in kg/h

35	55	75	98	124	154	188	227	-	-
40	51	71	94	120	150	183	222	-	-
45	47	67	89	115	144	178	215	-	-
50	-	63	85	110	139	171	208	-	-
55	-	-	80	105	133	165	201	-	-
60	-	-	-	99	126	157	193	-	-
65	-	-	-	92	119	150	184	-	-

Coefficient of performance (C.O.P.)

35	2.17	2.66	3.23	3.90	4.70	5.69	6.90	-	-
40	1.90	2.33	2.81	3.37	4.03	4.82	5.79	-	-
45	1.66	2.03	2.44	2.91	3.46	4.10	4.87	-	-
50	-	1.78	2.13	2.52	2.96	3.48	4.10	-	-
55	-	-	1.84	2.17	2.54	2.96	3.46	-	-
60	-	-	-	1.86	2.17	2.51	2.91	-	-
65	-	-	-	1.59	1.84	2.12	2.45	-	-

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

Cooling capacity	6 536	W
Power input	2 361	W
Current consumption	4.57	А
Mass flow	147	kg/h
C.O.P.	2.77	

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

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

Pressure switch settings		
Maximum HP switch setting	29.4	bar(g)
Minimum LP switch setting	1.4	bar(g)
LP pump down setting	1.7	bar(g)

Sound power data

Sound power level	73	dB(A)
With accoustic hood	66	dB(A)

Tolerance according EN12900



Maneurop reciprocating compressor. MTZ028-4

Performance data at 50 Hz, EN 12900 rating conditions

~(· (to)		1			ting temperatur	. ,		<u>г</u>	
°C (tc)	-25	-20	-10	-5	0	5	10	15	20
Cooling capacity				1	1				
35	847	1 202	2 211	2 915	3 785	4 845	6 121	7 637	9 419
40	727	1 069	2 021	2 680	3 496	4 491	5 692	7 122	8 808
45	601	929	1 823	2 438	3 198	4 128	5 252	6 596	8 185
50	473	787	1 621	2 190	2 894	3 757	4 805	6 062	7 553
55	-	-	1 416	1 939	2 586	3 383	4 353	5 522	6 915
60	-	-	-	1 688	2 278	3 007	3 899	4 979	6 273
65	-	-	-	-	1 971	2 631	3 445	4 436	5 630
75	-	-	-	-	-	-	2 547	3 357	4 350
Power input in V	v				-	-			
35	664	756	942	1 030	1 112	1 185	1 246	1 293	1 323
40	687	783	983	1 081	1 174	1 260	1 336	1 400	1 449
45	703	805	1 020	1 129	1 235	1 335	1 428	1 510	1 579
50	712	820	1 054	1 174	1 294	1 410	1 520	1 622	1 712
55	-	-	1 081	1 215	1 350	1 483	1 612	1 734	1 847
60	-	-	-	1 251	1 402	1 553	1 702	1 846	1 982
65	-	-	-	-	1 448	1 619	1 789	1 956	2 117
75	-	-	-	-	-	-	1 948	2 165	2 380
		•	-	•		•		· ·	
urrent consum	ption in A								
35	2.58	2.64	2.76	2.82	2.88	2.94	2.99	3.04	3.08
40	2.59	2.66	2.80	2.87	2.95	3.02	3.09	3.16	3.23
45	2.60	2.67	2.83	2.92	3.01	3.10	3.19	3.28	3.38
50	2.59	2.67	2.85	2.96	3.06	3.18	3.29	3.41	3.53
55	-	-	2.87	2.99	3.12	3.25	3.39	3.53	3.68
60	-	-	-	3.02	3.12	3.32	3.48	3.66	3.83
	-	-	-					1 1	
65 75		-		-	3.21	3.39	3.58	3.78	3.99
75	-	-	-	-	-	-	3.76	4.02	4.30
less flow in ka	h								
Alass flow in kg/		20	52	<u> </u>	00	100	104	101	200
35	21	30	53	68	86	108	134	164	200
40	19	28	51	65	83	105	130	161	196
45	17	26	48	63	80	102	127	156	191
50	14	23	45	60	77	98	122	151	185
55	-	-	42	56	73	93	117	146	179
60	-	-	-	52	69	89	112	140	172
65	-	-	-	-	64	83	106	133	164
05	-	-	-	-	-	-	92	118	148
75									
75	•			1	1				7.12
75 Coefficient of pe 35	rformance (C.C 1.28).P.) 1.59	2.35	2.83	3.40	4.09	4.91	5.91	
75 Coefficient of pe	•		2.35 2.06	2.83 2.48	3.40 2.98	4.09 3.56	4.91 4.26	5.91 5.09	6.08
75 Coefficient of pe 35	1.28	1.59						1	6.08 5.18
75 Coefficient of pe 35 40	1.28 1.06	1.59 1.36	2.06	2.48	2.98	3.56	4.26	5.09	
75 Coefficient of pe 35 40 45	1.28 1.06 0.85	1.59 1.36 1.15	2.06 1.79	2.48 2.16	2.98 2.59	3.56 3.09	4.26 3.68	5.09 4.37	5.18
75 Coefficient of pe 35 40 45 50	1.28 1.06 0.85 0.66	1.59 1.36 1.15 0.96	2.06 1.79 1.54	2.48 2.16 1.86	2.98 2.59 2.24	3.56 3.09 2.66	4.26 3.68 3.16	5.09 4.37 3.74	5.18 4.41
75 Coefficient of pe 35 40 45 50 55	1.28 1.06 0.85 0.66	1.59 1.36 1.15 0.96	2.06 1.79 1.54 1.31	2.48 2.16 1.86 1.60	2.98 2.59 2.24 1.92	3.56 3.09 2.66 2.28	4.26 3.68 3.16 2.70	5.09 4.37 3.74 3.18	5.18 4.41 3.74
75 coefficient of pe 35 40 45 50 55 60	1.28 1.06 0.85 0.66 - -	1.59 1.36 1.15 0.96 - -	2.06 1.79 1.54 1.31 -	2.48 2.16 1.86 1.60 1.35	2.98 2.59 2.24 1.92 1.63	3.56 3.09 2.66 2.28 1.94	4.26 3.68 3.16 2.70 2.29	5.09 4.37 3.74 3.18 2.70	5.18 4.41 3.74 3.16
75 coefficient of pe 35 40 45 50 55 60 65	1.28 1.06 0.85 0.66 - - -	1.59 1.36 1.15 0.96 - - -	2.06 1.79 1.54 1.31 - -	2.48 2.16 1.86 1.60 1.35 -	2.98 2.59 2.24 1.92 1.63 1.36	3.56 3.09 2.66 2.28 1.94 1.63	4.26 3.68 3.16 2.70 2.29 1.93	5.09 4.37 3.74 3.18 2.70 2.27	5.18 4.41 3.74 3.16 2.66
75 Coefficient of pe 35 40 45 50 55 60 65 75	1.28 1.06 0.85 0.66 - - - -	1.59 1.36 1.15 0.96 - - - -	2.06 1.79 1.54 1.31 - -	2.48 2.16 1.86 1.60 1.35 -	2.98 2.59 2.24 1.92 1.63 1.36	3.56 3.09 2.66 2.28 1.94 1.63	4.26 3.68 3.16 2.70 2.29 1.93 1.31	5.09 4.37 3.74 3.18 2.70 2.27	5.18 4.41 3.74 3.16 2.66
75 Coefficient of pe 35 40 45 50 55 60 65	1.28 1.06 0.85 0.66 - - - -	1.59 1.36 1.15 0.96 - - - -	2.06 1.79 1.54 1.31 - -	2.48 2.16 1.86 1.60 1.35 -	2.98 2.59 2.24 1.92 1.63 1.36	3.56 3.09 2.66 2.28 1.94 1.63 - Pressure switch s Maximum HP swit	4.26 3.68 3.16 2.70 2.29 1.93 1.31 settings	5.09 4.37 3.74 3.18 2.70 2.27	5.18 4.41 3.74 3.16 2.66
75 Coefficient of person 35 40 45 50 55 60 65 75 Nominal perform	1.28 1.06 0.85 0.66 - - - -	1.59 1.36 1.15 0.96 - - - - °C, tc = 50 °C	2.06 1.79 1.54 1.31 - - -	2.48 2.16 1.86 1.60 1.35 -	2.98 2.59 2.24 1.92 1.63 1.36	3.56 3.09 2.66 2.28 1.94 1.63 - Pressure switch s	4.26 3.68 3.16 2.70 2.29 1.93 1.31 settings	5.09 4.37 3.74 3.18 2.70 2.27 1.55	5.18 4.41 3.74 3.16 2.66 1.83
75 Coefficient of pe 35 40 45 50 55 60 65 75 Jominal perform Cooling capacity Power input Current consump	1.28 1.06 0.85 0.66 - - - - - - - - - - - - -	1.59 1.36 1.15 0.96 - - - - - - - - - - - - -	2.06 1.79 1.54 1.31 - - - - W W W A	2.48 2.16 1.86 1.60 1.35 -	2.98 2.59 2.24 1.92 1.63 1.36	3.56 3.09 2.66 2.28 1.94 1.63 - Pressure switch s Maximum HP swit	4.26 3.68 3.16 2.70 2.29 1.93 1.31 settings ch setting h setting	5.09 4.37 3.74 3.18 2.70 2.27 1.55 20.2	5.18 4.41 3.74 3.16 2.66 1.83 bar(g)
75 Coefficient of pe 35 40 45 50 55 60 65 75 Cooling capacity Yower input Current consump Mass flow	1.28 1.06 0.85 0.66 - - - - - - - - - - - - -	1.59 1.36 1.15 0.96 - - - - - - - - - - - - -	2.06 1.79 1.54 1.31 - - - W W W	2.48 2.16 1.86 1.60 1.35 -	2.98 2.59 2.24 1.92 1.63 1.36	3.56 3.09 2.66 2.28 1.94 1.63 - Pressure switch s Maximum HP switt Minimum LP switt LP pump down set	4.26 3.68 3.16 2.70 2.29 1.93 1.31 settings ch setting h setting	5.09 4.37 3.74 3.18 2.70 2.27 1.55 20.2 0.1	5.18 4.41 3.74 3.16 2.66 1.83 bar(g) bar(g)
75 Coefficient of pe 35 40 45 50 55 60 65 75 Jominal perform Cooling capacity Power input Current consump	1.28 1.06 0.85 0.66 - - - - - - - - - - - - -	1.59 1.36 1.15 0.96 - - - - - - - - - - - - -	2.06 1.79 1.54 1.31 - - - - W W W A	2.48 2.16 1.86 1.60 1.35 -	2.98 2.59 2.24 1.92 1.63 1.36	3.56 3.09 2.66 2.28 1.94 1.63 - Pressure switch a Maximum HP switch Minimum LP switch	4.26 3.68 3.16 2.70 2.29 1.93 1.31 settings ch setting h setting ting	5.09 4.37 3.74 3.18 2.70 2.27 1.55 20.2 0.1	5.18 4.41 3.74 3.16 2.66 1.83 bar(g) bar(g)

tc: Condensing temperature at dew point Rating conditions : Superheat = 10 K , Subcooling = 0 K

Tolerance according EN12900

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Danfoss

R134a

Maneurop reciprocating compressor. MTZ028-4

Performanc	ce data at 50) Hz, ARI rat	ing conditio	ns					R134a
Cond. temp. in				Evapora	ating temperatu	re in °C (to)			
°C (tc)	-25	-20	-10	-5	0	5	10	15	20
	•					·			
Cooling capacit	ty in W			1	1				
35	921	1 305	2 391	3 147	4 079	5 214	6 578	8 196	10 095
40	794	1 166	2 197	2 908	3 786	4 856	6 145	7 678	9 481
45	661	1 021	1 993	2 660	3 483	4 487	5 700	7 146	8 853
50	-	871	1 784	2 405	3 172	4 110	5 245	6 605	8 215
55	-	-	1 572	2 147	2 856	3 727	4 785	6 057	7 569
60	-	-	-	1 886	2 538	3 340	4 320	5 504	6 919
65	-	-	-	-	-	2 954	3 855	4 950	6 266
75	-	-	-	-	-	-	2 931	3 848	4 967
Power input in	w								
35	664	756	942	1 030	1 112	1 185	1 246	1 293	1 323
40	687	783	983	1 081	1 174	1 260	1 336	1 400	1 449
45	703	805	1 020	1 129	1 235	1 335	1 428	1 510	1 579
50	-	820	1 054	1 174	1 294	1 410	1 520	1 622	1 712
55	-	-	1 081	1 215	1 350	1 483	1 612	1 734	1 847
60	-	-	-	1 251	1 402	1 553	1 702	1 846	1 982
65	-	-	-	-	-	1 619	1 789	1 956	2 117
75	-	-	-	-	-	-	1 948	2 165	2 380
urrent consun 35	2.58	2.64	2.76	2.82	2.88	2.94	2.99	3.04	3.08
40	2.59	2.66	2.80	2.87	2.95	3.02	3.09	3.16	3.23
45	2.60	2.67	2.83	2.92	3.01	3.10	3.19	3.28	3.38
50	-	2.67	2.85	2.96	3.06	3.18	3.29	3.41	3.53
55	-	-	2.87	2.99	3.12	3.25	3.39	3.53	3.68
60	-	-	-	3.02	3.17	3.32	3.48	3.66	3.83
65	-	-	-	-	-	3.39	3.58	3.78	3.99
75	-	-	-	-	-	-	3.76	4.02	4.30
laas flaur in ka	11-								
lass flow in kg 35	/ n 21	30	52	67	86	107	133	164	199
40	19	28	50	65	83	107	130	160	195
45	17	26	48	63	80	101	126	155	189
50	-	23	45	59	77	97	120	150	184
55	_	-	42	56	73	93	117	145	178
60	_	_	-	52	69	88	111	139	170
65	-	-	-	-	-	83	105	133	163
75	-	-	-	-	-	-	92	117	100
35	erformance (C.C 1.39).P.) 1.73	2.54	3.05	3.67	4.40	5.28	6.34	7.63
35 40	1.39	1.73	2.54	3.05 2.69	3.67	3.85	4.60	5.48	6.54
	0.94								
45 50	- 0.94	1.27	1.95	2.36 2.05	2.82 2.45	3.36	3.99 3.45	4.73 4.07	5.61 4.80
55	-	1.06	1.69 1.45	2.05	2.45	2.91 2.51	2.97	3.49	4.80
60	-	-	-	1.77	1.81	2.51	2.97	2.98	3.49
65	-	-	-	-	-	1.82	2.54	2.98	2.96
75	-	-	-	-	-	-	1.50	1.78	2.96
				1	L			1	
		2 °C, tc = 54.4 °C		_		Pressure switch		00.0	h = = (=)
Cooling capacity Power input	,	4 218 1 531	W W			Maximum HP swite Minimum LP swite		20.2 0.1	bar(g) bar(g)
		1 001	••	1				0.1	Bai (g)

Sound power data	
Sound power level	0
With accoustic hood	0

Tolerance according EN12900

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

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

103

2.75

kg/h

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Mass flow

C.O.P.

dB(A)

dB(A)



Maneurop reciprocating compressor. MTZ028-4

Danfoss

R404A

Performance data at 50 Hz, EN 12900 rating conditions

ond. temp. in	Evaporating temperature in °C (to)									
°C (tc)	-30	-25	-20	-15	-10	-5	0	5	10	
oling capacity i	in W									
30	1 417	2 050	2 825	3 757	4 866	6 168	7 683	9 428	11 421	
35	1 182	1 769	2 485	3 348	4 375	5 585	6 995	8 624	10 488	
40	963	1 503	2 159	2 951	3 896	5 011	6 315	7 826	9 562	
45	759	1 250	1 846	2 566	3 427	4 447	5 644	7 037	8 642	
50	570	1 012	1 546	2 193	2 969	3 892	4 982	6 254	7 728	
55	-	787	1 260	1 832	2 522	3 348	4 328	5 480	6 821	
60	-	578	986	1 483	2 086	2 813	3 682	4 712	5 920	
wer input in W					-	-				
30	1 106	1 291	1 462	1 614	1 747	1 856	1 940	1 996	2 020	
35	1 094	1 298	1 488	1 663	1 818	1 952	2 062	2 144	2 197	
40	1 076	1 300	1 511	1 708	1 888	2 047	2 184	2 295	2 378	
45	1 050	1 295	1 529	1 750	1 955	2 141	2 306	2 446	2 560	
50	1 016	1 283	1 541	1 787	2 019	2 232	2 426	2 598	2 743	
55	-	1 263	1 546	1 818	2 077	2 320	2 545	2 748	2 927	
60	-	1 234	1 543	1 842	2 130	2 403	2 659	2 895	3 109	
irrent consump						1	1			
30	3.07	3.24	3.42	3.60	3.77	3.92	4.05	4.13	4.17	
35	3.08	3.26	3.46	3.65	3.84	4.02	4.16	4.27	4.33	
40	3.07	3.28	3.50	3.72	3.94	4.14	4.31	4.45	4.54	
45	3.04	3.28	3.53	3.79	4.04	4.28	4.49	4.67	4.80	
50	2.97	3.25	3.54	3.84	4.14	4.42	4.68	4.91	5.09	
55	-	3.18	3.52	3.87	4.22	4.56	4.87	5.16	5.39	
60	-	3.05	3.46	3.87	4.28	4.68	5.05	5.40	5.70	
iss flow in kg/h										
30	45	63	85	110	139	172	210	252	300	
35	40	58	80	105	133	166	203	245	292	
40	35	54	75	99	127	159	196	238	285	
45	31	49	70	94	121	153	189	230	277	
50	26	43	64	88	115	147	182	223	268	
55	-	38	59	82	109	140	176	215	260	
60	-	33	53	76	103	134	168	208	252	
efficient of per	formance (C.O).P.)								
30	1.28	1.59	1.93	2.33	2.79	3.32	3.96	4.72	5.65	
35	1.08	1.36	1.67	2.01	2.41	2.86	3.39	4.02	4.77	
40	0.90	1.16	1.43	1.73	2.06	2.45	2.89	3.41	4.02	
45	0.72	0.97	1.21	1.47	1.75	2.08	2.45	2.88	3.38	
50	0.56	0.79	1.00	1.23	1.47	1.74	2.05	2.41	2.82	
55	-	0.62	0.81	1.01	1.21	1.44	1.70	1.99	2.33	
60	-	0.47	0.64	0.80	0.98	1.17	1.38	1.63	1.90	

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

Cooling capacity	3 427	W
Power input	1 955	W
Current consumption	4.04	A
Mass flow	121	kg/h
C.O.P.	1.75	

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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)

71

64

dB(A)

dB(A)

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

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

With accoustic hood

Sound power data

Sound power level

Tolerance according EN12900



Maneurop reciprocating compressor. MTZ028-4

Danfoss

R404A

Performance data at 50 Hz, ARI rating conditions

Cond. temp. in	Evaporating temperature in °C (to)									
°C (tc)	-30	-25	-20	-15	-10	-5	0	5	10	
Cooling capacity	in W									
30	1 577	2 276	3 128	4 150	5 362	6 783	8 431	10 326	12 485	
35	1 330	1 984	2 779	3 733	4 866	6 195	7 741	9 522	11 557	
40	1 098	1 706	2 444	3 328	4 380	5 618	7 061	8 727	10 637	
45	880	1 442	2 121	2 936	3 906	5 051	6 390	7 943	9 727	
50	676	1 191	1 811	2 556	3 445	4 497	5 733	7 171	8 830	
55	-	954	1 516	2 190	2 997	3 958	5 091	6 416	7 952	
60	-	730	1 235	1 840	2 569	3 439	4 472	5 688	7 107	
Power input in W										
30	1 106	1 291	1 462	1 614	1 747	1 856	1 940	1 996	2 020	
35	1 094	1 298	1 488	1 663	1 818	1 952	2 062	2 144	2 197	
40	1 076	1 300	1 511	1 708	1 888	2 047	2 184	2 295	2 378	
45	1 050	1 295	1 529	1 750	1 955	2 141	2 306	2 446	2 560	
50	1 016	1 283	1 541	1 787	2 019	2 232	2 426	2 598	2 743	
55	-	1 263	1 546	1 818	2 077	2 320	2 545	2 748	2 927	
60	-	1 234	1 543	1 842	2 130	2 403	2 659	2 895	3 109	
Current consump		0.04	0.40	0.00	0.77	0.00	4.05	1.40	4.47	
30	3.07	3.24	3.42	3.60	3.77	3.92	4.05	4.13	4.17	
35 40	3.08	3.26 3.28	3.46 3.50	3.65 3.72	3.84 3.94	4.02	4.16 4.31	4.27 4.45	4.33 4.54	
40	3.07	3.28	3.50	3.72	4.04	4.14	4.31	4.45	4.54	
50	2.97	3.25	3.53	3.84	4.14	4.42	4.49	4.07	4.80 5.09	
55	-	3.18	3.52	3.87	4.22	4.56	4.87	5.16	5.39	
60	-	3.05	3.46	3.87	4.28	4.68	5.05	5.40	5.70	
00		0.00	0.10	0.01	1.20	1.00	0.00	0.10	0.10	
Mass flow in kg/h	1		1	1		1	1		1	
30	44	63	84	109	138	171	208	251	298	
35	40	58	79	104	132	165	202	243	290	
40	35	53	74	99	127	159	195	236	283	
45	30	48	69	93	121	152	188	229	275	
50	25	43	64	88	115	146	181	221	267	
55	-	38	58	82	109	139	174	214	259	
60	-	32	53	76	102	133	167	206	250	
Coefficient of per	formance (C.C	D.P.)								
30	1.43	1.76	2.14	2.57	3.07	3.65	4.35	5.17	6.18	
35	1.22	1.53	1.87	2.25	2.68	3.17	3.75	4.44	5.26	
40	1.02	1.31	1.62	1.95	2.32	2.74	3.23	3.80	4.47	
45	0.84	1.11	1.39	1.68	2.00	2.36	2.77	3.25	3.80	
50	0.67	0.93	1.18	1.43	1.71	2.01	2.36	2.76	3.22	
55	-	0.76	0.98	1.20	1.44	1.71	2.00	2.34	2.72	
60	-	0.59	0.80	1.00	1.21	1.43	1.68	1.96	2.29	

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

Cooling capacity	3 906	W
Power input	1 955	W
Current consumption	4.04	Α
Mass flow	121	kg/h
C.O.P.	2.00	

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

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

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	71	dB(A)
With accoustic hood	64	dB(A)

Tolerance according EN12900



Maneurop reciprocating compressor. MTZ028-4

Performance data at 50 Hz, EN 12900 rating conditions

~(· (to)		1			ting temperatur	. ,		<u>г </u>	
°C (tc)	-25	-20	-10	-5	0	5	10	15	20
Cooling capacity				1	1				
35	847	1 202	2 211	2 915	3 785	4 845	6 121	7 637	9 419
40	727	1 069	2 021	2 680	3 496	4 491	5 692	7 122	8 808
45	601	929	1 823	2 438	3 198	4 128	5 252	6 596	8 185
50	473	787	1 621	2 190	2 894	3 757	4 805	6 062	7 553
55	-	-	1 416	1 939	2 586	3 383	4 353	5 522	6 915
60	-	-	-	1 688	2 278	3 007	3 899	4 979	6 273
65	-	-	-	-	1 971	2 631	3 445	4 436	5 630
75	-	-	-	-	-	-	2 547	3 357	4 350
Power input in V	v				-	-			
35	664	756	942	1 030	1 112	1 185	1 246	1 293	1 323
40	687	783	983	1 081	1 174	1 260	1 336	1 400	1 449
45	703	805	1 020	1 129	1 235	1 335	1 428	1 510	1 579
50	712	820	1 054	1 174	1 294	1 410	1 520	1 622	1 712
55	-	-	1 081	1 215	1 350	1 483	1 612	1 734	1 847
60	-	-	-	1 251	1 402	1 553	1 702	1 846	1 982
65	-	-	-	-	1 448	1 619	1 789	1 956	2 117
75	-	-	-	-	-	-	1 948	2 165	2 380
		•	-	•		•		· ·	
urrent consum	ption in A								
35	2.58	2.64	2.76	2.82	2.88	2.94	2.99	3.04	3.08
40	2.59	2.66	2.80	2.87	2.95	3.02	3.09	3.16	3.23
45	2.60	2.67	2.83	2.92	3.01	3.10	3.19	3.28	3.38
50	2.59	2.67	2.85	2.96	3.06	3.18	3.29	3.41	3.53
55	-	-	2.87	2.99	3.12	3.25	3.39	3.53	3.68
60	-	-	-	3.02	3.12	3.32	3.48	3.66	3.83
	-	-	-					1 1	
65 75		-		-	3.21	3.39	3.58	3.78	3.99
75	-	-	-	-	-	-	3.76	4.02	4.30
less flow in ka	h								
Alass flow in kg/		20	52	<u> </u>	00	100	104	101	200
35	21	30	53	68	86	108	134	164	200
40	19	28	51	65	83	105	130	161	196
45	17	26	48	63	80	102	127	156	191
50	14	23	45	60	77	98	122	151	185
55	-	-	42	56	73	93	117	146	179
60	-	-	-	52	69	89	112	140	172
65	-	-	-	-	64	83	106	133	164
05	-	-	-	-	-	-	92	118	148
75									
								r	
75	•			1	1				7.12
75 Coefficient of pe 35	rformance (C.C 1.28).P.) 1.59	2.35	2.83	3.40	4.09	4.91	5.91	
75 Coefficient of pe	•		2.35 2.06	2.83 2.48	3.40 2.98	4.09 3.56	4.91 4.26	5.91 5.09	6.08
75 Coefficient of pe 35	1.28	1.59						1	6.08 5.18
75 Coefficient of pe 35 40	1.28 1.06	1.59 1.36	2.06	2.48	2.98	3.56	4.26	5.09	
75 Coefficient of pe 35 40 45	1.28 1.06 0.85	1.59 1.36 1.15	2.06 1.79	2.48 2.16	2.98 2.59	3.56 3.09	4.26 3.68	5.09 4.37	5.18
75 Coefficient of pe 35 40 45 50	1.28 1.06 0.85 0.66	1.59 1.36 1.15 0.96	2.06 1.79 1.54	2.48 2.16 1.86	2.98 2.59 2.24	3.56 3.09 2.66	4.26 3.68 3.16	5.09 4.37 3.74	5.18 4.41
75 Coefficient of pe 35 40 45 50 55	1.28 1.06 0.85 0.66	1.59 1.36 1.15 0.96	2.06 1.79 1.54 1.31	2.48 2.16 1.86 1.60	2.98 2.59 2.24 1.92	3.56 3.09 2.66 2.28	4.26 3.68 3.16 2.70	5.09 4.37 3.74 3.18	5.18 4.41 3.74
75 coefficient of pe 35 40 45 50 55 60	1.28 1.06 0.85 0.66 - -	1.59 1.36 1.15 0.96 - -	2.06 1.79 1.54 1.31 -	2.48 2.16 1.86 1.60 1.35	2.98 2.59 2.24 1.92 1.63	3.56 3.09 2.66 2.28 1.94	4.26 3.68 3.16 2.70 2.29	5.09 4.37 3.74 3.18 2.70	5.18 4.41 3.74 3.16
75 coefficient of pe 35 40 45 50 55 60 65	1.28 1.06 0.85 0.66 - - -	1.59 1.36 1.15 0.96 - - -	2.06 1.79 1.54 1.31 - -	2.48 2.16 1.86 1.60 1.35 -	2.98 2.59 2.24 1.92 1.63 1.36	3.56 3.09 2.66 2.28 1.94 1.63	4.26 3.68 3.16 2.70 2.29 1.93	5.09 4.37 3.74 3.18 2.70 2.27	5.18 4.41 3.74 3.16 2.66
75 Coefficient of pe 35 40 45 50 55 60 65 75	1.28 1.06 0.85 0.66 - - - -	1.59 1.36 1.15 0.96 - - - -	2.06 1.79 1.54 1.31 - -	2.48 2.16 1.86 1.60 1.35 -	2.98 2.59 2.24 1.92 1.63 1.36	3.56 3.09 2.66 2.28 1.94 1.63	4.26 3.68 3.16 2.70 2.29 1.93 1.31	5.09 4.37 3.74 3.18 2.70 2.27	5.18 4.41 3.74 3.16 2.66
75 Coefficient of pe 35 40 45 50 55 60 65	1.28 1.06 0.85 0.66 - - - -	1.59 1.36 1.15 0.96 - - - -	2.06 1.79 1.54 1.31 - -	2.48 2.16 1.86 1.60 1.35 -	2.98 2.59 2.24 1.92 1.63 1.36	3.56 3.09 2.66 2.28 1.94 1.63 - Pressure switch s Maximum HP swit	4.26 3.68 3.16 2.70 2.29 1.93 1.31 settings	5.09 4.37 3.74 3.18 2.70 2.27	5.18 4.41 3.74 3.16 2.66
75 Coefficient of pe 35 40 45 50 55 60 65 75 Nominal perform	1.28 1.06 0.85 0.66 - - - -	1.59 1.36 1.15 0.96 - - - - °C, tc = 50 °C	2.06 1.79 1.54 1.31 - - -	2.48 2.16 1.86 1.60 1.35 -	2.98 2.59 2.24 1.92 1.63 1.36	3.56 3.09 2.66 2.28 1.94 1.63 - Pressure switch s	4.26 3.68 3.16 2.70 2.29 1.93 1.31 settings	5.09 4.37 3.74 3.18 2.70 2.27 1.55	5.18 4.41 3.74 3.16 2.66 1.83
75 Coefficient of pe 35 40 45 50 55 60 65 75 Jominal perform Cooling capacity Power input Current consump	1.28 1.06 0.85 0.66 - - - - - - - - - - - - -	1.59 1.36 1.15 0.96 - - - - - - - - - - - - -	2.06 1.79 1.54 1.31 - - - - W W W A	2.48 2.16 1.86 1.60 1.35 -	2.98 2.59 2.24 1.92 1.63 1.36	3.56 3.09 2.66 2.28 1.94 1.63 - Pressure switch s Maximum HP swit	4.26 3.68 3.16 2.70 2.29 1.93 1.31 settings ch setting h setting	5.09 4.37 3.74 3.18 2.70 2.27 1.55 20.2	5.18 4.41 3.74 3.16 2.66 1.83 bar(g)
75 Coefficient of pe 35 40 45 50 55 60 65 75 Cooling capacity Yower input Current consump Aass flow	1.28 1.06 0.85 0.66 - - - - - - - - - - - - -	1.59 1.36 1.15 0.96 - - - - - - - - - - - - -	2.06 1.79 1.54 1.31 - - - W W W	2.48 2.16 1.86 1.60 1.35 -	2.98 2.59 2.24 1.92 1.63 1.36	3.56 3.09 2.66 2.28 1.94 1.63 - Pressure switch s Maximum HP switt Minimum LP switt LP pump down set	4.26 3.68 3.16 2.70 2.29 1.93 1.31 settings ch setting h setting	5.09 4.37 3.74 3.18 2.70 2.27 1.55 20.2 0.1	5.18 4.41 3.74 3.16 2.66 1.83 bar(g) bar(g)
75 Coefficient of pe 35 40 45 50 55 60 65 75 Jominal perform Cooling capacity Power input Current consump	1.28 1.06 0.85 0.66 - - - - - - - - - - - - -	1.59 1.36 1.15 0.96 - - - - - - - - - - - - -	2.06 1.79 1.54 1.31 - - - - W W W A	2.48 2.16 1.86 1.60 1.35 -	2.98 2.59 2.24 1.92 1.63 1.36	3.56 3.09 2.66 2.28 1.94 1.63 - Pressure switch a Maximum HP switch Minimum LP switch	4.26 3.68 3.16 2.70 2.29 1.93 1.31 settings ch setting h setting ting	5.09 4.37 3.74 3.18 2.70 2.27 1.55 20.2 0.1	5.18 4.41 3.74 3.16 2.66 1.83 bar(g) bar(g)

tc: Condensing temperature at dew point Rating conditions : Superheat = 10 K , Subcooling = 0 K

Tolerance according EN12900

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Danfoss

R134a

Maneurop reciprocating compressor. MTZ028-4

Performanc	ce data at 50) Hz, ARI rat	ing conditio	ns					R134a
Cond. temp. in				Evapora	ating temperatu	re in °C (to)			
°C (tc)	-25	-20	-10	-5	0	5	10	15	20
	•					·			
Cooling capacit	ty in W			1	1				
35	921	1 305	2 391	3 147	4 079	5 214	6 578	8 196	10 095
40	794	1 166	2 197	2 908	3 786	4 856	6 145	7 678	9 481
45	661	1 021	1 993	2 660	3 483	4 487	5 700	7 146	8 853
50	-	871	1 784	2 405	3 172	4 110	5 245	6 605	8 215
55	-	-	1 572	2 147	2 856	3 727	4 785	6 057	7 569
60	-	-	-	1 886	2 538	3 340	4 320	5 504	6 919
65	-	-	-	-	-	2 954	3 855	4 950	6 266
75	-	-	-	-	-	-	2 931	3 848	4 967
Power input in	w								
35	664	756	942	1 030	1 112	1 185	1 246	1 293	1 323
40	687	783	983	1 081	1 174	1 260	1 336	1 400	1 449
45	703	805	1 020	1 129	1 235	1 335	1 428	1 510	1 579
50	-	820	1 054	1 174	1 294	1 410	1 520	1 622	1 712
55	-	-	1 081	1 215	1 350	1 483	1 612	1 734	1 847
60	-	-	-	1 251	1 402	1 553	1 702	1 846	1 982
65	-	-	-	-	-	1 619	1 789	1 956	2 117
75	-	-	-	-	-	-	1 948	2 165	2 380
urrent consun 35	2.58	2.64	2.76	2.82	2.88	2.94	2.99	3.04	3.08
40	2.59	2.66	2.80	2.87	2.95	3.02	3.09	3.16	3.23
45	2.60	2.67	2.83	2.92	3.01	3.10	3.19	3.28	3.38
50	-	2.67	2.85	2.96	3.06	3.18	3.29	3.41	3.53
55	-	-	2.87	2.99	3.12	3.25	3.39	3.53	3.68
60	-	-	-	3.02	3.17	3.32	3.48	3.66	3.83
65	-	-	-	-	-	3.39	3.58	3.78	3.99
75	-	-	-	-	-	-	3.76	4.02	4.30
laas flaur in ka	11-								
lass flow in kg 35	/ n 21	30	52	67	86	107	133	164	199
40	19	28	50	65	83	107	130	160	195
45	17	26	48	63	80	101	126	155	189
50	-	23	45	59	77	97	120	150	184
55	_	-	42	56	73	93	117	145	178
60	_	_	-	52	69	88	111	139	170
65	-	-	-	-	-	83	105	133	163
75	-	-	-	-	-	-	92	117	100
35	erformance (C.C 1.39).P.) 1.73	2.54	3.05	3.67	4.40	5.28	6.34	7.63
35 40	1.39	1.73	2.54	3.05 2.69	3.67	3.85	4.60	5.48	6.54
	0.94								
45 50	- 0.94	1.27	1.95	2.36 2.05	2.82 2.45	3.36	3.99 3.45	4.73 4.07	5.61 4.80
55	-	1.06	1.69 1.45	2.05	2.45	2.91 2.51	2.97	3.49	4.80
60	-	-	-	1.77	1.81	2.51	2.97	2.98	3.49
65	-	-	-	-	-	1.82	2.54	2.98	2.96
75	-	-	-	-	-	-	1.50	1.78	2.96
				1	L			1	
		2 °C, tc = 54.4 °C		_		Pressure switch		00.0	h = = (=)
Cooling capacity Power input	,	4 218 1 531	W W			Maximum HP swite Minimum LP swite		20.2 0.1	bar(g) bar(g)
		1 001	••	1				0.1	Bai (g)

Sound power data	
Sound power level	0
With accoustic hood	0

Tolerance according EN12900

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

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

103

2.75

kg/h

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Mass flow

C.O.P.

dB(A)

dB(A)



Maneurop reciprocating compressor. MTZ028-4

Danfoss

R407C

Performance data at 50 Hz, EN 12900 rating conditions

Cond. temp. in	Evaporating temperature in °C (to)								
°C (tc)	-15	-10	-5	0	5	10	15		
Cooling consoity	in 14/								
Cooling capacity 35	2 544	3 518	4 673	6 032	7 616	9 449	11 550	-	-
40	2 262	3 187	4 278	5 558	7 049	8 772	10 751	-	-
45	1 975	2 849	3 875	5 075	6 470	8 084	9 938	_	-
50	-	2 509	3 467	4 585	5 885	7 387	9 115	-	-
55	-	-	3 058	4 093	5 294	6 684	8 284	-	-
60	-	-	-	3 601	4 703	5 978	7 450	-	-
65	-	-	-	3 112	4 113	5 273	6 614	-	-
		1							
Power input in W				-					
35	1 262	1 422	1 555	1 660	1 735	1 778	1 789	-	-
40	1 289	1 480	1 644	1 779	1 883	1 956	1 995	-	-
45	1 297	1 523	1 721	1 890	2 028	2 133	2 206	-	-
50	-	1 548	1 784	1 990	2 165	2 308	2 417	-	-
55	-	-	1 830	2 077	2 294	2 477	2 626	-	-
60	-	-	-	2 148	2 409	2 636	2 829	-	-
65	-	-	-	2 199	2 508	2 784	3 025	-	-
Current consump	tion in A								
35	3.22	3.38	3.53	3.65	3.74	3.82	3.88	-	-
40	3.25	3.46	3.64	3.79	3.92	4.02	4.10	-	-
45	3.25	3.51	3.74	3.94	4.11	4.25	4.36	-	-
50	-	3.54	3.83	4.08	4.30	4.48	4.64	-	-
55	-	-	3.89	4.21	4.49	4.73	4.94	-	-
60	-	-	-	4.31	4.66	4.97	5.24	-	-
65	-	-	-	4.39	4.82	5.20	5.55	-	-
Mass flow in kg/h									
35	55	75	98	125	155	190	229	-	-
40	52	71	94	120	150	184	223	-	-
45	48	67	90	116	145	179	216	-	-
50	-	63	85	111	140	172	209	-	-
55	-	-	80	105	134	166	202	-	-
60	-	-	-	99	127	158	194	-	-
65	-	-	-	93	120	150	185	-	-
Coefficient of per	formance (C.O).P.)							
35	2.02	2.47	3.00	3.63	4.39	5.31	6.46	-	-
40	1.76	2.15	2.60	3.12	3.74	4.49	5.39	-	-
45	1.52	1.87	2.25	2.69	3.19	3.79	4.51	-	-
50	-	1.62	1.94	2.30	2.72	3.20	3.77	-	-
55	-	-	1.67	1.97	2.31	2.70	3.16	-	-
60	-	-	-	1.68	1.95	2.27	2.63	-	-
65	-	_	_	1.42	1.64	1.89	2.19	_	_

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

Cooling capacity	5 885	W
Power input	2 165	W
Current consumption	4.30	A
Mass flow	140	kg/h
C.O.P.	2.72	



Pressure switch settings		
Maximum HP switch setting	29.4	bar(g)
Minimum LP switch setting	1.4	bar(g)
LP pump down setting	1.7	bar(g)

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

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

Sound power data
Sound power level

Sound power level	73	dB(A)
With accoustic hood	66	dB(A)

Tolerance according EN12900



Maneurop reciprocating compressor. MTZ028-4

Danfoss

R407C

Performance data at 50 Hz, ARI rating conditions

Cond. temp. in	Evaporating temperature in °C (to)								
°C (tc)	-15	-10	-5	0	5	10	15		
Cooling capacit	v in W								
35	2 738	3 782	5 018	6 470	8 160	10 112	12 350	-	-
40	2 448	3 444	4 617	5 991	7 589	9 434	11 549	-	-
45	2 151	3 098	4 208	5 502	7 006	8 742	10 734	-	-
50	-	2 748	3 792	5 006	6 415	8 041	9 909	-	-
55	-	-	3 373	4 506	5 818	7 334	9 075	-	-
60	-	-	-	4 005	5 220	6 623	8 238	-	-
65	-	-	-	3 506	4 623	5 914	7 402	-	-

Power input in W

35	1 262	1 422	1 555	1 660	1 735	1 778	1 789	-	-
40	1 289	1 480	1 644	1 779	1 883	1 956	1 995	-	-
45	1 297	1 523	1 721	1 890	2 028	2 133	2 206	-	-
50	-	1 548	1 784	1 990	2 165	2 308	2 417	-	-
55	-	-	1 830	2 077	2 294	2 477	2 626	-	-
60	-	-	-	2 148	2 409	2 636	2 829	-	-
65	-	-	-	2 199	2 508	2 784	3 025	-	-

Current consumption in A

35	3.22	3.38	3.53	3.65	3.74	3.82	3.88	-	-
40	3.25	3.46	3.64	3.79	3.92	4.02	4.10	-	-
45	3.25	3.51	3.74	3.94	4.11	4.25	4.36	-	-
50	-	3.54	3.83	4.08	4.30	4.48	4.64	-	-
55	-	-	3.89	4.21	4.49	4.73	4.94	-	-
60	-	-	-	4.31	4.66	4.97	5.24	-	-
65	-	-	_	4.39	4.82	5.20	5.55	-	-

Mass flow in kg/h

35	55	75	98	124	154	188	227	-	-
40	51	71	94	120	150	183	222	-	-
45	47	67	89	115	144	178	215	-	-
50	-	63	85	110	139	171	208	-	-
55	-	-	80	105	133	165	201	-	-
60	-	-	-	99	126	157	193	-	-
65	-	-	-	92	119	150	184	-	-

Coefficient of performance (C.O.P.)

35	2.17	2.66	3.23	3.90	4.70	5.69	6.90	-	-
40	1.90	2.33	2.81	3.37	4.03	4.82	5.79	-	-
45	1.66	2.03	2.44	2.91	3.46	4.10	4.87	-	-
50	-	1.78	2.13	2.52	2.96	3.48	4.10	-	-
55	-	-	1.84	2.17	2.54	2.96	3.46	-	-
60	-	-	-	1.86	2.17	2.51	2.91	-	-
65	-	-	-	1.59	1.84	2.12	2.45	-	-

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

Cooling capacity	6 536	W
Power input	2 361	W
Current consumption	4.57	А
Mass flow	147	kg/h
C.O.P.	2.77	

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

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

Pressure switch settings		
Maximum HP switch setting	29.4	bar(g)
Minimum LP switch setting	1.4	bar(g)
LP pump down setting	1.7	bar(g)

Sound power data

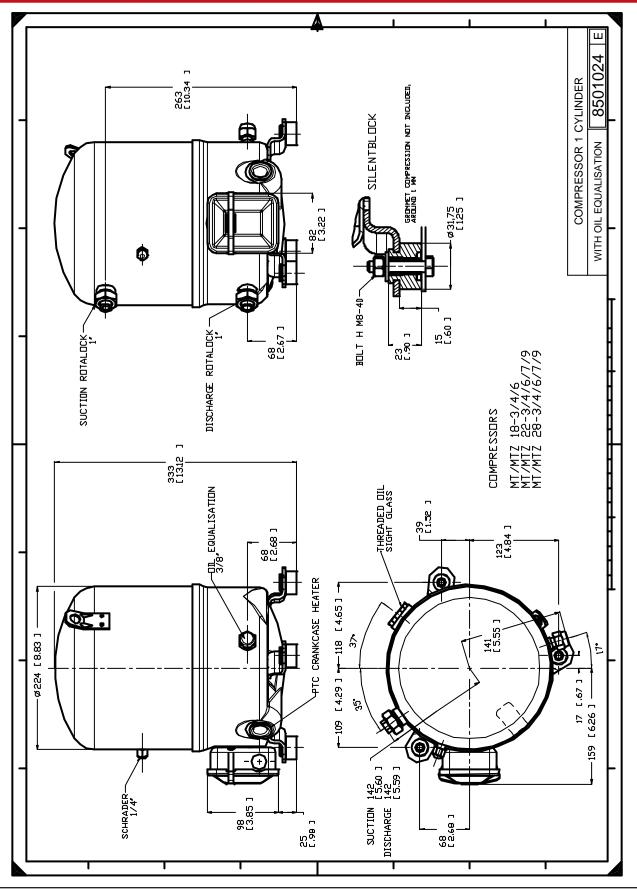
Sound power level	73	dB(A)
With accoustic hood	66	dB(A)

Tolerance according EN12900



ENGINEERING TOMORROW



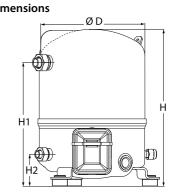


Datasheet, technical data

Maneurop reciprocating compressor, MTZ028-5

General Characteristics

Model number (on compressor nameplate)		MTZ28JE5AVE	
Code number for Singlepack*		MTZ28-5VI	
Code number for Industrial pack**		MTZ28-5VM	Dimension
Drawing number		8501021e	1
Suction and discharge connections		Rotolock	r
Suction connection		1 " Rotolock	
Discharge connection		1 " Rotolock	t Q
Suction connection with supplied sleeve		1/2 " ODF	
Discharge connection with supplied sleeve		3/8 " ODF	
Oil sight glass		Threaded	
Oil equalisation connection		3/8" flare SAE	H1 🗧
Oil drain connection		None	
LP gauge port		Schrader	
IPR valve		None	14
Cylinders		I	
Swept volume	48.06 c	m3/rev	
Displacement @ Nominal speed	8.4 m3/h @	2900 rpm	D=224 mm
Net weight	23	kg	H=333 mm
Oil charge	0.95 litre, P	OE - 160PZ	H1=263 mm
Maximum system test pressure Low Side / High side	25 bar(g) ,	/ 30 bar(g)	H2=68 mm
Maximum differential test pressure	30	bar	H3=- mm
Maximum number of starts per hour	1	2	
Refrigerant charge limit	2.5	kg	
Approved refrigerants	R404A, R507A, R134a,	R407C, R407A, R407F	
··· -	•	· · · · ·	 Terminal b



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Electrical Characteristics

Nominal voltage	220-240V/1/50Hz
Voltage range	220-240 V
Winding resistance (main / start) at 25°C	1.07 Ω / 3.26 Ω
Run capacitors A + C	20 μF + 10 μF
Start capacitor B	100 µF
Start relay	RVA-6AMKL
Maximum Continuous Current (MCC)	20 A
Locked Rotor Amps (LRA)	51 A
Motor protection	Internal overload protector

1 2 4 3

Recommended Installation torques

Oil sight glass	50 Nm	IP5
Power connections / Earth connection	2 Nm / 2 Nm	1:
Mounting bolts	15 Nm	2:
		3:

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

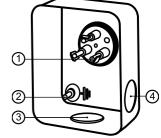
Approvals: CE certified, -, -

*Singlepack: Compressor in cardboard box

**Industrial pack: 12 Unboxed compressors on pallet (order per multiples of 12)

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IP55 (with cable gland) 1:

4:

Spade connectors 1/4"

- Earth M4-12
- Knock-out Ø 21 mm (0.83")
- Hole Ø 21 mm (0.83'')

Maneurop reciprocating compressor. MTZ028-5

Performance data at 50 Hz, EN 12900 rating conditions

Performanc	e data at 50) Hz, EN 129	00 rating co	nditions					R407C
cond. temp. in				Evapora	ating temperature	in °C (to)			
°C (tc)	-15	-10	-5	0	5	10	15		
ooling capacity	in W								
35	2 485	3 478	4 654	6 036	7 643	9 497	11 616	-	-
40	2 217	3 156	4 258	5 544	7 034	8 749	10 708	-	-
45	1 939	2 831	3 864	5 060	6 438	8 020	9 824	-	-
50	-	2 497	3 468	4 579	5 851	7 305	8 961	-	-
55	-	-	3 064	4 097	5 268	6 600	8 113	-	-
60	-	-	-	3 609	4 686	5 902	7 277	-	-
65	-	-	-	3 113	4 101	5 206	6 449	-	-
ower input in V	ı								
35	1 308	1 461	1 590	1 693	1 771	1 824	1 850	-	-
40	1 335	1 515	1 671	1 802	1 907	1 988	2 043	-	-
45	1 355	1 563	1 748	1 908	2 044	2 155	2 240	-	-
50	-	1 605	1 821	2 013	2 181	2 324	2 443	-	-
55	-	-	1 889	2 115	2 318	2 496	2 649	-	-
60	-	-	-	2 215	2 454	2 669	2 860	-	-
65	-	-	-	2 312	2 589	2 844	3 074	-	-
urrent consum	ntion in A								
35	8.47	8.77	9.11	9.45	9.75	9.98	10.11	_	-
40	8.55	8.93	9.36	9.78	10.18	10.50	10.71	_	_
45	8.61	9.09	9.62	10.15	10.65	11.08	11.41	_	_
50	-	9.23	9.87	10.53	11.15	11.71	12.17	_	-
55	-	-	10.12	10.91	11.68	12.39	13.00	_	-
60	-	-	-	11.29	12.22	13.10	13.88	_	_
65	-	-	-	11.65	12.76	13.82	14.78	-	-
loop flow in kg/	•								
lass flow in kg/ 35	54	74	98	125	156	191	230	-	-
40	51	74	94	120	150	184	230	-	_
45	47	67	90	116	145	177	214	-	_
50	-	63	85	110	139	171	206	_	_
55	-	-	80	105	133	164	198	-	-
60	-	-	-	99	126	156	189	_	-
65	-	-	-	93	119	149	183	-	-
		-		1	1		1 1		4
oefficient of pe	-	1	2.02	2 56	1 21	5.21	6.20		
35	1.90	2.38	2.93	3.56	4.31	5.21	6.28	-	-
40	1.66	2.08	2.55	3.08	3.69	4.40	5.24	-	-
45 50	1.43 -	1.81	2.21	2.65	3.15	3.72	4.39	-	-
50 55		1.56	1.90	2.27	2.68	3.14	3.67	-	-
55	-	-	1.62	1.94	2.27	2.64	3.06	-	-
60 65	-	-	-	1.63	1.91	2.21	2.54	-	-
00	-	-	-	1.35	1.58	1.83	2.10	-	-

Cooling capacity	5 851	W	
Power input	2 181	W	
Current consumption	11.15	Α	
Mass flow	139	kg/h	
C.O.P.	2.68		

CERTIFIED ASERCOM

Maximum HP switch setting	29.4	bar(g)
Minimum LP switch setting	1.4	bar(g)
LP pump down setting	1.7	bar(g)

dB(A)

dB(A)

73

66

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

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

Tolerance according EN12900

Sound power data

Sound power level

With accoustic hood





Maneurop reciprocating compressor. MTZ028-5

Danfoss

R407C

Performance data at 50 Hz, ARI rating conditions

Cond. temp. in	Evaporating temperature in °C (to)									
°C (tc)	-15	-10	-5	0	5	10	15			
Cooling capacit	y in W									
35	2 675	3 738	4 998	6 474	8 189	10 164	12 420	-	-	
40	2 399	3 411	4 596	5 977	7 574	9 409	11 503	-	-	
45	2 111	3 078	4 196	5 487	6 972	8 673	10 612	-	-	
50	-	2 735	3 792	4 999	6 379	7 952	9 741	-	-	
55	-	-	3 380	4 510	5 790	7 242	8 887	-	-	
60	-	-	-	4 014	5 202	6 539	8 047	-	-	
65	-	-	-	3 508	4 610	5 839	7 217	-	-	

35	1 308	1 461	1 590	1 693	1 771	1 824	1 850	-	-
40	1 335	1 515	1 671	1 802	1 907	1 988	2 043	-	-
45	1 355	1 563	1 748	1 908	2 044	2 155	2 240	-	-
50	-	1 605	1 821	2 013	2 181	2 324	2 443	-	-
55	-	-	1 889	2 115	2 318	2 496	2 649	-	-
60	-	-	-	2 215	2 454	2 669	2 860	-	-
65	-	-	-	2 312	2 589	2 844	3 074	-	-

Current consumption in A

35	8.47	8.77	9.11	9.45	9.75	9.98	10.11	-	-
40	8.55	8.93	9.36	9.78	10.18	10.50	10.71	-	-
45	8.61	9.09	9.62	10.15	10.65	11.08	11.41	-	-
50	-	9.23	9.87	10.53	11.15	11.71	12.17	-	-
55	-	-	10.12	10.91	11.68	12.39	13.00	-	-
60	-	-	-	11.29	12.22	13.10	13.88	-	-
65	-	-	-	11.65	12.76	13.82	14.78	-	-

Mass flow in kg/h

35	54	74	97	124	155	190	229	-	-
40	50	70	93	120	149	183	221	-	-
45	46	67	89	115	144	176	213	-	-
50	-	62	85	110	138	170	205	-	-
55	-	-	80	105	132	163	196	-	-
60	-	-	-	99	126	155	188	-	-
65	-	-	-	92	119	148	179	-	-

Coefficient of performance (C.O.P.)

35	2.05	2.56	3.14	3.82	4.62	5.57	6.71	-	-
40	1.80	2.25	2.75	3.32	3.97	4.73	5.63	-	-
45	1.56	1.97	2.40	2.87	3.41	4.02	4.74	-	-
50	-	1.70	2.08	2.48	2.92	3.42	3.99	-	-
55	-	-	1.79	2.13	2.50	2.90	3.35	-	-
60	-	-	-	1.81	2.12	2.45	2.81	-	-
65	-	-	-	1.52	1.78	2.05	2.35	-	-

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

Cooling capacity	6 483	W	
Power input	2 381	W	
Current consumption	11.93	A	
Mass flow	146	kg/h	
C.O.P.	2.72		

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

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

Pressure switch settings		
Maximum HP switch setting	29.4	bar(g)
Minimum LP switch setting	1.4	bar(g)
LP pump down setting	1.7	bar(g)

Sound power data

oouna ponor auta		
Sound power level	73	dB(A)
With accoustic hood	66	dB(A)

Tolerance according EN12900



Maneurop reciprocating compressor. MTZ028-5

Performance data at 50 Hz, EN 12900 rating conditions

Cond. temp. in					ating temperatu			т г	
°C (tc)	-25	-20	-10	-5	0	5	10	15	20
Cooling capacity								1 1	
35	847	1 202	2 211	2 915	3 785	4 845	6 121	7 637	9 419
40	727	1 069	2 021	2 680	3 496	4 491	5 692	7 122	8 808
45	601	929	1 823	2 438	3 198	4 128	5 252	6 596	8 185
50	473	787	1 621	2 190	2 894	3 757	4 805	6 062	7 553
55	-	-	1 416	1 939	2 586	3 383	4 353	5 522	6 915
60	-	-	-	1 688	2 278	3 007	3 899	4 979	6 273
65	-	-	-	-	1 971	2 631	3 445	4 436	5 630
75	-	-	-	-	-	-	2 547	3 357	4 350
ower input in W								· · · · · · ·	
35	690	786	980	1 072	1 157	1 233	1 296	1 345	1 376
40	714	814	1 022	1 124	1 221	1 310	1 390	1 456	1 507
45	731	837	1 061	1 174	1 284	1 389	1 485	1 570	1 642
50	740	853	1 096	1 221	1 346	1 467	1 581	1 687	1 780
55	-	-	1 125	1 264	1 404	1 543	1 677	1 804	1 921
60	-	-	-	1 301	1 458	1 615	1 770	1 920	2 062
65	-	-	-	-	1 506	1 683	1 860	2 034	2 202
75	-	-	-	-	-	-	2 026	2 251	2 475
		- h		•		•		•	
urrent consump	otion in A								
35	6.75	6.90	7.22	7.38	7.54	7.69	7.83	7.95	8.07
40	6.78	6.95	7.32	7.51	7.71	7.90	8.09	8.27	8.45
45	6.79	6.98	7.40	7.63	7.86	8.10	8.35	8.59	8.83
50	6.78	6.99	7.47	7.73	8.01	8.31	8.61	8.91	9.23
55	-	-	7.51	7.82	8.15	8.50	8.86	9.24	9.63
60	_	-	-	7.90	8.28	8.69	9.12	9.56	10.03
		-					9.12	9.89	
65 75	-	-	-	-	8.39	8.87	9.36		10.43
75	-	-	-	-	-	-	9.04	10.53	11.25
lass flow in kg/h									
35	21	30	53	68	86	108	134	164	200
40	19	28	53	65	83	105	134	161	196
		1		63				1	
45	17 14	26	48	60	80	102	127	156	191
50		23	45	-	77	98	122	151	185
55	-	-	42	56	73	93	117	146	179
60	-	-	-	52	69	89	112	140	172
65	-	-	-	-	64	83	106	133	164
75	-	-	-	-	-	-	92	118	148
a afficient of mon	fa	.							
Coefficient of per		1	0.00	0.70	0.07	0.00	4.70	5.00	0.05
35	1.23	1.53	2.26	2.72	3.27	3.93	4.72	5.68	6.85
40	1.02	1.31	1.98	2.39	2.86	3.43	4.10	4.89	5.85
45	0.82	1.11	1.72	2.08	2.49	2.97	3.54	4.20	4.99
50	0.64	0.92	1.48	1.79	2.15	2.56	3.04	3.59	4.24
55	-	-	1.26	1.53	1.84	2.19	2.60	3.06	3.60
60	-	-	-	1.30	1.56	1.86	2.20	2.59	3.04
65	-	-	-	-	1.31	1.56	1.85	2.18	2.56
75	-	-	-	-	-	-	1.26	1.49	1.76
ominal perform	ance at to = 5					Pressure switch	-		
Cooling capacity		3 757	W			Maximum HP swit	•	20.2	bar(g)
Power input	ion	1 467	W			Minimum LP swite	•	0.1	bar(g)
Current consumpt Aass flow	10(1	8.31 98	A kg/h			LP pump down se	ung	0.4	bar(g)
C.O.P.		98 2.56	Ng/11			Sound power dat	a		
		2.00]		Sound power leve		0	dB(A)
: Evaporating ter	nperature at de	ew point				With accoustic ho		0	dB(/

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point Rating conditions : Superheat = 10 K , Subcooling = 0 K

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Danfoss

R134a

i reasure awitch actunga		
Maximum HP switch setting	20.2	bar(g)
Minimum LP switch setting	0.1	bar(g)
LP pump down setting	0.4	bar(g)

Sound power data		
Sound power level	0	dB(A)
With accoustic hood	0	dB(A)

Sound power level	0	dB(A
With accoustic hood	0	dB(A

Tolerance according EN12900

Maneurop reciprocating compressor. MTZ028-5

Performance	e data at 50) Hz, ARI rat	ing conditio	ns					R134a
Cond. temp. in				Evapora	ating temperatu	re in °C (to)			
°C (tc)	-25	-20	-10	-5	0	5	10	15	20
Cooling capacity									
35	921	1 305	2 391	3 147	4 079	5 214	6 578	8 196	10 095
40	794	1 166	2 197	2 908	3 786	4 856	6 145	7 678	9 481
45	661	1 021	1 993	2 660	3 483	4 487	5 700	7 146	8 853
50	-	871	1 784	2 405	3 172	4 110	5 245	6 605	8 215
55	-	-	1 572	2 147	2 856	3 727	4 785	6 057	7 569
60				1 886	2 538	3 340	4 320	5 504	6 919
65 75	-	-	-	-	-	2 954	3 855 2 931	4 950 3 848	6 266 4 967
75	-	-	-	-	-	-	2 931	3 040	4 907
ower input in W	I								
35	690	786	980	1 072	1 157	1 233	1 296	1 345	1 376
40	714	814	1 022	1 124	1 221	1 310	1 390	1 456	1 507
45	731	837	1 061	1 174	1 284	1 389	1 485	1 570	1 642
50	-	853	1 096	1 221	1 346	1 467	1 581	1 687	1 780
55	-	-	1 125	1 264	1 404	1 543	1 677	1 804	1 921
60	-	-	-	1 301	1 458	1 615	1 770	1 920	2 062
65	-	-	-	-	-	1 683	1 860	2 034	2 202
75	-	-	-	-	-	-	2 026	2 251	2 475
	ntion in A								
urrent consum 35	6.75	6.90	7.22	7.38	7.54	7.69	7.83	7.95	8.07
40	6.78	6.95	7.32	7.50	7.71	7.90	8.09	8.27	8.45
45	6.79	6.98	7.40	7.63	7.86	8.10	8.35	8.59	8.83
50	-	6.99	7.47	7.73	8.01	8.31	8.61	8.91	9.23
55	-	-	7.51	7.82	8.15	8.50	8.86	9.24	9.63
60	-	-	-	7.90	8.28	8.69	9.12	9.56	10.03
65	-	-	-	-	-	8.87	9.36	9.89	10.43
75	-	-	-	-	-	-	9.84	10.53	11.25
ass flow in kg/ł		T		1	1		1		
35	21	30	52	67	86	107	133	164	199
40	19	28	50	65	83	104	130	160	195
45	17	26	48	63	80	101	126	155	189
50	-	23	45	59	77	97	122	150	184
55	-	-	42	56	73	93	117	145	178
60 65	-	-	-	- 52	69 -	88	111 105	139 132	171
75	-	-	-	-	-		92	132	103
oefficient of pe	rformance (C.C	D.P.)		•			•		
35	1.33	1.66	2.44	2.94	3.53	4.23	5.08	6.10	7.34
40	1.11	1.43	2.15	2.59	3.10	3.71	4.42	5.27	6.29
45	0.90	1.22	1.88	2.27	2.71	3.23	3.84	4.55	5.39
50	-	1.02	1.63	1.97	2.36	2.80	3.32	3.92	4.61
55	-	-	1.40	1.70	2.03	2.42	2.85	3.36	3.94
60	-	-	-	1.45	1.74	2.07	2.44	2.87	3.36
65	-	-	-	-	-	1.75	2.07	2.43	2.85
75	-	-	-	-	-	-	1.45	1.71	2.01
ominal perform	ance at to = 7 t	2 °C, tc = 54.4 °C				Pressure switch	settinas		
ooling capacity		4 218	W			Maximum HP swi		20.2	bar(g)
ower input		1 592	W			Minimum LP swite	ch setting	0.1	bar(g)
Current consumpt	tion	8.63	Α			LP pump down se	etting	0.4	bar(g)

to.	Evaporating	temperature	at	dow	noint
ιυ.		lemperature	αι	uew	point

tc: Condensing temperature at dew point

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

103

2.65

kg/h

Tolerance according EN12900

Sound power data

Sound power level

With accoustic hood

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Mass flow

C.O.P.

0

0

dB(A)

dB(A)

Danfoss

Maneurop reciprocating compressor. MTZ028-5

Danfoss

R404A

Performance data at 50 Hz, EN 12900 rating conditions

30 1 106 1 291 1 462 1 614 1 747 1 856 1 940 1 996 2 02 35 1 094 1 298 1 488 1 663 1 818 1 952 2 062 2 144 2 19 40 1 076 1 300 1 511 1 708 1 888 2 047 2 184 2 295 2 37 45 1 050 1 295 1 529 1 750 1 955 2 141 2 306 2 446 2 56 50 1 016 1 283 1 541 1 787 2 019 2 232 2 426 2 598 2 74 55 - 1 263 1 546 1 818 2 077 2 320 2 545 2 748 2 92 60 - 1 234 1 543 1 842 2 130 2 403 2 659 2 895 3 10 current consumption in A 30 8.42 8.88 9.36 9.86 10.33 10.75 11.09 11.33 11.4 35	Cond. temp. in				Evapora	ting temperature	in °C (to)			
30 1 417 2 050 2 825 3 767 4 866 6 168 6 783 9 428 1142 35 1 182 1 769 2 485 3 348 4 375 5 585 6 995 8 624 1044 40 963 1 503 2 169 2 951 3 806 5 011 5 17 8 785 45 759 1 250 1 846 2 566 3 427 4 447 5 544 7 037 8 64 50 570 1 012 1 546 2 193 2 999 3 892 4 982 6 264 7 72 55 - 787 1 280 1 832 2 522 3 348 4 328 5 480 6 82 60 - 578 966 1 643 1 747 1 856 1 940 1 996 2 02 35 1 064 1 298 1 488 1 663 1 618 1 952 2 144 2 95 2 74 45 1 050 1 295 1 529 1 760	°C (tc)	-30	-25	-20	-15	-10	-5	0	5	10
30 1 417 2 050 2 825 3 767 4 866 6 168 6 783 9 428 1142 35 1 182 1 769 2 485 3 348 4 375 5 585 6 995 8 624 1044 40 963 1 503 2 169 2 951 3 806 5 011 5 17 8 785 45 759 1 250 1 846 2 566 3 427 4 447 5 544 7 037 8 64 50 570 1 012 1 546 2 193 2 999 3 892 4 982 6 264 7 72 55 - 787 1 280 1 832 2 522 3 348 4 328 5 480 6 82 60 - 578 966 1 643 1 747 1 856 1 940 1 996 2 02 35 1 064 1 298 1 488 1 663 1 618 1 952 2 144 2 95 2 74 45 1 050 1 295 1 529 1 760	ooling conscitu	in W								
35 1 182 1 769 2 485 3 348 4 375 5 585 6 995 8 624 10 44 40 963 1603 2 159 2 961 3 366 5 5 7 8 6 50 570 1012 1546 2 183 2 969 3 822 4 882 6 264 7 7 55 - 787 1			2 050	2 825	3 757	4 866	6 168	7 683	9 4 2 8	11 421
40 963 1 503 2 159 2 961 3 886 5 011 6 315 7 826 9 56 45 759 1 250 1 846 2 566 3 427 4 447 5 644 7 037 8 64 50 570 1 012 1 546 2 193 2 689 3 882 4 922 6 224 7 72 55 . 787 1 260 1 832 2 689 3 882 4 328 5 480 6 62 60 . 576 9 96 1 483 2 086 2 813 3 682 4 712 5 82 cover input in W					1			1		-
45 759 1 250 1 846 2 566 3 427 4 447 5 644 7 037 8 64 50 570 1 012 1 546 2 193 2 969 3 802 4 982 6 254 7 72 60 - 578 986 1 433 2 086 2 813 3 682 4 712 5 52 cover input in W 30 1 106 1 291 1 462 1 614 1 747 1 856 1 940 1 996 2 02 35 1 094 1 298 1 488 1 663 1 818 1 952 2 062 2 144 2 195 50 1 016 1 283 1 541 1 770 1 858 2 047 2 184 2 295 2 37 455 - 1 263 1 541 1 787 2 019 2 322 2 426 2 568 2 748 2 92 60 - 1 224 1 543 1 842 2 130 2 403 2 659 2 885 3 10										
50 570 1 012 1 546 2 193 2 969 3 892 4 982 6 254 7 72 55 - 787 1 200 1 832 2 522 3 343 4 328 5 400 6 82 60 - 578 986 1 483 2 086 2 813 3 682 4 712 5 80 20wer input in W - - - 1 462 1 614 1 747 1 856 1 940 1 996 2 02 30 1 106 1 291 1 462 1 614 1 747 1 856 1 940 1 996 2 02 40 1 076 1 300 1 511 1 760 1 955 2 141 2 306 2 446 2 56 50 1 016 1 283 1 544 1 818 2 077 2 320 2 545 2 748 2 295 60 - 1 234 1 543 1 842 2 130 2 403 2 659 2 995 3 10 - 1 234										-
55 - 787 1 260 1 832 2 552 3 348 4 328 5 480 6 6 82 60 - 578 986 1 483 2 086 2 613 3 682 4 712 5 52 20wer input in W - - 578 986 1 643 1 747 1 886 1 940 1 996 2 052 35 1 094 1 291 1 462 1 614 1 747 1 886 1 940 1 996 2 02 40 1 076 1 300 1 511 1 708 1 888 2 047 2 184 2 295 2 37 45 1 050 1 295 1 529 1 750 1 955 2 141 2 306 2 446 2 59 2 73 45 1 050 1 283 1 546 1 818 2 077 2 320 2 545 2 748 2 92 60 - 1 234 1 543 1 842 2 130 2 403 2 659 3 10 20 8.42 8.84					1		1	1		
60 . 578 986 1 483 2 086 2 813 3 682 4 712 5 92 20wer input in W 30 1 106 1 291 1 462 1 614 1 747 1 856 1 940 1 996 2 02 35 1 094 1 298 1 488 1 663 1 818 1 952 2 662 2 144 2 194 2 194 40 1 076 1 300 1 511 1 700 1 955 2 141 2 306 2 446 2 56 50 1 016 1 283 1 544 1 777 2 019 2 232 2 426 2 596 2 748 55 - 1 233 1 546 1 818 2 077 2 320 2 545 2 748 2 42 60 - 1 234 1 543 1 842 2 130 2 403 2 659 2 895 3 10 2urrent consumption in A - - 1 234 1 3.41 1 1.09 1 1.33 1 1.44 35 8.44 <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td>1</td>										1
Prover input in W Source input i					1			1		-
30 1 106 1 291 1 462 1 614 1 747 1 856 1 940 1 996 2 02 35 1 094 1 298 1 488 1 663 1 818 1 992 2 062 2 144 2 19 40 1 076 1 300 1 511 1 709 1 888 2 047 2 184 2 236 2 37 45 1 050 1 295 1 529 1 750 1 955 2 141 2 306 2 446 2 56 50 1 016 1 283 1 541 1 787 2 019 2 232 2 426 2 598 2 74 55 - 1 263 1 546 1 818 2 077 2 320 2 545 2 748 2 92 60 - 1 234 1 543 1 842 2 130 2 403 2 659 3 0 0 20rent consumption in A	00	-	578	980	1403	2 080	2013	3 082	4712	5 920
30 1106 1291 1462 1614 1747 1856 1940 1996 202 35 1094 1298 1488 1663 1818 1982 2062 2144 219 40 1076 1300 1511 1708 1888 2047 2184 2255 237 45 1050 1295 1529 1750 1955 2141 2306 2446 256 50 1016 1283 1546 1818 2077 2320 2545 2748 292 60 - 1234 1543 1642 2130 2403 2659 2895 310 Surrent consumption in A 30 8.42 8.88 9.36 9.86 10.33 10.75 11.09 11.33 11.4 35 8.44 8.94 9.47 10.01 10.54 11.05 11.83 12.20 12.4 45 8.34 8.99	ower input in W	1								
40 1 076 1 300 1 511 1 708 1 888 2 047 2 184 2 295 2 37 45 1 050 1 295 1 529 1 750 1 955 2 141 2 306 2 446 2 56 50 1 016 1 283 1 541 1 787 2 019 2 322 2 426 2 598 2 74 55 - 1 263 1 544 1 818 2 077 2 320 2 665 2 748 2 29 60 - 1 234 1 543 1 842 2 130 2 403 2 659 2 895 3 10 consumption in A 30 8.42 8.88 9.36 9.86 10.33 10.75 11.09 11.33 11.4 45 8.34 8.99 9.59 10.20 10.80 11.35 11.31 12.80 13.1 50 8.15 8.91 9.71 10.54 11.35 12.31 12.80 13.4 50 8.15 <td></td> <td></td> <td>1 291</td> <td>1 462</td> <td>1 614</td> <td>1 747</td> <td>1 856</td> <td>1 940</td> <td>1 996</td> <td>2 020</td>			1 291	1 462	1 614	1 747	1 856	1 940	1 996	2 020
40 1076 1300 1511 1708 1888 2.047 2.184 2.295 2.37 45 1050 1.295 1.529 1.750 1.955 2.141 2.306 2.446 2.56 50 1.016 1.283 1.541 1.787 2.019 2.232 2.426 2.598 2.74 55 - 1.263 1.546 1.818 2.077 2.320 2.545 2.748 2.99 60 - 1.234 1.543 1.842 2.130 2.403 2.659 2.895 3.10 Current consumption in A 30 8.42 8.88 9.36 9.86 10.33 10.75 11.09 11.33 11.4 35 8.44 8.94 9.47 10.01 10.54 11.13 11.13 12.20 12.24 13.45 13.9 50 8.15 8.91 9.71 10.54 11.35 11.29 13.46 13.9					1			1		2 197
45 1050 1295 1529 1750 1955 2141 2306 2446 256 50 1016 1283 1541 1787 2019 2322 2426 2588 274 55 - 1283 1546 1818 2077 2320 2545 2748 292 60 - 1234 1543 1842 2130 2403 2659 2895 310 current consumption in A 30 8.42 8.88 9.36 9.86 10.33 10.75 11.09 11.33 11.4 40 8.43 8.99 9.59 10.20 10.80 11.35 11.83 12.20 12.4 45 8.34 8.99 9.65 10.62 11.58 12.20 13.36 14.13 14.7 60 - 8.37 9.47 10.60 11.72 12.84 13.45 13.9 55 - 8.71 9.65	40		1 300							2 378
50 1016 1283 1541 1787 2019 2232 2426 2598 274 55 - 1263 1546 1818 2077 2320 2545 2748 292 60 - 1234 1543 1842 2130 2403 2659 2895 310 Current consumption in A					1			1		2 560
55 - 1 263 1 546 1 818 2 077 2 320 2 545 2 748 2 92 60 - 1 234 1 543 1 842 2 130 2 403 2 659 2 895 3 10 current consumption in A 30 8.42 8.88 9.36 9.86 10.33 10.75 11.09 11.33 11.4 35 8.44 8.94 9.47 10.01 10.54 11.01 11.141 11.70 11.8 40 8.43 8.99 9.68 10.38 11.08 11.73 12.20 12.4 45 8.34 8.99 9.66 10.38 11.08 11.73 12.84 13.45 13.9 55 - 8.71 9.65 10.62 11.58 12.50 13.36 14.13 14.7 60 - 8.37 9.47 10.60 11.72 12.82 13.85 14.80 15.6 Aass flow in kg/h		1 016							2 598	2 743
Surrent consumption in A 30 8.42 8.88 9.36 9.86 10.33 10.75 11.09 11.33 11.4 35 8.44 8.94 9.47 10.01 10.54 11.01 11.41 11.70 11.83 11.4 40 8.43 8.99 9.59 10.20 10.80 11.35 11.83 12.20 12.4 45 8.34 8.99 9.68 10.38 11.08 11.73 12.31 12.80 13.1 50 8.15 8.91 9.71 10.54 11.35 12.13 12.84 13.45 13.9 55 - 8.71 9.65 10.62 11.58 12.50 13.36 14.13 14.7 60 - 8.37 9.47 10.60 11.72 12.62 13.05 14.80 15.6 Ass flow in kg/n 30 45 63 85 110 139 172 210 252	55	-				2 077				2 927
Durrent consumption in A 30 8.42 8.88 9.36 9.86 10.33 10.75 11.09 11.33 11.4 35 8.44 8.94 9.47 10.01 10.54 11.01 11.41 11.70 11.83 11.20 12.4 40 8.43 8.99 9.59 10.20 10.80 11.35 11.83 12.20 12.4 45 8.34 8.99 9.68 10.38 11.08 11.73 12.31 12.80 13.1 50 8.15 8.91 9.71 10.54 11.35 12.13 12.84 13.45 13.9 55 - 8.71 9.65 10.62 11.58 12.50 13.36 14.13 14.7 60 - 8.37 9.47 10.60 11.72 12.62 13.06 252 300 35 54 75 99 127 159 196 238 285 45	60	-	1 234	1 543	1 842	2 130	2 403	2 659	2 895	3 109
40 8.43 8.99 9.59 10.20 10.80 11.35 11.83 12.20 12.4 45 8.34 8.99 9.68 10.38 11.08 11.73 12.31 12.80 13.1 50 8.15 8.91 9.71 10.54 11.35 12.13 12.84 13.45 13.9 55 - 8.71 9.65 10.62 11.58 12.50 13.36 14.13 14.7 60 - 8.37 9.47 10.60 11.72 12.82 13.85 14.80 15.6 Ass flow in kg/h 11.72 12.82 13.85 14.80 15.6 30 45 63 85 110 139 172 210 252 300 35 40 58 80 105 133 166 203 245 292 40 35 54 75 99 127 159 196 238 2	30	8.42			1			1		11.42
45 8.34 8.99 9.68 10.38 11.08 11.73 12.31 12.80 13.1 50 8.15 8.91 9.71 10.54 11.35 12.13 12.84 13.45 13.9 55 $ 8.71$ 9.65 10.62 11.58 12.50 13.36 14.13 14.7 60 $ 8.37$ 9.47 10.60 11.72 12.82 13.85 14.80 15.6 Ass flow in kg/h 30 45 63 85 110 139 172 210 252 300 35 40 58 80 105 133 166 203 245 292 40 35 54 75 99 127 159 196 238 286 45 31 49 70 94 121 153 189 230 277 50 26 43 64 88 115 147 182 223 266 55 $ 38$ 59 82 109 140 176 215 266 30 1.28 1.59 1.93 2.33 2.79 3.32 3.96 4.72 5.66 35 1.08 1.36 1.67 2.01 2.41 2.86 3.39 4.02 4.77 40 0.90 1.16 1.43 1.73 2.06 2.45 2.89 3.41 4.02 45 0.7										11.86
50 8.15 8.91 9.71 10.54 11.35 12.13 12.84 13.45 13.9 55 - 8.71 9.65 10.62 11.58 12.50 13.36 14.13 14.7 60 - 8.37 9.47 10.60 11.72 12.82 13.85 14.80 15.6 Mass flow in kg/h					1			1		12.45
55 - 8.71 9.65 10.62 11.58 12.50 13.36 14.13 14.7 60 - 8.37 9.47 10.60 11.72 12.82 13.85 14.80 15.6 Aass flow in kg/h 11.72 12.82 13.85 14.80 15.6 30 45 63 85 110 139 172 210 252 300 35 40 58 80 105 133 166 203 245 292 40 35 54 75 99 127 159 196 238 285 45 31 49 70 94 121 153 189 230 277 50 26 43 64 88 115 147 182 223 266 60 - 33 53 76 103 134 168 208 252								1		13.15
60 - 8.37 9.47 10.60 11.72 12.82 13.85 14.80 15.6 Aass flow in kg/h 30 45 63 85 110 139 172 210 252 300 35 40 58 80 105 133 166 203 245 292 40 35 54 75 99 127 159 196 238 285 45 31 49 70 94 121 153 189 230 277 50 26 43 64 88 115 147 182 223 266 55 - 38 59 82 109 140 176 215 260 60 - 33 53 76 103 134 168 208 252 206fficient of performance (C.O.P.) 30 1.28 1.59 1.93 2.33 2.79 <t< td=""><td></td><td>8.15</td><td></td><td>1</td><td>1</td><td>11.35</td><td></td><td>1</td><td>13.45</td><td>13.94</td></t<>		8.15		1	1	11.35		1	13.45	13.94
Mass flow in kg/h 30 45 63 85 110 139 172 210 252 300 35 40 58 80 105 133 166 203 245 292 40 35 54 75 99 127 159 196 238 285 45 31 49 70 94 121 153 189 230 277 50 26 43 64 88 115 147 182 223 266 55 - 38 59 82 109 140 176 215 260 60 - 33 53 76 103 134 168 208 252 206ficient of performance (C.O.P.) 30 1.28 1.59 1.93 2.33 2.79 3.32 3.96 4.72 5.66 35 1.08 1.36 1.67 2.01 2.41 2		-								14.78
30 45 63 85 110 139 172 210 252 300 35 40 58 80 105 133 166 203 245 292 40 35 54 75 99 127 159 196 238 285 45 31 49 70 94 121 153 189 230 277 50 26 43 64 88 115 147 182 223 268 55 - 38 59 82 109 140 176 215 260 60 - 33 53 76 103 134 168 208 252 Xoefficient of performance (C.O.P.) 1.93 2.33 2.79 3.32 3.96 4.72 5.66 35 1.08 1.36 1.67 2.01 2.41 2.86 3.39 4.02 4.77	60	-	8.37	9.47	10.60	11.72	12.82	13.85	14.80	15.63
35 40 58 80 105 133 166 203 245 292 40 35 54 75 99 127 159 196 238 285 45 31 49 70 94 121 153 189 230 277 50 26 43 64 88 115 147 182 223 268 55 - 38 59 82 109 140 176 215 260 60 - 33 53 76 103 134 168 208 252 Soefficient of performance (C.O.P.) 1.33 2.33 2.79 3.32 3.96 4.72 5.66 35 1.08 1.36 1.67 2.01 2.41 2.86 3.39 4.02 4.77 40 0.90 1.16 1.43 1.73 2.06 2.45 2.89 3.41 4.02	lass flow in kg/ł	ı								
40 35 54 75 99 127 159 196 238 285 45 31 49 70 94 121 153 189 230 277 50 26 43 64 88 115 147 182 223 268 55 - 38 59 82 109 140 176 215 260 60 - 33 53 76 103 134 168 208 252 Scoefficient of performance (C.O.P.) 30 1.28 1.59 1.93 2.33 2.79 3.32 3.96 4.72 5.66 35 1.08 1.36 1.67 2.01 2.41 2.86 3.39 4.02 4.77 40 0.90 1.16 1.43 1.73 2.06 2.45 2.89 3.41 4.02 45 0.72 0.97 1.21 1.47 1	30	45	63	85	110	139	172	210	252	300
45 31 49 70 94 121 153 189 230 277 50 26 43 64 88 115 147 182 223 268 55 - 38 59 82 109 140 176 215 260 60 - 33 53 76 103 134 168 208 252 Scoefficient of performance (C.O.P.) 30 1.28 1.59 1.93 2.33 2.79 3.32 3.96 4.72 5.66 35 1.08 1.36 1.67 2.01 2.41 2.86 3.39 4.02 4.77 40 0.90 1.16 1.43 1.73 2.06 2.45 2.89 3.41 4.02 45 0.72 0.97 1.21 1.47 1.75 2.08 2.45 2.88 3.33 50 0.56 0.79 1.00 1.23 1.47 1.74 2.05 2.41 2.82 55 - <t< td=""><td>35</td><td>40</td><td>58</td><td>80</td><td>105</td><td>133</td><td>166</td><td>203</td><td>245</td><td>292</td></t<>	35	40	58	80	105	133	166	203	245	292
50 26 43 64 88 115 147 182 223 268 55 - 38 59 82 109 140 176 215 260 60 - 33 53 76 103 134 168 208 252 Coefficient of performance (C.O.P.) 30 1.28 1.59 1.93 2.33 2.79 3.32 3.96 4.72 5.66 35 1.08 1.36 1.67 2.01 2.41 2.86 3.39 4.02 4.77 40 0.90 1.16 1.43 1.73 2.06 2.45 2.89 3.41 4.02 45 0.72 0.97 1.21 1.47 1.75 2.08 2.45 2.88 3.38 50 0.56 0.79 1.00 1.23 1.47 1.74 2.05 2.41 2.82 55 - 0.62 0.81 1	40	35	54	75	99	127	159	196	238	285
55 - 38 59 82 109 140 176 215 260 60 - 33 53 76 103 134 168 208 252 Coefficient of performance (C.O.P.) 30 1.28 1.59 1.93 2.33 2.79 3.32 3.96 4.72 5.66 35 1.08 1.36 1.67 2.01 2.41 2.86 3.39 4.02 4.77 40 0.90 1.16 1.43 1.73 2.06 2.45 2.89 3.41 4.02 45 0.72 0.97 1.21 1.47 1.75 2.08 2.45 2.88 3.36 50 0.56 0.79 1.00 1.23 1.47 1.74 2.05 2.41 2.82 55 - 0.62 0.81 1.01 1.21 1.44 1.70 1.99 2.33	45	31	49	70	94	121	153	189	230	277
60 - 33 53 76 103 134 168 208 252 Coefficient of performance (C.O.P.) 30 1.28 1.59 1.93 2.33 2.79 3.32 3.96 4.72 5.66 35 1.08 1.36 1.67 2.01 2.41 2.86 3.39 4.02 4.77 40 0.90 1.16 1.43 1.73 2.06 2.45 2.89 3.41 4.02 45 0.72 0.97 1.21 1.47 1.75 2.08 2.45 2.88 3.36 50 0.56 0.79 1.00 1.23 1.47 1.74 2.05 2.41 2.82 55 - 0.62 0.81 1.01 1.21 1.44 1.70 1.99 2.33	50	26	43	64	88	115	147	182	223	268
30 1.28 1.59 1.93 2.33 2.79 3.32 3.96 4.72 5.66 35 1.08 1.36 1.67 2.01 2.41 2.86 3.39 4.02 4.77 40 0.90 1.16 1.43 1.73 2.06 2.45 2.89 3.41 4.02 45 0.72 0.97 1.21 1.47 1.75 2.08 2.45 2.88 3.36 50 0.56 0.79 1.00 1.23 1.47 1.74 2.05 2.41 2.86 55 - 0.62 0.81 1.01 1.21 1.44 1.70 1.99 2.33	55	-	38	59	82	109	140	176	215	260
30 1.28 1.59 1.93 2.33 2.79 3.32 3.96 4.72 5.66 35 1.08 1.36 1.67 2.01 2.41 2.86 3.39 4.02 4.77 40 0.90 1.16 1.43 1.73 2.06 2.45 2.89 3.41 4.02 45 0.72 0.97 1.21 1.47 1.75 2.08 2.45 2.88 3.36 50 0.56 0.79 1.00 1.23 1.47 1.74 2.05 2.41 2.86 55 - 0.62 0.81 1.01 1.21 1.44 1.70 1.99 2.33	60	-	33	53	76	103	134	168	208	252
30 1.28 1.59 1.93 2.33 2.79 3.32 3.96 4.72 5.66 35 1.08 1.36 1.67 2.01 2.41 2.86 3.39 4.02 4.77 40 0.90 1.16 1.43 1.73 2.06 2.45 2.89 3.41 4.02 45 0.72 0.97 1.21 1.47 1.75 2.08 2.45 2.88 3.36 50 0.56 0.79 1.00 1.23 1.47 1.74 2.05 2.41 2.86 55 - 0.62 0.81 1.01 1.21 1.44 1.70 1.99 2.33										
35 1.08 1.36 1.67 2.01 2.41 2.86 3.39 4.02 4.77 40 0.90 1.16 1.43 1.73 2.06 2.45 2.89 3.41 4.02 45 0.72 0.97 1.21 1.47 1.75 2.08 2.45 2.89 3.41 4.02 50 0.56 0.79 1.00 1.23 1.47 1.74 2.05 2.41 2.86 55 - 0.62 0.81 1.01 1.21 1.44 1.70 1.99 2.33		*		1.02	2.22	2 70	2 22	2.06	4 72	5.65
40 0.90 1.16 1.43 1.73 2.06 2.45 2.89 3.41 4.02 45 0.72 0.97 1.21 1.47 1.75 2.08 2.45 2.89 3.41 4.02 50 0.56 0.79 1.00 1.23 1.47 1.74 2.05 2.41 2.82 55 - 0.62 0.81 1.01 1.21 1.44 1.70 1.99 2.33					1			1		
45 0.72 0.97 1.21 1.47 1.75 2.08 2.45 2.88 3.38 50 0.56 0.79 1.00 1.23 1.47 1.74 2.05 2.41 2.82 55 - 0.62 0.81 1.01 1.21 1.44 1.70 1.99 2.33			-		1			1		-
50 0.56 0.79 1.00 1.23 1.47 1.74 2.05 2.41 2.82 55 - 0.62 0.81 1.01 1.21 1.44 1.70 1.99 2.33										
55 - 0.62 0.81 1.01 1.21 1.44 1.70 1.99 2.33					1					-
								1		-
	22	-	0.62							

Nominal performance at to = -10	C, IC = 45 C		
Cooling capacity	3 427	W	
Power input	1 955	W	
Current consumption	11.08	Α	
Mass flow	121	kg/h	
C.O.P.	1.75		

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

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

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	71	dB(A)
With accoustic hood	64	dB(A)

Tolerance according EN12900



Maneurop reciprocating compressor. MTZ028-5

Danfoss

R404A

Performance data at 50 Hz, ARI rating conditions

Cond. temp. in				Evapora	ting temperature	in °C (to)			
°C (tc)	-30	-25	-20	-15	-10	-5	0	5	10
ooling capacity	in W								
30	1 577	2 276	3 128	4 150	5 362	6 783	8 431	10 326	12 485
35	1 330	1 984	2 779	3 733	4 866	6 195	7 741	9 522	11 557
40	1 098	1 706	2 444	3 328	4 380	5 618	7 061	8 727	10 63
45	880	1 442	2 121	2 936	3 906	5 051	6 390	7 943	9 727
50	676	1 191	1 811	2 556	3 445	4 497	5 733	7 171	8 830
55	-	954	1 516	2 190	2 997	3 958	5 091	6 416	7 952
60	-	730	1 235	1 840	2 569	3 439	4 472	5 688	7 107
Power input in W		•	•	•	•		•	•	
30	1 106	1 291	1 462	1 614	1 747	1 856	1 940	1 996	2 020
35	1 094	1 298	1 488	1 663	1 818	1 952	2 062	2 144	2 197
40	1 076	1 300	1 511	1 708	1 888	2 047	2 184	2 295	2 378
45	1 050	1 295	1 529	1 750	1 955	2 141	2 306	2 446	2 560
50	1 016	1 283	1 541	1 787	2 019	2 232	2 426	2 598	2 743
55	-	1 263	1 546	1 818	2 077	2 320	2 545	2 748	2 927
60	-	1 234	1 543	1 842	2 130	2 403	2 659	2 895	3 109
Current consump	otion in A								
30	8.42	8.88	9.36	9.86	10.33	10.75	11.09	11.33	11.42
35	8.44	8.94	9.47	10.01	10.54	11.01	11.41	11.70	11.86
40	8.43	8.99	9.59	10.20	10.80	11.35	11.83	12.20	12.45
45	8.34	8.99	9.68	10.38	11.08	11.73	12.31	12.80	13.15
50	8.15	8.91	9.71	10.54	11.35	12.13	12.84	13.45	13.94
55	-	8.71	9.65	10.62	11.58	12.50	13.36	14.13	14.78
60	-	8.37	9.47	10.60	11.72	12.82	13.85	14.80	15.63
Mass flow in kg/h		62	0.4	100	400	474	200	054	200
30 35	44 40	63 58	84 79	109 104	138 132	171 165	208 202	251 243	298 290
40	35	53	79	99	132	105	195	243	290
40	30	48	69	99	127	159	195	230	285
50	25	40	64	88	121	146	188	229	275
55	- 25	43 38	58	82	109	146	174	221	267
55 60	-	38	58	76	109	139	174	214	259 250
00	-	52		10	102	100	107	200	200
Coefficient of per	formance (C.O).P.)							
30	1.43	1.76	2.14	2.57	3.07	3.65	4.35	5.17	6.18
35	1.22	1.53	1.87	2.25	2.68	3.17	3.75	4.44	5.26
40	1.02	1.31	1.62	1.95	2.32	2.74	3.23	3.80	4.47
45	0.84	1.11	1.39	1.68	2.00	2.36	2.77	3.25	3.80
50	0.67	0.93	1.18	1.43	1.71	2.01	2.36	2.76	3.22
55	-	0.76	0.98	1.20	1.44	1.71	2.00	2.34	2.72
60	-	0.59	0.80	1.00	1.21	1.43	1.68	1.96	2.29

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

Cooling capacity	3 906	W
Power input	1 955	W
Current consumption	11.08	Α
Mass flow	121	kg/h
C.O.P.	2.00	

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

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

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

Sound power data		
Sound power level	71	dB(A)
With accoustic hood	64	dB(A)

Tolerance according EN12900



Maneurop reciprocating compressor. MTZ028-5

Performance data at 50 Hz, EN 12900 rating conditions

Cond. temp. in					ating temperatu			т г	
°C (tc)	-25	-20	-10	-5	0	5	10	15	20
Cooling capacity								1 1	
35	847	1 202	2 211	2 915	3 785	4 845	6 121	7 637	9 419
40	727	1 069	2 021	2 680	3 496	4 491	5 692	7 122	8 808
45	601	929	1 823	2 438	3 198	4 128	5 252	6 596	8 185
50	473	787	1 621	2 190	2 894	3 757	4 805	6 062	7 553
55	-	-	1 416	1 939	2 586	3 383	4 353	5 522	6 915
60	-	-	-	1 688	2 278	3 007	3 899	4 979	6 273
65	-	-	-	-	1 971	2 631	3 445	4 436	5 630
75	-	-	-	-	-	-	2 547	3 357	4 350
ower input in W									
35	690	786	980	1 072	1 157	1 233	1 296	1 345	1 376
40	714	814	1 022	1 124	1 221	1 310	1 390	1 456	1 507
45	731	837	1 061	1 174	1 284	1 389	1 485	1 570	1 642
50	740	853	1 096	1 221	1 346	1 467	1 581	1 687	1 780
55	-	-	1 125	1 264	1 404	1 543	1 677	1 804	1 921
60	-	-	-	1 301	1 458	1 615	1 770	1 920	2 062
65	-	-	-	-	1 506	1 683	1 860	2 034	2 202
75	-	-	-	-	-	-	2 026	2 251	2 475
		- ·		•				•	
urrent consump	otion in A								
35	6.75	6.90	7.22	7.38	7.54	7.69	7.83	7.95	8.07
40	6.78	6.95	7.32	7.51	7.71	7.90	8.09	8.27	8.45
45	6.79	6.98	7.40	7.63	7.86	8.10	8.35	8.59	8.83
50	6.78	6.99	7.47	7.73	8.01	8.31	8.61	8.91	9.23
55	-	-	7.51	7.82	8.15	8.50	8.86	9.24	9.63
60	_	-	-	7.90	8.28	8.69	9.12	9.56	10.03
		-					9.12	9.89	
65 75	-	-	-	-	8.39	8.87	9.36		10.43
75	-	-	-	-	-	-	9.04	10.53	11.25
lass flow in kg/h									
35	21	30	53	68	86	108	134	164	200
40	19	28	53	65	83	105	134	161	196
		1		63				1	
45	17 14	26	48	60	80	102	127	156	191
50		23	45	-	77	98	122	151	185
55	-	-	42	56	73	93	117	146	179
60	-	-	-	52	69	89	112	140	172
65	-	-	-	-	64	83	106	133	164
75	-	-	-	-	-	-	92	118	148
a afficient of non	fa	.							
Coefficient of per		1	0.00	0.70	0.07	0.00	4.70	5.00	0.05
35	1.23	1.53	2.26	2.72	3.27	3.93	4.72	5.68	6.85
40	1.02	1.31	1.98	2.39	2.86	3.43	4.10	4.89	5.85
45	0.82	1.11	1.72	2.08	2.49	2.97	3.54	4.20	4.99
50	0.64	0.92	1.48	1.79	2.15	2.56	3.04	3.59	4.24
55	-	-	1.26	1.53	1.84	2.19	2.60	3.06	3.60
60	-	-	-	1.30	1.56	1.86	2.20	2.59	3.04
65	-	-	-	-	1.31	1.56	1.85	2.18	2.56
75	-	-	-	-	-	-	1.26	1.49	1.76
ominal perform	ance at to = 5					Pressure switch	-		
Cooling capacity		3 757	W			Maximum HP swit	•	20.2	bar(g)
Power input	ion	1 467	W			Minimum LP swite	•	0.1	bar(g)
Current consumpt Aass flow	10(1	8.31 98	A kg/h			LP pump down se	ung	0.4	bar(g)
C.O.P.		98 2.56	Ng/11			Sound power dat	a		
		2.00]		Sound power leve		0	dB(A)
: Evaporating ter	nperature at de	ew point				With accoustic ho		0	dB(/

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point Rating conditions : Superheat = 10 K , Subcooling = 0 K

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Danfoss

R134a

i reasure awitch actunga		
Maximum HP switch setting	20.2	bar(g)
Minimum LP switch setting	0.1	bar(g)
LP pump down setting	0.4	bar(g)

Sound power data							
Sound power level	0	dB(A)					
With accoustic hood	0	dB(A)					

Sound power level	0	dB(A
With accoustic hood	0	dB(A

Tolerance according EN12900

Maneurop reciprocating compressor. MTZ028-5

Performance	e data at 50) Hz, ARI rat	ing conditio	ns					R134a
Cond. temp. in				Evapora	ating temperatu	re in °C (to)			
°C (tc)	-25	-20	-10	-5	0	5	10	15	20
Cooling capacity									
35	921	1 305	2 391	3 147	4 079	5 214	6 578	8 196	10 095
40	794	1 166	2 197	2 908	3 786	4 856	6 145	7 678	9 481
45	661	1 021	1 993	2 660	3 483	4 487	5 700	7 146	8 853
50	-	871	1 784	2 405	3 172	4 110	5 245	6 605	8 215
55	-	-	1 572	2 147	2 856	3 727	4 785	6 057	7 569
60				1 886	2 538	3 340	4 320	5 504	6 919
65 75	-	-	-	-	-	2 954	3 855 2 931	4 950 3 848	6 266 4 967
75	-	-	-	-	-	-	2 931	3 040	4 907
ower input in W	I								
35	690	786	980	1 072	1 157	1 233	1 296	1 345	1 376
40	714	814	1 022	1 124	1 221	1 310	1 390	1 456	1 507
45	731	837	1 061	1 174	1 284	1 389	1 485	1 570	1 642
50	-	853	1 096	1 221	1 346	1 467	1 581	1 687	1 780
55	-	-	1 125	1 264	1 404	1 543	1 677	1 804	1 921
60	-	-	-	1 301	1 458	1 615	1 770	1 920	2 062
65	-	-	-	-	-	1 683	1 860	2 034	2 202
75	-	-	-	-	-	-	2 026	2 251	2 475
	ntion in A								
urrent consum 35	6.75	6.90	7.22	7.38	7.54	7.69	7.83	7.95	8.07
40	6.78	6.95	7.32	7.50	7.71	7.90	8.09	8.27	8.45
45	6.79	6.98	7.40	7.63	7.86	8.10	8.35	8.59	8.83
50	-	6.99	7.47	7.73	8.01	8.31	8.61	8.91	9.23
55	-	-	7.51	7.82	8.15	8.50	8.86	9.24	9.63
60	-	-	-	7.90	8.28	8.69	9.12	9.56	10.03
65	-	-	-	-	-	8.87	9.36	9.89	10.43
75	-	-	-	-	-	-	9.84	10.53	11.25
ass flow in kg/ł		T		1	1		1		
35	21	30	52	67	86	107	133	164	199
40	19	28	50	65	83	104	130	160	195
45	17	26	48	63	80	101	126	155	189
50	-	23	45	59	77	97	122	150	184
55	-	-	42	56	73	93	117	145	178
60 65	-	-	-	- 52	69 -	88	111 105	139 132	171
75	-	-	-	-	-		92	132	103
oefficient of pe	rformance (C.C	D.P.)		•			•		
35	1.33	1.66	2.44	2.94	3.53	4.23	5.08	6.10	7.34
40	1.11	1.43	2.15	2.59	3.10	3.71	4.42	5.27	6.29
45	0.90	1.22	1.88	2.27	2.71	3.23	3.84	4.55	5.39
50	-	1.02	1.63	1.97	2.36	2.80	3.32	3.92	4.61
55	-	-	1.40	1.70	2.03	2.42	2.85	3.36	3.94
60	-	-	-	1.45	1.74	2.07	2.44	2.87	3.36
65	-	-	-	-	-	1.75	2.07	2.43	2.85
75	-	-	-	-	-	-	1.45	1.71	2.01
ominal perform	ance at to = 7 t	2 °C, tc = 54.4 °C				Pressure switch	settinas		
ooling capacity		4 218	W			Maximum HP swi		20.2	bar(g)
ower input		1 592	W			Minimum LP swite	ch setting	0.1	bar(g)
Current consumpt	tion	8.63	Α			LP pump down se	etting	0.4	bar(g)

to.	Evaporating	temperature	at	dow	noint
ιυ.		lemperature	αι	uew	point

tc: Condensing temperature at dew point

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

103

2.65

kg/h

Tolerance according EN12900

Sound power data

Sound power level

With accoustic hood

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Mass flow

C.O.P.

0

0

dB(A)

dB(A)

Danfoss

Maneurop reciprocating compressor. MTZ028-5

Performance data at 50 Hz, EN 12900 rating conditions

Performanc	e data at 50) Hz, EN 129	00 rating co	nditions					R407C
cond. temp. in				Evapora	ating temperature	in °C (to)			
°C (tc)	-15	-10	-5	0	5	10	15		
ooling capacity	in W								
35	2 485	3 478	4 654	6 036	7 643	9 497	11 616	-	-
40	2 217	3 156	4 258	5 544	7 034	8 749	10 708	-	-
45	1 939	2 831	3 864	5 060	6 438	8 020	9 824	-	-
50	-	2 497	3 468	4 579	5 851	7 305	8 961	-	-
55	-	-	3 064	4 097	5 268	6 600	8 113	-	-
60	-	-	-	3 609	4 686	5 902	7 277	-	-
65	-	-	-	3 113	4 101	5 206	6 449	-	-
ower input in V	ı								
35	1 308	1 461	1 590	1 693	1 771	1 824	1 850	-	-
40	1 335	1 515	1 671	1 802	1 907	1 988	2 043	-	-
45	1 355	1 563	1 748	1 908	2 044	2 155	2 240	-	-
50	-	1 605	1 821	2 013	2 181	2 324	2 443	-	-
55	-	-	1 889	2 115	2 318	2 496	2 649	-	-
60	-	-	-	2 215	2 454	2 669	2 860	-	-
65	-	-	-	2 312	2 589	2 844	3 074	-	-
urrent consum	ntion in A								
35	8.47	8.77	9.11	9.45	9.75	9.98	10.11	_	-
40	8.55	8.93	9.36	9.78	10.18	10.50	10.71	_	_
45	8.61	9.09	9.62	10.15	10.65	11.08	11.41	_	_
50	-	9.23	9.87	10.53	11.15	11.71	12.17	-	-
55	-	-	10.12	10.91	11.68	12.39	13.00	_	-
60	-	-	-	11.29	12.22	13.10	13.88	_	_
65	-	-	-	11.65	12.76	13.82	14.78	-	-
loop flow in kg/	•								
lass flow in kg/ 35	54	74	98	125	156	191	230	-	-
40	51	74	94	120	150	184	230	-	_
45	47	67	90	116	145	177	214	-	_
50	-	63	85	110	139	171	206	_	_
55	-	-	80	105	133	164	198	-	-
60	-	-	-	99	126	156	189	-	-
65	-	-	-	93	119	149	183	-	-
		-		1	1		1 1		4
oefficient of pe	-	1	2.02	2 56	1 21	5.21	6.20		
35	1.90	2.38	2.93	3.56	4.31	5.21	6.28	-	-
40	1.66	2.08	2.55	3.08	3.69	4.40	5.24	-	-
45 50	1.43 -	1.81	2.21	2.65	3.15	3.72	4.39	-	-
50 55		1.56	1.90	2.27	2.68	3.14	3.67	-	-
55	-	-	1.62	1.94	2.27	2.64	3.06	-	-
60 65	-	-	-	1.63	1.91	2.21	2.54	-	-
00	-	-	-	1.35	1.58	1.83	2.10	-	-

Cooling capacity	5 851	W	
Power input	2 181	W	
Current consumption	11.15	Α	
Mass flow	139	kg/h	
C.O.P.	2.68		

CERTIFIED ASERCOM

Maximum HP switch setting	29.4	bar(g)
Minimum LP switch setting	1.4	bar(g)
LP pump down setting	1.7	bar(g)

dB(A)

dB(A)

73

66

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

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

Tolerance according EN12900

Sound power data

Sound power level

With accoustic hood





Maneurop reciprocating compressor. MTZ028-5

Danfoss

R407C

Performance data at 50 Hz, ARI rating conditions

Cond. temp. in	Evaporating temperature in °C (to)									
°C (tc)	-15	-10	-5	0	5	10	15			
Cooling capacit	y in W									
35	2 675	3 738	4 998	6 474	8 189	10 164	12 420	-	-	
40	2 399	3 411	4 596	5 977	7 574	9 409	11 503	-	-	
45	2 111	3 078	4 196	5 487	6 972	8 673	10 612	-	-	
50	-	2 735	3 792	4 999	6 379	7 952	9 741	-	-	
55	-	-	3 380	4 510	5 790	7 242	8 887	-	-	
60	-	-	-	4 014	5 202	6 539	8 047	-	-	
65	-	-	-	3 508	4 610	5 839	7 217	-	-	

35	1 308	1 461	1 590	1 693	1 771	1 824	1 850	-	-
40	1 335	1 515	1 671	1 802	1 907	1 988	2 043	-	-
45	1 355	1 563	1 748	1 908	2 044	2 155	2 240	-	-
50	-	1 605	1 821	2 013	2 181	2 324	2 443	-	-
55	-	-	1 889	2 115	2 318	2 496	2 649	-	-
60	-	-	-	2 215	2 454	2 669	2 860	-	-
65	-	-	-	2 312	2 589	2 844	3 074	-	-

Current consumption in A

35	8.47	8.77	9.11	9.45	9.75	9.98	10.11	-	-
40	8.55	8.93	9.36	9.78	10.18	10.50	10.71	-	-
45	8.61	9.09	9.62	10.15	10.65	11.08	11.41	-	-
50	-	9.23	9.87	10.53	11.15	11.71	12.17	-	-
55	-	-	10.12	10.91	11.68	12.39	13.00	-	-
60	-	-	-	11.29	12.22	13.10	13.88	-	-
65	-	-	-	11.65	12.76	13.82	14.78	-	-

Mass flow in kg/h

35	54	74	97	124	155	190	229	-	-
40	50	70	93	120	149	183	221	-	-
45	46	67	89	115	144	176	213	-	-
50	-	62	85	110	138	170	205	-	-
55	-	-	80	105	132	163	196	-	-
60	-	-	-	99	126	155	188	-	-
65	-	-	-	92	119	148	179	-	-

Coefficient of performance (C.O.P.)

35	2.05	2.56	3.14	3.82	4.62	5.57	6.71	-	-
40	1.80	2.25	2.75	3.32	3.97	4.73	5.63	-	-
45	1.56	1.97	2.40	2.87	3.41	4.02	4.74	-	-
50	-	1.70	2.08	2.48	2.92	3.42	3.99	-	-
55	-	-	1.79	2.13	2.50	2.90	3.35	-	-
60	-	-	-	1.81	2.12	2.45	2.81	-	-
65	-	-	-	1.52	1.78	2.05	2.35	-	-

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

Cooling capacity	6 483	W	
Power input	2 381	W	
Current consumption	11.93	А	
Mass flow	146	kg/h	
C.O.P.	2.72		

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

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

Pressure switch settings		
Maximum HP switch setting	29.4	bar(g)
Minimum LP switch setting	1.4	bar(g)
LP pump down setting	1.7	bar(g)

Sound power data

oouna ponor auta		
Sound power level	73	dB(A)
With accoustic hood	66	dB(A)

Tolerance according EN12900



ENGINEERING TOMORROW



