ENGINEERING TOMORROW



Datasheets

# Danfoss Reciprocating compressors MT / MTZ / NTZ





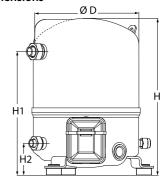


#### Datasheet, technical data

#### **General Characteristics**

Model number (on compressor nameplate)	MTZ28JE4AV		
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		
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 - 175PZ	
Maximum system test pressure Low Side / High side	25 bar(g) / 30 bar(g)		
Maximum differential test pressure	30 bar		
Maximum number of starts per hour	12		
Refrigerant charge limit	2.5 kg		
Approved refrigerants	R404A,R134a,R407A/C/F,R	448A,R449A,R452A,R513A	

#### **Dimensions**



D=224 mm H=333 mm H1=263 mm H2=68 mm H3=- mm

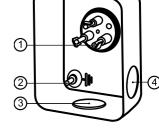
**Terminal box** 

#### **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	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	



IP55 (with cable gland)

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

# 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)



#### Datasheet, accessories and spare parts

# Maneurop reciprocating compressor, MTZ028-4

Rotolock accessories, suction side	Code no.	
Solder sleeve, P06 (1" Rotolock, 1/2" ODF)	8153007	
Rotolock valve, V06 (1" Rotolock, 1/2" ODF)	8168031	
Gasket, 1"	8156130	Gaskets, sleeves and nuts
Rotolock accessories, discharge side	Code no.	
Solder sleeve, P01 (1" Rotolock, 3/8" ODF)	8153010	
Rotolock valve, V01 (1" Rotolock, 3/8" ODF)	8168027	
Gasket, 1"	8156130	
Rotolock accessories, sets	Code no.	1 2 3
Valve set, V06 (1"~1/2"), V01 (1"~3/8")	7703004	
Gasket set, 1", 1-1/4", 1-3/4", OSG gaskets black & white	8156009	1: Gasket
		2: Solder sleeve
Oil / lubricants	Code no.	3: Rotolock nut
POE lubricant, 175PZ, 1 litre can	120Z0638	
POE lubricant, 175PZ, 2.5 litre can	120Z0639	
Crankcase heaters	Code no.	<del></del>
PTC heater 27W,CE mark, UL	120Z0459	
Belt type crankcase heater, 54 W, 230 V, CE mark, UL	7773106	
Belt type crankcase heater, 54 W, 400 V, UL	7773013	Mounting kit
Miscellaneous accessories	Code no.	1
Electronic soft start kit, MCI 15 C	7705006	2
Acoustic hood for 1 cylinder compressor	120Z0575	3
Oil equalisation nut	8153127	
· · · · · · · · · · · · · · · · · · ·		4
Spare parts	Code no.	5
Mounting kit for 1 and 2 cylinder compressor, including 3 grommets, 3 bolts	8156001	
Oil sight glass with gaskets (black & white)	8156019	6——,
Gasket for oil sight glass (black chloroprene)	8156145	
Service kit for terminal box 80 x 96 mm, including 1 cover, 1 clamp	8156134	

1: Bolt (3x)

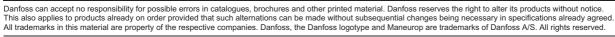
2: Lock washer (3x)

3: Flat washer (3x)

4: Sleeve (3x)

5: Grommet (3x)

6: Nut (3x)







# Maneurop reciprocating compressor. MTZ028-4

# Performance data at 50 Hz, EN 12900 rating conditions

**R407C** 

Cond. temp. in				Evapora	ating temperature	in °C (to)			
°C (tc)	-15	-10	-5	0	5	10	15		
, ,								1	
Cooling capacity	in W								
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	-	-
Power input in V			1	1			1	T	ı
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 consum	ntion in A								
35	3.23	3.39	3.53	3.65	3.75	3.82	3.88	_	
40	3.26	3.46	3.64	3.79	3.92	4.02	4.10	_	_
45	3.26	3.51	3.74	3.94	4.11	4.25	4.36	_	_
50	-	3.54	3.83	4.08	4.30	4.49	4.64	_	_
55	_	-	3.89	4.21	4.49	4.73	4.94	_	_
60		_	-	4.32	4.67	4.98	5.25	_	_
65	-	_	_	4.40	4.83	5.21	5.55	_	-
		I.						L	l.
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 pe			T	T			T		
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	Α
Mass flow	140	kg/h
C.O.P.	2.72	

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

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

**R407C** 

Cond. temp. in				Evapora	ting temperature	in °C (to)			
°C (tc)	-15	-10	-5	0	5	10	15		
•		•		•	•	•	•		
cooling capacity			1		,	1	·	1	ı
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 consump	otion in A								
35	3.23	3.39	3.53	3.65	3.75	3.82	3.88	-	-
40	3.26	3.46	3.64	3.79	3.92	4.02	4.10	-	-
45	3.26	3.51	3.74	3.94	4.11	4.25	4.36	-	-
50	-	3.54	3.83	4.08	4.30	4.49	4.64	-	-
55	-	-	3.89	4.21	4.49	4.73	4.94	-	-
60	-	-	-	4.32	4.67	4.98	5.25	-	-
65	-	-	-	4.40	4.83	5.21	5.55	-	-
/lass 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	-	-	-	98	126	157	192	-	-
65	-	-	-	92	119	150	184	-	-
Coefficient of per		1	2.00	2.00	4.70	F 00	0.00	T	l
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	4.58	Α
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(q)	

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

R134a

Cond. temp. in				Evapora	ting temperature	in °C (to)			
°C (tc)	-25	-20	-10	-5	0	5	10	15	20
'		1	•			•			•
Cooling capacity	/ in W								
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		750	0.40	1 4 000	1 110	1.405	1 4 0 4 0	1 4 000	4 000
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
Current consum	ntion 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	3.17	3.32	3.48	3.66	3.83
65	-	_	_	-	3.21	3.39	3.58	3.78	3.99
75	-	-	_	_	-	-	3.76	4.02	4.30
		L	L	<u> </u>	<u> </u>	_I			
Mass flow in kg	'h								
35	21	30	53	68	86	108	134	164	200
40	19	28	51	65	83	105	130	160	196
45	17	26	48	63	80	102	127	156	190
50	14	23	45	60	77	98	122	151	185
55	-	-	42	56	73	93	117	146	178
60	-	-	-	52	69	89	112	139	172
65	-	-	-	-	64	83	106	133	164
75	-	-	-	-	•	-	92	118	147
Coefficient of pe	•	1		1 0.00	1 0:-			<b>.</b>	
35	1.28	1.59	2.35	2.83	3.40	4.09	4.91	5.91	7.12
40	1.06	1.36	2.06	2.48	2.98	3.56	4.26	5.09	6.08
45	0.85	1.15	1.79	2.16	2.59	3.09	3.68	4.37	5.18
50	0.66	0.96	1.54	1.86	2.24	2.66	3.16	3.74	4.41
55	-	-	1.31	1.60	1.92	2.28	2.70	3.18	3.74
60	-	-	-	1.35	1.63	1.94	2.29	2.70	3.16
65	-	-	-	-	1.36	1.63	1.93	2.27	2.66
75	-	-	-	-	-	-	1.31	1.55	1.83

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

Cooling capacity	3 757	W	
Power input	1 410	W	
Current consumption	3.18	Α	
Mass flow	98	kg/h	
C.O.P.	2.66		

to: Evaporating temperature at dew point

Pressure switch settings

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)

Tolerance according EN12900



tc: Condensing temperature at dew point

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



# Maneurop reciprocating compressor. MTZ028-4

# Performance data at 50 Hz, ARI rating conditions

R134a

Cond. temp. in				Evapora	ting temperature	in °C (to)			
°C (tc)	-25	-20	-10	-5	0	5	10	15	20
				<u> </u>			1		
Cooling capacit	y in W								
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 \	N		•	1		_	•	T	
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
Current consum	nption 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	-	2.67	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
Mass flow in kg	/h								_
35	21	30	52	67	86	107	133	164	199
40	19	28	50	65	83	104	130	160	194
45	17	26	48	62	80	101	126	155	189
50	-	23	45	59	77	97	122	150	184
55	-	-	42	56	73	93	117	145	177
60	-	-	-	52	68	88	111	139	171
65	-	-	-	-	-	83	105	132	163
75	-	-	-	-	-	-	92	117	147
-	erformance (C.C		,	1	1	1	1	Г	
35	1.39	1.73	2.54	3.05	3.67	4.40	5.28	6.34	7.63
40	1.16	1.49	2.24	2.69	3.23	3.85	4.60	5.48	6.54
45	0.94	1.27	1.95	2.36	2.82	3.36	3.99	4.73	5.61
50	-	1.06	1.69	2.05	2.45	2.91	3.45	4.07	4.80
55	-	-	1.45	1.77	2.12	2.51	2.97	3.49	4.10
60	-	-	-	1.51	1.81	2.15	2.54	2.98	3.49
65	-	-	-	-	-	1.82	2.15	2.53	2.96
75	-	-	-	-	-	-	1.50	1.78	2.09

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

	• •		
Cooling capacity	4 218	W	
Power input	1 531	W	
Current consumption	3.30	Α	
Mass flow	103	kg/h	
C.O.P.	2.75		

to: Evaporating temperature at dew point

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

Pressure switch settings

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)

Tolerance according EN12900



tc: Condensing temperature at dew point



# Maneurop reciprocating compressor. MTZ028-4

# Performance data at 50 Hz, EN 12900 rating conditions

# **R404A**

			Evapora	iting temperature	in °C (to)			
-30	-25	-20	-15	-10	-5	0	5	10
	T	T			T 2.22			
	+	1	1	ł	+		1	11 421
								10 488
			1	1		1	1	9 562
			1	1		1	1	8 642
								7 728
-	1	1	1	1	1	1	1	6 821
-	578	986	1 483	2 086	2 813	3 682	4 712	5 920
N								
1 106	1 291	1 462	1 614	1 747	1 856	1 940	1 996	2 020
1 094	1 298	1 488	1 663	1 818	1 952	2 062	2 144	2 197
1 076	1 300	1 511	1 708	1 888	2 047	2 184	2 295	2 378
1 050	1 295	1 529	1 750	1 955	2 141	2 306	2 446	2 560
1 016	1 283	1 541	1 787	2 019	2 232	2 426	2 598	2 743
-	1 263	1 546	1 818	2 077	2 320	2 545	2 748	2 927
-	1 234	1 543	1 842	2 130	2 403	2 659	2 895	3 109
nption in A								
3.07	3.24	3.42	3.60	3.77	3.92	4.05	4.13	4.16
3.08	3.26	3.45	3.65	3.84	4.02	4.16	4.27	4.32
3.07	3.27	3.49	3.72	3.94	4.14	4.31	4.45	4.54
3.04	3.27	3.53	3.78	4.04	4.28	4.49	4.67	4.80
2.97	3.24	3.54	3.84	4.14	4.42	4.68	4.90	5.08
-	3.17	3.51	3.87	4.22	4.55	4.87	5.15	5.39
-	3.04	3.45	3.86	4.27	4.67	5.05	5.39	5.70
/h								
45	63	85	110	139	172	210	252	300
40	58	80	105	133	166	203	245	292
35	54	75	99	127	160	196	238	285
31	49	70	94	121	153	189	230	277
26	44	64	88	115	147	182	223	268
-	38	59	82	109	140	175	215	260
-	33	53	76	103	134	168	208	252
erformance (C.O.								
	1	1.93	2.33	2.79	3.32	3.96	4.72	5.65
								4.77
		+	1	1		1	1	4.02
								3.38
0.56	0.79	1.00	1.23	1.47	1.74	2.05	2.41	2.82
		1.00	1.20	1.17	1.7.7	2.00		2.02
0.50	0.62	0.81	1.01	1.21	1.44	1.70	1.99	2.33
	y in W  1 417  1 182  963  759  570  W  1 106  1 094  1 076  1 050  1 016  nption in A  3.07  3.08  3.07  3.04  2.97  /h  45  40  35  31  26	y in W  1 417	y in W  1 417	30	1417	yin W  1 417	1   106   1   291   1   1462   1614   1   1747   1   1856   1   1940   1   1060   1   295   1   1529   1   1500   1   295   1   295   1   295   1   205   1   205   1   205   1   205   1   205   20	yin W    1

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

Cooling capacity	3 427	W
Power input	1 955	W
Current consumption	4.04	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



Pressure switch settings

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

Sound power data

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

Tolerance according EN12900





# Maneurop reciprocating compressor. MTZ028-4

# Performance data at 50 Hz, ARI rating conditions

# **R404A**

Cond. temp. in				Evapora	iting temperature	in °C (to)			
°C (tc)	-30	-25	-20	-15	-10	-5	0	5	10
Cooling capacit		0.070	2.420	4.450	F 200	0.702	0.424	40.220	40.405
30 35	1 577 1 330	2 276	3 128	4 150 3 733	5 362	6 783	8 431 7 741	10 326	12 485
40	1 098	1 984 1 706	2 779 2 444	3 733	4 866 4 380	6 195	7 741	9 522	11 557
			1	1	1	5 618	1	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 \	N	_	1	1	1			1	_
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 consum	nption in A								
30	3.07	3.24	3.42	3.60	3.77	3.92	4.05	4.13	4.16
35	3.08	3.26	3.45	3.65	3.84	4.02	4.16	4.27	4.32
40	3.07	3.27	3.49	3.72	3.94	4.14	4.31	4.45	4.54
45	3.04	3.27	3.53	3.78	4.04	4.28	4.49	4.67	4.80
50	2.97	3.24	3.54	3.84	4.14	4.42	4.68	4.90	5.08
55	-	3.17	3.51	3.87	4.22	4.55	4.87	5.15	5.39
60	-	3.04	3.45	3.86	4.27	4.67	5.05	5.39	5.70
Mass flow in kg	/h								
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	26	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 pe	erformance (C.C	).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

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

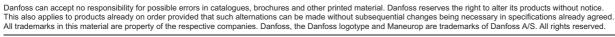
Rating conditions : Superheat = 11.1 K , Subcooling = 8.3 K

Pressure switch settings

27.7	bar(g)
1	bar(g)
1.3	bar(g)
	1

Sound power data

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







# Maneurop reciprocating compressor. MTZ028-4

# Performance data at 50 Hz, EN 12900 rating conditions

**R407A** 

Cond. temp. in	o. in Evaporating temperature in °C (to)								
°C (tc)	-30	-25	-20	-15	-10	-5	0	5	10
Cooling capacity		4.500	2.205	2.450	4.400	E 40E	0.000	0.500	40.455
30	1 014	1 586	2 295	3 158	4 196	5 425	6 866	8 536	10 455
35	845	1 386	2 054	2 866	3 842	4 999	6 357	7 935	9 751
40 45	677 513	1 187 990	1 813	2 572 2 280	3 485 3 129	4 570 4 140	5 845	7 330 6 722	9 042 8 329
	- 513	1	1 573		+	+	5 332	1	1
50 55	-	798	1 337	1 990 1 705	2 775 2 425	3 712	4 818 4 307	6 113 5 507	7 615
60	<u> </u>	-	1 107	1 427	2 425	3 287 2 866	3 801	4 903	6 903 6 192
00	-	-	-	1 427	2 081	2 800	3 80 1	4 903	0 192
Power input in W	1								
30	832	1 018	1 190	1 347	1 485	1 604	1 702	1 776	1 825
35	812	1 018	1 211	1 389	1 551	1 693	1 814	1 913	1 988
40	782	1 010	1 225	1 426	1 611	1 778	1 925	2 050	2 152
45	741	992	1 231	1 457	1 667	1 860	2 034	2 187	2 317
50	-	965	1 229	1 481	1 719	1 939	2 142	2 324	2 485
55	-	-	1 221	1 500	1 766	2 016	2 249	2 462	2 654
60	-	-	-	1 514	1 810	2 091	2 355	2 600	2 825
Current consum	ption in A								_
30	2.75	2.91	3.09	3.27	3.45	3.61	3.74	3.83	3.87
35	2.75	2.92	3.10	3.30	3.49	3.67	3.83	3.94	4.02
40	2.74	2.92	3.13	3.34	3.56	3.77	3.95	4.10	4.22
45	2.71	2.91	3.14	3.38	3.63	3.87	4.10	4.30	4.46
50	-	2.87	3.13	3.41	3.70	3.99	4.26	4.51	4.72
55	-	-	3.09	3.42	3.75	4.09	4.42	4.73	5.00
60	-	-	-	3.38	3.77	4.17	4.56	4.93	5.28
Mass flow in kg/h	า								
30	24	37	53	71	93	118	147	180	217
35	21	34	50	68	89	114	143	175	212
40	18	31	46	64	85	110	138	170	207
45	14	27	43	60	81	105	133	165	201
50	-	24	39	56	77	101	128	160	195
55	-	-	34	52	72	96	123	154	189
60	-	-	-	47	67	90	117	147	182
Coefficient of pe	rformance (C.C	D.P.)							
30	1.22	1.56	1.93	2.35	2.82	3.38	4.03	4.81	5.73
35	1.04	1.36	1.70	2.06	2.48	2.95	3.50	4.15	4.90
40	0.87	1.18	1.48	1.80	2.16	2.57	3.04	3.57	4.20
45	0.69	1.00	1.28	1.57	1.88	2.23	2.62	3.07	3.59
50	-	0.83	1.09	1.34	1.61	1.91	2.25	2.63	3.07
	_	-	0.91	1.14	1.37	1.63	1.92	2.24	2.60
55									

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

Cooling capacity	3 129	W
Power input	1 667	W
Current consumption	3.63	Α
Mass flow	81	kg/h
C.O.P.	1.88	_

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

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

Pressure switch settings

Maximum HP switch setting	25.8	bar(g)
Minimum LP switch setting	0.9	bar(g)
LP pump down setting	1.2	bar(g)

Sound power data

Sound power level	70	dB(A)
With accoustic hood	63	dB(A)

Tolerance according EN12900





# Maneurop reciprocating compressor. MTZ028-4

# Performance data at 50 Hz, ARI rating conditions

**R407A** 

Cond. temp. in				Evapora	iting temperature	in °C (to)			
°C (tc)	-30	-25	-20	-15	-10	-5	0	5	10
•			•		•		•	•	•
cooling capacity			T	T					
30	1 096	1 713	2 475	3 401	4 513	5 828	7 367	9 149	11 193
35	919	1 506	2 227	3 103	4 154	5 398	6 855	8 546	10 489
40	742	1 298	1 978	2 803	3 792	4 964	6 340	7 938	9 779
45	567	1 091	1 730	2 503	3 429	4 529	5 822	7 328	9 067
50	-	888	1 484	2 204	3 067	4 094	5 304	6 718	8 354
55	-	-	1 243	1 910	2 710	3 663	4 790	6 111	7 645
60	-	-	-	1 621	2 358	3 238	4 282	5 510	6 942
Power input in W	ı								
30	832	1 018	1 190	1 347	1 485	1 604	1 702	1 776	1 825
35	812	1 018	1 211	1 389	1 551	1 693	1 814	1 913	1 988
40	782	1 010	1 225	1 426	1 611	1 778	1 925	2 050	2 152
45	741	992	1 231	1 457	1 667	1 860	2 034	2 187	2 317
50	-	965	1 229	1 481	1 719	1 939	2 142	2 324	2 485
55	-	-	1 221	1 500	1 766	2 016	2 249	2 462	2 654
60	-	-	-	1 514	1 810	2 091	2 355	2 600	2 825
Current consum	ption in A						1	1	1
30	2.75	2.91	3.09	3.27	3.45	3.61	3.74	3.83	3.87
35	2.75	2.92	3.10	3.30	3.49	3.67	3.83	3.94	4.02
40	2.74	2.92	3.13	3.34	3.56	3.77	3.95	4.10	4.22
45	2.71	2.91	3.14	3.38	3.63	3.87	4.10	4.30	4.46
50	-	2.87	3.13	3.41	3.70	3.99	4.26	4.51	4.72
55	-	-	3.09	3.42	3.75	4.09	4.42	4.73	5.00
60	-	-	-	3.38	3.77	4.17	4.56	4.93	5.28
Mass flow in kg/l	h								
30	24	37	52	71	92	117	146	179	216
35	21	34	49	67	89	113	142	174	211
40	18	31	46	64	85	109	137	169	206
45	14	27	42	60	81	105	133	164	200
50	-	23	38	56	76	100	127	159	194
55	-	-	34	52	72	95	122	153	188
60	-	-	-	47	67	90	116	146	181
Coefficient of pe	rformance (C.C	).P.)							
30	1.32	1.68	2.08	2.53	3.04	3.63	4.33	5.15	6.13
35	1.13	1.48	1.84	2.23	2.68	3.19	3.78	4.47	5.28
40	0.95	1.29	1.62	1.97	2.35	2.79	3.29	3.87	4.54
45	0.76	1.10	1.41	1.72	2.06	2.43	2.86	3.35	3.91
50	-	0.92	1.21	1.49	1.78	2.11	2.48	2.89	3.36
55	-	-	1.02	1.27	1.53	1.82	2.13	2.48	2.88

|--|

Cooling capacity	3 429	W
Power input	1 667	W
Current consumption	3.63	Α
Mass flow	81	kg/h
C.O.P.	2.06	

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

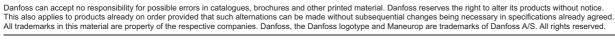
Rating conditions : Superheat = 11.1 K , Subcooling = 8.3 K

Pressure switch settings

Maximum HP switch setting	25.8	bar(g)	
Minimum LP switch setting	0.9	bar(g)	
LP pump down setting	1.2	bar(q)	

Sound power data

Sound power level	70	dB(A)
With accoustic hood	63	dB(A)







# Maneurop reciprocating compressor. MTZ028-4

# Performance data at 50 Hz, EN 12900 rating conditions

**R407F** 

Cond. temp. in	Evaporating temperature in °C (to)									
°C (tc)	-30	-25	-20	-15	-10	-5	0	5	10	
Cooling capacity		1		1		T	T			
30	-	1 770	2 575	3 550	4 714	6 091	7 699	9 561	11 698	
35	-	1 482	2 218	3 109	4 176	5 440	6 922	8 644	10 626	
40	-	1 239	1 916	2 734	3 713	4 876	6 243	7 835	9 673	
45	-	1 032	1 661	2 417	3 320	4 392	5 654	7 127	8 831	
50	-	-	1 444	2 148	2 986	3 978	5 146	6 511	8 093	
55	-	-	-	1 921	2 703	3 627	4 711	5 979	7 449	
60	-	-	-	-	-	-	-	-	-	
Power input in W										
30	-	1 088	1 269	1 437	1 583	1 699	1 775	1 804	1 776	
35	-	1 083	1 281	1 471	1 645	1 795	1 911	1 984	2 007	
40	-	1 080	1 292	1 502	1 701	1 881	2 034	2 149	2 220	
45	-	1 085	1 308	1 535	1 756	1 965	2 150	2 306	2 421	
50	-	-	1 337	1 577	1 818	2 051	2 268	2 459	2 617	
55	-	-	-	1 635	1 893	2 148	2 392	2 617	2 813	
60	-	-	_	-	-	_	_	_	-	
1		•	•	•		•		•		
Current consump	tion in A									
30	-	2.92	3.11	3.31	3.50	3.67	3.79	3.87	3.87	
35	-	2.96	3.16	3.37	3.58	3.77	3.92	4.03	4.07	
40	-	2.97	3.19	3.42	3.65	3.88	4.07	4.22	4.31	
45	-	2.97	3.21	3.47	3.74	4.00	4.23	4.43	4.58	
50	-	-	3.22	3.51	3.82	4.13	4.42	4.68	4.89	
55	-	-	-	3.56	3.92	4.29	4.64	4.96	5.25	
60	-	-	-	-	-	-	-	-	-	
Mass flow in kg/h	-	37	52	71	93	119	148	182	220	
35	-	32	47	65	86	111	139	172	209	
40		28	43	60	81	104	132	163	199	
45		25	39	56	76	99	126	156	199	
50	-	-	36	53	72	95	120	150	185	
55	-		-	51	70	95	118	147	180	
60			_	-	-	- 92	-	-	-	
00	-			<u>-</u>			<u> </u>	<u> </u>		
Coefficient of per	formance (C.C	D.P.)								
30	-	1.63	2.03	2.47	2.98	3.59	4.34	5.30	6.59	
35	-	1.37	1.73	2.11	2.54	3.03	3.62	4.36	5.29	
40	-	1.15	1.48	1.82	2.18	2.59	3.07	3.65	4.36	
45	-	0.95	1.27	1.57	1.89	2.24	2.63	3.09	3.65	
40		-	1.08	1.36	1.64	1.94	2.27	2.65	3.09	
	-				1					
50	-	_	_	1.17	1.43	1.69	1.97	2.28	2.65	

Nominal performance at to = -10 °C, tc = 45 °C	;
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Cooling capacity	3 320	W
Power input	1 756	W
Current consumption	3.74	Α
Mass flow	76	kg/h
C.O.P.	1.89	

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

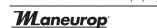
Rating conditions : Superheat = 10 K , Subcooling = 0 K

Pressure switch settings

Maximum HP switch setting	24	bar(g)	
Minimum LP switch setting	1	bar(g)	
LP pump down setting	1.26	bar(q)	

Sound power data

Sound power level	70	dB(A)
With accoustic hood	63	dB(A)





# Maneurop reciprocating compressor. MTZ028-4

# Performance data at 50 Hz, ARI rating conditions

**R407F** 

Cond. temp. in				Evapora	iting temperature	in °C (to)			
°C (tc)	-30	-25	-20	-15	-10	-5	0	5	10
		•							
cooling capacity	in W	1.007	1 0		T 000	0.500	0.040	40.400	10.157
30	-	1 897	2 757	3 797	5 038	6 502	8 212	10 190	12 457
35	-	1 596	2 386	3 340	4 481	5 832	7 414	9 249	11 360
40	-	1 342	2 072	2 952	4 005	5 253	6 719	8 423	10 389
45	-	1 125	1 807	2 625	3 602	4 759	6 119	7 704	9 537
50	-	-	1 583	2 351	3 263	4 341	5 608	7 086	8 797
55	-	-	-	2 122	2 981	3 993	5 179	6 562	8 165
60	-	-	-	-	-	-	-	-	-
Power input in W									
30	-	1 088	1 269	1 437	1 583	1 699	1 775	1 804	1 776
35	-	1 083	1 281	1 471	1 645	1 795	1 911	1 984	2 007
40	-	1 080	1 292	1 502	1 701	1 881	2 034	2 149	2 220
45	-	1 085	1 308	1 535	1 756	1 965	2 150	2 306	2 421
50	-	-	1 337	1 577	1 818	2 051	2 268	2 459	2 617
55	-	-	-	1 635	1 893	2 148	2 392	2 617	2 813
60	-	-	-	-	-	-	-	-	-
Current consump	tion in A	•	T	1	1	T	T		1
30	-	2.92	3.11	3.31	3.50	3.67	3.79	3.87	3.87
35	-	2.96	3.16	3.37	3.58	3.77	3.92	4.03	4.07
40	-	2.97	3.19	3.42	3.65	3.88	4.07	4.22	4.31
45	-	2.97	3.21	3.47	3.74	4.00	4.23	4.43	4.58
50	-	-	3.22	3.51	3.82	4.13	4.42	4.68	4.89
55	-	-	-	3.56	3.92	4.29	4.64	4.96	5.25
60	-	-	-	-	-	-	-	-	-
lass flow in kg/h									
30	-	36	52	71	93	118	147	181	219
35	-	32	47	65	86	110	138	171	207
40	-	28	43	60	80	104	131	162	197
45	-	25	39	56	76	98	125	155	189
50	-	-	36	53	72	94	120	150	183
55	-	-	-	50	69	92	117	146	179
60	-	-	-	-	-	-	-	-	-
Coefficient of per	formance (C.C	D.P.)							
30	-	1.74	2.17	2.64	3.18	3.83	4.63	5.65	7.02
35	<u>-</u>	1.47	1.86	2.27	2.72	3.25	3.88	4.66	5.66
40		1.24	1.60	1.97	2.72	2.79	3.30	3.92	4.68
45		1.04	1.38	1.71	2.05	2.79	2.85	3.92	3.94
50		+	1.18	1.71	1.79	2.42	2.65	2.88	3.94
55	-	-	1.18	1.49	1.79	1.86	2.47	2.88	2.90
60	-	-		1.30	1.58	1.86	2.16	2.51	2.90
OU	-		-			_		-	

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

Cooling capacity	3 602	W
Power input	1 756	W
Current consumption	3.74	Α
Mass flow	76	kg/h
C.O.P.	2.05	

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

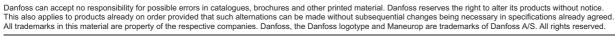
Rating conditions : Superheat = 11.1 K , Subcooling = 8.3 K

Pressure switch settings

Maximum HP switch setting	24	bar(g)	ı
Minimum LP switch setting	1	bar(g)	١
LP pump down setting	1.26	bar(g)	

Sound power data

Sound power level	70	dB(A)
With accoustic hood	63	dB(A)







# Maneurop reciprocating compressor. MTZ028-4

# Performance data at 50 Hz, EN 12900 rating conditions

R134a

Cond. temp. in				Evapora	ting temperature	in °C (to)			
°C (tc)	-25	-20	-10	-5	0	5	10	15	20
'		1	•			•			•
Cooling capacity	/ in W								
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		750	0.40	1 4 000	1 110	1.405	1 4 0 4 0	1 4 000	4 000
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
Current consum	ntion 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	3.17	3.32	3.48	3.66	3.83
65	-	_	_	-	3.21	3.39	3.58	3.78	3.99
75	-	-	_	_	-	-	3.76	4.02	4.30
		L	L	<u> </u>	<u> </u>	_I			
Mass flow in kg	'h								
35	21	30	53	68	86	108	134	164	200
40	19	28	51	65	83	105	130	160	196
45	17	26	48	63	80	102	127	156	190
50	14	23	45	60	77	98	122	151	185
55	-	-	42	56	73	93	117	146	178
60	-	-	-	52	69	89	112	139	172
65	-	-	-	-	64	83	106	133	164
75	-	-	-	-	•	-	92	118	147
Coefficient of pe	•	1		1 0.00	1 0:-			<b>.</b>	
35	1.28	1.59	2.35	2.83	3.40	4.09	4.91	5.91	7.12
40	1.06	1.36	2.06	2.48	2.98	3.56	4.26	5.09	6.08
45	0.85	1.15	1.79	2.16	2.59	3.09	3.68	4.37	5.18
50	0.66	0.96	1.54	1.86	2.24	2.66	3.16	3.74	4.41
55	-	-	1.31	1.60	1.92	2.28	2.70	3.18	3.74
60	-	-	-	1.35	1.63	1.94	2.29	2.70	3.16
65	-	-	-	-	1.36	1.63	1.93	2.27	2.66
75	-	-	-	-	-	-	1.31	1.55	1.83

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

Cooling capacity	3 757	W	
Power input	1 410	W	
Current consumption	3.18	Α	
Mass flow	98	kg/h	
C.O.P.	2.66		

to: Evaporating temperature at dew point

Pressure switch settings

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)

Tolerance according EN12900



tc: Condensing temperature at dew point

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



# Maneurop reciprocating compressor. MTZ028-4

# Performance data at 50 Hz, ARI rating conditions

R134a

Cond. temp. in				Evapora	ting temperature	in °C (to)			
°C (tc)	-25	-20	-10	-5	0	5	10	15	20
				<u> </u>			1		
Cooling capacit	y in W								
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 \	N		•	1		_	•	T	
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
Current consum	nption 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	-	2.67	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
Mass flow in kg	/h								•
35	21	30	52	67	86	107	133	164	199
40	19	28	50	65	83	104	130	160	194
45	17	26	48	62	80	101	126	155	189
50	-	23	45	59	77	97	122	150	184
55	-	-	42	56	73	93	117	145	177
60	-	-	-	52	68	88	111	139	171
65	-	-	-	-	-	83	105	132	163
75	-	-	-	-	-	-	92	117	147
-	erformance (C.C		,	1	1	1	1	Г	
35	1.39	1.73	2.54	3.05	3.67	4.40	5.28	6.34	7.63
40	1.16	1.49	2.24	2.69	3.23	3.85	4.60	5.48	6.54
45	0.94	1.27	1.95	2.36	2.82	3.36	3.99	4.73	5.61
50	-	1.06	1.69	2.05	2.45	2.91	3.45	4.07	4.80
55	-	-	1.45	1.77	2.12	2.51	2.97	3.49	4.10
60	-	-	-	1.51	1.81	2.15	2.54	2.98	3.49
65	-	-	-	-	-	1.82	2.15	2.53	2.96
75	-	-	-	-	-	-	1.50	1.78	2.09

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

	• •		
Cooling capacity	4 218	W	
Power input	1 531	W	
Current consumption	3.30	Α	
Mass flow	103	kg/h	
C.O.P.	2.75		

to: Evaporating temperature at dew point

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

Pressure switch settings

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)

Tolerance according EN12900



tc: Condensing temperature at dew point



# Maneurop reciprocating compressor. MTZ028-4

# Performance data at 50 Hz, EN 12900 rating conditions

**R407C** 

Cond. temp. in				Evapora	ating temperature	in °C (to)			
°C (tc)	-15	-10	-5	0	5	10	15		
, ,								1	
Cooling capacity	in W								
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	-	-
Power input in V			1	1			1	T	ı
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 consum	ntion in A								
35	3.23	3.39	3.53	3.65	3.75	3.82	3.88	_	
40	3.26	3.46	3.64	3.79	3.92	4.02	4.10	_	_
45	3.26	3.51	3.74	3.94	4.11	4.25	4.36	_	_
50	-	3.54	3.83	4.08	4.30	4.49	4.64	_	_
55	_	-	3.89	4.21	4.49	4.73	4.94	_	_
60		_	-	4.32	4.67	4.98	5.25	_	_
65	-	_	_	4.40	4.83	5.21	5.55	_	-
		I.				****		L	
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 pe			T	T			T		
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	Α
Mass flow	140	kg/h
C.O.P.	2.72	

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

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

**R407C** 

Cond. temp. in				Evapora	ting temperature	in °C (to)			
°C (tc)	-15	-10	-5	0	5	10	15		
•		•		•	•	•	•		
cooling capacity			1		,	1	·	1	ı
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 consump	otion in A								
35	3.23	3.39	3.53	3.65	3.75	3.82	3.88	-	-
40	3.26	3.46	3.64	3.79	3.92	4.02	4.10	-	-
45	3.26	3.51	3.74	3.94	4.11	4.25	4.36	-	-
50	-	3.54	3.83	4.08	4.30	4.49	4.64	-	-
55	-	-	3.89	4.21	4.49	4.73	4.94	-	-
60	-	-	-	4.32	4.67	4.98	5.25	-	-
65	-	-	-	4.40	4.83	5.21	5.55	-	-
/lass 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	-	-	-	98	126	157	192	-	-
65	-	-	-	92	119	150	184	-	-
Coefficient of per		1	2.00	2.00	4.70	F 00	0.00	T	l
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	4.58	Α
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(q)	

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, Suction temp. = 20 °C

**R448A** 

Cond. temp. in	Evaporating temperature in °C (to)								
°C (tc)	-30	-25	-20	-15	-10	-5	0	5	10
cooling capacity	in W		1	T	T	1	Т		
10	-	2 543	3 377	4 437	5 753	-	-	-	-
20	-	2 188	2 906	3 817	4 952	6 339	8 010	-	-
30	-	1 875	2 490	3 266	4 233	5 417	6 850	8 563	10 592
40	-	-	2 109	2 763	3 575	4 570	5 779	7 230	8 955
50	-	-	-	2 288	2 957	3 778	4 776	5 980	7 416
60	-	-	-	-	2 360	3 019	3 821	4 792	5 955
Power input in W									
10	-	853	913	955	975	-	-	-	-
20	-	986	1 073	1 146	1 203	1 239	1 252	-	-
30	-	1 092	1 207	1 314	1 410	1 490	1 551	1 589	1 602
40	-	-	1 319	1 462	1 598	1 724	1 836	1 930	2 004
50	_	_	-	1 593	1 772	1 946	2 111	2 264	2 400
60	-	-	-	-	1 935	2 159	2 380	2 593	2 794
33		<u> </u>		1	. 555	2.00	2 000	2 000	
urrent consump	tion in A								
10	-	2.24	2.31	2.37	2.40	-	-	-	-
20	-	2.83	2.91	2.99	3.06	3.09	3.08	-	-
30	-	3.17	3.26	3.36	3.47	3.57	3.63	3.64	3.58
40	-	-	3.44	3.58	3.74	3.90	4.04	4.14	4.20
50	-	-	-	3.74	3.95	4.18	4.40	4.61	4.78
60	-	-	-	-	4.20	4.50	4.81	5.13	5.42
lass flow in kg/h	1	1		1	,	1	1		ı
10	-	42	56	73	96	-	-	-	-
20	-	38	51	68	88	114	145	-	-
30	-	36	48	63	82	105	134	170	215
40	-	-	44	58	76	97	124	158	199
50	-	-	-	54	70	90	115	146	184
60	-	-	-	-	64	82	106	134	169
Coefficient of per			1 0	1		1			
10	-	2.98	3.70	4.65	5.90	-	-	-	-
20	-	2.22	2.71	3.33	4.12	5.12	6.40	-	-
30	-	1.72	2.06	2.49	3.00	3.64	4.42	5.39	6.61
40	-	-	1.60	1.89	2.24	2.65	3.15	3.75	4.47
50	-	-	-	1.44	1.67	1.94	2.26	2.64	3.09
60	_	_	_	_	1.22	1.40	1.61	1.85	2.13

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

Cooling capacity	3 262	W
Power input	1 687	W
Current consumption	3.85	Α
Mass flow	73	kg/h
C.O.P.	1.93	

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

Rating conditions : Suction gas temp. = 20  $^{\circ}\text{C}$  , Subcooling = 0 K

Pressure switch settings

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

Sound power data

Sound power level	72	dB(A)	Ī
With accoustic hood	65	dB(A)	





# Maneurop reciprocating compressor. MTZ028-4

# Performance data at 50 Hz, EN 12900 rating conditions, Superheat = 10 K

**R448A** 

Cond. temp. in	Evaporating temperature in °C (to)									
°C (tc)	-30	-25	-20	-15	-10	-5	0	5	10	
Cooling capacity	/ in W			•						
10	1 913	2 555	3 396	4 465	5 790	-	-	-	-	
20	1 621	2 173	2 893	3 810	4 951	6 347	8 025	-	-	
30	1 359	1 837	2 450	3 227	4 197	5 390	6 834	8 558	10 592	
40	1 109	1 524	2 044	2 695	3 509	4 512	5 735	7 206	8 955	
50	-	1 215	1 655	2 194	2 864	3 692	4 707	5 939	7 416	
60	-	-	1 261	1 703	2 242	2 908	3 729	4 735	5 955	
Power input in V	v									
10	778	853	913	955	975	_	_	_	_	
20	891	986	1 073	1 146	1 203	1 239	1 252	-	-	
30	973	1 092	1 207	1 314	1 410	1 490	1 551	1 589	1 602	
40	1 028	1 173	1 319	1 462	1 598	1 724	1 836	1 930	2 004	
50	-	1 233	1 412	1 593	1 772	1 946	2 111	2 264	2 400	
60	-	-	1 489	1 710	1 935	2 159	2 380	2 593	2 794	
<u>'</u>			1	•	1		•	•		
Current consum	ption in A									
10	2.18	2.24	2.31	2.37	2.40	-	-	-	-	
20	2.77	2.83	2.91	2.99	3.06	3.09	3.08	-	-	
30	3.11	3.17	3.26	3.36	3.47	3.57	3.63	3.64	3.58	
40	3.27	3.33	3.44	3.58	3.74	3.90	4.04	4.14	4.20	
50	-	3.42	3.56	3.74	3.95	4.18	4.40	4.61	4.78	
60	-	-	3.70	3.93	4.20	4.50	4.81	5.13	5.42	
Mass flow in kg/	h									
10	37	48	63	82	105	-	-	-	-	
20	34	45	58	76	97	122	153	-	-	
30	31	42	54	70	90	113	141	175	215	
40	28	38	50	65	83	105	131	162	199	
50	-	35	46	60	77	97	121	150	184	
60	-	-	41	54	70	89	111	138	169	
Coefficient of pe	rformance (C.C	D.P.)	T	_	1	1	1	Ţ		
10	2.46	3.00	3.72	4.68	5.94	-	-	-	-	
20	1.82	2.20	2.70	3.32	4.12	5.12	6.41	-	-	
30	1.40	1.68	2.03	2.46	2.98	3.62	4.41	5.39	6.61	
40	1.08	1.30	1.55	1.84	2.20	2.62	3.12	3.73	4.47	
50	-	0.99	1.17	1.38	1.62	1.90	2.23	2.62	3.09	
60	-	-	0.85	1.00	1.16	1.35	1.57	1.83	2.13	
Nominal perforn	nance at to = -1	0 °C, tc = 45 °C				Pressure switch	settings			

Cooling capacity

Current consumption

Power input

Mass flow

C.O.P.

to: Evaporating temperature at dew point tc: Condensing temperature at dew point

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

3 182

1 687

3.85

80

1.89

W

W

Max	imum HP switch setting	27.7	bar(g)
Mini	mum LP switch setting	1	bar(g)
LPp	oump down setting	1.3	bar(g)

Sound power data

Sound power level	72	dB(A)
With accoustic hood	65	dB(A)





# Maneurop reciprocating compressor. MTZ028-4

# Performance data at 50 Hz, EN 12900 rating conditions, Suction temp. = 20 °C

**R449A** 

Cond. temp. in	Evaporating temperature in °C (to)									
°C (tc)	-30	-25	-20	-15	-10	-5	0	5	10	
Cooling capacity	in W									
10	-	2 547	3 382	4 443	5 759	-	-	-	-	
20	-	2 192	2 911	3 823	4 958	6 344	8 015	-	-	
30	-	1 880	2 495	3 272	4 238	5 423	6 855	8 566	10 592	
40	-	-	2 114	2 769	3 580	4 576	5 784	7 233	8 955	
50	-	-	-	2 294	2 963	3 784	4 781	5 982	7 416	
60	-	-	-	-	2 366	3 025	3 826	4 794	5 955	
Power input in W										
10	-	853	913	955	975	-	-	-	-	
20	-	987	1 073	1 146	1 203	1 239	1 252	-	-	
30	-	1 092	1 207	1 314	1 410	1 490	1 551	1 589	1 602	
40	-	-	1 319	1 462	1 598	1 724	1 836	1 930	2 004	
50	-	-	-	1 593	1 772	1 946	2 111	2 264	2 400	
60	-	-	-	-	1 935	2 160	2 380	2 593	2 794	
Current consump	otion in A	2.24	2.31	2.37	2.40	_	_	_	_	
20		2.83	2.91	2.99	3.06	3.09	3.08	-	_	
30		3.16	3.26	3.36	3.47	3.56	3.63	3.64	3.58	
40		3.10	3.44	3.58	3.74	3.89	4.03	4.14	4.19	
50	-	-	-	3.73	3.74	4.17	4.40	4.60	4.19	
60		-	_	-	4.19	4.49	4.81	5.12	5.41	
00			<u> </u>		4.19	4.43	4.01	3.12	3.41	
lass flow in kg/h	1									
10	-	43	57	76	99	-	-	-	-	
20	-	39	53	69	90	116	148	-	-	
30	-	36	49	64	83	107	137	173	218	
40	-	-	45	59	77	99	127	161	202	
50	-	-	-	55	71	92	118	149	187	
60	-	-	-	-	65	84	108	137	173	
Coefficient of per	formance (C.0	O.P.)								
10	-	2.99	3.71	4.65	5.91	-	-	-	-	
20	-	2.22	2.71	3.34	4.12	5.12	6.40	-	-	
30	-	1.72	2.07	2.49	3.01	3.64	4.42	5.39	6.61	
40	-	-	1.60	1.89	2.24	2.65	3.15	3.75	4.47	
	-	_	-	1.44	1.67	1.94	2.26	2.64	3.09	
50	-									

Nominal perf	ormance at to	= -10 °C	, tc = 45 °C

Cooling capacity	3 268	W
Power input	1 687	W
Current consumption	3.84	Α
Mass flow	74	kg/h
C.O.P.	1.94	

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

Rating conditions : Suction gas temp. = 20  $^{\circ}\text{C}$  , Subcooling = 0 K

Pressure switch settings

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

Sound power data

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





# Maneurop reciprocating compressor. MTZ028-4

# Performance data at 50 Hz, EN 12900 rating conditions, Superheat = 10 K

**R449A** 

Cond. temp. in				Evapora	ating temperature	in °C (to)			
°C (tc)	-30	-25	-20	-15	-10	-5	0	5	10
Cooling capacity	in W	•							
10	1 913	2 555	3 396	4 465	5 790	-	-	-	-
20	1 621	2 173	2 893	3 810	4 951	6 347	8 025	-	-
30	1 359	1 837	2 450	3 227	4 197	5 390	6 834	8 558	10 592
40	1 109	1 524	2 044	2 695	3 509	4 512	5 735	7 206	8 955
50	-	1 215	1 655	2 194	2 864	3 692	4 707	5 939	7 416
60	-	-	1 261	1 703	2 242	2 908	3 729	4 735	5 955
Power input in V	ı								
10	778	853	913	955	975	_	_	_	_
20	891	987	1 073	1 146	1 203	1 239	1 252	-	_
30	973	1 092	1 207	1 314	1 410	1 490	1 551	1 589	1 602
40	1 028	1 174	1 319	1 462	1 598	1 724	1 836	1 930	2 004
50	-	1 233	1 412	1 593	1 772	1 946	2 111	2 264	2 400
60	-	-	1 489	1 710	1 935	2 160	2 380	2 593	2 794
•		•	1		1		•	•	
Current consum	ption in A								
10	2.18	2.24	2.31	2.37	2.40	-	-	-	-
20	2.77	2.83	2.91	2.99	3.06	3.09	3.08	-	-
30	3.11	3.16	3.26	3.36	3.47	3.56	3.63	3.64	3.58
40	3.26	3.33	3.44	3.58	3.74	3.89	4.03	4.14	4.19
50	-	3.42	3.55	3.73	3.95	4.17	4.40	4.60	4.77
60	-	-	3.69	3.92	4.19	4.49	4.81	5.12	5.41
Mass flow in kg/	h	•							
10	38	50	66	85	108	-	-	-	-
20	34	46	60	77	99	125	156	-	-
30	31	42	55	72	91	115	144	178	218
40	29	39	51	67	85	107	134	165	202
50	-	36	47	61	78	99	124	153	187
60	-	-	42	56	72	91	114	141	173
Coefficient of pe	,	1	T	1	T	T		T	
10	2.46	3.00	3.72	4.68	5.94	-	-	-	-
20	1.82	2.20	2.70	3.32	4.12	5.12	6.41	-	-
30	1.40	1.68	2.03	2.46	2.98	3.62	4.41	5.38	6.61
40	1.08	1.30	1.55	1.84	2.20	2.62	3.12	3.73	4.47
50	-	0.99	1.17	1.38	1.62	1.90	2.23	2.62	3.09
60	-	-	0.85	1.00	1.16	1.35	1.57	1.83	2.13
						_			
Nominal perform	nance at to = -1	0 °C, tc = 45 °C				Pressure switch	settings		

Cooling capacity

Current consumption

Power input

Mass flow

to: Evaporating temperature at dew point tc: Condensing temperature at dew point

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

3 182

1 687

3.84

82 1.89 W

W

Max	imum HP switch setting	27.7	bar(g)
Mini	mum LP switch setting	1	bar(g)
LPp	oump down setting	1.3	bar(g)

Sound power data

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





# Maneurop reciprocating compressor. MTZ028-4

# Performance data at 50 Hz, EN 12900 rating conditions, Suction temp. = 20 °C

**R452A** 

Cond. temp. in		1	Т		ting temperature			1	
°C (tc)	-30	-25	-20	-15	-10	-5	0	5	10
Cooling capacity i	n W								
10	-	2 759	3 475	4 398	5 557	-	-	-	-
20	-	2 521	3 174	4 007	5 047	6 322	7 861	-	-
30	-	2 237	2 816	3 548	4 458	5 575	6 924	8 536	10 442
40	-	1 916	2 410	3 029	3 800	4 747	5 896	7 274	8 909
50	-	-	1 964	2 460	3 079	3 847	4 787	5 922	7 277
60	-	-	-	1 848	2 305	2 883	3 605	4 490	5 555
Power input in W									
10	-	1 027	1 053	1 055	1 031	-	-	-	-
20	-	1 159	1 224	1 272	1 300	1 304	1 279	-	-
30	-	1 274	1 376	1 469	1 548	1 610	1 650	1 665	1 651
40	-	1 359	1 499	1 635	1 765	1 883	1 986	2 071	2 134
50	-	-	1 581	1 760	1 938	2 112	2 277	2 431	2 569
60	-	-	-	1 831	2 057	2 285	2 512	2 733	2 945
Current consumpt	tion in A	1.47	1.44	1.40	1.35	-	_	-	<u> </u>
20		2.70	2.72	2.75	2.76	2.76	2.72	_	_
30		3.27	3.35	3.44	3.52	3.60	3.65	3.67	3.64
40		3.45	3.58	3.73	3.89	4.04	4.18	4.29	4.36
50		-	3.67	3.88	4.11	4.34	4.56	4.76	4.93
60	_	_	-	4.14	4.44	4.74	5.05	5.34	5.61
•		L					0.00	0.01	0.01
Mass flow in kg/h								1	
10	-	55	70	88	111			-	-
20	-	56	70	89	112	141	177	-	-
30	-	54	69	87	110	138	173	217	270
40	-	52	65	83	105	132	166	208	259
50	-	-	61	77	97	122	154	194	243
60	-	-	-	69	87	110	140	177	223
Coefficient of perf	ormance (C.C	1			T = 00	1	1	1	T
10	-	2.69	3.30	4.17	5.39	-	-	-	-
20	-	2.17	2.59	3.15	3.88	4.85	6.14	-	-
30	-	1.76	2.05	2.41	2.88	3.46	4.20	5.13	6.32
40	-	1.41	1.61	1.85	2.15	2.52	2.97	3.51	4.18
50	-	-	1.24	1.40	1.59	1.82	2.10	2.44	2.83
60	-	-	-	1.01	1.12	1.26	1.44	1.64	1.89

Nominal pe	rformance	at to =	-10 °C,	tc = 45 °	С

Cooling capacity	3 447	W
Power input	1 857	W
Current consumption	4.00	Α
Mass flow	101	kg/h
C.O.P.	1.86	

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

Rating conditions : Suction gas temp. = 20  $^{\circ}\text{C}$  , Subcooling = 0 K

Pressure switch settings

Max	imum HP switch setting	27.7	bar(g)
Mini	mum LP switch setting	1	bar(g)
LPp	oump down setting	1.3	bar(g)

Sound power data

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





# Maneurop reciprocating compressor. MTZ028-4

# Performance data at 50 Hz, EN 12900 rating conditions, Superheat = 10 K

**R452A** 

Cond. temp. in	Evaporating temperature in °C (to)										
°C (tc)	-30	-25	-20	-15	-10	-5	0	5	10		
Cooling capacity	/ in W								_		
10	2 150	2 685	3 402	4 330	5 498	-	-	-	-		
20	1 917	2 413	3 063	3 897	4 945	6 237	7 801	-	-		
30	1 650	2 096	2 668	3 398	4 315	5 449	6 828	8 483	10 442		
40	1 361	1 745	2 229	2 844	3 619	4 584	5 767	7 199	8 909		
50	1 060	1 371	1 757	2 246	2 868	3 652	4 629	5 827	7 277		
60	-	985	1 260	1 612	2 070	2 664	3 423	4 377	5 555		
Power input in V	v										
10	983	1 027	1 053	1 055	1 031	-	_	_	-		
20	1 082	1 159	1 224	1 272	1 300	1 304	1 279	-	-		
30	1 165	1 274	1 376	1 469	1 548	1 610	1 650	1 665	1 651		
40	1 221	1 359	1 499	1 635	1 765	1 883	1 986	2 071	2 134		
50	1 238	1 406	1 581	1 760	1 938	2 112	2 277	2 431	2 569		
60	-	1 402	1 611	1 831	2 057	2 285	2 512	2 733	2 945		
		-			-				•		
Current consum	ption in A										
10	1.51	1.47	1.44	1.40	1.35	-	-	-	-		
20	2.68	2.70	2.72	2.75	2.76	2.76	2.72	-	-		
30	3.21	3.27	3.35	3.44	3.52	3.60	3.65	3.67	3.64		
40	3.34	3.45	3.58	3.73	3.89	4.04	4.18	4.29	4.36		
50	3.32	3.48	3.67	3.88	4.11	4.34	4.56	4.76	4.93		
60	-	3.62	3.86	4.14	4.44	4.74	5.05	5.34	5.61		
Macc flow in ka	h										
Mass flow in kg/	52	64	80	98	122	_	_	T -	_		
20	52	65	80	100	123	152	186	_	_		
30	51	63	79	98	121	149	183	223	270		
40	48	60	75	93	115	142	175	213	259		
50	45	56	69	86	107	132	163	199	243		
60	-	51	63	77	96	119	147	181	223		
00		01	00	, ,,		110		101	220		
Coefficient of pe	rformance (C.C	).P.)	_			•			•		
10	2.19	2.61	3.23	4.10	5.33	-	-	-	-		
20	1.77	2.08	2.50	3.06	3.80	4.78	6.10	-	-		
30	1.42	1.65	1.94	2.31	2.79	3.38	4.14	5.09	6.32		
40	1.12	1.28	1.49	1.74	2.05	2.43	2.90	3.48	4.18		
50	0.86	0.98	1.11	1.28	1.48	1.73	2.03	2.40	2.83		
60	-	0.70	0.78	0.88	1.01	1.17	1.36	1.60	1.89		
<u></u>		<u> </u>									
Nominal perforn	nance at to = -10	0 °C, tc = 45 °C			_	Pressure switch	settings				

Cooling capacity

Current consumption

Power input

Mass flow

to: Evaporating temperature at dew point tc: Condensing temperature at dew point

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

3 250

1 857

4.00

111

1.75

W

W

kg/h

Max	imum HP switch setting	27.7	bar(g)
Mini	mum LP switch setting	1	bar(g)
LPp	oump down setting	1.3	bar(g)

Sound power data

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





# Maneurop reciprocating compressor. MTZ028-4

# Performance data at 60 Hz, EN 12900 rating conditions

**R407C** 

Cond. temp. in				Evapora	ting temperature	in °C (to)			
°C (tc)	-15	-10	-5	0	5	10	15		
		•	•	•					l .
Cooling capacit	ty in W								
35	3 415	4 506	5 837	7 445	9 365	11 632	14 282	-	-
40	3 160	4 180	5 416	6 903	8 678	10 775	13 229	-	-
45	2 901	3 856	5 003	6 377	8 013	9 946	12 211	-	-
50	-	3 530	4 593	5 860	7 363	9 139	11 222	-	-
55	-	-	4 182	5 347	6 725	8 349	10 256	-	-
60	-	-	-	4 833	6 090	7 570	9 306	-	-
65	-	-	-	4 313	5 455	6 794	8 365	-	-
Power input in	w								
35	1 615	1 774	1 913	2 032	2 133	2 219	2 290	-	-
40	1 690	1 869	2 028	2 169	2 293	2 403	2 500	-	-
45	1 766	1 963	2 141	2 303	2 450	2 583	2 705	-	-
50	-	2 058	2 255	2 437	2 606	2 763	2 909	-	-
55	-	-	2 373	2 575	2 764	2 943	3 113	-	-
60	-	-	-	2 717	2 927	3 128	3 320	-	-
65	-	-	-	2 868	3 097	3 318	3 533	-	-
Current consur	nption in A								
35	3.02	3.17	3.32	3.46	3.58	3.70	3.79	-	-
40	3.10	3.28	3.45	3.61	3.76	3.90	4.01	-	-
45	3.17	3.38	3.58	3.77	3.95	4.11	4.24	-	-
50	-	3.47	3.71	3.93	4.14	4.33	4.49	-	-
55	-	-	3.84	4.09	4.34	4.56	4.75	-	-
60	-	-	-	4.26	4.54	4.80	5.03	-	-
65	-	-	-	4.43	4.75	5.04	5.31	-	-
Mass flow in kg	<u>ı/h</u>								
35	74	96	123	154	191	233	283	-	-
40	72	94	119	150	185	227	274	-	-
45	70	91	116	146	180	220	266	-	-
50	-	88	113	141	175	213	258	-	-
55	-	-	109	137	170	207	250	-	-
60	-	-	-	133	164	200	242	-	-
65	-	-	-	128	159	194	234	-	-
	erformance (C.O				1	1	, ,		1
35	2.11	2.54	3.05	3.66	4.39	5.24	6.24	-	-
40	1.87	2.24	2.67	3.18	3.78	4.48	5.29	-	-
45	1.64	1.96	2.34	2.77	3.27	3.85	4.51	-	-
50	-	1.72	2.04	2.40	2.83	3.31	3.86	-	-
55	-	-	1.76	2.08	2.43	2.84	3.29	-	-
60	-	-	-	1.78	2.08	2.42	2.80	-	-
65	_	_	_	1.50	1.76	2.05	2.37	_	_

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

Cooling capacity	7 363	W
Power input	2 606	W
Current consumption	4.14	Α
Mass flow	175	kg/h
C.O.P.	2.83	

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

Rating conditions : Superheat = 10 K , Subcooling = 0 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	76	dB(A)
With accoustic hood	69	dB(A)

Tolerance according EN12900





# Maneurop reciprocating compressor. MTZ028-4

# Performance data at 60 Hz, ARI rating conditions

**R407C** 

Cond. temp. in				Evapora	ting temperature	in °C (to)			
°C (tc)	-15	-10	-5	0	5	10	15		
			l			1		I.	I
cooling capacity	in W					_			
35	3 676	4 844	6 268	7 985	10 034	12 449	15 270	-	-
40	3 420	4 517	5 845	7 442	9 343	11 588	14 212	-	-
45	3 160	4 193	5 432	6 914	8 676	10 756	13 190	-	-
50	-	3 867	5 023	6 398	8 027	9 949	12 199	-	-
55	-	-	4 613	5 887	7 390	9 161	11 235	-	-
60	-	-	-	5 376	6 760	8 386	10 291	-	-
65	-	-	-	4 860	6 132	7 620	9 362	-	-
Power input in W	,								
35	1 615	1 774	1 913	2 032	2 133	2 219	2 290	_	_
40	1 690	1 869	2 028	2 169	2 293	2 403	2 500	-	-
45	1 766	1 963	2 141	2 303	2 450	2 583	2 705	-	-
50	-	2 058	2 255	2 437	2 606	2 763	2 909	-	-
55	-	-	2 373	2 575	2 764	2 943	3 113	-	-
60	-	-	-	2 717	2 927	3 128	3 320	-	-
65	-	-	-	2 868	3 097	3 318	3 533	-	-
•									•
urrent consump	otion in A				1				T
35	3.02	3.17	3.32	3.46	3.58	3.70	3.79	-	-
40	3.10	3.28	3.45	3.61	3.76	3.90	4.01	-	-
45	3.17	3.38	3.58	3.77	3.95	4.11	4.24	-	-
50	-	3.47	3.71	3.93	4.14	4.33	4.49	-	-
55	-	-	3.84	4.09	4.34	4.56	4.75	-	-
60	-	-	-	4.26	4.54	4.80	5.03	-	-
65	-	-	-	4.43	4.75	5.04	5.31	-	-
/lass flow in kg/h									
35	74	96	122	153	189	232	281	-	_
40	72	93	119	149	184	225	273	-	_
45	70	91	116	145	179	219	264	-	_
50	-	88	112	141	174	212	256	-	_
55	-	-	109	137	169	206	248	-	-
60	-	_	-	132	163	199	240	-	_
65	-	-	-	128	158	193	233	-	-
<u></u>			•			•	•	•	•
Coefficient of per		1	1	T	1	1	1	T	ı
35	2.28	2.73	3.28	3.93	4.70	5.61	6.67	-	-
40	2.02	2.42	2.88	3.43	4.07	4.82	5.69	-	-
45	1.79	2.14	2.54	3.00	3.54	4.16	4.88	-	-
50	-	1.88	2.23	2.62	3.08	3.60	4.19	-	-
55	-	-	1.94	2.29	2.67	3.11	3.61	-	-
60	-	-	-	1.98	2.31	2.68	3.10	-	-
65	_	-	-	1.69	1.98	2.30	2.65	_	_

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

Cooling capacity	8 218	W
Power input	2 824	W
Current consumption	4.41	Α
Mass flow	185	kg/h
C.O.P.	2.91	

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

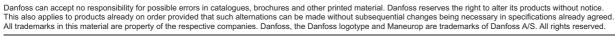
Rating conditions : Superheat = 11.1 K , Subcooling = 8.3 K

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(q)	

Sound power data

Sound power level	76	dB(A)
With accoustic hood	69	dB(A)







# Maneurop reciprocating compressor. MTZ028-4

# Performance data at 60 Hz, EN 12900 rating conditions

R134a

Cond. temp. in	Evaporating temperature in °C (to)									
°C (tc)	-25	-20	-10	-5	0	5	10	15	20	
Cooling consoits	. in 14/									
Cooling capacity 35	1 017	1 443	2 654	3 498	4 542	5 814	7 345	9 165	11 302	
40	872	1 282	2 425	3 217	4 195	5 389	6 830	8 547	10 569	
45	721	1 115	2 188	2 925	3 837	4 953	6 303	7 916	9 822	
50	567	944	1 945	2 628	3 473	4 509	5 766	7 275	9 064	
55	-	-	1 699	2 327	3 104	4 059	5 224	6 627	8 298	
60		-	-	2 026	2 734	3 608	4 678	5 975	7 528	
65	_	_	_	-	2 366	3 158	4 133	5 323	6 756	
75	-	_	_	_	-	-	3 057	4 029	5 220	
						1		1		
Power input in V				T	1	1		1	1	
35	796	907	1 130	1 237	1 335	1 422	1 495	1 552	1 587	
40	824	940	1 179	1 297	1 409	1 512	1 603	1 680	1 738	
45	844	966	1 224	1 355	1 482	1 603	1 714	1 812	1 894	
50	854	984	1 264	1 409	1 553	1 692	1 824	1 946	2 054	
55	-	-	1 298	1 458	1 620	1 780	1 935	2 081	2 216	
60	-	-	-	1 501	1 682	1 864	2 042	2 215	2 379	
65	-	-	-	-	1 737	1 942	2 147	2 347	2 541	
75	-	-	-	-	-	-	2 337	2 598	2 856	
Current consum	ntion in A									
35	2.69	2.75	2.88	2.94	3.01	3.06	3.12	3.17	3.22	
40	2.70	2.77	2.92	3.00	3.07	3.15	3.22	3.30	3.37	
45	2.71	2.78	2.95	3.04	3.14	3.23	3.33	3.43	3.52	
50	2.70	2.79	2.98	3.08	3.20	3.31	3.43	3.55	3.68	
55	-	_	3.00	3.12	3.25	3.39	3.53	3.68	3.84	
60	-	-	_	3.15	3.30	3.46	3.63	3.81	4.00	
65	-	-	_	-	3.35	3.53	3.73	3.94	4.16	
75	-	-	-	-	-	-	3.92	4.20	4.48	
•		•	•		•	•	•	•	•	
Mass flow in kg/					T	1		T	1	
35	26	36	63	81	103	129	161	197	240	
40	23	34	61	79	100	126	157	193	235	
45	20	31	58	75	97	122	152	187	229	
50	17	28	54	72	92	117	147	181	222	
55	-	-	51	68	88	112	141	175	214	
60	-	-	-	63	83	106	134	167	206	
65	-	-	-	-	77	100	127	159	197	
75	-	-	-	-	-	-	111	141	177	
Coefficient of pe	rformance (C.O	.P.)								
35	1.28	1.59	2.35	2.83	3.40	4.09	4.91	5.91	7.12	
40	1.06	1.36	2.06	2.48	2.98	3.56	4.26	5.09	6.08	
45	0.85	1.15	1.79	2.16	2.59	3.09	3.68	4.37	5.18	
50	0.66	0.96	1.54	1.86	2.24	2.66	3.16	3.74	4.41	
55	-	-	1.31	1.60	1.92	2.28	2.70	3.18	3.74	
60	-	-	-	1.35	1.63	1.94	2.29	2.70	3.16	
65	-	-	-	-	1.36	1.63	1.93	2.27	2.66	
75	-	-	_	-	-	-	1.31	1.55	1.83	

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

Cooling capacity	4 509	W
Power input	1 692	W
Current consumption	3.31	Α
Mass flow	117	kg/h
C.O.P.	2.66	

to: Evaporating temperature at dew point

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

Pressure switch settings

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)

Tolerance according EN12900



tc: Condensing temperature at dew point



# Maneurop reciprocating compressor. MTZ028-4

# Performance data at 60 Hz, ARI rating conditions

R134a

Cond. temp. in				Evapora	iting temperature	in °C (to)			
°C (tc)	-25	-20	-10	-5	0	5	10	15	20
			•			•			
Cooling capacity	in W								
35	1 105	1 565	2 869	3 776	4 895	6 257	7 894	9 836	12 114
40	953	1 399	2 636	3 490	4 543	5 828	7 374	9 213	11 377
45	794	1 225	2 392	3 192	4 179	5 385	6 840	8 576	10 624
50	-	1 045	2 141	2 887	3 806	4 932	6 295	7 926	9 858
55	-	-	1 886	2 576	3 427	4 472	5 742	7 268	9 083
60	-	-	-	2 263	3 045	4 008	5 184	6 605	8 302
65	-	-	-	-	-	3 544	4 626	5 940	7 519
75	-	-	-	-	-	-	3 517	4 618	5 960
	_								
Power input in W						1			
35	796	907	1 130	1 237	1 335	1 422	1 495	1 552	1 587
40	824	940	1 179	1 297	1 409	1 512	1 603	1 680	1 738
45	844	966	1 224	1 355	1 482	1 603	1 714	1 812	1 894
50	-	984	1 264	1 409	1 553	1 692	1 824	1 946	2 054
55	-	-	1 298	1 458	1 620	1 780	1 935	2 081	2 216
60	-	-	-	1 501	1 682	1 864	2 042	2 215	2 379
65	-	-	-	-	-	1 942	2 147	2 347	2 541
75	-	-	-	-	-	-	2 337	2 598	2 856
Current consum	ntion in A								
35	2.69	2.75	2.88	2.94	3.01	3.06	3.12	3.17	3.22
40	2.70	2.77	2.92	3.00	3.07	3.15	3.22	3.30	3.37
45	2.71	2.78	2.95	3.04	3.14	3.23	3.33	3.43	3.52
50		2.79	2.98	3.08	3.20	3.31	3.43	3.55	3.68
55	-	-	3.00	3.12	3.25	3.39	3.53	3.68	3.84
60	-	_	-	3.15	3.30	3.46	3.63	3.81	4.00
65	-	_	_	-	-	3.53	3.73	3.94	4.16
75	-	_	_	_	_	-	3.92	4.20	4.48
			1			1			I
Mass flow in kg/l	1								
35	26	36	63	81	103	129	160	196	239
40	23	34	60	78	100	125	156	192	233
45	20	31	58	75	96	121	151	186	227
50	-	28	54	71	92	117	146	180	221
55	-	-	50	67	87	111	140	174	213
60	-	-	-	63	82	106	134	166	205
65	-	-	-	-	-	99	127	159	196
75	-	-	-	-	-	-	110	141	176
Coefficient of pe	•	1	0.54	0.05	1 0.0-	4.10	5.00	0.01	
35	1.39	1.73	2.54	3.05	3.67	4.40	5.28	6.34	7.63
40	1.16	1.49	2.24	2.69	3.23	3.85	4.60	5.48	6.54
45	0.94	1.27	1.95	2.36	2.82	3.36	3.99	4.73	5.61
50	-	1.06	1.69	2.05	2.45	2.91	3.45	4.07	4.80
55	-	-	1.45	1.77	2.12	2.51	2.97	3.49	4.10
60	-	-	-	1.51	1.81	2.15	2.54	2.98	3.49
65	-	-	-	-	-	1.82	2.15	2.53	2.96
75	-	-	-	-	-	-	1.50	1.78	2.09

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

rionina poriormanos at to	0,	U-1		
Cooling capacity		5 061	W	
Power input		1 837	W	
Current consumption		3.44	Α	
Mass flow		124	kg/h	
C.O.P.		2.75		

to: Evaporating temperature at dew point

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

Pressure switch settings

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)

Tolerance according EN12900



tc: Condensing temperature at dew point



# Maneurop reciprocating compressor. MTZ028-4

# Performance data at 60 Hz, EN 12900 rating conditions

# **R404A**

Cond. temp. in		Evaporating temperature in °C (to)							
°C (tc)	-30	-25	-20	-15	-10	-5	0	5	10
Cooling capacity		0.045		1 4400	T = 000	7.000		10.557	10.074
30	1 909	2 615	3 466	4 482	5 680	7 080	8 699	10 557	12 671
35	1 696	2 371	3 179	4 140	5 272	6 592	8 121	9 876	11 876
40	1 472	2 110	2 870	3 770	4 829	6 065	7 497	9 143	11 022
45	1 241	1 836	2 541	3 375	4 355	5 500	6 830	8 361	10 113
50	1 006	1 552	2 196	2 957	3 853	4 901	6 122	7 533	9 152
55	-	1 261	1 838	2 520	3 325	4 271	5 377	6 661	8 142
60	-	965	1 470	2 067	2 776	3 613	4 598	5 749	7 085
Power input in W	1								
30	1 416	1 621	1 805	1 967	2 106	2 224	2 319	2 392	2 442
35	1 434	1 666	1 875	2 063	2 229	2 373	2 495	2 593	2 669
40	1 437	1 697	1 935	2 152	2 346	2 518	2 668	2 795	2 899
45	1 421	1 712	1 981	2 228	2 453	2 656	2 836	2 994	3 128
50	1 384	1 708	2 010	2 290	2 548	2 783	2 996	3 186	3 353
55	-	1 681	2 018	2 334	2 627	2 897	3 145	3 370	3 571
60	-	1 628	2 003	2 356	2 686	2 993	3 278	3 540	3 779
Current consum				I	1				
30	2.88	3.04	3.22	3.39	3.56	3.72	3.86	3.97	4.06
35	2.92	3.11	3.31	3.50	3.69	3.87	4.03	4.16	4.26
40	2.93	3.15	3.38	3.61	3.83	4.03	4.22	4.37	4.49
45	2.90	3.17	3.44	3.70	3.96	4.20	4.41	4.60	4.75
50	2.84	3.16	3.47	3.78	4.08	4.35	4.61	4.83	5.02
55	-	3.10	3.47	3.83	4.18	4.50	4.80	5.07	5.30
60	-	3.01	3.43	3.85	4.26	4.64	4.99	5.31	5.59
Mass flow in kg/l	h								
30	61	81	105	132	163	199	239	285	336
35	58	79	103	130	162	197	238	283	334
40	55	76	100	128	159	195	235	280	331
45	51	72	97	124	156	191	231	276	327
50	46	68	92	120	151	187	227	271	321
55	-	62	87	114	146	181	221	265	314
60	-	55	80	108	139	174	213	257	306
Coefficient of per	*	1	1.02	2.20	2.70	2.10	2.75	4.44	F 10
30	1.35	1.61	1.92	2.28	2.70	3.18	3.75	4.41	5.19
35	1.18	1.42	1.70	2.01	2.36	2.78	3.26	3.81	4.45
40	1.02	1.24	1.48	1.75	2.06	2.41	2.81	3.27	3.80
45	0.87	1.07	1.28	1.51	1.77	2.07	2.41	2.79	3.23
50	0.73	0.91	1.09	1.29	1.51	1.76	2.04	2.36	2.73
55	-	0.75	0.91	1.08	1.27	1.47	1.71	1.98	2.28
60	-	0.59	0.73	0.88	1.03	1.21	1.40	1.62	1.87

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

Cooling capacity	4 355	W
Power input	2 453	W
Current consumption	3.96	Α
Mass flow	156	kg/h
C.O.P.	1.77	

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

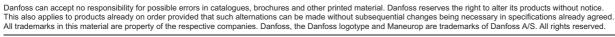
Rating conditions : Superheat = 10 K , Subcooling = 0 K

Pressure switch settings

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

Sound power data

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







# Maneurop reciprocating compressor. MTZ028-4

# Performance data at 60 Hz, ARI rating conditions

# **R404A**

Cond. temp. in				Evapora	ating temperature	in °C (to)			
°C (tc)	-30	-25	-20	-15	-10	-5	0	5	10
Cooling capacit		T	T	T		T ====	1	T	
30	2 125	2 903	3 838	4 950	6 260	7 785	9 546	11 562	13 852
35	1 908	2 659	3 555	4 616	5 863	7 313	8 987	10 905	13 086
40	1 678	2 397	3 248	4 252	5 430	6 799	8 382	10 195	12 261
45	1 439	2 119	2 919	3 861	4 964	6 248	7 732	9 437	11 383
50	1 191	1 828	2 573	3 447	4 470	5 663	7 045	8 636	10 457
55	-	1 527	2 212	3 013	3 952	5 050	6 325	7 799	9 492
60	-	1 220	1 841	2 566	3 418	4 417	5 585	6 940	8 505
Power input in \	w								
30	1 416	1 621	1 805	1 967	2 106	2 224	2 319	2 392	2 442
35	1 434	1 666	1 875	2 063	2 229	2 373	2 495	2 593	2 669
40	1 437	1 697	1 935	2 152	2 346	2 518	2 668	2 795	2 899
45	1 421	1 712	1 981	2 228	2 453	2 656	2 836	2 994	3 128
50	1 384	1 708	2 010	2 290	2 548	2 783	2 996	3 186	3 353
55	-	1 681	2 018	2 334	2 627	2 897	3 145	3 370	3 571
60	-	1 628	2 003	2 356	2 686	2 993	3 278	3 540	3 779
Current consum	nption in A	T	T		1	T		T	
30	2.88	3.04	3.22	3.39	3.56	3.72	3.86	3.97	4.06
35	2.92	3.11	3.31	3.50	3.69	3.87	4.03	4.16	4.26
40	2.93	3.15	3.38	3.61	3.83	4.03	4.22	4.37	4.49
45	2.90	3.17	3.44	3.70	3.96	4.20	4.41	4.60	4.75
50	2.84	3.16	3.47	3.78	4.08	4.35	4.61	4.83	5.02
55	-	3.10	3.47	3.83	4.18	4.50	4.80	5.07	5.30
60	-	3.01	3.43	3.85	4.26	4.64	4.99	5.31	5.59
Mass flow in kg	/h								
30	60	81	104	131	162	198	238	283	334
35	58	79	102	130	161	196	236	281	332
40	54	76	100	127	158	194	234	279	329
45	50	72	96	124	155	190	230	275	325
50	45	67	92	119	150	186	225	270	319
55	-	62	86	114	145	180	219	263	312
60	-	55	80	107	138	173	212	255	304
Coefficient of p	erformance (C.C	).P.)							
30	1.50	1.79	2.13	2.52	2.97	3.50	4.12	4.83	5.67
	1.33	1.60	1.90	2.24	2.63	3.08	3.60	4.21	4.90
35			1.68	1.98	2.31	2.70	3.14	3.65	4.23
35 40	1,17	1.41							
40	1.17 1.01	1.41 1.24			2.02	2.35	2.73	3.15	3.64
40 45	1.01	1.24	1.47	1.73	2.02 1.75	2.35 2.03	2.73 2.35	3.15 2.71	1
40					2.02 1.75 1.50	2.35 2.03 1.74	2.73 2.35 2.01	3.15 2.71 2.31	3.64 3.12 2.66

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

Cooling capacity	4 964	W
Power input	2 453	W
Current consumption	3.96	Α
Mass flow	155	kg/h
C.O.P.	2.02	

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

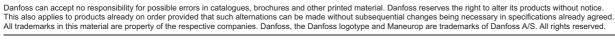
Rating conditions : Superheat = 11.1 K , Subcooling = 8.3 K

Pressure switch settings

Maximum HP switch setting	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	73	dB(A)
With accoustic hood	66	dB(A)







# Maneurop reciprocating compressor. MTZ028-4

# Performance data at 60 Hz, EN 12900 rating conditions

**R407A** 

Cond. temp. in		Г			ting temperature		Г		
°C (tc)	-30	-25	-20	-15	-10	-5	0	5	10
cooling capacity	y in W								
30	1 216	1 903	2 754	3 790	5 035	6 510	8 239	10 244	12 546
35	1 014	1 664	2 465	3 439	4 610	5 999	7 629	9 522	11 701
40	813	1 425	2 175	3 087	4 183	5 484	7 014	8 796	10 850
45	616	1 188	1 888	2 736	3 755	4 969	6 398	8 066	9 995
50	-	957	1 604	2 388	3 330	4 454	5 782	7 336	9 139
55	-	-	1 328	2 046	2 910	3 944	5 169	6 608	8 283
60	-	-	-	1 712	2 498	3 440	4 561	5 884	7 431
Power input in V	v								
30	998	1 221	1 428	1 616	1 782	1 925	2 042	2 131	2 190
35	975	1 222	1 454	1 667	1 861	2 031	2 177	2 296	2 386
40	938	1 211	1 470	1 711	1 933	2 134	2 310	2 460	2 582
45	889	1 190	1 477	1 748	2 000	2 232	2 441	2 625	2 781
50	-	1 158	1 475	1 778	2 062	2 327	2 570	2 789	2 981
55	-	-	1 465	1 801	2 119	2 420	2 699	2 954	3 185
60	-	-	-	1 817	2 172	2 509	2 826	3 121	3 390
Current consum	ption in A								
30	2.86	3.04	3.22	3.41	3.60	3.76	3.90	3.99	4.04
35	2.87	3.04	3.24	3.44	3.64	3.83	3.99	4.11	4.19
40	2.86	3.05	3.26	3.49	3.71	3.93	4.12	4.28	4.39
45	2.83	3.04	3.27	3.53	3.79	4.04	4.27	4.48	4.64
50	-	3.00	3.27	3.56	3.86	4.16	4.44	4.70	4.92
55	-	-	3.22	3.56	3.91	4.26	4.60	4.92	5.21
60	-	-	-	3.52	3.93	4.34	4.75	5.14	5.50
Mass flow in kg/	'h								
30	29	44	63	85	111	141	176	216	261
35	25	41	59	81	107	137	171	210	255
40	22	37	55	77	102	132	166	204	248
45	17	33	51	72	98	127	160	198	242
50	-	28	46	68	92	121	154	191	234
55	-	-	41	62	87	115	147	184	226
60	-	-	-	57	81	108	140	177	218
Coefficient of pe	erformance (C.C	).P.)							
30	1.22	1.56	1.93	2.35	2.82	3.38	4.03	4.81	5.73
35	1.04	1.36	1.70	2.06	2.48	2.95	3.50	4.15	4.90
40	0.87	1.18	1.48	1.80	2.16	2.57	3.04	3.57	4.20
45	0.69	1.00	1.28	1.57	1.88	2.23	2.62	3.07	3.59
50	-	0.83	1.09	1.34	1.61	1.91	2.25	2.63	3.07
		-	0.91	1.14	1.37	1.63	1.92	2.24	2.60
55	-	-							

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

Cooling capacity	3 755	W
Power input	2 000	W
Current consumption	3.79	Α
Mass flow	98	kg/h
C.O.P.	1.88	

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

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

Pressure switch settings

			_
Maximum HP switch setting	25.8	bar(g)	٦
Minimum LP switch setting	0.9	bar(g)	
LP pump down setting	1.2	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 60 Hz, ARI rating conditions

**R407A** 

Cond. temp. in				Evapora	iting temperature	in °C (to)			
°C (tc)	-30	-25	-20	-15	-10	-5	0	5	10
Cooling capacit		2.055	2.070	4.000	F 445	0.004	0.040	40.070	40.400
30	1 316	2 055	2 970	4 082	5 415	6 994	8 840	10 979	13 432
35	1 103	1 807	2 673	3 724	4 984	6 477	8 227	10 255	12 587
40	890	1 558	2 374	3 364	4 550	5 957	7 607	9 526	11 735
45	680	1 310	2 076	3 003	4 115	5 434	6 986	8 793	10 880
50	-	1 065	1 781	2 645	3 681	4 913	6 365	8 061	10 025
55	-	-	1 491	2 291	3 251	4 396	5 748	7 333	9 173
60	-	-	-	1 945	2 829	3 886	5 139	6 612	8 331
Power input in V		1	ı	ı	1	T			
30	998	1 221	1 428	1 616	1 782	1 925	2 042	2 131	2 190
35	975	1 222	1 454	1 667	1 861	2 031	2 177	2 296	2 386
40	938	1 211	1 470	1 711	1 933	2 134	2 310	2 460	2 582
45	889	1 190	1 477	1 748	2 000	2 232	2 441	2 625	2 781
50	-	1 158	1 475	1 778	2 062	2 327	2 570	2 789	2 981
55	-	-	1 465	1 801	2 119	2 420	2 699	2 954	3 185
60	-	-	-	1 817	2 172	2 509	2 826	3 121	3 390
Current consum	nption in A								
30	2.86	3.04	3.22	3.41	3.60	3.76	3.90	3.99	4.04
35	2.87	3.04	3.24	3.44	3.64	3.83	3.99	4.11	4.19
40	2.86	3.05	3.26	3.49	3.71	3.93	4.12	4.28	4.39
45	2.83	3.04	3.27	3.53	3.79	4.04	4.27	4.48	4.64
50	-	3.00	3.27	3.56	3.86	4.16	4.44	4.70	4.92
55	-	-	3.22	3.56	3.91	4.26	4.60	4.92	5.21
60	-	-	-	3.52	3.93	4.34	4.75	5.14	5.50
Mass flow in kg	/h								
30	29	44	63	85	111	140	175	214	259
35	25	41	59	81	106	136	170	209	253
40	21	37	55	77	102	131	165	203	247
45	17	33	51	72	97	126	159	197	240
50	-	28	46	67	92	120	153	190	233
55	-	-	41	62	86	114	146	183	225
60	-	-	-	56	80	108	139	176	217
Coefficient of pe	erformance (C.O	).P.)							
30	1.32	1.68	2.08	2.53	3.04	3.63	4.33	5.15	6.13
30	1.13	1.48	1.84	2.23	2.68	3.19	3.78	4.47	5.28
35	1.10			1.97	2.35	2.79	3.29	3.87	4.54
	0.95	1.29	1.62	1.97					
35 40	0.95	1.29 1.10	1.62 1.41						3.91
35 40 45	0.95 0.76	1.10	1.41	1.72	2.06	2.43	2.86	3.35	3.91 3.36
35 40	0.95								3.91 3.36 2.88

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

Cooling capacity	4 115	W
Power input	2 000	W
Current consumption	3.79	Α
Mass flow	97	kg/h
C.O.P.	2.06	

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	25.8	bar(g)	٦
Minimum LP switch setting	0.9	bar(g)	
LP pump down setting	1.2	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 60 Hz, EN 12900 rating conditions

**R407F** 

Cond. temp. in				Evaporating temperature in °C (to)					
°C (tc)	-30	-25	-20	-15	-10	-5	0	5	10
									<u> </u>
Cooling capacity		1	T	1		1		T	T
30	-	2 124	3 090	4 259	5 657	7 309	9 239	11 474	14 038
35	-	1 779	2 662	3 730	5 011	6 528	8 306	10 372	12 751
40	-	1 487	2 299	3 281	4 456	5 851	7 491	9 402	11 607
45	-	1 239	1 993	2 900	3 984	5 270	6 784	8 552	10 598
50	-	-	1 733	2 578	3 583	4 774	6 175	7 813	9 712
55	-	-	-	2 305	3 244	4 352	5 654	7 174	8 939
60	-	-	-	-	-	-	-	-	-
Power input in W									
30	_	1 306	1 523	1 725	1 900	2 039	2 130	2 164	2 131
35	_	1 299	1 537	1 765	1 975	2 154	2 293	2 381	2 408
40	_	1 295	1 550	1 802	2 041	2 258	2 440	2 579	2 664
45	_	1 302	1 570	1 842	2 108	2 357	2 581	2 767	2 905
50	_	-	1 604	1 892	2 182	2 461	2 721	2 951	3 140
55	_	-	-	1 962	2 271	2 577	2 870	3 140	3 376
60	_	_	_	-	-	-	-	-	-
		-1	l	ı	l	-1	1	l	ı
Current consump	tion in A								
30	-	3.04	3.25	3.45	3.65	3.82	3.96	4.03	4.03
35	-	3.09	3.30	3.52	3.73	3.93	4.09	4.20	4.24
40	-	3.10	3.33	3.57	3.81	4.04	4.24	4.40	4.49
45	-	3.10	3.35	3.62	3.90	4.17	4.41	4.62	4.77
50	-	-	3.36	3.67	3.99	4.31	4.61	4.88	5.10
55	-	-	-	3.72	4.09	4.47	4.84	5.18	5.47
60	-	-	-	-	-	-	-	-	-
		•	•			•	•	•	•
Mass flow in kg/h					1				
30	-	44	63	85	112	142	178	218	264
35	-	39	57	78	104	133	167	206	250
40	-	34	51	72	97	125	158	195	238
45	-	30	47	67	91	119	150	187	228
50	-	-	43	63	87	114	145	180	221
55	-	-	-	61	84	110	141	176	216
60	-	-	-	-	-	-	-	-	-
0 60 - 1 - 1 - 1	15								
Coefficient of per	•	1	2.00	2.47	2.00	2.50	4.04	F 00	0.50
30	-	1.63	2.03	2.47	2.98	3.59	4.34	5.30	6.59
35	-	1.37	1.73	2.11	2.54	3.03	3.62	4.36	5.29
40	-	1.15	1.48	1.82	2.18	2.59	3.07	3.65	4.36
45	-	0.95	1.27	1.57	1.89	2.24	2.63	3.09	3.65
50	-	-	1.08	1.36	1.64	1.94	2.27	2.65	3.09
55	-	-	-	1.17	1.43	1.69	1.97	2.28	2.65
60	-	-	-	-	-	-	-	-	-

Nominal performance at to = -10 °C, tc = 45 °C	;
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Cooling capacity	3 984	W
Power input	2 108	W
Current consumption	3.90	Α
Mass flow	91	kg/h
C.O.P.	1.89	

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

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

Pressure switch settings

Maximum HP switch setting	24	bar(g)	
Minimum LP switch setting	1	bar(g)	
LP pump down setting	1.26	bar(q)	

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 60 Hz, ARI rating conditions

**R407F** 

Cond. temp. in		T	T		ting temperature		T	T	ı
°C (tc)	-30	-25	-20	-15	-10	-5	0	5	10
Cooling capacity	in W								
30	-	2 276	3 309	4 556	6 045	7 803	9 855	12 228	14 948
35	-	1 916	2 863	4 008	5 377	6 998	8 897	11 099	13 632
40	-	1 610	2 486	3 543	4 806	6 304	8 062	10 108	12 467
45	-	1 350	2 169	3 151	4 322	5 711	7 343	9 245	11 444
50	-	-	1 900	2 822	3 916	5 209	6 729	8 503	10 557
55	-	-	-	2 546	3 578	4 791	6 214	7 874	9 797
60	-	-	-	-	-	-	-	-	-
Power input in W	,								
30	_	1 306	1 523	1 725	1 900	2 039	2 130	2 164	2 131
35	-	1 299	1 537	1 765	1 975	2 154	2 293	2 381	2 408
40	-	1 295	1 550	1 802	2 041	2 258	2 440	2 579	2 664
45	-	1 302	1 570	1 842	2 108	2 357	2 581	2 767	2 905
50	-	-	1 604	1 892	2 182	2 461	2 721	2 951	3 140
55	-	-	-	1 962	2 271	2 577	2 870	3 140	3 376
60	-	-	-	-	-	-	-	-	-
Current consum	otion in A								
30	-	3.04	3.25	3.45	3.65	3.82	3.96	4.03	4.03
35	-	3.09	3.30	3.52	3.73	3.93	4.09	4.20	4.24
40	-	3.10	3.33	3.57	3.81	4.04	4.24	4.40	4.49
45	-	3.10	3.35	3.62	3.90	4.17	4.41	4.62	4.77
50	-	-	3.36	3.67	3.99	4.31	4.61	4.88	5.10
55	-	-	-	3.72	4.09	4.47	4.84	5.18	5.47
60	-	-	-	-	-	-	-	-	-
Mass flow in kg/h	1								
30	-	44	63	85	111	142	177	217	262
35	-	38	56	78	103	132	166	204	248
40	-	34	51	72	96	124	157	194	237
45	-	30	47	67	91	118	150	186	227
50	-	-	43	63	86	113	144	179	220
55	-	-	-	60	83	110	140	175	214
60	-	-	-	-	-	-	-	-	-
Coefficient of pe	rformance (C.0	O.P.)							
30	-	1.74	2.17	2.64	3.18	3.83	4.63	5.65	7.02
35	_	1.47	1.86	2.27	2.72	3.25	3.88	4.66	5.66
40	_	1.24	1.60	1.97	2.35	2.79	3.30	3.92	4.68
45	-	1.04	1.38	1.71	2.05	2.42	2.85	3.34	3.94
50	_	-	1.18	1.49	1.79	2.12	2.47	2.88	3.36
+	_	-	-	1.30	1.58	1.86	2.16	2.51	2.90
55									

Nominai	performance at to = -	-10 °C, tc = 45 °C
-		4.00

Cooling capacity	4 322	W
Power input	2 108	W
Current consumption	3.90	Α
Mass flow	91	kg/h
C.O.P.	2.05	

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

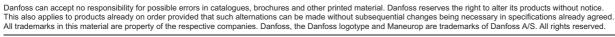
Rating conditions : Superheat = 11.1 K , Subcooling = 8.3 K

Pressure switch settings

Maximum HP switch setting	24	bar(g)	
Minimum LP switch setting	1	bar(g)	
LP pump down setting	1.26	bar(q)	

Sound power data

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







# Maneurop reciprocating compressor. MTZ028-4

# Performance data at 60 Hz, EN 12900 rating conditions

R134a

Cond. temp. in				Evapora	ting temperature	in °C (to)			
°C (tc)	-25	-20	-10	-5	0	5	10	15	20
Cooling consoits	. in 14/								
Cooling capacity 35	1 017	1 443	2 654	3 498	4 542	5 814	7 345	9 165	11 302
40	872	1 282	2 425	3 217	4 195	5 389	6 830	8 547	10 569
45	721	1 115	2 188	2 925	3 837	4 953	6 303	7 916	9 822
50	567	944	1 945	2 628	3 473	4 509	5 766	7 275	9 064
55	-	-	1 699	2 327	3 104	4 059	5 224	6 627	8 298
60		-	-	2 026	2 734	3 608	4 678	5 975	7 528
65	_	_	_	-	2 366	3 158	4 133	5 323	6 756
75	-	_	_	_	-	-	3 057	4 029	5 220
						1		1	
Power input in V				T	1	1		1	1
35	796	907	1 130	1 237	1 335	1 422	1 495	1 552	1 587
40	824	940	1 179	1 297	1 409	1 512	1 603	1 680	1 738
45	844	966	1 224	1 355	1 482	1 603	1 714	1 812	1 894
50	854	984	1 264	1 409	1 553	1 692	1 824	1 946	2 054
55	-	-	1 298	1 458	1 620	1 780	1 935	2 081	2 216
60	-	-	-	1 501	1 682	1 864	2 042	2 215	2 379
65	-	-	-	-	1 737	1 942	2 147	2 347	2 541
75	-	-	-	-	-	-	2 337	2 598	2 856
Current consum	ntion in A								
35	2.69	2.75	2.88	2.94	3.01	3.06	3.12	3.17	3.22
40	2.70	2.77	2.92	3.00	3.07	3.15	3.22	3.30	3.37
45	2.71	2.78	2.95	3.04	3.14	3.23	3.33	3.43	3.52
50	2.70	2.79	2.98	3.08	3.20	3.31	3.43	3.55	3.68
55	-	-	3.00	3.12	3.25	3.39	3.53	3.68	3.84
60	-	-	_	3.15	3.30	3.46	3.63	3.81	4.00
65	-	-	_	-	3.35	3.53	3.73	3.94	4.16
75	-	-	-	-	-	-	3.92	4.20	4.48
•		•	•		•	•	•	•	•
Mass flow in kg/					T	1		T	1
35	26	36	63	81	103	129	161	197	240
40	23	34	61	79	100	126	157	193	235
45	20	31	58	75	97	122	152	187	229
50	17	28	54	72	92	117	147	181	222
55	-	-	51	68	88	112	141	175	214
60	-	-	-	63	83	106	134	167	206
65	-	-	-	-	77	100	127	159	197
75	-	-	-	-	-	-	111	141	177
Coefficient of pe	rformance (C.O	.P.)							
35	1.28	1.59	2.35	2.83	3.40	4.09	4.91	5.91	7.12
40	1.06	1.36	2.06	2.48	2.98	3.56	4.26	5.09	6.08
45	0.85	1.15	1.79	2.16	2.59	3.09	3.68	4.37	5.18
50	0.66	0.96	1.54	1.86	2.24	2.66	3.16	3.74	4.41
55	-	-	1.31	1.60	1.92	2.28	2.70	3.18	3.74
60	-	-	-	1.35	1.63	1.94	2.29	2.70	3.16
65	-	-	-	-	1.36	1.63	1.93	2.27	2.66
75	-	-	_	-	-	-	1.31	1.55	1.83

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

Cooling capacity	4 509	W
Power input	1 692	W
Current consumption	3.31	Α
Mass flow	117	kg/h
C.O.P.	2.66	

to: Evaporating temperature at dew point

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

Pressure switch settings

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)

Tolerance according EN12900



tc: Condensing temperature at dew point



# Maneurop reciprocating compressor. MTZ028-4

# Performance data at 60 Hz, ARI rating conditions

R134a

Cond. temp. in				Evapora	iting temperature	in °C (to)			
°C (tc)	-25	-20	-10	-5	0	5	10	15	20
			•			•			
Cooling capacity	in W								
35	1 105	1 565	2 869	3 776	4 895	6 257	7 894	9 836	12 114
40	953	1 399	2 636	3 490	4 543	5 828	7 374	9 213	11 377
45	794	1 225	2 392	3 192	4 179	5 385	6 840	8 576	10 624
50	-	1 045	2 141	2 887	3 806	4 932	6 295	7 926	9 858
55	-	-	1 886	2 576	3 427	4 472	5 742	7 268	9 083
60	-	-	-	2 263	3 045	4 008	5 184	6 605	8 302
65	-	-	-	-	-	3 544	4 626	5 940	7 519
75	-	-	-	-	-	-	3 517	4 618	5 960
	_								
Power input in W						1			
35	796	907	1 130	1 237	1 335	1 422	1 495	1 552	1 587
40	824	940	1 179	1 297	1 409	1 512	1 603	1 680	1 738
45	844	966	1 224	1 355	1 482	1 603	1 714	1 812	1 894
50	-	984	1 264	1 409	1 553	1 692	1 824	1 946	2 054
55	-	-	1 298	1 458	1 620	1 780	1 935	2 081	2 216
60	-	-	-	1 501	1 682	1 864	2 042	2 215	2 379
65	-	-	-	-	-	1 942	2 147	2 347	2 541
75	-	-	-	-	-	-	2 337	2 598	2 856
Current consum	ntion in A								
35	2.69	2.75	2.88	2.94	3.01	3.06	3.12	3.17	3.22
40	2.70	2.77	2.92	3.00	3.07	3.15	3.22	3.30	3.37
45	2.71	2.78	2.95	3.04	3.14	3.23	3.33	3.43	3.52
50		2.79	2.98	3.08	3.20	3.31	3.43	3.55	3.68
55	-	-	3.00	3.12	3.25	3.39	3.53	3.68	3.84
60	-	_	-	3.15	3.30	3.46	3.63	3.81	4.00
65	-	_	_	-	-	3.53	3.73	3.94	4.16
75	-	_	_	_	-	-	3.92	4.20	4.48
			1			1			I
Mass flow in kg/l	1								
35	26	36	63	81	103	129	160	196	239
40	23	34	60	78	100	125	156	192	233
45	20	31	58	75	96	121	151	186	227
50	-	28	54	71	92	117	146	180	221
55	-	-	50	67	87	111	140	174	213
60	-	-	-	63	82	106	134	166	205
65	-	-	-	-	-	99	127	159	196
75	-	-	-	-	-	-	110	141	176
Coefficient of pe	•	1	0.54	0.05	1 0.0-	4.10	5.00	0.01	
35	1.39	1.73	2.54	3.05	3.67	4.40	5.28	6.34	7.63
40	1.16	1.49	2.24	2.69	3.23	3.85	4.60	5.48	6.54
45	0.94	1.27	1.95	2.36	2.82	3.36	3.99	4.73	5.61
50	-	1.06	1.69	2.05	2.45	2.91	3.45	4.07	4.80
55	-	-	1.45	1.77	2.12	2.51	2.97	3.49	4.10
60	-	-	-	1.51	1.81	2.15	2.54	2.98	3.49
65	-	-	-	-	-	1.82	2.15	2.53	2.96
75	-	-	-	-	-	-	1.50	1.78	2.09

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

rionina poriormanos at to	0,	U-1		
Cooling capacity		5 061	W	
Power input		1 837	W	
Current consumption		3.44	Α	
Mass flow		124	kg/h	
C.O.P.		2.75		

to: Evaporating temperature at dew point

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

Pressure switch settings

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)

Tolerance according EN12900



tc: Condensing temperature at dew point



# Maneurop reciprocating compressor. MTZ028-4

# Performance data at 60 Hz, EN 12900 rating conditions

**R407C** 

Cond. temp. in				Evapora	ting temperature	in °C (to)			
°C (tc)	-15	-10	-5	0	5	10	15		
		•	•	•					l .
Cooling capacit	ty in W								
35	3 415	4 506	5 837	7 445	9 365	11 632	14 282	-	-
40	3 160	4 180	5 416	6 903	8 678	10 775	13 229	-	-
45	2 901	3 856	5 003	6 377	8 013	9 946	12 211	-	-
50	-	3 530	4 593	5 860	7 363	9 139	11 222	-	-
55	-	-	4 182	5 347	6 725	8 349	10 256	-	-
60	-	-	-	4 833	6 090	7 570	9 306	-	-
65	-	-	-	4 313	5 455	6 794	8 365	-	-
Power input in	w								
35	1 615	1 774	1 913	2 032	2 133	2 219	2 290	-	-
40	1 690	1 869	2 028	2 169	2 293	2 403	2 500	-	-
45	1 766	1 963	2 141	2 303	2 450	2 583	2 705	-	-
50	-	2 058	2 255	2 437	2 606	2 763	2 909	-	-
55	-	-	2 373	2 575	2 764	2 943	3 113	-	-
60	-	-	-	2 717	2 927	3 128	3 320	-	-
65	-	-	-	2 868	3 097	3 318	3 533	-	-
Current consur	nption in A								
35	3.02	3.17	3.32	3.46	3.58	3.70	3.79	-	-
40	3.10	3.28	3.45	3.61	3.76	3.90	4.01	-	-
45	3.17	3.38	3.58	3.77	3.95	4.11	4.24	-	-
50	-	3.47	3.71	3.93	4.14	4.33	4.49	-	-
55	-	-	3.84	4.09	4.34	4.56	4.75	-	-
60	-	-	-	4.26	4.54	4.80	5.03	-	-
65	-	-	-	4.43	4.75	5.04	5.31	-	-
Mass flow in kg	<u>ı/h</u>								
35	74	96	123	154	191	233	283	-	-
40	72	94	119	150	185	227	274	-	-
45	70	91	116	146	180	220	266	-	-
50	-	88	113	141	175	213	258	-	-
55	-	-	109	137	170	207	250	-	-
60	-	-	-	133	164	200	242	-	-
65	-	-	-	128	159	194	234	-	-
	erformance (C.O				1	1	, ,		1
35	2.11	2.54	3.05	3.66	4.39	5.24	6.24	-	-
40	1.87	2.24	2.67	3.18	3.78	4.48	5.29	-	-
45	1.64	1.96	2.34	2.77	3.27	3.85	4.51	-	-
50	-	1.72	2.04	2.40	2.83	3.31	3.86	-	-
55	-	-	1.76	2.08	2.43	2.84	3.29	-	-
60	-	-	-	1.78	2.08	2.42	2.80	-	-
65	_	_	_	1.50	1.76	2.05	2.37	_	_

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

Cooling capacity	7 363	W
Power input	2 606	W
Current consumption	4.14	Α
Mass flow	175	kg/h
C.O.P.	2.83	

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

Rating conditions : Superheat = 10 K , Subcooling = 0 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	76	dB(A)
With accoustic hood	69	dB(A)

Tolerance according EN12900





# Maneurop reciprocating compressor. MTZ028-4

# Performance data at 60 Hz, ARI rating conditions

**R407C** 

Cond. temp. in				Evapora	ting temperature	in °C (to)			
°C (tc)	-15	-10	-5	0	5	10	15		
		•	l			1		I.	I
cooling capacity	in W					_			
35	3 676	4 844	6 268	7 985	10 034	12 449	15 270	-	-
40	3 420	4 517	5 845	7 442	9 343	11 588	14 212	-	-
45	3 160	4 193	5 432	6 914	8 676	10 756	13 190	-	-
50	-	3 867	5 023	6 398	8 027	9 949	12 199	-	-
55	-	-	4 613	5 887	7 390	9 161	11 235	-	-
60	-	-	-	5 376	6 760	8 386	10 291	-	-
65	-	-	-	4 860	6 132	7 620	9 362	-	-
Power input in W	,								
35	1 615	1 774	1 913	2 032	2 133	2 219	2 290	_	_
40	1 690	1 869	2 028	2 169	2 293	2 403	2 500	-	-
45	1 766	1 963	2 141	2 303	2 450	2 583	2 705	-	-
50	-	2 058	2 255	2 437	2 606	2 763	2 909	-	-
55	-	-	2 373	2 575	2 764	2 943	3 113	-	-
60	-	-	-	2 717	2 927	3 128	3 320	-	-
65	-	-	-	2 868	3 097	3 318	3 533	-	-
•									•
urrent consump	otion in A				1				T
35	3.02	3.17	3.32	3.46	3.58	3.70	3.79	-	-
40	3.10	3.28	3.45	3.61	3.76	3.90	4.01	-	-
45	3.17	3.38	3.58	3.77	3.95	4.11	4.24	-	-
50	-	3.47	3.71	3.93	4.14	4.33	4.49	-	-
55	-	-	3.84	4.09	4.34	4.56	4.75	-	-
60	-	-	-	4.26	4.54	4.80	5.03	-	-
65	-	-	-	4.43	4.75	5.04	5.31	-	-
/lass flow in kg/h									
35	74	96	122	153	189	232	281	-	_
40	72	93	119	149	184	225	273	-	_
45	70	91	116	145	179	219	264	-	_
50	-	88	112	141	174	212	256	-	_
55	-	-	109	137	169	206	248	-	-
60	-	_	-	132	163	199	240	-	_
65	-	-	-	128	158	193	233	-	-
<u></u>			•			•	•	•	•
Coefficient of per		1	1	T	1	1	1	T	ı
35	2.28	2.73	3.28	3.93	4.70	5.61	6.67	-	-
40	2.02	2.42	2.88	3.43	4.07	4.82	5.69	-	-
45	1.79	2.14	2.54	3.00	3.54	4.16	4.88	-	-
50	-	1.88	2.23	2.62	3.08	3.60	4.19	-	-
55	-	-	1.94	2.29	2.67	3.11	3.61	-	-
60	-	-	-	1.98	2.31	2.68	3.10	-	-
65	_	-	-	1.69	1.98	2.30	2.65	_	_

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

Cooling capacity	8 218	W
Power input	2 824	W
Current consumption	4.41	Α
Mass flow	185	kg/h
C.O.P.	2.91	

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

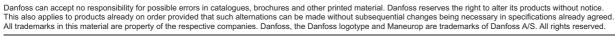
Rating conditions : Superheat = 11.1 K , Subcooling = 8.3 K

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(q)	

Sound power data

Sound power level	76	dB(A)
With accoustic hood	69	dB(A)







# Maneurop reciprocating compressor. MTZ028-4

# Performance data at 60 Hz, EN 12900 rating conditions, Suction temp. = 20 °C

**R448A** 

Cond. temp. in		·	1	Evapora	ting temperature	in °C (to)	1	•	
°C (tc)	-30	-25	-20	-15	-10	-5	0	5	10
Cooling capacity i	n W								
10	-	3 051	4 052	5 325	6 904	-	-	-	-
20	-	2 625	3 487	4 581	5 943	7 607	9 612	-	-
30	-	2 250	2 988	3 919	5 079	6 501	8 220	10 276	12 711
40	-	-	2 531	3 316	4 289	5 485	6 935	8 676	10 746
50	-	-	-	2 745	3 549	4 534	5 732	7 176	8 900
60	-	-	-	-	2 832	3 623	4 586	5 750	7 146
Power input in W									
10	-	1 023	1 095	1 146	1 170	-	_	_	_
20	-	1 184	1 287	1 375	1 443	1 487	1 502	-	-
30	-	1 311	1 449	1 577	1 691	1 787	1 861	1 907	1 922
40	-	-	1 583	1 755	1 918	2 069	2 203	2 317	2 404
50	-	-	-	1 912	2 127	2 336	2 534	2 717	2 880
60	-	-	-	-	2 322	2 591	2 856	3 111	3 353
Current consumpt		2.24	2.44	2.47	2.50	T	1	T	ı
10	-	2.34	3.04	2.47	2.50	- 2.00	- 2.24	-	-
20 30	-	2.96 3.30	3.40	3.12 3.51	3.19 3.62	3.23 3.72	3.21 3.78	3.79	3.74
40		3.30	3.59	3.74	3.90	4.06	4.21	4.32	4.38
50		-	-	3.74	4.12	4.36	4.59	4.80	4.98
60		-	-	3.90	4.12	4.69	5.02	5.35	5.65
00		1	<u> </u>		4.50	4.09	3.02	3.33	3.03
Mass flow in kg/h		_							
10	-	50	67	88	115	-	-	-	-
20	-	46	62	81	106	136	175	-	-
30	-	43	57	75	98	126	161	205	258
40	-	-	53	70	91	117	149	189	238
50	-	-	-	64	84	108	138	175	220
60	-	-	-	-	76	99	127	161	203
Coefficient of perf	ormance (C.0	D.P.)	·			<del>,</del>	<del>,</del>	<del>,</del>	
10	-	2.98	3.70	4.65	5.90	-	-	-	-
20	-	2.22	2.71	3.33	4.12	5.12	6.40	-	-
30	-	1.72	2.06	2.49	3.00	3.64	4.42	5.39	6.61
40	-	-	1.60	1.89	2.24	2.65	3.15	3.75	4.47
50	-	-	-	1.44	1.67	1.94	2.26	2.64	3.09
		1	-	-	1.22	1.40	1.61	1.85	2.13

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

3 915	W
2 024	W
4.01	Α
87	kg/h
1.93	
	2 024 4.01 87

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

Rating conditions : Suction gas temp. = 20  $^{\circ}\text{C}$  , Subcooling = 0 K

Pressure switch settings

Max	imum HP switch setting	27.7	bar(g)
Mini	mum LP switch setting	1	bar(g)
LPp	oump down setting	1.3	bar(g)

Sound power data

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





# Maneurop reciprocating compressor. MTZ028-4

# Performance data at 60 Hz, EN 12900 rating conditions, Superheat = 10 K

**R448A** 

Cond. temp. in	Evaporating temperature in °C (to)									
°C (tc)	-30	-25	-20	-15	-10	-5	0	5	10	
Cooling capacity	y in W								,	
10	2 296	3 066	4 075	5 357	6 949	-	-	-	-	
20	1 945	2 608	3 472	4 571	5 941	7 616	9 630	-	-	
30	1 631	2 204	2 940	3 872	5 037	6 468	8 201	10 270	12 711	
40	1 330	1 829	2 452	3 234	4 210	5 414	6 882	8 648	10 746	
50	-	1 458	1 985	2 633	3 436	4 430	5 648	7 127	8 900	
60	-	-	1 513	2 043	2 690	3 489	4 475	5 682	7 146	
Power input in V	v									
10	934	1 023	1 095	1 146	1 170	-	_	-	_	
20	1 069	1 184	1 287	1 375	1 443	1 487	1 502	-	-	
30	1 167	1 311	1 449	1 577	1 691	1 787	1 861	1 907	1 922	
40	1 234	1 408	1 583	1 755	1 918	2 069	2 203	2 317	2 404	
50	-	1 479	1 694	1 912	2 127	2 336	2 534	2 717	2 880	
60	-	-	1 787	2 052	2 322	2 591	2 856	3 111	3 353	
1					1	1		•	1	
Current consum	ption in A									
10	2.27	2.34	2.41	2.47	2.50	-	-	-	-	
20	2.89	2.96	3.04	3.12	3.19	3.23	3.21	-	-	
30	3.24	3.30	3.40	3.51	3.62	3.72	3.78	3.79	3.74	
40	3.41	3.47	3.59	3.74	3.90	4.06	4.21	4.32	4.38	
50	-	3.57	3.71	3.90	4.12	4.36	4.59	4.80	4.98	
60	-	-	3.86	4.09	4.38	4.69	5.02	5.35	5.65	
Mass flow in kg/	h									
10	44	58	76	98	126	-	_	_	_	
20	41	54	70	91	116	147	184	_	_	
30	37	50	65	84	107	136	170	210	258	
40	34	46	60	78	100	126	157	194	238	
50	-	42	55	72	92	116	145	180	220	
60	-	-	49	65	84	106	133	165	203	
		ı				1	1			
Coefficient of pe	erformance (C.C	D.P.)		1			T		1	
10	2.46	3.00	3.72	4.68	5.94	-	-	-	-	
20	1.82	2.20	2.70	3.32	4.12	5.12	6.41	-	-	
30	1.40	1.68	2.03	2.46	2.98	3.62	4.41	5.39	6.61	
40	1.08	1.30	1.55	1.84	2.20	2.62	3.12	3.73	4.47	
50	-	0.99	1.17	1.38	1.62	1.90	2.23	2.62	3.09	
60	-	-	0.85	1.00	1.16	1.35	1.57	1.83	2.13	
Nominal perforn	nance at to = -1	0 °C, tc = 45 °C			_	Pressure switch	settings			

Cooling capacity

Current consumption

Power input

Mass flow

to: Evaporating temperature at dew point tc: Condensing temperature at dew point

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

3 818

2 024

4.01

96 1.89 W

W

Max	imum HP switch setting	27.7	bar(g)
Mini	mum LP switch setting	1	bar(g)
LPp	oump down setting	1.3	bar(g)

Sound power data

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





# Maneurop reciprocating compressor. MTZ028-4

# Performance data at 60 Hz, EN 12900 rating conditions, Suction temp. = 20 °C

**R449A** 

Cond. temp. in	Evaporating temperature in °C (to)									
°C (tc)	-30	-25	-20	-15	-10	-5	0	5	10	
Cooling capacity i	n W									
10	-	3 057	4 058	5 331	6 910	-	-	-	-	
20	-	2 631	3 493	4 588	5 949	7 613	9 617		-	
30	-	2 256	2 994	3 926	5 086	6 507	8 225	10 279	12 711	
40	-	-	2 537	3 323	4 296	5 491	6 940	8 679	10 746	
50	-	-	-	2 752	3 556	4 540	5 737	7 179	8 900	
60	-	-	-	-	2 839	3 630	4 591	5 753	7 146	
Power input in W										
10	-	1 023	1 095	1 146	1 170	-	-	-	-	
20	-	1 184	1 287	1 375	1 443	1 487	1 502	-	-	
30	-	1 311	1 449	1 577	1 691	1 787	1 861	1 907	1 922	
40	-	-	1 583	1 755	1 918	2 069	2 203	2 317	2 404	
50	-	-	-	1 912	2 127	2 336	2 534	2 717	2 880	
60	-	-	-	-	2 322	2 591	2 856	3 111	3 353	
Current consump	tion in A	2.34	2.41	2.47	2.50	-	_	-	_	
20		2.96	3.04	3.12	3.19	3.23	3.21	-	_	
30		3.30	3.40	3.51	3.62	3.72	3.78	3.79	3.74	
40		-	3.59	3.74	3.90	4.06	4.21	4.32	4.38	
50		-	-	3.90	4.12	4.36	4.59	4.81	4.98	
60		_	_	-	4.38	4.69	5.02	5.35	5.65	
00				ı	1.00	1.00	0.02	0.00	0.00	
Mass flow in kg/h										
10	-	51	68	90	117	-	-	-	-	
20	-	47	63	83	108	139	178	-	-	
30	-	44	58	77	100	129	164	208	262	
40	-	-	54	71	93	119	152	193	243	
50	-	-	-	66	86	110	141	179	225	
60	-	-	-	-	78	101	130	165	207	
Coefficient of perf	ormance (C.0	D.P.)			1	1	1		1	
10	-	2.99	3.71	4.65	5.91	-	-	-	-	
20	-	2.22	2.71	3.34	4.12	5.12	6.40	-	-	
30	-	1.72	2.07	2.49	3.01	3.64	4.42	5.39	6.61	
40	-	-	1.60	1.89	2.24	2.65	3.15	3.75	4.47	
50	-	-	-	1.44	1.67	1.94	2.26	2.64	3.09	
60	-	-	-	-	1.22	1.40	1.61	1.85	2.13	

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

Cooling capacity	3 922	W
Power input	2 024	W
Current consumption	4.01	Α
Mass flow	89	kg/h
C.O.P.	1.94	

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

Rating conditions : Suction gas temp. = 20  $^{\circ}\text{C}$  , Subcooling = 0 K

Pressure switch settings

27.7	bar(g)
1	bar(g)
1.3	bar(g)
	1

Sound power data

Sound power level	74	dB(A)
With accoustic hood	67	dB(A)





# Maneurop reciprocating compressor. MTZ028-4

# Performance data at 60 Hz, EN 12900 rating conditions, Superheat = 10 K

**R449A** 

Cond. temp. in				Evapora	ting temperature	in °C (to)			
°C (tc)	-30	-25	-20	-15	-10	-5	0	5	10
Cooling capacity	/ in W			•					
10	2 296	3 066	4 075	5 357	6 949	-	-	-	-
20	1 945	2 608	3 472	4 571	5 941	7 616	9 630	-	-
30	1 631	2 204	2 940	3 872	5 037	6 468	8 201	10 270	12 711
40	1 330	1 829	2 452	3 234	4 210	5 414	6 882	8 648	10 746
50	-	1 458	1 985	2 633	3 436	4 430	5 648	7 127	8 900
60	-	-	1 513	2 043	2 690	3 489	4 475	5 682	7 146
Power input in V	v								
10	934	1 023	1 095	1 146	1 170	-	-	-	-
20	1 069	1 184	1 287	1 375	1 443	1 487	1 502	_	-
30	1 167	1 311	1 449	1 577	1 691	1 787	1 861	1 907	1 922
40	1 234	1 408	1 583	1 755	1 918	2 069	2 203	2 317	2 404
50	-	1 479	1 694	1 912	2 127	2 336	2 534	2 717	2 880
60	-	-	1 787	2 052	2 322	2 591	2 856	3 111	3 353
			· L	•	•	1		•	
Current consum	ption in A			_	•				
10	2.27	2.34	2.41	2.47	2.50	-	-	-	-
20	2.89	2.96	3.04	3.12	3.19	3.23	3.21	-	-
30	3.24	3.30	3.40	3.51	3.62	3.72	3.78	3.79	3.74
40	3.41	3.47	3.59	3.74	3.90	4.06	4.21	4.32	4.38
50	-	3.57	3.71	3.90	4.12	4.36	4.59	4.81	4.98
60	-	-	3.86	4.09	4.38	4.69	5.02	5.35	5.65
Mana flam in land	L								
Mass flow in kg/	45	60	78	101	129	_	-	_	_
20	42	55	70	93	118	149	187	-	
30	38	51	67	86	110	138	173	214	262
40	35	47	62	80	102	128	160	198	243
50	-	43	57	74	94	119	148	184	225
60		-	51	67	86	109	136	169	207
00			1 01	37	1 30	1 100	1 .00	100	201
Coefficient of pe	rformance (C.C	D.P.)							
10	2.46	3.00	3.72	4.68	5.94	-	-	-	-
20	1.82	2.20	2.70	3.32	4.12	5.12	6.41	-	-
30	1.40	1.68	2.03	2.46	2.98	3.62	4.41	5.39	6.61
40	1.08	1.30	1.55	1.84	2.20	2.62	3.12	3.73	4.47
50	-	0.99	1.17	1.38	1.62	1.90	2.23	2.62	3.09
60	-	-	0.85	1.00	1.16	1.35	1.57	1.83	2.13
Nominal perform	nance at to = -1	0 °C, tc = 45 °C			_	Pressure switch	settings		
- ··				1					

C.O.P.		

Cooling capacity

Current consumption

Power input

Mass flow

to: Evaporating temperature at dew point tc: Condensing temperature at dew point

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

3 818

2 024

4.01

98 1.89 W

W

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

Sound power data

Couria porror data		
Sound power level	74	dB(A)
With accoustic hood	67	dB(A)





# Maneurop reciprocating compressor. MTZ028-4

# Performance data at 60 Hz, EN 12900 rating conditions, Suction temp. = 20 °C

**R452A** 

Cond. temp. in				Evapora	iting temperature	in °C (to)			
°C (tc)	-30	-25	-20	-15	-10	-5	0	5	10
Cooling capacity	in W								
10	-	3 310	4 170	5 278	6 668	-	-	-	-
20	-	3 025	3 809	4 808	6 056	7 587	9 434	_	-
30	-	2 684	3 379	4 257	5 350	6 690	8 309	10 243	12 531
40	-	2 299	2 892	3 635	4 560	5 696	7 076	8 729	10 691
50	-	-	2 357	2 952	3 695	4 616	5 744	7 107	8 732
60	-	-	-	2 217	2 766	3 460	4 326	5 388	6 666
Power input in W	1								
10	-	1 233	1 263	1 266	1 237	-	-	-	-
20	-	1 391	1 469	1 527	1 560	1 564	1 535	-	-
30	-	1 528	1 652	1 763	1 858	1 932	1 980	1 998	1 981
40	-	1 631	1 799	1 962	2 118	2 260	2 384	2 486	2 561
50	-	-	1 897	2 112	2 325	2 534	2 733	2 917	3 082
60	-	-	-	2 197	2 468	2 742	3 014	3 279	3 534
Current consump		1.51	4.50	1.40	144	T		1	1
10	-	1.54	1.50	1.46	1.41	-	-	-	-
20	-	2.81	2.84	2.86	2.88	2.88	2.84	-	-
30	-	3.41	3.49	3.59	3.68	3.75	3.81	3.82	3.80
40	-	3.59	3.74	3.89	4.06	4.22	4.36	4.47	4.55
50	-	-	3.83	4.05	4.29	4.53	4.76	4.97	5.15
60	-	-	-	4.32	4.63	4.95	5.27	5.57	5.86
/lass flow in kg/h	1								
10	-	66	83	105	133	-	-	-	-
20	-	67	84	107	134	169	212	-	-
30	-	65	83	104	132	166	208	260	324
40	-	62	79	99	125	158	199	249	311
50	-	-	73	92	116	147	185	233	292
60	-	-	-	83	104	132	168	212	267
Coefficient of per	rformance (C.0	O.P.)							
10	-	2.69	3.30	4.17	5.39	-	-	-	-
20	-	2.17	2.59	3.15	3.88	4.85	6.14	-	-
30	-	1.76	2.05	2.41	2.88	3.46	4.20	5.13	6.32
	-	1.41	1.61	1.85	2.15	2.52	2.97	3.51	4.18
40						1			
40 50	-	-	1.24	1.40	1.59	1.82	2.10	2.44	2.83

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

Cooling capacity	4 136	W
Power input	2 229	W
Current consumption	4.17	Α
Mass flow	121	kg/h
C.O.P.	1.86	

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

Rating conditions : Suction gas temp. = 20  $^{\circ}\text{C}$  , Subcooling = 0 K

Pressure switch settings

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

Sound power data

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





# Maneurop reciprocating compressor. MTZ028-4

# Performance data at 60 Hz, EN 12900 rating conditions, Superheat = 10 K

**R452A** 

Cond. temp. in				Evapora	ating temperature	in °C (to)			
°C (tc)	-30	-25	-20	-15	-10	-5	0	5	10
Cooling capacity	y in W								
10	2 580	3 223	4 083	5 196	6 598	-	-	-	-
20	2 300	2 895	3 675	4 677	5 934	7 484	9 361	-	-
30	1 981	2 515	3 202	4 078	5 179	6 538	8 194	10 179	12 531
40	1 633	2 094	2 675	3 413	4 343	5 500	6 921	8 639	10 691
50	1 271	1 645	2 108	2 695	3 441	4 383	5 554	6 992	8 732
60	-	1 182	1 512	1 935	2 485	3 197	4 108	5 253	6 666
Power input in V	v								
10	1 179	1 233	1 263	1 266	1 237	-	_	_	_
20	1 298	1 391	1 469	1 527	1 560	1 564	1 535	_	-
30	1 398	1 528	1 652	1 763	1 858	1 932	1 980	1 998	1 981
40	1 465	1 631	1 799	1 962	2 118	2 260	2 384	2 486	2 561
50	1 486	1 687	1 897	2 112	2 325	2 534	2 733	2 917	3 082
60	-	1 682	1 934	2 197	2 468	2 742	3 014	3 279	3 534
			•	•	•	-	•	•	•
Current consum	ption in A								
10	1.57	1.54	1.50	1.46	1.41	-	-	-	-
20	2.80	2.81	2.84	2.86	2.88	2.88	2.84	-	-
30	3.35	3.41	3.49	3.59	3.68	3.75	3.81	3.82	3.80
40	3.48	3.59	3.74	3.89	4.06	4.22	4.36	4.47	4.55
50	3.46	3.63	3.83	4.05	4.29	4.53	4.76	4.97	5.15
60	-	3.77	4.03	4.32	4.63	4.95	5.27	5.57	5.86
Mass flow in kg/	h								
10	63	77	95	118	146	-	-	_	_
20	63	78	97	120	148	182	224	_	-
30	61	76	95	117	145	179	219	267	324
40	58	72	90	112	138	170	209	256	311
50	54	67	83	103	128	158	195	239	292
60	-	61	75	93	115	142	177	218	267
l			•		•	•	•	•	•
Coefficient of pe			1	T	1	T	T		1
10	2.19	2.61	3.23	4.10	5.33	-	-	-	-
20	1.77	2.08	2.50	3.06	3.80	4.78	6.10	-	-
30	1.42	1.65	1.94	2.31	2.79	3.38	4.14	5.09	6.32
40	1.12	1.28	1.49	1.74	2.05	2.43	2.90	3.48	4.18
50	0.86	0.98	1.11	1.28	1.48	1.73	2.03	2.40	2.83
60	-	0.70	0.78	0.88	1.01	1.17	1.36	1.60	1.89
						_			
Nominal perforn	nance at to = -1	0 °C, tc = 45 °C			F	Pressure switch	settings		

to:	Evaporating	temperature	at	dew	point
w.	Lvaporating	temperature	uı	actt	Ponn

Cooling capacity

Current consumption

Power input

Mass flow

C.O.P.

tc: Condensing temperature at dew point

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

3 900

2 229

4.17

133

1.75

W

W

Max	kimum HP switch setting	27.7	bar(g)
Min	imum LP switch setting	1	bar(g)
LP	pump down setting	1.3	bar(g)

Sound power data

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





