ENGINEERING TOMORROW



Datasheets

# Danfoss Reciprocating compressors MT / MTZ / NTZ





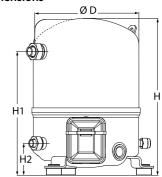


#### Datasheet, technical data

## **General Characteristics**

Model number (on compressor nameplate)		MTZ28JE4AVE	
Code number for Singlepack*		MTZ28-4VI	
Code number for Industrial pack**		MTZ28-4VM	
Drawing number		8501024e	
Suction and discharge connections		Rotolock	
Suction connection		1 " Rotolock	
Discharge connection		1 " Rotolock	
Suction connection with supplied sleeve		1/2 " ODF	
Discharge connection with supplied sleeve		3/8 " ODF	
Oil sight glass		Threaded	
Oil equalisation connection		3/8" flare SAE	
Oil drain connection		None	
LP gauge port		Schrader	
IPR valve		30 bar / 8 bar	
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 - 160PZ	
Maximum system test pressure Low Side / High side	25 bar(g) / 30 bar(g)		
Maximum differential test pressure	30 bar		
Maximum number of starts per hour	1	2	
Refrigerant charge limit	2,5	kg	
Approved refrigerants	R404A, R507A, R134a, R407C, R407A, R407F		

#### **Dimensions**



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

**Terminal box** 

1

#### **Electrical Characteristics**

Nominal voltage	380-400V/3/50Hz - 460V/3/60Hz
Voltage range	340-440 V @ 50Hz - 414-506 V @ 60Hz
Winding resistance (between phases) +/- 7% at 25°C	7.11 Ω
Maximum Continuous Current (MCC)	7.5 A
Locked Rotor Amps (LRA)	23 A
Motor protection	Internal overload protector

#### **Recommended Installation torques**

Oil sight glass	50 Nm		
Power connections / Earth connection	Nm / 2 Nm		
Mounting bolts	15 Nm		

# IP55 (with cable gland)

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

#### Parts shipped with compressor

 $\label{eq:mounting-bolts} \mbox{Mounting kit with grommets, bolts, nuts, sleeves and washers}$ 

 $Suction \& \, Discharge \, solder \, sleeves, \, rotolock \, nuts \, and \, gaskets \, (shipped \, with \, rotolock \, version \, only)$ 

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

Service kit for terminal box 80 x 96 mm, including 1 cover, 1 clamp

## Maneurop reciprocating compressor, MTZ028-4

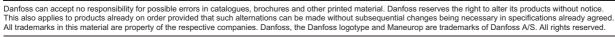
Rotolock accessories, suction side	Code no.	
Solder sleeve, P06 (1" Rotolock, 1/2" ODF)	8153007	
Angle adapter, C06 (1" Rotolock, 1/2" ODF)	8168007	
Rotolock valve, V06 (1" Rotolock, 1/2" ODF)	8168031	Gaskets, sleeves and nuts
Gasket, 1"	8156130	
Rotolock accessories, discharge side	Code no.	
Solder sleeve, P01 (1" Rotolock, 3/8" ODF)	8153010	
Angle adapter, C01 (1" Rotolock, 3/8" ODF)	8168004	
Rotolock valve, V01 (1" Rotolock, 3/8" ODF)	8168027	
Gasket, 1"	8156130	1 2 3
Rotolock accessories, sets	Code no.	1: Gasket
Angle adapter set, C06 (1"~1/2"), C01 (1"~3/8")	7703011	2: Solder sleeve
Valve set, V06 (1"~1/2"), V01 (1"~3/8")	7703004	3: Rotolock nut
Gasket set, 1", 1-1/4", 1-3/4", OSG gaskets black & white	8156009	
Oil / lubricants	Code no.	
POE lubricant, 160PZ, 1 litre can	7754019	
POE lubricant, 160PZ, 2.5 litre can	120Z0573	
Crankcase heaters	Code no.	Mounting kit
PTC heater 27W,CE mark, UL	120Z0459	
Belt type crankcase heater, 54 W, 230 V, CE mark, UL	7773106	1
Belt type crankcase heater, 54 W, 400 V, UL	7773013	2
Miscellaneous accessories	Code no.	
Electronic soft start kit, MCI 15 C	7705006	4
Acoustic hood for 1 cylinder compressor	120Z0471	
Oil equalisation nut	8153127	
Spare parts	Code no.	6
Mounting kit for 1 and 2 cylinder compressor, including 3 grommets, 3 bolts	8156001	
Oil sight glass with gaskets (black & white)	8156019	1: Bolt (3x)
Gasket for oil sight glass (black chloroprene)	8156145	2: Lock washer (3x)
		3. Flatah an (2)

5: Grommet (3x) 6: Nut (3x)

3: Flat washer (3x)

4: Sleeve (3x)

8156134







## 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		
		-	-	<u> </u>		-	1	I.	ı
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		•	•	T	•	•	1	•	1
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	ption in A	1	,	ı		1	ı	1	1
35	3.22	3.38	3.53	3.65	3.74	3.82	3.88	-	-
40	3.25	3.46	3.64	3.79	3.92	4.02	4.10	-	-
45	3.25	3.51	3.74	3.94	4.11	4.25	4.36	-	-
50	-	3.54	3.83	4.08	4.30	4.48	4.64	-	-
55	-	-	3.89	4.21	4.49	4.73	4.94	-	-
60	-	-	-	4.31	4.66	4.97	5.24	-	-
65	-	-	-	4.39	4.82	5.20	5.55	-	-
Mass flow in kg/	h	1	,	ı		1	ı	1	1
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	rformance (C.O		•	1					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	0.2	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)

All performance data +/- 5%





## Maneurop reciprocating compressor. MTZ028-4

## Performance data at 50 Hz, ARI rating conditions

**R407C** 

Cond. temp. in				Evapora	ating temperature	in °C (to)			
°C (tc)	-15	-10	-5	0	5	10	15		
L	-	1	-	-		-	-	L	
Cooling capacity	in W								
35	2 738	3 782	5 018	6 470	8 160	10 112	12 350	-	-
40	2 448	3 444	4 617	5 991	7 589	9 434	11 549	-	-
45	2 151	3 098	4 208	5 502	7 006	8 742	10 734	-	-
50	-	2 748	3 792	5 006	6 415	8 041	9 909	-	-
55	-	-	3 373	4 506	5 818	7 334	9 075	-	-
60	-	-	-	4 005	5 220	6 623	8 238	-	-
65	-	-	-	3 506	4 623	5 914	7 402	-	-
Power input in V		T	1	1		T	1	T	Г
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		Т	T	1		Т	1	Т	Т
35	3.22	3.38	3.53	3.65	3.74	3.82	3.88	-	-
40	3.25	3.46	3.64	3.79	3.92	4.02	4.10	-	-
45	3.25	3.51	3.74	3.94	4.11	4.25	4.36	-	-
50	-	3.54	3.83	4.08	4.30	4.48	4.64	-	-
55	-	-	3.89	4.21	4.49	4.73	4.94	-	-
60	-	-	-	4.31	4.66	4.97	5.24	-	-
65	-	-	-	4.39	4.82	5.20	5.55	-	-
Mass flow in kg/			1 00	1 404	151	100	1 00-		
35	55	75	98	124	154	188	227	-	-
40	51	71	94	120	150	183	222	-	-
45	47	67	89	115	144	178	215	-	-
50	-	63	85	110	139	171	208	-	-
55	-	-	80	105	133	165	201	-	-
60	-	-	-	99	126	157	193	-	-
65	-	-	-	92	119	150	184	-	-
Coefficient of no	rformanaa (C.C	<b>\ D</b> \							
Coefficient of pe	2.17	2.66	3.23	3.90	4.70	5.69	6.90	_	_
35 40	1.90	2.00	2.81	3.90	4.70	4.82	5.79		-
45	1.90	2.33	2.81	1	3.46	+	4.87	-	-
	1.00	+		2.91 2.52		4.10		-	-
50	<u> </u>	1.78	2.13	1	2.96	3.48	4.10		-
55		-	1.84	2.17	2.54	2.96	3.46		
60	-	-	-	1.86	2.17	2.51	2.91	-	-
65	-	-	-	1.59	1.84	2.12	2.45	-	-

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

Cooling capacity	6 536	W
Power input	2 361	W
Current consumption	4.57	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

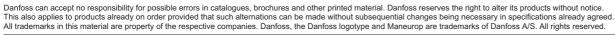
Pressure switch settings

Maximum HP switch setting	29.4	bar(g)
Minimum LP switch setting	0.2	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)

All performance data +/- 5%







## 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)	-15	-10	-5	0	5	10	15	20	
		1	1			•	1		
Cooling capacit	y in W								
35	1 522	2 090	2 811	3 708	4 806	6 126	7 692	9 528	-
40	1 369	1 900	2 575	3 417	4 450	5 697	7 180	8 924	-
45	1 235	1 723	2 346	3 128	4 092	5 259	6 654	8 300	-
50	1 120	1 561	2 128	2 844	3 732	4 815	6 117	7 659	-
55	1 026	1 414	1 919	2 565	3 373	4 366	5 568	7 002	-
60	-	1 284	1 723	2 292	3 015	3 913	5 011	6 330	-
65	-	-	-	2 027	2 659	3 458	4 446	5 645	-
70	-	-	-	-	-	3 002	3 875	4 949	-
Power input in \				T	1			T T	
35	850	942	1 030	1 112	1 185	1 246	1 293	1 323	-
40	883	983	1 081	1 174	1 260	1 336	1 400	1 449	-
45	911	1 020	1 129	1 235	1 335	1 428	1 510	1 579	-
50	935	1 054	1 174	1 294	1 410	1 520	1 622	1 712	-
55	951	1 081	1 215	1 350	1 483	1 612	1 734	1 847	-
60	-	1 102	1 251	1 402	1 553	1 702	1 846	1 982	-
65	-	-	-	1 448	1 619	1 789	1 956	2 117	-
70	-	-	-	-	-	1 871	2 063	2 250	-
Current consum	•	0.70	0.00	0.00	0.04	0.00	0.04	0.00	
35	2.70	2.76	2.82	2.88	2.94	2.99	3.04	3.08	-
40	2.73	2.80	2.87	2.95	3.02	3.09	3.16	3.23	-
45	2.75	2.83	2.92	3.01	3.10	3.19	3.28	3.38	-
50	2.76	2.85	2.96	3.06	3.18	3.29	3.41	3.53	-
55	2.76	2.87	2.99	3.12	3.25	3.39	3.53	3.68	-
60	-	2.88	3.02	3.17	3.32	3.48	3.66	3.83	-
65	-	-	-	3.21	3.39	3.58	3.78	3.99	-
70	-	-	-	-	-	3.67	3.90	4.14	-
Mass flow in kg	/h								
35	37	50	65	84	107	134	165	202	
40	35	47	63	81	104	131	162	198	
45	33	45	60	79	100	127	157	192	
50	32	43	58	75	97	122	157	187	
55	31	43	56	72	93	117	146	180	
60	-	42	53	69	89	112	140	173	<u> </u>
65	-	-	- 55	66	85	107	133	165	
70		<del>-</del>	<u> </u>	-	-	101	126	156	
70				I	<u> </u>	101	120	100	-
Coefficient of pe	erformance (C.O	o.P.)							
35	1.79	2.22	2.73	3.33	4.06	4.92	5.95	7.20	-
40	1.55	1.93	2.38	2.91	3.53	4.26	5.13	6.16	-
45	1.35	1.69	2.08	2.53	3.06	3.68	4.41	5.26	-
50	1.20	1.48	1.81	2.20	2.65	3.17	3.77	4.47	-
55	1.08	1.31	1.58	1.90	2.27	2.71	3.21	3.79	-
60	-	1.16	1.38	1.64	1.94	2.30	2.71	3.19	-
65	-	-	-	1.40	1.64	1.93	2.27	2.67	-
70	-	-	_	-	-	1.60	1.88	2.20	_

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

	•••		
Cooling capacity	3 732	W	
Power input	1 410	W	
Current consumption	3.18	Α	
Mass flow	97	kg/h	
C.O.P.	2.65		

to: Evaporating temperature at dew point

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

Pressure switch settings

Maximum HP switch setting	22.6	bar(g)
Minimum LP switch setting	0.2	bar(g)
LP pump down setting	0.5	bar(g)

# Sound power data

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

All performance data +/- 5%



tc: Condensing temperature at dew point



## Maneurop reciprocating compressor. MTZ028-4

## Performance data at 50 Hz, ARI rating conditions

R134a

Cond. temp. in				Evapora	iting temperature	in °C (to)			
°C (tc)	-15	-10	-5	0	5	10	15	20	
Cooling conceits	ı in W								
Cooling capacity 35	1 649	2 260	3 034	3 997	5 172	6 583	8 255	10 212	
40	1 491	2 065	2 793	3 701	4 812	6 150	7 740	9 605	
								1	
45	1 353	1 884	2 560	3 407	4 448	5 707	7 209	8 978	
50	1 236	1 718	2 337	3 117	4 082	5 257	6 665	8 330	-
55	1 142	1 569	2 125	2 832	3 715	4 799	6 108	7 665	-
60	-	1 439	1 925	2 553	3 349	4 337	5 539	6 982	-
65	-	-	-	2 283	2 985	3 870	4 961	6 283	-
70	-	-	-	-	-	3 401	4 375	5 571	-
Power input in V	1								
35	850	942	1 030	1 112	1 185	1 246	1 293	1 323	-
40	883	983	1 081	1 174	1 260	1 336	1 400	1 449	-
45	911	1 020	1 129	1 235	1 335	1 428	1 510	1 579	-
50	935	1 054	1 174	1 294	1 410	1 520	1 622	1 712	-
55	951	1 081	1 215	1 350	1 483	1 612	1 734	1 847	-
60	-	1 102	1 251	1 402	1 553	1 702	1 846	1 982	-
65	-	-	-	1 448	1 619	1 789	1 956	2 117	-
70	-	-	-	-	-	1 871	2 063	2 250	-
Current consum		2.76	2.02	2.00	2.04	2.00	2.04	2.09	
35	2.70	2.76	2.82	2.88	2.94	2.99	3.04	3.08	
40	2.73	2.80	2.87	2.95	3.02	3.09	3.16	3.23	-
45	2.75	2.83	2.92	3.01	3.10	3.19	3.28	3.38	-
50	2.76	2.85	2.96	3.06	3.18	3.29	3.41	3.53	-
55	2.76	2.87	2.99	3.12	3.25	3.39	3.53	3.68	-
60	-	2.88	3.02	3.17	3.32	3.48	3.66	3.83	-
65	-	-	-	3.21	3.39	3.58	3.78	3.99	-
70	-	-	-	-	-	3.67	3.90	4.14	-
Mass flow in kg/l	'n								
35	37	49	65	84	107	133	164	201	-
40	35	47	62	81	103	130	161	196	-
45	33	45	60	78	100	126	156	191	-
50	32	43	57	75	96	121	151	186	-
55	31	42	55	72	92	117	145	179	-
60	-	41	53	69	88	112	139	172	-
65	-	-	-	66	84	106	133	164	-
70	-	-	-	-	-	101	126	155	-
Coefficient of pe	rformance (C C	) P )							
35	1.94	2.40	2.94	3.59	4.36	5.28	6.38	7.72	-
40	1.69	2.10	2.58	3.15	3.82	4.60	5.53	6.63	-
45	1.48	1.85	2.27	2.76	3.33	4.00	4.77	5.69	-
50	1.32	1.63	1.99	2.41	2.89	3.46	4.11	4.87	_
55	1.20	1.45	1.75	2.10	2.50	2.98	3.52	4.15	
60	-	1.43	1.73	1.82	2.16	2.55	3.00	3.52	
00	-	-	-	1.58	1.84	2.33	2.54	2.97	
65									-

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

	• •		
Cooling capacity	4 215	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

Pressure switch settings

Maximum HP switch setting	22.6	bar(g)
Minimum LP switch setting	0.2	bar(g)
LP pump down setting	0.5	bar(g)

# Sound power data

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

All performance data +/- 5%



tc: Condensing temperature at dew point

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



## Maneurop reciprocating compressor. MTZ028-4

## Performance data at 50 Hz, EN 12900 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		T	T			T 2.32			
30	1 417	2 050	2 825	3 757	4 866	6 168	7 683	9 428	11 421
35	1 182	1 769	2 485	3 348	4 375	5 585	6 995	8 624	10 488
40	963	1 503	2 159	2 951	3 896	5 011	6 315	7 826	9 562
45	759	1 250	1 846	2 566	3 427	4 447	5 644	7 037	8 642
50	570	1 012	1 546	2 193	2 969	3 892	4 982	6 254	7 728
55	-	787	1 260	1 832	2 522	3 348	4 328	5 480	6 821
60	-	578	986	1 483	2 086	2 813	3 682	4 712	5 920
Power input in	w								
30	1 106	1 291	1 462	1 614	1 747	1 856	1 940	1 996	2 020
35	1 094	1 298	1 488	1 663	1 818	1 952	2 062	2 144	2 197
40	1 076	1 300	1 511	1 708	1 888	2 047	2 184	2 295	2 378
45	1 050	1 295	1 529	1 750	1 955	2 141	2 306	2 446	2 560
50	1 016	1 283	1 541	1 787	2 019	2 232	2 426	2 598	2 743
55	-	1 263	1 546	1 818	2 077	2 320	2 545	2 748	2 927
60	-	1 234	1 543	1 842	2 130	2 403	2 659	2 895	3 109
Current consur	nption in A			1	1		1	1	1
30	3.07	3.24	3.42	3.60	3.77	3.92	4.05	4.13	4.17
35	3.08	3.26	3.46	3.65	3.84	4.02	4.16	4.27	4.33
40	3.07	3.28	3.50	3.72	3.94	4.14	4.31	4.45	4.54
45	3.04	3.28	3.53	3.79	4.04	4.28	4.49	4.67	4.80
50	2.97	3.25	3.54	3.84	4.14	4.42	4.68	4.91	5.09
55	-	3.18	3.52	3.87	4.22	4.56	4.87	5.16	5.39
60	-	3.05	3.46	3.87	4.28	4.68	5.05	5.40	5.70
Mass flow in kg	ı/h								
30	45	63	85	110	139	172	210	252	300
35	40	58	80	105	133	166	203	245	292
40	35	54	75	99	127	159	196	238	285
45	31	49	70	94	121	153	189	230	277
50	26	43	64	88	115	147	182	223	268
55	-	38	59	82	109	140	176	215	260
60	-	33	53	76	103	134	168	208	252
Coefficient of n	erformance (C.O	).P.)							
30	1.28	1.59	1.93	2.33	2.79	3.32	3.96	4.72	5.65
35	1.08	1.36	1.67	2.01	2.41	2.86	3.39	4.02	4.77
40	0.90	1.16	1.43	1.73	2.06	2.45	2.89	3.41	4.02
45	0.72	0.97	1.21	1.47	1.75	2.08	2.45	2.88	3.38
50	0.56	0.79	1.00	1.23	1.47	1.74	2.05	2.41	2.82
	5.55	5.10				1	1		t
55	_	0.62	0.81	1.01	1.21	1.44	1.70	1.99	2.33

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	0.2	bar(g)
LP pump down setting	0.9	bar(g)

Sound power data

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

All performance data +/- 5%





## 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	0.700	0.424	40.220	40.405
30	1 577	2 276	3 128	4 150	5 362	6 783	8 431	10 326	12 485
35	1 330	1 984	2 779	3 733	4 866	6 195	7 741	9 522	11 557
40	1 098	1 706	2 444	3 328	4 380	5 618	7 061	8 727	10 637
45	880	1 442	2 121	2 936	3 906	5 051	6 390	7 943	9 727
50	676	1 191	1 811	2 556	3 445	4 497	5 733	7 171	8 830
55	-	954	1 516	2 190	2 997	3 958	5 091	6 416	7 952
60	-	730	1 235	1 840	2 569	3 439	4 472	5 688	7 107
Power input in \	N	_	_	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	4.17
35	3.08	3.26	3.46	3.65	3.84	4.02	4.16	4.27	4.33
40	3.07	3.28	3.50	3.72	3.94	4.14	4.31	4.45	4.54
45	3.04	3.28	3.53	3.79	4.04	4.28	4.49	4.67	4.80
50	2.97	3.25	3.54	3.84	4.14	4.42	4.68	4.91	5.09
55	-	3.18	3.52	3.87	4.22	4.56	4.87	5.16	5.39
60	-	3.05	3.46	3.87	4.28	4.68	5.05	5.40	5.70
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	25	43	64	88	115	146	181	221	267
55	-	38	58	82	109	139	174	214	259
60	-	32	53	76	102	133	167	206	250
Coefficient of n	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
55									

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

Maximum HP switch setting	27.7	bar(g)
Minimum LP switch setting	0.2	bar(g)
LP pump down setting	0.9	bar(g)

Sound power data

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

All performance data +/- 5%

