

ENGINEERING TOMORROW

Datasheets

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



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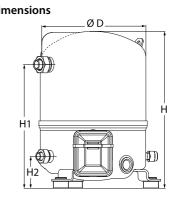
Datasheet, technical data

Maneurop reciprocating compressor, MTZ018-4

Danfoss

General Characteristics

Model number (on compressor nameplate)	MTZ18JA4BVE	
Code number for Singlepack*	MTZ18-4VI	
Code number for Industrial pack**	MTZ18-4VM	
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	30.23 cm3/rev	
Displacement @ Nominal speed	5.3 m3/h @ 2900 rpm - 6.3 m3/h @ 3500 rpm	
Net weight	21 kg	
Oil charge	0.95 litre, POE - 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	3 kg	
Approved refrigerants	R404A,R134a,R407A/C/F,R448A,R449A,R452A,R513A	



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

Electrical Characteristics

Nominal voltage	380-400V/3/50Hz - 460V/3/60Hz
Voltage range	340-440 V @ 50Hz - 414-506 V @ 60Hz
Winding resistance (between phases) +/- 7% at 25°C	9.37 Ω
Maximum Continuous Current (MCC)	5 A
Locked Rotor Amps (LRA)	20 A
Motor protection	Internal overload protector

Recommended Installation torques

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

Parts shipped with compressor

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

Suction & Discharge solder sleeves, rotolock nuts and gaskets (shipped with rotolock version only) Initial oil charge

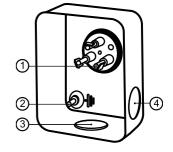
Installation instructions

Approvals : CE certified, UL certified (file SA6873), CCC certified

*Singlepack: Compressor in cardboard box

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

Terminal box



IP55 (with cable gland)

- 1: Spade connectors 1/4"
 - Earth M4-12

2:

- 3: Knock-out Ø 21 mm (0.83")
- 4: Hole Ø 21 mm (0.83'')



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Datasheet, accessories and spare parts

Maneurop reciprocating compressor, MTZ018-4

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

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.	
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.	
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	
Acoustic hood for 1 cylinder compressor	120Z0575	
Oil equalisation nut	8153127	
Spare parts	Code no.	
Mounting kit for 1 and 2 cylinder compressor, including 3 grommets, 3 bolts	8156001	
Oil sight glass with gaskets (black & white)	8156019	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)



Maneurop reciprocating compressor. MTZ018-4

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Performance data at 50 Hz. EN 12900 rating conditions

Performanc	e data at 50) Hz, EN 129	00 rating co	nditions					R4070
Cond. temp. in				Evapor	ating temperature	in °C (to)			
°C (tc)	-15	-10	-5	0	5	10	15		
Cooling capacity	' in W								
35	1 445	2 054	2 784	3 651	4 668	5 848	7 207	-	-
40	1 255	1 824	2 503	3 306	4 249	5 344	6 607	-	-
45	1 076	1 606	2 235	2 978	3 848	4 861	6 029	-	-
50	-	1 399	1 981	2 665	3 466	4 397	5 474	-	-
55	-	-	1 739	2 367	3 100	3 953	4 939	-	-
60	-	-	-	2 082	2 750	3 526	4 424	-	-
65	-	-	-	1 811	2 415	3 116	3 929	-	-
Power input in V									
35	794	878	948	1 005	1 050	1 084	1 109	-	-
40	812	912	996	1 066	1 123	1 167	1 201	-	-
45	820	938	1 040	1 125	1 197	1 255	1 301	-	-
50	-	957	1 078	1 182	1 271	1 345	1 406	-	-
55	-	-	1 110	1 235	1 344	1 437	1 516	-	-
60	-	-	-	1 284	1 415	1 530	1 629	-	-
65	-	-	-	1 326	1 484	1 623	1 745	-	-
urrent consum	ntion in A								
35	2.32	2.36	2.41	2.45	2.50	2.53	2.56	-	-
40	2.32	2.39	2.45	2.51	2.57	2.62	2.65	-	
45	2.32	2.41	2.49	2.57	2.65	2.71	2.76	-	-
50	-	2.42	2.53	2.64	2.73	2.82	2.88	-	-
55	-	-	2.56	2.70	2.82	2.93	3.02	-	-
60	-	-	-	2.76	2.91	3.05	3.16	-	-
65	-	-	-	2.81	3.00	3.17	3.32	-	-
/lass flow in kg/	h								
35	31	44	58	75	95	117	143	-	-
40	29	41	55	72	91	112	137	-	-
45	26	38	52	68	86	107	131	-	-
50	-	35	49	64	82	103	126	-	-
55	-	-	46	61	78	98	120	-	-
60	-	-	-	57	74	93	115	-	-
65	-	-	-	54	70	89	110	-	-
coefficient of pe	rformanco (C O	N P)							
35	1.82	2.34	2.94	3.63	4.45	5.39	6.50	-	-
40	1.55	2.00	2.51	3.10	3.78	4.58	5.50	-	
45	1.31	1.71	2.15	2.65	3.22	3.87	4.64	-	-
50	-	1.46	1.84	2.25	2.73	3.27	3.89	-	_
55	-	-	1.57	1.92	2.31	2.75	3.26	-	_
60	-	-	-	1.62	1.94	2.30	2.72	-	-
65	-	-	-	1.37	1.63	1.92	2.25	-	-

Cooling capacity	3 466	W	
Power input	1 271	W	
Current consumption	2.73	Α	
Mass flow	82	kg/h	
C.O.P.	2.73		

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Flessure 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)

dB(A)

dB(A)

72

64

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

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

With accoustic hood

Sound power data

Sound power level

Tolerance according EN12900



Maneurop reciprocating compressor. MTZ018-4

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R407C

Performance data at 50 Hz, ARI rating conditions

Cond. temp. in				Evapora	ating temperature i	n °C (to)			
°C (tc)	-15	-10	-5	0	5	10	15		
Cooling capacity	y in W								
35	1 555	2 208	2 990	3 916	5 001	6 259	7 706	-	-
40	1 359	1 971	2 701	3 564	4 574	5 747	7 098	-	-
45	1 172	1 746	2 427	3 229	4 167	5 257	6 513	-	-
50	-	1 533	2 166	2 910	3 778	4 787	5 950	-	-
55	-	-	1 918	2 606	3 407	4 337	5 411	-	-
60	-	-	-	2 316	3 052	3 906	4 893	-	-
65	-	-	-	2 040	2 714	3 495	4 397	-	-
Power input in W	v								
35	794	878	948	1 005	1 050	1 084	1 109	-	-
40	812	912	996	1 066	1 123	1 167	1 201	-	-
45	820	938	1 040	1 125	1 197	1 255	1 301	-	-

40	812	912	996	1 066	1 123	1 167	1 201	-	-
45	820	938	1 040	1 125	1 197	1 255	1 301	-	-
50	-	957	1 078	1 182	1 271	1 345	1 406	-	-
55	-	-	1 110	1 235	1 344	1 437	1 516	-	-
60	-	-	-	1 284	1 415	1 530	1 629	-	-
65	-	-	-	1 326	1 484	1 623	1 745	-	-

Current consumption in A

35	2.32	2.36	2.41	2.45	2.50	2.53	2.56	-	-
40	2.32	2.39	2.45	2.51	2.57	2.62	2.65	-	-
45	2.32	2.41	2.49	2.57	2.65	2.71	2.76	-	-
50	-	2.42	2.53	2.64	2.73	2.82	2.88	-	-
55	-	-	2.56	2.70	2.82	2.93	3.02	-	-
60	-	-	-	2.76	2.91	3.05	3.16	-	-
65	-	-	-	2.81	3.00	3.17	3.32	-	-

Mass flow in kg/h

35	31	44	58	75	94	117	142	-	-
40	29	41	55	71	90	112	136	-	-
45	26	38	52	68	86	107	131	-	-
50	-	35	48	64	82	102	125	-	-
55	-	-	45	60	78	97	120	-	-
60	-	-	-	57	74	93	114	-	-
65	-	-	-	54	70	88	109	-	-

Coefficient of performance (C.O.P.)

		/							
35	1.96	2.52	3.15	3.90	4.76	5.77	6.95	-	-
40	1.67	2.16	2.71	3.34	4.07	4.92	5.91	-	-
45	1.43	1.86	2.33	2.87	3.48	4.19	5.01	-	-
50	-	1.60	2.01	2.46	2.97	3.56	4.23	-	-
55	-	-	1.73	2.11	2.53	3.02	3.57	-	-
60	-	-	-	1.80	2.16	2.55	3.00	-	-
65	-	-	-	1.54	1.83	2.15	2.52	-	-

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

Cooling capacity	3 847	W
Power input	1 377	W
Current consumption	2.86	А
Mass flow	87	kg/h
C.O.P.	2.79	

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

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

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

Sound power data

Sound power level	72	dB(A)
With accoustic hood	64	dB(A)

Tolerance according EN12900



Maneurop reciprocating compressor. MTZ018-4

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R134a

Performance data at 50 Hz, EN 12900 rating conditions

Cond. temp. in		1			ating temperatu			· · · · ·	
°C (tc)	-25	-20	-10	-5	0	5	10	15	20
Cooling capacity	y in W	1		1	1		1	r	
35	404	649	1 357	1 839	2 419	3 107	3 913	4 846	5 916
40	330	560	1 217	1 662	2 199	2 837	3 586	4 455	5 454
45	255	470	1 075	1 484	1 978	2 566	3 257	4 062	4 989
50	180	380	933	1 307	1 757	2 295	2 928	3 669	4 525
55	-	-	795	1 131	1 539	2 026	2 602	3 278	4 063
60	-	-	-	961	1 324	1 761	2 280	2 891	3 605
65	-	-	-	-	1 116	1 502	1 964	2 511	3 152
75	-	-	-	-	-	-	1 359	1 776	2 275
						•		•	
Power input in V	v								
35	448	516	643	695	736	763	773	762	728
40	459	530	668	729	780	818	841	845	827
45	460	536	688	758	820	870	907	927	926
50	452	533	701	781	855	919	971	1 008	1 026
55	-	-	706	798	885	964	1 032	1 086	1 124
60	-	-	-	807	908	1 003	1 088	1 162	1 219
65	-	-		-	924	1 036	1 140	1 233	1 312
75	-	-	_	-	-	-	1 223	1 359	1 485
75	-	-	-	-	-	-	1 223	1 3 5 9	1 400
Current consum		1.04	1.00	1.04	1.07	2.00	2.04	2.00	0.40
35	1.81	1.84	1.90	1.94	1.97	2.00	2.04	2.08	2.12
40	1.81	1.84	1.91	1.95	1.99	2.04	2.09	2.14	2.19
45	1.80	1.84	1.92	1.97	2.02	2.08	2.14	2.20	2.27
50	1.79	1.83	1.93	1.99	2.05	2.12	2.19	2.27	2.36
55	-	-	1.94	2.01	2.08	2.16	2.25	2.34	2.44
60	-	-	-	2.02	2.11	2.20	2.30	2.41	2.53
65	-	-	-	-	2.13	2.24	2.36	2.49	2.63
75	-	-	-	-	-	-	2.48	2.64	2.82
Mass flow in kg	′h	1		T	T		1		
35	10	16	32	43	55	69	86	104	126
40	9	15	30	41	53	66	82	100	121
45	7	13	28	38	50	63	79	96	116
50	5	11	26	36	47	60	75	91	110
55	-	-	24	33	44	56	70	86	105
60	-	-	-	30	40	52	65	81	98
65	-	-	-	-	36	47	60	75	92
75	-	-	-	-	-	-	49	62	77
1		1							
Coefficient of pe	erformance (C.C).P.)							
35	0.90	1.26	2.11	2.65	3.29	4.07	5.06	6.36	8.13
40	0.72	1.06	1.82	2.28	2.82	3.47	4.27	5.27	6.60
45	0.55	0.88	1.56	1.96	2.02	2.95	3.59	4.38	5.39
43 50	0.33	0.00	1.33	1.67	2.41	2.50	3.02	3.64	4.41
55	-	-	1.33	1.42	1.74	2.10	2.52	3.02	3.62
								1	
60	-	-	-	1.19	1.46	1.76	2.09	2.49	2.96
65	-	-	-	-	1.21	1.45	1.72	2.04	2.40
75	-	-	-	-	-	-	1.11	1.31	1.53
1		0. 4 50.00				D			
Nominal perform	nance at to = 5 °			_		Pressure switch	-	~~~~	ь ()
Cooling capacity Power input		2 295	W W	1		Maximum HP swite	•	20.2	bar(g)
Power Input Current consump	ntion	919 2.12	VV A			Minimum LP swite LP pump down se	-	0.1 0.4	bar(g) bar(g)
Mass flow		60	kg/h	1				0.7	bai(g)
C.O.P.		2.50		1		Sound power dat	a		
						Sound power leve		0	dB(A)
	emperature at de					With accoustic ho		0	dB(A)

tc: Condensing temperature at dew point

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

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Tolerance according EN12900

Maneurop reciprocating compressor. MTZ018-4

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Cond. temp. in °C (tc) -25 Cooling capacity in W 35 439 35 439 40 361 40 361 45 281 50 - - 65 - 60 - - 65 - - 75 - - - - 66 - - 65 -	-20 705 611 516 420 - - - - - - 516 530	-10 1 467 1 322 1 175 1 028 882 - - - - 643 668	Evapora -5 1 985 1 804 1 620 1 435 1 253 1 073 - - 695 729	2 607 2 382 2 154 1 926 1 699 1 475 - - 736	in °C (to) 5 3 344 3 068 2 789 2 510 2 231 1 956 1 686 - 763	10 4 205 3 871 3 535 3 197 2 860 2 526 2 198 1 564 773	15 5 201 4 802 4 400 3 997 3 595 3 196 2 802 2 036	20 6 341 5 871 5 397 4 922 4 447 3 976 3 509 2 597
Cooling capacity in W 35 439 40 361 45 281 50 - 55 - 60 - 65 - 75 - Power input in W 35 35 448 40 459 45 460 50 - 65 - 60 - 65 - 60 - 65 - 60 - 65 - 75 - 60 - 65 - 75 - Current consumption in A 35 35 1.81	705 611 516 420 - - - - 516	1 467 1 322 1 175 1 028 882 - - - - 643 668	1 985 1 804 1 620 1 435 1 253 1 073 - - - 695	2 607 2 382 2 154 1 926 1 699 1 475 - - 736	3 344 3 068 2 789 2 510 2 231 1 956 1 686 -	4 205 3 871 3 535 3 197 2 860 2 526 2 198 1 564	5 201 4 802 4 400 3 997 3 595 3 196 2 802 2 036	6 341 5 871 5 397 4 922 4 447 3 976 3 509
35 439 40 361 45 281 50 - 55 - 60 - 65 - 75 - 90wer input in W 35 35 448 40 459 45 460 50 - 55 - 60 - 65 - 75 - 60 - 65 - 75 - 60 - 65 - 75 - Current consumption in A 35 1.81	611 516 420 - - - - - 516	1 322 1 175 1 028 882 - - - - 643 668	1 804 1 620 1 435 1 253 1 073 - - 695	2 382 2 154 1 926 1 699 1 475 - - 736	3 068 2 789 2 510 2 231 1 956 1 686 -	3 871 3 535 3 197 2 860 2 526 2 198 1 564	4 802 4 400 3 997 3 595 3 196 2 802 2 036	5 871 5 397 4 922 4 447 3 976 3 509
35 439 40 361 45 281 50 - 55 - 60 - 65 - 75 - 90wer input in W 35 35 448 40 459 45 460 50 - 55 - 60 - 55 - 60 - 55 - 60 - 55 - 60 - 75 - Current consumption in A 35 35 1.81	611 516 420 - - - - - 516	1 322 1 175 1 028 882 - - - - 643 668	1 804 1 620 1 435 1 253 1 073 - - 695	2 382 2 154 1 926 1 699 1 475 - - 736	3 068 2 789 2 510 2 231 1 956 1 686 -	3 871 3 535 3 197 2 860 2 526 2 198 1 564	4 802 4 400 3 997 3 595 3 196 2 802 2 036	5 871 5 397 4 922 4 447 3 976 3 509
40 361 45 281 50 - 55 - 60 - 65 - 75 - Power input in W 35 448 40 459 45 460 50 - 60 - 65 - 60 - 65 - 60 - 65 - 75 - 60 - 65 - 75 - Current consumption in A 35 35 1.81	611 516 420 - - - - - 516	1 322 1 175 1 028 882 - - - - 643 668	1 804 1 620 1 435 1 253 1 073 - - 695	2 382 2 154 1 926 1 699 1 475 - - 736	3 068 2 789 2 510 2 231 1 956 1 686 -	3 871 3 535 3 197 2 860 2 526 2 198 1 564	4 802 4 400 3 997 3 595 3 196 2 802 2 036	5 871 5 397 4 922 4 447 3 976 3 509
45 281 50 - 55 - 60 - 65 - 75 - Power input in W 35 448 40 459 45 460 50 - 55 - 60 - 65 - 75 - 60 - 65 - 75 - Current consumption in A 35 35 1.81	516 420 - - - - - 516	1 175 1 028 882 - - - - 643 668	1 620 1 435 1 253 1 073 - - - 695	2 154 1 926 1 699 1 475 - - 736	2 789 2 510 2 231 1 956 1 686 -	3 535 3 197 2 860 2 526 2 198 1 564	4 400 3 997 3 595 3 196 2 802 2 036	5 397 4 922 4 447 3 976 3 509
50 - 55 - 60 - 65 - 75 - Power input in W 35 448 40 459 45 460 50 - 55 - 60 - 65 - 75 - Current consumption in A 35 35 1.81	420 - - - - - 516	1 028 882 - - - - 643 668	1 435 1 253 1 073 - - 695	1 926 1 699 1 475 - - 736	2 510 2 231 1 956 1 686 -	3 197 2 860 2 526 2 198 1 564	3 997 3 595 3 196 2 802 2 036	4 922 4 447 3 976 3 509
55 - 60 - 65 - 75 - Power input in W 35 448 40 459 45 460 50 - 55 - 60 - 65 - 75 - Current consumption in A 35 1.81	- - - - - 516	882 - - - - 643 668	1 253 1 073 - - 695	1 699 1 475 - - 736	2 231 1 956 1 686 -	2 860 2 526 2 198 1 564	3 595 3 196 2 802 2 036	4 447 3 976 3 509
60 - 65 - 75 - Power input in W 35 35 448 40 459 45 460 50 - 55 - 60 - 65 - 75 - Current consumption in A 35 1.81	- - - 516	- - - 643 668	1 073 - - 695	1 475 - - 736	1 956 1 686 -	2 526 2 198 1 564	3 196 2 802 2 036	3 976 3 509
65 - 75 - 75 - 35 448 40 459 45 460 50 - 55 - 60 - 65 - 75 - Current consumption in A 35 1.81	516	- - 643 668	- - 695	736	1 686	2 198 1 564	2 802 2 036	3 509
75 - Power input in W 35 448 40 459 45 460 50 - 55 - 60 - 65 - 75 - Current consumption in A 35 1.81	- 516	- 643 668	- 695	- 736	-	1 564	2 036	
Power input in W 35 448 40 459 45 460 50 - 55 - 60 - 65 - 75 - Current consumption in A 35 35 1.81	516	643 668	695	736			1	2 597
35 448 40 459 45 460 50 - 55 - 60 - 65 - 75 - Current consumption in A 35 1.81		668			763	773	T	-
45 460 50 - 55 - 60 - 65 - 75 - Current consumption in A 35 1.81	530	-	729	700			762	728
50 - 55 - 60 - 65 - 75 - Current consumption in A 35 1.81		-		780	818	841	845	827
50 - 55 - 60 - 65 - 75 - Current consumption in A 35 1.81	536	688	758	820	870	907	927	926
60 - 65 - 75 - Current consumption in A 35 1.81	533	701	781	855	919	971	1 008	1 026
65 - 75 - Current consumption in A 35 35 1.81	-	706	798	885	964	1 032	1 086	1 124
75 - Current consumption in A 35 1.81	-	-	807	908	1 003	1 088	1 162	1 219
Current consumption in A 35 1.81	-	-	-	-	1 036	1 140	1 233	1 312
35 1.81	-	-	-	-	-	1 223	1 359	1 485
							1	
40 1.81	1.84	1.90	1.94	1.97	2.00	2.04	2.08	2.12
	1.84	1.91	1.95	1.99	2.04	2.09	2.14	2.19
45 1.80	1.84	1.92	1.97	2.02	2.08	2.14	2.20	2.27
50 -	1.83	1.93	1.99	2.05	2.12	2.19	2.27	2.36
55 -	-	1.94	2.01	2.08	2.16	2.25	2.34	2.44
60 -	-	-	2.02	2.11	2.20	2.30	2.41	2.53
65 -	-	-	-	-	2.24	2.36	2.49	2.63
75 -	-	-	-	-	-	2.48	2.64	2.82

35	10	16	32	42	55	69	85	104	125
40	9	15	30	40	52	66	82	100	120
45	7	13	28	38	50	63	78	96	115
50	-	11	26	36	47	59	74	91	110
55	-	-	24	33	43	56	70	86	104
60	-	-	-	30	40	52	65	80	98
65	-	-	-	-	-	47	60	75	91
75	-	-	-	-	-	-	49	62	77

Coefficient of performance (C.O.P.)

35	0.98	1.36	2.28	2.86	3.54	4.38	5.44	6.83	8.71
40	0.79	1.15	1.98	2.48	3.06	3.75	4.61	5.69	7.10
45	0.61	0.96	1.71	2.14	2.63	3.20	3.90	4.75	5.83
50	-	0.79	1.47	1.84	2.25	2.73	3.29	3.97	4.80
55	-	-	1.25	1.57	1.92	2.32	2.77	3.31	3.96
60	-	-	-	1.33	1.62	1.95	2.32	2.75	3.26
65	-	-	-	-	-	1.63	1.93	2.27	2.67
75	-	-	-	-	-	-	1.28	1.50	1.75

Nominal performance at to =	7.2 °C, tc = 54.4 °C		
Cooling capacity	2 532	W	
Power input	989	W	
Current consumption	2.19	A	
Mass flow	62	kg/h	
COP	2 56		

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)

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

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

Tolerance according EN12900



Maneurop reciprocating compressor. MTZ018-4

Danfoss

R404A

Performance data at 50 Hz, EN 12900 rating conditions

ond. temp. in	Evaporating temperature in °C (to)										
°C (tc)	-30	-25	-20	-15	-10	-5	0	5	10		
oling capacity	in W										
30	642	996	1 448	2 012	2 700	3 524	4 496	5 630	6 937		
35	553	876	1 288	1 801	2 429	3 182	4 074	5 118	6 324		
40	468	761	1 133	1 597	2 164	2 847	3 659	4 613	5 720		
45	389	652	984	1 397	1 905	2 519	3 251	4 115	5 122		
50	313	546	839	1 203	1 651	2 195	2 848	3 623	4 531		
55	-	444	698	1 012	1 401	1 877	2 451	3 136	3 945		
60	-	345	559	825	1 156	1 562	2 058	2 654	3 365		
war input in W											
ower input in W 30	702	823	931	1 024	1 102	1 163	1 205	1 228	1 229		
35	695	824	942	1 046	1 137	1 212	1 271	1 311	1 331		
40	690	826	953	1 068	1 171	1 260	1 334	1 392	1 431		
45	687	830	965	1 090	1 205	1 308	1 397	1 471	1 529		
50	686	836	979	1 114	1 240	1 355	1 459	1 549	1 625		
55	-	844	995	1 139	1 276	1 404	1 522	1 628	1 720		
60	-	856	1 014	1 167	1 314	1 454	1 585	1 706	1 816		
30 35	2.03	2.20	2.36	2.50	2.62	2.73	2.81	2.87 2.91	2.91		
35	2.08	2.24	2.39	2.53	2.65	2.75	2.84	2.91	2.95		
40	2.12	2.28	2.43	2.56	2.69	2.80	2.89	2.97	3.03		
45	2.16	2.31	2.46	2.60	2.73	2.85	2.96	3.05	3.13		
50	2.18	2.34	2.49	2.64	2.79	2.92	3.04	3.16	3.26		
55	-	2.35	2.52	2.68	2.84	2.99	3.14	3.28	3.41		
60	-	2.34	2.52	2.70	2.88	3.06	3.23	3.40	3.56		
ass flow in kg/h	1										
30	20	31	43	59	77	98	123	151	183		
35	19	29	41	56	74	94	118	145	177		
40	17	27	39	54	71	91	114	140	170		
45	16	25	37	51	68	87	109	135	164		
50	14	23	35	48	64	83	104	129	157		
55	-	21	32	45	61	79	99	123	150		
60	-	19	30	42	57	74	94	117	143		
pefficient of per	formanco (C (נפר									
30	0.91	1.21	1.56	1.96	2.45	3.03	3.73	4.59	5.64		
35	0.79	1.06	1.37	1.72	2.14	2.63	3.21	3.90	4.75		
40	0.68	0.92	1.19	1.49	1.85	2.26	2.74	3.31	4.00		
45	0.57	0.79	1.02	1.28	1.58	1.93	2.33	2.80	3.35		
50	0.46	0.65	0.86	1.08	1.33	1.62	1.95	2.34	2.79		
55	-	0.53	0.70	0.89	1.10	1.34	1.61	1.93	2.29		

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

Cooling capacity	1 905	W
Power input	1 205	W
Current consumption	2.73	A
Mass flow	68	kg/h
C.O.P.	1.58	

0.40

0.55

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0.88

0.71

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

1.56

73

65

1.85

dB(A)

dB(A)

1.30

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

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

Tolerance according EN12900

1.07

Sound power data

Sound power level

With accoustic hood

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Maneurop reciprocating compressor. MTZ018-4

Danfoss

R404A

Performance data at 50 Hz, ARI rating conditions

Cond. temp. in	Evaporating temperature in °C (to)										
°C (tc)	-30	-25	-20	-15	-10	-5	0	5	10		
cooling capacity i	n W										
30	715	1 105	1 604	2 223	2 975	3 875	4 934	6 166	7 583		
35	622	982	1 440	2 009	2 701	3 530	4 509	5 651	6 969		
40	534	865	1 283	1 801	2 433	3 192	4 091	5 144	6 362		
45	451	752	1 130	1 599	2 171	2 861	3 681	4 644	5 765		
50	370	643	983	1 402	1 915	2 536	3 278	4 153	5 177		
55	-	538	839	1 210	1 666	2 219	2 883	3 672	4 600		
60	-	436	700	1 025	1 423	1 910	2 499	3 204	4 039		
Power input in W											
30	702	823	931	1 024	1 102	1 163	1 205	1 228	1 229		
35	695	824	942	1 046	1 137	1 212	1 271	1 311	1 331		
40	690	826	953	1 068	1 171	1 260	1 334	1 392	1 431		
45	687	830	965	1 090	1 205	1 308	1 397	1 471	1 529		
50	686	836	979	1 114	1 240	1 355	1 459	1 549	1 625		
55	-	844	995	1 139	1 276	1 404	1 522	1 628	1 720		
60	-	856	1 014	1 167	1 314	1 454	1 585	1 706	1 816		
Surrent consump 30	tion in A 2.03	2.20	2.36	2.50	2.62	2.73	2.81	2.87	2.91		
35	2.08	2.24	2.39	2.53	2.65	2.75	2.84	2.91	2.95		
40	2.12	2.28	2.43	2.56	2.69	2.80	2.89	2.97	3.03		
45	2.16	2.31	2.46	2.60	2.73	2.85	2.96	3.05	3.13		
50	2.18	2.34	2.49	2.64	2.79	2.92	3.04	3.16	3.26		
55	-	2.35	2.52	2.68	2.84	2.99	3.14	3.28	3.41		
60	-	2.34	2.52	2.70	2.88	3.06	3.23	3.40	3.56		
Mass flow in kg/h											
30	20	30	43	58	76	97	122	150	181		
35	19	29	41	56	73	94	117	145	175		
40	17	27	39	53	70	90	113	139	169		
45	15	25	37	51	67	86	108	134	163		
50	14	23	35	48	64	82	104	128	156		
55	-	21	32	45	60	78	99	122	149		
60	-	19	30	42	57	74	94	116	142		
Coefficient of perf	ormance (C.C).P.)									
30	1.02	, 1.34	1.72	2.17	2.70	3.33	4.09	5.02	6.17		
35	0.89	1.19	1.53	1.92	2.38	2.91	3.55	4.31	5.23		
40	0.77	1.05	1.35	1.69	2.08	2.53	3.07	3.70	4.45		
45	0.66	0.91	1.17	1.47	1.80	2.19	2.64	3.16	3.77		
50	0.54	0.77	1.00	1.26	1.54	1.87	2.25	2.68	3.19		
55	-	0.64	0.84	1.06	1.31	1.58	1.89	2.26	2.67		
			1	1	1.08		1	1	2.22		

Nominal performance at to = -10	C, IC = 45 C		
Cooling capacity	2 171	W	
Power input	1 205	W	
Current consumption	2.73	A	
Mass flow	67	kg/h	
C.O.P.	1.80		

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

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

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

Sound power level

Sound power level	73	dB(A)
With accoustic hood	65	dB(A)

Tolerance according EN12900



Maneurop reciprocating compressor. MTZ018-4

Danfoss

R407A

Performance data at 50 Hz, EN 12900 rating conditions

i enormane		5 HZ, LIN 125		inditions				•	
Cond. temp. in				Evapora	ating temperatu	re in °C (to)			
°C (tc)	-30	-25	-20	-15	-10	-5	0	5	10
							-		
ooling capacit	y in W								
30	478	795	1 205	1 719	2 352	3 115	4 021	5 084	6 315
35	405	701	1 082	1 560	2 149	2 861	3 708	4 705	5 862
40	333	607	958	1 399	1 944	2 603	3 391	4 320	5 403
45	262	513	834	1 238	1 737	2 344	3 071	3 932	4 940
50	-	423	713	1 078	1 531	2 084	2 751	3 543	4 474
55	-	-	595	921	1 328	1 827	2 431	3 155	4 009
60	-	-	-	770	1 129	1 573	2 115	2 768	3 544
ower input in	w	T	1	-	1		1		1
30	533	649	757	856	942	1 013	1 064	1 093	1 097
35	521	644	762	872	971	1 057	1 124	1 172	1 196
40	505	636	764	885	997	1 097	1 182	1 248	1 292
45	486	625	762	895	1 021	1 136	1 237	1 322	1 386
50	-	612	759	903	1 042	1 172	1 290	1 394	1 479
55	-	-	753	910	1 062	1 207	1 343	1 465	1 571
60	-	-	-	915	1 081	1 242	1 395	1 536	1 663
urrent consun	•	1	1						
30	1.81	1.98	2.13	2.28	2.40	2.51	2.60	2.66	2.70
35	1.85	2.00	2.15	2.28	2.41	2.52	2.61	2.68	2.74
40	1.89	2.03	2.17	2.30	2.43	2.54	2.65	2.74	2.81
45	1.92	2.06	2.19	2.33	2.46	2.58	2.70	2.81	2.91
50	-	2.07	2.21	2.35	2.49	2.63	2.77	2.90	3.03
55	-	-	2.21	2.37	2.52	2.68	2.84	3.00	3.16
60	-	-	-	2.37	2.54	2.73	2.91	3.11	3.30
	<i>n</i> .								
lass flow in kg		10	20	20	50	<u></u>	00	407	101
30	11	19	28	39	52	68	86	107	131
35	10	17	26	37	50	65	83	104	128
40	9	16	24	35	48	63	80	100	124
45	7	14	23	33	45	60	77	97	119
50	-	13	21	31	42	57	73	92	115
55	-	-	19	28	40	53	69	88	110
60	-	-	-	25	36	50	65	83	104
Coefficient of p	erformance (C.C).P.)							
30	0.90	1.23	1.59	2.01	2.50	3.08	3.78	4.65	5.76
35	0.30	1.09	1.42	1.79	2.30	2.71	3.30	4.01	4.90
40	0.66	0.95	1.25	1.58	1.95	2.37	2.87	3.46	4.18
45	0.54	0.82	1.09	1.38	1.33	2.06	2.48	2.98	3.56
43 50	-	0.69	0.94	1.19	1.47	1.78	2.40	2.54	3.03
55	-	-	0.94	1.01	1.47	1.78	1.81	2.15	2.55
55 60	-	-	-	0.84	1.25	1.31	1.52	1.80	2.55
00	-	-	1 -	0.04	1.04	1.27	1.02	1.00	2.13
lominal perfori	mance at to = -1	0 °C, tc = 45 °C				Pressure switch	settings		
Cooling capacity		1 737	W			Maximum HP swi	-	25.8	bar(g)
Power input		1 021				Minimum LP swit	•	0.9	bar(g)
Current consumi	otion	2 46	Α			I P nump down se	ettina	12	bar(g)

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

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

2.46

45

1.70

А

kg/h

winimum LP switch setting	0.9	bar(g)	
LP pump down setting	1.2	bar(g)	
Sound power data			
Sound power level	72	dB(A)	

dB(A)

64

Tolerance according EN12900

With accoustic hood

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Current consumption

Mass flow

C.O.P.

Maneurop reciprocating compressor. MTZ018-4

Danfoss

R407A

Performance data at 50 Hz, ARI rating conditions

Cond. temp. in	Evaporating temperature in °C (to)										
°C (tc)	-30	-25	-20	-15	-10	-5	0	5	10		
	- 14/										
30	517	859	1 299	1 852	2 530	3 346	4 315	5 449	6 761		
35	441	762	1 173	1 690	2 324	3 089	3 999	5 067	6 306		
40	364	663	1 046	1 525	2 114	2 828	3 678	4 679	5 844		
45	289	566	918	1 359	1 903	2 564	3 354	4 287	5 377		
50	-	470	791	1 194	1 692	2 299	3 028	3 894	4 908		
55	-	-	669	1 032	1 483	2 036	2 704	3 501	4 440		
60	-	-	-	875	1 278	1 776	2 382	3 110	3 974		
				0.0	. 2. 0		2 002	0110			
ower input in W											
30	533	649	757	856	942	1 013	1 064	1 093	1 097		
35	521	644	762	872	971	1 057	1 124	1 172	1 196		
40	505	636	764	885	997	1 097	1 182	1 248	1 292		
45	486	625	762	895	1 021	1 136	1 237	1 322	1 386		
50	-	612	759	903	1 042	1 172	1 290	1 394	1 479		
55	-	-	753	910	1 062	1 207	1 343	1 465	1 571		
60	-	-	-	915	1 081	1 242	1 395	1 536	1 663		
urrent consump	tion in A	-	-				•				
30	1.81	1.98	2.13	2.28	2.40	2.51	2.60	2.66	2.70		
35	1.85	2.00	2.15	2.28	2.41	2.52	2.61	2.68	2.74		
40	1.89	2.03	2.17	2.30	2.43	2.54	2.65	2.74	2.81		
45	1.92	2.06	2.19	2.33	2.46	2.58	2.70	2.81	2.91		
50	-	2.07	2.21	2.35	2.49	2.63	2.77	2.90	3.03		
55	-	-	2.21	2.37	2.52	2.68	2.84	3.00	3.16		
60	-	-	-	2.37	2.54	2.73	2.91	3.11	3.30		
lass flow in kg/h											
30	11	18	27	38	52	67	85	106	131		
35	10	17	26	37	50	65	83	103	127		
40	9	16	24	35	47	62	80	100	123		
45	7	14	22	33	45	59	76	96	119		
50	-	12	21	30	42	56	73	92	114		
55	-	-	18	28	39	53	69	87	109		
60	-	-	-	25	36	49	65	83	103		
oefficient of per	ormance (C.C).P.)									
30	0.97	1.32	1.72	2.16	2.68	3.30	4.06	4.98	6.16		
35	0.85	1.18	1.54	1.94	2.39	2.92	3.56	4.32	5.27		
40	0.72	1.04	1.37	1.72	2.12	2.58	3.11	3.75	4.52		
45	0.59	0.91	1.20	1.52	1.86	2.26	2.71	3.24	3.88		
50	-	0.77	1.04	1.32	1.62	1.96	2.35	2.79	3.32		
55	-	-	0.89	1.13	1.40	1.69	2.01	2.39	2.83		
		+	2.00		1.18	1.43	1.71		2.39		

Nominal performance at to = -10 °C	c, tc = 45 °C		
Cooling capacity	1 903	W	
Power input	1 021	W	
Current consumption	2.46	Α	
Mass flow	45	kg/h	
C.O.P.	1.86		

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

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

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

S	ound	power	data
S	Sound	power l	evel

Sound power level	72	dB(A)
With accoustic hood	64	dB(A)

Tolerance according EN12900



Maneurop reciprocating compressor. MTZ018-4

Danfoss

R407F

Performance data at 50 Hz, EN 12900 rating conditions

Cond. temp. in		Evaporating temperature in °C (to)										
°C (tc)	-30	-25	-20	-15	-10	-5	0	5	10			
20 Cooling capacity i	in W _	855	1 314	1 886	2 586	3 425	4 417	5 576	6 914			
30							4 417	5 576				
35	-	731	1 149	1 671	2 311	3 082	3 997	5 070	6 312			
40	-	627	1 007	1 482	2 066	2 772	3 613	4 602	5 753			
45	-	541	886	1 317	1 848	2 492	3 262	4 172	5 233			
50	-	-	- 784	1 175	1 656	2 242	2 944	3 776	4 752			
55 60	-	-	-	1 053	1 488	2 018	2 655	3 414	4 307			
00	-	-	-	-	-	-	-	-	-			
ower input in W		1	1	1	1		1	1	1			
30	-	694	803	903	988	1 053	1 092	1 098	1 067			
35	-	693	810	922	1 023	1 108	1 171	1 205	1 205			
40	-	694	817	939	1 054	1 156	1 241	1 300	1 330			
45	-	703	828	957	1 084	1 201	1 304	1 387	1 444			
50	-	-	847	981	1 116	1 246	1 366	1 469	1 550			
55	-	-	-	1 012	1 153	1 294	1 428	1 549	1 653			
60	-	-	-	-	-	-	-	-	-			
Current consumption	tion in A											
30	-	1.98	2.14	2.29	2.42	2.53	2.60	2.65	2.66			
35	-	2.03	2.18	2.33	2.46	2.57	2.66	2.73	2.76			
40	-	2.06	2.21	2.36	2.49	2.62	2.72	2.81	2.87			
45	-	2.09	2.23	2.38	2.53	2.66	2.79	2.90	2.99			
50	-	-	2.26	2.42	2.57	2.72	2.87	3.01	3.13			
55	-	-	-	2.47	2.64	2.81	2.98	3.15	3.31			
60	-	-	-	-	-	-	-	-	-			
less flow in low/h												
Aass flow in kg/h 30	-	18	27	38	51	67	85	106	130			
	-	16		35	48	63	80		130			
35	-		25	33			76	101				
40	-	14	23 21	33	45 42	59	76	96	118			
45 50	-	- 13	20	29	42	56 54	69	91 87	113 108			
55	-	-		29	39	51	66	84	108			
60	-	-	-			-	-		- 104			
			1		1	1	1	1	1			
Coefficient of perf	formance (C.											
30	-	1.23	1.64	2.09	2.62	3.25	4.05	5.08	6.48			
35	-	1.06	1.42	1.81	2.26	2.78	3.41	4.21	5.24			
40	-	0.90	1.23	1.58	1.96	2.40	2.91	3.54	4.32			
45	-	0.77	1.07	1.38	1.71	2.07	2.50	3.01	3.62			
50	-	-	0.93	1.20	1.48	1.80	2.16	2.57	3.06			
55	-	-	-	1.04	1.29	1.56	1.86	2.20	2.61			
60	-	-	-	-	-	-	-	-	-			
Nominal performa	Ince at to = -1	0 °C, tc = 45 °C				Pressure switch	settings					
Cooling capacity		1 848	W			Maximum HP swi	tch setting	24	bar(g			
Power input		1 084	W			Minimum LP swite		1	bar(g			
Current consumption	n	2 53	Δ	1		LP nump down se	ottina	1 26	har(g)			

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

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

2.53

42

1.71

А

kg/h

Minimum LP switch setting	1	bar(g)
LP pump down setting	1.26	bar(g)
Sound power data		

Sound power level	72	dB(A)
With accoustic hood	64	dB(A)

Tolerance according EN12900

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Current consumption

Mass flow

C.O.P.

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R407F

Datasheet, performance data

Maneurop reciprocating compressor. MTZ018-4

Performance data at 50 Hz, ARI rating conditions

Cond. temp. in		Evaporating temperature in $^{\circ}$ C (to)										
°C (tc)	-30	-25	-20	-15	-10	-5	0	5	10			
Cooling capacity	in W											
30	-	917	1 407	2 018	2 763	3 656	4 712	5 942	7 362			
35	-	787	1 235	1 795	2 480	3 304	4 281	5 425	6 748			
40	-	679	1 088	1 600	2 228	2 986	3 888	4 948	6 178			
45	-	590	964	1 431	2 005	2 701	3 531	4 510	5 651			
50	-	-	860	1 286	1 810	2 446	3 208	4 110	5 165			
55	-	-	-	1 164	1 641	2 221	2 919	3 747	4 720			
60	-	-	-	-	-	-	-	-	-			

Power input in W

30	-	694	803	903	988	1 053	1 092	1 098	1 067
35	-	693	810	922	1 023	1 108	1 171	1 205	1 205
40	-	694	817	939	1 054	1 156	1 241	1 300	1 330
45	-	703	828	957	1 084	1 201	1 304	1 387	1 444
50	-	-	847	981	1 116	1 246	1 366	1 469	1 550
55	-	-	-	1 012	1 153	1 294	1 428	1 549	1 653
60	-	-	-	-	-	-	-	-	-

Current consumption in A

30	-	1.98	2.14	2.29	2.42	2.53	2.60	2.65	2.66
35	-	2.03	2.18	2.33	2.46	2.57	2.66	2.73	2.76
40	-	2.06	2.21	2.36	2.49	2.62	2.72	2.81	2.87
45	-	2.09	2.23	2.38	2.53	2.66	2.79	2.90	2.99
50	-	-	2.26	2.42	2.57	2.72	2.87	3.01	3.13
55	-	-	-	2.47	2.64	2.81	2.98	3.15	3.31
60	-	-	-	-	-	-	-	-	-

Mass flow in kg/h

30	-	18	27	38	51	66	84	105	129
35	-	16	24	35	48	62	80	100	123
40	-	14	22	33	45	59	76	95	117
45	-	13	21	31	42	56	72	91	112
50	-	-	20	29	40	53	69	87	108
55	-	-	-	28	38	51	66	83	103
60	-	-	-	-	-	-	-	-	-

Coefficient of performance (C.O.P.)

		,							
30	-	1.32	1.75	2.23	2.80	3.47	4.31	5.41	6.90
35	-	1.14	1.53	1.95	2.42	2.98	3.66	4.50	5.60
40	-	0.98	1.33	1.70	2.11	2.58	3.13	3.80	4.65
45	-	0.84	1.16	1.49	1.85	2.25	2.71	3.25	3.91
50	-	-	1.02	1.31	1.62	1.96	2.35	2.80	3.33
55	-	-	-	1.15	1.42	1.72	2.04	2.42	2.86
60	-	-	-	-	-	-	-	-	-

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

Cooling capacity	2 005	W
Power input	1 084	W
Current consumption	2.53	А
Mass flow	42	kg/h
C.O.P.	1.85	

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(g)

Sound power data

Sound power level	72	dB(A)
With accoustic hood	64	dB(A)

Tolerance according EN12900



Maneurop reciprocating compressor. MTZ018-4

Danfoss

R134a

Performance data at 50 Hz, EN 12900 rating conditions

Cond. temp. in		1			ating temperatu			· · · · ·	
°C (tc)	-25	-20	-10	-5	0	5	10	15	20
Cooling capacity	y in W	1		1	1		1	r	
35	404	649	1 357	1 839	2 419	3 107	3 913	4 846	5 916
40	330	560	1 217	1 662	2 199	2 837	3 586	4 455	5 454
45	255	470	1 075	1 484	1 978	2 566	3 257	4 062	4 989
50	180	380	933	1 307	1 757	2 295	2 928	3 669	4 525
55	-	-	795	1 131	1 539	2 026	2 602	3 278	4 063
60	-	-	-	961	1 324	1 761	2 280	2 891	3 605
65	-	-	-	-	1 116	1 502	1 964	2 511	3 152
75	-	-	-	-	-	-	1 359	1 776	2 275
						•		•	
Power input in V	v								
35	448	516	643	695	736	763	773	762	728
40	459	530	668	729	780	818	841	845	827
45	460	536	688	758	820	870	907	927	926
50	452	533	701	781	855	919	971	1 008	1 026
55	-	-	706	798	885	964	1 032	1 086	1 124
60	-	-	-	807	908	1 003	1 088	1 162	1 219
65	-	-		-	924	1 036	1 140	1 233	1 312
75	-	-	_	-	-	-	1 223	1 359	1 485
75	-	-	-	-	-	-	1 223	1 3 5 9	1 400
Current consum		1.04	1.00	1.04	1.07	2.00	2.04	2.00	0.40
35	1.81	1.84	1.90	1.94	1.97	2.00	2.04	2.08	2.12
40	1.81	1.84	1.91	1.95	1.99	2.04	2.09	2.14	2.19
45	1.80	1.84	1.92	1.97	2.02	2.08	2.14	2.20	2.27
50	1.79	1.83	1.93	1.99	2.05	2.12	2.19	2.27	2.36
55	-	-	1.94	2.01	2.08	2.16	2.25	2.34	2.44
60	-	-	-	2.02	2.11	2.20	2.30	2.41	2.53
65	-	-	-	-	2.13	2.24	2.36	2.49	2.63
75	-	-	-	-	-	-	2.48	2.64	2.82
Mass flow in kg	′h	1		T	T		1		
35	10	16	32	43	55	69	86	104	126
40	9	15	30	41	53	66	82	100	121
45	7	13	28	38	50	63	79	96	116
50	5	11	26	36	47	60	75	91	110
55	-	-	24	33	44	56	70	86	105
60	-	-	-	30	40	52	65	81	98
65	-	-	-	-	36	47	60	75	92
75	-	-	-	-	-	-	49	62	77
1		1							
Coefficient of pe	erformance (C.C).P.)							
35	0.90	1.26	2.11	2.65	3.29	4.07	5.06	6.36	8.13
40	0.72	1.06	1.82	2.28	2.82	3.47	4.27	5.27	6.60
45	0.55	0.88	1.56	1.96	2.02	2.95	3.59	4.38	5.39
43 50	0.33	0.00	1.33	1.67	2.41	2.50	3.02	3.64	4.41
55	-	-	1.33	1.42	1.74	2.10	2.52	3.02	3.62
								1	
60	-	-	-	1.19	1.46	1.76	2.09	2.49	2.96
65	-	-	-	-	1.21	1.45	1.72	2.04	2.40
75	-	-	-	-	-	-	1.11	1.31	1.53
1		0. 4 50.00				D			
Nominal perform	nance at to = 5 °			_		Pressure switch	-	~~~~	ь ()
Cooling capacity Power input		2 295	W W	1		Maximum HP swite	•	20.2	bar(g)
Power Input Current consump	ntion	919 2.12	VV A			Minimum LP swite LP pump down se	-	0.1 0.4	bar(g) bar(g)
Mass flow		60	kg/h	1				0.7	bai(g)
C.O.P.		2.50		1		Sound power dat	a		
						Sound power leve		0	dB(A)
	emperature at de					With accoustic ho		0	dB(A)

tc: Condensing temperature at dew point

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

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Tolerance according EN12900

Maneurop reciprocating compressor. MTZ018-4

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Cond. temp. in °C (tc) -25 Cooling capacity in W 35 439 35 439 40 361 40 361 45 281 50 - - 65 - 60 - - 65 - - 75 - - - - 66 - - 65 -	-20 705 611 516 420 - - - - - - 516 530	-10 1 467 1 322 1 175 1 028 882 - - - - 643 668	Evapora -5 1 985 1 804 1 620 1 435 1 253 1 073 - - 695 729	2 607 2 382 2 154 1 926 1 699 1 475 - - 736	in °C (to) 5 3 344 3 068 2 789 2 510 2 231 1 956 1 686 - 763	10 4 205 3 871 3 535 3 197 2 860 2 526 2 198 1 564 773	15 5 201 4 802 4 400 3 997 3 595 3 196 2 802 2 036	20 6 341 5 871 5 397 4 922 4 447 3 976 3 509 2 597
Cooling capacity in W 35 439 40 361 45 281 50 - 55 - 60 - 65 - 75 - Power input in W 35 35 448 40 459 45 460 50 - 65 - 60 - 65 - 60 - 65 - 60 - 65 - 75 - 60 - 65 - 75 - Current consumption in A 35 35 1.81	705 611 516 420 - - - - 516	1 467 1 322 1 175 1 028 882 - - - - 643 668	1 985 1 804 1 620 1 435 1 253 1 073 - - - 695	2 607 2 382 2 154 1 926 1 699 1 475 - - 736	3 344 3 068 2 789 2 510 2 231 1 956 1 686 -	4 205 3 871 3 535 3 197 2 860 2 526 2 198 1 564	5 201 4 802 4 400 3 997 3 595 3 196 2 802 2 036	6 341 5 871 5 397 4 922 4 447 3 976 3 509
35 439 40 361 45 281 50 - 55 - 60 - 65 - 75 - 90wer input in W 35 35 448 40 459 45 460 50 - 55 - 60 - 65 - 75 - 60 - 65 - 75 - 60 - 65 - 75 - Current consumption in A 35 1.81	611 516 420 - - - - - 516	1 322 1 175 1 028 882 - - - - 643 668	1 804 1 620 1 435 1 253 1 073 - - 695	2 382 2 154 1 926 1 699 1 475 - - 736	3 068 2 789 2 510 2 231 1 956 1 686 -	3 871 3 535 3 197 2 860 2 526 2 198 1 564	4 802 4 400 3 997 3 595 3 196 2 802 2 036	5 871 5 397 4 922 4 447 3 976 3 509
35 439 40 361 45 281 50 - 55 - 60 - 65 - 75 - 90wer input in W 35 35 448 40 459 45 460 50 - 55 - 60 - 55 - 60 - 55 - 60 - 55 - 60 - 75 - Current consumption in A 35 35 1.81	611 516 420 - - - - - 516	1 322 1 175 1 028 882 - - - - 643 668	1 804 1 620 1 435 1 253 1 073 - - 695	2 382 2 154 1 926 1 699 1 475 - - 736	3 068 2 789 2 510 2 231 1 956 1 686 -	3 871 3 535 3 197 2 860 2 526 2 198 1 564	4 802 4 400 3 997 3 595 3 196 2 802 2 036	5 871 5 397 4 922 4 447 3 976 3 509
40 361 45 281 50 - 55 - 60 - 65 - 75 - Power input in W 35 448 40 459 45 460 50 - 60 - 65 - 60 - 65 - 60 - 65 - 75 - 60 - 65 - 75 - Current consumption in A 35 35 1.81	611 516 420 - - - - - 516	1 322 1 175 1 028 882 - - - - 643 668	1 804 1 620 1 435 1 253 1 073 - - 695	2 382 2 154 1 926 1 699 1 475 - - 736	3 068 2 789 2 510 2 231 1 956 1 686 -	3 871 3 535 3 197 2 860 2 526 2 198 1 564	4 802 4 400 3 997 3 595 3 196 2 802 2 036	5 871 5 397 4 922 4 447 3 976 3 509
45 281 50 - 55 - 60 - 65 - 75 - Power input in W 35 448 40 459 45 460 50 - 55 - 60 - 65 - 75 - 60 - 65 - 75 - Current consumption in A 35 35 1.81	516 420 - - - - - 516	1 175 1 028 882 - - - - 643 668	1 620 1 435 1 253 1 073 - - - 695	2 154 1 926 1 699 1 475 - - 736	2 789 2 510 2 231 1 956 1 686 -	3 535 3 197 2 860 2 526 2 198 1 564	4 400 3 997 3 595 3 196 2 802 2 036	5 397 4 922 4 447 3 976 3 509
50 - 55 - 60 - 65 - 75 - Power input in W 35 448 40 459 45 460 50 - 55 - 60 - 65 - 75 - Current consumption in A 35 35 1.81	420 - - - - - 516	1 028 882 - - - - 643 668	1 435 1 253 1 073 - - 695	1 926 1 699 1 475 - - 736	2 510 2 231 1 956 1 686 -	3 197 2 860 2 526 2 198 1 564	3 997 3 595 3 196 2 802 2 036	4 922 4 447 3 976 3 509
55 - 60 - 65 - 75 - Power input in W 35 448 40 459 45 460 50 - 55 - 60 - 65 - 75 - Current consumption in A 35 1.81	- - - - - 516	882 - - - - 643 668	1 253 1 073 - - 695	1 699 1 475 - - 736	2 231 1 956 1 686 -	2 860 2 526 2 198 1 564	3 595 3 196 2 802 2 036	4 447 3 976 3 509
60 - 65 - 75 - Power input in W 35 35 448 40 459 45 460 50 - 55 - 60 - 65 - 75 - Current consumption in A 35 1.81	- - - 516	- - - 643 668	1 073 - - 695	1 475 - - 736	1 956 1 686 -	2 526 2 198 1 564	3 196 2 802 2 036	3 976 3 509
65 - 75 - 75 - 35 448 40 459 45 460 50 - 55 - 60 - 65 - 75 - Current consumption in A 35 1.81	516	- - 643 668	- - 695	736	1 686	2 198 1 564	2 802 2 036	3 509
75 - Power input in W 35 448 40 459 45 460 50 - 55 - 60 - 65 - 75 - Current consumption in A 35 1.81	- 516	- 643 668	- 695	- 736	-	1 564	2 036	
Power input in W 35 448 40 459 45 460 50 - 55 - 60 - 65 - 75 - Current consumption in A 35 35 1.81	516	643 668	695	736			1	2 597
35 448 40 459 45 460 50 - 55 - 60 - 65 - 75 - Current consumption in A 35 1.81		668			763	773	T	-
45 460 50 - 55 - 60 - 65 - 75 - Current consumption in A 35 1.81	530	-	729	700			762	728
50 - 55 - 60 - 65 - 75 - Current consumption in A 35 1.81		-		780	818	841	845	827
50 - 55 - 60 - 65 - 75 - Current consumption in A 35 1.81	536	688	758	820	870	907	927	926
60 - 65 - 75 - Current consumption in A 35 1.81	533	701	781	855	919	971	1 008	1 026
65 - 75 - Current consumption in A 35 35 1.81	-	706	798	885	964	1 032	1 086	1 124
75 - Current consumption in A 35 1.81	-	-	807	908	1 003	1 088	1 162	1 219
Current consumption in A 35 1.81	-	-	-	-	1 036	1 140	1 233	1 312
35 1.81	-	-	-	-	-	1 223	1 359	1 485
							1	
40 1.81	1.84	1.90	1.94	1.97	2.00	2.04	2.08	2.12
	1.84	1.91	1.95	1.99	2.04	2.09	2.14	2.19
45 1.80	1.84	1.92	1.97	2.02	2.08	2.14	2.20	2.27
50 -	1.83	1.93	1.99	2.05	2.12	2.19	2.27	2.36
55 -	-	1.94	2.01	2.08	2.16	2.25	2.34	2.44
60 -	-	-	2.02	2.11	2.20	2.30	2.41	2.53
65 -	-	-	-	-	2.24	2.36	2.49	2.63
75 -	-	-	-	-	-	2.48	2.64	2.82

35	10	16	32	42	55	69	85	104	125
40	9	15	30	40	52	66	82	100	120
45	7	13	28	38	50	63	78	96	115
50	-	11	26	36	47	59	74	91	110
55	-	-	24	33	43	56	70	86	104
60	-	-	-	30	40	52	65	80	98
65	-	-	-	-	-	47	60	75	91
75	-	-	-	-	-	-	49	62	77

Coefficient of performance (C.O.P.)

35	0.98	1.36	2.28	2.86	3.54	4.38	5.44	6.83	8.71
40	0.79	1.15	1.98	2.48	3.06	3.75	4.61	5.69	7.10
45	0.61	0.96	1.71	2.14	2.63	3.20	3.90	4.75	5.83
50	-	0.79	1.47	1.84	2.25	2.73	3.29	3.97	4.80
55	-	-	1.25	1.57	1.92	2.32	2.77	3.31	3.96
60	-	-	-	1.33	1.62	1.95	2.32	2.75	3.26
65	-	-	-	-	-	1.63	1.93	2.27	2.67
75	-	-	-	-	-	-	1.28	1.50	1.75

Nominal performance at to =	7.2 °C, tc = 54.4 °C		
Cooling capacity	2 532	W	
Power input	989	W	
Current consumption	2.19	A	
Mass flow	62	kg/h	
COP	2 56		

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)

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

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

Tolerance according EN12900



Maneurop reciprocating compressor. MTZ018-4

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Performance data at 50 Hz. EN 12900 rating conditions

Performanc	e data at 50) Hz, EN 129	2900 rating conditions							
Cond. temp. in				Evapor	ating temperature	in °C (to)				
°C (tc)	-15	-10	-5	0	5	10	15			
Cooling capacity	' in W									
35	1 445	2 054	2 784	3 651	4 668	5 848	7 207	-	-	
40	1 255	1 824	2 503	3 306	4 249	5 344	6 607	-	-	
45	1 076	1 606	2 235	2 978	3 848	4 861	6 029	-	-	
50	-	1 399	1 981	2 665	3 466	4 397	5 474	-	-	
55	-	-	1 739	2 367	3 100	3 953	4 939	-	-	
60	-	-	-	2 082	2 750	3 526	4 424	-	-	
65	-	-	-	1 811	2 415	3 116	3 929	-	-	
Power input in V										
35	794	878	948	1 005	1 050	1 084	1 109	-	-	
40	812	912	996	1 066	1 123	1 167	1 201	-	-	
45	820	938	1 040	1 125	1 197	1 255	1 301	-	-	
50	-	957	1 078	1 182	1 271	1 345	1 406	-	-	
55	-	-	1 110	1 235	1 344	1 437	1 516	-	-	
60	-	-	-	1 284	1 415	1 530	1 629	-	-	
65	-	-	-	1 326	1 484	1 623	1 745	-	-	
urrent consum	ntion in A									
35	2.32	2.36	2.41	2.45	2.50	2.53	2.56	-	-	
40	2.32	2.39	2.45	2.51	2.57	2.62	2.65	-		
45	2.32	2.41	2.49	2.57	2.65	2.71	2.76	-	-	
50	-	2.42	2.53	2.64	2.73	2.82	2.88	-	-	
55	-	-	2.56	2.70	2.82	2.93	3.02	-	-	
60	-	-	-	2.76	2.91	3.05	3.16	-	-	
65	-	-	-	2.81	3.00	3.17	3.32	-	-	
/lass flow in kg/	h									
35	31	44	58	75	95	117	143	-	-	
40	29	41	55	72	91	112	137	-	-	
45	26	38	52	68	86	107	131	-	-	
50	-	35	49	64	82	103	126	-	-	
55	-	-	46	61	78	98	120	-	-	
60	-	-	-	57	74	93	115	-	-	
65	-	-	-	54	70	89	110	-	-	
coefficient of pe	rformanco (C O	N P)								
35	1.82	2.34	2.94	3.63	4.45	5.39	6.50	-	-	
40	1.55	2.00	2.51	3.10	3.78	4.58	5.50	-		
45	1.31	1.71	2.15	2.65	3.22	3.87	4.64	-	-	
50	-	1.46	1.84	2.25	2.73	3.27	3.89	-	_	
55	-	-	1.57	1.92	2.31	2.75	3.26	-	_	
60	-	-	-	1.62	1.94	2.30	2.72	-	-	
65	-	-	-	1.37	1.63	1.92	2.25	-	-	

Cooling capacity	3 466	W	
Power input	1 271	W	
Current consumption	2.73	A	
Mass flow	82	kg/h	
C.O.P.	2.73		

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Flessure 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)

dB(A)

dB(A)

72

64

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

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

With accoustic hood

Sound power data

Sound power level

Tolerance according EN12900



Maneurop reciprocating compressor. MTZ018-4

<u>Danfoss</u>

R407C

Performance data at 50 Hz, ARI rating conditions

Cond. temp. in		Evaporating temperature in °C (to)										
°C (tc)	-15	-10	-5	0	5	10	15					
Cooling capacity	y in W											
35	1 555	2 208	2 990	3 916	5 001	6 259	7 706	-	-			
40	1 359	1 971	2 701	3 564	4 574	5 747	7 098	-	-			
45	1 172	1 746	2 427	3 229	4 167	5 257	6 513	-	-			
50	-	1 533	2 166	2 910	3 778	4 787	5 950	-	-			
55	-	-	1 918	2 606	3 407	4 337	5 411	-	-			
60	-	-	-	2 316	3 052	3 906	4 893	-	-			
65	-	-	-	2 040	2 714	3 495	4 397	-	-			
Power input in W	v											
35	794	878	948	1 005	1 050	1 084	1 109	-	-			
40	812	912	996	1 066	1 123	1 167	1 201	-	-			
45	820	938	1 040	1 125	1 197	1 255	1 301	-	-			

40	812	912	996	1 066	1 123	1 167	1 201	-	-
45	820	938	1 040	1 125	1 197	1 255	1 301	-	-
50	-	957	1 078	1 182	1 271	1 345	1 406	-	-
55	-	-	1 110	1 235	1 344	1 437	1 516	-	-
60	-	-	-	1 284	1 415	1 530	1 629	-	-
65	-	-	-	1 326	1 484	1 623	1 745	-	-

Current consumption in A

35	2.32	2.36	2.41	2.45	2.50	2.53	2.56	-	-
40	2.32	2.39	2.45	2.51	2.57	2.62	2.65	-	-
45	2.32	2.41	2.49	2.57	2.65	2.71	2.76	-	-
50	-	2.42	2.53	2.64	2.73	2.82	2.88	-	-
55	-	-	2.56	2.70	2.82	2.93	3.02	-	-
60	-	-	-	2.76	2.91	3.05	3.16	-	-
65	-	-	-	2.81	3.00	3.17	3.32	-	-

Mass flow in kg/h

35	31	44	58	75	94	117	142	-	-
40	29	41	55	71	90	112	136	-	-
45	26	38	52	68	86	107	131	-	-
50	-	35	48	64	82	102	125	-	-
55	-	-	45	60	78	97	120	-	-
60	-	-	-	57	74	93	114	-	-
65	-	-	-	54	70	88	109	-	-

Coefficient of performance (C.O.P.)

		/							
35	1.96	2.52	3.15	3.90	4.76	5.77	6.95	-	-
40	1.67	2.16	2.71	3.34	4.07	4.92	5.91	-	-
45	1.43	1.86	2.33	2.87	3.48	4.19	5.01	-	-
50	-	1.60	2.01	2.46	2.97	3.56	4.23	-	-
55	-	-	1.73	2.11	2.53	3.02	3.57	-	-
60	-	-	-	1.80	2.16	2.55	3.00	-	-
65	-	-	-	1.54	1.83	2.15	2.52	-	-

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

Cooling capacity	3 847	W
Power input	1 377	W
Current consumption	2.86	А
Mass flow	87	kg/h
C.O.P.	2.79	

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

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

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

Sound power data

Sound power level	72	dB(A)
With accoustic hood	64	dB(A)

Tolerance according EN12900



Danfoss

Maneurop reciprocating compressor. MTZ018-4

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

R448A

Cond. temp. in		-		Evapora	ating temperature	e in °C (to)			
°C (tc)	-30	-25	-20	-15	-10	-5	0	5	10
Cooling capacity i	in W								
10	-	1 630	2 213	2 917	3 750	_	_	_	-
20	-	1 285	1 802	2 426	3 165	4 031	5 035	_	-
30	_	975	1 428	1 974	2 621	3 380	4 261	5 276	6 441
40	-	-	1 420	1 563	2 120	2 774	3 535	4 412	5 420
50	-	_	-	1 193	1 663	2 214	2 857	3 600	4 454
60	-	-	-	-	1 251	1 703	2 230	2 841	3 544
00	-	-	-	-	1201	1703	2 230	2 041	5 544
Power input in W									
10	-	618	658	673	660	-	-	-	-
20	-	653	727	781	810	813	784	-	-
30	-	661	766	855	924	969	988	977	933
40	-	-	781	901	1 006	1 091	1 154	1 191	1 199
50	-	-	-	925	1 062	1 183	1 286	1 368	1 424
60	-	-	-	-	1 097	1 252	1 392	1 514	1 616
Current consump		0.00	0.77	0.01	0.00			<u>г</u>	
10	-	2.69	2.77	2.84	2.88	-	-	-	-
20	-	2.34	2.43	2.50	2.55	2.57	2.55	-	-
30	-	2.23	2.31	2.39	2.46	2.51	2.53	2.51	2.45
40	-	-	2.32	2.41	2.51	2.59	2.66	2.69	2.69
50	-	-	-	2.46	2.59	2.71	2.83	2.92	2.99
60	-	-	-	-	2.60	2.77	2.94	3.10	3.25
Mass flow in kg/h									
10	-	26	36	48	62	-	-	-	-
20		20	30	43	56	72	91		-
30	-	19	27	38	50	66	84	- 105	130
					1				
40	-	-	23	33	45	59	76	96	120
50	-	-	-	28	39	53	69	88	110
60	-	-	-	-	34	46	62	79	101
Coefficient of per	formance (C.0	D.P.)							
10	-	2.64	3.37	4.34	5.69	-	-	-	-
20	-	1.97	2.48	3.11	3.91	4.96	6.42	-	-
30	-	1.47	1.86	2.31	2.84	3.49	4.31	5.40	6.90
40	-	-	1.40	1.73	2.11	2.54	3.06	3.71	4.52
50	-	-	-	1.29	1.57	1.87	2.22	2.63	3.13
60	-	-	-	-	1.14	1.36	1.60	1.88	2.19
								·	
Nominal performa	ince at to = -1					Pressure switch			
Cooling capacity		1 886	W			Maximum HP swit		27.7	bar(g)
Power input Current consumption	an	1 036 2.55	W A			Minimum LP swite		1	bar(g)
Mass flow		2.55 42	A kg/h				sung	1.3	bar(g)
C.O.P.		1.82	Ng/11			Sound power da	ta		
				 I		Sound power leve		74	dB(A)
						With accoustic ho		66	dB(A)

Rating conditions : Suction gas temp. = 20 °C , Subcooling = 0 K

Tolerance according EN12900



Maneurop reciprocating compressor. MTZ018-4

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R448A

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

Cond. temp. in		Evaporating temperature in °C (to)								
°C (tc)	-30	-25	-20	-15	-10	-5	0	5	10	

Cooling capacity in W

10	1 160	1 638	2 226	2 935	3 774	-	-	-	-
20	855	1 276	1 795	2 421	3 164	4 035	5 044	-	-
30	589	955	1 405	1 950	2 599	3 363	4 251	5 274	6 441
40	361	674	1 059	1 524	2 081	2 739	3 508	4 398	5 420
50	-	436	756	1 144	1 610	2 164	2 816	3 576	4 454
60	-	-	499	811	1 188	1 640	2 176	2 807	3 544

Power input in W

10	557	618	658	673	660	-	-	-	-
20	562	653	727	781	810	813	784	-	-
30	543	661	766	855	924	969	988	977	933
40	506	648	781	901	1 006	1 091	1 154	1 191	1 199
50	-	619	776	925	1 062	1 183	1 286	1 368	1 424
60	-	-	759	932	1 097	1 252	1 392	1 514	1 616

Current consumption in A

10	2.59	2.69	2.77	2.84	2.88	-	-	-	-
20	2.26	2.34	2.43	2.50	2.55	2.57	2.55	-	-
30	2.15	2.23	2.31	2.39	2.46	2.51	2.53	2.51	2.45
40	2.15	2.23	2.32	2.41	2.51	2.59	2.66	2.69	2.69
50	-	2.24	2.34	2.46	2.59	2.71	2.83	2.92	2.99
60	-	-	2.28	2.43	2.60	2.77	2.94	3.10	3.25

Mass flow in kg/h

10	22	31	41	54	68	-	-	-	-
20	18	26	36	48	62	78	96	-	-
30	14	22	31	42	55	71	88	108	130
40	9	17	26	37	49	64	80	99	120
50	-	12	21	31	43	57	72	90	110
60	-	-	16	26	37	50	65	82	101

Coefficient of performance (C.O.P.)

10	2.08	2.65	3.38	4.36	5.72	-	-	-	-
20	1.52	1.95	2.47	3.10	3.91	4.97	6.43	-	-
30	1.09	1.44	1.83	2.28	2.81	3.47	4.30	5.40	6.90
40	0.71	1.04	1.36	1.69	2.07	2.51	3.04	3.69	4.52
50	-	0.70	0.97	1.24	1.52	1.83	2.19	2.61	3.13
60	-	-	0.66	0.87	1.08	1.31	1.56	1.85	2.19

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

Cooling capacity	1 839	W
Power input	1 036	W
Current consumption	2.55	А
Mass flow	46	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

oouna ponor auta		
Sound power level	74	dB(A)
With accoustic hood	66	dB(A)

Tolerance according EN12900



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Maneurop reciprocating compressor. MTZ018-4

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

Cond. temp. in				Evapora	ating temperature	e in °C (to)			
°C (tc)	-30	-25	-20	-15	-10	-5	0	5	10
Cooling capacity i	in W								
10	-	1 633	2 217	2 920	3 754	-	-		-
20	-	1 287	1 806	2 429	3 168	4 034	5 038	_	-
30	_	977	1 431	1 977	2 625	3 383	4 264	5 278	6 441
40	-	-	1 095	1 566	2 123	2 777	3 537	4 414	5 420
50	-	_	-	1 196	1 666	2 218	2 860	3 602	4 454
60	-	-	-	-	1 254	1 706	2 233	2 843	3 544
00	-	_	-	-	1254	1700	2 233	2 043	5 544
Power input in W		-							
10	-	618	658	673	660	-	-	-	-
20	-	653	727	781	810	813	784	-	-
30	-	661	766	855	924	969	988	977	933
40	-	-	781	901	1 006	1 091	1 154	1 191	1 199
50	-	-	-	925	1 062	1 183	1 286	1 368	1 424
60	-	-	-	-	1 097	1 252	1 392	1 514	1 616
	tion in A								
10	-	2.69	2.77	2.84	2.88	-	_	-	-
20	-	2.34	2.43	2.50	2.55	2.57	2.55	-	-
30	-	2.23	2.31	2.39	2.46	2.51	2.53	2.51	2.45
40	-	-	2.32	2.41	2.51	2.59	2.66	2.69	2.69
50	-	-	-	2.46	2.59	2.71	2.83	2.92	2.99
60	_	_	_	-	2.60	2.77	2.94	3.10	3.25
00					2.00	2.11	2.01	0.10	0.20
Mass flow in kg/h		•		1		1		, , , , , , , , , , , , , , , , , , , ,	
10	-	27	37	49	63	-	-	-	-
20	-	23	32	44	58	74	93	-	-
30	-	19	28	39	52	67	85	107	132
40	-	-	23	34	46	60	78	98	122
50	-	-	-	29	40	54	70	90	113
60	-	-	-	-	35	48	63	81	103
Coofficient of nort									
10	-	2.64	3.37	4.34	5.69	-	-	-	-
20	-	1.97	2.48	3.11	3.91	4.96	6.42	-	-
30	-	1.48	1.87	2.31	2.84	3.49	4.31	5.40	6.90
40	-	-	1.40	1.74	2.11	2.55	3.07	3.71	4.52
50	-	-	-	1.29	1.57	1.87	2.22	2.63	3.13
60	-	-	-	-	1.14	1.36	1.60	1.88	2.19
				·	·			· .	
Nominal performa Cooling capacity	ince at to = -1	0 °C, tc = 45 °C 1 889	W			Pressure switch Maximum HP swi		27.7	bar(g)
Power input		1 036	Ŵ			Minimum LP swite		1	bar(g)
Current consumption	on	2.55	A			LP pump down se	-	1.3	bar(g)
Mass flow		43	kg/h				č	-	
C.O.P.		1.82	-			Sound power da			
_						Sound power leve		73	dB(A)
to: Evaporating terr	noraturo at de	w point				With accoustic ho		65	dB(A)

Rating conditions : Suction gas temp. = 20 °C , Subcooling = 0 K

Tolerance according EN12900



Maneurop reciprocating compressor. MTZ018-4

Danfoss

R449A

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

Cond. temp. in	Evaporating temperature in °C (to)								
°C (tc)	-30	-25	-20	-15	-10	-5	0	5	10

Cooling capacity in W

10	1 160	1 638	2 226	2 935	3 774	-	-	-	-
20	855	1 276	1 795	2 421	3 164	4 035	5 044	-	-
30	589	955	1 405	1 950	2 599	3 363	4 251	5 274	6 441
40	361	674	1 059	1 524	2 081	2 739	3 508	4 398	5 420
50	-	436	756	1 144	1 610	2 164	2 816	3 576	4 454
60	-	-	499	811	1 188	1 640	2 176	2 807	3 544

Power input in W

10	557	618	658	673	660	-	-	-	-
20	562	653	727	781	810	813	784	-	-
30	543	661	766	855	924	969	988	977	933
40	506	648	781	901	1 006	1 091	1 154	1 191	1 199
50	-	619	776	925	1 062	1 183	1 286	1 368	1 424
60	-	-	759	932	1 097	1 252	1 392	1 514	1 616

Current consumption in A

10	2.59	2.69	2.77	2.84	2.88	-	-	-	-
20	2.26	2.34	2.43	2.50	2.55	2.57	2.55	-	-
30	2.15	2.23	2.31	2.39	2.46	2.51	2.53	2.51	2.45
40	2.15	2.23	2.32	2.41	2.51	2.59	2.66	2.69	2.69
50	-	2.24	2.34	2.46	2.59	2.71	2.83	2.92	2.99
60	-	-	2.28	2.43	2.60	2.77	2.94	3.10	3.25

Mass flow in kg/h

10	22	32	42	55	70	-	-	-	-
20	18	27	37	49	63	79	98	-	-
30	14	22	32	43	57	72	90	110	132
40	9	17	27	38	50	65	82	101	122
50	-	13	22	32	44	58	74	92	113
60	-	-	17	27	38	51	66	84	103

Coefficient of performance (C.O.P.)

10	2.08	2.65	3.38	4.36	5.72	-	-	-	-
20	1.52	1.95	2.47	3.10	3.91	4.97	6.43	-	-
30	1.09	1.44	1.83	2.28	2.81	3.47	4.30	5.40	6.90
40	0.71	1.04	1.36	1.69	2.07	2.51	3.04	3.69	4.52
50	-	0.70	0.97	1.24	1.52	1.83	2.19	2.61	3.13
60	-	-	0.66	0.87	1.08	1.31	1.56	1.85	2.19

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

Cooling capacity	1 839	W
Power input	1 036	W
Current consumption	2.55	А
Mass flow	47	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

oound power duta		
Sound power level	73	dB(A)
With accoustic hood	65	dB(A)

Tolerance according EN12900



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Maneurop reciprocating compressor. MTZ018-4

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

Cond. temp. in				Evapora	ting temperatu	re in °C (to)			
°C (tc)	-30	-25	-20	-15	-10	-5	0	5	10
Seeling severity.	\A /								
10		1 842	2 424	3 136	3 990		-	-	-
	-		2 068	2 703				-	-
20		1 546			3 462	4 355	5 397		
30	-	1 243	1 705	2 263	2 926	3 705	4 613	5 661	6 865
40	-	936	1 339	1 819	2 386	3 051	3 825	4 717	5 742
50	-	-	972	1 375	1 847	2 398	3 038	3 776	4 621
60	-	-	-	933	1 312	1 750	2 258	2 842	3 509
Power input in W									
10	-	693	724	733	718	-	-	-	-
20	-	747	811	855	875	871	841	-	-
30	-	772	872	952	1 009	1 044	1 054	1 038	994
40	-	759	896	1 014	1 112	1 187	1 239	1 266	1 267
50	-	-	873	1 032	1 172	1 290	1 387	1 459	1 506
60	-	-	-	995	1 172	1 343	1 486	1 607	1 703
		<u> </u>					. 100		
Current consump	tion in A			-					
10	-	2.24	2.26	2.27	2.25	-	-	-	-
20	-	2.27	2.32	2.36	2.38	2.37	2.34	-	-
30	-	2.30	2.38	2.44	2.50	2.53	2.55	2.53	2.48
40	-	2.30	2.41	2.51	2.61	2.69	2.75	2.79	2.79
50	-	-	2.42	2.56	2.69	2.82	2.93	3.02	3.09
60	-	-	-	2.56	2.74	2.92	3.08	3.23	3.37
				·					
Mass flow in kg/h 10	-	38	51	66	84	-	-	-	-
20	-	34	46	61	78	99	124	-	-
30	-	30	42	55	72	92	116	144	178
40	-	25	36	50	66	85	107	134	167
50	-	-	30	43	58	76	98	124	154
		+ +						1	
60	-	-	-	35	49	67	87	112	141
Coefficient of per	formance (C.C			1	1		1	· · · · ·	
10	-	2.66	3.35	4.28	5.56	-	-	-	-
20	-	2.07	2.55	3.16	3.96	5.00	6.42	-	-
30	-	1.61	1.96	2.38	2.90	3.55	4.38	5.45	6.90
40	-	1.23	1.49	1.79	2.15	2.57	3.09	3.72	4.53
50	-	-	1.11	1.33	1.58	1.86	2.19	2.59	3.07
60	-	-	-	0.94	1.11	1.30	1.52	1.77	2.06
lominal performa	ance at to $= -1$	0 °C to = 45 °C				Pressure switch	sottings		
Cooling capacity	ut to1	2 116	W			Maximum HP swi	-	27.7	bar(g)
Power input		1 147	W			Minimum LP swite	•	1	bar(g)
Current consumpti	on	2.65	A			LP pump down se	-	1.3	bar(g)
lass flow		62	kg/h			<u> </u>	-		.0/
C.O.P.		1.84				Sound power da			
						Sound power leve	el	76	dB(A)
e e 🗖 e e e e e e e e e e e e e e e e e	nperature at de	nu naint				With accoustic ho		68	dB(A)

tc: Condensing temperature at dew point

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

Sound power level	76
With accoustic hood	68

Tolerance according EN12900



Maneurop reciprocating compressor. MTZ018-4

Danfoss

R452A

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

Cond. temp. in		Evaporating temperature in °C (to)										
°C (tc)	-30	-25	-20	-15	-10	-5	0	5	10			

Cooling capacity in W

<u> </u>									
10	1 333	1 793	2 373	3 088	3 948	-	-	-	-
20	1 068	1 480	1 996	2 629	3 392	4 297	5 355	-	-
30	801	1 165	1 616	2 168	2 832	3 621	4 548	5 625	6 865
40	538	853	1 239	1 708	2 273	2 946	3 741	4 668	5 742
50	285	550	869	1 255	1 720	2 277	2 937	3 715	4 621
60	-	261	513	814	1 178	1 618	2 144	2 770	3 509

Power input in W

10	641	693	724	733	718	-	-	-	-
20	663	747	811	855	875	871	841	-	-
30	654	772	872	952	1 009	1 044	1 054	1 038	994
40	604	759	896	1 014	1 112	1 187	1 239	1 266	1 267
50	502	696	873	1 032	1 172	1 290	1 387	1 459	1 506
60	-	574	793	995	1 179	1 343	1 486	1 607	1 703

Current consumption in A

10	2.20	2.24	2.26	2.27	2.25	-	-	-	-
20	2.22	2.27	2.32	2.36	2.38	2.37	2.34	-	-
30	2.22	2.30	2.38	2.44	2.50	2.53	2.55	2.53	2.48
40	2.20	2.30	2.41	2.51	2.61	2.69	2.75	2.79	2.79
50	2.14	2.28	2.42	2.56	2.69	2.82	2.93	3.02	3.09
60	-	2.21	2.38	2.56	2.74	2.92	3.08	3.23	3.37

Mass flow in kg/h

10	34	45	58	74	93	-	-	-	-
20	29	40	53	68	86	107	131	-	-
30	25	35	48	62	79	99	122	149	178
40	19	29	42	56	72	91	113	138	167
50	12	22	34	48	64	82	103	127	154
60	-	14	25	39	54	72	92	115	141

Coefficient of performance (C.O.P.)

10	2.08	2.59	3.28	4.21	5.50	-	-	-	-
20	1.61	1.98	2.46	3.08	3.88	4.93	6.37	-	-
30	1.22	1.51	1.85	2.28	2.81	3.47	4.32	5.42	6.90
40	0.89	1.12	1.38	1.68	2.04	2.48	3.02	3.69	4.53
50	0.57	0.79	1.00	1.22	1.47	1.76	2.12	2.55	3.07
60	-	0.45	0.65	0.82	1.00	1.20	1.44	1.72	2.06

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

Cooling capacity	1 995	W
Power input	1 147	W
Current consumption	2.65	A
Mass flow	68	kg/h
C.O.P.	1.74	

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	76	dB(A)
With accoustic hood	68	dB(A)

Tolerance according EN12900



Maneurop reciprocating compressor. MTZ018-4

Performance data at 60 Hz, EN 12900 rating conditions

Cond. temp. in				Evapora	ating temperature	in °C (to)			
°C (tc)	-15	-10	-5	0	5	10	15		
Cooling capacity		0.740	0.000	4.044	5 704	7 400	0.074		
35	2 010	2 742	3 603	4 611	5 781	7 130	8 674	-	-
40	1 788	2 490	3 312	4 271	5 383	6 665	8 132	-	-
45	1 556	2 225	3 006	3 915	4 967	6 179	7 567	-	-
50	-	1 952	2 690	3 546	4 536	5 676	6 982	-	-
55	-	-	2 365	3 166	4 091	5 157	6 379	-	-
60	-	-	-	2 778	3 636	4 625	5 761	-	-
65	-	-	-	2 384	3 173	4 083	5 130	-	-
Power input in W									
35	1 007	1 108	1 180	1 229	1 259	1 275	1 283	-	-
40	1 031	1 161	1 259	1 329	1 376	1 406	1 424	-	-
45	1 034	1 198	1 325	1 421	1 490	1 538	1 570	-	-
50	-	1 214	1 375	1 501	1 596	1 667	1 717	-	-
55	-	-	1 406	1 567	1 693	1 790	1 862	-	-
60	-	-	-	1 614	1 775	1 903	2 003	-	-
65	-	-	-	1 640	1 841	2 004	2 135	-	-
35	2.13	2.21	2.27	2.31	2.34	2.37	2.40	-	-
35	2.13	2.21	2.27	2.31	2.34	2.37	2.40	-	-
40	2.15	2.26	2.34	2.40	2.45	2.48	2.51	-	-
45	2.16	2.30	2.41	2.50	2.56	2.61	2.65	-	-
50	-	2.32	2.47	2.58	2.68	2.75	2.81	-	-
55	-	-	2.50	2.66	2.79	2.89	2.97	-	-
60	-	-	-	2.71	2.88	3.02	3.14	-	-
65	-	-	-	2.74	2.96	3.14	3.29	-	-
Mass flow in kg/h									
35	44	59	76	95	118	143	172	-	-
40	41	56	73	93	115	140	169	-	-
45	38	53	70	89	112	137	165	-	-
50	-	49	66	86	108	133	160	-	-
55	-	-	62	81	103	128	155	-	-
60	-	_	-	76	98	122	150	-	-
65	-	_	-	71	92	117	143	-	-
Coefficient of per	formance (C.C	D.P.)		1					
35	2.00	2.47	3.05	3.75	4.59	5.59	6.76	-	-
40	1.73	2.14	2.63	3.21	3.91	4.74	5.71	-	-
45	1.50	1.86	2.27	2.76	3.33	4.02	4.82	-	-
50	-	1.61	1.96	2.36	2.84	3.41	4.07	-	-
		1	+	1	1	1	1	1	1

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

Cooling capacity	4 536	W
Power input	1 596	W
Current consumption	2.68	A
Mass flow	108	kg/h
C.O.P.	2.84	

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)

3.43

2.88

2.40

Sound power data

2.88

2.43

2.04

Sound power level	75	dB(A)
With accoustic hood	67	dB(A)

Tolerance according EN12900

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2.02

1.72

1.45

2.42

2.05

1.72

1.68



55

60

65



R407C

Maneurop reciprocating compressor. MTZ018-4

<u>Danfoss</u>

R407C

Performance data at 60 Hz, ARI rating conditions

Cond. temp. in	Evaporating temperature in °C (to)									
°C (tc)	-15	-10	-5	0	5	10	15			
Cooling capacity	/ in W									
35	2 164	2 947	3 869	4 945	6 193	7 631	9 274	-	-	
40	1 935	2 691	3 575	4 604	5 796	7 167	8 736	-	-	
45	1 695	2 420	3 265	4 245	5 379	6 682	8 173	-	-	
50	-	2 139	2 942	3 871	4 944	6 178	7 590	-	-	
55	-	-	2 609	3 485	4 496	5 658	6 988	-	-	
60	-	-	-	3 089	4 036	5 124	6 371	-	-	
65	-	-	-	2 687	3 567	4 579	5 741	-	-	
		•	•	•	•	•	•			
Power input in V	1									
35	1 007	1 108	1 180	1 229	1 259	1 275	1 283	-	-	
40	1 031	1 161	1 259	1 329	1 376	1 406	1 424	-	-	

40	1 031	1 161	1 259	1 329	1 376	1 406	1 424	-	-
45	1 034	1 198	1 325	1 421	1 490	1 538	1 570	-	-
50	-	1 214	1 375	1 501	1 596	1 667	1 717	-	-
55	-	-	1 406	1 567	1 693	1 790	1 862	-	-
60	-	-	-	1 614	1 775	1 903	2 003	-	-
65	-	-	-	1 640	1 841	2 004	2 135	-	-

Current consumption in A

25	0.40	0.04	0.07	0.04	0.04	0.07	0.40		
35	2.13	2.21	2.27	2.31	2.34	2.37	2.40	-	-
40	2.15	2.26	2.34	2.40	2.45	2.48	2.51	-	-
45	2.16	2.30	2.41	2.50	2.56	2.61	2.65	-	-
50	-	2.32	2.47	2.58	2.68	2.75	2.81	-	-
55	-	-	2.50	2.66	2.79	2.89	2.97	-	-
60	-	-	-	2.71	2.88	3.02	3.14	-	-
65	-	-	-	2.74	2.96	3.14	3.29	-	-

Mass flow in kg/h

35	43	58	75	95	117	142	171	-	-
40	41	56	73	92	114	139	168	-	-
45	37	52	69	89	111	136	164	-	-
50	-	49	66	85	107	132	159	-	-
55	-	-	62	81	103	127	155	-	-
60	-	-	-	76	98	122	149	-	-
65	-	-	-	70	92	116	143	-	-

Coefficient of performance (C.O.P.)

35	2.15	2.66	3.28	4.03	4.92	5.98	7.23	-	-
40	1.88	2.32	2.84	3.47	4.21	5.10	6.14	-	-
45	1.64	2.02	2.46	2.99	3.61	4.35	5.21	-	-
50	-	1.76	2.14	2.58	3.10	3.71	4.42	-	-
55	-	-	1.85	2.22	2.66	3.16	3.75	-	-
60	-	-	-	1.91	2.27	2.69	3.18	-	-
65	-	-	-	1.64	1.94	2.29	2.69	-	-

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

Cooling capacity	5 046	W
Power input	1 726	W
Current consumption	2.82	А
Mass flow	114	kg/h
C.O.P.	2.92	

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

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

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

Sound power data

eeuna pener aata		
Sound power level	75	dB(A)
With accoustic hood	67	dB(A)

Tolerance according EN12900



Maneurop reciprocating compressor. MTZ018-4

Performance data at 60 Hz, EN 12900 rating conditions

Cond. temp. in					ating temperatur		1	<u>г</u> т	
°C (tc)	-25	-20	-10	-5	0	5	10	15	20
Cooling capacity		770	4.000	0.007	2 002	2 720	4 605	5.045	7 400
35	485	779	1 628	2 207	2 903	3 728	4 695	5 815	7 100
40	396	672	1 460	1 995	2 639	3 405	4 303	5 346	6 545
45	306	564	1 290	1 781	2 374	3 079	3 909	4 874	5 987
50	216	456	1 120	1 568	2 109	2 753	3 514	4 403	5 430
55	-	-	953	1 358	1 846	2 431	3 123	3 934	4 875
60	-	-	-	1 153	1 589	2 113	2 736	3 470	4 325
65	-	-	-	-	1 340	1 803	2 357	3 013	3 783
75	-	-	-	-	-	-	1 631	2 132	2 730
Power input in W		1 1		T	1				
35	538	620	771	834	884	916	927	914	873
40	550	636	802	874	936	982	1 009	1 013	992
45	552	643	825	909	983	1 044	1 089	1 112	1 112
50	542	640	841	937	1 026	1 103	1 165	1 209	1 231
55	-	-	847	957	1 062	1 156	1 238	1 303	1 348
60	-	-	-	969	1 090	1 203	1 306	1 394	1 463
65	-	-	-	-	1 109	1 243	1 367	1 479	1 575
75	-	-	-	-	-	-	1 467	1 631	1 782
Current consum		1 1		1				<u> </u>	
35	1.89	1.92	1.99	2.02	2.05	2.09	2.13	2.17	2.21
40	1.89	1.92	2.00	2.04	2.08	2.13	2.18	2.23	2.29
45	1.88	1.92	2.01	2.05	2.11	2.17	2.23	2.30	2.37
50	1.87	1.91	2.01	2.07	2.14	2.21	2.29	2.37	2.46
55	-	-	2.02	2.09	2.17	2.25	2.34	2.44	2.55
60	-	-	-	2.11	2.20	2.30	2.40	2.52	2.64
65	-	-	-	-	2.23	2.34	2.46	2.60	2.74
75	-	-	-	-	-	-	2.58	2.75	2.94
lass flow in kg/	h			1		1	1		
35	12	19	39	51	66	83	103	125	151
40	11	18	37	49	63	80	99	121	145
45	9	16	34	46	60	76	94	115	139
50	7	13	31	43	56	72	89	110	133
55	-	-	28	39	52	67	84	104	126
60	-	-	-	36	48	62	79	97	118
65	-	-	-	-	43	57	72	90	110
75	-	-	-	-	-	-	59	75	93
Coefficient of pe	rformance (C.C	D.P.)							
35	0.90	1.26	2.11	2.65	3.29	4.07	5.06	6.36	8.13
40	0.72	1.06	1.82	2.28	2.82	3.47	4.27	5.27	6.60
45	0.55	0.88	1.56	1.96	2.41	2.95	3.59	4.38	5.39
50	0.40	0.71	1.33	1.67	2.06	2.50	3.02	3.64	4.41
55	-	-	1.13	1.42	1.74	2.10	2.52	3.02	3.62
60	-	-	-	1.19	1.46	1.76	2.09	2.49	2.96
65	-	-	-	-	1.21	1.45	1.72	2.04	2.40
	-	-	_	-	-	-	1.11	1.31	1.53
75		1			1	1		. · · · · · · · · · · · · · · · · · · ·	
	ance at to - F	°C, tc = 50 °C				Pressure switch	settings		
75	iance at to = 5		W			Maximum HP swit	ch setting	20.2	bar(g)
	ialice at to = 5	2 753				Minimum LP switc			
75 Iominal perform Cooling capacity	lance at to – 5	2 753 1 103	W			Minimum LP Switc	in setting	0.1	bar(g)
75 Nominal perform Cooling capacity Power input Current consump		1 103 2.21	W A			LP pump down se		0.1 0.4	bar(g)
75 Iominal perform Cooling capacity Yower input Current consump Mass flow		1 103 2.21 72	W			LP pump down se	tting		
75 Iominal perform Cooling capacity Power input Current consump		1 103 2.21	W A				tting a		

tc: Condensing temperature at dew point

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

Tolerance according EN12900

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R134a

Maneurop reciprocating compressor. MTZ018-4

Danfoss

Performanc	e data at 6) Hz, ARI rat	ing conditio	ns					R134a
Cond. temp. in				Evapor	ating temperature	in °C (to)			
°C (tc)	-25	-20	-10	-5	0	5	10	15	20
Cooling capacity	•	0.45	4 704	0.000	0.400	4.040	5.040	0.044	7 000
35	527	845	1 761	2 382	3 129	4 013	5 046	6 241	7 609
40	433	734	1 587	2 164	2 859	3 682	4 646	5 763	7 045
45	337	619	1 410	1 944	2 585	3 347	4 241	5 280	6 476
50		504	1 233	1 722	2 311	3 012	3 836	4 797	5 906
55 60	-	-	1 058	1 503 1 288	2 039 1 770	2 678 2 348	3 432 3 032	4 314 3 835	5 337 4 771
65	-	-		-	-	2 348	2 637	3 835	4 771
75	-	-	-	-		- 2 024	1 876	2 443	3 117
75	-	-	-	-	-	-	10/0	2 443	3117
ower input in V	v								
35	538	620	771	834	884	916	927	914	873
40	550	636	802	874	936	982	1 009	1 013	992
45	552	643	825	909	983	1 044	1 089	1 112	1 112
50	-	640	841	937	1 026	1 103	1 165	1 209	1 231
55	-	-	847	957	1 062	1 156	1 238	1 303	1 348
60	-	-	-	969	1 090	1 203	1 306	1 394	1 463
65	-	-	-	-	-	1 243	1 367	1 479	1 575
75	-	-	-	-	-	-	1 467	1 631	1 782
Current consum	•	4.00		0.00			0.40	0.17	0.01
35	1.89	1.92	1.99	2.02	2.05	2.09	2.13	2.17	2.21
40	1.89	1.92	2.00	2.04	2.08	2.13	2.18	2.23	2.29
45	1.88	1.92	2.01	2.05	2.11	2.17	2.23	2.30	2.37
50	-	1.91	2.01	2.07	2.14	2.21	2.29	2.37	2.46
55 60	-	-	2.02	2.09	2.17	2.25	2.34	2.44	2.55
	-	-	-	2.11	2.20	2.30	2.40	2.52	2.64
65 75	-	-	-	-	-	2.34	2.46 2.58	2.60 2.75	2.74
75	-	-	-	-	-	-	2.56	2.15	2.94
lass flow in kg/	h			-			•		
35	12	19	38	51	66	83	102	125	150
40	11	18	36	48	63	79	98	120	144
45	9	16	34	46	59	75	94	115	138
50	-	13	31	43	56	71	89	109	132
55	-	-	28	39	52	67	84	103	125
60	-	-	-	36	48	62	78	97	118
65	-	-	-	-	-	57	72	90	110
75	-	-	-	-	-	-	59	74	92
Coefficient of pe	rformance (C.() P)							
voeincient of pe		т <i>і</i>							
35	0.98	1.36	2.28	2.86	3.54	4.38	5.44	6.83	8.71

35	0.98	1.36	2.28	2.86	3.54	4.38	5.44	6.83	8.71
40	0.79	1.15	1.98	2.48	3.06	3.75	4.61	5.69	7.10
45	0.61	0.96	1.71	2.14	2.63	3.20	3.90	4.75	5.83
50	-	0.79	1.47	1.84	2.25	2.73	3.29	3.97	4.80
55	-	-	1.25	1.57	1.92	2.32	2.77	3.31	3.96
60	-	-	-	1.33	1.62	1.95	2.32	2.75	3.26
65	-	-	-	-	-	1.63	1.93	2.27	2.67
75	-	-	-	-	-	-	1.28	1.50	1.75

Nominal performance at to = 7.2 °C	, tc = 54.4 °C		
Cooling capacity	3 038	W	
Power input	1 187	W	
Current consumption	2.28	Α	
Mass flow	75	kg/h	
COP	2 56		

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

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

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

Tolerance according EN12900



Maneurop reciprocating compressor. MTZ018-4

Performance data at 60 Hz, EN 12900 rating conditions

ond. temp. in	Evaporating temperature in °C (to)										
°C (tc)	-30	-25	-20	-15	-10	-5	0	5	10		
oling capacity	in W										
30	793	1 262	1 833	2 521	3 338	4 298	5 415	6 701	8 170		
35	644	1 088	1 628	2 276	3 046	3 951	5 004	6 219	7 609		
40	492	909	1 412	2 017	2 735	3 580	4 566	5 705	7 012		
45	343	727	1 190	1 746	2 408	3 189	4 103	5 162	6 381		
50	201	548	967	1 470	2 071	2 784	3 621	4 596	5 722		
55	-	377	746	1 192	1 728	2 368	3 124	4 010	5 039		
60	-	217	533	917	1 384	1 946	2 617	3 410	4 338		
·				•	•	•		•			
ower input in W											
30	956	1 135	1 277	1 384	1 461	1 512	1 541	1 552	1 549		
35	918	1 127	1 296	1 428	1 528	1 599	1 646	1 673	1 683		
40	860	1 102	1 301	1 462	1 587	1 681	1 749	1 793	1 819		
45	779	1 058	1 290	1 481	1 635	1 755	1 846	1 911	1 955		
50	674	991	1 259	1 484	1 669	1 818	1 935	2 024	2 089		
55	-	899	1 206	1 467	1 686	1 866	2 012	2 128	2 217		
60	-	778	1 128	1 428	1 683	1 898	2 076	2 221	2 337		
urrent consump	tion in A										
30	1.95	2.15	2.31	2.43	2.52	2.58	2.61	2.63	2.62		
35	1.94	2.17	2.35	2.49	2.59	2.66	2.71	2.73	2.73		
40	1.89	2.15	2.36	2.53	2.66	2.75	2.82	2.85	2.87		
45	1.81	2.11	2.35	2.56	2.72	2.84	2.93	2.99	3.02		
50	1.67	2.02	2.31	2.55	2.75	2.91	3.04	3.13	3.19		
55	-	1.87	2.22	2.52	2.76	2.97	3.13	3.26	3.36		
60	-	1.67	2.08	2.43	2.73	2.99	3.21	3.38	3.52		
ass flow in kg/h											
30	25	39	55	74	95	120	148	179	215		
35	22	36	52	71	93	117	145	177	212		
40	18	32	49	68	89	114	142	173	209		
45	14	28	45	64	85	110	138	169	204		
50	9	24	40	59	81	105	133	164	199		
55	-	18	35	54	75	99	127	158	192		
60	-	12	29	47	68	92	120	150	185		
		•		•	•		•	•			
oefficient of per	formance (C.C	D.P.)	1	1	1	1	1	1	1		
30	0.83	1.11	1.44	1.82	2.28	2.84	3.51	4.32	5.27		
35	0.70	0.97	1.26	1.59	1.99	2.47	3.04	3.72	4.52		
40	0.57	0.82	1.09	1.38	1.72	2.13	2.61	3.18	3.85		
45	0.44	0.69	0.92	1.18	1.47	1.82	2.22	2.70	3.26		
50	0.30	0.55	0.77	0.99	1.24	1.53	1.87	2.27	2.74		
55	-	0.42	0.62	0.81	1.03	1.27	1.55	1.88	2.27		
60	-	0.28	0.47	0.64	0.82	1.03	1.26	1.54	1.86		

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

Cooling capacity	2 408	W
Power input	1 635	W
Current consumption	2.72	A
Mass flow	85	kg/h
C.O.P.	1.47	

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

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

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

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Sound	nowor	

Sound power level	76	dB(A)
With accoustic hood	68	dB(A)

Tolerance according EN12900

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R404A

Maneurop reciprocating compressor. MTZ018-4

Danfoss

R404A

Performance data at 60 Hz, ARI rating conditions

Cond. temp. in	Evaporating temperature in °C (to)										
°C (tc)	-30	-25	-20	-15	-10	-5	0	5	10		
Cooling capacity i	in W										
30	883	1 401	2 030	2 784	3 678	4 726	5 942	7 339	8 931		
35	724	1 221	1 821	2 538	3 388	4 383	5 538	6 867	8 385		
40	561	1 032	1 598	2 275	3 075	4 014	5 104	6 362	7 800		
45	398	839	1 367	1 998	2 745	3 623	4 645	5 827	7 182		
50	238	646	1 132	1 713	2 403	3 216	4 167	5 269	6 538		
55	-	456	898	1 425	2 054	2 799	3 675	4 695	5 875		
60	-	275	667	1 139	1 704	2 379	3 178	4 116	5 207		
Power input in W 30	956	1 135	1 277	1 384	1 461	1 512	1 541	1 552	1 549		
35	918	1 127	1 296	1 428	1 528	1 599	1 646	1 673	1 683		
40	860	1 102	1 301	1 462	1 587	1 681	1 749	1 793	1 819		
45	779	1 058	1 290	1 481	1 635	1 755	1 846	1 911	1 955		
50	674	991	1 259	1 484	1 669	1 818	1 935	2 024	2 089		
55	-	899	1 206	1 467	1 686	1 866	2 012	2 128	2 217		
60	-	778	1 128	1 428	1 683	1 898	2 076	2 221	2 337		
Current consump		0.15	0.21	2.42	2.52	2 59	2.61	2.62	2.62		
30	1.95	2.15	2.31	2.43	2.52	2.58	2.61	2.63	2.62		
35 40	1.94 1.89	2.17 2.15	2.35 2.36	2.49 2.53	2.59 2.66	2.66 2.75	2.71 2.82	2.73 2.85	2.73 2.87		
40	1.89	2.15	2.36	2.55	2.00	2.75	2.02	2.05	3.02		
50	1.67	2.02	2.35	2.55	2.72	2.04	3.04	3.13	3.19		
55	-	1.87	2.22	2.55	2.75	2.97	3.13	3.26	3.36		
60	-	1.67	2.08	2.43	2.73	2.99	3.21	3.38	3.52		
	-	1.07	2.00	2.40	2.10	2.00	0.21	0.00	0.02		
Mass flow in kg/h											
30	25	39	55	73	95	119	147	178	213		
35	22	36	52	71	92	117	144	176	211		
40	18	32	49	67	89	113	141	172	207		
45	14 9	28	45 40	63	85 80	109 104	137	168	203 198		
50 55	- 9	23 18	40 35	59 53	80 74	99	132 126	163 157	198		
60	-	18	28	47	68	99 92	120	157	191		
00	-	12	20	47	00	92	119	149	165		
Coefficient of perf	•	,	4.50	0.04	0.50	0.40	0.00	1.70			
30	0.92	1.23	1.59	2.01	2.52	3.13	3.86	4.73	5.77		
35	0.79	1.08	1.40	1.78	2.22	2.74	3.36	4.11	4.98		
40	0.65	0.94	1.23	1.56	1.94	2.39	2.92	3.55	4.29		
45	0.51	0.79	1.06	1.35	1.68	2.06	2.52	3.05	3.67		
	0.25	0.05	0.00								
50 55	0.35	0.65	0.90	1.15 0.97	1.44 1.22	1.77 1.50	2.15 1.83	2.60 2.21	3.13 2.65		

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

Cooling capacity	2 745	W
Power input	1 635	W
Current consumption	2.72	А
Mass flow	85	kg/h
C.O.P.	1.68	

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

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

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

Sound power data

Sound power level 7	76	dB(A)
With accoustic hood 6	68	dB(A)

Tolerance according EN12900



Maneurop reciprocating compressor. MTZ018-4

Danfoss

R407A

Performance data at 60 Hz, EN 12900 rating conditions

Cond. temp. in	Evaporating temperature in °C (to)								
°C (tc)	-30	-25	-20	-15	-10	-5	0	5	10
ooling capacity	in 14/								
30	573	954	1 445	2 063	2 822	3 738	4 826	6 100	7 578
35	486	841	1 298	1 873	2 579	3 433	4 450	5 645	7 034
40	399	728	1 150	1 679	2 332	3 124	4 069	5 184	6 483
45	314	616	1 001	1 486	2 084	2 813	3 686	4 719	5 928
50	-	507	856	1 294	1 837	2 501	3 301	4 252	5 369
55	-	-	715	1 106	1 593	2 192	2 918	3 785	4 811
60	-	_	-	924	1 354	1 887	2 538	3 321	4 253
ower input in W									
30	640	778	909	1 028	1 131	1 215	1 277	1 312	1 316
35	625	773	915	1 047	1 166	1 268	1 349	1 406	1 435
40	606	763	916	1 062	1 197	1 317	1 418	1 497	1 551
45	584	750	915	1 074	1 225	1 363	1 484	1 586	1 664
50	-	734	910	1 084	1 250	1 407	1 549	1 673	1 775
55	-	-	904	1 091	1 274	1 449	1 611	1 758	1 885
60	-	-	-	1 098	1 297	1 490	1 674	1 843	1 995
Current consump		0.07	0.00	0.07	0.50	0.00	0.74	0.70	0.00
30	1.89	2.07	2.23	2.37	2.50	2.62	2.71	2.78	2.82
35	1.93	2.09	2.24	2.38	2.51	2.62	2.72	2.80	2.86
40	1.98	2.12	2.26	2.40	2.53	2.65	2.76	2.86	2.93
45	2.01	2.15	2.29	2.43	2.56	2.70	2.82	2.93	3.03
50	-	2.16	2.31	2.45	2.60	2.75	2.89	3.03	3.16
55	-	-	2.31	2.47	2.63	2.80	2.97	3.13	3.30
60	-	-	-	2.47	2.65	2.84	3.04	3.24	3.44
/lass flow in kg/h									
30	14	22	33	46	62	81	103	128	158
35	12	21	31	44	60	78	100	125	153
40	11	19	29	42	57	75	96	121	149
45	9	17	27	39	54	72	92	116	143
50	-	15	25	37	51	68	88	111	138
55	-	-	22	34	47	64	83	106	131
60	-	-	-	31	44	60	78	100	125
Coefficient of per	formance (C.C	D.P.)	-	-	•	•	•	1	•
30	0.90	1.23	1.59	2.01	2.50	3.08	3.78	4.65	5.76
35	0.78	1.09	1.42	1.79	2.21	2.71	3.30	4.01	4.90
40	0.66	0.95	1.25	1.58	1.95	2.37	2.87	3.46	4.18
45	0.54	0.82	1.09	1.38	1.70	2.06	2.48	2.98	3.56
50	-	0.69	0.94	1.19	1.47	1.78	2.13	2.54	3.03
55	-	-	0.79	1.01	1.25	1.51	1.81	2.15	2.55
60	-	-	-	0.84	1.04	1.27	1.52	1.80	2.13

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

Cooling capacity	2 084	W	
Power input	1 225	W	
Current consumption	2.56	A	
Mass flow	54	kg/h	
C.O.P.	1.70		

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

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

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	75	dB(A)
With accoustic hood	67	dB(A)

Tolerance according EN12900



Maneurop reciprocating compressor. MTZ018-4

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R407A

Performance data at 60 Hz, ARI rating conditions

Cond. temp. in	Evaporating temperature in °C (to)								
°C (tc)	-30	-25	-20	-15	-10	-5	0	5	10
30	620	1 030	1 559	2 222	3 035	4 015	5 178	6 538	8 113
35	529	914	1 408	2 028	2 788	3 707	4 799	6 080	7 567
40	437	796	1 255	1 830	2 537	3 393	4 414	5 615	7 012
45	347	679	1 101	1 631	2 284	3 076	4 025	5 145	6 453
50	-	564	950	1 433	2 031	2 759	3 634	4 672	5 890
55	-	-	802	1 238	1 780	2 443	3 245	4 201	5 328
60	-	-	-	1 050	1 534	2 132	2 859	3 732	4 768
			•	•			•	•	
ower input in W			1	1			1	1	r
30	640	778	909	1 028	1 131	1 215	1 277	1 312	1 316
35	625	773	915	1 047	1 166	1 268	1 349	1 406	1 435
40	606	763	916	1 062	1 197	1 317	1 418	1 497	1 551
45	584	750	915	1 074	1 225	1 363	1 484	1 586	1 664
50	-	734	910	1 084	1 250	1 407	1 549	1 673	1 775
55	-	-	904	1 091	1 274	1 449	1 611	1 758	1 885
60	-	-	-	1 098	1 297	1 490	1 674	1 843	1 995
urrent consump	otion in A								
30	1.89	2.07	2.23	2.37	2.50	2.62	2.71	2.78	2.82
35	1.93	2.09	2.24	2.38	2.51	2.62	2.72	2.80	2.86
40	1.98	2.12	2.26	2.40	2.53	2.65	2.76	2.86	2.93
45	2.01	2.15	2.29	2.43	2.56	2.70	2.82	2.93	3.03
50	-	2.16	2.31	2.45	2.60	2.75	2.89	3.03	3.16
55	-	-	2.31	2.47	2.63	2.80	2.97	3.13	3.30
60	-	-	-	2.47	2.65	2.84	3.04	3.24	3.44
lass flow in kg/h 30	13	22	33	46	62	81	102	128	157
35	13	22	31	40	60	78	99	128	157
40	12	19	29	44	57	75	99	124	132
40	9	19	23	39	54	75	90	120	148
50	-	17	25	36	54	68	87	115	142
55	-	-	23	33	47	63	87	105	137
60	-	-	-	30	47	59	78	99	131
00		1		00		00	10	00	
oefficient of per	formance (C.C	D.P.)							
30	0.97	1.32	1.72	2.16	2.68	3.30	4.06	4.98	6.16
35	0.85	1.18	1.54	1.94	2.39	2.92	3.56	4.32	5.27
40	0.72	1.04	1.37	1.72	2.12	2.58	3.11	3.75	4.52
45	0.59	0.91	1.20	1.52	1.86	2.26	2.71	3.24	3.88
50	-	0.77	1.04	1.32	1.62	1.96	2.35	2.79	3.32
55	-	-	0.89	1.13	1.40	1.69	2.01	2.39	2.83
60	-	-	-	0.96	1.18	1.43	1.71	2.03	2.39

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

Cooling capacity	2 284	W
Power input	1 225	W
Current consumption	2.56	А
Mass flow	54	kg/h
C.O.P.	1.86	

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

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

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

Sound	power data
Sound	nower level

Sound power level	75	dB(A)
With accoustic hood	67	dB(A)

Tolerance according EN12900



Maneurop reciprocating compressor. MTZ018-4

Performance data at 60 Hz, EN 12900 rating conditions

Cond. temp. in	Evaporating temperature in °C (to)										
°C (tc)	-30	-25	-20	-15	-10	-5	0	5	10		
Cooling capacity		1 026	1 577	2 264	3 103	4 110	5 301	6 691	8 296		
						-					
35	-	877	1 378	2 005	2 773	3 698	4 797	6 083	7 574		
40	-	753	1 208	1 778	2 479	3 326	4 335	5 523	6 903		
45	-	650	1 063	1 580	2 218	2 991	3 915	5 006	6 280		
50	-	-	941	1 410	1 988	2 690	3 533	4 532	5 702		
55	-	-	-	1 264	1 786	2 421	3 186	4 097	5 168		
60	-	-	-	-	-	-	-	-	-		
Power input in W											
30	-	833	963	1 083	1 186	1 264	1 310	1 318	1 280		
35	-	831	971	1 106	1 228	1 330	1 405	1 446	1 446		
40	-	833	980	1 127	1 265	1 388	1 489	1 560	1 596		
45	-	843	994	1 149	1 300	1 441	1 565	1 665	1 733		
50	-	-	1 017	1 177	1 339	1 495	1 639	1 763	1 861		
55	-	-	-	1 215	1 384	1 553	1 713	1 859	1 983		
60	-	-	-	-	-	-	-	-	-		
Current consump	tion in A										
30		2.06	2.23	2.39	2.52	2.63	2.71	2.76	2.77		
35	-	2.11	2.28	2.43	2.57	2.68	2.78	2.84	2.88		
40	-	2.15	2.31	2.46	2.60	2.73	2.84	2.93	2.99		
45	-	2.17	2.33	2.48	2.63	2.77	2.91	3.02	3.12		
50	-	-	2.36	2.52	2.68	2.84	2.99	3.14	3.27		
55	-	-	-	2.57	2.75	2.93	3.11	3.28	3.45		
60	-	-	-	-	-	-	-	-	-		
Mass flow in kg/h		01		45	04		400	407	450		
30	-	21	32	45	61	80	102	127	156		
35	-	19	29	42	57	75	96	121	149		
40	-	17	27	39	54	71	91	115	142		
45	-	15	25	37	51	67	87	110	136		
50	-	-	23	35	48	64	83	105	130		
55	-	-	-	33	46	62	80	101	125		
60	-	-	-	-	-	-	-	-	-		
Coefficient of per	formance (C.	O.P.)									
30	-	1.23	1.64	2.09	2.62	3.25	4.05	5.08	6.48		
35	-	1.06	1.42	1.81	2.26	2.78	3.41	4.21	5.24		
40	-	0.90	1.23	1.58	1.96	2.40	2.91	3.54	4.32		
45	-	0.77	1.07	1.38	1.71	2.07	2.50	3.01	3.62		
50	-	-	0.93	1.20	1.48	1.80	2.16	2.57	3.06		
55	-	-	-	1.04	1.29	1.56	1.86	2.20	2.61		
60	-	-	-	-	-	-	-	-	-		
Nominal performa	ince at to = -1	0 °C. tc = 45 °C				Pressure switch	settings				
Cooling capacity		2 218	W			Maximum HP swi		24	bar(g)		
Power input		1 300				Minimum LP swite		1	bar(g)		
Current consumption	20	2.63	Δ			I P nump down se		1 26	har(g)		

to: Evaporating temperature at dew point	

tc: Condensing temperature at dew point

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

2.63

1.71

51

А

kg/h

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

Sound	power	uala
Sound	nowor l	aval

Sound power level	75	dB(A)
With accoustic hood	67	dB(A)

Tolerance according EN12900

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Current consumption

Mass flow

C.O.P.



R407F

Danfoss

Maneurop reciprocating compressor. MTZ018-4

Performance data at 60 Hz, ARI rating conditions

Performance	data at 6	0 Hz, ARI rat	ing conditio	ns					R407F	
Cond. temp. in	Evaporating temperature in °C (to)									
°C (tc)	-30	-25	-20	-15	-10	-5	0	5	10	
Cooling capacity i	in W									
30	-	1 100	1 688	2 421	3 315	4 388	5 654	7 131	8 834	
35	_	945	1 482	2 154	2 976	3 965	5 137	6 510	8 098	
40	-	815	1 306	1 920	2 674	3 584	4 666	5 937	7 414	
45	_	708	1 156	1 717	2 406	3 241	4 237	5 412	6 781	
50	-	-	1 032	1 543	2 172	2 935	3 850	4 932	6 198	
55	-		-	1 396	1 969	2 666	3 503	4 497	5 664	
60	-	_	-	-	-	-	-			
00	_	_			_	_	_			
ower input in W						1		1		
30	-	833	963	1 083	1 186	1 264	1 310	1 318	1 280	
35	-	831	971	1 106	1 228	1 330	1 405	1 446	1 446	
40	-	833	980	1 127	1 265	1 388	1 489	1 560	1 596	
45	-	843	994	1 149	1 300	1 441	1 565	1 665	1 733	
50	-	-	1 017	1 177	1 339	1 495	1 639	1 763	1 861	
55	-	-	-	1 215	1 384	1 553	1 713	1 859	1 983	
60	-	-	-	-	-	-	-	-	-	
urrent consumption		2.00	0.00	0.00	0.50	2.02	0.74	0.70	0.77	
30	-	2.06	2.23	2.39	2.52	2.63	2.71	2.76	2.77	
35 40	-	2.11 2.15	2.28	2.43 2.46	2.57 2.60	2.68	2.78 2.84	2.84 2.93	2.88	
-		_	2.31	_		2.73	-			
45	-	2.17	2.33	2.48	2.63	2.77	2.91	3.02	3.12	
50	-	-	2.36	2.52	2.68	2.84	2.99	3.14	3.27	
55	-	-	-	2.57	2.75	2.93	3.11	3.28	3.45	
60	-	-	-	-	-	-	-	-	-	
lass flow in kg/h										
30	-	21	32	45	61	80	101	126	155	
35	-	19	29	42	57	75	96	120	148	
40	-	17	27	39	53	71	91	114	141	
45	-	15	25	36	50	67	86	109	135	
50	-	-	23	34	48	64	82	104	129	
55	-	-	-	33	46	61	79	100	124	
60	-	-	-	-	-	-	-	-	-	
coefficient of perf	formance (C.	O.P.)								
30	-	1.32	1.75	2.23	2.80	3.47	4.31	5.41	6.90	
35	-	1.14	1.53	1.95	2.42	2.98	3.66	4.50	5.60	
40	-	0.98	1.33	1.70	2.11	2.58	3.13	3.80	4.65	
45	-	0.84	1.16	1.49	1.85	2.25	2.71	3.25	3.91	
50	-	-	1.02	1.31	1.62	1.96	2.35	2.80	3.33	

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

Cooling capacity	2 406	W	
Power input	1 300	W	
Current consumption	2.63	Α	
Mass flow	50	kg/h	
C.O.P.	1.85		

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

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

24	bar(g)
1	bar(g)
1.26	bar(g)
	1.26

2.42

2.86

2.04

Sound power data

1.72

Sound power level	75	dB(A)
With accoustic hood	67	dB(A)

Tolerance according EN12900

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1.15

1.42



55

60

Maneurop reciprocating compressor. MTZ018-4

Performance data at 60 Hz, EN 12900 rating conditions

Cond. temp. in					ating temperatur		1	<u>г</u> т	
°C (tc)	-25	-20	-10	-5	0	5	10	15	20
Cooling capacity		770	4.000	0.007	2 002	2 720	4 605	5.045	7 400
35	485	779	1 628	2 207	2 903	3 728	4 695	5 815	7 100
40	396	672	1 460	1 995	2 639	3 405	4 303	5 346	6 545
45	306	564	1 290	1 781	2 374	3 079	3 909	4 874	5 987
50	216	456	1 120	1 568	2 109	2 753	3 514	4 403	5 430
55	-	-	953	1 358	1 846	2 431	3 123	3 934	4 875
60	-	-	-	1 153	1 589	2 113	2 736	3 470	4 325
65	-	-	-	-	1 340	1 803	2 357	3 013	3 783
75	-	-	-	-	-	-	1 631	2 132	2 730
Power input in W		1 1		T	1				
35	538	620	771	834	884	916	927	914	873
40	550	636	802	874	936	982	1 009	1 013	992
45	552	643	825	909	983	1 044	1 089	1 112	1 112
50	542	640	841	937	1 026	1 103	1 165	1 209	1 231
55	-	-	847	957	1 062	1 156	1 238	1 303	1 348
60	-	-	-	969	1 090	1 203	1 306	1 394	1 463
65	-	-	-	-	1 109	1 243	1 367	1 479	1 575
75	-	-	-	-	-	-	1 467	1 631	1 782
Current consum		1 1		1				<u> </u>	
35	1.89	1.92	1.99	2.02	2.05	2.09	2.13	2.17	2.21
40	1.89	1.92	2.00	2.04	2.08	2.13	2.18	2.23	2.29
45	1.88	1.92	2.01	2.05	2.11	2.17	2.23	2.30	2.37
50	1.87	1.91	2.01	2.07	2.14	2.21	2.29	2.37	2.46
55	-	-	2.02	2.09	2.17	2.25	2.34	2.44	2.55
60	-	-	-	2.11	2.20	2.30	2.40	2.52	2.64
65	-	-	-	-	2.23	2.34	2.46	2.60	2.74
75	-	-	-	-	-	-	2.58	2.75	2.94
lass flow in kg/	h			1		1	1		
35	12	19	39	51	66	83	103	125	151
40	11	18	37	49	63	80	99	121	145
45	9	16	34	46	60	76	94	115	139
50	7	13	31	43	56	72	89	110	133
55	-	-	28	39	52	67	84	104	126
60	-	-	-	36	48	62	79	97	118
65	-	-	-	-	43	57	72	90	110
75	-	-	-	-	-	-	59	75	93
Coefficient of pe	rformance (C.C	D.P.)							
35	0.90	1.26	2.11	2.65	3.29	4.07	5.06	6.36	8.13
40	0.72	1.06	1.82	2.28	2.82	3.47	4.27	5.27	6.60
45	0.55	0.88	1.56	1.96	2.41	2.95	3.59	4.38	5.39
50	0.40	0.71	1.33	1.67	2.06	2.50	3.02	3.64	4.41
55	-	-	1.13	1.42	1.74	2.10	2.52	3.02	3.62
60	-	-	-	1.19	1.46	1.76	2.09	2.49	2.96
65	-	-	-	-	1.21	1.45	1.72	2.04	2.40
	-	-	_	-	-	-	1.11	1.31	1.53
75		1			1	1		. · · · · · · · · · · · · · · · · · · ·	
	ance at to - F	°C, tc = 50 °C				Pressure switch	settings		
75	iance at to = 5	•	W			Maximum HP swit	ch setting	20.2	bar(g)
	ialice at to = 5					Minimum LP switc			
75 Iominal perform Cooling capacity	lance at to – 5	2 753 1 103	W			Minimum LP Switc	in setting	0.1	bar(g)
75 Nominal perform Cooling capacity Power input Current consump		1 103 2.21	W A			LP pump down se		0.1 0.4	bar(g)
75 Iominal perform Cooling capacity Yower input Current consump Mass flow		1 103 2.21 72	W			LP pump down se	tting		
75 Iominal perform Cooling capacity Power input Current consump		1 103 2.21	W A				tting a		

tc: Condensing temperature at dew point

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

Tolerance according EN12900

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R134a

Maneurop reciprocating compressor. MTZ018-4

Danfoss

Performanc	e data at 6) Hz, ARI rat	ing conditio	ns					R134a	
Cond. temp. in	Evaporating temperature in °C (to)									
°C (tc)	-25	-20	-10	-5	0	5	10	15	20	
Cooling capacity	•	0.45	4 704	0.000	0.400	4.040	5.040	0.044	7 000	
35	527	845	1 761	2 382	3 129	4 013	5 046	6 241	7 609	
40	433	734	1 587	2 164	2 859	3 682	4 646	5 763	7 045	
45	337	619	1 410	1 944	2 585	3 347	4 241	5 280	6 476	
50		504	1 233	1 722	2 311	3 012	3 836	4 797	5 906	
55 60	-	-	1 058	1 503 1 288	2 039 1 770	2 678 2 348	3 432 3 032	4 314 3 835	5 337 4 771	
65	-	-		-	-	2 348	2 637	3 835	4 771	
75	-	-	-	-		- 2 024	1 876	2 443	3 117	
75	-	-	-	-	-	-	10/0	2 443	3117	
ower input in V	v									
35	538	620	771	834	884	916	927	914	873	
40	550	636	802	874	936	982	1 009	1 013	992	
45	552	643	825	909	983	1 044	1 089	1 112	1 112	
50	-	640	841	937	1 026	1 103	1 165	1 209	1 231	
55	-	-	847	957	1 062	1 156	1 238	1 303	1 348	
60	-	-	-	969	1 090	1 203	1 306	1 394	1 463	
65	-	-	-	-	-	1 243	1 367	1 479	1 575	
75	-	-	-	-	-	-	1 467	1 631	1 782	
Current consum	•	4.00		0.00			0.40	0.17	0.01	
35	1.89	1.92	1.99	2.02	2.05	2.09	2.13	2.17	2.21	
40	1.89	1.92	2.00	2.04	2.08	2.13	2.18	2.23	2.29	
45	1.88	1.92	2.01	2.05	2.11	2.17	2.23	2.30	2.37	
50	-	1.91	2.01	2.07	2.14	2.21	2.29	2.37	2.46	
55 60	-	-	2.02	2.09	2.17	2.25	2.34	2.44	2.55	
	-	-	-	2.11	2.20	2.30	2.40	2.52	2.64	
65 75	-	-	-	-	-	2.34	2.46 2.58	2.60 2.75	2.74	
75	-	-	-	-	-	-	2.56	2.15	2.94	
lass flow in kg/	h			-			•			
35	12	19	38	51	66	83	102	125	150	
40	11	18	36	48	63	79	98	120	144	
45	9	16	34	46	59	75	94	115	138	
50	-	13	31	43	56	71	89	109	132	
55	-	-	28	39	52	67	84	103	125	
60	-	-	-	36	48	62	78	97	118	
65	-	-	-	-	-	57	72	90	110	
75	-	-	-	-	-	-	59	74	92	
Coefficient of pe	rformance (C.() P)								
voeincient of pe		т <i>і</i>								
35	0.98	1.36	2.28	2.86	3.54	4.38	5.44	6.83	8.71	

35	0.98	1.36	2.28	2.86	3.54	4.38	5.44	6.83	8.71
40	0.79	1.15	1.98	2.48	3.06	3.75	4.61	5.69	7.10
45	0.61	0.96	1.71	2.14	2.63	3.20	3.90	4.75	5.83
50	-	0.79	1.47	1.84	2.25	2.73	3.29	3.97	4.80
55	-	-	1.25	1.57	1.92	2.32	2.77	3.31	3.96
60	-	-	-	1.33	1.62	1.95	2.32	2.75	3.26
65	-	-	-	-	-	1.63	1.93	2.27	2.67
75	-	-	-	-	-	-	1.28	1.50	1.75

Nominal performance at to = 7.2 °C	, tc = 54.4 °C		
Cooling capacity	3 038	W	
Power input	1 187	W	
Current consumption	2.28	Α	
Mass flow	75	kg/h	
COP	2 56		

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

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

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

Tolerance according EN12900



Maneurop reciprocating compressor. MTZ018-4

Performance data at 60 Hz, EN 12900 rating conditions

Cond. temp. in				Evapora	ating temperature	in °C (to)			
°C (tc)	-15	-10	-5	0	5	10	15		
Cooling capacity		0.740	0.000	4.044	5 704	7 400	0.074		
35	2 010	2 742	3 603	4 611	5 781	7 130	8 674	-	-
40	1 788	2 490	3 312	4 271	5 383	6 665	8 132	-	-
45	1 556	2 225	3 006	3 915	4 967	6 179	7 567	-	-
50	-	1 952	2 690	3 546	4 536	5 676	6 982	-	-
55	-	-	2 365	3 166	4 091	5 157	6 379	-	-
60	-	-	-	2 778	3 636	4 625	5 761	-	-
65	-	-	-	2 384	3 173	4 083	5 130	-	-
Power input in W									
35	1 007	1 108	1 180	1 229	1 259	1 275	1 283	-	-
40	1 031	1 161	1 259	1 329	1 376	1 406	1 424	-	-
45	1 034	1 198	1 325	1 421	1 490	1 538	1 570	-	-
50	-	1 214	1 375	1 501	1 596	1 667	1 717	-	-
55	-	-	1 406	1 567	1 693	1 790	1 862	-	-
60	-	-	-	1 614	1 775	1 903	2 003	-	-
65	-	-	-	1 640	1 841	2 004	2 135	-	-
35	2.13	2.21	2.27	2.31	2.34	2.37	2.40	-	-
35	2.13	2.21	2.27	2.31	2.34	2.37	2.40	-	-
40	2.15	2.26	2.34	2.40	2.45	2.48	2.51	-	-
45	2.16	2.30	2.41	2.50	2.56	2.61	2.65	-	-
50	-	2.32	2.47	2.58	2.68	2.75	2.81	-	-
55	-	-	2.50	2.66	2.79	2.89	2.97	-	-
60	-	-	-	2.71	2.88	3.02	3.14	-	-
65	-	-	-	2.74	2.96	3.14	3.29	-	-
Mass flow in kg/h									
35	44	59	76	95	118	143	172	-	-
40	41	56	73	93	115	140	169	-	-
45	38	53	70	89	112	137	165	-	-
50	-	49	66	86	108	133	160	-	-
55	-	-	62	81	103	128	155	-	-
60	-	_	-	76	98	122	150	-	-
65	-	_	-	71	92	117	143	-	-
Coefficient of per	formance (C.C	D.P.)		1				1	
35	2.00	2.47	3.05	3.75	4.59	5.59	6.76	-	-
40	1.73	2.14	2.63	3.21	3.91	4.74	5.71	-	-
45	1.50	1.86	2.27	2.76	3.33	4.02	4.82	-	-
50	-	1.61	1.96	2.36	2.84	3.41	4.07	-	-
		1	+	1	1	1	1	1	1

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

Cooling capacity	4 536	W
Power input	1 596	W
Current consumption	2.68	A
Mass flow	108	kg/h
C.O.P.	2.84	

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)

3.43

2.88

2.40

Sound power data

2.88

2.43

2.04

Sound power level	75	dB(A)
With accoustic hood	67	dB(A)

Tolerance according EN12900

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2.02

1.72

1.45

2.42

2.05

1.72

1.68



55

60

65



R407C

Maneurop reciprocating compressor. MTZ018-4

Danfoss

Performance	e data at 6	0 Hz, ARI rat	ing conditio	ns					R4070
Cond. temp. in	mp. in Evaporating temperature in °C (to)								
°C (tc)	-15	-10	-5	0	5	10	15		
Cooling capacity					T			1	T
35	2 164	2 947	3 869	4 945	6 193	7 631	9 274	-	-
40	1 935	2 691	3 575	4 604	5 796	7 167	8 736	-	-
45	1 695	2 420	3 265	4 245	5 379	6 682	8 173	-	-
50	-	2 139	2 942	3 871	4 944	6 178	7 590	-	-
55	-	-	2 609	3 485	4 496	5 658	6 988	-	-
60	-	-	-	3 089	4 036	5 124	6 371	-	-
65	-	-	-	2 687	3 567	4 579	5 741	-	-
ower input in W		-	-		-				
35	1 007	1 108	1 180	1 229	1 259	1 275	1 283	-	-
40	1 031	1 161	1 259	1 329	1 376	1 406	1 424	-	-
45	1 034	1 198	1 325	1 421	1 490	1 538	1 570	-	-
50	-	1 214	1 375	1 501	1 596	1 667	1 717	-	-
55	-	-	1 406	1 567	1 693	1 790	1 862	-	-
60	-	-	-	1 614	1 775	1 903	2 003	-	-
65	-	-	-	1 640	1 841	2 004	2 135	-	-
urrent consum 35	2.13	2.21	2.27	2.31	2.34	2.37	2.40	-	-
40	2.15	2.26	2.34	2.40	2.45	2.48	2.51	-	-
45	2.16	2.30	2.41	2.50	2.56	2.61	2.65	-	-
50	-	2.32	2.47	2.58	2.68	2.75	2.81	-	-
55	-	-	2.50	2.66	2.79	2.89	2.97	-	-
60	-	-	-	2.71	2.88	3.02	3.14	-	-
65	-	-	-	2.74	2.96	3.14	3.29	-	-
lass flow in kg/l	ı					·			
35	43	58	75	95	117	142	171	-	-
40	41	56	73	92	114	139	168	-	-
45	37	52	69	89	111	136	164	-	-
50		10	66	85	107	132	150		

50	-	49	66	85	107	132	159	-	-
55	-	-	62	81	103	127	155	-	-
60	-	-	-	76	98	122	149	-	-
65	-	-	-	70	92	116	143	-	-

Coefficient of performance (C.O.P.)

obennelent of p									
35	2.15	2.66	3.28	4.03	4.92	5.98	7.23	-	-
40	1.88	2.32	2.84	3.47	4.21	5.10	6.14	-	-
45	1.64	2.02	2.46	2.99	3.61	4.35	5.21	-	-
50	-	1.76	2.14	2.58	3.10	3.71	4.42	-	-
55	-	-	1.85	2.22	2.66	3.16	3.75	-	-
60	-	-	-	1.91	2.27	2.69	3.18	-	-
65	-	-	-	1.64	1.94	2.29	2.69	-	-

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

	1		
Cooling capacity	5 046	W	
Power input	1 726	W	
Current consumption	2.82	Α	
Mass flow	114	kg/h	
C.O.P.	2.92		

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

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

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

Sound power data

eeuna pener aata			_
Sound power level	75	dB(A)	
With accoustic hood	67	dB(A)	
			_

Tolerance according EN12900



Danfoss

Maneurop reciprocating compressor. MTZ018-4

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

R448A

ond. temp. in				Evapora	ting temperature	e in °C (to)			
°C (tc)	-30	-25	-20	-15	-10	-5	0	5	10
ooling capacity i	in W								
10	-	1 956	2 656	3 500	4 500	-	-	-	-
20	-	1 542	2 163	2 911	3 798	4 837	6 042	-	
30	-	1 170	1 714	2 369	3 145	4 056	5 113	6 332	7 729
40	-	-	1 311	1 875	2 544	3 329	4 242	5 295	6 504
50	-	-	-						5 344
60	-	-	-	1 431	1 995 1 501	2 657 2 043	3 429 2 676	4 320 3 409	4 252
00	-	-	-	-	1 50 1	2 045	2 070	3409	4 202
ower input in W									
10	-	742	789	807	791	-	-	-	-
20	-	784	873	937	972	975	941	-	-
30	-	793	920	1 026	1 108	1 163	1 186	1 173	1 120
40	-	-	937	1 081	1 207	1 309	1 384	1 429	1 438
50	-	-	-	1 110	1 274	1 420	1 544	1 641	1 709
60	-	-	-	-	1 317	1 502	1 670	1 817	1 939
Current consump	tion in A			1	•		1		
10	-	2.80	2.89	2.96	3.00	-	-	-	-
20	-	2.45	2.53	2.60	2.66	2.68	2.66	-	-
30	-	2.32	2.41	2.49	2.56	2.61	2.64	2.62	2.55
40	-	-	2.42	2.52	2.61	2.70	2.77	2.81	2.81
50	-	-	-	2.57	2.70	2.83	2.95	3.05	3.12
60	-	-	-	-	2.71	2.89	3.07	3.24	3.39
Mass flow in kg/h		-		-		-			
10	-	32	43	57	74	-	-	-	-
20	-	27	38	51	67	87	109	-	-
30	-	22	33	45	61	79	100	126	156
40	-	-	27	39	54	71	91	116	144
50	-	-	-	33	47	63	83	105	132
60	-	-	-	-	40	56	74	95	121
Coefficient of per	formance (C.			1	T			,	
10	-	2.64	3.37	4.34	5.69	-	-	-	-
20	-	1.97	2.48	3.11	3.91	4.96	6.42	-	-
30	-	1.47	1.86	2.31	2.84	3.49	4.31	5.40	6.90
40	-	-	1.40	1.73	2.11	2.54	3.06	3.71	4.52
50	-	-	-	1.29	1.57	1.87	2.22	2.63	3.13
60	-	-	-	-	1.14	1.36	1.60	1.88	2.19
ta anti-		0.00 4				B			
Nominal performa	ance at to = -1		10/			Pressure switch	-	07 7	h = =/)
Cooling capacity2 263WPower input1 244W		W			Maximum HP swite	•	27.7 1	bar(g) bar(g)	
Current consumption	on	1 244 W Minimum LP switch setting 2.66 A LP pump down setting		-	1.3	bar(g) bar(g)			
Aass flow					,	'3		30.(9)	
		1.82	<u> </u>			Sound power dat	a		
C.O.P.									
J.O.P.						Sound power leve		75	dB(A)



Maneurop reciprocating compressor. MTZ018-4

Danfoss

R448A

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

Cond. temp. in	temp. in Evaporating temperature in °C (to)								
°C (tc)	-30	-25	-20	-15	-10	-5	0	5	10

Cooling capacity in W

10	1 392	1 965	2 671	3 522	4 529	-	-	-	-
20	1 027	1 532	2 154	2 905	3 797	4 842	6 053	-	-
30	706	1 146	1 686	2 340	3 119	4 035	5 101	6 328	7 729
40	433	809	1 271	1 829	2 497	3 286	4 209	5 278	6 504
50	-	523	907	1 373	1 932	2 596	3 379	4 291	5 344
60	-	-	599	973	1 425	1 967	2 611	3 369	4 252

Power input in W

10	668	742	789	807	791	-	-	-	-
20	674	784	873	937	972	975	941	-	-
30	651	793	920	1 026	1 108	1 163	1 186	1 173	1 120
40	607	777	937	1 081	1 207	1 309	1 384	1 429	1 438
50	-	743	932	1 110	1 274	1 420	1 544	1 641	1 709
60	-	-	910	1 118	1 317	1 502	1 670	1 817	1 939

Current consumption in A

10	2.70	2.80	2.89	2.96	3.00	-	-	-	-
20	2.36	2.45	2.53	2.60	2.66	2.68	2.66	-	-
30	2.24	2.32	2.41	2.49	2.56	2.61	2.64	2.62	2.55
40	2.25	2.32	2.42	2.52	2.61	2.70	2.77	2.81	2.81
50	-	2.34	2.44	2.57	2.70	2.83	2.95	3.05	3.12
60	-	-	2.38	2.53	2.71	2.89	3.07	3.24	3.39

Mass flow in kg/h

10	26	37	49	64	81	-	-	-	-
20	21	31	43	58	74	93	115	-	-
30	16	26	37	51	67	85	106	129	156
40	11	20	31	44	59	76	96	119	144
50	-	15	25	37	52	68	87	108	132
60	-	-	20	31	44	60	78	98	121

Coefficient of performance (C.O.P.)

10	2.08	2.65	3.38	4.36	5.72	-	-	-	-
20	1.52	1.95	2.47	3.10	3.91	4.97	6.43	-	-
30	1.09	1.44	1.83	2.28	2.81	3.47	4.30	5.40	6.90
40	0.71	1.04	1.36	1.69	2.07	2.51	3.04	3.69	4.52
50	-	0.70	0.97	1.24	1.52	1.83	2.19	2.61	3.13
60	-	-	0.66	0.87	1.08	1.31	1.56	1.85	2.19

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

Cooling capacity	2 207	W
Power input	1 244	W
Current consumption	2.66	A
Mass flow	55	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

oouna ponor auta		
Sound power level	75	dB(A)
With accoustic hood	67	dB(A)

Tolerance according EN12900



Danfoss

Maneurop reciprocating compressor. MTZ018-4

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

Cond. temp. in		-		Evapora	ting temperature	e in °C (to)			
°C (tc)	-30	-25	-20	-15	-10	-5	0	5	10
Cooling capacity	in W								
10	-	1 959	2 660	3 504	4 504	-	-		
20	-	1 545	2 167	2 915	3 802	4 841	6 045	-	
30				2 373	3 150	4 060		6 334	7 729
40	-	1 173	1 718	1 879			5 116 4 245	5 297	6 504
	-	-	1 314		2 548	3 333			
50	-	-	-	1 435	1 999	2 661	3 432	4 322	5 344
60	-	-	-	-	1 504	2 047	2 679	3 411	4 252
Power input in W									
10	-	742	789	807	791	-	-	-	-
20	-	784	873	937	972	975	941	-	-
30	-	793	920	1 026	1 108	1 163	1 186	1 173	1 120
40	-	-	937	1 081	1 207	1 309	1 384	1 429	1 438
50	-	-		1 110	1 274	1 420	1 544	1 641	1 709
60	-	-	-	-	1 317	1 502	1 670	1 817	1 939
.	4 - -								
10	tion in A	2.80	2.89	2.96	3.00	-	_	_	_
20	-	2.45	2.53	2.60	2.66	2.68	2.66	_	
30	-	2.45	2.55	2.49	2.56	2.61	2.64	2.62	2.55
	-	-				-			
40			2.42	2.52	2.61	2.70	2.77	2.81	2.81
50	-	-	-	2.57	2.70	2.83	2.95	3.05	3.12
60	-	-	-	-	2.71	2.89	3.07	3.24	3.39
Mass flow in kg/h									
10	-	33	45	59	76	-	-	-	-
20	-	28	39	53	69	88	111	-	-
30	-	23	33	46	62	80	102	128	159
40	-	-	28	40	55	72	93	118	147
50	-	-	-	34	48	65	84	108	135
60	-	-	-	-	41	57	76	98	124
10	formance (C.	2.64	3.37	4.34	5.69	-	_	-	
20	-	1.97	2.48	3.11	3.91	4.96	6.42	_	_
30	-	1.48	1.87	2.31	2.84	3.49	4.31	5.40	6.90
40	-	-	1.40	1.74	2.04	2.55	3.07	3.71	4.52
40 50	-	-	-	1.74	1.57	1.87	2.22	2.63	3.13
	-	-	-	-					
60	-	-	-	-	1.14	1.36	1.60	1.88	2.19
Nominal performa	ance at to = -1	10 °C, tc = 45 °C				Pressure switch	-		
Cooling capacity		2 267	W			Maximum HP swit		27.7	bar(g)
Power input		1 244	w			Minimum LP swite	-	1	bar(g)
Current consumpti	on	2.66	A ka/b			LP pump down se	etting	1.3	bar(g)
Mass flow C.O.P.		52 1.82	kg/h			Sound nowor do	ha		
U.U.F.		1.02]		Sound power dat Sound power leve		73	dB(A)
to: Evaporating ten	nperature at de	ew point				With accoustic ho		65	dB(A)
		P. 1. 1.							· - v · 7



Maneurop reciprocating compressor. MTZ018-4

Danfoss

R449A

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

Cond. temp. in				Evapora	ting temperature in	n °C (to)			
°C (tc)	-30	-25	-20	-15	-10	-5	0	5	10

Cooling capacity in W

10	1 392	1 965	2 671	3 522	4 529	-	-	-	-
20	1 027	1 532	2 154	2 905	3 797	4 842	6 053	-	-
30	706	1 146	1 686	2 340	3 119	4 035	5 101	6 328	7 729
40	433	809	1 271	1 829	2 497	3 286	4 209	5 278	6 504
50	-	523	907	1 373	1 932	2 596	3 379	4 291	5 344
60	-	-	599	973	1 425	1 967	2 611	3 369	4 252

Power input in W

10	668	742	789	807	791	-	-	-	-
20	674	784	873	937	972	975	941	-	-
30	651	793	920	1 026	1 108	1 163	1 186	1 173	1 120
40	607	777	937	1 081	1 207	1 309	1 384	1 429	1 438
50	-	743	932	1 110	1 274	1 420	1 544	1 641	1 709
60	-	-	910	1 118	1 317	1 502	1 670	1 817	1 939

Current consumption in A

10	2.70	2.80	2.89	2.96	3.00	-	-	-	-
20	2.36	2.45	2.53	2.60	2.66	2.68	2.66	-	-
30	2.24	2.32	2.41	2.49	2.56	2.61	2.64	2.62	2.55
40	2.25	2.32	2.42	2.52	2.61	2.70	2.77	2.81	2.81
50	-	2.34	2.44	2.57	2.70	2.83	2.95	3.05	3.12
60	-	-	2.38	2.53	2.71	2.89	3.07	3.24	3.39

Mass flow in kg/h

10	27	38	51	66	84	-	-	-	-
20	22	32	44	59	76	95	117	-	-
30	16	26	38	52	68	86	108	132	159
40	11	21	32	45	60	78	98	121	147
50	-	15	26	38	53	70	89	111	135
60	-	-	20	32	45	61	79	100	124

Coefficient of performance (C.O.P.)

10	2.08	2.65	3.38	4.36	5.72	-	-	-	-
20	1.52	1.95	2.47	3.10	3.91	4.97	6.43	-	-
30	1.09	1.44	1.83	2.28	2.81	3.47	4.30	5.40	6.90
40	0.71	1.04	1.36	1.69	2.07	2.51	3.04	3.69	4.52
50	-	0.70	0.97	1.24	1.52	1.83	2.19	2.61	3.13
60	-	-	0.66	0.87	1.08	1.31	1.56	1.85	2.19

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

Cooling capacity	2 207	W
Power input	1 244	W
Current consumption	2.66	А
Mass flow	57	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	65	dB(A)

Tolerance according EN12900



Danfoss

Maneurop reciprocating compressor. MTZ018-4

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

R452A

10 . 831 869 880 862 . . . 20 - 897 974 1025 1050 1045 1000 . 30 - 927 1046 1142 1211 1253 1265 1246 40 - 910 1075 1217 1334 1425 1487 1520 50 - - 1047 1238 1406 1548 1664 1751 60 - - 1194 1415 1612 1784 1928 2urrent consumption in A - - 1194 1415 162 1784 1928 20 - 2.37 2.42 2.46 2.48 2.47 2.44 - - 30 - 2.40 2.52 2.67 2.81 2.94 3.06 3.15 60 - - - 2.67 2.86 3.04 3.22 <th>Cond. temp. in</th> <th></th> <th></th> <th></th> <th>Evapora</th> <th>ting temperatur</th> <th>e in °C (to)</th> <th></th> <th></th> <th></th>	Cond. temp. in				Evapora	ting temperatur	e in °C (to)			
10 - 2 200 2 3763 4788 - - - - - - - - - - - - - - - - - - - 1 2 0 - 1 440 553 6793 3 6478 3 6478 446 553 6793 1 60 - - 1 <	°C (tc)	-30	-25	-20	-15	-10	-5	0	5	10
10 - 2 20 2 3763 4788 - 1 2 2 6 775 3 511 4 446 5 555 6 793 4 4 4 5 2 6 783 3 661 4 4 5 55 6 793 1<	coling conscitu	in W								
20 . 1 855 2.482 3 244 4 154 5 227 6 476 . . . 30 - 1 442 2 047 2 715 3 511 4 446 5 535 6 793 40 - 1 124 1 667 2 183 2 863 3 661 4 589 5 661 50 - - 1 166 1 649 2 216 2 878 3 845 4 531 60 - - 1 120 1 574 2 101 2 710 3 410 20 - 857 974 1 025 1 050 1 045 1 009 - 30 - 927 1 046 1 142 1 211 1 223 1 265 1 246 40 - 910 1 075 1 217 1 334 1 425 1 487 1 520 1 520 50 - - - 1 194 1 415 1 612 1 784 1 928 20 - 2.37 </td <td></td> <td></td> <td>2 210</td> <td>2 000</td> <td>2 762</td> <td>4 799</td> <td></td> <td></td> <td></td> <td></td>			2 210	2 000	2 762	4 799				
30 - 1 492 2.047 2.715 3.511 4.446 5.535 6.783 40 - 1.124 1.607 2.183 2.663 3.661 4.698 5.661 50 - - 1.166 1.649 2.216 2.878 3.641 4.698 4.531 60 - - . 1.120 1.574 2.101 2.710 3.410 200er input in W - - .										-
40 . 1 124 1 607 2 183 2 283 3 661 4 589 5 661 60 . . 1 166 1 649 2 216 2 878 3 645 4 531 700 . . 1 120 1 574 2 101 2 710 3 410 Over input in W 10 . 891 889 880 862 20 . 897 974 1 025 1 060 1 045 1 046 1 548 1 684 1 751 30 . 927 1 046 1 142 1 211 1 283 1 285 1 487 1 520 50 . . 1 047 1 238 1 468 1 684 1 751 1 60 1 548 1 684 1 751 60 . . . 1 194 1 415 1 612 1 784 1 928 Consumption in A 10 . 2 33										8 238
50 . . 1 166 1 649 2 216 2 878 3 645 4 531 60 - - . 1 120 1 574 2 101 2710 3410 20wer input in W - .										6 890
60 . . 1120 1574 2101 2710 3410 20 . 831 869 880 662 . . . 20 . 897 974 1025 1060 1045 1009 . 30 . 927 1046 1142 1211 1253 1265 1246 40 . 910 1075 1217 1334 1425 1487 1520 50 . . 1047 1238 1466 1548 1664 1751 60 . . . 1194 1415 1612 1784 1928 2urent consumption in A . . . 2.46 2.48 2.47 2.44 . 20 . 2.33 2.36 2.272 2.80 3.615 5 60 . . 2.67 2.81 2.94 3.66 3.15										5 546
Prover input in W Image: constraint of the setting of th				1						4 211
10 . 831 869 880 862 . . . 20 - 897 974 1025 1050 1045 1000 . 30 - 927 1046 1142 1211 1253 1265 1246 40 - 910 1075 1217 1334 1425 1487 1520 50 - - 1047 1238 1406 1548 1664 1751 60 - - 1194 1415 1612 1784 1928 2urrent consumption in A - - 1194 1415 162 1784 1928 20 - 2.37 2.42 2.46 2.48 2.47 2.44 - - 30 - 2.40 2.52 2.67 2.81 2.94 3.06 3.15 60 - - - 2.67 2.86 3.04 3.22 <td>00</td> <td>-</td> <td>-</td> <td>-</td> <td>1 120</td> <td>1 574</td> <td>2 101</td> <td>2710</td> <td>3410</td> <td>4211</td>	00	-	-	-	1 120	1 574	2 101	2710	3410	4211
20 . 897 974 1 025 1 050 1 045 1 009 . 30 - 927 1 046 1 142 1 211 1 223 1 225 1 246 40 - 910 1 075 1 217 1 334 1 425 1 487 1 520 50 - - 1 047 1 238 1 406 1 548 1 664 1 751 60 - - - 1 194 1 415 1 612 1 784 1 928 varrent consumption in A - <t< td=""><td>ower input in W</td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>	ower input in W									
30 - 927 1046 1142 1211 1253 1285 1246 40 - 910 1075 1217 1334 1425 1487 1520 50 - 1047 1238 1406 1548 1664 1751 60 - - 1194 1415 1612 1784 1928 2urent consumption in A - - 1194 1415 1612 1784 1928 2urent consumption in A - 2.33 2.36 2.35 - - - - 20 - 2.37 2.42 2.46 2.48 2.47 2.44 - - - - - 2.90 2.60 2.87 2.90 2.60 2.87 2.90 2.60 2.87 2.90 2.60 2.87 2.90 2.60 3.60 3.15 1.60 3.22 3.37 2.60 3.60 3.60 6.7 87 111<	10	-	831	869	880	862	-	-	-	-
40 - 910 1075 1217 1334 1425 1487 1520 50 - - 1047 1238 1406 1548 1664 1751 60 - - 1194 1415 1612 1784 1928 2urrent consumption in A 10 - 233 236 236 - <td< td=""><td>20</td><td>-</td><td>897</td><td>974</td><td>1 025</td><td>1 050</td><td>1 045</td><td>1 009</td><td>-</td><td>-</td></td<>	20	-	897	974	1 025	1 050	1 045	1 009	-	-
50 - - 1 047 1 238 1 406 1 548 1 664 1 751 60 - - 1 194 1 415 1 612 1 764 1 928 burrent consumption in A - - 1 194 1 415 1 612 1 764 1 928 20 - 2.33 2.36 2.36 2.35 - - - - 20 - 2.37 2.42 2.46 2.48 2.47 2.44 - - 30 - 2.40 2.52 2.67 2.81 2.94 3.06 3.15 6 60 - - 2.67 2.86 3.04 3.22 3.37 4ass flow in kg/h - <td>30</td> <td>-</td> <td>927</td> <td>1 046</td> <td>1 142</td> <td>1 211</td> <td>1 253</td> <td>1 265</td> <td>1 246</td> <td>1 193</td>	30	-	927	1 046	1 142	1 211	1 253	1 265	1 246	1 193
60 . . 1 194 1 415 1 612 1 784 1 928 Current consumption in A 10 . 2.33 2.36 2.35 .	40	-	910	1 075	1 217	1 334	1 425	1 487	1 520	1 520
Current consumption in A Current consumption in A 10 - 2.33 2.36 2.36 2.35 -	50	-	-	1 047	1 238	1 406	1 548	1 664	1 751	1 808
10 - 2.33 2.36 2.36 2.35 - - - - 20 - 2.37 2.42 2.46 2.48 2.47 2.44 - 30 - 2.40 2.48 2.55 2.61 2.64 2.66 2.64 40 - 2.40 2.52 2.62 2.72 2.80 2.87 2.90 50 - - 2.52 2.67 2.81 2.94 3.06 3.15 60 - - 2.67 2.86 3.04 3.22 3.37 Ass flow in kg/h - <	60	-	-	-	1 194	1 415	1 612	1 784	1 928	2 043
10 - 2.33 2.36 2.36 2.35 - - - - 20 - 2.37 2.42 2.46 2.48 2.47 2.44 - 30 - 2.40 2.48 2.55 2.61 2.64 2.66 2.64 40 - 2.40 2.52 2.62 2.72 2.80 2.87 2.90 50 - - 2.52 2.67 2.81 2.94 3.06 3.15 60 - - 2.67 2.86 3.04 3.22 3.37 Ass flow in kg/h - - - 2.67 2.86 3.04 3.22 3.37 40 - 30 44 60 79 102 129 161 50 - - - 42 59 80 105 134 Coefficient of performance (C.O.P.) - - - - - - <td></td>										
20 - 2.37 2.42 2.46 2.48 2.47 2.44 - 30 - 2.40 2.48 2.55 2.61 2.64 2.66 2.64 40 - 2.40 2.52 2.62 2.72 2.80 2.87 2.90 50 - - 2.67 2.81 2.94 3.06 3.15 60 - - 2.67 2.86 3.04 3.22 3.37 Aass flow in kgh 10 - 46 61 79 101 - - - 20 - 41 56 73 94 119 149 - 30 - 36 50 67 87 111 139 173 40 - 30 44 60 79 102 129 161 50 - - - 42 59 80 105	i		2.22	2.26	2.26	2.25				-
30 - 2.40 2.48 2.55 2.61 2.64 2.66 2.64 40 - 2.40 2.52 2.62 2.72 2.80 2.87 2.90 50 - - 2.62 2.67 2.81 2.94 3.06 3.15 60 - - 2.67 2.81 2.94 3.06 3.15 60 - - 2.67 2.86 3.04 3.22 3.37 Ass flow in kg/h - - 2.67 2.86 3.04 3.22 3.37 10 - 46 61 79 101 - - - 20 41 56 73 94 119 149 - - 30 - 36 51 70 92 118 148 6 50 - - - 42 59 80 105 134 - - 42 59 80 0.55 4.38 5.45										-
40 - 2.40 2.52 2.62 2.72 2.80 2.87 2.90 50 - - 2.52 2.67 2.81 2.94 3.06 3.15 60 - - - 2.67 2.86 3.04 3.22 3.37 Aass flow in kg/h - - 2.67 2.86 3.04 3.22 3.37 10 - 46 61 79 101 - - - 20 - 41 56 73 94 119 149 - 30 - 36 50 67 87 111 139 173 40 - 30 44 60 79 102 129 161 50 - - - 42 59 80 105 134 60 - - - 42 59 80 105 134 20 - 2.07 2.55 3.16 3.96 5.00 6.42 - <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td>+ +</td><td>2.59</td></t<>									+ +	2.59
50 - 2.52 2.67 2.81 2.94 3.06 3.15 60 - - 2.67 2.86 3.04 3.22 3.37 Aass flow in kg/h 10 - 46 61 79 101 - - - 20 - 41 56 73 94 119 149 - 30 - 36 50 67 87 111 139 173 40 - 30 44 60 79 102 129 161 50 - - 36 51 70 92 118 148 60 - - 42 59 80 105 134 200 - 2.07 2.55 3.16 3.96 5.00 6.42 - 20 - 1.61 1.96 2.38 2.90 3.55 4.38 5.45 40										2.59
60 - - 2.67 2.86 3.04 3.22 3.37 Aass flow in kg/h - - 2.67 2.86 3.04 3.22 3.37 10 - 46 61 79 101 -		-								3.22
Mass flow in kg/h 10 - 46 61 79 101 - </td <td></td> <td>-</td> <td></td> <td></td> <td></td> <td></td> <td>-</td> <td>-</td> <td></td> <td>3.51</td>		-					-	-		3.51
10 - 46 61 79 101 - - - - 20 - 41 56 73 94 119 149 - - 30 - 36 50 67 87 111 139 173 40 - 30 44 60 79 102 129 161 50 - - 36 51 70 92 118 148 60 - - 42 59 80 105 134 Coefficient of performance (C.O.P.) 10 - 2.66 3.35 4.28 5.56 - - - - - 134 148 148 148 148 148 148 148 148 148 144 148 148 148 148 144 149 149 149 149 149 125 149 149				1	2.07	2.00	0.01	0.22	0.01	0.01
20 - 41 56 73 94 119 149 - 30 - 36 50 67 87 111 139 173 40 - 30 44 60 79 102 129 161 50 - - 36 51 70 92 118 148 60 - - 42 59 80 105 134 Coefficient of performance (C.O.P.) 10 - 2.66 3.35 4.28 5.56 - - - - 20 - 2.07 2.55 3.16 3.96 5.00 6.42 - - 30 - 1.61 1.96 2.38 2.90 3.55 4.38 5.45 40 - 1.23 1.49 1.79 2.15 2.57 3.09 3.72 50 - - 0.94 1.11 </td <td>Mass flow in kg/h</td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td> <td></td>	Mass flow in kg/h									
30 - 36 50 67 87 111 139 173 40 - 30 44 60 79 102 129 161 50 - - 36 51 70 92 118 148 60 - - 42 59 80 105 134 Coefficient of performance (C.O.P.) 10 - 2.66 3.35 4.28 5.56 - - - - 20 - 2.07 2.55 3.16 3.96 5.00 6.42 - - 30 - 1.61 1.96 2.38 2.90 3.55 4.38 5.45 40 - 1.23 1.49 1.79 2.15 2.57 3.09 3.72 50 - - - 0.94 1.11 1.30 1.52 1.77 Mominal performance at to = -10 °C, tc = 45 °C Cooling capacity 2 539 W W Winum HP switch setting 1 1	10	-	46	61	79	101	-	-	-	-
40 - 30 44 60 79 102 129 161 50 - - 36 51 70 92 118 148 60 - - 42 59 80 105 134 Coefficient of performance (C.O.P.) 10 - 2.66 3.35 4.28 5.56 - - - - 20 - 2.07 2.55 3.16 3.96 5.00 6.42 - - 30 - 1.61 1.96 2.38 2.90 3.55 4.38 5.45 40 - 1.23 1.49 1.79 2.15 2.57 3.09 3.72 50 - - 1.11 1.33 1.58 1.86 2.19 2.59 6 60 - - 0.94 1.11 1.30 1.52 1.77 2.539 W	20	-	41	56	73	94	119	149	-	-
50 - - 36 51 70 92 118 148 60 - - - 42 59 80 105 134 Coefficient of performance (C.O.P.) 10 - 2.66 3.35 4.28 5.56 - 1.11 1.33 1.58 1.86 2.19 2.59 1.77 - -	30	-	36	50	67	87	111	139	173	214
60 - - 42 59 80 105 134 Coefficient of performance (C.O.P.) 10 - 2.66 3.35 4.28 5.56 - - - - 20 - 2.07 2.55 3.16 3.96 5.00 6.42 - - 30 - 1.61 1.96 2.38 2.90 3.55 4.38 5.45 40 - 1.23 1.49 1.79 2.15 2.57 3.09 3.72 50 - - - 0.94 1.11 1.30 1.52 1.77 60 - - 0.94 1.11 1.30 1.52 1.77 Iominal performance at to = -10 °C, tc = 45 °C Cooling capacity 2 539 W W Yower input 1 377 W W Maximum HP switch setting 27.7 Mass flow 74 kg/h 2.0.P. 1.84 Sound power data Sou	40	-	30	44	60	79	102	129	161	200
Coefficient of performance (C.O.P.) 10 - 2.66 3.35 4.28 5.56 - - - 20 - 2.07 2.55 3.16 3.96 5.00 6.42 - 30 - 1.61 1.96 2.38 2.90 3.55 4.38 5.45 40 - 1.23 1.49 1.79 2.15 2.57 3.09 3.72 50 - - 1.11 1.33 1.58 1.86 2.19 2.59 60 - - 0.94 1.11 1.30 1.52 1.77 Nominal performance at to = -10 °C, tc = 45 °C Cooling capacity 2.539 W W W N	50	-	-	36	51	70	92	118	148	185
10 - 2.66 3.35 4.28 5.56 - - - - 20 - 2.07 2.55 3.16 3.96 5.00 6.42 - 30 - 1.61 1.96 2.38 2.90 3.55 4.38 5.45 40 - 1.23 1.49 1.79 2.15 2.57 3.09 3.72 50 - - 1.11 1.33 1.58 1.86 2.19 2.59 60 - - 0.94 1.11 1.30 1.52 1.77 Nominal performance at to = -10 °C, tc = 45 °C Cooling capacity 2 539 W W W Naximum HP switch setting 1 1 Power input 1 377 W W Maximum LP switch setting 1 1 1 3 1 Current consumption 2.77 A Ass flow 74 kg/h 1 3 c).O.P. 1.84 . . Sound power level 76 With accoustic hood<	60	-	-	-	42	59	80	105	134	169
10 - 2.66 3.35 4.28 5.56 - - - - 20 - 2.07 2.55 3.16 3.96 5.00 6.42 - 30 - 1.61 1.96 2.38 2.90 3.55 4.38 5.45 40 - 1.23 1.49 1.79 2.15 2.57 3.09 3.72 50 - - 1.11 1.33 1.58 1.86 2.19 2.59 60 - - 0.94 1.11 1.30 1.52 1.77 Nominal performance at to = -10 °C, tc = 45 °C Cooling capacity 2 539 W W W Naximum HP switch setting 1 1 Power input 1 377 W W Maximum LP switch setting 1 L L P pump down setting 1 3 Co.O.P. 1.84 c: Evaporating temperature at dew point . . . <t< td=""><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td><td></td></t<>										
20 - 2.07 2.55 3.16 3.96 5.00 6.42 - 30 - 1.61 1.96 2.38 2.90 3.55 4.38 5.45 40 - 1.23 1.49 1.79 2.15 2.57 3.09 3.72 50 - - 1.11 1.33 1.58 1.86 2.19 2.59 60 - - 0.94 1.11 1.30 1.52 1.77 Nominal performance at to = -10 °C, tc = 45 °C Cooling capacity 2 539 W W W Power input 1 377 W Maximum HP switch setting 1 Current consumption 2.77 A Mass flow 74 kg/h C.O.P. 1.84 Sound power level 76 Sound power level 76 With accoustic hood 68 68			1	3 35	4 28	5 56	_	_		_
30 - 1.61 1.96 2.38 2.90 3.55 4.38 5.45 40 - 1.23 1.49 1.79 2.15 2.57 3.09 3.72 50 - - 1.11 1.33 1.58 1.86 2.19 2.59 60 - - 0.94 1.11 1.30 1.52 1.77 Mominal performance at to = -10 °C, tc = 45 °C Cooling capacity 2 539 W Power input 1 377 W Maximum HP switch setting 27.7 Mass flow 74 kg/h 1.3 500 1.34 bc: Evaporating temperature at dew point 1.84 500 68							-			-
40 - 1.23 1.49 1.79 2.15 2.57 3.09 3.72 50 - - 1.11 1.33 1.58 1.86 2.19 2.59 60 - - 0.94 1.11 1.30 1.52 1.77 Mominal performance at to = -10 °C, tc = 45 °C Pressure switch settings Pressure switch setting 27.7 Cooling capacity 2 539 W W W Maximum HP switch setting 27.7 Numeric consumption 2.77 A Maximum LP switch setting 1.3 Abust flow 74 kg/h 1.3 Sound power data 0: Evaporating temperature at dew point 1.84 50 76			1					1	5.45	6.90
50 - 1.11 1.33 1.58 1.86 2.19 2.59 60 - - 0.94 1.11 1.30 1.52 1.77 Mominal performance at to = -10 °C, tc = 45 °C Cooling capacity 2 539 W ?ower input 1 377 W Current consumption 2.77 A Alass flow 74 kg/h C.O.P. 1.84 Sound power level 76 Sound power level 76 With accoustic hood 68										4.53
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Nominal performance at to = -10 °C, tc = 45 °C Pressure switch settings Cooling capacity 2 539 W Power input 1 377 W Current consumption 2.77 A Mass flow 74 kg/h C.O.P. 1.84 Sound power data o: Evaporating temperature at dew point 76										2.06
Cooling capacity 2 539 W Power input 1 377 W Current consumption 2.77 A Mass flow 74 kg/h C.O.P. 1.84 Sound power data o: Evaporating temperature at dew point 5	00	-		-	0.94	1 1.11	1.50	1.02	1.77	2.00
Cooling capacity 2 539 W Power input 1 377 W Current consumption 2.77 A Mass flow 74 kg/h C.O.P. 1.84 to: Evaporating temperature at dew point 5000000000000000000000000000000000000	Nominal performa	ince at to = -1	0 °C, tc = 45 °C				Pressure switch	settings		
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Mass flow 74 kg/h C.O.P. 1.84 Sound power data Sound power level 76 With accoustic hood 68	Power input							-		bar(g
Sound power data Sound power level 76 With accoustic hood 68		on					LP pump down se	etting	1.3	bar(g)
o: Evaporating temperature at dew point Sound power level 76 With accoustic hood 68				kg/h			0			
o: Evaporating temperature at dew point 68	J.U.P.		1.84]				70	
	o: Evanorating tor	nerature at de	w point							dB(A) dB(A)
c: Condensing temperature at dew point	1 0						whith accoustic ho	iou -	00	ub(A)



Maneurop reciprocating compressor. MTZ018-4

Danfoss

R452A

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

Cond. temp. in	Evaporating temperature in °C (to)								
°C (tc)	-30	-25	-20	-15	-10	-5	0	5	10

Cooling capacity in W

10	1 600	2 151	2 848	3 705	4 737	-	-	-	-
20	1 281	1 776	2 395	3 155	4 070	5 156	6 426	-	-
30	961	1 397	1 939	2 601	3 398	4 346	5 458	6 750	8 238
40	646	1 024	1 486	2 049	2 727	3 536	4 489	5 602	6 890
50	342	660	1 043	1 506	2 064	2 732	3 525	4 458	5 546
60	-	313	615	977	1 414	1 941	2 573	3 325	4 211

Power input in W

10	769	831	869	880	862	-	-	-	-
20	796	897	974	1 025	1 050	1 045	1 009	-	-
30	785	927	1 046	1 142	1 211	1 253	1 265	1 246	1 193
40	725	910	1 075	1 217	1 334	1 425	1 487	1 520	1 520
50	603	835	1 047	1 238	1 406	1 548	1 664	1 751	1 808
60	-	689	951	1 194	1 415	1 612	1 784	1 928	2 043

Current consumption in A

10	2.29	2.33	2.36	2.36	2.35	-	-	-	-
20	2.31	2.37	2.42	2.46	2.48	2.47	2.44	-	-
30	2.32	2.40	2.48	2.55	2.61	2.64	2.66	2.64	2.59
40	2.29	2.40	2.52	2.62	2.72	2.80	2.87	2.90	2.91
50	2.23	2.38	2.52	2.67	2.81	2.94	3.06	3.15	3.22
60	-	2.30	2.49	2.67	2.86	3.04	3.22	3.37	3.51

Mass flow in kg/h

10	40	54	70	89	111	-	-	-	-
20	35	48	63	82	103	128	157	-	-
30	30	42	57	75	95	119	147	178	214
40	23	35	50	67	87	109	136	166	200
50	15	27	41	58	77	99	124	153	185
60	-	16	31	47	65	86	110	138	169

Coefficient of performance (C.O.P.)

10	2.08	2.59	3.28	4.21	5.50	-	-	-	-
20	1.61	1.98	2.46	3.08	3.88	4.93	6.37	-	-
30	1.22	1.51	1.85	2.28	2.81	3.47	4.32	5.42	6.90
40	0.89	1.12	1.38	1.68	2.04	2.48	3.02	3.69	4.53
50	0.57	0.79	1.00	1.22	1.47	1.76	2.12	2.55	3.07
60	-	0.45	0.65	0.82	1.00	1.20	1.44	1.72	2.06

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

iteminal periormanee atte		
Cooling capacity	2 394	W
Power input	1 377	W
Current consumption	2.77	А
Mass flow	82	kg/h
C.O.P.	1.74	

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

oouna ponor auta		
Sound power level	76	dB(A)
With accoustic hood	68	dB(A)

Tolerance according EN12900



ENGINEERING TOMORROW



