

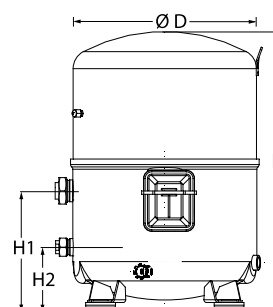
Datasheets

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



General Characteristics

Model number (on compressor nameplate)		MTZ160HW4AVE
Code number for Singlepack*		MTZ160-4VI
Code number for Industrial pack**		MTZ160-4VM
Drawing number		8504011e
Suction and discharge connections		Rotolock
Suction connection		1-3/4" Rotolock
Discharge connection		1-1/4" Rotolock
Suction connection with supplied sleeve		1-1/8" ODF
Discharge connection with supplied sleeve		3/4" ODF
Oil sight glass		Threaded
Oil equalisation connection		3/8" flare SAE
Oil drain connection		None
LP gauge port		Schrader
IPR valve		30 bar / 8 bar
Cylinders	4	
Swept volume	271.55 cm ³ /rev	
Displacement @ Nominal speed	47.3 m ³ /h @ 2900 rpm - 57.0 m ³ /h @ 3500 rpm	
Net weight	67 kg	
Oil charge	3.9 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	10 kg	
Approved refrigerants	R404A, R134a, R407C, R407A/F, R448A, R449A, R452A	

Dimensions


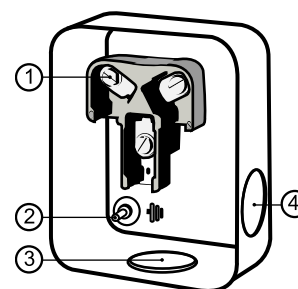
D=352 mm

H=540 mm

H1=233 mm

H2=125 mm

H3=- mm

Terminal box


IP54 (with cable gland)

1: Screw connectors 10-32 UNF x 9.5

2: Earth M4-12

3: Knock-out Ø 29 mm (1.14")

4: Knock-out Ø 25.5 mm (1.00")

Electrical Characteristics

Nominal voltage	380-400V/3/50Hz - 460V/3/60Hz
Voltage range	340-440 V @ 50Hz - 414-506 V @ 60Hz
Winding resistance (between phases) +/- 7% at 25°C	1.19 Ω
Maximum Continuous Current (MCC)	36 A
Locked Rotor Amps (LRA)	130 A
Motor protection	Internal overload protector

Recommended Installation torques

Oil sight glass	50 Nm
Power connections / Earth connection	3 Nm / 2 Nm
Mounting bolts	50 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), -

*Singlepack: Compressor in cardboard box

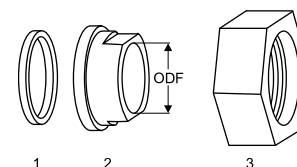
**Industrial pack: 6 Unboxed compressors on pallet (order per multiples of 6)

Rotolock accessories, suction side
Code no.

Solder sleeve, P02 (1-3/4" Rotolock, 1-1/8" ODF)	8153004
Rotolock valve, V02 (1-3/4" Rotolock, 1-1/8" ODF)	8168028
Gasket, 1-3/4"	8156132

Gaskets, sleeves and nuts
Rotolock accessories, discharge side
Code no.

Solder sleeve, P04 (1-1/4" Rotolock, 3/4" ODF)	8153008
Rotolock valve, V04 (1-1/4" Rotolock, 3/4" ODF)	8168029
Gasket, 1-1/4"	8156131



- 1: Gasket
2: Solder sleeve
3: Rotolock nut

Rotolock accessories, sets
Code no.

Valve set, V02 (1-3/4"~1-1/8"), V04 (1-1/4"~3/4")	7703009
Gasket set, 1", 1-1/4", 1-3/4", OSG gaskets black & white	8156009

Oil / lubricants
Code no.

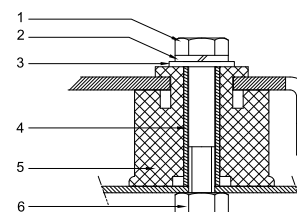
POE lubricant, 175PZ, 1 litre can	120Z0638
POE lubricant, 175PZ, 2.5 litre can	120Z0639

Crankcase heaters
Code no.

PTC heater 27W, CE mark, UL	120Z0459
Belt type crankcase heater, 75 W, 230 V, CE mark, UL	7773108
Belt type crankcase heater, 75 W, 400 V, CE mark, UL	7773118
Belt type crankcase heater, 75 W, 460 V, CE mark, UL	120Z0464

Mounting kit
Miscellaneous accessories
Code no.

Electronic soft start kit, MCI 25 C	7705007
Soft start kit with statoric resistors, prewired box, SCR03	7705001
Acoustic hood for 4 cylinder compressor	120Z0473
Oil equalisation nut	8153127



- 1: Bolt (4x)
2: Lock washer (4x)
3: Flat washer (4x)
4: Sleeve (4x)
5: Grommet (4x)
6: Nut (4x)

Spare parts
Code no.

Mounting kit for 4 cylinder compressor & MS, including 4 grommets, 4 bolts	8156007
Oil sight glass with gaskets (black & white)	8156019
Gasket for oil sight glass (black chloroprene)	8156145
Service kit for terminal box 96 x 115 mm, including 1 cover, 1 clamp	8156135
T block connector 52 x 57 mm	8173230

Datasheet, performance data

Maneurop reciprocating compressor. MTZ160-4

Performance data at 50 Hz, EN 12900 rating conditions

R407C

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

Cooling capacity in W

35	16 998	21 980	27 923	34 947	43 176	52 730	63 731	-	-
40	15 537	20 244	25 839	32 442	40 175	49 161	59 520	-	-
45	14 059	18 489	23 732	29 911	37 146	45 559	55 273	-	-
50	-	16 719	21 607	27 357	34 091	41 929	50 995	-	-
55	-	-	19 467	24 786	31 014	38 274	46 688	-	-
60	-	-	-	22 199	27 920	34 598	42 356	-	-
65	-	-	-	19 602	24 811	30 904	38 004	-	-

Power input in W

35	7 638	8 357	9 014	9 629	10 226	10 825	11 448	-	-
40	7 965	8 806	9 568	10 275	10 947	11 608	12 278	-	-
45	8 213	9 197	10 087	10 907	11 678	12 423	13 162	-	-
50	-	9 516	10 557	11 513	12 405	13 255	14 085	-	-
55	-	-	10 964	12 078	13 112	14 090	15 034	-	-
60	-	-	-	12 587	13 787	14 915	15 994	-	-
65	-	-	-	13 027	14 414	15 715	16 951	-	-

Current consumption in A

35	13.91	14.84	15.73	16.55	17.26	17.85	18.27	-	-
40	14.28	15.33	16.35	17.31	18.18	18.93	19.52	-	-
45	14.60	15.80	16.97	18.09	19.13	20.06	20.85	-	-
50	-	16.21	17.55	18.85	20.08	21.21	22.21	-	-
55	-	-	18.09	19.58	21.02	22.36	23.59	-	-
60	-	-	-	20.25	21.92	23.50	24.97	-	-
65	-	-	-	20.85	22.75	24.58	26.32	-	-

Mass flow in kg/h

35	369	469	586	722	879	1 058	1 263	-	-
40	355	454	570	703	857	1 033	1 234	-	-
45	339	437	551	683	834	1 007	1 204	-	-
50	-	419	531	661	809	979	1 172	-	-
55	-	-	510	637	782	949	1 138	-	-
60	-	-	-	611	754	916	1 102	-	-
65	-	-	-	583	723	882	1 063	-	-

Coefficient of performance (C.O.P.)

35	2.23	2.63	3.10	3.63	4.22	4.87	5.57	-	-
40	1.95	2.30	2.70	3.16	3.67	4.24	4.85	-	-
45	1.71	2.01	2.35	2.74	3.18	3.67	4.20	-	-
50	-	1.76	2.05	2.38	2.75	3.16	3.62	-	-
55	-	-	1.78	2.05	2.37	2.72	3.11	-	-
60	-	-	-	1.76	2.03	2.32	2.65	-	-
65	-	-	-	1.50	1.72	1.97	2.24	-	-

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

Cooling capacity	34 091	W
Power input	12 405	W
Current consumption	20.08	A
Mass flow	809	kg/h
C.O.P.	2.75	



to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

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

Pressure switch settings

Maximum HP switch setting	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	84	dB(A)
With acoustic hood	78	dB(A)

Tolerance according EN12900

Performance data at 50 Hz, ARI rating conditions
R407C

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

Cooling capacity in W

35	18 296	23 630	29 982	37 483	46 257	56 434	68 140	-	-
40	16 814	21 879	27 889	34 971	43 255	52 869	63 939	-	-
45	15 313	20 106	25 769	32 432	40 223	49 270	59 702	-	-
50	-	18 314	23 629	29 869	37 164	45 643	55 435	-	-
55	-	-	21 471	27 287	34 084	41 994	51 144	-	-
60	-	-	-	24 692	30 990	38 329	46 839	-	-
65	-	-	-	22 090	27 891	34 661	42 532	-	-

Power input in W

35	7 638	8 357	9 014	9 629	10 226	10 825	11 448	-	-
40	7 965	8 806	9 568	10 275	10 947	11 608	12 278	-	-
45	8 213	9 197	10 087	10 907	11 678	12 423	13 162	-	-
50	-	9 516	10 557	11 513	12 405	13 255	14 085	-	-
55	-	-	10 964	12 078	13 112	14 090	15 034	-	-
60	-	-	-	12 587	13 787	14 915	15 994	-	-
65	-	-	-	13 027	14 414	15 715	16 951	-	-

Current consumption in A

35	13.91	14.84	15.73	16.55	17.26	17.85	18.27	-	-
40	14.28	15.33	16.35	17.31	18.18	18.93	19.52	-	-
45	14.60	15.80	16.97	18.09	19.13	20.06	20.85	-	-
50	-	16.21	17.55	18.85	20.08	21.21	22.21	-	-
55	-	-	18.09	19.58	21.02	22.36	23.59	-	-
60	-	-	-	20.25	21.92	23.50	24.97	-	-
65	-	-	-	20.85	22.75	24.58	26.32	-	-

Mass flow in kg/h

35	367	467	583	718	874	1 052	1 255	-	-
40	353	452	566	699	852	1 027	1 227	-	-
45	337	435	548	679	829	1 001	1 197	-	-
50	-	417	528	657	804	973	1 165	-	-
55	-	-	507	633	778	943	1 131	-	-
60	-	-	-	607	749	911	1 095	-	-
65	-	-	-	580	719	877	1 057	-	-

Coefficient of performance (C.O.P.)

35	2.40	2.83	3.33	3.89	4.52	5.21	5.95	-	-
40	2.11	2.48	2.91	3.40	3.95	4.55	5.21	-	-
45	1.86	2.19	2.55	2.97	3.44	3.97	4.54	-	-
50	-	1.92	2.24	2.59	3.00	3.44	3.94	-	-
55	-	-	1.96	2.26	2.60	2.98	3.40	-	-
60	-	-	-	1.96	2.25	2.57	2.93	-	-
65	-	-	-	1.70	1.94	2.21	2.51	-	-

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

Cooling capacity	37 819	W
Power input	13 457	W
Current consumption	21.50	A
Mass flow	851	kg/h
C.O.P.	2.81	

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	84	dB(A)
With acoustic hood	78	dB(A)

Tolerance according EN12900

Performance data at 50 Hz, EN 12900 rating conditions
R134a

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

Cooling capacity in W

35	5 597	7 862	14 130	18 302	23 277	29 140	35 975	43 865	52 896
40	4 930	7 103	13 045	16 981	21 673	27 205	33 662	41 126	49 683
45	4 231	6 304	11 900	15 593	19 993	25 186	31 255	38 284	46 358
50	3 516	5 479	10 713	14 152	18 252	23 096	28 768	35 353	42 935
55	-	-	9 498	12 675	16 465	20 951	26 218	32 350	39 431
60	-	-	-	11 177	14 648	18 767	23 620	29 289	35 860
65	-	-	-	-	12 815	16 559	20 988	26 186	32 238
75	-	-	-	-	-	-	15 686	19 915	24 901

Power input in W

35	3 839	4 359	5 441	5 977	6 494	6 978	7 418	7 802	8 115
40	3 978	4 513	5 645	6 218	6 778	7 313	7 810	8 258	8 643
45	4 088	4 643	5 836	6 449	7 057	7 646	8 206	8 722	9 183
50	4 170	4 749	6 011	6 669	7 329	7 978	8 604	9 194	9 736
55	-	-	6 169	6 878	7 595	8 308	9 005	9 673	10 300
60	-	-	-	7 073	7 852	8 634	9 407	10 158	10 875
65	-	-	-	-	8 100	8 955	9 809	10 647	11 459
75	-	-	-	-	-	-	10 609	11 636	12 651

Current consumption in A

35	9.32	9.85	10.97	11.54	12.12	12.69	13.25	13.78	14.28
40	9.43	9.98	11.17	11.80	12.44	13.09	13.72	14.35	14.95
45	9.51	10.09	11.37	12.06	12.77	13.49	14.22	14.94	15.65
50	9.57	10.18	11.56	12.31	13.10	13.90	14.73	15.56	16.38
55	-	-	11.74	12.56	13.43	14.33	15.25	16.19	17.14
60	-	-	-	12.80	13.76	14.76	15.79	16.85	17.93
65	-	-	-	-	14.09	15.20	16.35	17.53	18.75
75	-	-	-	-	-	-	17.50	18.96	20.47

Mass flow in kg/h

35	142	196	336	426	530	650	788	944	1 121
40	132	186	326	415	518	637	772	927	1 101
45	120	175	314	402	504	620	754	906	1 077
50	107	162	300	386	486	601	732	881	1 049
55	-	-	283	368	466	579	707	853	1 017
60	-	-	-	347	443	553	678	821	981
65	-	-	-	-	416	523	645	784	941
75	-	-	-	-	-	-	568	699	847

Coefficient of performance (C.O.P.)

35	1.46	1.80	2.60	3.06	3.58	4.18	4.85	5.62	6.52
40	1.24	1.57	2.31	2.73	3.20	3.72	4.31	4.98	5.75
45	1.03	1.36	2.04	2.42	2.83	3.29	3.81	4.39	5.05
50	0.84	1.15	1.78	2.12	2.49	2.89	3.34	3.85	4.41
55	-	-	1.54	1.84	2.17	2.52	2.91	3.34	3.83
60	-	-	-	1.58	1.87	2.17	2.51	2.88	3.30
65	-	-	-	-	1.58	1.85	2.14	2.46	2.81
75	-	-	-	-	-	-	1.48	1.71	1.97

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

Cooling capacity	23 096	W
Power input	7 978	W
Current consumption	13.90	A
Mass flow	601	kg/h
C.O.P.	2.89	

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 acoustic hood	0	dB(A)

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

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

Tolerance according EN12900

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Performance data at 50 Hz, ARI rating conditions
R134a

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

Cooling capacity in W

35	6 084	8 530	15 278	19 757	25 088	31 361	38 661	47 077	56 694
40	5 390	7 751	14 178	18 424	23 474	29 418	36 341	44 333	53 479
45	4 658	6 923	13 012	17 015	21 775	27 379	33 917	41 476	50 142
50	-	6 062	11 795	15 546	20 005	25 262	31 405	38 520	46 698
55	-	-	10 542	14 031	18 181	23 081	28 818	35 483	43 162
60	-	-	-	12 487	16 318	20 850	26 174	32 378	39 551
65	-	-	-	-	-	18 587	23 488	29 223	35 881
75	-	-	-	-	-	-	18 049	22 824	28 433

Power input in W

35	3 839	4 359	5 441	5 977	6 494	6 978	7 418	7 802	8 115
40	3 978	4 513	5 645	6 218	6 778	7 313	7 810	8 258	8 643
45	4 088	4 643	5 836	6 449	7 057	7 646	8 206	8 722	9 183
50	-	4 749	6 011	6 669	7 329	7 978	8 604	9 194	9 736
55	-	-	6 169	6 878	7 595	8 308	9 005	9 673	10 300
60	-	-	-	7 073	7 852	8 634	9 407	10 158	10 875
65	-	-	-	-	-	8 955	9 809	10 647	11 459
75	-	-	-	-	-	-	10 609	11 636	12 651

Current consumption in A

35	9.32	9.85	10.97	11.54	12.12	12.69	13.25	13.78	14.28
40	9.43	9.98	11.17	11.80	12.44	13.09	13.72	14.35	14.95
45	9.51	10.09	11.37	12.06	12.77	13.49	14.22	14.94	15.65
50	-	10.18	11.56	12.31	13.10	13.90	14.73	15.56	16.38
55	-	-	11.74	12.56	13.43	14.33	15.25	16.19	17.14
60	-	-	-	12.80	13.76	14.76	15.79	16.85	17.93
65	-	-	-	-	-	15.20	16.35	17.53	18.75
75	-	-	-	-	-	-	17.50	18.96	20.47

Mass flow in kg/h

35	141	195	335	423	527	647	783	939	1 115
40	131	185	325	413	515	633	768	922	1 095
45	120	174	313	400	501	617	750	901	1 071
50	-	161	298	384	484	598	728	876	1 043
55	-	-	282	366	464	576	703	848	1 012
60	-	-	-	345	440	550	675	816	976
65	-	-	-	-	-	520	642	780	936
75	-	-	-	-	-	-	565	695	842

Coefficient of performance (C.O.P.)

35	1.58	1.96	2.81	3.31	3.86	4.49	5.21	6.03	6.99
40	1.36	1.72	2.51	2.96	3.46	4.02	4.65	5.37	6.19
45	1.14	1.49	2.23	2.64	3.09	3.58	4.13	4.76	5.46
50	-	1.28	1.96	2.33	2.73	3.17	3.65	4.19	4.80
55	-	-	1.71	2.04	2.39	2.78	3.20	3.67	4.19
60	-	-	-	1.77	2.08	2.41	2.78	3.19	3.64
65	-	-	-	-	-	2.08	2.39	2.74	3.13
75	-	-	-	-	-	-	1.70	1.96	2.25

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

Cooling capacity	25 782	W
Power input	8 574	W
Current consumption	14.67	A
Mass flow	633	kg/h
C.O.P.	3.01	

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

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Datasheet, performance data

Maneurop reciprocating compressor. MTZ160-4

Performance data at 50 Hz, EN 12900 rating conditions

R404A

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

Cooling capacity in W

30	9 609	12 945	17 010	21 898	27 702	34 515	42 432	51 545	61 948
35	8 450	11 549	15 316	19 845	25 228	31 559	38 932	47 439	57 175
40	7 339	10 192	13 652	17 811	22 764	28 602	35 421	43 314	52 373
45	6 275	8 872	12 014	15 794	20 305	25 642	31 897	39 164	47 537
50	5 254	7 584	10 399	13 789	17 850	22 675	28 356	34 988	42 663
55	-	6 326	8 803	11 794	15 394	19 697	24 794	30 781	37 750
60	-	5 094	7 222	9 805	12 934	16 705	21 209	26 540	32 792

Power input in W

30	6 678	7 512	8 282	8 999	9 675	10 323	10 955	11 583	12 220
35	6 772	7 709	8 582	9 404	10 186	10 941	11 681	12 418	13 165
40	6 811	7 853	8 832	9 760	10 650	11 514	12 364	13 212	14 071
45	6 804	7 952	9 039	10 076	11 076	12 051	13 013	13 975	14 948
50	6 760	8 017	9 214	10 363	11 475	12 563	13 640	14 717	15 806
55	-	8 058	9 367	10 629	11 855	13 059	14 252	15 447	16 655
60	-	8 084	9 507	10 884	12 228	13 549	14 861	16 175	17 504

Current consumption in A

30	12.74	13.69	14.66	15.62	16.57	17.48	18.34	19.13	19.85
35	12.86	13.92	14.99	16.07	17.13	18.16	19.14	20.06	20.91
40	12.93	14.11	15.30	16.50	17.70	18.86	19.98	21.04	22.03
45	12.93	14.24	15.58	16.92	18.26	19.57	20.84	22.05	23.20
50	12.87	14.33	15.81	17.31	18.80	20.28	21.71	23.10	24.41
55	-	14.34	15.99	17.66	19.33	20.98	22.59	24.16	25.66
60	-	14.28	16.12	17.97	19.82	21.66	23.47	25.23	26.93

Mass flow in kg/h

30	302	398	510	640	790	961	1 157	1 378	1 627
35	286	381	492	620	768	937	1 130	1 348	1 594
40	269	363	472	599	744	911	1 101	1 316	1 559
45	252	345	452	576	719	883	1 070	1 282	1 521
50	235	326	431	553	694	855	1 038	1 247	1 482
55	-	307	410	529	667	825	1 005	1 210	1 441
60	-	287	388	504	639	794	970	1 171	1 398

Coefficient of performance (C.O.P.)

30	1.44	1.72	2.05	2.43	2.86	3.34	3.87	4.45	5.07
35	1.25	1.50	1.78	2.11	2.48	2.88	3.33	3.82	4.34
40	1.08	1.30	1.55	1.82	2.14	2.48	2.86	3.28	3.72
45	0.92	1.12	1.33	1.57	1.83	2.13	2.45	2.80	3.18
50	0.78	0.95	1.13	1.33	1.56	1.80	2.08	2.38	2.70
55	-	0.79	0.94	1.11	1.30	1.51	1.74	1.99	2.27
60	-	0.63	0.76	0.90	1.06	1.23	1.43	1.64	1.87

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

Cooling capacity	20 305	W
Power input	11 076	W
Current consumption	18.26	A
Mass flow	719	kg/h
C.O.P.	1.83	



to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

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

Pressure switch settings

Maximum HP switch setting	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	83	dB(A)
With acoustic hood	77	dB(A)

Tolerance according EN12900

Datasheet, performance data

Maneurop reciprocating compressor. MTZ160-4

Performance data at 50 Hz, ARI rating conditions

R404A

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

Cooling capacity in W

30	10 697	14 371	18 835	24 188	30 529	37 955	46 564	56 454	67 720
35	9 507	12 953	17 127	22 128	28 056	35 009	43 085	52 382	62 999
40	8 367	11 576	15 449	20 089	25 595	32 066	39 601	48 299	58 258
45	7 273	10 236	13 801	18 071	23 146	29 127	36 114	44 206	53 503
50	6 223	8 932	12 181	16 073	20 711	26 196	32 630	40 113	48 745
55	-	7 665	10 592	14 102	18 298	23 285	29 165	36 040	44 011
60	-	6 440	9 044	12 171	15 929	20 423	25 758	32 037	39 364

Power input in W

30	6 678	7 512	8 282	8 999	9 675	10 323	10 955	11 583	12 220
35	6 772	7 709	8 582	9 404	10 186	10 941	11 681	12 418	13 165
40	6 811	7 853	8 832	9 760	10 650	11 514	12 364	13 212	14 071
45	6 804	7 952	9 039	10 076	11 076	12 051	13 013	13 975	14 948
50	6 760	8 017	9 214	10 363	11 475	12 563	13 640	14 717	15 806
55	-	8 058	9 367	10 629	11 855	13 059	14 252	15 447	16 655
60	-	8 084	9 507	10 884	12 228	13 549	14 861	16 175	17 504

Current consumption in A

30	12.74	13.69	14.66	15.62	16.57	17.48	18.34	19.13	19.85
35	12.86	13.92	14.99	16.07	17.13	18.16	19.14	20.06	20.91
40	12.93	14.11	15.30	16.50	17.70	18.86	19.98	21.04	22.03
45	12.93	14.24	15.58	16.92	18.26	19.57	20.84	22.05	23.20
50	12.87	14.33	15.81	17.31	18.80	20.28	21.71	23.10	24.41
55	-	14.34	15.99	17.66	19.33	20.98	22.59	24.16	25.66
60	-	14.28	16.12	17.97	19.82	21.66	23.47	25.23	26.93

Mass flow in kg/h

30	300	396	507	636	785	956	1 150	1 369	1 616
35	284	379	489	616	763	931	1 123	1 339	1 583
40	268	361	470	595	740	905	1 094	1 307	1 548
45	251	343	450	573	715	878	1 064	1 274	1 511
50	234	324	429	550	690	850	1 032	1 239	1 472
55	-	305	407	526	663	820	999	1 202	1 431
60	-	285	385	501	635	789	964	1 163	1 388

Coefficient of performance (C.O.P.)

30	1.60	1.91	2.27	2.69	3.16	3.68	4.25	4.87	5.54
35	1.40	1.68	2.00	2.35	2.75	3.20	3.69	4.22	4.79
40	1.23	1.47	1.75	2.06	2.40	2.79	3.20	3.66	4.14
45	1.07	1.29	1.53	1.79	2.09	2.42	2.78	3.16	3.58
50	0.92	1.11	1.32	1.55	1.80	2.09	2.39	2.73	3.08
55	-	0.95	1.13	1.33	1.54	1.78	2.05	2.33	2.64
60	-	0.80	0.95	1.12	1.30	1.51	1.73	1.98	2.25

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

Cooling capacity	23 146	W
Power input	11 076	W
Current consumption	18.26	A
Mass flow	715	kg/h
C.O.P.	2.09	

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

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

Pressure switch settings

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

Sound power data

Sound power level	83	dB(A)
With acoustic hood	77	dB(A)

Tolerance according EN12900

Datasheet, performance data

Maneurop reciprocating compressor. MTZ160-4

Performance data at 50 Hz, EN 12900 rating conditions

R407A

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

Cooling capacity in W

30	7 043	10 177	13 989	18 575	24 029	30 445	37 919	46 546	56 421
35	6 119	9 117	12 743	17 093	22 262	28 345	35 437	43 631	53 024
40	5 173	8 020	11 447	15 548	20 419	26 155	32 850	40 599	49 497
45	4 220	6 903	10 118	13 957	18 517	23 892	30 177	37 468	45 857
50	-	5 786	8 774	12 338	16 573	21 575	27 437	34 254	42 123
55	-	-	7 433	10 708	14 606	19 220	24 645	30 977	38 311
60	-	-	-	9 086	12 632	16 846	21 821	27 654	34 439

Power input in W

30	5 009	5 898	6 739	7 536	8 295	9 021	9 719	10 393	11 048
35	5 014	6 002	6 943	7 843	8 706	9 536	10 340	11 122	11 887
40	4 958	6 051	7 099	8 107	9 079	10 021	10 937	11 833	12 713
45	4 844	6 049	7 209	8 331	9 419	10 478	11 512	12 528	13 530
50	-	5 997	7 277	8 518	9 728	10 910	12 069	13 210	14 339
55	-	-	7 304	8 672	10 009	11 320	12 609	13 883	15 145
60	-	-	-	8 794	10 265	11 711	13 137	14 548	15 950

Current consumption in A

30	11.39	12.31	13.26	14.22	15.16	16.07	16.94	17.73	18.44
35	11.48	12.46	13.48	14.52	15.57	16.60	17.60	18.54	19.41
40	11.53	12.58	13.69	14.83	15.99	17.16	18.30	19.40	20.45
45	11.53	12.66	13.87	15.12	16.42	17.72	19.03	20.31	21.54
50	-	12.68	14.00	15.38	16.82	18.28	19.76	21.23	22.67
55	-	-	14.06	15.59	17.18	18.82	20.48	22.15	23.81
60	-	-	-	15.73	17.49	19.32	21.18	23.06	24.95

Mass flow in kg/h

30	167	238	321	418	531	661	810	980	1 173
35	153	224	308	404	517	646	795	964	1 155
40	138	209	292	389	500	629	776	944	1 133
45	120	191	274	370	481	609	755	920	1 108
50	-	172	254	349	459	585	730	894	1 080
55	-	-	232	326	435	559	702	864	1 048
60	-	-	-	301	408	531	671	831	1 012

Coefficient of performance (C.O.P.)

30	1.41	1.73	2.08	2.46	2.90	3.37	3.90	4.48	5.11
35	1.22	1.52	1.84	2.18	2.56	2.97	3.43	3.92	4.46
40	1.04	1.33	1.61	1.92	2.25	2.61	3.00	3.43	3.89
45	0.87	1.14	1.40	1.68	1.97	2.28	2.62	2.99	3.39
50	-	0.96	1.21	1.45	1.70	1.98	2.27	2.59	2.94
55	-	-	1.02	1.23	1.46	1.70	1.95	2.23	2.53
60	-	-	-	1.03	1.23	1.44	1.66	1.90	2.16

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

Cooling capacity	18 517	W
Power input	9 419	W
Current consumption	16.42	A
Mass flow	481	kg/h
C.O.P.	1.97	

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

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

Pressure switch settings

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

Sound power data

Sound power level	82	dB(A)
With acoustic hood	76	dB(A)

Tolerance according EN12900

Datasheet, performance data

Maneurop reciprocating compressor. MTZ160-4

Performance data at 50 Hz, ARI rating conditions

R407A

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

Cooling capacity in W

30	7 617	10 991	15 087	20 005	25 845	32 706	40 687	49 887	60 404
35	6 658	9 902	13 819	18 509	24 071	30 606	38 212	46 990	57 037
40	5 667	8 769	12 494	16 942	22 213	28 408	35 628	43 970	53 535
45	4 661	7 609	11 128	15 321	20 289	26 132	32 951	40 847	49 918
50	-	6 439	9 740	13 666	18 317	23 796	30 204	37 641	46 208
55	-	-	8 348	11 994	16 318	21 421	27 407	34 375	42 429
60	-	-	-	10 325	14 311	19 029	24 584	31 077	38 610

Power input in W

30	5 009	5 898	6 739	7 536	8 295	9 021	9 719	10 393	11 048
35	5 014	6 002	6 943	7 843	8 706	9 536	10 340	11 122	11 887
40	4 958	6 051	7 099	8 107	9 079	10 021	10 937	11 833	12 713
45	4 844	6 049	7 209	8 331	9 419	10 478	11 512	12 528	13 530
50	-	5 997	7 277	8 518	9 728	10 910	12 069	13 210	14 339
55	-	-	7 304	8 672	10 009	11 320	12 609	13 883	15 145
60	-	-	-	8 794	10 265	11 711	13 137	14 548	15 950

Current consumption in A

30	11.39	12.31	13.26	14.22	15.16	16.07	16.94	17.73	18.44
35	11.48	12.46	13.48	14.52	15.57	16.60	17.60	18.54	19.41
40	11.53	12.58	13.69	14.83	15.99	17.16	18.30	19.40	20.45
45	11.53	12.66	13.87	15.12	16.42	17.72	19.03	20.31	21.54
50	-	12.68	14.00	15.38	16.82	18.28	19.76	21.23	22.67
55	-	-	14.06	15.59	17.18	18.82	20.48	22.15	23.81
60	-	-	-	15.73	17.49	19.32	21.18	23.06	24.95

Mass flow in kg/h

30	167	237	319	416	528	657	805	974	1 165
35	153	223	306	402	514	643	790	958	1 148
40	137	208	290	386	498	625	772	938	1 126
45	119	190	273	368	478	605	750	915	1 101
50	-	171	253	347	457	582	726	889	1 073
55	-	-	231	324	432	556	698	859	1 041
60	-	-	-	299	406	528	668	826	1 006

Coefficient of performance (C.O.P.)

30	1.52	1.86	2.24	2.65	3.12	3.63	4.19	4.80	5.47
35	1.33	1.65	1.99	2.36	2.77	3.21	3.70	4.22	4.80
40	1.14	1.45	1.76	2.09	2.45	2.83	3.26	3.72	4.21
45	0.96	1.26	1.54	1.84	2.15	2.49	2.86	3.26	3.69
50	-	1.07	1.34	1.60	1.88	2.18	2.50	2.85	3.22
55	-	-	1.14	1.38	1.63	1.89	2.17	2.48	2.80
60	-	-	-	1.17	1.39	1.62	1.87	2.14	2.42

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

Cooling capacity	20 289	W
Power input	9 419	W
Current consumption	16.42	A
Mass flow	478	kg/h
C.O.P.	2.15	

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

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

Pressure switch settings

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

Sound power data

Sound power level	82	dB(A)
With acoustic hood	76	dB(A)

Tolerance according EN12900

Datasheet, performance data

Maneurop reciprocating compressor. MTZ160-4

Performance data at 50 Hz, EN 12900 rating conditions

R407F

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

Cooling capacity in W

30	-	11 165	15 487	20 683	26 864	34 139	42 620	52 415	63 635
35	-	9 706	13 663	18 416	24 075	30 750	38 551	47 588	57 971
40	-	8 473	12 125	16 495	21 693	27 828	35 010	43 349	52 956
45	-	7 416	10 825	14 872	19 668	25 323	31 947	39 649	48 539
50	-	-	9 710	13 496	17 951	23 186	29 311	36 436	44 671
55	-	-	-	12 316	16 491	21 367	27 054	33 662	41 301
60	-	-	-	-	-	-	-	-	-

Power input in W

30	-	6 339	7 188	8 014	8 796	9 509	10 130	10 636	11 004
35	-	6 456	7 381	8 306	9 207	10 061	10 845	11 536	12 110
40	-	6 567	7 559	8 572	9 582	10 567	11 504	12 368	13 138
45	-	6 702	7 749	8 839	9 949	11 054	12 133	13 161	14 116
50	-	-	7 980	9 137	10 335	11 551	12 761	13 942	15 072
55	-	-	-	9 492	10 768	12 083	13 415	14 739	16 033
60	-	-	-	-	-	-	-	-	-

Current consumption in A

30	-	12.32	13.34	14.38	15.39	16.34	17.19	17.91	18.46
35	-	12.63	13.71	14.83	15.95	17.03	18.04	18.94	19.68
40	-	12.80	13.96	15.18	16.42	17.65	18.83	19.92	20.89
45	-	12.91	14.16	15.49	16.88	18.27	19.64	20.94	22.13
50	-	-	14.36	15.83	17.37	18.94	20.51	22.03	23.48
55	-	-	-	16.24	17.95	19.72	21.50	23.26	24.97
60	-	-	-	-	-	-	-	-	-

Mass flow in kg/h

30	-	230	315	415	531	666	820	997	1 198
35	-	210	292	387	498	627	775	945	1 138
40	-	193	272	364	471	595	738	902	1 088
45	-	179	256	346	450	571	709	868	1 048
50	-	-	244	333	435	553	689	843	1 018
55	-	-	-	324	426	543	676	827	999
60	-	-	-	-	-	-	-	-	-

Coefficient of performance (C.O.P.)

30	-	1.76	2.15	2.58	3.05	3.59	4.21	4.93	5.78
35	-	1.50	1.85	2.22	2.61	3.06	3.55	4.13	4.79
40	-	1.29	1.60	1.92	2.26	2.63	3.04	3.50	4.03
45	-	1.11	1.40	1.68	1.98	2.29	2.63	3.01	3.44
50	-	-	1.22	1.48	1.74	2.01	2.30	2.61	2.96
55	-	-	-	1.30	1.53	1.77	2.02	2.28	2.58
60	-	-	-	-	-	-	-	-	-

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

Cooling capacity	19 668	W
Power input	9 949	W
Current consumption	16.88	A
Mass flow	450	kg/h
C.O.P.	1.98	

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

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

Pressure switch settings

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

Sound power data

Sound power level	82	dB(A)
With acoustic hood	76	dB(A)

Tolerance according EN12900

Performance data at 50 Hz, ARI rating conditions
R407F

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

Cooling capacity in W

30	-	11 967	16 581	22 122	28 705	36 446	45 459	55 859	67 761
35	-	10 451	14 695	19 785	25 837	32 967	41 290	50 922	61 976
40	-	9 173	13 110	17 813	23 398	29 981	37 678	46 604	56 876
45	-	8 080	11 777	16 158	21 340	27 441	34 576	42 863	52 416
50	-	-	10 645	14 771	19 617	25 302	31 942	39 655	48 557
55	-	-	-	13 606	18 186	23 524	29 738	36 946	45 266
60	-	-	-	-	-	-	-	-	-

Power input in W

30	-	6 339	7 188	8 014	8 796	9 509	10 130	10 636	11 004
35	-	6 456	7 381	8 306	9 207	10 061	10 845	11 536	12 110
40	-	6 567	7 559	8 572	9 582	10 567	11 504	12 368	13 138
45	-	6 702	7 749	8 839	9 949	11 054	12 133	13 161	14 116
50	-	-	7 980	9 137	10 335	11 551	12 761	13 942	15 072
55	-	-	-	9 492	10 768	12 083	13 415	14 739	16 033
60	-	-	-	-	-	-	-	-	-

Current consumption in A

30	-	12.32	13.34	14.38	15.39	16.34	17.19	17.91	18.46
35	-	12.63	13.71	14.83	15.95	17.03	18.04	18.94	19.68
40	-	12.80	13.96	15.18	16.42	17.65	18.83	19.92	20.89
45	-	12.91	14.16	15.49	16.88	18.27	19.64	20.94	22.13
50	-	-	14.36	15.83	17.37	18.94	20.51	22.03	23.48
55	-	-	-	16.24	17.95	19.72	21.50	23.26	24.97
60	-	-	-	-	-	-	-	-	-

Mass flow in kg/h

30	-	229	314	413	528	662	815	991	1 190
35	-	209	290	385	495	623	771	939	1 130
40	-	192	270	362	468	592	734	896	1 081
45	-	178	255	344	448	567	705	862	1 041
50	-	-	243	331	433	550	684	838	1 012
55	-	-	-	323	424	539	672	822	992
60	-	-	-	-	-	-	-	-	-

Coefficient of performance (C.O.P.)

30	-	1.89	2.31	2.76	3.26	3.83	4.49	5.25	6.16
35	-	1.62	1.99	2.38	2.81	3.28	3.81	4.41	5.12
40	-	1.40	1.73	2.08	2.44	2.84	3.28	3.77	4.33
45	-	1.21	1.52	1.83	2.15	2.48	2.85	3.26	3.71
50	-	-	1.33	1.62	1.90	2.19	2.50	2.84	3.22
55	-	-	-	1.43	1.69	1.95	2.22	2.51	2.82
60	-	-	-	-	-	-	-	-	-

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

Cooling capacity	21 340	W
Power input	9 949	W
Current consumption	16.88	A
Mass flow	448	kg/h
C.O.P.	2.15	

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	82	dB(A)
With acoustic hood	76	dB(A)

Tolerance according EN12900

Performance data at 50 Hz, EN 12900 rating conditions
R134a

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

Cooling capacity in W

35	5 597	7 862	14 130	18 302	23 277	29 140	35 975	43 865	52 896
40	4 930	7 103	13 045	16 981	21 673	27 205	33 662	41 126	49 683
45	4 231	6 304	11 900	15 593	19 993	25 186	31 255	38 284	46 358
50	3 516	5 479	10 713	14 152	18 252	23 096	28 768	35 353	42 935
55	-	-	9 498	12 675	16 465	20 951	26 218	32 350	39 431
60	-	-	-	11 177	14 648	18 767	23 620	29 289	35 860
65	-	-	-	-	12 815	16 559	20 988	26 186	32 238
75	-	-	-	-	-	-	15 686	19 915	24 901

Power input in W

35	3 839	4 359	5 441	5 977	6 494	6 978	7 418	7 802	8 115
40	3 978	4 513	5 645	6 218	6 778	7 313	7 810	8 258	8 643
45	4 088	4 643	5 836	6 449	7 057	7 646	8 206	8 722	9 183
50	4 170	4 749	6 011	6 669	7 329	7 978	8 604	9 194	9 736
55	-	-	6 169	6 878	7 595	8 308	9 005	9 673	10 300
60	-	-	-	7 073	7 852	8 634	9 407	10 158	10 875
65	-	-	-	-	8 100	8 955	9 809	10 647	11 459
75	-	-	-	-	-	-	10 609	11 636	12 651

Current consumption in A

35	9.32	9.85	10.97	11.54	12.12	12.69	13.25	13.78	14.28
40	9.43	9.98	11.17	11.80	12.44	13.09	13.72	14.35	14.95
45	9.51	10.09	11.37	12.06	12.77	13.49	14.22	14.94	15.65
50	9.57	10.18	11.56	12.31	13.10	13.90	14.73	15.56	16.38
55	-	-	11.74	12.56	13.43	14.33	15.25	16.19	17.14
60	-	-	-	12.80	13.76	14.76	15.79	16.85	17.93
65	-	-	-	-	14.09	15.20	16.35	17.53	18.75
75	-	-	-	-	-	-	17.50	18.96	20.47

Mass flow in kg/h

35	142	196	336	426	530	650	788	944	1 121
40	132	186	326	415	518	637	772	927	1 101
45	120	175	314	402	504	620	754	906	1 077
50	107	162	300	386	486	601	732	881	1 049
55	-	-	283	368	466	579	707	853	1 017
60	-	-	-	347	443	553	678	821	981
65	-	-	-	-	416	523	645	784	941
75	-	-	-	-	-	-	568	699	847

Coefficient of performance (C.O.P.)

35	1.46	1.80	2.60	3.06	3.58	4.18	4.85	5.62	6.52
40	1.24	1.57	2.31	2.73	3.20	3.72	4.31	4.98	5.75
45	1.03	1.36	2.04	2.42	2.83	3.29	3.81	4.39	5.05
50	0.84	1.15	1.78	2.12	2.49	2.89	3.34	3.85	4.41
55	-	-	1.54	1.84	2.17	2.52	2.91	3.34	3.83
60	-	-	-	1.58	1.87	2.17	2.51	2.88	3.30
65	-	-	-	-	1.58	1.85	2.14	2.46	2.81
75	-	-	-	-	-	-	1.48	1.71	1.97

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

Cooling capacity	23 096	W
Power input	7 978	W
Current consumption	13.90	A
Mass flow	601	kg/h
C.O.P.	2.89	

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 acoustic hood	0	dB(A)

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

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

Tolerance according EN12900

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Performance data at 50 Hz, ARI rating conditions
R134a

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

Cooling capacity in W

35	6 084	8 530	15 278	19 757	25 088	31 361	38 661	47 077	56 694
40	5 390	7 751	14 178	18 424	23 474	29 418	36 341	44 333	53 479
45	4 658	6 923	13 012	17 015	21 775	27 379	33 917	41 476	50 142
50	-	6 062	11 795	15 546	20 005	25 262	31 405	38 520	46 698
55	-	-	10 542	14 031	18 181	23 081	28 818	35 483	43 162
60	-	-	-	12 487	16 318	20 850	26 174	32 378	39 551
65	-	-	-	-	-	18 587	23 488	29 223	35 881
75	-	-	-	-	-	-	18 049	22 824	28 433

Power input in W

35	3 839	4 359	5 441	5 977	6 494	6 978	7 418	7 802	8 115
40	3 978	4 513	5 645	6 218	6 778	7 313	7 810	8 258	8 643
45	4 088	4 643	5 836	6 449	7 057	7 646	8 206	8 722	9 183
50	-	4 749	6 011	6 669	7 329	7 978	8 604	9 194	9 736
55	-	-	6 169	6 878	7 595	8 308	9 005	9 673	10 300
60	-	-	-	7 073	7 852	8 634	9 407	10 158	10 875
65	-	-	-	-	-	8 955	9 809	10 647	11 459
75	-	-	-	-	-	-	10 609	11 636	12 651

Current consumption in A

35	9.32	9.85	10.97	11.54	12.12	12.69	13.25	13.78	14.28
40	9.43	9.98	11.17	11.80	12.44	13.09	13.72	14.35	14.95
45	9.51	10.09	11.37	12.06	12.77	13.49	14.22	14.94	15.65
50	-	10.18	11.56	12.31	13.10	13.90	14.73	15.56	16.38
55	-	-	11.74	12.56	13.43	14.33	15.25	16.19	17.14
60	-	-	-	12.80	13.76	14.76	15.79	16.85	17.93
65	-	-	-	-	-	15.20	16.35	17.53	18.75
75	-	-	-	-	-	-	17.50	18.96	20.47

Mass flow in kg/h

35	141	195	335	423	527	647	783	939	1 115
40	131	185	325	413	515	633	768	922	1 095
45	120	174	313	400	501	617	750	901	1 071
50	-	161	298	384	484	598	728	876	1 043
55	-	-	282	366	464	576	703	848	1 012
60	-	-	-	345	440	550	675	816	976
65	-	-	-	-	-	520	642	780	936
75	-	-	-	-	-	-	565	695	842

Coefficient of performance (C.O.P.)

35	1.58	1.96	2.81	3.31	3.86	4.49	5.21	6.03	6.99
40	1.36	1.72	2.51	2.96	3.46	4.02	4.65	5.37	6.19
45	1.14	1.49	2.23	2.64	3.09	3.58	4.13	4.76	5.46
50	-	1.28	1.96	2.33	2.73	3.17	3.65	4.19	4.80
55	-	-	1.71	2.04	2.39	2.78	3.20	3.67	4.19
60	-	-	-	1.77	2.08	2.41	2.78	3.19	3.64
65	-	-	-	-	-	2.08	2.39	2.74	3.13
75	-	-	-	-	-	-	1.70	1.96	2.25

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

Cooling capacity	25 782	W
Power input	8 574	W
Current consumption	14.67	A
Mass flow	633	kg/h
C.O.P.	3.01	

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

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Datasheet, performance data

Maneurop reciprocating compressor. MTZ160-4

Performance data at 50 Hz, EN 12900 rating conditions

R407C

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

Cooling capacity in W

35	16 998	21 980	27 923	34 947	43 176	52 730	63 731	-	-
40	15 537	20 244	25 839	32 442	40 175	49 161	59 520	-	-
45	14 059	18 489	23 732	29 911	37 146	45 559	55 273	-	-
50	-	16 719	21 607	27 357	34 091	41 929	50 995	-	-
55	-	-	19 467	24 786	31 014	38 274	46 688	-	-
60	-	-	-	22 199	27 920	34 598	42 356	-	-
65	-	-	-	19 602	24 811	30 904	38 004	-	-

Power input in W

35	7 638	8 357	9 014	9 629	10 226	10 825	11 448	-	-
40	7 965	8 806	9 568	10 275	10 947	11 608	12 278	-	-
45	8 213	9 197	10 087	10 907	11 678	12 423	13 162	-	-
50	-	9 516	10 557	11 513	12 405	13 255	14 085	-	-
55	-	-	10 964	12 078	13 112	14 090	15 034	-	-
60	-	-	-	12 587	13 787	14 915	15 994	-	-
65	-	-	-	13 027	14 414	15 715	16 951	-	-

Current consumption in A

35	13.91	14.84	15.73	16.55	17.26	17.85	18.27	-	-
40	14.28	15.33	16.35	17.31	18.18	18.93	19.52	-	-
45	14.60	15.80	16.97	18.09	19.13	20.06	20.85	-	-
50	-	16.21	17.55	18.85	20.08	21.21	22.21	-	-
55	-	-	18.09	19.58	21.02	22.36	23.59	-	-
60	-	-	-	20.25	21.92	23.50	24.97	-	-
65	-	-	-	20.85	22.75	24.58	26.32	-	-

Mass flow in kg/h

35	369	469	586	722	879	1 058	1 263	-	-
40	355	454	570	703	857	1 033	1 234	-	-
45	339	437	551	683	834	1 007	1 204	-	-
50	-	419	531	661	809	979	1 172	-	-
55	-	-	510	637	782	949	1 138	-	-
60	-	-	-	611	754	916	1 102	-	-
65	-	-	-	583	723	882	1 063	-	-

Coefficient of performance (C.O.P.)

35	2.23	2.63	3.10	3.63	4.22	4.87	5.57	-	-
40	1.95	2.30	2.70	3.16	3.67	4.24	4.85	-	-
45	1.71	2.01	2.35	2.74	3.18	3.67	4.20	-	-
50	-	1.76	2.05	2.38	2.75	3.16	3.62	-	-
55	-	-	1.78	2.05	2.37	2.72	3.11	-	-
60	-	-	-	1.76	2.03	2.32	2.65	-	-
65	-	-	-	1.50	1.72	1.97	2.24	-	-

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

Cooling capacity	34 091	W
Power input	12 405	W
Current consumption	20.08	A
Mass flow	809	kg/h
C.O.P.	2.75	



to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

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

Pressure switch settings

Maximum HP switch setting	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	84	dB(A)
With acoustic hood	78	dB(A)

Tolerance according EN12900

Performance data at 50 Hz, ARI rating conditions
R407C

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

Cooling capacity in W

35	18 296	23 630	29 982	37 483	46 257	56 434	68 140	-	-
40	16 814	21 879	27 889	34 971	43 255	52 869	63 939	-	-
45	15 313	20 106	25 769	32 432	40 223	49 270	59 702	-	-
50	-	18 314	23 629	29 869	37 164	45 643	55 435	-	-
55	-	-	21 471	27 287	34 084	41 994	51 144	-	-
60	-	-	-	24 692	30 990	38 329	46 839	-	-
65	-	-	-	22 090	27 891	34 661	42 532	-	-

Power input in W

35	7 638	8 357	9 014	9 629	10 226	10 825	11 448	-	-
40	7 965	8 806	9 568	10 275	10 947	11 608	12 278	-	-
45	8 213	9 197	10 087	10 907	11 678	12 423	13 162	-	-
50	-	9 516	10 557	11 513	12 405	13 255	14 085	-	-
55	-	-	10 964	12 078	13 112	14 090	15 034	-	-
60	-	-	-	12 587	13 787	14 915	15 994	-	-
65	-	-	-	13 027	14 414	15 715	16 951	-	-

Current consumption in A

35	13.91	14.84	15.73	16.55	17.26	17.85	18.27	-	-
40	14.28	15.33	16.35	17.31	18.18	18.93	19.52	-	-
45	14.60	15.80	16.97	18.09	19.13	20.06	20.85	-	-
50	-	16.21	17.55	18.85	20.08	21.21	22.21	-	-
55	-	-	18.09	19.58	21.02	22.36	23.59	-	-
60	-	-	-	20.25	21.92	23.50	24.97	-	-
65	-	-	-	20.85	22.75	24.58	26.32	-	-

Mass flow in kg/h

35	367	467	583	718	874	1 052	1 255	-	-
40	353	452	566	699	852	1 027	1 227	-	-
45	337	435	548	679	829	1 001	1 197	-	-
50	-	417	528	657	804	973	1 165	-	-
55	-	-	507	633	778	943	1 131	-	-
60	-	-	-	607	749	911	1 095	-	-
65	-	-	-	580	719	877	1 057	-	-

Coefficient of performance (C.O.P.)

35	2.40	2.83	3.33	3.89	4.52	5.21	5.95	-	-
40	2.11	2.48	2.91	3.40	3.95	4.55	5.21	-	-
45	1.86	2.19	2.55	2.97	3.44	3.97	4.54	-	-
50	-	1.92	2.24	2.59	3.00	3.44	3.94	-	-
55	-	-	1.96	2.26	2.60	2.98	3.40	-	-
60	-	-	-	1.96	2.25	2.57	2.93	-	-
65	-	-	-	1.70	1.94	2.21	2.51	-	-

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

Cooling capacity	37 819	W
Power input	13 457	W
Current consumption	21.50	A
Mass flow	851	kg/h
C.O.P.	2.81	

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	84	dB(A)
With acoustic hood	78	dB(A)

Tolerance according EN12900

Datasheet, performance data

Maneurop reciprocating compressor. MTZ160-4

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

R448A

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

Cooling capacity in W

10	-	17 941	23 186	29 519	37 048	-	-	-	-
20	-	15 025	19 635	25 201	31 825	39 616	48 693	-	-
30	-	12 424	16 449	21 297	27 068	33 864	41 793	50 976	61 558
40	-	-	13 556	17 738	22 706	28 558	35 393	43 320	52 463
50	-	-	-	14 449	18 667	23 627	29 421	36 147	43 909
60	-	-	-	-	14 878	19 001	23 808	29 386	35 821

Power input in W

10	-	5 474	5 942	6 354	6 709	-	-	-	-
20	-	5 995	6 576	7 105	7 579	7 996	8 355	-	-
30	-	6 449	7 184	7 870	8 504	9 084	9 608	10 076	10 483
40	-	-	7 711	8 594	9 428	10 211	10 942	11 618	12 238
50	-	-	-	9 221	10 296	11 324	12 301	13 227	14 099
60	-	-	-	-	11 053	12 365	13 630	14 846	16 011

Current consumption in A

10	-	11.45	11.93	12.33	12.63	-	-	-	-
20	-	12.13	12.79	13.40	13.94	14.37	14.67	-	-
30	-	12.71	13.59	14.45	15.26	15.99	16.62	17.13	17.48
40	-	-	14.26	15.40	16.52	17.59	18.59	19.49	20.27
50	-	-	-	16.19	17.66	19.11	20.51	21.84	23.08
60	-	-	-	-	18.60	20.47	22.31	24.12	25.85

Mass flow in kg/h

10	-	294	382	489	618	-	-	-	-
20	-	264	347	447	568	712	885	-	-
30	-	237	314	409	522	659	821	1 014	1 243
40	-	-	284	373	480	609	762	945	1 162
50	-	-	-	338	440	563	708	882	1 088
60	-	-	-	-	401	518	657	822	1 019

Coefficient of performance (C.O.P.)

10	-	3.28	3.90	4.65	5.52	-	-	-	-
20	-	2.51	2.99	3.55	4.20	4.95	5.83	-	-
30	-	1.93	2.29	2.71	3.18	3.73	4.35	5.06	5.87
40	-	-	1.76	2.06	2.41	2.80	3.23	3.73	4.29
50	-	-	-	1.57	1.81	2.09	2.39	2.73	3.11
60	-	-	-	-	1.35	1.54	1.75	1.98	2.24

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

Cooling capacity	20 651	W
Power input	9 873	W
Current consumption	17.11	A
Mass flow	460	kg/h
C.O.P.	2.09	

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

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

Pressure switch settings

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

Sound power data

Sound power level	84	dB(A)
With acoustic hood	78	dB(A)

Tolerance according EN12900

Datasheet, performance data

Maneurop reciprocating compressor. MTZ160-4

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

R448A

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

Cooling capacity in W

10	13 737	18 029	23 317	29 702	37 287	-	-	-	-
20	11 171	14 928	19 553	25 148	31 817	39 662	48 784	-	-
30	8 903	12 173	16 185	21 040	26 842	33 693	41 694	50 949	61 558
40	6 857	9 690	13 138	17 302	22 287	28 193	35 123	43 179	52 463
50	-	7 404	10 336	13 860	18 075	23 086	28 994	35 901	43 909
60	-	-	7 706	10 637	14 133	18 297	23 232	29 039	35 821

Power input in W

10	4 952	5 474	5 942	6 354	6 709	-	-	-	-
20	5 363	5 995	6 576	7 105	7 579	7 996	8 355	-	-
30	5 666	6 449	7 184	7 870	8 504	9 084	9 608	10 076	10 483
40	5 807	6 781	7 711	8 594	9 428	10 211	10 942	11 618	12 238
50	-	6 935	8 100	9 221	10 296	11 324	12 301	13 227	14 099
60	-	-	8 297	9 697	11 053	12 365	13 630	14 846	16 011

Current consumption in A

10	10.92	11.45	11.93	12.33	12.63	-	-	-	-
20	11.44	12.13	12.79	13.40	13.94	14.37	14.67	-	-
30	11.82	12.71	13.59	14.45	15.26	15.99	16.62	17.13	17.48
40	11.99	13.11	14.26	15.40	16.52	17.59	18.59	19.49	20.27
50	-	13.27	14.72	16.19	17.66	19.11	20.51	21.84	23.08
60	-	-	14.90	16.73	18.60	20.47	22.31	24.12	25.85

Mass flow in kg/h

10	262	341	436	548	679	-	-	-	-
20	232	307	396	501	623	766	930	-	-
30	204	275	359	458	574	708	863	1 041	1 243
40	176	244	324	418	527	655	802	970	1 162
50	-	211	288	379	483	605	745	905	1 088
60	-	-	252	339	440	557	691	844	1 019

Coefficient of performance (C.O.P.)

10	2.77	3.29	3.92	4.67	5.56	-	-	-	-
20	2.08	2.49	2.97	3.54	4.20	4.96	5.84	-	-
30	1.57	1.89	2.25	2.67	3.16	3.71	4.34	5.06	5.87
40	1.18	1.43	1.70	2.01	2.36	2.76	3.21	3.72	4.29
50	-	1.07	1.28	1.50	1.76	2.04	2.36	2.71	3.11
60	-	-	0.93	1.10	1.28	1.48	1.70	1.96	2.24

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

Cooling capacity	20 143	W
Power input	9 873	W
Current consumption	17.11	A
Mass flow	505	kg/h
C.O.P.	2.04	

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	84	dB(A)
With acoustic hood	78	dB(A)

Tolerance according EN12900

Datasheet, performance data
Maneurop reciprocating compressor. MTZ160-4
Performance data at 50 Hz, EN 12900 rating conditions, Suction temp. = 20 °C
R449A

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

Cooling capacity in W

10	-	17 975	23 222	29 555	37 083	-	-	-	-
20	-	15 057	19 670	25 237	31 860	39 648	48 718	-	-
30	-	12 456	16 484	21 334	27 104	33 897	41 819	50 992	61 558
40	-	-	13 591	17 775	22 743	28 592	35 420	43 336	52 463
50	-	-	-	14 487	18 705	23 661	29 449	36 164	43 909
60	-	-	-	-	14 916	19 035	23 837	29 403	35 821

Power input in W

10	-	5 474	5 942	6 354	6 709	-	-	-	-
20	-	5 995	6 576	7 105	7 579	7 996	8 355	-	-
30	-	6 449	7 184	7 870	8 504	9 084	9 608	10 076	10 483
40	-	-	7 711	8 594	9 428	10 211	10 942	11 618	12 238
50	-	-	-	9 221	10 296	11 324	12 301	13 227	14 099
60	-	-	-	-	11 053	12 365	13 630	14 846	16 011

Current consumption in A

10	-	11.44	11.92	12.32	12.62	-	-	-	-
20	-	12.12	12.79	13.40	13.93	14.36	14.66	-	-
30	-	12.71	13.59	14.45	15.26	15.99	16.62	17.12	17.48
40	-	-	14.26	15.40	16.52	17.59	18.59	19.49	20.27
50	-	-	-	16.19	17.66	19.11	20.51	21.84	23.08
60	-	-	-	-	18.60	20.47	22.31	24.12	25.85

Mass flow in kg/h

10	-	300	390	500	631	-	-	-	-
20	-	270	354	456	579	727	902	-	-
30	-	241	321	417	533	672	837	1 033	1 266
40	-	-	290	381	491	622	778	964	1 185
50	-	-	-	346	451	575	724	901	1 111
60	-	-	-	-	411	530	672	841	1 042

Coefficient of performance (C.O.P.)

10	-	3.28	3.91	4.65	5.53	-	-	-	-
20	-	2.51	2.99	3.55	4.20	4.96	5.83	-	-
30	-	1.93	2.29	2.71	3.19	3.73	4.35	5.06	5.87
40	-	-	1.76	2.07	2.41	2.80	3.24	3.73	4.29
50	-	-	-	1.57	1.82	2.09	2.39	2.73	3.11
60	-	-	-	-	1.35	1.54	1.75	1.98	2.24

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

Cooling capacity	20 688	W
Power input	9 873	W
Current consumption	17.11	A
Mass flow	470	kg/h
C.O.P.	2.10	

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

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

Pressure switch settings

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

Sound power data

Sound power level	83	dB(A)
With acoustic hood	77	dB(A)

Tolerance according EN12900

Datasheet, performance data

Maneurop reciprocating compressor. MTZ160-4

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

R449A

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

Cooling capacity in W

10	13 737	18 029	23 317	29 702	37 287	-	-	-	-
20	11 171	14 928	19 553	25 148	31 817	39 662	48 784	-	-
30	8 903	12 173	16 185	21 040	26 842	33 693	41 694	50 949	61 558
40	6 857	9 690	13 138	17 302	22 287	28 193	35 123	43 179	52 463
50	-	7 404	10 336	13 860	18 075	23 086	28 994	35 901	43 909
60	-	-	7 706	10 637	14 133	18 297	23 232	29 039	35 821

Power input in W

10	4 952	5 474	5 942	6 354	6 709	-	-	-	-
20	5 363	5 995	6 576	7 105	7 579	7 996	8 355	-	-
30	5 666	6 449	7 184	7 870	8 504	9 084	9 608	10 076	10 483
40	5 807	6 781	7 711	8 594	9 428	10 211	10 942	11 618	12 238
50	-	6 935	8 100	9 221	10 296	11 324	12 301	13 227	14 099
60	-	-	8 297	9 697	11 053	12 365	13 630	14 846	16 011

Current consumption in A

10	10.90	11.44	11.92	12.32	12.62	-	-	-	-
20	11.43	12.12	12.79	13.40	13.93	14.36	14.66	-	-
30	11.82	12.71	13.59	14.45	15.26	15.99	16.62	17.12	17.48
40	11.99	13.11	14.26	15.40	16.52	17.59	18.59	19.49	20.27
50	-	13.27	14.72	16.19	17.66	19.11	20.51	21.84	23.08
60	-	-	14.90	16.73	18.60	20.47	22.31	24.12	25.85

Mass flow in kg/h

10	268	349	445	560	693	-	-	-	-
20	237	313	404	511	636	781	948	-	-
30	209	281	366	467	585	722	880	1 061	1 266
40	180	249	331	427	539	668	818	990	1 185
50	-	217	295	387	494	618	761	925	1 111
60	-	-	258	348	451	570	707	864	1 042

Coefficient of performance (C.O.P.)

10	2.77	3.29	3.92	4.67	5.56	-	-	-	-
20	2.08	2.49	2.97	3.54	4.20	4.96	5.84	-	-
30	1.57	1.89	2.25	2.67	3.16	3.71	4.34	5.06	5.87
40	1.18	1.43	1.70	2.01	2.36	2.76	3.21	3.72	4.29
50	-	1.07	1.28	1.50	1.76	2.04	2.36	2.71	3.11
60	-	-	0.93	1.10	1.28	1.48	1.70	1.96	2.24

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

Cooling capacity	20 143	W
Power input	9 873	W
Current consumption	17.11	A
Mass flow	516	kg/h
C.O.P.	2.04	

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	83	dB(A)
With acoustic hood	77	dB(A)

Tolerance according EN12900

Datasheet, performance data

Maneurop reciprocating compressor. MTZ160-4

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

R452A

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

Cooling capacity in W

10	-	19 613	24 221	29 735	36 247	-	-	-	-
20	-	16 848	21 044	26 031	31 895	38 728	46 629	-	-
30	-	14 191	17 951	22 386	27 581	33 619	40 590	48 596	57 756
40	-	11 596	14 898	18 759	23 261	28 481	34 502	41 411	49 307
50	-	-	11 836	15 103	18 891	23 274	28 325	34 117	40 728
60	-	-	-	11 380	14 440	17 970	22 032	26 685	31 982

Power input in W

10	-	5 443	5 738	6 064	6 451	-	-	-	-
20	-	6 501	6 903	7 300	7 721	8 198	8 758	-	-
30	-	7 352	7 937	8 481	9 014	9 565	10 165	10 844	11 630
40	-	7 906	8 750	9 519	10 240	10 944	11 660	12 418	13 249
50	-	-	9 255	10 324	11 311	12 244	13 153	14 069	15 020
60	-	-	-	10 810	12 138	13 377	14 556	15 706	16 855

Current consumption in A

10	-	11.15	11.23	11.36	11.56	-	-	-	-
20	-	12.17	12.53	12.90	13.29	13.72	14.21	-	-
30	-	13.04	13.77	14.46	15.13	15.78	16.45	17.13	17.87
40	-	13.57	14.76	15.86	16.89	17.85	18.78	19.68	20.58
50	-	-	15.32	16.91	18.38	19.74	21.01	22.22	23.37
60	-	-	-	17.42	19.41	21.25	22.96	24.55	26.04

Mass flow in kg/h

10	-	395	494	612	751	-	-	-	-
20	-	371	468	582	717	878	1 067	-	-
30	-	344	438	549	681	836	1 020	1 237	1 494
40	-	313	404	512	640	791	969	1 180	1 430
50	-	-	366	470	594	741	914	1 118	1 360
60	-	-	-	423	543	685	852	1 050	1 285

Coefficient of performance (C.O.P.)

10	-	3.60	4.22	4.90	5.62	-	-	-	-
20	-	2.59	3.05	3.57	4.13	4.72	5.32	-	-
30	-	1.93	2.26	2.64	3.06	3.51	3.99	4.48	4.97
40	-	1.47	1.70	1.97	2.27	2.60	2.96	3.33	3.72
50	-	-	1.28	1.46	1.67	1.90	2.15	2.43	2.71
60	-	-	-	1.05	1.19	1.34	1.51	1.70	1.90

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

Cooling capacity	21 085	W
Power input	10 800	W
Current consumption	17.68	A
Mass flow	618	kg/h
C.O.P.	1.95	

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

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

Pressure switch settings

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

Sound power data

Sound power level	81	dB(A)
With acoustic hood	75	dB(A)

Tolerance according EN12900

Datasheet, performance data

Maneurop reciprocating compressor. MTZ160-4

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

R452A

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

Cooling capacity in W

10	15 312	19 093	23 715	29 274	35 864	-	-	-	-
20	12 679	16 126	20 308	25 318	31 252	38 204	46 269	-	-
30	10 210	13 296	17 009	21 444	26 696	32 858	40 026	48 294	57 756
40	7 864	10 563	13 781	17 614	22 156	27 502	33 746	40 982	49 307
50	5 603	7 888	10 585	13 789	17 595	22 097	27 390	33 569	40 728
60	-	5 232	7 381	9 930	12 973	16 605	20 921	26 015	31 982

Power input in W

10	5 149	5 443	5 738	6 064	6 451	-	-	-	-
20	6 065	6 501	6 903	7 300	7 721	8 198	8 758	-	-
30	6 697	7 352	7 937	8 481	9 014	9 565	10 165	10 844	11 630
40	6 954	7 906	8 750	9 519	10 240	10 944	11 660	12 418	13 249
50	6 749	8 073	9 255	10 324	11 311	12 244	13 153	14 069	15 020
60	-	7 767	9 363	10 810	12 138	13 377	14 556	15 706	16 855

Current consumption in A

10	11.10	11.15	11.23	11.36	11.56	-	-	-	-
20	11.79	12.17	12.53	12.90	13.29	13.72	14.21	-	-
30	12.24	13.04	13.77	14.46	15.13	15.78	16.45	17.13	17.87
40	12.27	13.57	14.76	15.86	16.89	17.85	18.78	19.68	20.58
50	11.70	13.59	15.32	16.91	18.38	19.74	21.01	22.22	23.37
60	-	12.89	15.25	17.42	19.41	21.25	22.96	24.55	26.04

Mass flow in kg/h

10	371	461	565	686	826	-	-	-	-
20	344	433	535	653	789	946	1 124	-	-
30	315	401	501	616	749	901	1 075	1 272	1 494
40	280	365	462	575	704	852	1 021	1 213	1 430
50	239	323	418	528	654	798	963	1 149	1 360
60	-	274	368	475	597	738	898	1 080	1 285

Coefficient of performance (C.O.P.)

10	2.97	3.51	4.13	4.83	5.56	-	-	-	-
20	2.09	2.48	2.94	3.47	4.05	4.66	5.28	-	-
30	1.52	1.81	2.14	2.53	2.96	3.44	3.94	4.45	4.97
40	1.13	1.34	1.57	1.85	2.16	2.51	2.89	3.30	3.72
50	0.83	0.98	1.14	1.34	1.56	1.80	2.08	2.39	2.71
60	-	0.67	0.79	0.92	1.07	1.24	1.44	1.66	1.90

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

Cooling capacity	19 881	W
Power input	10 800	W
Current consumption	17.68	A
Mass flow	680	kg/h
C.O.P.	1.84	

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	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	81	dB(A)
With acoustic hood	75	dB(A)

Tolerance according EN12900

Datasheet, performance data

Maneurop reciprocating compressor. MTZ160-4

Performance data at 60 Hz, EN 12900 rating conditions

R407C

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

Cooling capacity in W

35	20 675	26 564	33 505	41 635	51 090	62 005	74 518	-	-
40	18 922	24 508	31 073	38 753	47 681	57 996	69 832	-	-
45	17 150	22 425	28 606	35 827	44 223	53 929	65 080	-	-
50	-	20 325	26 114	32 869	40 723	49 812	60 270	-	-
55	-	-	23 606	29 886	37 191	45 654	55 409	-	-
60	-	-	-	26 888	33 633	41 460	50 501	-	-
65	-	-	-	23 877	30 052	37 230	45 544	-	-

Power input in W

35	9 367	10 360	11 274	12 080	12 750	13 256	13 569	-	-
40	9 698	10 816	11 872	12 838	13 684	14 383	14 906	-	-
45	9 976	11 220	12 419	13 543	14 566	15 457	16 190	-	-
50	-	11 572	12 912	14 196	15 394	16 478	17 420	-	-
55	-	-	13 353	14 795	16 168	17 445	18 596	-	-
60	-	-	-	15 341	16 890	18 358	19 718	-	-
65	-	-	-	15 834	17 557	19 218	20 786	-	-

Current consumption in A

35	13.90	14.97	15.97	16.91	17.84	18.79	19.78	-	-
40	14.31	15.54	16.69	17.78	18.84	19.92	21.04	-	-
45	14.65	16.06	17.38	18.64	19.87	21.10	22.37	-	-
50	-	16.50	18.02	19.47	20.89	22.30	23.74	-	-
55	-	-	18.59	20.26	21.88	23.50	25.14	-	-
60	-	-	-	20.97	22.83	24.67	26.53	-	-
65	-	-	-	21.58	23.70	25.79	27.90	-	-

Mass flow in kg/h

35	449	567	704	861	1 040	1 245	1 476	-	-
40	432	550	685	840	1 018	1 220	1 448	-	-
45	414	531	665	818	993	1 193	1 418	-	-
50	-	510	643	794	967	1 163	1 386	-	-
55	-	-	619	768	939	1 132	1 351	-	-
60	-	-	-	741	908	1 099	1 314	-	-
65	-	-	-	711	876	1 063	1 275	-	-

Coefficient of performance (C.O.P.)

35	2.21	2.56	2.97	3.45	4.01	4.68	5.49	-	-
40	1.95	2.27	2.62	3.02	3.48	4.03	4.68	-	-
45	1.72	2.00	2.30	2.65	3.04	3.49	4.02	-	-
50	-	1.76	2.02	2.32	2.65	3.02	3.46	-	-
55	-	-	1.77	2.02	2.30	2.62	2.98	-	-
60	-	-	-	1.75	1.99	2.26	2.56	-	-
65	-	-	-	1.51	1.71	1.94	2.19	-	-

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

Cooling capacity	40 723	W
Power input	15 394	W
Current consumption	20.89	A
Mass flow	967	kg/h
C.O.P.	2.65	

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

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

Pressure switch settings

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

Sound power data

Sound power level	87	dB(A)
With acoustic hood	81	dB(A)

Tolerance according EN12900

Performance data at 60 Hz, ARI rating conditions
R407C

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

Cooling capacity in W

35	22 254	28 557	35 977	44 656	54 737	66 362	79 674	-	-
40	20 479	26 487	33 538	41 774	51 337	62 370	75 016	-	-
45	18 679	24 386	31 062	38 847	47 886	58 321	70 294	-	-
50	-	22 265	28 558	35 887	44 395	54 224	65 518	-	-
55	-	-	26 037	32 903	40 873	50 091	60 698	-	-
60	-	-	-	29 906	37 332	45 931	55 846	-	-
65	-	-	-	26 907	33 782	41 756	50 971	-	-

Power input in W

35	9 367	10 360	11 274	12 080	12 750	13 256	13 569	-	-
40	9 698	10 816	11 872	12 838	13 684	14 383	14 906	-	-
45	9 976	11 220	12 419	13 543	14 566	15 457	16 190	-	-
50	-	11 572	12 912	14 196	15 394	16 478	17 420	-	-
55	-	-	13 353	14 795	16 168	17 445	18 596	-	-
60	-	-	-	15 341	16 890	18 358	19 718	-	-
65	-	-	-	15 834	17 557	19 218	20 786	-	-

Current consumption in A

35	13.90	14.97	15.97	16.91	17.84	18.79	19.78	-	-
40	14.31	15.54	16.69	17.78	18.84	19.92	21.04	-	-
45	14.65	16.06	17.38	18.64	19.87	21.10	22.37	-	-
50	-	16.50	18.02	19.47	20.89	22.30	23.74	-	-
55	-	-	18.59	20.26	21.88	23.50	25.14	-	-
60	-	-	-	20.97	22.83	24.67	26.53	-	-
65	-	-	-	21.58	23.70	25.79	27.90	-	-

Mass flow in kg/h

35	446	564	700	856	1 034	1 237	1 467	-	-
40	430	547	681	836	1 012	1 212	1 439	-	-
45	412	528	661	814	988	1 186	1 409	-	-
50	-	507	639	790	961	1 156	1 377	-	-
55	-	-	615	764	933	1 125	1 343	-	-
60	-	-	-	736	903	1 092	1 306	-	-
65	-	-	-	707	871	1 057	1 267	-	-

Coefficient of performance (C.O.P.)

35	2.38	2.76	3.19	3.70	4.29	5.01	5.87	-	-
40	2.11	2.45	2.82	3.25	3.75	4.34	5.03	-	-
45	1.87	2.17	2.50	2.87	3.29	3.77	4.34	-	-
50	-	1.92	2.21	2.53	2.88	3.29	3.76	-	-
55	-	-	1.95	2.22	2.53	2.87	3.26	-	-
60	-	-	-	1.95	2.21	2.50	2.83	-	-
65	-	-	-	1.70	1.92	2.17	2.45	-	-

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

Cooling capacity	45 222	W
Power input	16 644	W
Current consumption	22.46	A
Mass flow	1 018	kg/h
C.O.P.	2.72	

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

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

Pressure switch settings

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

Sound power data

Sound power level	87	dB(A)
With acoustic hood	81	dB(A)

Tolerance according EN12900

Performance data at 60 Hz, EN 12900 rating conditions
R134a

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

Cooling capacity in W

35	6 717	9 434	16 956	21 962	27 932	34 968	43 169	52 639	63 476
40	5 916	8 524	15 653	20 377	26 008	32 647	40 394	49 352	59 620
45	5 077	7 564	14 280	18 711	23 992	30 223	37 506	45 941	55 629
50	4 219	6 575	12 856	16 983	21 902	27 715	34 522	42 424	51 522
55	-	-	11 398	15 210	19 758	25 142	31 462	38 820	47 317
60	-	-	-	13 412	17 577	22 521	28 344	35 147	43 032
65	-	-	-	-	15 378	19 871	25 186	31 424	38 685
75	-	-	-	-	-	-	18 823	23 898	29 881

Power input in W

35	4 607	5 231	6 529	7 172	7 792	8 374	8 902	9 362	9 738
40	4 773	5 416	6 775	7 461	8 133	8 775	9 372	9 909	10 371
45	4 906	5 572	7 003	7 739	8 468	9 176	9 847	10 467	11 020
50	5 004	5 698	7 213	8 003	8 795	9 574	10 325	11 033	11 683
55	-	-	7 403	8 253	9 114	9 970	10 806	11 608	12 360
60	-	-	-	8 488	9 422	10 361	11 288	12 189	13 050
65	-	-	-	-	9 720	10 747	11 770	12 777	13 750
75	-	-	-	-	-	-	12 731	13 964	15 181

Current consumption in A

35	9.71	10.27	11.44	12.04	12.64	13.24	13.82	14.37	14.90
40	9.83	10.41	11.65	12.31	12.98	13.65	14.32	14.97	15.60
45	9.92	10.52	11.86	12.58	13.32	14.07	14.83	15.58	16.33
50	9.97	10.61	12.05	12.84	13.66	14.50	15.36	16.23	17.09
55	-	-	12.24	13.10	14.00	14.94	15.91	16.89	17.88
60	-	-	-	13.35	14.35	15.39	16.47	17.58	18.71
65	-	-	-	-	14.70	15.85	17.05	18.29	19.56
75	-	-	-	-	-	-	18.25	19.78	21.35

Mass flow in kg/h

35	171	235	404	511	636	780	945	1 133	1 346
40	158	224	392	498	622	764	927	1 112	1 321
45	144	210	377	483	604	745	905	1 087	1 292
50	129	194	360	464	584	721	879	1 057	1 259
55	-	-	340	442	559	694	849	1 023	1 221
60	-	-	-	416	531	663	814	985	1 177
65	-	-	-	-	499	628	775	941	1 129
75	-	-	-	-	-	-	681	838	1 016

Coefficient of performance (C.O.P.)

35	1.46	1.80	2.60	3.06	3.58	4.18	4.85	5.62	6.52
40	1.24	1.57	2.31	2.73	3.20	3.72	4.31	4.98	5.75
45	1.03	1.36	2.04	2.42	2.83	3.29	3.81	4.39	5.05
50	0.84	1.15	1.78	2.12	2.49	2.89	3.34	3.85	4.41
55	-	-	1.54	1.84	2.17	2.52	2.91	3.34	3.83
60	-	-	-	1.58	1.87	2.17	2.51	2.88	3.30
65	-	-	-	-	1.58	1.85	2.14	2.46	2.81
75	-	-	-	-	-	-	1.48	1.71	1.97

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

Cooling capacity	27 715	W
Power input	9 574	W
Current consumption	14.50	A
Mass flow	721	kg/h
C.O.P.	2.89	

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 = 10 K , Subcooling = 0 K

Tolerance according EN12900

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Performance data at 60 Hz, ARI rating conditions
R134a

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

Cooling capacity in W

35	7 301	10 236	18 334	23 708	30 106	37 633	46 394	56 492	68 032
40	6 469	9 301	17 014	22 108	28 169	35 301	43 610	53 199	64 175
45	5 589	8 307	15 615	20 418	26 130	32 855	40 701	49 771	60 170
50	-	7 275	14 154	18 655	24 006	30 315	37 686	46 225	56 037
55	-	-	12 650	16 838	21 818	27 697	34 582	42 579	51 794
60	-	-	-	14 984	19 581	25 021	31 409	38 854	47 461
65	-	-	-	-	-	22 304	28 186	35 068	43 058
75	-	-	-	-	-	-	21 659	27 389	34 119

Power input in W

35	4 607	5 231	6 529	7 172	7 792	8 374	8 902	9 362	9 738
40	4 773	5 416	6 775	7 461	8 133	8 775	9 372	9 909	10 371
45	4 906	5 572	7 003	7 739	8 468	9 176	9 847	10 467	11 020
50	-	5 698	7 213	8 003	8 795	9 574	10 325	11 033	11 683
55	-	-	7 403	8 253	9 114	9 970	10 806	11 608	12 360
60	-	-	-	8 488	9 422	10 361	11 288	12 189	13 050
65	-	-	-	-	-	10 747	11 770	12 777	13 750
75	-	-	-	-	-	-	12 731	13 964	15 181

Current consumption in A

35	9.71	10.27	11.44	12.04	12.64	13.24	13.82	14.37	14.90
40	9.83	10.41	11.65	12.31	12.98	13.65	14.32	14.97	15.60
45	9.92	10.52	11.86	12.58	13.32	14.07	14.83	15.58	16.33
50	-	10.61	12.05	12.84	13.66	14.50	15.36	16.23	17.09
55	-	-	12.24	13.10	14.00	14.94	15.91	16.89	17.88
60	-	-	-	13.35	14.35	15.39	16.47	17.58	18.71
65	-	-	-	-	-	15.85	17.05	18.29	19.56
75	-	-	-	-	-	-	18.25	19.78	21.35

Mass flow in kg/h

35	170	234	402	508	632	776	940	1 127	1 338
40	158	222	390	496	618	760	922	1 106	1 314
45	144	209	375	480	601	741	900	1 081	1 285
50	-	193	358	461	581	718	874	1 051	1 252
55	-	-	338	440	557	691	844	1 018	1 214
60	-	-	-	414	529	660	809	979	1 171
65	-	-	-	-	-	624	770	936	1 123
75	-	-	-	-	-	-	677	834	1 010

Coefficient of performance (C.O.P.)

35	1.58	1.96	2.81	3.31	3.86	4.49	5.21	6.03	6.99
40	1.36	1.72	2.51	2.96	3.46	4.02	4.65	5.37	6.19
45	1.14	1.49	2.23	2.64	3.09	3.58	4.13	4.76	5.46
50	-	1.28	1.96	2.33	2.73	3.17	3.65	4.19	4.80
55	-	-	1.71	2.04	2.39	2.78	3.20	3.67	4.19
60	-	-	-	1.77	2.08	2.41	2.78	3.19	3.64
65	-	-	-	-	-	2.08	2.39	2.74	3.13
75	-	-	-	-	-	-	1.70	1.96	2.25

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

Cooling capacity	30 939	W
Power input	10 289	W
Current consumption	15.31	A
Mass flow	759	kg/h
C.O.P.	3.01	

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 acoustic 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

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Datasheet, performance data

Maneurop reciprocating compressor. MTZ160-4

Performance data at 60 Hz, EN 12900 rating conditions

R404A

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

Cooling capacity in W

30	12 449	16 267	20 862	26 339	32 805	40 366	49 128	59 199	70 686
35	10 929	14 501	18 788	23 895	29 930	36 998	45 205	54 658	65 465
40	9 445	12 757	16 723	21 447	27 037	33 597	41 235	50 057	60 170
45	7 998	11 036	14 666	18 994	24 124	30 164	37 219	45 396	54 801
50	6 586	9 338	12 619	16 535	21 193	26 698	33 156	40 674	49 357
55	-	7 661	10 579	14 071	18 243	23 199	29 046	35 891	43 838
60	-	6 007	8 548	11 601	15 272	19 666	24 888	31 045	38 242

Power input in W

30	8 326	9 298	10 248	11 164	12 031	12 835	13 563	14 200	14 732
35	8 410	9 482	10 549	11 597	12 610	13 577	14 482	15 311	16 051
40	8 423	9 593	10 772	11 948	13 105	14 229	15 308	16 326	17 271
45	8 377	9 640	10 929	12 228	13 525	14 804	16 053	17 257	18 402
50	8 282	9 636	11 029	12 450	13 882	15 313	16 728	18 113	19 456
55	-	9 591	11 086	12 623	14 188	15 766	17 344	18 908	20 443
60	-	9 517	11 111	12 761	14 454	16 176	17 913	19 651	21 376

Current consumption in A

30	12.60	13.72	14.77	15.80	16.85	17.96	19.15	20.48	21.97
35	12.69	13.96	15.16	16.33	17.51	18.74	20.06	21.49	23.09
40	12.69	14.12	15.48	16.81	18.13	19.50	20.94	22.50	24.21
45	12.59	14.20	15.73	17.22	18.70	20.21	21.80	23.48	25.32
50	12.38	14.18	15.89	17.55	19.20	20.87	22.60	24.44	26.41
55	-	14.05	15.95	17.79	19.62	21.46	23.35	25.34	27.46
60	-	13.79	15.90	17.93	19.94	21.96	24.03	26.18	28.46

Mass flow in kg/h

30	391	500	626	770	936	1 125	1 340	1 583	1 857
35	370	479	603	747	911	1 098	1 312	1 553	1 824
40	347	455	579	721	884	1 070	1 281	1 520	1 790
45	322	429	552	693	855	1 039	1 249	1 486	1 753
50	295	402	524	664	824	1 007	1 214	1 450	1 714
55	-	371	493	632	790	972	1 178	1 411	1 673
60	-	339	459	597	754	934	1 138	1 369	1 630

Coefficient of performance (C.O.P.)

30	1.50	1.75	2.04	2.36	2.73	3.14	3.62	4.17	4.80
35	1.30	1.53	1.78	2.06	2.37	2.73	3.12	3.57	4.08
40	1.12	1.33	1.55	1.80	2.06	2.36	2.69	3.07	3.48
45	0.95	1.14	1.34	1.55	1.78	2.04	2.32	2.63	2.98
50	0.80	0.97	1.14	1.33	1.53	1.74	1.98	2.25	2.54
55	-	0.80	0.95	1.11	1.29	1.47	1.67	1.90	2.14
60	-	0.63	0.77	0.91	1.06	1.22	1.39	1.58	1.79

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

Cooling capacity	24 124	W
Power input	13 525	W
Current consumption	18.70	A
Mass flow	855	kg/h
C.O.P.	1.78	

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	86	dB(A)
With acoustic hood	80	dB(A)

Tolerance according EN12900

Datasheet, performance data

Maneurop reciprocating compressor. MTZ160-4

Performance data at 60 Hz, ARI rating conditions

R404A

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

Cooling capacity in W

30	13 858	18 059	23 100	29 094	36 153	44 389	53 913	64 837	77 273
35	12 296	16 264	21 009	26 645	33 285	41 042	50 027	60 353	72 133
40	10 767	14 488	18 924	24 190	30 399	37 665	46 101	55 819	66 932
45	9 270	12 733	16 848	21 732	27 499	34 264	42 139	51 240	61 679
50	7 802	10 997	14 782	19 274	24 590	30 845	38 154	46 632	56 393
55	-	9 283	12 730	16 824	21 684	27 426	34 167	42 023	51 110
60	-	7 594	10 704	14 402	18 808	24 044	30 227	37 476	45 907

Power input in W

30	8 326	9 298	10 248	11 164	12 031	12 835	13 563	14 200	14 732
35	8 410	9 482	10 549	11 597	12 610	13 577	14 482	15 311	16 051
40	8 423	9 593	10 772	11 948	13 105	14 229	15 308	16 326	17 271
45	8 377	9 640	10 929	12 228	13 525	14 804	16 053	17 257	18 402
50	8 282	9 636	11 029	12 450	13 882	15 313	16 728	18 113	19 456
55	-	9 591	11 086	12 623	14 188	15 766	17 344	18 908	20 443
60	-	9 517	11 111	12 761	14 454	16 176	17 913	19 651	21 376

Current consumption in A

30	12.60	13.72	14.77	15.80	16.85	17.96	19.15	20.48	21.97
35	12.69	13.96	15.16	16.33	17.51	18.74	20.06	21.49	23.09
40	12.69	14.12	15.48	16.81	18.13	19.50	20.94	22.50	24.21
45	12.59	14.20	15.73	17.22	18.70	20.21	21.80	23.48	25.32
50	12.38	14.18	15.89	17.55	19.20	20.87	22.60	24.44	26.41
55	-	14.05	15.95	17.79	19.62	21.46	23.35	25.34	27.46
60	-	13.79	15.90	17.93	19.94	21.96	24.03	26.18	28.46

Mass flow in kg/h

30	389	498	622	766	930	1 118	1 332	1 573	1 845
35	368	476	600	742	905	1 092	1 303	1 543	1 812
40	345	452	575	717	879	1 063	1 273	1 511	1 778
45	320	427	549	689	850	1 033	1 241	1 476	1 741
50	293	399	521	660	819	1 001	1 207	1 440	1 703
55	-	369	490	628	786	966	1 170	1 402	1 662
60	-	337	456	593	750	928	1 131	1 361	1 619

Coefficient of performance (C.O.P.)

30	1.66	1.94	2.25	2.61	3.00	3.46	3.98	4.57	5.25
35	1.46	1.72	1.99	2.30	2.64	3.02	3.45	3.94	4.49
40	1.28	1.51	1.76	2.02	2.32	2.65	3.01	3.42	3.88
45	1.11	1.32	1.54	1.78	2.03	2.31	2.63	2.97	3.35
50	0.94	1.14	1.34	1.55	1.77	2.01	2.28	2.57	2.90
55	-	0.97	1.15	1.33	1.53	1.74	1.97	2.22	2.50
60	-	0.80	0.96	1.13	1.30	1.49	1.69	1.91	2.15

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

Cooling capacity	27 499	W
Power input	13 525	W
Current consumption	18.70	A
Mass flow	850	kg/h
C.O.P.	2.03	

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

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

Pressure switch settings

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

Sound power data

Sound power level	86	dB(A)
With acoustic hood	80	dB(A)

Tolerance according EN12900

Datasheet, performance data

Maneurop reciprocating compressor. MTZ160-4

Performance data at 60 Hz, EN 12900 rating conditions

R407A

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

Cooling capacity in W

30	8 452	12 212	16 787	22 290	28 834	36 534	45 503	55 856	67 705
35	7 343	10 940	15 292	20 512	26 715	34 014	42 524	52 357	63 629
40	6 207	9 624	13 736	18 658	24 503	31 386	39 420	48 719	59 397
45	5 064	8 284	12 141	16 749	22 220	28 671	36 213	44 961	55 029
50	-	6 943	10 529	14 806	19 888	25 889	32 924	41 105	50 547
55	-	-	8 920	12 850	17 527	23 064	29 574	37 173	45 973
60	-	-	-	10 904	15 159	20 215	26 186	33 185	41 327

Power input in W

30	6 011	7 078	8 087	9 044	9 955	10 826	11 662	12 471	13 257
35	6 017	7 202	8 332	9 411	10 447	11 444	12 408	13 347	14 264
40	5 950	7 261	8 519	9 728	10 895	12 025	13 125	14 200	15 256
45	5 813	7 258	8 651	9 997	11 303	12 573	13 815	15 034	16 236
50	-	7 197	8 732	10 222	11 673	13 092	14 483	15 853	17 207
55	-	-	8 765	10 406	12 011	13 584	15 131	16 659	18 174
60	-	-	-	10 553	12 318	14 053	15 764	17 458	19 139

Current consumption in A

30	11.89	12.84	13.83	14.83	15.81	16.76	17.67	18.50	19.23
35	11.98	13.00	14.06	15.15	16.24	17.31	18.35	19.34	20.25
40	12.03	13.12	14.28	15.47	16.68	17.89	19.09	20.24	21.33
45	12.03	13.21	14.46	15.78	17.12	18.49	19.85	21.18	22.47
50	-	13.23	14.60	16.05	17.54	19.07	20.61	22.14	23.64
55	-	-	14.67	16.26	17.92	19.63	21.37	23.11	24.84
60	-	-	-	16.41	18.25	20.15	22.09	24.06	26.03

Mass flow in kg/h

30	201	286	385	501	637	793	972	1 176	1 407
35	184	269	369	485	620	775	953	1 156	1 385
40	165	250	350	466	600	754	931	1 132	1 360
45	144	229	329	444	577	730	905	1 104	1 329
50	-	206	304	419	551	702	875	1 072	1 295
55	-	-	278	391	521	671	842	1 036	1 256
60	-	-	-	360	489	636	805	997	1 214

Coefficient of performance (C.O.P.)

30	1.41	1.73	2.08	2.46	2.90	3.37	3.90	4.48	5.11
35	1.22	1.52	1.84	2.18	2.56	2.97	3.43	3.92	4.46
40	1.04	1.33	1.61	1.92	2.25	2.61	3.00	3.43	3.89
45	0.87	1.14	1.40	1.68	1.97	2.28	2.62	2.99	3.39
50	-	0.96	1.21	1.45	1.70	1.98	2.27	2.59	2.94
55	-	-	1.02	1.23	1.46	1.70	1.95	2.23	2.53
60	-	-	-	1.03	1.23	1.44	1.66	1.90	2.16

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

Cooling capacity	22 220	W
Power input	11 303	W
Current consumption	17.12	A
Mass flow	577	kg/h
C.O.P.	1.97	

Pressure switch settings

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

Sound power data

Sound power level	85	dB(A)
With acoustic hood	79	dB(A)

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

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

Tolerance according EN12900

Datasheet, performance data

Maneurop reciprocating compressor. MTZ160-4

Performance data at 60 Hz, ARI rating conditions

R407A

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

Cooling capacity in W

30	9 141	13 189	18 104	24 006	31 014	39 247	48 824	59 864	72 485
35	7 989	11 883	16 583	22 211	28 885	36 727	45 855	56 388	68 445
40	6 800	10 523	14 992	20 330	26 656	34 090	42 753	52 764	64 243
45	5 593	9 130	13 354	18 385	24 346	31 358	39 542	49 016	59 902
50	-	7 726	11 688	16 399	21 980	28 555	36 245	45 169	55 449
55	-	-	10 017	14 393	19 581	25 705	32 888	41 250	50 914
60	-	-	-	12 390	17 173	22 835	29 501	37 292	46 332

Power input in W

30	6 011	7 078	8 087	9 044	9 955	10 826	11 662	12 471	13 257
35	6 017	7 202	8 332	9 411	10 447	11 444	12 408	13 347	14 264
40	5 950	7 261	8 519	9 728	10 895	12 025	13 125	14 200	15 256
45	5 813	7 258	8 651	9 997	11 303	12 573	13 815	15 034	16 236
50	-	7 197	8 732	10 222	11 673	13 092	14 483	15 853	17 207
55	-	-	8 765	10 406	12 011	13 584	15 131	16 659	18 174
60	-	-	-	10 553	12 318	14 053	15 764	17 458	19 139

Current consumption in A

30	11.89	12.84	13.83	14.83	15.81	16.76	17.67	18.50	19.23
35	11.98	13.00	14.06	15.15	16.24	17.31	18.35	19.34	20.25
40	12.03	13.12	14.28	15.47	16.68	17.89	19.09	20.24	21.33
45	12.03	13.21	14.46	15.78	17.12	18.49	19.85	21.18	22.47
50	-	13.23	14.60	16.05	17.54	19.07	20.61	22.14	23.64
55	-	-	14.67	16.26	17.92	19.63	21.37	23.11	24.84
60	-	-	-	16.41	18.25	20.15	22.09	24.06	26.03

Mass flow in kg/h

30	200	284	383	499	633	788	966	1 169	1 398
35	183	268	367	483	617	771	948	1 149	1 377
40	164	249	348	463	597	750	926	1 125	1 351
45	143	228	327	441	574	726	900	1 098	1 321
50	-	205	303	416	548	698	870	1 066	1 287
55	-	-	276	389	518	667	837	1 030	1 249
60	-	-	-	358	486	633	800	991	1 206

Coefficient of performance (C.O.P.)

30	1.52	1.86	2.24	2.65	3.12	3.63	4.19	4.80	5.47
35	1.33	1.65	1.99	2.36	2.77	3.21	3.70	4.22	4.80
40	1.14	1.45	1.76	2.09	2.45	2.83	3.26	3.72	4.21
45	0.96	1.26	1.54	1.84	2.15	2.49	2.86	3.26	3.69
50	-	1.07	1.34	1.60	1.88	2.18	2.50	2.85	3.22
55	-	-	1.14	1.38	1.63	1.89	2.17	2.48	2.80
60	-	-	-	1.17	1.39	1.62	1.87	2.14	2.42

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

Cooling capacity	24 346	W
Power input	11 303	W
Current consumption	17.12	A
Mass flow	574	kg/h
C.O.P.	2.15	

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

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

Pressure switch settings

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

Sound power data

Sound power level	85	dB(A)
With acoustic hood	79	dB(A)

Tolerance according EN12900

Datasheet, performance data

Maneurop reciprocating compressor. MTZ160-4

Performance data at 60 Hz, EN 12900 rating conditions

R407F

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

Cooling capacity in W

30	-	13 399	18 584	24 819	32 236	40 967	51 144	62 898	76 362
35	-	11 647	16 395	22 099	28 889	36 900	46 261	57 106	69 565
40	-	10 167	14 550	19 795	26 031	33 393	42 012	52 019	63 547
45	-	8 899	12 990	17 847	23 602	30 388	38 336	47 578	58 247
50	-	-	11 652	16 195	21 541	27 823	35 174	43 723	53 605
55	-	-	-	14 779	19 789	25 640	32 465	40 394	49 561
60	-	-	-	-	-	-	-	-	-

Power input in W

30	-	7 607	8 625	9 617	10 555	11 411	12 156	12 763	13 204
35	-	7 747	8 857	9 967	11 048	12 074	13 014	13 843	14 531
40	-	7 881	9 071	10 286	11 499	12 681	13 805	14 842	15 765
45	-	8 042	9 299	10 607	11 939	13 265	14 560	15 794	16 939
50	-	-	9 576	10 964	12 402	13 861	15 313	16 731	18 086
55	-	-	-	11 390	12 922	14 500	16 098	17 687	19 240
60	-	-	-	-	-	-	-	-	-

Current consumption in A

30	-	12.85	13.92	15.00	16.05	17.04	17.93	18.68	19.25
35	-	13.17	14.30	15.46	16.63	17.76	18.82	19.75	20.53
40	-	13.35	14.56	15.83	17.13	18.42	19.65	20.78	21.79
45	-	13.47	14.77	16.16	17.61	19.06	20.48	21.84	23.09
50	-	-	14.98	16.51	18.12	19.76	21.39	22.98	24.49
55	-	-	-	16.95	18.73	20.57	22.43	24.27	26.06
60	-	-	-	-	-	-	-	-	-

Mass flow in kg/h

30	-	277	378	498	637	799	985	1 197	1 437
35	-	253	350	464	598	752	930	1 134	1 365
40	-	232	326	437	566	715	886	1 082	1 305
45	-	215	308	415	541	685	852	1 042	1 258
50	-	-	293	400	523	664	827	1 012	1 222
55	-	-	-	390	512	651	811	993	1 198
60	-	-	-	-	-	-	-	-	-

Coefficient of performance (C.O.P.)

30	-	1.76	2.15	2.58	3.05	3.59	4.21	4.93	5.78
35	-	1.50	1.85	2.22	2.61	3.06	3.55	4.13	4.79
40	-	1.29	1.60	1.92	2.26	2.63	3.04	3.50	4.03
45	-	1.11	1.40	1.68	1.98	2.29	2.63	3.01	3.44
50	-	-	1.22	1.48	1.74	2.01	2.30	2.61	2.96
55	-	-	-	1.30	1.53	1.77	2.02	2.28	2.58
60	-	-	-	-	-	-	-	-	-

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

Cooling capacity	23 602	W
Power input	11 939	W
Current consumption	17.61	A
Mass flow	541	kg/h
C.O.P.	1.98	

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

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

Pressure switch settings

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

Sound power data

Sound power level	85	dB(A)
With acoustic hood	79	dB(A)

Tolerance according EN12900

Datasheet, performance data

Maneurop reciprocating compressor. MTZ160-4

Performance data at 60 Hz, ARI rating conditions

R407F

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

Cooling capacity in W

30	-	14 361	19 897	26 546	34 446	43 735	54 551	67 031	81 313
35	-	12 542	17 634	23 742	31 004	39 560	49 548	61 106	74 372
40	-	11 007	15 732	21 376	28 077	35 977	45 213	55 925	68 252
45	-	9 696	14 132	19 390	25 608	32 929	41 491	51 435	62 900
50	-	-	12 774	17 725	23 541	30 362	38 330	47 586	58 268
55	-	-	-	16 328	21 823	28 229	35 685	44 335	54 319
60	-	-	-	-	-	-	-	-	-

Power input in W

30	-	7 607	8 625	9 617	10 555	11 411	12 156	12 763	13 204
35	-	7 747	8 857	9 967	11 048	12 074	13 014	13 843	14 531
40	-	7 881	9 071	10 286	11 499	12 681	13 805	14 842	15 765
45	-	8 042	9 299	10 607	11 939	13 265	14 560	15 794	16 939
50	-	-	9 576	10 964	12 402	13 861	15 313	16 731	18 086
55	-	-	-	11 390	12 922	14 500	16 098	17 687	19 240
60	-	-	-	-	-	-	-	-	-

Current consumption in A

30	-	12.85	13.92	15.00	16.05	17.04	17.93	18.68	19.25
35	-	13.17	14.30	15.46	16.63	17.76	18.82	19.75	20.53
40	-	13.35	14.56	15.83	17.13	18.42	19.65	20.78	21.79
45	-	13.47	14.77	16.16	17.61	19.06	20.48	21.84	23.09
50	-	-	14.98	16.51	18.12	19.76	21.39	22.98	24.49
55	-	-	-	16.95	18.73	20.57	22.43	24.27	26.06
60	-	-	-	-	-	-	-	-	-

Mass flow in kg/h

30	-	275	376	495	634	794	979	1 189	1 428
35	-	251	348	462	594	748	925	1 127	1 356
40	-	231	325	434	562	710	881	1 076	1 297
45	-	214	306	413	537	681	846	1 035	1 249
50	-	-	292	397	520	660	821	1 005	1 214
55	-	-	-	388	509	648	806	986	1 191
60	-	-	-	-	-	-	-	-	-

Coefficient of performance (C.O.P.)

30	-	1.89	2.31	2.76	3.26	3.83	4.49	5.25	6.16
35	-	1.62	1.99	2.38	2.81	3.28	3.81	4.41	5.12
40	-	1.40	1.73	2.08	2.44	2.84	3.28	3.77	4.33
45	-	1.21	1.52	1.83	2.15	2.48	2.85	3.26	3.71
50	-	-	1.33	1.62	1.90	2.19	2.50	2.84	3.22
55	-	-	-	1.43	1.69	1.95	2.22	2.51	2.82
60	-	-	-	-	-	-	-	-	-

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

Cooling capacity	25 608	W
Power input	11 939	W
Current consumption	17.61	A
Mass flow	537	kg/h
C.O.P.	2.15	

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	85	dB(A)
With acoustic hood	79	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

Performance data at 60 Hz, EN 12900 rating conditions
R134a

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

Cooling capacity in W

35	6 717	9 434	16 956	21 962	27 932	34 968	43 169	52 639	63 476
40	5 916	8 524	15 653	20 377	26 008	32 647	40 394	49 352	59 620
45	5 077	7 564	14 280	18 711	23 992	30 223	37 506	45 941	55 629
50	4 219	6 575	12 856	16 983	21 902	27 715	34 522	42 424	51 522
55	-	-	11 398	15 210	19 758	25 142	31 462	38 820	47 317
60	-	-	-	13 412	17 577	22 521	28 344	35 147	43 032
65	-	-	-	-	15 378	19 871	25 186	31 424	38 685
75	-	-	-	-	-	-	18 823	23 898	29 881

Power input in W

35	4 607	5 231	6 529	7 172	7 792	8 374	8 902	9 362	9 738
40	4 773	5 416	6 775	7 461	8 133	8 775	9 372	9 909	10 371
45	4 906	5 572	7 003	7 739	8 468	9 176	9 847	10 467	11 020
50	5 004	5 698	7 213	8 003	8 795	9 574	10 325	11 033	11 683
55	-	-	7 403	8 253	9 114	9 970	10 806	11 608	12 360
60	-	-	-	8 488	9 422	10 361	11 288	12 189	13 050
65	-	-	-	-	9 720	10 747	11 770	12 777	13 750
75	-	-	-	-	-	-	12 731	13 964	15 181

Current consumption in A

35	9.71	10.27	11.44	12.04	12.64	13.24	13.82	14.37	14.90
40	9.83	10.41	11.65	12.31	12.98	13.65	14.32	14.97	15.60
45	9.92	10.52	11.86	12.58	13.32	14.07	14.83	15.58	16.33
50	9.97	10.61	12.05	12.84	13.66	14.50	15.36	16.23	17.09
55	-	-	12.24	13.10	14.00	14.94	15.91	16.89	17.88
60	-	-	-	13.35	14.35	15.39	16.47	17.58	18.71
65	-	-	-	-	14.70	15.85	17.05	18.29	19.56
75	-	-	-	-	-	-	18.25	19.78	21.35

Mass flow in kg/h

35	171	235	404	511	636	780	945	1 133	1 346
40	158	224	392	498	622	764	927	1 112	1 321
45	144	210	377	483	604	745	905	1 087	1 292
50	129	194	360	464	584	721	879	1 057	1 259
55	-	-	340	442	559	694	849	1 023	1 221
60	-	-	-	416	531	663	814	985	1 177
65	-	-	-	-	499	628	775	941	1 129
75	-	-	-	-	-	-	681	838	1 016

Coefficient of performance (C.O.P.)

35	1.46	1.80	2.60	3.06	3.58	4.18	4.85	5.62	6.52
40	1.24	1.57	2.31	2.73	3.20	3.72	4.31	4.98	5.75
45	1.03	1.36	2.04	2.42	2.83	3.29	3.81	4.39	5.05
50	0.84	1.15	1.78	2.12	2.49	2.89	3.34	3.85	4.41
55	-	-	1.54	1.84	2.17	2.52	2.91	3.34	3.83
60	-	-	-	1.58	1.87	2.17	2.51	2.88	3.30
65	-	-	-	-	1.58	1.85	2.14	2.46	2.81
75	-	-	-	-	-	-	1.48	1.71	1.97

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

Cooling capacity	27 715	W
Power input	9 574	W
Current consumption	14.50	A
Mass flow	721	kg/h
C.O.P.	2.89	

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 = 10 K , Subcooling = 0 K

Tolerance according EN12900

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Performance data at 60 Hz, ARI rating conditions
R134a

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

Cooling capacity in W

35	7 301	10 236	18 334	23 708	30 106	37 633	46 394	56 492	68 032
40	6 469	9 301	17 014	22 108	28 169	35 301	43 610	53 199	64 175
45	5 589	8 307	15 615	20 418	26 130	32 855	40 701	49 771	60 170
50	-	7 275	14 154	18 655	24 006	30 315	37 686	46 225	56 037
55	-	-	12 650	16 838	21 818	27 697	34 582	42 579	51 794
60	-	-	-	14 984	19 581	25 021	31 409	38 854	47 461
65	-	-	-	-	-	22 304	28 186	35 068	43 058
75	-	-	-	-	-	-	21 659	27 389	34 119

Power input in W

35	4 607	5 231	6 529	7 172	7 792	8 374	8 902	9 362	9 738
40	4 773	5 416	6 775	7 461	8 133	8 775	9 372	9 909	10 371
45	4 906	5 572	7 003	7 739	8 468	9 176	9 847	10 467	11 020
50	-	5 698	7 213	8 003	8 795	9 574	10 325	11 033	11 683
55	-	-	7 403	8 253	9 114	9 970	10 806	11 608	12 360
60	-	-	-	8 488	9 422	10 361	11 288	12 189	13 050
65	-	-	-	-	-	10 747	11 770	12 777	13 750
75	-	-	-	-	-	-	12 731	13 964	15 181

Current consumption in A

35	9.71	10.27	11.44	12.04	12.64	13.24	13.82	14.37	14.90
40	9.83	10.41	11.65	12.31	12.98	13.65	14.32	14.97	15.60
45	9.92	10.52	11.86	12.58	13.32	14.07	14.83	15.58	16.33
50	-	10.61	12.05	12.84	13.66	14.50	15.36	16.23	17.09
55	-	-	12.24	13.10	14.00	14.94	15.91	16.89	17.88
60	-	-	-	13.35	14.35	15.39	16.47	17.58	18.71
65	-	-	-	-	-	15.85	17.05	18.29	19.56
75	-	-	-	-	-	-	18.25	19.78	21.35

Mass flow in kg/h

35	170	234	402	508	632	776	940	1 127	1 338
40	158	222	390	496	618	760	922	1 106	1 314
45	144	209	375	480	601	741	900	1 081	1 285
50	-	193	358	461	581	718	874	1 051	1 252
55	-	-	338	440	557	691	844	1 018	1 214
60	-	-	-	414	529	660	809	979	1 171
65	-	-	-	-	-	624	770	936	1 123
75	-	-	-	-	-	-	677	834	1 010

Coefficient of performance (C.O.P.)

35	1.58	1.96	2.81	3.31	3.86	4.49	5.21	6.03	6.99
40	1.36	1.72	2.51	2.96	3.46	4.02	4.65	5.37	6.19
45	1.14	1.49	2.23	2.64	3.09	3.58	4.13	4.76	5.46
50	-	1.28	1.96	2.33	2.73	3.17	3.65	4.19	4.80
55	-	-	1.71	2.04	2.39	2.78	3.20	3.67	4.19
60	-	-	-	1.77	2.08	2.41	2.78	3.19	3.64
65	-	-	-	-	-	2.08	2.39	2.74	3.13
75	-	-	-	-	-	-	1.70	1.96	2.25

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

Cooling capacity	30 939	W
Power input	10 289	W
Current consumption	15.31	A
Mass flow	759	kg/h
C.O.P.	3.01	

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 acoustic 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

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Datasheet, performance data

Maneurop reciprocating compressor. MTZ160-4

Performance data at 60 Hz, EN 12900 rating conditions

R407C

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

Cooling capacity in W

35	20 675	26 564	33 505	41 635	51 090	62 005	74 518	-	-
40	18 922	24 508	31 073	38 753	47 681	57 996	69 832	-	-
45	17 150	22 425	28 606	35 827	44 223	53 929	65 080	-	-
50	-	20 325	26 114	32 869	40 723	49 812	60 270	-	-
55	-	-	23 606	29 886	37 191	45 654	55 409	-	-
60	-	-	-	26 888	33 633	41 460	50 501	-	-
65	-	-	-	23 877	30 052	37 230	45 544	-	-

Power input in W

35	9 367	10 360	11 274	12 080	12 750	13 256	13 569	-	-
40	9 698	10 816	11 872	12 838	13 684	14 383	14 906	-	-
45	9 976	11 220	12 419	13 543	14 566	15 457	16 190	-	-
50	-	11 572	12 912	14 196	15 394	16 478	17 420	-	-
55	-	-	13 353	14 795	16 168	17 445	18 596	-	-
60	-	-	-	15 341	16 890	18 358	19 718	-	-
65	-	-	-	15 834	17 557	19 218	20 786	-	-

Current consumption in A

35	13.90	14.97	15.97	16.91	17.84	18.79	19.78	-	-
40	14.31	15.54	16.69	17.78	18.84	19.92	21.04	-	-
45	14.65	16.06	17.38	18.64	19.87	21.10	22.37	-	-
50	-	16.50	18.02	19.47	20.89	22.30	23.74	-	-
55	-	-	18.59	20.26	21.88	23.50	25.14	-	-
60	-	-	-	20.97	22.83	24.67	26.53	-	-
65	-	-	-	21.58	23.70	25.79	27.90	-	-

Mass flow in kg/h

35	449	567	704	861	1 040	1 245	1 476	-	-
40	432	550	685	840	1 018	1 220	1 448	-	-
45	414	531	665	818	993	1 193	1 418	-	-
50	-	510	643	794	967	1 163	1 386	-	-
55	-	-	619	768	939	1 132	1 351	-	-
60	-	-	-	741	908	1 099	1 314	-	-
65	-	-	-	711	876	1 063	1 275	-	-

Coefficient of performance (C.O.P.)

35	2.21	2.56	2.97	3.45	4.01	4.68	5.49	-	-
40	1.95	2.27	2.62	3.02	3.48	4.03	4.68	-	-
45	1.72	2.00	2.30	2.65	3.04	3.49	4.02	-	-
50	-	1.76	2.02	2.32	2.65	3.02	3.46	-	-
55	-	-	1.77	2.02	2.30	2.62	2.98	-	-
60	-	-	-	1.75	1.99	2.26	2.56	-	-
65	-	-	-	1.51	1.71	1.94	2.19	-	-

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

Cooling capacity	40 723	W
Power input	15 394	W
Current consumption	20.89	A
Mass flow	967	kg/h
C.O.P.	2.65	

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

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

Pressure switch settings

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

Sound power data

Sound power level	87	dB(A)
With acoustic hood	81	dB(A)

Tolerance according EN12900

Performance data at 60 Hz, ARI rating conditions
R407C

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

Cooling capacity in W

35	22 254	28 557	35 977	44 656	54 737	66 362	79 674	-	-
40	20 479	26 487	33 538	41 774	51 337	62 370	75 016	-	-
45	18 679	24 386	31 062	38 847	47 886	58 321	70 294	-	-
50	-	22 265	28 558	35 887	44 395	54 224	65 518	-	-
55	-	-	26 037	32 903	40 873	50 091	60 698	-	-
60	-	-	-	29 906	37 332	45 931	55 846	-	-
65	-	-	-	26 907	33 782	41 756	50 971	-	-

Power input in W

35	9 367	10 360	11 274	12 080	12 750	13 256	13 569	-	-
40	9 698	10 816	11 872	12 838	13 684	14 383	14 906	-	-
45	9 976	11 220	12 419	13 543	14 566	15 457	16 190	-	-
50	-	11 572	12 912	14 196	15 394	16 478	17 420	-	-
55	-	-	13 353	14 795	16 168	17 445	18 596	-	-
60	-	-	-	15 341	16 890	18 358	19 718	-	-
65	-	-	-	15 834	17 557	19 218	20 786	-	-

Current consumption in A

35	13.90	14.97	15.97	16.91	17.84	18.79	19.78	-	-
40	14.31	15.54	16.69	17.78	18.84	19.92	21.04	-	-
45	14.65	16.06	17.38	18.64	19.87	21.10	22.37	-	-
50	-	16.50	18.02	19.47	20.89	22.30	23.74	-	-
55	-	-	18.59	20.26	21.88	23.50	25.14	-	-
60	-	-	-	20.97	22.83	24.67	26.53	-	-
65	-	-	-	21.58	23.70	25.79	27.90	-	-

Mass flow in kg/h

35	446	564	700	856	1 034	1 237	1 467	-	-
40	430	547	681	836	1 012	1 212	1 439	-	-
45	412	528	661	814	988	1 186	1 409	-	-
50	-	507	639	790	961	1 156	1 377	-	-
55	-	-	615	764	933	1 125	1 343	-	-
60	-	-	-	736	903	1 092	1 306	-	-
65	-	-	-	707	871	1 057	1 267	-	-

Coefficient of performance (C.O.P.)

35	2.38	2.76	3.19	3.70	4.29	5.01	5.87	-	-
40	2.11	2.45	2.82	3.25	3.75	4.34	5.03	-	-
45	1.87	2.17	2.50	2.87	3.29	3.77	4.34	-	-
50	-	1.92	2.21	2.53	2.88	3.29	3.76	-	-
55	-	-	1.95	2.22	2.53	2.87	3.26	-	-
60	-	-	-	1.95	2.21	2.50	2.83	-	-
65	-	-	-	1.70	1.92	2.17	2.45	-	-

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

Cooling capacity	45 222	W
Power input	16 644	W
Current consumption	22.46	A
Mass flow	1 018	kg/h
C.O.P.	2.72	

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

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

Pressure switch settings

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

Sound power data

Sound power level	87	dB(A)
With acoustic hood	81	dB(A)

Tolerance according EN12900

Datasheet, performance data
Maneurop reciprocating compressor. MTZ160-4
Performance data at 60 Hz, EN 12900 rating conditions, Suction temp. = 20 °C
R448A

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

Cooling capacity in W

10	-	21 548	27 808	35 351	44 304	-	-	-	-
20	-	18 053	23 578	30 236	38 146	47 437	58 248	-	-
30	-	14 917	19 752	25 569	32 485	40 618	50 096	61 063	73 687
40	-	-	16 265	21 288	27 255	34 277	42 474	51 972	62 917
50	-	-	-	17 327	22 392	28 353	35 317	43 397	52 717
60	-	-	-	-	17 835	22 783	28 564	35 276	43 021

Power input in W

10	-	6 359	6 842	7 254	7 595	-	-	-	-
20	-	7 145	7 807	8 399	8 923	9 381	9 777	-	-
30	-	7 738	8 614	9 422	10 165	10 844	11 464	12 025	12 530
40	-	-	9 253	10 314	11 311	12 248	13 126	13 949	14 719
50	-	-	-	11 063	12 351	13 581	14 755	15 876	16 945
60	-	-	-	-	13 274	14 833	16 339	17 793	19 199

Current consumption in A

10	-	11.94	12.45	12.86	13.17	-	-	-	-
20	-	12.65	13.34	13.98	14.53	14.98	15.30	-	-
30	-	13.25	14.18	15.07	15.91	16.67	17.33	17.86	18.23
40	-	-	14.87	16.06	17.23	18.35	19.39	20.33	21.14
50	-	-	-	16.88	18.42	19.93	21.40	22.78	24.07
60	-	-	-	-	19.40	21.35	23.27	25.15	26.96

Mass flow in kg/h

10	-	352	457	585	737	-	-	-	-
20	-	317	416	536	680	852	1 057	-	-
30	-	284	378	491	627	790	984	1 214	1 487
40	-	-	340	448	577	731	915	1 134	1 394
50	-	-	-	405	528	675	850	1 059	1 306
60	-	-	-	-	481	621	788	987	1 223

Coefficient of performance (C.O.P.)

10	-	3.39	4.06	4.87	5.83	-	-	-	-
20	-	2.53	3.02	3.60	4.28	5.06	5.96	-	-
30	-	1.93	2.29	2.71	3.20	3.75	4.37	5.08	5.88
40	-	-	1.76	2.06	2.41	2.80	3.24	3.73	4.27
50	-	-	-	1.57	1.81	2.09	2.39	2.73	3.11
60	-	-	-	-	1.34	1.54	1.75	1.98	2.24

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

Cooling capacity	24 781	W
Power input	11 845	W
Current consumption	17.85	A
Mass flow	552	kg/h
C.O.P.	2.09	

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

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

Pressure switch settings

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

Sound power data

Sound power level	85	dB(A)
With acoustic hood	79	dB(A)

Tolerance according EN12900

Datasheet, performance data

Maneurop reciprocating compressor. MTZ160-4

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

R448A

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

Cooling capacity in W

10	16 519	21 654	27 964	35 570	44 589	-	-	-	-
20	13 425	17 937	23 480	30 173	38 137	47 492	58 356	-	-
30	10 683	14 615	19 435	25 261	32 214	40 413	49 978	61 030	73 687
40	8 227	11 623	15 763	20 765	26 751	33 839	42 150	51 802	62 917
50	-	8 893	12 397	16 620	21 683	27 704	34 803	43 101	52 717
60	-	-	9 270	12 758	16 942	21 940	27 872	34 859	43 021

Power input in W

10	5 800	6 359	6 842	7 254	7 595	-	-	-	-
20	6 411	7 145	7 807	8 399	8 923	9 381	9 777	-	-
30	6 792	7 738	8 614	9 422	10 165	10 844	11 464	12 025	12 530
40	6 933	8 127	9 253	10 314	11 311	12 248	13 126	13 949	14 719
50	-	8 301	9 713	11 063	12 351	13 581	14 755	15 876	16 945
60	-	-	9 985	11 659	13 274	14 833	16 339	17 793	19 199

Current consumption in A

10	11.39	11.94	12.45	12.86	13.17	-	-	-	-
20	11.93	12.65	13.34	13.98	14.53	14.98	15.30	-	-
30	12.33	13.25	14.18	15.07	15.91	16.67	17.33	17.86	18.23
40	12.51	13.68	14.87	16.06	17.23	18.35	19.39	20.33	21.14
50	-	13.84	15.35	16.88	18.42	19.93	21.40	22.78	24.07
60	-	-	15.54	17.45	19.40	21.35	23.27	25.15	26.96

Mass flow in kg/h

10	314	409	522	655	809	-	-	-	-
20	279	369	475	600	747	916	1 111	-	-
30	245	330	431	550	688	849	1 035	1 246	1 487
40	211	292	388	501	633	786	963	1 164	1 394
50	-	254	346	454	580	726	894	1 087	1 306
60	-	-	303	407	528	668	829	1 013	1 223

Coefficient of performance (C.O.P.)

10	2.85	3.41	4.09	4.90	5.87	-	-	-	-
20	2.09	2.51	3.01	3.59	4.27	5.06	5.97	-	-
30	1.57	1.89	2.26	2.68	3.17	3.73	4.36	5.08	5.88
40	1.19	1.43	1.70	2.01	2.37	2.76	3.21	3.71	4.27
50	-	1.07	1.28	1.50	1.76	2.04	2.36	2.71	3.11
60	-	-	0.93	1.09	1.28	1.48	1.71	1.96	2.24

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

Cooling capacity	24 172	W
Power input	11 845	W
Current consumption	17.85	A
Mass flow	606	kg/h
C.O.P.	2.04	

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	85	dB(A)
With acoustic hood	79	dB(A)

Tolerance according EN12900

Datasheet, performance data

Maneurop reciprocating compressor. MTZ160-4

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

R449A

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

Cooling capacity in W

10	-	21 588	27 851	35 394	44 345	-	-	-	-
20	-	18 093	23 621	30 279	38 189	47 476	58 278	-	-
30	-	14 956	19 794	25 613	32 528	40 657	50 128	61 082	73 687
40	-	-	16 307	21 333	27 299	34 318	42 506	51 991	62 917
50	-	-	-	17 372	22 437	28 394	35 350	43 417	52 717
60	-	-	-	-	17 880	22 824	28 598	35 296	43 021

Power input in W

10	-	6 359	6 842	7 254	7 595	-	-	-	-
20	-	7 145	7 807	8 399	8 923	9 381	9 777	-	-
30	-	7 738	8 614	9 422	10 165	10 844	11 464	12 025	12 530
40	-	-	9 253	10 314	11 311	12 248	13 126	13 949	14 719
50	-	-	-	11 063	12 351	13 581	14 755	15 876	16 945
60	-	-	-	-	13 274	14 833	16 339	17 793	19 199

Current consumption in A

10	-	11.94	12.45	12.86	13.17	-	-	-	-
20	-	12.65	13.34	13.98	14.53	14.98	15.30	-	-
30	-	13.25	14.18	15.07	15.91	16.67	17.33	17.86	18.23
40	-	-	14.87	16.06	17.23	18.35	19.39	20.33	21.14
50	-	-	-	16.88	18.42	19.93	21.40	22.78	24.07
60	-	-	-	-	19.40	21.35	23.27	25.15	26.96

Mass flow in kg/h

10	-	346	457	589	745	-	-	-	-
20	-	317	420	544	692	867	1 074	-	-
30	-	287	384	501	640	806	1 002	1 235	1 511
40	-	-	348	458	589	747	934	1 156	1 420
50	-	-	-	415	540	690	869	1 081	1 334
60	-	-	-	-	492	635	806	1 010	1 253

Coefficient of performance (C.O.P.)

10	-	3.40	4.07	4.88	5.84	-	-	-	-
20	-	2.53	3.03	3.61	4.28	5.06	5.96	-	-
30	-	1.93	2.30	2.72	3.20	3.75	4.37	5.08	5.88
40	-	-	1.76	2.07	2.41	2.80	3.24	3.73	4.27
50	-	-	-	1.57	1.82	2.09	2.40	2.73	3.11
60	-	-	-	-	1.35	1.54	1.75	1.98	2.24

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

Cooling capacity	24 826	W
Power input	11 845	W
Current consumption	17.85	A
Mass flow	565	kg/h
C.O.P.	2.10	

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

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

Pressure switch settings

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

Sound power data

Sound power level	84	dB(A)
With acoustic hood	78	dB(A)

Tolerance according EN12900

Datasheet, performance data

Maneurop reciprocating compressor. MTZ160-4

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

R449A

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

Cooling capacity in W

10	16 519	21 654	27 964	35 570	44 589	-	-	-	-
20	13 425	17 937	23 480	30 173	38 137	47 492	58 356	-	-
30	10 683	14 615	19 435	25 261	32 214	40 413	49 978	61 030	73 687
40	8 227	11 623	15 763	20 765	26 751	33 839	42 150	51 802	62 917
50	-	8 893	12 397	16 620	21 683	27 704	34 803	43 101	52 717
60	-	-	9 270	12 758	16 942	21 940	27 872	34 859	43 021

Power input in W

10	5 800	6 359	6 842	7 254	7 595	-	-	-	-
20	6 411	7 145	7 807	8 399	8 923	9 381	9 777	-	-
30	6 792	7 738	8 614	9 422	10 165	10 844	11 464	12 025	12 530
40	6 933	8 127	9 253	10 314	11 311	12 248	13 126	13 949	14 719
50	-	8 301	9 713	11 063	12 351	13 581	14 755	15 876	16 945
60	-	-	9 985	11 659	13 274	14 833	16 339	17 793	19 199

Current consumption in A

10	11.39	11.94	12.45	12.86	13.17	-	-	-	-
20	11.93	12.65	13.34	13.98	14.53	14.98	15.30	-	-
30	12.33	13.25	14.18	15.07	15.91	16.67	17.33	17.86	18.23
40	12.51	13.68	14.87	16.06	17.23	18.35	19.39	20.33	21.14
50	-	13.84	15.35	16.88	18.42	19.93	21.40	22.78	24.07
60	-	-	15.54	17.45	19.40	21.35	23.27	25.15	26.96

Mass flow in kg/h

10	300	402	521	659	818	-	-	-	-
20	273	368	480	609	760	932	1 130	-	-
30	245	334	438	560	703	866	1 054	1 269	1 511
40	214	298	396	512	647	803	983	1 187	1 420
50	-	261	354	464	593	742	914	1 110	1 334
60	-	-	312	417	540	683	848	1 037	1 253

Coefficient of performance (C.O.P.)

10	2.85	3.41	4.09	4.90	5.87	-	-	-	-
20	2.09	2.51	3.01	3.59	4.27	5.06	5.97	-	-
30	1.57	1.89	2.26	2.68	3.17	3.73	4.36	5.08	5.88
40	1.19	1.43	1.70	2.01	2.37	2.76	3.21	3.71	4.27
50	-	1.07	1.28	1.50	1.76	2.04	2.36	2.71	3.11
60	-	-	0.93	1.09	1.28	1.48	1.71	1.96	2.24

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

Cooling capacity	24 172	W
Power input	11 845	W
Current consumption	17.85	A
Mass flow	620	kg/h
C.O.P.	2.04	

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	84	dB(A)
With acoustic hood	78	dB(A)

Tolerance according EN12900

Datasheet, performance data

Maneurop reciprocating compressor. MTZ160-4

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

R452A

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

Cooling capacity in W

10	-	23 535	29 065	35 682	43 496	-	-	-	-
20	-	20 218	25 253	31 237	38 274	46 474	55 955	-	-
30	-	17 030	21 541	26 864	33 097	40 343	48 708	58 315	69 307
40	-	13 915	17 877	22 511	27 913	34 178	41 403	49 693	59 168
50	-	-	14 203	18 124	22 669	27 929	33 991	40 941	48 874
60	-	-	-	13 656	17 328	21 564	26 438	32 022	38 379

Power input in W

10	-	6 531	6 885	7 277	7 742	-	-	-	-
20	-	7 802	8 283	8 760	9 266	9 837	10 510	-	-
30	-	8 822	9 524	10 177	10 816	11 478	12 199	13 012	13 956
40	-	9 487	10 500	11 422	12 288	13 132	13 992	14 902	15 899
50	-	-	11 106	12 389	13 573	14 692	15 784	16 882	18 024
60	-	-	-	12 972	14 565	16 052	17 467	18 847	20 226

Current consumption in A

10	-	11.63	11.71	11.85	12.06	-	-	-	-
20	-	12.69	13.07	13.45	13.86	14.31	14.82	-	-
30	-	13.60	14.36	15.08	15.78	16.46	17.15	17.87	18.64
40	-	14.16	15.40	16.54	17.61	18.62	19.58	20.53	21.47
50	-	-	15.98	17.64	19.17	20.59	21.92	23.17	24.37
60	-	-	-	18.16	20.25	22.17	23.95	25.61	27.16

Mass flow in kg/h

10	-	474	593	734	901	-	-	-	-
20	-	446	561	698	861	1 053	1 280	-	-
30	-	413	526	659	817	1 004	1 224	1 484	1 793
40	-	376	485	615	768	949	1 163	1 416	1 716
50	-	-	439	564	713	889	1 096	1 342	1 632
60	-	-	-	507	651	822	1 023	1 260	1 542

Coefficient of performance (C.O.P.)

10	-	3.60	4.22	4.90	5.62	-	-	-	-
20	-	2.59	3.05	3.57	4.13	4.72	5.32	-	-
30	-	1.93	2.26	2.64	3.06	3.51	3.99	4.48	4.97
40	-	1.47	1.70	1.97	2.27	2.60	2.96	3.33	3.72
50	-	-	1.28	1.46	1.67	1.90	2.15	2.43	2.71
60	-	-	-	1.05	1.19	1.34	1.51	1.70	1.90

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

Cooling capacity	25 302	W
Power input	12 960	W
Current consumption	18.44	A
Mass flow	741	kg/h
C.O.P.	1.95	

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

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

Pressure switch settings

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

Sound power data

Sound power level	84	dB(A)
With acoustic hood	78	dB(A)

Tolerance according EN12900

Datasheet, performance data

Maneurop reciprocating compressor. MTZ160-4

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

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

Cooling capacity in W

10	18 374	22 911	28 458	35 129	43 037	-	-	-	-
20	15 215	19 352	24 369	30 382	37 503	45 845	55 523	-	-
30	12 252	15 955	20 411	25 733	32 035	39 430	48 031	57 952	69 307
40	9 437	12 675	16 537	21 137	26 587	33 002	40 495	49 179	59 168
50	6 724	9 465	12 702	16 547	21 114	26 516	32 868	40 283	48 874
60	-	6 279	8 857	11 916	15 567	19 926	25 105	31 218	38 379

Power input in W

10	6 179	6 531	6 885	7 277	7 742	-	-	-	-
20	7 278	7 802	8 283	8 760	9 266	9 837	10 510	-	-
30	8 036	8 822	9 524	10 177	10 816	11 478	12 199	13 012	13 956
40	8 345	9 487	10 500	11 422	12 288	13 132	13 992	14 902	15 899
50	8 099	9 688	11 106	12 389	13 573	14 692	15 784	16 882	18 024
60	-	9 320	11 235	12 972	14 565	16 052	17 467	18 847	20 226

Current consumption in A

10	11.58	11.63	11.71	11.85	12.06	-	-	-	-
20	12.29	12.69	13.07	13.45	13.86	14.31	14.82	-	-
30	12.77	13.60	14.36	15.08	15.78	16.46	17.15	17.87	18.64
40	12.80	14.16	15.40	16.54	17.61	18.62	19.58	20.53	21.47
50	12.20	14.17	15.98	17.64	19.17	20.59	21.92	23.17	24.37
60	-	13.45	15.90	18.16	20.25	22.17	23.95	25.61	27.16

Mass flow in kg/h

10	445	553	678	824	992	-	-	-	-
20	413	519	642	784	947	1 135	1 349	-	-
30	377	481	601	740	899	1 081	1 290	1 526	1 793
40	336	438	555	690	845	1 023	1 226	1 456	1 716
50	287	387	502	634	785	958	1 155	1 379	1 632
60	-	329	441	570	717	885	1 077	1 295	1 542

Coefficient of performance (C.O.P.)

10	2.97	3.51	4.13	4.83	5.56	-	-	-	-
20	2.09	2.48	2.94	3.47	4.05	4.66	5.28	-	-
30	1.52	1.81	2.14	2.53	2.96	3.44	3.94	4.45	4.97
40	1.13	1.34	1.57	1.85	2.16	2.51	2.89	3.30	3.72
50	0.83	0.98	1.14	1.34	1.56	1.80	2.08	2.39	2.71
60	-	0.67	0.79	0.92	1.07	1.24	1.44	1.66	1.90

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

Cooling capacity	23 857	W
Power input	12 960	W
Current consumption	18.44	A
Mass flow	816	kg/h
C.O.P.	1.84	

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	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	84	dB(A)
With acoustic hood	78	dB(A)

Tolerance according EN12900

