



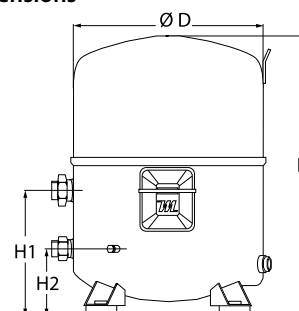
Datasheets

Maneurop[®] Reciprocating compressors MT / MTZ / MPZ / NTZ



General Characteristics

Model number (on compressor nameplate)		MTZ160HW4VE
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		69 kg
Oil charge		3,9 litre, POE - 160PZ
Maximum system test pressure Low Side / High side		25 bar(g) / 30 bar(g)
Maximum differential test pressure		30 bar
Maximum number of starts per hour		12
Refrigerant charge limit		10 kg
Approved refrigerants		R404A, R507A, R134a, R407C

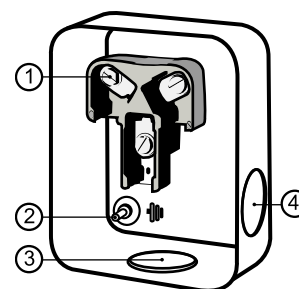
Dimensions


D=352 mm

H=540 mm

H1=233 mm

H2=125 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	1.1 Ω
Maximum Continuous Current (MCC)	36 A
Locked Rotor Amps (LRA)	140 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

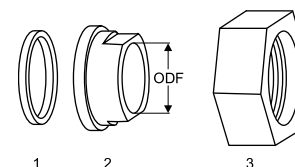
Approvals : CE certified, UL certified (file SA6873), -

*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
Angle adapter, C02 (1-3/4" Rotolock, 1-1/8" ODF)	8168005
Rotolock valve, V02 (1-3/4" Rotolock, 1-1/8" ODF)	8168028
Gasket, 1-3/4"	8156132

Gaskets, sleeves and nuts


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

Rotolock accessories, discharge side
Code no.

Solder sleeve, P04 (1-1/4" Rotolock, 3/4" ODF)	8153008
Angle adapter, C04 (1-1/4" Rotolock, 3/4" ODF)	8168006
Rotolock valve, V04 (1-1/4" Rotolock, 3/4" ODF)	8168029
Gasket, 1-1/4"	8156131

Rotolock accessories, sets
Code no.

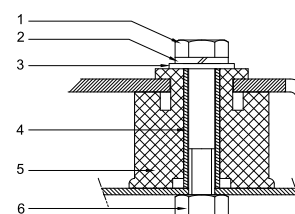
Angle adapter set, C02 (1-3/4"~1-1/8"), C04 (1-1/4"~3/4")	7703014
Valve set, V02 (1-3/4"~1-1/8"), V04 (1-1/4"~3/4")	7703009
Gasket set, 1", 1-1/4", 1-3/4", OSG gaskets black & white	8156009

Oil / lubricants
Code no.

POE lubricant, 160PZ, 1 litre can	7754019
POE lubricant, 160PZ, 2 litre can	7754020

Crankcase heaters
Code no.

PTC heater 27W	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


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

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	7755003
Oil equalisation nut	8153127

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, 1 T block connector 52 x 57 mm	8156135
T block connector 52 x 57 mm	8173230

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	16.54	17.26	17.85	18.27	-	-
40	14.28	15.33	16.35	17.31	18.18	18.93	19.52	-	-
45	14.60	15.79	16.96	18.09	19.13	20.06	20.84	-	-
50	-	16.21	17.55	18.85	20.08	21.21	22.21	-	-
55	-	-	18.08	19.58	21.01	22.36	23.59	-	-
60	-	-	-	20.25	21.91	23.49	24.96	-	-
65	-	-	-	20.84	22.75	24.58	26.31	-	-

Mass flow in kg/h

35	369	469	586	722	879	1 058	1 263	-	-
40	355	454	569	703	857	1 034	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	


Pressure switch settings

Maximum HP switch setting	29.4	bar(g)
Minimum LP switch setting	0.2	bar(g)
LP pump down setting	1.3	bar(g)

Sound power data

Sound power level	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

All performance data +/- 5%

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	37 482	46 257	56 434	68 140	-	-
40	16 814	21 879	27 888	34 971	43 255	52 868	63 939	-	-
45	15 313	20 106	25 769	32 432	40 222	49 270	59 702	-	-
50	-	18 314	23 629	29 869	37 164	45 643	55 435	-	-
55	-	-	21 471	27 287	34 084	41 993	51 144	-	-
60	-	-	-	24 691	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	16.54	17.26	17.85	18.27	-	-
40	14.28	15.33	16.35	17.31	18.18	18.93	19.52	-	-
45	14.60	15.79	16.96	18.09	19.13	20.06	20.84	-	-
50	-	16.21	17.55	18.85	20.08	21.21	22.21	-	-
55	-	-	18.08	19.58	21.01	22.36	23.59	-	-
60	-	-	-	20.25	21.91	23.49	24.96	-	-
65	-	-	-	20.84	22.75	24.58	26.31	-	-

Mass flow in kg/h

35	367	467	583	718	874	1 052	1 255	-	-
40	353	451	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	

Pressure switch settings

Maximum HP switch setting	29.4	bar(g)
Minimum LP switch setting	0.2	bar(g)
LP pump down setting	1.3	bar(g)

Sound power data

Sound power level	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

All performance data +/- 5%

Performance data at 50 Hz, EN 12900 rating conditions

R134a

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

Cooling capacity in W

35	10 643	14 060	18 208	23 181	29 070	35 969	43 971	53 169	-
40	9 675	12 911	16 836	21 542	27 121	33 666	41 270	50 025	-
45	8 768	11 798	15 473	19 887	25 130	31 295	38 474	46 761	-
50	7 917	10 714	14 115	18 210	23 091	28 850	35 578	43 370	-
55	7 114	9 654	12 755	16 506	21 000	26 326	32 578	39 848	-
60	-	8 612	11 388	14 771	18 851	23 720	29 469	36 190	-
65	-	-	-	12 999	16 642	21 028	26 248	32 394	-
70	-	-	-	-	-	18 247	22 913	28 456	-

Power input in W

35	4 897	5 441	5 977	6 494	6 978	7 418	7 802	8 115	-
40	5 073	5 645	6 218	6 778	7 313	7 810	8 258	8 643	-
45	5 230	5 836	6 449	7 057	7 646	8 206	8 722	9 183	-
50	5 366	6 011	6 669	7 329	7 978	8 604	9 194	9 736	-
55	5 482	6 169	6 878	7 595	8 308	9 005	9 673	10 300	-
60	-	6 310	7 073	7 852	8 634	9 407	10 158	10 875	-
65	-	-	-	8 100	8 955	9 809	10 647	11 459	-
70	-	-	-	-	-	10 210	11 140	12 051	-

Current consumption in A

35	10.40	10.97	11.54	12.12	12.69	13.25	13.78	14.28	-
40	10.56	11.17	11.80	12.44	13.09	13.72	14.35	14.95	-
45	10.71	11.37	12.06	12.77	13.49	14.22	14.94	15.66	-
50	10.84	11.56	12.31	13.10	13.90	14.73	15.56	16.39	-
55	10.96	11.73	12.56	13.43	14.33	15.25	16.19	17.15	-
60	-	11.90	12.80	13.76	14.76	15.79	16.85	17.93	-
65	-	-	-	14.09	15.20	16.35	17.53	18.75	-
70	-	-	-	-	-	16.92	18.24	19.60	-

Mass flow in kg/h

35	258	334	423	527	648	787	945	1 125	-
40	247	322	410	514	634	771	929	1 106	-
45	236	310	397	499	617	753	908	1 084	-
50	226	298	383	483	599	732	884	1 056	-
55	216	286	369	465	578	707	856	1 024	-
60	-	274	353	446	555	680	824	988	-
65	-	-	-	426	529	650	789	947	-
70	-	-	-	-	-	617	750	902	-

Coefficient of performance (C.O.P.)

35	2.17	2.58	3.05	3.57	4.17	4.85	5.64	6.55	-
40	1.91	2.29	2.71	3.18	3.71	4.31	5.00	5.79	-
45	1.68	2.02	2.40	2.82	3.29	3.81	4.41	5.09	-
50	1.48	1.78	2.12	2.48	2.89	3.35	3.87	4.45	-
55	1.30	1.56	1.85	2.17	2.53	2.92	3.37	3.87	-
60	-	1.36	1.61	1.88	2.18	2.52	2.90	3.33	-
65	-	-	-	1.60	1.86	2.14	2.47	2.83	-
70	-	-	-	-	-	1.79	2.06	2.36	-

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

Cooling capacity	23 091	W
Power input	7 978	W
Current consumption	13.90	A
Mass flow	599	kg/h
C.O.P.	2.89	

Pressure switch settings

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

Sound power data

Sound power level	0	dB(A)
With 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

All performance data +/- 5%

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Performance data at 50 Hz, ARI rating conditions

R134a

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

Cooling capacity in W

35	11 528	15 203	19 657	24 987	31 288	38 658	47 193	56 989	-
40	10 537	14 034	18 268	23 334	29 328	36 349	44 491	53 851	-
45	9 609	12 901	16 886	21 661	27 321	33 964	41 685	50 582	-
50	8 739	11 798	15 506	19 962	25 259	31 497	38 770	47 175	-
55	7 919	10 717	14 121	18 229	23 137	28 941	35 738	43 624	-
60	-	9 652	12 725	16 457	20 947	26 289	32 582	39 921	-
65	-	-	-	14 639	18 682	23 536	29 296	36 060	-
70	-	-	-	-	-	20 674	25 874	32 034	-

Power input in W

35	4 897	5 441	5 977	6 494	6 978	7 418	7 802	8 115	-
40	5 073	5 645	6 218	6 778	7 313	7 810	8 258	8 643	-
45	5 230	5 836	6 449	7 057	7 646	8 206	8 722	9 183	-
50	5 366	6 011	6 669	7 329	7 978	8 604	9 194	9 736	-
55	5 482	6 169	6 878	7 595	8 308	9 005	9 673	10 300	-
60	-	6 310	7 073	7 852	8 634	9 407	10 158	10 875	-
65	-	-	-	8 100	8 955	9 809	10 647	11 459	-
70	-	-	-	-	-	10 210	11 140	12 051	-

Current consumption in A

35	10.40	10.97	11.54	12.12	12.69	13.25	13.78	14.28	-
40	10.56	11.17	11.80	12.44	13.09	13.72	14.35	14.95	-
45	10.71	11.37	12.06	12.77	13.49	14.22	14.94	15.66	-
50	10.84	11.56	12.31	13.10	13.90	14.73	15.56	16.39	-
55	10.96	11.73	12.56	13.43	14.33	15.25	16.19	17.15	-
60	-	11.90	12.80	13.76	14.76	15.79	16.85	17.93	-
65	-	-	-	14.09	15.20	16.35	17.53	18.75	-
70	-	-	-	-	-	16.92	18.24	19.60	-

Mass flow in kg/h

35	257	332	421	524	644	782	940	1 118	-
40	246	320	408	511	630	767	923	1 100	-
45	235	308	395	497	614	749	903	1 077	-
50	225	297	381	481	596	728	879	1 050	-
55	215	285	367	463	575	704	851	1 018	-
60	-	273	351	444	552	676	819	982	-
65	-	-	-	424	527	647	784	942	-
70	-	-	-	-	-	614	746	897	-

Coefficient of performance (C.O.P.)

35	2.35	2.79	3.29	3.85	4.48	5.21	6.05	7.02	-
40	2.08	2.49	2.94	3.44	4.01	4.65	5.39	6.23	-
45	1.84	2.21	2.62	3.07	3.57	4.14	4.78	5.51	-
50	1.63	1.96	2.33	2.72	3.17	3.66	4.22	4.85	-
55	1.44	1.74	2.05	2.40	2.78	3.21	3.69	4.24	-
60	-	1.53	1.80	2.10	2.43	2.79	3.21	3.67	-
65	-	-	-	1.81	2.09	2.40	2.75	3.15	-
70	-	-	-	-	-	2.02	2.32	2.66	-

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

Cooling capacity	25 856	W
Power input	8 574	W
Current consumption	14.67	A
Mass flow	632	kg/h
C.O.P.	3.02	

Pressure switch settings

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

Sound power data

Sound power level	0	dB(A)
With 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

All performance data +/- 5%

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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

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	12.75	13.70	14.66	15.62	16.57	17.48	18.34	19.13	19.85
35	12.87	13.92	14.99	16.07	17.13	18.16	19.14	20.07	20.91
40	12.93	14.11	15.31	16.51	17.70	18.86	19.98	21.04	22.03
45	12.94	14.25	15.58	16.93	18.26	19.57	20.84	22.06	23.20
50	12.87	14.33	15.82	17.32	18.81	20.28	21.72	23.10	24.42
55	-	14.35	16.00	17.67	19.34	20.98	22.60	24.17	25.67
60	-	14.29	16.13	17.98	19.83	21.67	23.48	25.24	26.94

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	270	363	473	599	744	911	1 101	1 316	1 558
45	253	345	452	577	720	884	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	720	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	0.2	bar(g)
LP pump down setting	0.9	bar(g)

Sound power data

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

All performance data +/- 5%

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

Cooling capacity in W

30	10 697	14 371	18 835	24 188	30 529	37 955	46 564	56 453	67 720
35	9 507	12 953	17 127	22 128	28 055	35 008	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	12.75	13.70	14.66	15.62	16.57	17.48	18.34	19.13	19.85
35	12.87	13.92	14.99	16.07	17.13	18.16	19.14	20.07	20.91
40	12.93	14.11	15.31	16.51	17.70	18.86	19.98	21.04	22.03
45	12.94	14.25	15.58	16.93	18.26	19.57	20.84	22.06	23.20
50	12.87	14.33	15.82	17.32	18.81	20.28	21.72	23.10	24.42
55	-	14.35	16.00	17.67	19.34	20.98	22.60	24.17	25.67
60	-	14.29	16.13	17.98	19.83	21.67	23.48	25.24	26.94

Mass flow in kg/h

30	300	396	507	637	785	956	1 150	1 369	1 616
35	285	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	408	526	663	820	999	1 202	1 431
60	-	285	386	502	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	

Pressure switch settings

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

Sound power data

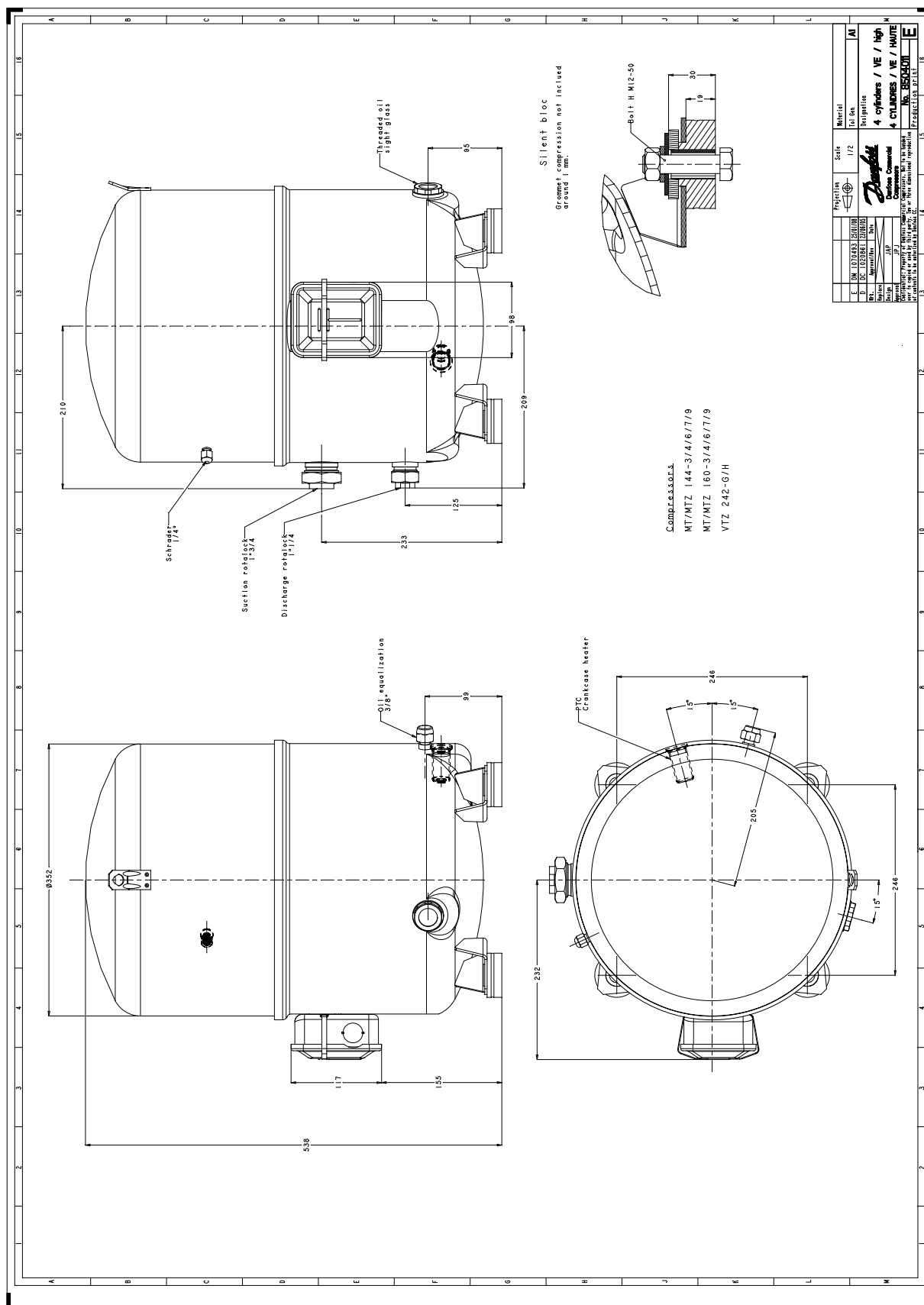
Sound power level	83	dB(A)
With acoustic hood	77	dB(A)

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

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

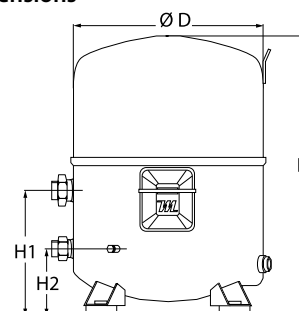
All performance data +/- 5%



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General Characteristics

Model number (on compressor nameplate)		MTZ160HW4
Code number for Industrial pack**		MTZ160-4M
Drawing number		8504014e
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		Brazed
Oil equalisation connection		None
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		69 kg
Oil charge		3,9 litre, POE - 160PZ
Maximum system test pressure Low Side / High side		25 bar(g) / 30 bar(g)
Maximum differential test pressure		30 bar
Maximum number of starts per hour		12
Refrigerant charge limit		10 kg
Approved refrigerants		R404A, R507A, R134a, R407C

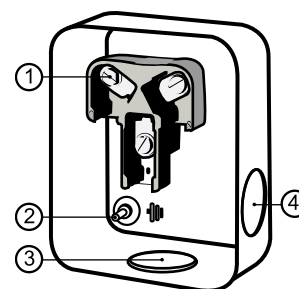
Dimensions


D=352 mm

H=540 mm

H1=233 mm

H2=125 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	1.1 Ω
Maximum Continuous Current (MCC)	36 A
Locked Rotor Amps (LRA)	140 A
Motor protection	Internal overload protector

Recommended Installation torques

Oil sight glass	0 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
Initial oil charge
Installation instructions

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

*Singlepack: Compressor in cardboard box

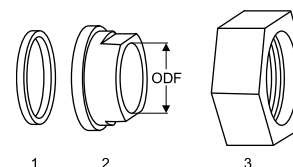
**Industrial pack: 6 Unboxed compressors on pallet (order per multiples of 6)

Rotolock accessories, suction side

Code no.

Solder sleeve, P02 (1-3/4" Rotolock, 1-1/8" ODF)	8153004
Angle adapter, C02 (1-3/4" Rotolock, 1-1/8" ODF)	8168005
Rotolock valve, V02 (1-3/4" Rotolock, 1-1/8" ODF)	8168028
Gasket, 1-3/4"	8156132

Gaskets, sleeves and nuts



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

Rotolock accessories, discharge side

Code no.

Solder sleeve, P04 (1-1/4" Rotolock, 3/4" ODF)	8153008
Angle adapter, C04 (1-1/4" Rotolock, 3/4" ODF)	8168006
Rotolock valve, V04 (1-1/4" Rotolock, 3/4" ODF)	8168029
Gasket, 1-1/4"	8156131

Rotolock accessories, sets

Code no.

Angle adapter set, C02 (1-3/4"~1-1/8"), C04 (1-1/4"~3/4")	7703014
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.

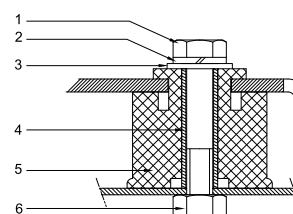
POE lubricant, 160PZ, 1 litre can	7754019
POE lubricant, 160PZ, 2 litre can	7754020

Crankcase heaters

Code no.

PTC heater 27W	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



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

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	7755003

Spare parts

Code no.

Mounting kit for 4 cylinder compressor & MS, including 4 grommets, 4 bolts	8156007
Service kit for terminal box 96 x 115 mm, including 1 cover, 1 clamp, 1 T block connector 52 x 57 mm	8156135
T block connector 52 x 57 mm	8173230

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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	16.54	17.26	17.85	18.27	-	-
40	14.28	15.33	16.35	17.31	18.18	18.93	19.52	-	-
45	14.60	15.79	16.96	18.09	19.13	20.06	20.84	-	-
50	-	16.21	17.55	18.85	20.08	21.21	22.21	-	-
55	-	-	18.08	19.58	21.01	22.36	23.59	-	-
60	-	-	-	20.25	21.91	23.49	24.96	-	-
65	-	-	-	20.84	22.75	24.58	26.31	-	-

Mass flow in kg/h

35	369	469	586	722	879	1 058	1 263	-	-
40	355	454	569	703	857	1 034	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	


Pressure switch settings

Maximum HP switch setting	29.4	bar(g)
Minimum LP switch setting	0.2	bar(g)
LP pump down setting	1.3	bar(g)

Sound power data

Sound power level	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

All performance data +/- 5%

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	37 482	46 257	56 434	68 140	-	-
40	16 814	21 879	27 888	34 971	43 255	52 868	63 939	-	-
45	15 313	20 106	25 769	32 432	40 222	49 270	59 702	-	-
50	-	18 314	23 629	29 869	37 164	45 643	55 435	-	-
55	-	-	21 471	27 287	34 084	41 993	51 144	-	-
60	-	-	-	24 691	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	16.54	17.26	17.85	18.27	-	-
40	14.28	15.33	16.35	17.31	18.18	18.93	19.52	-	-
45	14.60	15.79	16.96	18.09	19.13	20.06	20.84	-	-
50	-	16.21	17.55	18.85	20.08	21.21	22.21	-	-
55	-	-	18.08	19.58	21.01	22.36	23.59	-	-
60	-	-	-	20.25	21.91	23.49	24.96	-	-
65	-	-	-	20.84	22.75	24.58	26.31	-	-

Mass flow in kg/h

35	367	467	583	718	874	1 052	1 255	-	-
40	353	451	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	

Pressure switch settings

Maximum HP switch setting	29.4	bar(g)
Minimum LP switch setting	0.2	bar(g)
LP pump down setting	1.3	bar(g)

Sound power data

Sound power level	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

All performance data +/- 5%

Performance data at 50 Hz, EN 12900 rating conditions

R134a

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

Cooling capacity in W

35	10 643	14 060	18 208	23 181	29 070	35 969	43 971	53 169	-
40	9 675	12 911	16 836	21 542	27 121	33 666	41 270	50 025	-
45	8 768	11 798	15 473	19 887	25 130	31 295	38 474	46 761	-
50	7 917	10 714	14 115	18 210	23 091	28 850	35 578	43 370	-
55	7 114	9 654	12 755	16 506	21 000	26 326	32 578	39 848	-
60	-	8 612	11 388	14 771	18 851	23 720	29 469	36 190	-
65	-	-	-	12 999	16 642	21 028	26 248	32 394	-
70	-	-	-	-	-	18 247	22 913	28 456	-

Power input in W

35	4 897	5 441	5 977	6 494	6 978	7 418	7 802	8 115	-
40	5 073	5 645	6 218	6 778	7 313	7 810	8 258	8 643	-
45	5 230	5 836	6 449	7 057	7 646	8 206	8 722	9 183	-
50	5 366	6 011	6 669	7 329	7 978	8 604	9 194	9 736	-
55	5 482	6 169	6 878	7 595	8 308	9 005	9 673	10 300	-
60	-	6 310	7 073	7 852	8 634	9 407	10 158	10 875	-
65	-	-	-	8 100	8 955	9 809	10 647	11 459	-
70	-	-	-	-	-	10 210	11 140	12 051	-

Current consumption in A

35	10.40	10.97	11.54	12.12	12.69	13.25	13.78	14.28	-
40	10.56	11.17	11.80	12.44	13.09	13.72	14.35	14.95	-
45	10.71	11.37	12.06	12.77	13.49	14.22	14.94	15.66	-
50	10.84	11.56	12.31	13.10	13.90	14.73	15.56	16.39	-
55	10.96	11.73	12.56	13.43	14.33	15.25	16.19	17.15	-
60	-	11.90	12.80	13.76	14.76	15.79	16.85	17.93	-
65	-	-	-	14.09	15.20	16.35	17.53	18.75	-
70	-	-	-	-	-	16.92	18.24	19.60	-

Mass flow in kg/h

35	258	334	423	527	648	787	945	1 125	-
40	247	322	410	514	634	771	929	1 106	-
45	236	310	397	499	617	753	908	1 084	-
50	226	298	383	483	599	732	884	1 056	-
55	216	286	369	465	578	707	856	1 024	-
60	-	274	353	446	555	680	824	988	-
65	-	-	-	426	529	650	789	947	-
70	-	-	-	-	-	617	750	902	-

Coefficient of performance (C.O.P.)

35	2.17	2.58	3.05	3.57	4.17	4.85	5.64	6.55	-
40	1.91	2.29	2.71	3.18	3.71	4.31	5.00	5.79	-
45	1.68	2.02	2.40	2.82	3.29	3.81	4.41	5.09	-
50	1.48	1.78	2.12	2.48	2.89	3.35	3.87	4.45	-
55	1.30	1.56	1.85	2.17	2.53	2.92	3.37	3.87	-
60	-	1.36	1.61	1.88	2.18	2.52	2.90	3.33	-
65	-	-	-	1.60	1.86	2.14	2.47	2.83	-
70	-	-	-	-	-	1.79	2.06	2.36	-

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

Cooling capacity	23 091	W
Power input	7 978	W
Current consumption	13.90	A
Mass flow	599	kg/h
C.O.P.	2.89	

Pressure switch settings

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

Sound power data

Sound power level	0	dB(A)
With 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

All performance data +/- 5%

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Performance data at 50 Hz, ARI rating conditions

R134a

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

Cooling capacity in W

35	11 528	15 203	19 657	24 987	31 288	38 658	47 193	56 989	-
40	10 537	14 034	18 268	23 334	29 328	36 349	44 491	53 851	-
45	9 609	12 901	16 886	21 661	27 321	33 964	41 685	50 582	-
50	8 739	11 798	15 506	19 962	25 259	31 497	38 770	47 175	-
55	7 919	10 717	14 121	18 229	23 137	28 941	35 738	43 624	-
60	-	9 652	12 725	16 457	20 947	26 289	32 582	39 921	-
65	-	-	-	14 639	18 682	23 536	29 296	36 060	-
70	-	-	-	-	-	20 674	25 874	32 034	-

Power input in W

35	4 897	5 441	5 977	6 494	6 978	7 418	7 802	8 115	-
40	5 073	5 645	6 218	6 778	7 313	7 810	8 258	8 643	-
45	5 230	5 836	6 449	7 057	7 646	8 206	8 722	9 183	-
50	5 366	6 011	6 669	7 329	7 978	8 604	9 194	9 736	-
55	5 482	6 169	6 878	7 595	8 308	9 005	9 673	10 300	-
60	-	6 310	7 073	7 852	8 634	9 407	10 158	10 875	-
65	-	-	-	8 100	8 955	9 809	10 647	11 459	-
70	-	-	-	-	-	10 210	11 140	12 051	-

Current consumption in A

35	10.40	10.97	11.54	12.12	12.69	13.25	13.78	14.28	-
40	10.56	11.17	11.80	12.44	13.09	13.72	14.35	14.95	-
45	10.71	11.37	12.06	12.77	13.49	14.22	14.94	15.66	-
50	10.84	11.56	12.31	13.10	13.90	14.73	15.56	16.39	-
55	10.96	11.73	12.56	13.43	14.33	15.25	16.19	17.15	-
60	-	11.90	12.80	13.76	14.76	15.79	16.85	17.93	-
65	-	-	-	14.09	15.20	16.35	17.53	18.75	-
70	-	-	-	-	-	16.92	18.24	19.60	-

Mass flow in kg/h

35	257	332	421	524	644	782	940	1 118	-
40	246	320	408	511	630	767	923	1 100	-
45	235	308	395	497	614	749	903	1 077	-
50	225	297	381	481	596	728	879	1 050	-
55	215	285	367	463	575	704	851	1 018	-
60	-	273	351	444	552	676	819	982	-
65	-	-	-	424	527	647	784	942	-
70	-	-	-	-	-	614	746	897	-

Coefficient of performance (C.O.P.)

35	2.35	2.79	3.29	3.85	4.48	5.21	6.05	7.02	-
40	2.08	2.49	2.94	3.44	4.01	4.65	5.39	6.23	-
45	1.84	2.21	2.62	3.07	3.57	4.14	4.78	5.51	-
50	1.63	1.96	2.33	2.72	3.17	3.66	4.22	4.85	-
55	1.44	1.74	2.05	2.40	2.78	3.21	3.69	4.24	-
60	-	1.53	1.80	2.10	2.43	2.79	3.21	3.67	-
65	-	-	-	1.81	2.09	2.40	2.75	3.15	-
70	-	-	-	-	-	2.02	2.32	2.66	-

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

Cooling capacity	25 856	W
Power input	8 574	W
Current consumption	14.67	A
Mass flow	632	kg/h
C.O.P.	3.02	

Pressure switch settings

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

Sound power data

Sound power level	0	dB(A)
With 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

All performance data +/- 5%

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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

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	12.75	13.70	14.66	15.62	16.57	17.48	18.34	19.13	19.85
35	12.87	13.92	14.99	16.07	17.13	18.16	19.14	20.07	20.91
40	12.93	14.11	15.31	16.51	17.70	18.86	19.98	21.04	22.03
45	12.94	14.25	15.58	16.93	18.26	19.57	20.84	22.06	23.20
50	12.87	14.33	15.82	17.32	18.81	20.28	21.72	23.10	24.42
55	-	14.35	16.00	17.67	19.34	20.98	22.60	24.17	25.67
60	-	14.29	16.13	17.98	19.83	21.67	23.48	25.24	26.94

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	270	363	473	599	744	911	1 101	1 316	1 558
45	253	345	452	577	720	884	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	720	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	0.2	bar(g)
LP pump down setting	0.9	bar(g)

Sound power data

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

All performance data +/- 5%

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

Cooling capacity in W

30	10 697	14 371	18 835	24 188	30 529	37 955	46 564	56 453	67 720
35	9 507	12 953	17 127	22 128	28 055	35 008	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	12.75	13.70	14.66	15.62	16.57	17.48	18.34	19.13	19.85
35	12.87	13.92	14.99	16.07	17.13	18.16	19.14	20.07	20.91
40	12.93	14.11	15.31	16.51	17.70	18.86	19.98	21.04	22.03
45	12.94	14.25	15.58	16.93	18.26	19.57	20.84	22.06	23.20
50	12.87	14.33	15.82	17.32	18.81	20.28	21.72	23.10	24.42
55	-	14.35	16.00	17.67	19.34	20.98	22.60	24.17	25.67
60	-	14.29	16.13	17.98	19.83	21.67	23.48	25.24	26.94

Mass flow in kg/h

30	300	396	507	637	785	956	1 150	1 369	1 616
35	285	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	408	526	663	820	999	1 202	1 431
60	-	285	386	502	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	

Pressure switch settings

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

Sound power data

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

to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

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

All performance data +/- 5%

