General Characteristics

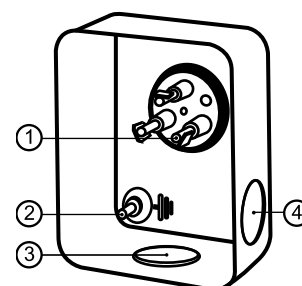| Model number (on compressor nameplate)		**MTZ18JA5AVE**
Code number for Singlepack*		MTZ18-5VI
Code number for Industrial pack**		MTZ18-5VM
Drawing number		8501021e
Suction and discharge connections		Rotolock
Suction connection		1 " Rotolock
Discharge connection		1 " Rotolock
Suction connection with supplied sleeve		1/2 " ODF
Discharge connection with supplied sleeve		3/8 " ODF
Oil sight glass		Threaded
Oil equalisation connection		3/8'' flare SAE
Oil drain connection		None
LP gauge port		Schrader
IPR valve		None
Cylinders		1
Swept volume		30.23 cm3/rev
Displacement @ Nominal speed		5.3 m3/h @ 2900 rpm
Net weight		21 kg
Oil charge		0.95 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		3 kg
Approved refrigerants		R404A, R507A, R134a, R407C, R407A, R407F

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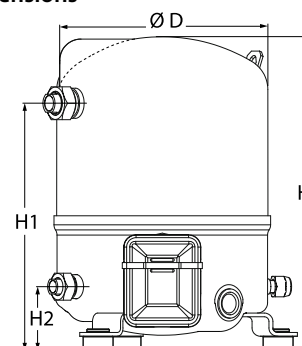
D=224 mm
H=333 mm
H1=263 mm
H2=68 mm
H3=- mm

Electrical Characteristics

Nominal voltage		220-240V/1/50Hz
Voltage range		220-240 V
Winding resistance (main / start) at 25ºC		1.35 Ω / 3.83 Ω
Run capacitors A + C		20 µF + 10 µF
Start capacitor B		100 µF
Start relay		RVA-6AMKL
Maximum Continuous Current (MCC)		10 A
Locked Rotor Amps (LRA)		40 A
Motor protection		Internal overload protector

Terminal box

IP55 (with cable gland)

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

Recommended Installation torques

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

Parts shipped with compressor

Mounting kit with grommets, bolts, nuts, sleeves and washers
Suction & Discharge solder sleeves, rotolock nuts and gaskets (shipped with rotolock version only)
Initial oil charge
Installation instructions

Approvals : CE certified, -, -

*Singlepack: Compressor in cardboard box

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

Performance data at 50 Hz, EN 12900 rating conditions

R407C

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

Cooling capacity in W

	-15	-10	-5	0	5	10	15		
35	1 387	1 966	2 683	3 560	4 621	5 886	7 377	-	-
40	1 265	1 806	2 464	3 262	4 222	5 366	6 716	-	-
45	1 136	1 648	2 258	2 986	3 856	4 890	6 109	-	-
50	-	1 484	2 055	2 724	3 514	4 447	5 545	-	-
55	-	-	1 845	2 466	3 186	4 029	5 016	-	-
60	-	-	-	2 202	2 863	3 626	4 512	-	-
65	-	-	-	1 922	2 534	3 227	4 023	-	-

Power input in W

	-15	-10	-5	0	5	10	15		
35	794	884	961	1 022	1 066	1 094	1 103	-	-
40	819	924	1 013	1 086	1 143	1 181	1 200	-	-
45	838	958	1 063	1 151	1 220	1 271	1 302	-	-
50	-	985	1 107	1 212	1 297	1 363	1 408	-	-
55	-	-	1 145	1 268	1 371	1 454	1 516	-	-
60	-	-	-	1 317	1 441	1 543	1 623	-	-
65	-	-	-	1 357	1 502	1 626	1 727	-	-

Current consumption in A

	-15	-10	-5	0	5	10	15		
35	4.74	4.93	5.16	5.39	5.60	5.77	5.86	-	-
40	4.83	5.03	5.27	5.51	5.73	5.90	6.00	-	-
45	4.95	5.18	5.44	5.71	5.96	6.16	6.28	-	-
50	-	5.32	5.63	5.95	6.24	6.49	6.66	-	-
55	-	-	5.79	6.18	6.54	6.86	7.09	-	-
60	-	-	-	6.36	6.82	7.22	7.54	-	-
65	-	-	-	6.46	7.02	7.53	7.96	-	-

Mass flow in kg/h

	-15	-10	-5	0	5	10	15		
35	30	42	56	74	94	118	146	-	-
40	29	40	54	71	90	113	139	-	-
45	27	39	52	68	87	108	133	-	-
50	-	37	51	66	83	104	127	-	-
55	-	-	48	63	80	100	122	-	-
60	-	-	-	61	77	96	117	-	-
65	-	-	-	57	74	92	113	-	-

Coefficient of performance (C.O.P.)

	-15	-10	-5	0	5	10	15		
35	1.75	2.22	2.79	3.49	4.33	5.38	6.69	-	-
40	1.54	1.95	2.43	3.00	3.69	4.54	5.60	-	-
45	1.36	1.72	2.12	2.60	3.16	3.85	4.69	-	-
50	-	1.51	1.86	2.25	2.71	3.26	3.94	-	-
55	-	-	1.61	1.94	2.32	2.77	3.31	-	-
60	-	-	-	1.67	1.99	2.35	2.78	-	-
65	-	-	-	1.42	1.69	1.98	2.33	-	-

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

Cooling capacity	3 514	W
Power input	1 297	W
Current consumption	6.24	A
Mass flow	83	kg/h
C.O.P.	2.71	

to: Evaporating temperature at dew point
tc: Condensing temperature at dew point
Rating conditions : Superheat = 10 K , Subcooling = 0 K

CERTIFIED PRODUCT
ASERCOM

Pressure switch settings

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

Sound power data

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

Tolerance according EN12900

Danfoss

Datasheet, performance data | Maneurop reciprocating compressor. MTZ018-5

Performance data at 50 Hz, ARI rating conditions

R407C

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

Cooling capacity in W

35	1 493	2 113	2 881	3 819	4 951	6 299	7 888	-	-
40	1 370	1 951	2 659	3 516	4 545	5 771	7 215	-	-
45	1 238	1 792	2 451	3 238	4 176	5 288	6 598	-	-
50	-	1 626	2 247	2 974	3 831	4 841	6 028	-	-
55	-	-	2 036	2 715	3 502	4 421	5 495	-	-
60	-	-	-	2 449	3 178	4 017	4 990	-	-
65	-	-	-	2 166	2 849	3 619	4 503	-	-

Power input in W

35	794	884	961	1 022	1 066	1 094	1 103	-	-
40	819	924	1 013	1 086	1 143	1 181	1 200	-	-
45	838	958	1 063	1 151	1 220	1 271	1 302	-	-
50	-	985	1 107	1 212	1 297	1 363	1 408	-	-
55	-	-	1 145	1 268	1 371	1 454	1 516	-	-
60	-	-	-	1 317	1 441	1 543	1 623	-	-
65	-	-	-	1 357	1 502	1 626	1 727	-	-

Current consumption in A

35	4.74	4.93	5.16	5.39	5.60	5.77	5.86	-	-
40	4.83	5.03	5.27	5.51	5.73	5.90	6.00	-	-
45	4.95	5.18	5.44	5.71	5.96	6.16	6.28	-	-
50	-	5.32	5.63	5.95	6.24	6.49	6.66	-	-
55	-	-	5.79	6.18	6.54	6.86	7.09	-	-
60	-	-	-	6.36	6.82	7.22	7.54	-	-
65	-	-	-	6.46	7.02	7.53	7.96	-	-

Mass flow in kg/h

35	30	42	56	73	94	118	146	-	-
40	29	40	54	70	90	112	138	-	-
45	27	39	52	68	86	107	132	-	-
50	-	37	50	65	83	103	127	-	-
55	-	-	48	63	80	99	121	-	-
60	-	-	-	60	77	95	117	-	-
65	-	-	-	57	73	92	112	-	-

Coefficient of performance (C.O.P.)

35	1.88	2.39	3.00	3.74	4.64	5.76	7.15	-	-
40	1.67	2.11	2.62	3.24	3.98	4.89	6.01	-	-
45	1.48	1.87	2.31	2.81	3.42	4.16	5.07	-	-
50	-	1.65	2.03	2.45	2.95	3.55	4.28	-	-
55	-	-	1.78	2.14	2.55	3.04	3.62	-	-
60	-	-	-	1.86	2.21	2.60	3.07	-	-
65	-	-	-	1.60	1.90	2.23	2.61	-	-

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

Cooling capacity	3 932	W
Power input	1 401	W
Current consumption	6.65	A
Mass flow	89	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	72	dB(A)
With accoustic hood	64	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

	-25	-20	-10	-5	0	5	10	15	20
35	404	649	1 357	1 839	2 419	3 107	3 913	4 846	5 916
40	330	560	1 217	1 662	2 199	2 837	3 586	4 455	5 454
45	255	470	1 075	1 484	1 978	2 566	3 257	4 062	4 989
50	180	380	933	1 307	1 757	2 295	2 928	3 669	4 525
55	-	-	795	1 131	1 539	2 026	2 602	3 278	4 063
60	-	-	-	961	1 324	1 761	2 280	2 891	3 605
65	-	-	-	-	1 116	1 502	1 964	2 511	3 152
75	-	-	-	-	-	-	1 359	1 776	2 275

Power input in W

	-25	-20	-10	-5	0	5	10	15	20
35	466	537	668	723	766	794	804	792	757
40	477	551	695	758	811	851	874	878	860
45	478	557	715	788	852	905	943	964	963
50	470	554	729	812	889	956	1 010	1 048	1 067
55	-	-	734	830	920	1 002	1 073	1 130	1 169
60	-	-	-	840	944	1 043	1 132	1 208	1 268
65	-	-	-	-	961	1 077	1 185	1 282	1 365
75	-	-	-	-	-	-	1 271	1 413	1 544

Current consumption in A

	-25	-20	-10	-5	0	5	10	15	20
35	4.75	4.82	4.98	5.06	5.15	5.24	5.34	5.44	5.55
40	4.74	4.82	5.00	5.11	5.22	5.34	5.46	5.60	5.74
45	4.72	4.81	5.03	5.15	5.29	5.44	5.59	5.76	5.95
50	4.69	4.80	5.05	5.20	5.36	5.54	5.73	5.94	6.17
55	-	-	5.07	5.25	5.44	5.65	5.88	6.13	6.39
60	-	-	-	5.29	5.51	5.76	6.02	6.32	6.63
65	-	-	-	-	5.58	5.87	6.17	6.51	6.87
75	-	-	-	-	-	-	6.48	6.91	7.37

Mass flow in kg/h

	-25	-20	-10	-5	0	5	10	15	20
35	10	16	32	43	55	69	86	104	126
40	9	15	30	41	53	66	82	100	121
45	7	13	28	38	50	63	79	96	116
50	6	11	26	36	47	60	75	91	111
55	-	-	24	33	44	56	70	86	105
60	-	-	-	30	40	52	65	81	99
65	-	-	-	-	36	47	60	75	92
75	-	-	-	-	-	-	49	62	77

Coefficient of performance (C.O.P.)

	-25	-20	-10	-5	0	5	10	15	20
35	0.87	1.21	2.03	2.54	3.16	3.92	4.87	6.12	7.82
40	0.69	1.02	1.75	2.19	2.71	3.34	4.10	5.07	6.34
45	0.53	0.84	1.50	1.88	2.32	2.83	3.45	4.21	5.18
50	0.38	0.69	1.28	1.61	1.98	2.40	2.90	3.50	4.24
55	-	-	1.08	1.36	1.67	2.02	2.42	2.90	3.48
60	-	-	-	1.14	1.40	1.69	2.01	2.39	2.84
65	-	-	-	-	1.16	1.39	1.66	1.96	2.31
75	-	-	-	-	-	-	1.07	1.26	1.47

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

Cooling capacity	2 295	W
Power input	956	W
Current consumption	5.54	A
Mass flow	60	kg/h
C.O.P.	2.40	

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	20.2	bar(g)
Minimum LP switch setting	0.1	bar(g)
LP pump down setting	0.4	bar(g)

Sound power data

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

Tolerance according EN12900

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

	-25	-20	-10	-5	0	5	10	15	20
35	439	705	1 467	1 985	2 607	3 344	4 205	5 201	6 341
40	361	611	1 322	1 804	2 382	3 068	3 871	4 802	5 871
45	281	516	1 175	1 620	2 154	2 789	3 535	4 400	5 397
50	-	420	1 028	1 435	1 926	2 510	3 197	3 997	4 922
55	-	-	882	1 253	1 699	2 231	2 860	3 595	4 447
60	-	-	-	1 073	1 475	1 956	2 526	3 196	3 976
65	-	-	-	-	-	1 686	2 198	2 802	3 509
75	-	-	-	-	-	-	1 564	2 036	2 597

Power input in W

	-25	-20	-10	-5	0	5	10	15	20
35	466	537	668	723	766	794	804	792	757
40	477	551	695	758	811	851	874	878	860
45	478	557	715	788	852	905	943	964	963
50	-	554	729	812	889	956	1 010	1 048	1 067
55	-	-	734	830	920	1 002	1 073	1 130	1 169
60	-	-	-	840	944	1 043	1 132	1 208	1 268
65	-	-	-	-	-	1 077	1 185	1 282	1 365
75	-	-	-	-	-	-	1 271	1 413	1 544

Current consumption in A

	-25	-20	-10	-5	0	5	10	15	20
35	4.75	4.82	4.98	5.06	5.15	5.24	5.34	5.44	5.55
40	4.74	4.82	5.00	5.11	5.22	5.34	5.46	5.60	5.74
45	4.72	4.81	5.03	5.15	5.29	5.44	5.59	5.76	5.95
50	-	4.80	5.05	5.20	5.36	5.54	5.73	5.94	6.17
55	-	-	5.07	5.25	5.44	5.65	5.88	6.13	6.39
60	-	-	-	5.29	5.51	5.76	6.02	6.32	6.63
65	-	-	-	-	-	5.87	6.17	6.51	6.87
75	-	-	-	-	-	-	6.48	6.91	7.37

Mass flow in kg/h

	-25	-20	-10	-5	0	5	10	15	20
35	10	16	32	42	55	69	85	104	125
40	9	15	30	40	52	66	82	100	120
45	7	13	28	38	50	63	78	96	115
50	-	11	26	36	47	59	74	91	110
55	-	-	24	33	43	56	70	86	104
60	-	-	-	30	40	52	65	81	98
65	-	-	-	-	-	47	60	75	91
75	-	-	-	-	-	-	49	62	77

Coefficient of performance (C.O.P.)

	-25	-20	-10	-5	0	5	10	15	20
35	0.94	1.31	2.19	2.75	3.40	4.21	5.23	6.56	8.38
40	0.76	1.11	1.90	2.38	2.94	3.61	4.43	5.47	6.83
45	0.59	0.93	1.64	2.06	2.53	3.08	3.75	4.57	5.60
50	-	0.76	1.41	1.77	2.17	2.63	3.17	3.81	4.61
55	-	-	1.20	1.51	1.85	2.23	2.67	3.18	3.81
60	-	-	-	1.28	1.56	1.88	2.23	2.65	3.13
65	-	-	-	-	-	1.57	1.85	2.19	2.57
75	-	-	-	-	-	-	1.23	1.44	1.68

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

Cooling capacity	2 532	W
Power input	1 029	W
Current consumption	5.73	A
Mass flow	62	kg/h
C.O.P.	2.46	

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	20.2	bar(g)
Minimum LP switch setting	0.1	bar(g)
LP pump down setting	0.4	bar(g)

Sound power data

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

Tolerance according EN12900

Danfoss

Datasheet, performance data　　　　　　**Maneurop reciprocating compressor. MTZ018-5**

Performance data at 50 Hz, EN 12900 rating conditions　　　**R404A**

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

Cooling capacity in W

	-30	-25	-20	-15	-10	-5	0	5	10
30	642	996	1 448	2 012	2 700	3 524	4 496	5 630	6 937
35	553	876	1 288	1 801	2 429	3 182	4 074	5 118	6 324
40	468	761	1 133	1 597	2 164	2 847	3 659	4 613	5 720
45	389	652	984	1 397	1 905	2 519	3 251	4 115	5 122
50	313	546	839	1 203	1 651	2 195	2 848	3 623	4 531
55	-	444	698	1 012	1 401	1 877	2 451	3 136	3 945
60	-	345	559	825	1 156	1 562	2 058	2 654	3 365

Power input in W

	-30	-25	-20	-15	-10	-5	0	5	10
30	702	823	931	1 024	1 102	1 163	1 205	1 228	1 229
35	695	824	942	1 046	1 137	1 212	1 271	1 311	1 331
40	690	826	953	1 068	1 171	1 260	1 334	1 392	1 431
45	687	830	965	1 090	1 205	1 308	1 397	1 471	1 529
50	686	836	979	1 114	1 240	1 355	1 459	1 549	1 625
55	-	844	995	1 139	1 276	1 404	1 522	1 628	1 720
60	-	856	1 014	1 167	1 314	1 454	1 585	1 706	1 816

Current consumption in A

	-30	-25	-20	-15	-10	-5	0	5	10
30	4.95	5.38	5.76	6.11	6.41	6.67	6.87	7.02	7.11
35	5.07	5.47	5.84	6.17	6.47	6.72	6.94	7.10	7.21
40	5.18	5.57	5.93	6.26	6.56	6.83	7.06	7.25	7.40
45	5.27	5.66	6.02	6.36	6.68	6.97	7.24	7.47	7.66
50	5.33	5.72	6.10	6.46	6.81	7.14	7.44	7.72	7.97
55	-	5.74	6.15	6.54	6.93	7.31	7.66	8.00	8.32
60	-	5.72	6.16	6.60	7.04	7.47	7.89	8.31	8.70

Mass flow in kg/h

	-30	-25	-20	-15	-10	-5	0	5	10
30	20	31	43	59	77	98	123	151	183
35	19	29	41	56	74	94	118	145	177
40	17	27	39	54	71	91	114	140	170
45	16	25	37	51	68	87	109	135	164
50	14	23	35	48	64	83	104	129	157
55	-	22	32	45	61	79	99	123	150
60	-	19	30	42	57	74	94	117	143

Coefficient of performance (C.O.P.)

	-30	-25	-20	-15	-10	-5	0	5	10
30	0.91	1.21	1.56	1.96	2.45	3.03	3.73	4.59	5.64
35	0.79	1.06	1.37	1.72	2.14	2.63	3.21	3.90	4.75
40	0.68	0.92	1.19	1.49	1.85	2.26	2.74	3.31	4.00
45	0.57	0.79	1.02	1.28	1.58	1.93	2.33	2.80	3.35
50	0.46	0.65	0.86	1.08	1.33	1.62	1.95	2.34	2.79
55	-	0.53	0.70	0.89	1.10	1.34	1.61	1.93	2.29
60	-	0.40	0.55	0.71	0.88	1.07	1.30	1.56	1.85

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

Cooling capacity	1 905	W
Power input	1 205	W
Current consumption	6.68	A
Mass flow	68	kg/h
C.O.P.	1.58	

to: Evaporating temperature at dew point
tc: Condensing temperature at dew point
Rating conditions : Superheat = 10 K , Subcooling = 0 K

Pressure switch settings

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

Sound power data

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

Tolerance according EN12900

Performance data at 50 Hz, ARI rating conditions

R404A

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

Cooling capacity in W

	-30	-25	-20	-15	-10	-5	0	5	10
30	715	1 105	1 604	2 223	2 975	3 875	4 934	6 166	7 583
35	622	982	1 440	2 009	2 701	3 530	4 509	5 651	6 969
40	534	865	1 283	1 801	2 433	3 192	4 091	5 144	6 362
45	451	752	1 130	1 599	2 171	2 861	3 681	4 644	5 765
50	370	643	983	1 402	1 915	2 536	3 278	4 153	5 177
55	-	538	839	1 210	1 666	2 219	2 883	3 672	4 600
60	-	436	700	1 025	1 423	1 910	2 499	3 204	4 039

Power input in W

	-30	-25	-20	-15	-10	-5	0	5	10
30	702	823	931	1 024	1 102	1 163	1 205	1 228	1 229
35	695	824	942	1 046	1 137	1 212	1 271	1 311	1 331
40	690	826	953	1 068	1 171	1 260	1 334	1 392	1 431
45	687	830	965	1 090	1 205	1 308	1 397	1 471	1 529
50	686	836	979	1 114	1 240	1 355	1 459	1 549	1 625
55	-	844	995	1 139	1 276	1 404	1 522	1 628	1 720
60	-	856	1 014	1 167	1 314	1 454	1 585	1 706	1 816

Current consumption in A

	-30	-25	-20	-15	-10	-5	0	5	10
30	4.95	5.38	5.76	6.11	6.41	6.67	6.87	7.02	7.11
35	5.07	5.47	5.84	6.17	6.47	6.72	6.94	7.10	7.21
40	5.18	5.57	5.93	6.26	6.56	6.83	7.06	7.25	7.40
45	5.27	5.66	6.02	6.36	6.68	6.97	7.24	7.47	7.66
50	5.33	5.72	6.10	6.46	6.81	7.14	7.44	7.72	7.97
55	-	5.74	6.15	6.54	6.93	7.31	7.66	8.00	8.32
60	-	5.72	6.16	6.60	7.04	7.47	7.89	8.31	8.70

Mass flow in kg/h

	-30	-25	-20	-15	-10	-5	0	5	10
30	20	31	43	58	76	97	122	150	181
35	19	29	41	56	73	94	117	145	175
40	17	27	39	53	70	90	113	139	169
45	16	25	37	51	67	86	108	134	163
50	14	23	35	48	64	82	104	128	156
55	-	21	32	45	60	78	99	122	149
60	-	19	30	42	57	74	94	116	142

Coefficient of performance (C.O.P.)

	-30	-25	-20	-15	-10	-5	0	5	10
30	1.02	1.34	1.72	2.17	2.70	3.33	4.09	5.02	6.17
35	0.89	1.19	1.53	1.92	2.38	2.91	3.55	4.31	5.23
40	0.77	1.05	1.35	1.69	2.08	2.53	3.07	3.70	4.45
45	0.66	0.91	1.17	1.47	1.80	2.19	2.64	3.16	3.77
50	0.54	0.77	1.00	1.26	1.54	1.87	2.25	2.68	3.19
55	-	0.64	0.84	1.06	1.31	1.58	1.89	2.26	2.67
60	-	0.51	0.69	0.88	1.08	1.31	1.58	1.88	2.22

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

Cooling capacity	2 171	W
Power input	1 205	W
Current consumption	6.68	A
Mass flow	67	kg/h
C.O.P.	1.80	

to: Evaporating temperature at dew point
tc: Condensing temperature at dew point
Rating conditions : Superheat = 11.1 K , Subcooling = 8.3 K

Pressure switch settings

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

Sound power data

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

Tolerance according EN12900

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	404	649	1 357	1 839	2 419	3 107	3 913	4 846	5 916
40	330	560	1 217	1 662	2 199	2 837	3 586	4 455	5 454
45	255	470	1 075	1 484	1 978	2 566	3 257	4 062	4 989
50	180	380	933	1 307	1 757	2 295	2 928	3 669	4 525
55	-	-	795	1 131	1 539	2 026	2 602	3 278	4 063
60	-	-	-	961	1 324	1 761	2 280	2 891	3 605
65	-	-	-	-	1 116	1 502	1 964	2 511	3 152
75	-	-	-	-	-	-	1 359	1 776	2 275

Power input in W

35	466	537	668	723	766	794	804	792	757
40	477	551	695	758	811	851	874	878	860
45	478	557	715	788	852	905	943	964	963
50	470	554	729	812	889	956	1 010	1 048	1 067
55	-	-	734	830	920	1 002	1 073	1 130	1 169
60	-	-	-	840	944	1 043	1 132	1 208	1 268
65	-	-	-	-	961	1 077	1 185	1 282	1 365
75	-	-	-	-	-	-	1 271	1 413	1 544

Current consumption in A

35	4.75	4.82	4.98	5.06	5.15	5.24	5.34	5.44	5.55
40	4.74	4.82	5.00	5.11	5.22	5.34	5.46	5.60	5.74
45	4.72	4.81	5.03	5.15	5.29	5.44	5.59	5.76	5.95
50	4.69	4.80	5.05	5.20	5.36	5.54	5.73	5.94	6.17
55	-	-	5.07	5.25	5.44	5.65	5.88	6.13	6.39
60	-	-	-	5.29	5.51	5.76	6.02	6.32	6.63
65	-	-	-	-	5.58	5.87	6.17	6.51	6.87
75	-	-	-	-	-	-	6.48	6.91	7.37

Mass flow in kg/h

35	10	16	32	43	55	69	86	104	126
40	9	15	30	41	53	66	82	100	121
45	7	13	28	38	50	63	79	96	116
50	6	11	26	36	47	60	75	91	111
55	-	-	24	33	44	56	70	86	105
60	-	-	-	30	40	52	65	81	99
65	-	-	-	-	36	47	60	75	92
75	-	-	-	-	-	-	49	62	77

Coefficient of performance (C.O.P.)

35	0.87	1.21	2.03	2.54	3.16	3.92	4.87	6.12	7.82
40	0.69	1.02	1.75	2.19	2.71	3.34	4.10	5.07	6.34
45	0.53	0.84	1.50	1.88	2.32	2.83	3.45	4.21	5.18
50	0.38	0.69	1.28	1.61	1.98	2.40	2.90	3.50	4.24
55	-	-	1.08	1.36	1.67	2.02	2.42	2.90	3.48
60	-	-	-	1.14	1.40	1.69	2.01	2.39	2.84
65	-	-	-	-	1.16	1.39	1.66	1.96	2.31
75	-	-	-	-	-	-	1.07	1.26	1.47

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

Cooling capacity	2 295	W
Power input	956	W
Current consumption	5.54	A
Mass flow	60	kg/h
C.O.P.	2.40	

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

Danfoss

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

	-25	-20	-10	-5	0	5	10	15	20
35	439	705	1 467	1 985	2 607	3 344	4 205	5 201	6 341
40	361	611	1 322	1 804	2 382	3 068	3 871	4 802	5 871
45	281	516	1 175	1 620	2 154	2 789	3 535	4 400	5 397
50	-	420	1 028	1 435	1 926	2 510	3 197	3 997	4 922
55	-	-	882	1 253	1 699	2 231	2 860	3 595	4 447
60	-	-	-	1 073	1 475	1 956	2 526	3 196	3 976
65	-	-	-	-	-	1 686	2 198	2 802	3 509
75	-	-	-	-	-	-	1 564	2 036	2 597

Power input in W

	-25	-20	-10	-5	0	5	10	15	20
35	466	537	668	723	766	794	804	792	757
40	477	551	695	758	811	851	874	878	860
45	478	557	715	788	852	905	943	964	963
50	-	554	729	812	889	956	1 010	1 048	1 067
55	-	-	734	830	920	1 002	1 073	1 130	1 169
60	-	-	-	840	944	1 043	1 132	1 208	1 268
65	-	-	-	-	-	1 077	1 185	1 282	1 365
75	-	-	-	-	-	-	1 271	1 413	1 544

Current consumption in A

	-25	-20	-10	-5	0	5	10	15	20
35	4.75	4.82	4.98	5.06	5.15	5.24	5.34	5.44	5.55
40	4.74	4.82	5.00	5.11	5.22	5.34	5.46	5.60	5.74
45	4.72	4.81	5.03	5.15	5.29	5.44	5.59	5.76	5.95
50	-	4.80	5.05	5.20	5.36	5.54	5.73	5.94	6.17
55	-	-	5.07	5.25	5.44	5.65	5.88	6.13	6.39
60	-	-	-	5.29	5.51	5.76	6.02	6.32	6.63
65	-	-	-	-	-	5.87	6.17	6.51	6.87
75	-	-	-	-	-	-	6.48	6.91	7.37

Mass flow in kg/h

	-25	-20	-10	-5	0	5	10	15	20
35	10	16	32	42	55	69	85	104	125
40	9	15	30	40	52	66	82	100	120
45	7	13	28	38	50	63	78	96	115
50	-	11	26	36	47	59	74	91	110
55	-	-	24	33	43	56	70	86	104
60	-	-	-	30	40	52	65	81	98
65	-	-	-	-	-	47	60	75	91
75	-	-	-	-	-	-	49	62	77

Coefficient of performance (C.O.P.)

	-25	-20	-10	-5	0	5	10	15	20
35	0.94	1.31	2.19	2.75	3.40	4.21	5.23	6.56	8.38
40	0.76	1.11	1.90	2.38	2.94	3.61	4.43	5.47	6.83
45	0.59	0.93	1.64	2.06	2.53	3.08	3.75	4.57	5.60
50	-	0.76	1.41	1.77	2.17	2.63	3.17	3.81	4.61
55	-	-	1.20	1.51	1.85	2.23	2.67	3.18	3.81
60	-	-	-	1.28	1.56	1.88	2.23	2.65	3.13
65	-	-	-	-	-	1.57	1.85	2.19	2.57
75	-	-	-	-	-	-	1.23	1.44	1.68

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

Cooling capacity	2 532	W
Power input	1 029	W
Current consumption	5.73	A
Mass flow	62	kg/h
C.O.P.	2.46	

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	20.2	bar(g)
Minimum LP switch setting	0.1	bar(g)
LP pump down setting	0.4	bar(g)

Sound power data

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

Tolerance according EN12900

Maneurop
RECIPROCATING COMPRESSORS

Performance data at 50 Hz, EN 12900 rating conditions

R407C

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

Cooling capacity in W

	-15	-10	-5	0	5	10	15		
35	1 387	1 966	2 683	3 560	4 621	5 886	7 377	-	-
40	1 265	1 806	2 464	3 262	4 222	5 366	6 716	-	-
45	1 136	1 648	2 258	2 986	3 856	4 890	6 109	-	-
50	-	1 484	2 055	2 724	3 514	4 447	5 545	-	-
55	-	-	1 845	2 466	3 186	4 029	5 016	-	-
60	-	-	-	2 202	2 863	3 626	4 512	-	-
65	-	-	-	1 922	2 534	3 227	4 023	-	-

Power input in W

	-15	-10	-5	0	5	10	15		
35	794	884	961	1 022	1 066	1 094	1 103	-	-
40	819	924	1 013	1 086	1 143	1 181	1 200	-	-
45	838	958	1 063	1 151	1 220	1 271	1 302	-	-
50	-	985	1 107	1 212	1 297	1 363	1 408	-	-
55	-	-	1 145	1 268	1 371	1 454	1 516	-	-
60	-	-	-	1 317	1 441	1 543	1 623	-	-
65	-	-	-	1 357	1 502	1 626	1 727	-	-

Current consumption in A

	-15	-10	-5	0	5	10	15		
35	4.74	4.93	5.16	5.39	5.60	5.77	5.86	-	-
40	4.83	5.03	5.27	5.51	5.73	5.90	6.00	-	-
45	4.95	5.18	5.44	5.71	5.96	6.16	6.28	-	-
50	-	5.32	5.63	5.95	6.24	6.49	6.66	-	-
55	-	-	5.79	6.18	6.54	6.86	7.09	-	-
60	-	-	-	6.36	6.82	7.22	7.54	-	-
65	-	-	-	6.46	7.02	7.53	7.96	-	-

Mass flow in kg/h

	-15	-10	-5	0	5	10	15		
35	30	42	56	74	94	118	146	-	-
40	29	40	54	71	90	113	139	-	-
45	27	39	52	68	87	108	133	-	-
50	-	37	51	66	83	104	127	-	-
55	-	-	48	63	80	100	122	-	-
60	-	-	-	61	77	96	117	-	-
65	-	-	-	57	74	92	113	-	-

Coefficient of performance (C.O.P.)

	-15	-10	-5	0	5	10	15		
35	1.75	2.22	2.79	3.49	4.33	5.38	6.69	-	-
40	1.54	1.95	2.43	3.00	3.69	4.54	5.60	-	-
45	1.36	1.72	2.12	2.60	3.16	3.85	4.69	-	-
50	-	1.51	1.86	2.25	2.71	3.26	3.94	-	-
55	-	-	1.61	1.94	2.32	2.77	3.31	-	-
60	-	-	-	1.67	1.99	2.35	2.78	-	-
65	-	-	-	1.42	1.69	1.98	2.33	-	-

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

Cooling capacity	3 514	W
Power input	1 297	W
Current consumption	6.24	A
Mass flow	83	kg/h
C.O.P.	2.71	

to: Evaporating temperature at dew point
tc: Condensing temperature at dew point
Rating conditions : Superheat = 10 K , Subcooling = 0 K

CERTIFIED PRODUCT
ASERCOM

Pressure switch settings

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

Sound power data

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

Tolerance according EN12900

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

	-15	-10	-5	0	5	10	15		
35	1 493	2 113	2 881	3 819	4 951	6 299	7 888	-	-
40	1 370	1 951	2 659	3 516	4 545	5 771	7 215	-	-
45	1 238	1 792	2 451	3 238	4 176	5 288	6 598	-	-
50	-	1 626	2 247	2 974	3 831	4 841	6 028	-	-
55	-	-	2 036	2 715	3 502	4 421	5 495	-	-
60	-	-	-	2 449	3 178	4 017	4 990	-	-
65	-	-	-	2 166	2 849	3 619	4 503	-	-

Power input in W

	-15	-10	-5	0	5	10	15		
35	794	884	961	1 022	1 066	1 094	1 103	-	-
40	819	924	1 013	1 086	1 143	1 181	1 200	-	-
45	838	958	1 063	1 151	1 220	1 271	1 302	-	-
50	-	985	1 107	1 212	1 297	1 363	1 408	-	-
55	-	-	1 145	1 268	1 371	1 454	1 516	-	-
60	-	-	-	1 317	1 441	1 543	1 623	-	-
65	-	-	-	1 357	1 502	1 626	1 727	-	-

Current consumption in A

	-15	-10	-5	0	5	10	15		
35	4.74	4.93	5.16	5.39	5.60	5.77	5.86	-	-
40	4.83	5.03	5.27	5.51	5.73	5.90	6.00	-	-
45	4.95	5.18	5.44	5.71	5.96	6.16	6.28	-	-
50	-	5.32	5.63	5.95	6.24	6.49	6.66	-	-
55	-	-	5.79	6.18	6.54	6.86	7.09	-	-
60	-	-	-	6.36	6.82	7.22	7.54	-	-
65	-	-	-	6.46	7.02	7.53	7.96	-	-

Mass flow in kg/h

	-15	-10	-5	0	5	10	15		
35	30	42	56	73	94	118	146	-	-
40	29	40	54	70	90	112	138	-	-
45	27	39	52	68	86	107	132	-	-
50	-	37	50	65	83	103	127	-	-
55	-	-	48	63	80	99	121	-	-
60	-	-	-	60	77	95	117	-	-
65	-	-	-	57	73	92	112	-	-

Coefficient of performance (C.O.P.)

	-15	-10	-5	0	5	10	15		
35	1.88	2.39	3.00	3.74	4.64	5.76	7.15	-	-
40	1.67	2.11	2.62	3.24	3.98	4.89	6.01	-	-
45	1.48	1.87	2.31	2.81	3.42	4.16	5.07	-	-
50	-	1.65	2.03	2.45	2.95	3.55	4.28	-	-
55	-	-	1.78	2.14	2.55	3.04	3.62	-	-
60	-	-	-	1.86	2.21	2.60	3.07	-	-
65	-	-	-	1.60	1.90	2.23	2.61	-	-

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

Cooling capacity	3 932	W
Power input	1 401	W
Current consumption	6.65	A
Mass flow	89	kg/h
C.O.P.	2.81	

to: Evaporating temperature at dew point
tc: Condensing temperature at dew point
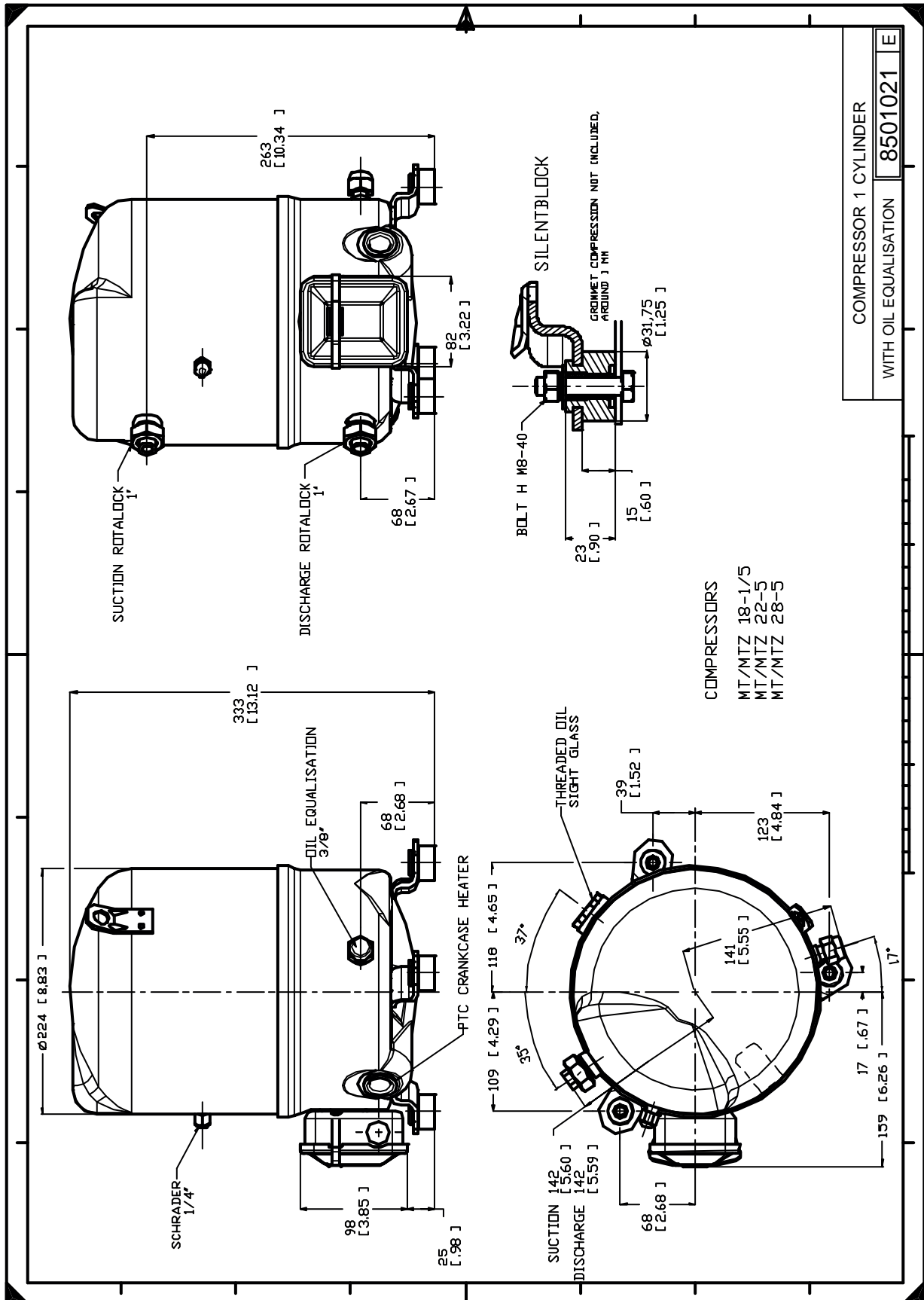Rating conditions : Superheat = 11.1 K , Subcooling = 8.3 K

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	72	dB(A)
With accoustic hood	64	dB(A)

Tolerance according EN12900

COMPRESSOR 1 CYLINDER

WITH OIL EQUALISATION

8501021 E

SILENTBLOCK

GROMMET COMPRESSION NOT INCLUDED, AROUND 1 MM

BOLT H M8-40

Ø31.75 [1.25]

23 [.90]

15 [.60]

263 [10.34]

82 [3.22]

68 [2.67]

SUCTION ROTALOCK 1'

DISCHARGE ROTALOCK 1'

COMPRESSORS
MT/MTZ 18-1/5
MT/MTZ 22-5
MT/MTZ 28-5

333 [13.12]

OIL EQUALISATION 3/8'

68 [2.68]

THREADED OIL SIGHT GLASS

PTC CRANKCASE HEATER

39 [1.52]

123 [4.84]

118 [4.65]

Ø224 [8.83]

37°

141 [5.55]

109 [4.29]

35°

7°

17 [.67]

159 [6.26]

SCHRADER 1/4'

98 [3.85]

25 [.98]

SUCTION 142 [5.60]
DISCHARGE 142 [5.59]

68 [2.68]

FRCC.PD.8501021e

page drawings