

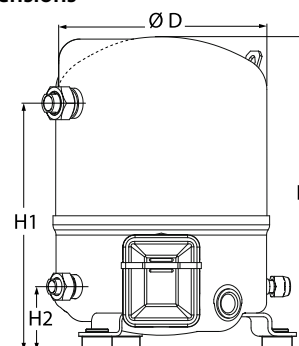
Datasheets

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



General Characteristics

Model number (on compressor nameplate)		MT40JH4EVE
Code number for Singlepack*		MT40-4VI
Code number for Industrial pack**		MT40-4VM
Drawing number		8501025f
Suction and discharge connections		Rotolock
Suction connection		1-1/4" Rotolock
Discharge connection		1" Rotolock
Suction connection with supplied sleeve		5/8" ODF
Discharge connection with supplied sleeve		1/2" 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		67.89 cm ³ /rev
Displacement @ Nominal speed		11.8 m ³ /h @ 2900 rpm - 14.3 m ³ /h @ 3500 rpm
Net weight		26 kg
Oil charge		0.95 litre, Mineral - 160P
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		2.5 kg
Approved refrigerants		R22, R417A-160PZ

Dimensions


D=224 mm

H=356 mm

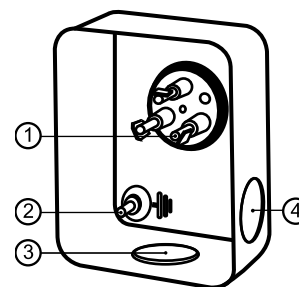
H1=263 mm

H2=68 mm

H3=- mm

Electrical Characteristics

Nominal voltage	380-400V/3/50Hz - 460V/3/60Hz
Voltage range	340-440 V @ 50Hz - 414-506 V @ 60Hz
Winding resistance (between phases) +/- 7% at 25°C	4.05 Ω
Maximum Continuous Current (MCC)	10 A
Locked Rotor Amps (LRA)	38 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

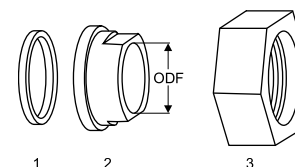
Approvals : CE certified, UL certified (file SA6873), CCC certified

*Singlepack: Compressor in cardboard box

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

Rotolock accessories, suction side
Code no.

Solder sleeve, P09 (1-1/4" Rotolock, 5/8" ODF)	8153011
Angle adapter, C09 (1-1/4" Rotolock, 5/8" ODF)	8168009
Rotolock valve, V09 (1-1/4" Rotolock, 5/8" ODF)	8168033
Gasket, 1-1/4"	8156131

Gaskets, sleeves and nuts


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

Rotolock accessories, discharge side
Code no.

Solder sleeve, P06 (1" Rotolock, 1/2" ODF)	8153007
Angle adapter, C06 (1" Rotolock, 1/2" ODF)	8168007
Rotolock valve, V06 (1" Rotolock, 1/2" ODF)	8168031
Gasket, 1"	8156130

Rotolock accessories, sets
Code no.

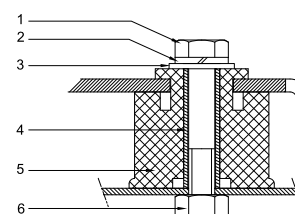
Angle adapter set, C09 (1-1/4"~5/8"), C06 (1"~1/2")	7703012
Valve set, V09 (1-1/4"~5/8"), V06 (1"~1/2")	7703005
Gasket set, 1", 1-1/4", 1-3/4", OSG gaskets black & white	8156009

Oil / lubricants
Code no.

Mineral oil, 160P, 2 litre can	7754001
Mineral oil, 160P, 5 litre can	7754002

Crankcase heaters
Code no.

PTC heater 27W, CE mark, UL	120Z0459
Belt type crankcase heater, 54 W, 230 V, CE mark, UL	7773106
Belt type crankcase heater, 54 W, 400 V, UL	7773013

Mounting kit


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

Miscellaneous accessories
Code no.

Electronic soft start kit, MCI 15 C	7705006
Acoustic hood for 1 cylinder compressor	120Z0575
Oil equalisation nut	8153127

Spare parts
Code no.

Mounting kit for 1 and 2 cylinder compressor, including 3 grommets, 3 bolts	8156001
Oil sight glass with gaskets (black & white)	8156019
Gasket for oil sight glass (black chloroprene)	8156145
Service kit for terminal box 80 x 96 mm, including 1 cover, 1 clamp	8156134

Performance data at 50 Hz, EN 12900 rating conditions
R22

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

Cooling capacity in W

30	3 005	4 020	5 184	6 508	8 006	9 689	11 571	13 665	15 982
35	2 639	3 640	4 785	6 086	7 557	9 210	11 058	13 112	15 387
40	2 273	3 256	4 379	5 655	7 097	8 716	10 526	12 540	14 769
45	1 907	2 870	3 969	5 217	6 626	8 210	9 979	11 948	14 129
50	-	2 484	3 556	4 773	6 147	7 691	9 418	11 339	13 468
55	-	-	3 142	4 325	5 661	7 163	8 843	10 714	12 788
60	-	-	-	3 876	5 170	6 627	8 257	10 073	12 088
65	-	-	-	-	4 675	6 082	7 659	9 417	11 369

Power input in W

30	1 537	1 796	2 036	2 244	2 410	2 523	2 570	2 542	2 426
35	1 635	1 909	2 167	2 398	2 592	2 737	2 821	2 834	2 764
40	1 714	2 005	2 285	2 542	2 767	2 947	3 071	3 128	3 107
45	1 770	2 081	2 386	2 673	2 932	3 150	3 317	3 422	3 452
50	-	2 136	2 469	2 789	3 084	3 344	3 557	3 711	3 797
55	-	-	2 530	2 886	3 221	3 525	3 787	3 995	4 138
60	-	-	-	2 961	3 339	3 691	4 005	4 270	4 474
65	-	-	-	-	3 437	3 840	4 209	4 533	4 801

Current consumption in A

30	3.66	3.89	4.13	4.36	4.55	4.68	4.74	4.70	4.54
35	3.76	4.01	4.27	4.53	4.76	4.94	5.05	5.07	4.97
40	3.83	4.11	4.40	4.69	4.97	5.20	5.37	5.45	5.43
45	3.89	4.19	4.52	4.86	5.18	5.47	5.70	5.85	5.91
50	-	4.25	4.62	5.00	5.38	5.73	6.04	6.27	6.40
55	-	-	4.69	5.13	5.57	5.99	6.37	6.68	6.90
60	-	-	-	5.24	5.74	6.24	6.69	7.09	7.41
65	-	-	-	-	5.89	6.46	7.00	7.49	7.91

Mass flow in kg/h

30	65	86	110	136	166	198	234	274	317
35	60	81	106	133	163	196	232	272	316
40	54	76	101	128	159	193	230	271	315
45	47	70	95	124	155	189	227	269	314
50	-	64	90	118	150	185	224	266	313
55	-	-	83	113	145	181	221	264	311
60	-	-	-	107	140	177	217	261	309
65	-	-	-	-	134	172	213	258	307

Coefficient of performance (C.O.P.)

30	1.95	2.24	2.55	2.90	3.32	3.84	4.50	5.38	6.59
35	1.61	1.91	2.21	2.54	2.92	3.37	3.92	4.63	5.57
40	1.33	1.62	1.92	2.22	2.56	2.96	3.43	4.01	4.75
45	1.08	1.38	1.66	1.95	2.26	2.61	3.01	3.49	4.09
50	-	1.16	1.44	1.71	1.99	2.30	2.65	3.06	3.55
55	-	-	1.24	1.50	1.76	2.03	2.34	2.68	3.09
60	-	-	-	1.31	1.55	1.80	2.06	2.36	2.70
65	-	-	-	-	1.36	1.58	1.82	2.08	2.37

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

Cooling capacity	9 418	W
Power input	3 557	W
Current consumption	6.04	A
Mass flow	224	kg/h
C.O.P.	2.65	

Pressure switch settings

Maximum HP switch setting	27.9	bar(g)
Minimum LP switch setting	0.7	bar(g)
LP pump down setting	0.9	bar(g)

Sound power data

Sound power level	67	dB(A)
With acoustic hood	62	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
R22

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

Cooling capacity in W

30	3 192	4 267	5 497	6 896	8 476	10 252	12 235	14 439	16 877
35	2 813	3 876	5 091	6 470	8 028	9 776	11 729	13 898	16 298
40	2 432	3 481	4 677	6 035	7 567	9 286	11 205	13 338	15 697
45	2 050	3 082	4 258	5 591	7 095	8 782	10 666	12 759	15 076
50	-	2 681	3 834	5 141	6 614	8 267	10 113	12 164	14 435
55	-	-	3 408	4 686	6 126	7 742	9 547	11 555	13 778
60	-	-	-	4 227	5 632	7 209	8 971	10 932	13 105
65	-	-	-	-	5 135	6 670	8 387	10 298	12 418

Power input in W

30	1 537	1 796	2 036	2 244	2 410	2 523	2 570	2 542	2 426
35	1 635	1 909	2 167	2 398	2 592	2 737	2 821	2 834	2 764
40	1 714	2 005	2 285	2 542	2 767	2 947	3 071	3 128	3 107
45	1 770	2 081	2 386	2 673	2 932	3 150	3 317	3 422	3 452
50	-	2 136	2 469	2 789	3 084	3 344	3 557	3 711	3 797
55	-	-	2 530	2 886	3 221	3 525	3 787	3 995	4 138
60	-	-	-	2 961	3 339	3 691	4 005	4 270	4 474
65	-	-	-	-	3 437	3 840	4 209	4 533	4 801

Current consumption in A

30	3.66	3.89	4.13	4.36	4.55	4.68	4.74	4.70	4.54
35	3.76	4.01	4.27	4.53	4.76	4.94	5.05	5.07	4.97
40	3.83	4.11	4.40	4.69	4.97	5.20	5.37	5.45	5.43
45	3.89	4.19	4.52	4.86	5.18	5.47	5.70	5.85	5.91
50	-	4.25	4.62	5.00	5.38	5.73	6.04	6.27	6.40
55	-	-	4.69	5.13	5.57	5.99	6.37	6.68	6.90
60	-	-	-	5.24	5.74	6.24	6.69	7.09	7.41
65	-	-	-	-	5.89	6.46	7.00	7.49	7.91

Mass flow in kg/h

30	65	86	109	136	165	197	233	272	315
35	59	81	105	132	162	195	231	271	314
40	54	76	100	128	158	192	229	269	314
45	47	70	95	123	154	188	226	267	312
50	-	63	89	118	149	184	223	265	311
55	-	-	83	112	145	180	220	263	309
60	-	-	-	106	139	176	216	260	308
65	-	-	-	-	134	171	212	257	305

Coefficient of performance (C.O.P.)

30	2.08	2.37	2.70	3.07	3.52	4.06	4.76	5.68	6.96
35	1.72	2.03	2.35	2.70	3.10	3.57	4.16	4.90	5.90
40	1.42	1.74	2.05	2.37	2.73	3.15	3.65	4.26	5.05
45	1.16	1.48	1.78	2.09	2.42	2.79	3.22	3.73	4.37
50	-	1.26	1.55	1.84	2.14	2.47	2.84	3.28	3.80
55	-	-	1.35	1.62	1.90	2.20	2.52	2.89	3.33
60	-	-	-	1.43	1.69	1.95	2.24	2.56	2.93
65	-	-	-	-	1.49	1.74	1.99	2.27	2.59

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

Cooling capacity	10 475	W
Power input	3 856	W
Current consumption	6.47	A
Mass flow	238	kg/h
C.O.P.	2.72	

Pressure switch settings

Maximum HP switch setting	27.9	bar(g)
Minimum LP switch setting	0.7	bar(g)
LP pump down setting	0.9	bar(g)

Sound power data

Sound power level	67	dB(A)
With acoustic hood	62	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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Performance data at 60 Hz, EN 12900 rating conditions
R22

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

Cooling capacity in W

30	3 606	4 825	6 221	7 810	9 607	11 627	13 886	16 398	19 179
35	3 167	4 368	5 742	7 303	9 069	11 052	13 269	15 735	18 465
40	2 727	3 907	5 255	6 786	8 516	10 460	12 632	15 048	17 723
45	2 288	3 444	4 763	6 260	7 952	9 852	11 975	14 338	16 955
50	-	2 981	4 267	5 728	7 377	9 230	11 302	13 607	16 162
55	-	-	3 771	5 190	6 794	8 596	10 612	12 857	15 345
60	-	-	-	4 651	6 204	7 952	9 908	12 088	14 506
65	-	-	-	-	5 611	7 299	9 190	11 300	13 643

Power input in W

30	1 845	2 156	2 443	2 693	2 892	3 027	3 085	3 050	2 911
35	1 963	2 290	2 600	2 878	3 111	3 284	3 386	3 401	3 317
40	2 057	2 406	2 741	3 051	3 320	3 536	3 685	3 754	3 728
45	2 125	2 498	2 863	3 208	3 518	3 780	3 981	4 106	4 142
50	-	2 564	2 963	3 346	3 701	4 013	4 268	4 454	4 556
55	-	-	3 036	3 463	3 865	4 230	4 544	4 794	4 966
60	-	-	-	3 553	4 007	4 430	4 806	5 124	5 369
65	-	-	-	-	4 124	4 607	5 050	5 440	5 762

Current consumption in A

30	3.66	3.89	4.13	4.36	4.55	4.68	4.74	4.70	4.54
35	3.76	4.01	4.27	4.53	4.76	4.94	5.05	5.07	4.97
40	3.83	4.11	4.40	4.69	4.97	5.20	5.37	5.45	5.43
45	3.89	4.19	4.52	4.86	5.18	5.47	5.70	5.85	5.91
50	-	4.25	4.62	5.00	5.38	5.73	6.04	6.27	6.40
55	-	-	4.69	5.13	5.57	5.99	6.37	6.68	6.90
60	-	-	-	5.24	5.74	6.24	6.69	7.09	7.41
65	-	-	-	-	5.89	6.46	7.00	7.49	7.91

Mass flow in kg/h

30	78	103	132	163	199	238	281	328	380
35	72	98	127	159	195	235	279	327	379
40	65	91	121	154	191	231	276	325	378
45	57	84	115	148	186	227	273	322	377
50	-	76	107	142	180	223	269	320	375
55	-	-	100	135	174	218	265	317	373
60	-	-	-	128	168	212	261	313	371
65	-	-	-	-	161	206	256	310	369

Coefficient of performance (C.O.P.)

30	1.95	2.24	2.55	2.90	3.32	3.84	4.50	5.38	6.59
35	1.61	1.91	2.21	2.54	2.92	3.37	3.92	4.63	5.57
40	1.33	1.62	1.92	2.22	2.56	2.96	3.43	4.01	4.75
45	1.08	1.38	1.66	1.95	2.26	2.61	3.01	3.49	4.09
50	-	1.16	1.44	1.71	1.99	2.30	2.65	3.06	3.55
55	-	-	1.24	1.50	1.76	2.03	2.34	2.68	3.09
60	-	-	-	1.31	1.55	1.80	2.06	2.36	2.70
65	-	-	-	-	1.36	1.58	1.82	2.08	2.37

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

Cooling capacity	11 302	W
Power input	4 268	W
Current consumption	6.04	A
Mass flow	269	kg/h
C.O.P.	2.65	

Pressure switch settings

Maximum HP switch setting	27.9	bar(g)
Minimum LP switch setting	0.7	bar(g)
LP pump down setting	0.9	bar(g)

Sound power data

Sound power level	70	dB(A)
With acoustic hood	65	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

R22

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

Cooling capacity in W

30	3 830	5 120	6 596	8 275	10 172	12 302	14 681	17 326	20 252
35	3 376	4 651	6 109	7 765	9 633	11 731	14 074	16 678	19 558
40	2 919	4 177	5 613	7 242	9 080	11 143	13 446	16 006	18 837
45	2 460	3 698	5 109	6 709	8 514	10 538	12 799	15 311	18 091
50	-	3 218	4 601	6 169	7 937	9 920	12 135	14 597	17 322
55	-	-	4 090	5 623	7 351	9 290	11 456	13 866	16 533
60	-	-	-	5 073	6 758	8 651	10 765	13 118	15 725
65	-	-	-	-	6 161	8 004	10 064	12 358	14 901

Power input in W

30	1 845	2 156	2 443	2 693	2 892	3 027	3 085	3 050	2 911
35	1 963	2 290	2 600	2 878	3 111	3 284	3 386	3 401	3 317
40	2 057	2 406	2 741	3 051	3 320	3 536	3 685	3 754	3 728
45	2 125	2 498	2 863	3 208	3 518	3 780	3 981	4 106	4 142
50	-	2 564	2 963	3 346	3 701	4 013	4 268	4 454	4 556
55	-	-	3 036	3 463	3 865	4 230	4 544	4 794	4 966
60	-	-	-	3 553	4 007	4 430	4 806	5 124	5 369
65	-	-	-	-	4 124	4 607	5 050	5 440	5 762

Current consumption in A

30	3.66	3.89	4.13	4.36	4.55	4.68	4.74	4.70	4.54
35	3.76	4.01	4.27	4.53	4.76	4.94	5.05	5.07	4.97
40	3.83	4.11	4.40	4.69	4.97	5.20	5.37	5.45	5.43
45	3.89	4.19	4.52	4.86	5.18	5.47	5.70	5.85	5.91
50	-	4.25	4.62	5.00	5.38	5.73	6.04	6.27	6.40
55	-	-	4.69	5.13	5.57	5.99	6.37	6.68	6.90
60	-	-	-	5.24	5.74	6.24	6.69	7.09	7.41
65	-	-	-	-	5.89	6.46	7.00	7.49	7.91

Mass flow in kg/h

30	77	103	131	163	198	236	279	326	378
35	71	97	126	158	194	233	277	325	377
40	64	91	120	153	190	230	274	323	376
45	57	84	114	148	185	226	271	321	375
50	-	76	107	141	179	221	267	318	373
55	-	-	99	135	173	216	263	315	371
60	-	-	-	127	167	211	259	312	369
65	-	-	-	-	160	205	254	308	367

Coefficient of performance (C.O.P.)

30	2.08	2.37	2.70	3.07	3.52	4.06	4.76	5.68	6.96
35	1.72	2.03	2.35	2.70	3.10	3.57	4.16	4.90	5.90
40	1.42	1.74	2.05	2.37	2.73	3.15	3.65	4.26	5.05
45	1.16	1.48	1.78	2.09	2.42	2.79	3.22	3.73	4.37
50	-	1.26	1.55	1.84	2.14	2.47	2.84	3.28	3.80
55	-	-	1.35	1.62	1.90	2.20	2.52	2.89	3.33
60	-	-	-	1.43	1.69	1.95	2.24	2.56	2.93
65	-	-	-	-	1.49	1.74	1.99	2.27	2.59

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

Cooling capacity	12 571	W
Power input	4 627	W
Current consumption	6.47	A
Mass flow	286	kg/h
C.O.P.	2.72	

Pressure switch settings

Maximum HP switch setting	27.9	bar(g)
Minimum LP switch setting	0.7	bar(g)
LP pump down setting	0.9	bar(g)

Sound power data

Sound power level	70	dB(A)
With acoustic hood	65	dB(A)

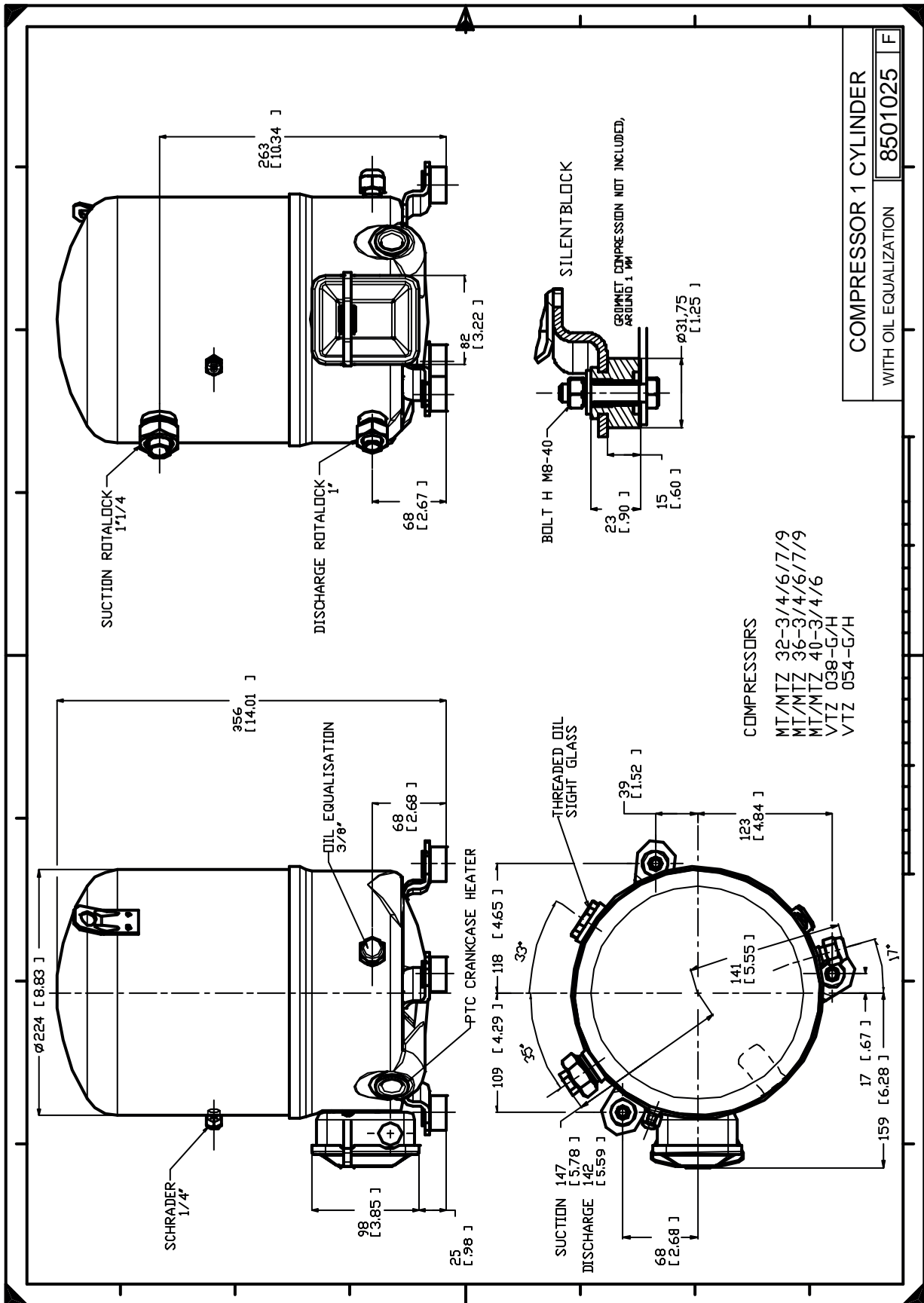
to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

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

Tolerance according EN12900

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