

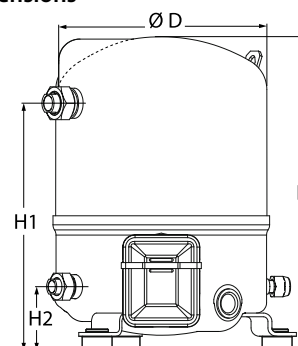
Datasheets

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



**General Characteristics**

Model number (on compressor nameplate)		<b>MT36JG4FVE</b>
Code number for Singlepack*		MT36-4VI
Code number for Industrial pack**		MT36-4VM
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		60.47 cm <sup>3</sup> /rev
Displacement @ Nominal speed		10.5 m <sup>3</sup> /h @ 2900 rpm - 12.7 m <sup>3</sup> /h @ 3500 rpm
Net weight		25 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

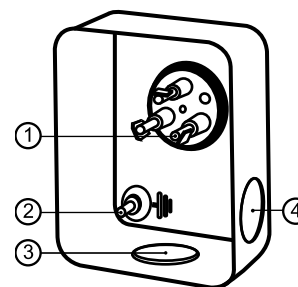
H1=263 mm

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	5.8 Ω
Maximum Continuous Current (MCC)	9 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

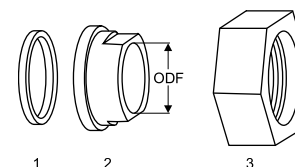
\*\*Industrial pack: 12 Unboxed compressors on pallet (order per multiples of 12)

**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.**

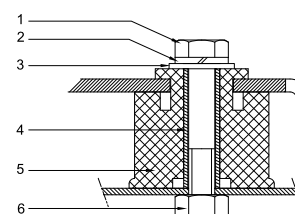
Mineral oil, 160P, 2 litre can	7754001
Mineral oil, 160P, 5 litre can	7754002

**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	2 741	3 691	4 782	6 027	7 436	9 021	10 794	12 767	14 950
35	2 435	3 362	4 424	5 632	6 999	8 535	10 252	12 161	14 275
40	2 130	3 029	4 057	5 225	6 544	8 026	9 683	11 525	13 565
45	1 825	2 693	3 682	4 805	6 073	7 497	9 088	10 859	12 820
50	-	2 354	3 301	4 374	5 586	6 947	8 469	10 164	12 042
55	-	-	2 914	3 934	5 085	6 379	7 827	9 441	11 231
60	-	-	-	3 485	4 571	5 793	7 163	8 691	10 389
65	-	-	-	-	4 045	5 191	6 477	7 914	9 515

**Power input in W**

30	1 524	1 713	1 894	2 061	2 208	2 327	2 414	2 461	2 462
35	1 580	1 779	1 973	2 156	2 322	2 465	2 577	2 652	2 685
40	1 631	1 842	2 051	2 253	2 441	2 607	2 747	2 854	2 921
45	1 676	1 902	2 128	2 351	2 562	2 756	2 925	3 065	3 168
50	-	1 957	2 204	2 449	2 686	2 908	3 110	3 285	3 426
55	-	-	2 276	2 546	2 811	3 065	3 301	3 513	3 695
60	-	-	-	2 643	2 938	3 225	3 497	3 749	3 973
65	-	-	-	-	3 065	3 387	3 698	3 991	4 261

**Current consumption in A**

30	3.35	3.54	3.74	3.94	4.12	4.27	4.38	4.44	4.44
35	3.41	3.61	3.83	4.05	4.26	4.45	4.60	4.71	4.75
40	3.47	3.68	3.92	4.17	4.41	4.64	4.84	4.99	5.10
45	3.51	3.75	4.02	4.30	4.58	4.85	5.09	5.30	5.47
50	-	3.81	4.11	4.43	4.75	5.07	5.37	5.64	5.86
55	-	-	4.20	4.56	4.93	5.30	5.66	5.99	6.29
60	-	-	-	4.70	5.12	5.54	5.96	6.36	6.73
65	-	-	-	-	5.31	5.80	6.29	6.76	7.21

**Mass flow in kg/h**

30	60	79	102	126	154	184	218	255	296
35	55	75	98	123	150	181	215	252	293
40	50	71	93	119	146	177	211	249	290
45	45	66	89	114	142	173	207	244	285
50	-	60	83	109	137	168	202	239	280
55	-	-	77	103	131	161	195	233	273
60	-	-	-	96	124	155	188	225	266
65	-	-	-	-	116	147	180	217	257

**Coefficient of performance (C.O.P.)**

30	1.80	2.15	2.53	2.92	3.37	3.88	4.47	5.19	6.07
35	1.54	1.89	2.24	2.61	3.01	3.46	3.98	4.58	5.32
40	1.31	1.64	1.98	2.32	2.68	3.08	3.52	4.04	4.64
45	1.09	1.42	1.73	2.04	2.37	2.72	3.11	3.54	4.05
50	-	1.20	1.50	1.79	2.08	2.39	2.72	3.09	3.51
55	-	-	1.28	1.55	1.81	2.08	2.37	2.69	3.04
60	-	-	-	1.32	1.56	1.80	2.05	2.32	2.61
65	-	-	-	-	1.32	1.53	1.75	1.98	2.23

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

Cooling capacity	8 469	W
Power input	3 110	W
Current consumption	5.37	A
Mass flow	202	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	61	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	15

**Cooling capacity in W**

30	2 911	3 917	5 071	6 386	7 873	9 545	11 413	13 490	15 787
35	2 596	3 580	4 707	5 988	7 435	9 059	10 874	12 890	15 120
40	2 279	3 239	4 333	5 576	6 977	8 550	10 307	12 258	14 417
45	1 962	2 892	3 950	5 150	6 502	8 019	9 713	11 596	13 679
50	-	2 541	3 559	4 711	6 010	7 467	9 094	10 903	12 906
55	-	-	3 161	4 262	5 502	6 894	8 450	10 182	12 100
60	-	-	-	3 801	4 979	6 302	7 783	9 432	11 262
65	-	-	-	-	4 442	5 692	7 092	8 655	10 392

**Power input in W**

30	1 524	1 713	1 894	2 061	2 208	2 327	2 414	2 461	2 462
35	1 580	1 779	1 973	2 156	2 322	2 465	2 577	2 652	2 685
40	1 631	1 842	2 051	2 253	2 441	2 607	2 747	2 854	2 921
45	1 676	1 902	2 128	2 351	2 562	2 756	2 925	3 065	3 168
50	-	1 957	2 204	2 449	2 686	2 908	3 110	3 285	3 426
55	-	-	2 276	2 546	2 811	3 065	3 301	3 513	3 695
60	-	-	-	2 643	2 938	3 225	3 497	3 749	3 973
65	-	-	-	-	3 065	3 387	3 698	3 991	4 261

**Current consumption in A**

30	3.35	3.54	3.74	3.94	4.12	4.27	4.38	4.44	4.44
35	3.41	3.61	3.83	4.05	4.26	4.45	4.60	4.71	4.75
40	3.47	3.68	3.92	4.17	4.41	4.64	4.84	4.99	5.10
45	3.51	3.75	4.02	4.30	4.58	4.85	5.09	5.30	5.47
50	-	3.81	4.11	4.43	4.75	5.07	5.37	5.64	5.86
55	-	-	4.20	4.56	4.93	5.30	5.66	5.99	6.29
60	-	-	-	4.70	5.12	5.54	5.96	6.36	6.73
65	-	-	-	-	5.31	5.80	6.29	6.76	7.21

**Mass flow in kg/h**

30	59	79	101	126	153	183	217	254	294
35	55	75	97	122	150	180	214	251	292
40	50	70	93	118	146	176	210	247	288
45	45	65	88	113	141	172	206	243	283
50	-	60	83	108	136	167	200	238	278
55	-	-	77	102	130	161	194	231	272
60	-	-	-	95	123	154	187	224	264
65	-	-	-	-	116	146	179	216	256

**Coefficient of performance (C.O.P.)**

30	1.91	2.29	2.68	3.10	3.57	4.10	4.73	5.48	6.41
35	1.64	2.01	2.39	2.78	3.20	3.68	4.22	4.86	5.63
40	1.40	1.76	2.11	2.47	2.86	3.28	3.75	4.30	4.94
45	1.17	1.52	1.86	2.19	2.54	2.91	3.32	3.78	4.32
50	-	1.30	1.62	1.92	2.24	2.57	2.92	3.32	3.77
55	-	-	1.39	1.67	1.96	2.25	2.56	2.90	3.27
60	-	-	-	1.44	1.69	1.95	2.23	2.52	2.83
65	-	-	-	-	1.45	1.68	1.92	2.17	2.44

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

Cooling capacity	9 272	W
Power input	3 373	W
Current consumption	5.77	A
Mass flow	211	kg/h
C.O.P.	2.75	

**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	61	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	3 289	4 429	5 738	7 232	8 923	10 825	12 953	15 320	17 940
35	2 923	4 035	5 309	6 759	8 398	10 242	12 302	14 593	17 130
40	2 556	3 635	4 868	6 270	7 853	9 631	11 619	13 830	16 278
45	2 190	3 231	4 419	5 766	7 287	8 996	10 906	13 031	15 384
50	-	2 825	3 961	5 249	6 703	8 337	10 163	12 197	14 450
55	-	-	3 497	4 721	6 102	7 655	9 393	11 329	13 477
60	-	-	-	4 182	5 485	6 952	8 595	10 429	12 466
65	-	-	-	-	4 854	6 229	7 772	9 497	11 418

**Power input in W**

30	1 829	2 055	2 273	2 473	2 649	2 793	2 897	2 953	2 954
35	1 896	2 134	2 367	2 587	2 787	2 957	3 092	3 183	3 222
40	1 957	2 210	2 462	2 704	2 929	3 129	3 297	3 425	3 505
45	2 012	2 282	2 554	2 821	3 074	3 307	3 511	3 678	3 802
50	-	2 349	2 644	2 938	3 223	3 490	3 732	3 942	4 112
55	-	-	2 732	3 055	3 373	3 678	3 961	4 216	4 434
60	-	-	-	3 171	3 525	3 870	4 197	4 499	4 768
65	-	-	-	-	3 678	4 064	4 438	4 790	5 113

**Current consumption in A**

30	3.35	3.54	3.74	3.94	4.12	4.27	4.38	4.44	4.44
35	3.41	3.61	3.83	4.05	4.26	4.45	4.60	4.71	4.75
40	3.47	3.68	3.92	4.17	4.41	4.64	4.84	4.99	5.10
45	3.51	3.75	4.02	4.30	4.58	4.85	5.09	5.30	5.47
50	-	3.81	4.11	4.43	4.75	5.07	5.37	5.64	5.86
55	-	-	4.20	4.56	4.93	5.30	5.66	5.99	6.29
60	-	-	-	4.70	5.12	5.54	5.96	6.36	6.73
65	-	-	-	-	5.31	5.80	6.29	6.76	7.21

**Mass flow in kg/h**

30	72	96	122	152	185	222	262	307	356
35	66	90	117	147	181	218	258	303	352
40	60	85	112	142	176	213	254	298	348
45	54	79	106	137	170	207	248	293	342
50	-	72	100	130	164	201	242	287	336
55	-	-	93	123	157	194	234	279	328
60	-	-	-	115	149	186	226	270	319
65	-	-	-	-	139	176	216	260	309

**Coefficient of performance (C.O.P.)**

30	1.80	2.15	2.53	2.92	3.37	3.88	4.47	5.19	6.07
35	1.54	1.89	2.24	2.61	3.01	3.46	3.98	4.58	5.32
40	1.31	1.64	1.98	2.32	2.68	3.08	3.52	4.04	4.64
45	1.09	1.42	1.73	2.04	2.37	2.72	3.11	3.54	4.05
50	-	1.20	1.50	1.79	2.08	2.39	2.72	3.09	3.51
55	-	-	1.28	1.55	1.81	2.08	2.37	2.69	3.04
60	-	-	-	1.32	1.56	1.80	2.05	2.32	2.61
65	-	-	-	-	1.32	1.53	1.75	1.98	2.23

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

Cooling capacity	10 163	W
Power input	3 732	W
Current consumption	5.37	A
Mass flow	242	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	64	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	15

**Cooling capacity in W**

30	3 493	4 700	6 085	7 663	9 447	11 454	13 696	16 187	18 944
35	3 115	4 297	5 649	7 185	8 922	10 871	13 048	15 468	18 144
40	2 735	3 886	5 200	6 691	8 373	10 261	12 368	14 710	17 301
45	2 355	3 470	4 740	6 180	7 803	9 623	11 656	13 915	16 415
50	-	3 049	4 271	5 654	7 212	8 960	10 913	13 084	15 488
55	-	-	3 793	5 114	6 603	8 273	10 140	12 218	14 521
60	-	-	-	4 561	5 975	7 563	9 339	11 318	13 514
65	-	-	-	-	5 331	6 831	8 511	10 386	12 471

**Power input in W**

30	1 829	2 055	2 273	2 473	2 649	2 793	2 897	2 953	2 954
35	1 896	2 134	2 367	2 587	2 787	2 957	3 092	3 183	3 222
40	1 957	2 210	2 462	2 704	2 929	3 129	3 297	3 425	3 505
45	2 012	2 282	2 554	2 821	3 074	3 307	3 511	3 678	3 802
50	-	2 349	2 644	2 938	3 223	3 490	3 732	3 942	4 112
55	-	-	2 732	3 055	3 373	3 678	3 961	4 216	4 434
60	-	-	-	3 171	3 525	3 870	4 197	4 499	4 768
65	-	-	-	-	3 678	4 064	4 438	4 790	5 113

**Current consumption in A**

30	3.35	3.54	3.74	3.94	4.12	4.27	4.38	4.44	4.44
35	3.41	3.61	3.83	4.05	4.26	4.45	4.60	4.71	4.75
40	3.47	3.68	3.92	4.17	4.41	4.64	4.84	4.99	5.10
45	3.51	3.75	4.02	4.30	4.58	4.85	5.09	5.30	5.47
50	-	3.81	4.11	4.43	4.75	5.07	5.37	5.64	5.86
55	-	-	4.20	4.56	4.93	5.30	5.66	5.99	6.29
60	-	-	-	4.70	5.12	5.54	5.96	6.36	6.73
65	-	-	-	-	5.31	5.80	6.29	6.76	7.21

**Mass flow in kg/h**

30	71	95	121	151	184	220	261	305	354
35	66	90	117	147	180	216	257	301	350
40	60	84	111	141	175	212	252	297	346
45	54	78	106	136	169	206	247	291	340
50	-	72	99	130	163	200	241	285	334
55	-	-	92	122	156	193	233	278	326
60	-	-	-	115	148	185	225	269	317
65	-	-	-	-	139	175	215	259	307

**Coefficient of performance (C.O.P.)**

30	1.91	2.29	2.68	3.10	3.57	4.10	4.73	5.48	6.41
35	1.64	2.01	2.39	2.78	3.20	3.68	4.22	4.86	5.63
40	1.40	1.76	2.11	2.47	2.86	3.28	3.75	4.30	4.94
45	1.17	1.52	1.86	2.19	2.54	2.91	3.32	3.78	4.32
50	-	1.30	1.62	1.92	2.24	2.57	2.92	3.32	3.77
55	-	-	1.39	1.67	1.96	2.25	2.56	2.90	3.27
60	-	-	-	1.44	1.69	1.95	2.23	2.52	2.83
65	-	-	-	-	1.45	1.68	1.92	2.17	2.44

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

Cooling capacity	11 127	W
Power input	4 047	W
Current consumption	5.77	A
Mass flow	253	kg/h
C.O.P.	2.75	

**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	64	dB(A)

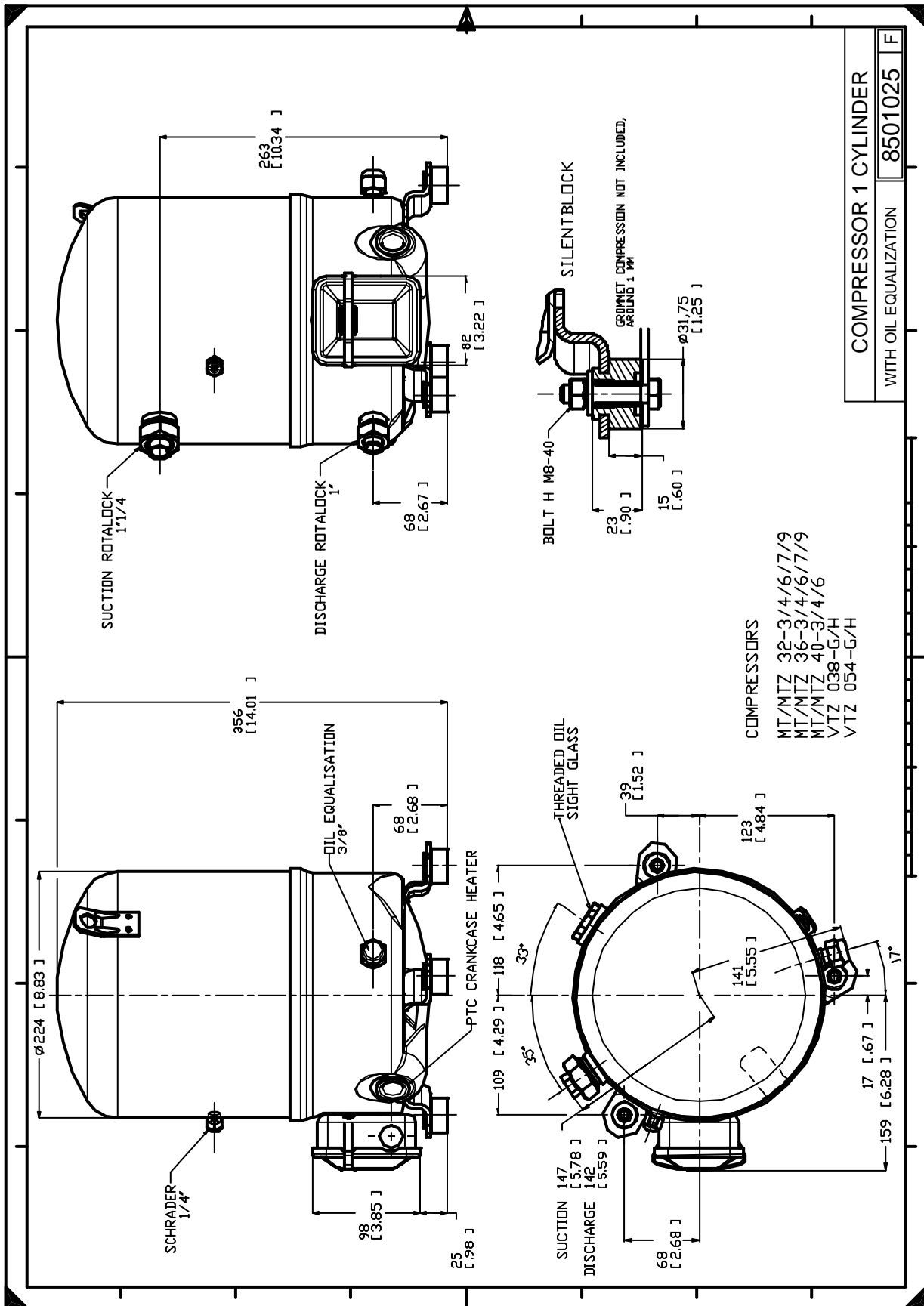
to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

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

Tolerance according EN12900

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