

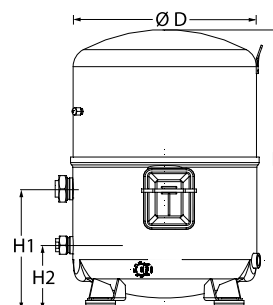
Datasheets

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



General Characteristics

Model number (on compressor nameplate)		MT125HU4DVE
Code number for Singlepack*		MT125-4VI
Code number for Industrial pack**		MT125-4VM
Drawing number		8504010f
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		215.44 cm ³ /rev
Displacement @ Nominal speed		37.5 m ³ /h @ 2900 rpm - 45.2 m ³ /h @ 3500 rpm
Net weight		64 kg
Oil charge		3.9 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		10 kg
Approved refrigerants		R22, R417A-160PZ

Dimensions


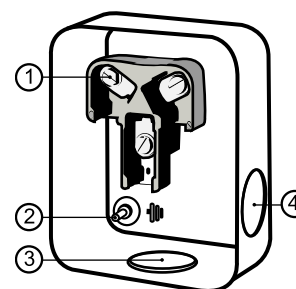
D=352 mm

H=519 mm

H1=233 mm

H2=125 mm

H3=- mm

Terminal box


IP54 (with cable gland)

1: Screw connectors 10-32 UNF x 9.5

2: Earth M4-12

3: Knock-out Ø 29 mm (1.14")

4: Knock-out Ø 25.5 mm (1.00")

Electrical Characteristics

Nominal voltage	380-400V/3/50Hz - 460V/3/60Hz
Voltage range	340-440 V @ 50Hz - 414-506 V @ 60Hz
Winding resistance (between phases) +/- 7% at 25°C	1.57 Ω
Maximum Continuous Current (MCC)	27 A
Locked Rotor Amps (LRA)	105 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

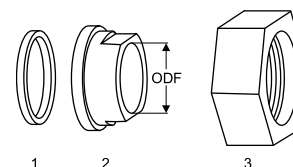
**Industrial pack: 6 Unboxed compressors on pallet (order per multiples of 6)

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.

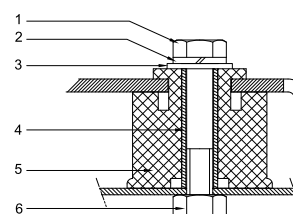
Mineral oil, 160P, 2 litre can	7754001
Mineral oil, 160P, 5 litre can	7754002

Crankcase heaters

Code no.

PTC heater 27W, CE mark, UL	120Z0459
Belt type crankcase heater, 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	120Z0473
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	8156135
T block connector 52 x 57 mm	8173230

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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

Cooling capacity in W

30	8 794	11 705	15 221	19 422	24 385	30 191	36 919	44 648	53 459
35	7 857	10 650	14 012	18 021	22 757	28 299	34 726	42 117	50 552
40	6 998	9 649	12 834	16 630	21 116	26 370	32 473	39 502	47 537
45	6 225	8 713	11 698	15 257	19 470	24 415	30 170	36 814	44 427
50	-	7 853	10 615	13 916	17 833	22 445	27 829	34 065	41 232
55	-	-	9 595	12 614	16 214	20 470	25 462	31 267	37 963
60	-	-	-	11 364	14 623	18 502	23 078	28 429	34 632
65	-	-	-	-	13 072	16 550	20 688	25 562	31 249

Power input in W

30	4 821	5 395	5 939	6 430	6 848	7 172	7 381	7 453	7 367
35	5 081	5 689	6 276	6 822	7 305	7 705	7 999	8 168	8 189
40	5 301	5 950	6 588	7 196	7 752	8 234	8 622	8 894	9 030
45	5 476	6 173	6 870	7 547	8 182	8 754	9 243	9 626	9 884
50	-	6 352	7 115	7 868	8 590	9 259	9 856	10 358	10 744
55	-	-	7 316	8 153	8 969	9 743	10 454	11 082	11 604
60	-	-	-	8 396	9 313	10 199	11 033	11 793	12 459
65	-	-	-	-	9 617	10 622	11 585	12 485	13 301

Current consumption in A

30	8.57	9.27	9.98	10.66	11.26	11.74	12.05	12.15	11.99
35	8.90	9.65	10.44	11.21	11.92	12.53	12.99	13.26	13.29
40	9.18	10.00	10.88	11.75	12.59	13.35	13.97	14.43	14.66
45	9.40	10.31	11.28	12.28	13.26	14.18	14.98	15.63	16.08
50	-	10.56	11.65	12.78	13.91	15.00	16.00	16.86	17.54
55	-	-	11.95	13.24	14.54	15.81	17.01	18.10	19.02
60	-	-	-	13.63	15.11	16.59	18.01	19.33	20.52
65	-	-	-	-	15.64	17.32	18.98	20.55	22.01

Mass flow in kg/h

30	192	253	324	408	505	617	745	892	1 057
35	178	239	310	393	489	601	728	874	1 039
40	165	225	295	377	473	583	709	853	1 016
45	154	212	281	361	455	563	687	828	989
50	-	201	267	345	436	541	662	801	958
55	-	-	254	329	416	518	635	770	923
60	-	-	-	313	396	494	607	737	885
65	-	-	-	-	376	468	576	701	845

Coefficient of performance (C.O.P.)

30	1.82	2.17	2.56	3.02	3.56	4.21	5.00	5.99	7.26
35	1.55	1.87	2.23	2.64	3.12	3.67	4.34	5.16	6.17
40	1.32	1.62	1.95	2.31	2.72	3.20	3.77	4.44	5.26
45	1.14	1.41	1.70	2.02	2.38	2.79	3.26	3.82	4.49
50	-	1.24	1.49	1.77	2.08	2.42	2.82	3.29	3.84
55	-	-	1.31	1.55	1.81	2.10	2.44	2.82	3.27
60	-	-	-	1.35	1.57	1.81	2.09	2.41	2.78
65	-	-	-	-	1.36	1.56	1.79	2.05	2.35

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

Cooling capacity	27 829	W
Power input	9 856	W
Current consumption	16.00	A
Mass flow	662	kg/h
C.O.P.	2.82	

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	81	dB(A)
With acoustic hood	75	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	9 340	12 422	16 140	20 578	25 819	31 943	39 035	47 177	56 450
35	8 375	11 342	14 909	19 159	24 175	30 039	36 833	44 641	53 545
40	7 489	10 316	13 708	17 746	22 514	28 093	34 566	42 016	50 525
45	6 693	9 358	12 550	16 352	20 847	26 117	32 245	39 313	47 404
50	-	8 477	11 445	14 988	19 186	24 123	29 882	36 544	44 192
55	-	-	10 407	13 665	17 543	22 123	27 487	33 720	40 901
60	-	-	-	12 396	15 929	20 127	25 074	30 852	37 544
65	-	-	-	-	14 355	18 149	22 654	27 954	34 130

Power input in W

30	4 821	5 395	5 939	6 430	6 848	7 172	7 381	7 453	7 367
35	5 081	5 689	6 276	6 822	7 305	7 705	7 999	8 168	8 189
40	5 301	5 950	6 588	7 196	7 752	8 234	8 622	8 894	9 030
45	5 476	6 173	6 870	7 547	8 182	8 754	9 243	9 626	9 884
50	-	6 352	7 115	7 868	8 590	9 259	9 856	10 358	10 744
55	-	-	7 316	8 153	8 969	9 743	10 454	11 082	11 604
60	-	-	-	8 396	9 313	10 199	11 033	11 793	12 459
65	-	-	-	-	9 617	10 622	11 585	12 485	13 301

Current consumption in A

30	8.57	9.27	9.98	10.66	11.26	11.74	12.05	12.15	11.99
35	8.90	9.65	10.44	11.21	11.92	12.53	12.99	13.26	13.29
40	9.18	10.00	10.88	11.75	12.59	13.35	13.97	14.43	14.66
45	9.40	10.31	11.28	12.28	13.26	14.18	14.98	15.63	16.08
50	-	10.56	11.65	12.78	13.91	15.00	16.00	16.86	17.54
55	-	-	11.95	13.24	14.54	15.81	17.01	18.10	19.02
60	-	-	-	13.63	15.11	16.59	18.01	19.33	20.52
65	-	-	-	-	15.64	17.32	18.98	20.55	22.01

Mass flow in kg/h

30	191	251	322	405	502	613	741	886	1 051
35	177	237	308	391	487	598	724	869	1 033
40	164	224	294	375	470	580	705	848	1 010
45	153	211	280	360	452	560	683	824	983
50	-	200	266	343	434	538	659	796	952
55	-	-	253	327	414	515	632	766	918
60	-	-	-	311	394	491	603	733	880
65	-	-	-	-	374	466	573	697	840

Coefficient of performance (C.O.P.)

30	1.94	2.30	2.72	3.20	3.77	4.45	5.29	6.33	7.66
35	1.65	1.99	2.38	2.81	3.31	3.90	4.60	5.47	6.54
40	1.41	1.73	2.08	2.47	2.90	3.41	4.01	4.72	5.60
45	1.22	1.52	1.83	2.17	2.55	2.98	3.49	4.08	4.80
50	-	1.33	1.61	1.90	2.23	2.61	3.03	3.53	4.11
55	-	-	1.42	1.68	1.96	2.27	2.63	3.04	3.52
60	-	-	-	1.48	1.71	1.97	2.27	2.62	3.01
65	-	-	-	-	1.49	1.71	1.96	2.24	2.57

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

Cooling capacity	30 429	W
Power input	10 664	W
Current consumption	17.37	A
Mass flow	692	kg/h
C.O.P.	2.85	

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	81	dB(A)
With acoustic hood	75	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

Cooling capacity in W

30	10 553	14 046	18 266	23 306	29 262	36 229	44 303	53 578	64 151
35	9 429	12 780	16 814	21 626	27 309	33 959	41 671	50 541	60 662
40	8 397	11 579	15 401	19 956	25 339	31 644	38 967	47 402	57 045
45	7 471	10 456	14 037	18 309	23 364	29 298	36 204	44 177	53 312
50	-	9 423	12 738	16 699	21 399	26 933	33 395	40 879	49 478
55	-	-	11 514	15 137	19 456	24 564	30 554	37 520	45 556
60	-	-	-	13 637	17 548	22 202	27 693	34 114	41 559
65	-	-	-	-	15 686	19 861	24 826	30 674	37 499

Power input in W

30	5 786	6 475	7 127	7 716	8 218	8 607	8 857	8 943	8 840
35	6 097	6 826	7 531	8 186	8 766	9 246	9 599	9 801	9 827
40	6 362	7 140	7 906	8 635	9 302	9 881	10 347	10 673	10 836
45	6 572	7 407	8 244	9 056	9 818	10 505	11 091	11 552	11 860
50	-	7 622	8 538	9 441	10 307	11 111	11 827	12 429	12 892
55	-	-	8 780	9 783	10 762	11 692	12 545	13 298	13 925
60	-	-	-	10 075	11 176	12 239	13 239	14 152	14 950
65	-	-	-	-	11 540	12 746	13 902	14 982	15 962

Current consumption in A

30	8.57	9.27	9.98	10.66	11.26	11.74	12.05	12.15	11.99
35	8.90	9.65	10.44	11.21	11.92	12.53	12.99	13.26	13.29
40	9.18	10.00	10.88	11.75	12.59	13.35	13.97	14.43	14.66
45	9.40	10.31	11.28	12.28	13.26	14.18	14.98	15.63	16.08
50	-	10.56	11.65	12.78	13.91	15.00	16.00	16.86	17.54
55	-	-	11.95	13.24	14.54	15.81	17.01	18.10	19.02
60	-	-	-	13.63	15.11	16.59	18.01	19.33	20.52
65	-	-	-	-	15.64	17.32	18.98	20.55	22.01

Mass flow in kg/h

30	231	304	390	490	606	741	895	1 071	1 270
35	214	286	372	472	587	721	874	1 049	1 247
40	198	270	354	453	567	699	851	1 023	1 219
45	185	255	337	434	546	675	824	994	1 186
50	-	241	321	414	523	649	795	961	1 149
55	-	-	305	395	500	622	763	924	1 108
60	-	-	-	375	476	593	728	884	1 063
65	-	-	-	-	451	562	692	841	1 013

Coefficient of performance (C.O.P.)

30	1.82	2.17	2.56	3.02	3.56	4.21	5.00	5.99	7.26
35	1.55	1.87	2.23	2.64	3.12	3.67	4.34	5.16	6.17
40	1.32	1.62	1.95	2.31	2.72	3.20	3.77	4.44	5.26
45	1.14	1.41	1.70	2.02	2.38	2.79	3.26	3.82	4.49
50	-	1.24	1.49	1.77	2.08	2.42	2.82	3.29	3.84
55	-	-	1.31	1.55	1.81	2.10	2.44	2.82	3.27
60	-	-	-	1.35	1.57	1.81	2.09	2.41	2.78
65	-	-	-	-	1.36	1.56	1.79	2.05	2.35

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

Cooling capacity	33 395	W
Power input	11 827	W
Current consumption	16.00	A
Mass flow	795	kg/h
C.O.P.	2.82	

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	84	dB(A)
With acoustic hood	78	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	11 208	14 906	19 368	24 694	30 982	38 332	46 842	56 612	67 740
35	10 050	13 610	17 890	22 991	29 010	36 047	44 200	53 569	64 254
40	8 986	12 380	16 450	21 296	27 016	33 711	41 479	50 419	60 630
45	8 032	11 229	15 060	19 622	25 016	31 340	38 694	47 176	56 885
50	-	10 172	13 735	17 985	23 023	28 948	35 858	43 852	53 030
55	-	-	12 488	16 398	21 051	26 547	32 985	40 463	49 082
60	-	-	-	14 875	19 114	24 153	30 089	37 023	45 052
65	-	-	-	-	17 226	21 779	27 185	33 545	40 957

Power input in W

30	5 786	6 475	7 127	7 716	8 218	8 607	8 857	8 943	8 840
35	6 097	6 826	7 531	8 186	8 766	9 246	9 599	9 801	9 827
40	6 362	7 140	7 906	8 635	9 302	9 881	10 347	10 673	10 836
45	6 572	7 407	8 244	9 056	9 818	10 505	11 091	11 552	11 860
50	-	7 622	8 538	9 441	10 307	11 111	11 827	12 429	12 892
55	-	-	8 780	9 783	10 762	11 692	12 545	13 298	13 925
60	-	-	-	10 075	11 176	12 239	13 239	14 152	14 950
65	-	-	-	-	11 540	12 746	13 902	14 982	15 962

Current consumption in A

30	8.57	9.27	9.98	10.66	11.26	11.74	12.05	12.15	11.99
35	8.90	9.65	10.44	11.21	11.92	12.53	12.99	13.26	13.29
40	9.18	10.00	10.88	11.75	12.59	13.35	13.97	14.43	14.66
45	9.40	10.31	11.28	12.28	13.26	14.18	14.98	15.63	16.08
50	-	10.56	11.65	12.78	13.91	15.00	16.00	16.86	17.54
55	-	-	11.95	13.24	14.54	15.81	17.01	18.10	19.02
60	-	-	-	13.63	15.11	16.59	18.01	19.33	20.52
65	-	-	-	-	15.64	17.32	18.98	20.55	22.01

Mass flow in kg/h

30	230	302	388	487	603	737	890	1 065	1 262
35	212	285	370	469	584	717	870	1 043	1 239
40	197	269	352	450	564	695	846	1 017	1 212
45	184	253	335	431	543	672	819	988	1 179
50	-	240	319	412	520	646	790	955	1 143
55	-	-	304	393	497	618	758	919	1 102
60	-	-	-	373	473	589	724	879	1 057
65	-	-	-	-	448	559	688	837	1 008

Coefficient of performance (C.O.P.)

30	1.94	2.30	2.72	3.20	3.77	4.45	5.29	6.33	7.66
35	1.65	1.99	2.38	2.81	3.31	3.90	4.60	5.47	6.54
40	1.41	1.73	2.08	2.47	2.90	3.41	4.01	4.72	5.60
45	1.22	1.52	1.83	2.17	2.55	2.98	3.49	4.08	4.80
50	-	1.33	1.61	1.90	2.23	2.61	3.03	3.53	4.11
55	-	-	1.42	1.68	1.96	2.27	2.63	3.04	3.52
60	-	-	-	1.48	1.71	1.97	2.27	2.62	3.01
65	-	-	-	-	1.49	1.71	1.96	2.24	2.57

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

Cooling capacity	36 515	W
Power input	12 797	W
Current consumption	17.37	A
Mass flow	831	kg/h
C.O.P.	2.85	

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

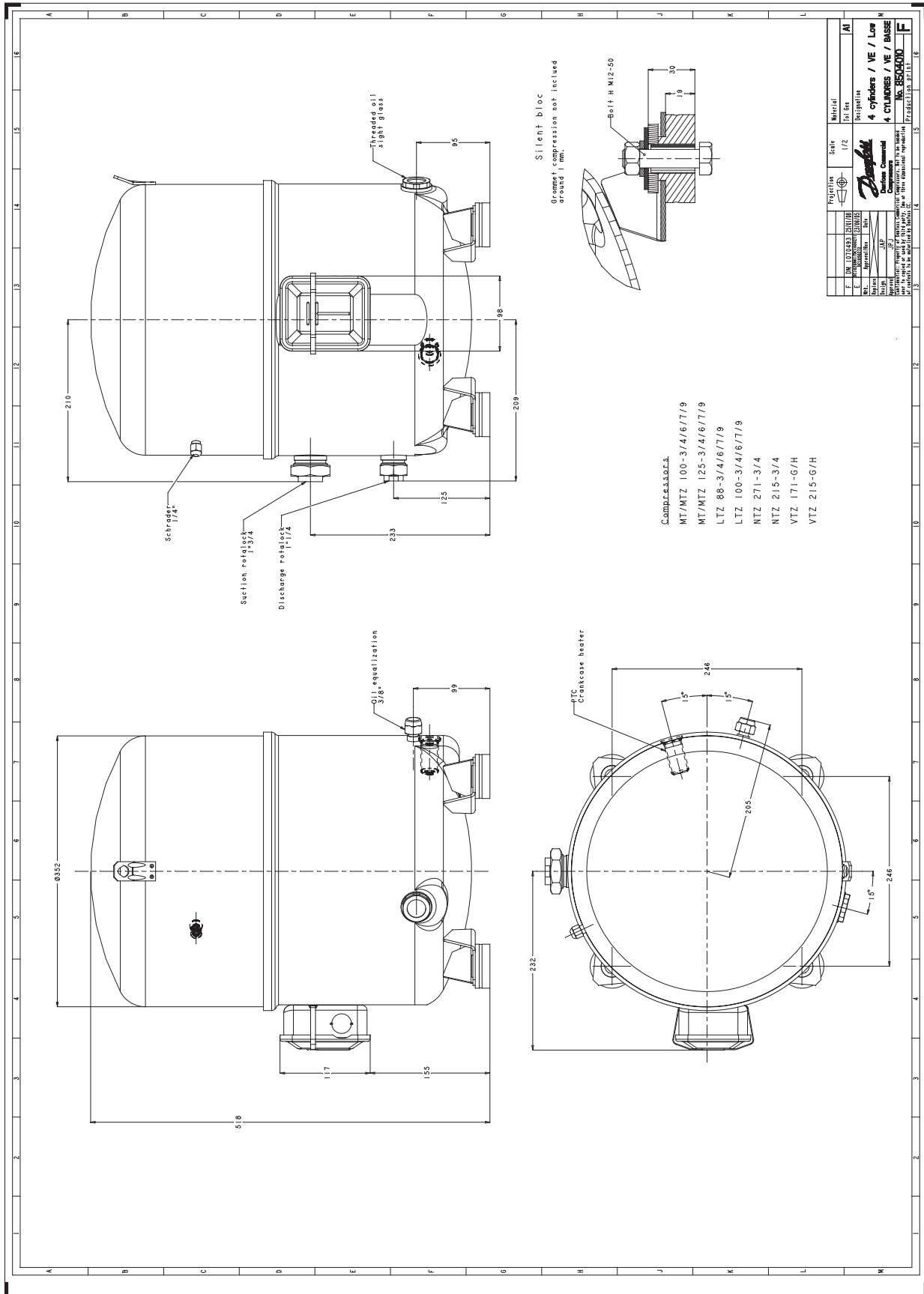
to: Evaporating temperature at dew point

tc: Condensing temperature at dew point

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

Tolerance according EN12900

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