

# Maneurop<sup>®</sup> reciprocating compressors

MT 60 Hz  
R-22



# MANEUROP® RECIPROCATING COMPRESSORS

Danfoss compressors can be used in many applications. The nominal tonnage of the compressor may be the same, or slightly lower than the nominal tonnage of the unit.

**A general way to identify if a Danfoss reciprocating compressor could work for you is if there are:**

- **Three mounting feet**
- **Rotolock connections**
- **The discharge line comes out lower than the suction line**

When changing a compressor find out what caused that compressor to fail, and fix the root problem.

Things to check:

- Condenser fan
- Dirty condenser
- Superheat
- Wiring
- Short cycling
- Refrigerant leaks

While changing a compressor:

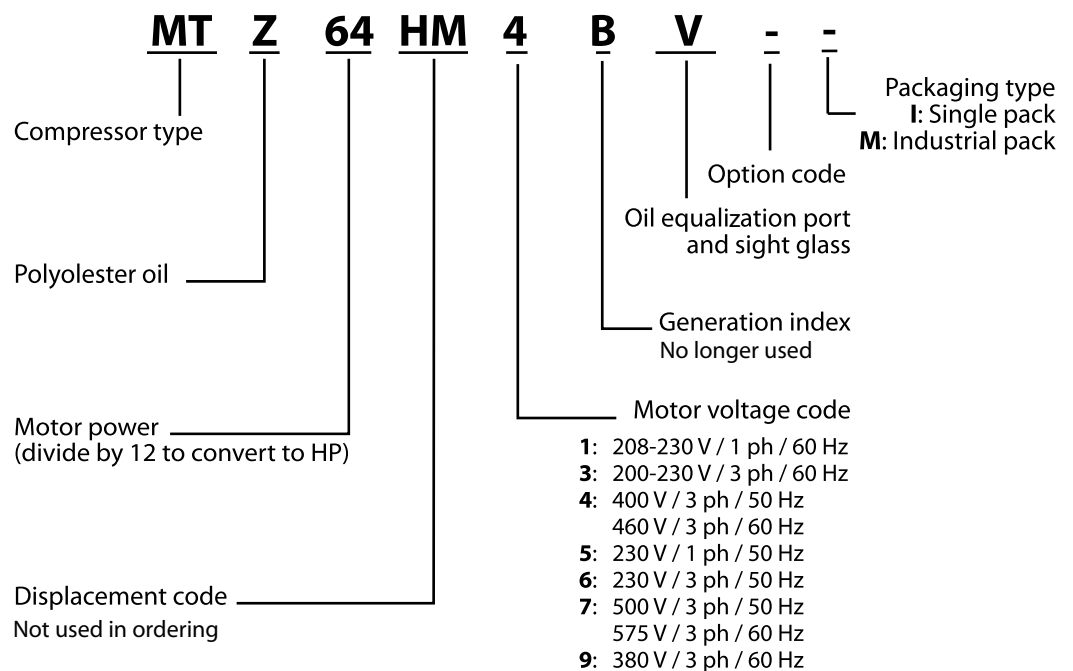
- Change the filter drier
- Test for acid (take action if needed)
- Change starting components (single phase)
- Change contactor (three phase)

Charging the system:

Weigh in the amount specified by the OEM after achieving a good vacuum.

*Note: Danfoss compressors for R22 come charged with 160 SUS viscosity mineral oil, but using 150 SUS viscosity mineral oil like 3GS or C-3 is acceptable.*

## Compressor reference (indicated on the compressor nameplate)



## PERFORMANCE DATA

### R-22 60 Hz Performance Data ARI rating conditions

**MT 18:** (Nominal 18,000 Btu)  
 Connections: 1" Rotolock X 1/2" Solder and 1" Rotolock X 3/8" Solder  
 32 oz. Mineral Oil  
 RLA: 230/1 - 8.3a 230/3 - 5.8a 460/3 - 3.2a

Cond Temp in °F (tc)	Evaporating Temp °F (to)								
	-10	0	10	20	30	40	45	50	55

#### Cooling Capacity in Btu/h

90	3774	5688	8166	11304	15200	19950	22676	25652	28890
100	3300	5092	7412	10358	14026	18513	21095	23917	26993
110	2875	4521	6661	9391	12808	17010	19435	22092	24994
120		3982	5918	8409	11553	15445	17702	20183	22900
130			5190	7419	10265	13825	15903	18196	20716
140				6425	8951	12155	14043	16136	18447
150					7616	10442	12127	14009	16100

**MT 22:** (Nominal 22,000 Btu)  
 Connections: 1" Rotolock X 1/2" Solder and 1" Rotolock X 3/8" Solder  
 32 oz. Mineral Oil  
 RLA: 230/1 - 10.9a 230/3 - 7.1a 460/3 - 3.9a

Cond Temp in °F (tc)	Evaporating Temp °F (to)								
	-10	0	10	20	30	40	45	50	55

#### Cooling Capacity in Btu/h

90	5811	8746	12277	16479	21428	27199	30417	33868	37563
100	4891	7711	11093	15114	19848	25371	28453	31760	35302
110	3990	6673	9885	13702	18199	23453	26387	29538	32917
120		5638	8658	12249	16488	21451	24226	27211	30415
130			7418	10763	14721	19370	21977	24784	27802
140				9248	12904	17218	19644	22263	25084
150					11044	15000	17235	19655	22268

**MT 28:** (Nominal 28,000 Btu)  
 Connections: 1" Rotolock X 1/2" Solder and 1" Rotolock X 3/8" Solder  
 32 oz. Mineral Oil  
 RLA: 230/1 - 16.0a 230/3 - 10.3a 460/3 - 4.8a

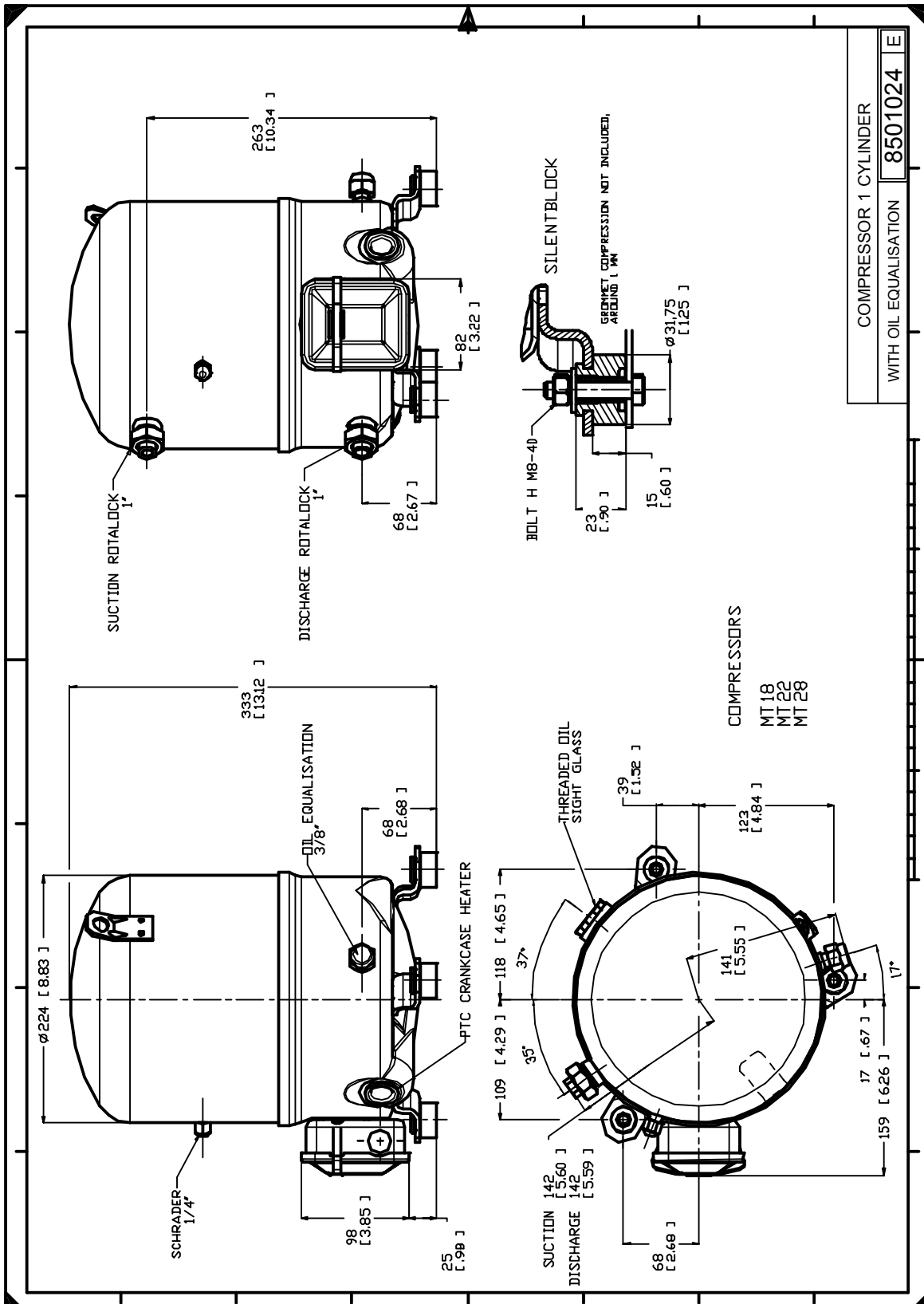
Cond Temp in °F (tc)	Evaporating Temp °F (to)								
	-10	0	10	20	30	40	45	50	55

#### Cooling Capacity in Btu/h

90	9432	13247	17710	22886	28841	35639	39375	43346	47561
100	8355	12059	16378	21380	27128	33688	37293	41124	45192
110	7258	10829	14985	19790	25311	31611	35073	38756	42665
120		9560	13530	18119	23390	29409	32720	36242	39983
130			12017	16367	21368	27086	30234	33585	37147
140				14537	19247	24642	27616	30786	34159
150					17028	22079	24869	27847	31020

OUTLINE DRAWINGS

Compressor: 1 Cylinder



## PERFORMANCE DATA

### R-22 60 Hz Performance Data ARI rating conditions

**MT 32:** (Nominal 32,000 Btu)  
 Connections: 1" Rotolock X 1/2" Solder and 1 1/4" Rotolock X 5/8" Solder  
 32 oz. Mineral Oil  
 RLA: 230/1 - 17.0a 230/3 - 11.5a 460/3 - 5.1a

Cond Temp in °F (tc)	Evaporating Temp °F (to)								
	-10	0	10	20	30	40	45	50	55

#### Cooling Capacity in Btu/h

90	10262	14305	19156	24915	31684	39563	43951	48655	53687
100	8911	12806	17466	22991	29484	37045	41258	45776	50611
110	7677	11395	15836	21101	27289	34504	38527	42845	47470
120		10098	14292	19266	25123	31963	35783	39887	44287
130			12855	17512	23009	29446	33048	36924	41085
140				15862	20970	26976	30347	33981	37889
150					19030	24577	27702	31080	34722

**MT 36:** (Nominal 36,000 Btu)  
 Connections: 1" Rotolock X 1/2" Solder and 1 1/4" Rotolock X 5/8" Solder  
 32 oz. Mineral Oil  
 RLA: 230/1 - 19.2a 230/3 - 10.9a 460/3 - 5.8a

Cond Temp in °F (tc)	Evaporating Temp °F (to)								
	-10	0	10	20	30	40	45	50	55

#### Cooling Capacity in Btu/h

90	12654	17442	22994	29376	36657	44904	49410	54182	59229
100	11185	15843	21228	27407	34448	42416	46770	51380	56257
110	9705	14208	19402	25352	32127	39794	43983	48419	53112
120		12542	17520	23218	29703	37043	41054	45304	49802
130			15588	21009	27179	34168	37990	42041	46331
140				18731	24563	31175	34796	38636	42705
150					21859	28071	31477	35094	38931

**MT 40:** (Nominal 40,000 Btu)  
 Connections: 1" Rotolock X 1/2" Solder and 1 1/4" Rotolock X 5/8" Solder  
 32 oz. Mineral Oil  
 RLA: 230/1 - 21.8a 230/3 - 14.1a 460/3 - 6.4a

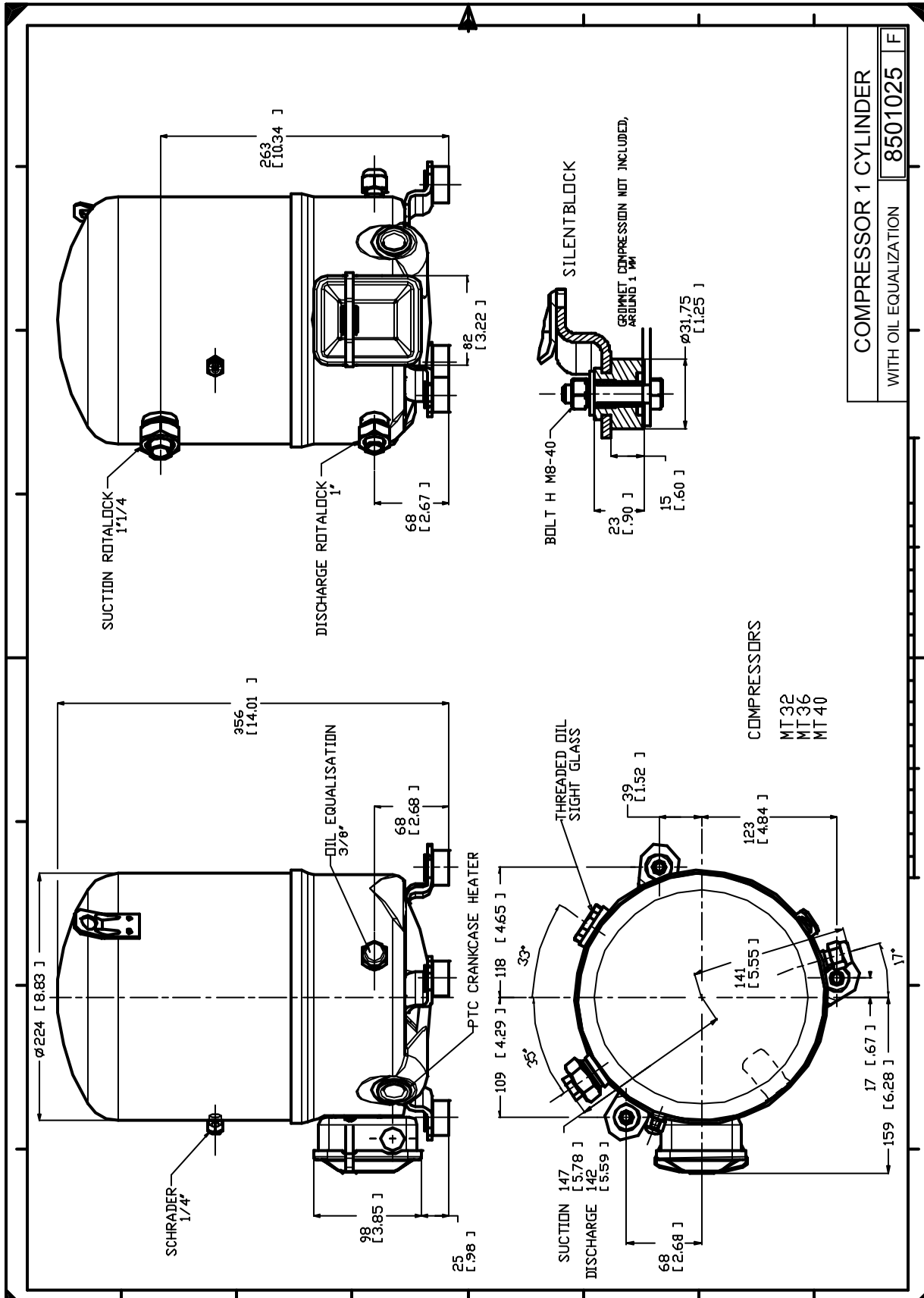
Cond Temp in °F (tc)	Evaporating Temp °F (to)								
	-10	0	10	20	30	40	45	50	55

#### Cooling Capacity in Btu/h

90	13780	18917	24860	31683	39461	48266	53077	58173	63562
100	12034	17096	22944	29651	37292	45940	50664	55668	60960
110	10274	15248	20987	27565	35055	43531	48162	53067	58255
120		13384	19000	25434	32760	41050	45580	50379	55456
130			16992	23269	30416	38506	42929	47615	52574
140				21079	28033	35911	40219	44785	49619
150					25622	33273	37459	41899	46601

OUTLINE DRAWINGS

Compressor: 1 Cylinder



## PERFORMANCE DATA

### R-22 60 Hz Performance Data ARI rating conditions

**MT 44:** (Nominal 44,000 Btu)  
 Connections: 1 1/4" Rotolock X 3/4" Solder and 1 3/4" Rotolock X 7/8" Solder  
 61 oz. Mineral Oil  
 RLA: 230/1 – 19.9a 230/3 – 14.1a 460/3 – 6.1a

Cond Temp in °F (tc)	Evaporating Temp °F (to)								
	-10	0	10	20	30	40	45	50	55

#### Cooling Capacity in Btu/h

90	13617	18671	25029	32897	42483	53995	60538	67640	75328
100	12301	17104	23138	30609	39726	50697	56942	63728	71081
110	11084	15588	21250	28277	36877	47259	53182	59628	66623
120		14139	19381	25916	33952	43696	49273	55355	61968
130			17546	23542	30965	40024	45232	50926	57134
140				21170	27933	36260	41074	46357	52134
150					24872	32418	36814	41662	46958

**MT 50:** (Nominal 50,000 Btu)  
 Connections: 1 1/4" Rotolock X 3/4" Solder and 1 3/4" Rotolock X 7/8" Solder  
 61 oz. Mineral Oil  
 RLA: 230/3 – 16.0a 460/3 – 7.7a

Cond Temp in °F (tc)	Evaporating Temp °F (to)								
	-10	0	10	20	30	40	45	50	55

#### Cooling Capacity in Btu/h

90	15642	21049	27910	36467	46963	59640	66872	74741	83276
100	13914	19092	25657	33852	43920	56102	63062	70642	78872
110	12229	17134	23361	31150	40745	52388	59054	66323	74226
120		15190	21033	28373	37453	48514	54864	61800	69353
130			18690	25537	34057	44492	50504	57086	64268
140				22654	30571	40336	45989	52194	58983
150					27009	36061	41332	47139	53514

**MT 56:** (Nominal 56,000 Btu)  
 Connections: 1 1/4" Rotolock X 3/4" Solder and 1 3/4" Rotolock X 7/8" Solder  
 61 oz. Mineral Oil  
 RLA: 230/1 – 27.2a 230/3 – 16.7a 460/3 – 7.7a

Cond Temp in °F (tc)	Evaporating Temp °F (to)								
	-10	0	10	20	30	40	45	50	55

#### Cooling Capacity in Btu/h

90	16831	23911	32334	42256	53832	67220	74643	82576	91041
100	14957	21773	29857	39364	50450	63272	70383	77987	86103
110	13150	19653	27347	36389	46935	59142	65917	73165	80907
120		17567	24822	33349	43305	54846	61259	68128	75471
130			22298	30260	39576	50401	56428	62892	69811
140				27139	35764	45824	51440	57473	63943
150					31887	41131	46311	51889	57885



## PERFORMANCE DATA

### R-22 60 Hz Performance Data ARI rating conditions

**MT 64:** (Nominal 64,000 Btu)  
 Connections: 1 1/4" Rotolock X 3/4" Solder and 1 3/4" Rotolock X 7/8" Solder  
 61 oz. Mineral Oil  
 RLA: 230/1 - 29.5a 230/3 - 18.6a 460/3 - 9.6a

Cond Temp in °F (tc)	Evaporating Temp °F (to)								
	-10	0	10	20	30	40	45	50	55

#### Cooling Capacity in Btu/h

90	19148	26897	36320	47646	61101	76915	85777	95314	105555
100	16942	24365	33367	44178	57025	72137	80613	89740	99547
110	14992	22025	30545	40780	52956	67303	75362	84048	93392
120		19929	27904	37500	48944	62465	70075	78290	87137
130			25493	34388	45038	57670	64801	72513	80834
140				31495	41288	52970	59590	66768	74532
150					37743	48412	54491	61105	68280

**MT 72:** (Nominal 72,000 Btu)  
 Connections: 1 1/4" Rotolock X 3/4" Solder and 1 3/4" Rotolock X 7/8" Solder  
 61 oz. Mineral Oil  
 RLA: 230/3 - 19.2a 460/3 - 9.9a

Cond Temp in °F (tc)	Evaporating Temp °F (to)								
	-10	0	10	20	30	40	45	50	55

#### Cooling Capacity in Btu/h

90	21170	29912	40348	52680	67107	83829	93113	103047	113654
100	18805	27173	37128	48872	62603	78523	87366	96832	106944
110	16800	24722	34125	45209	58175	73222	81588	90550	100132
120		22619	31399	41753	53881	67984	75839	84262	93279
130			29008	38562	49782	62870	70177	78026	86442
140				35694	45936	57938	64662	71901	79681
150					42402	53248	59353	65947	73055

**MT 80:** (Nominal 80,000 Btu)  
 Connections: 1 1/4" Rotolock X 3/4" Solder and 1 3/4" Rotolock X 1 1/8" Solder  
 61 oz. Mineral Oil  
 RLA: 230/3 - 23.1a 460/3 - 11.5a

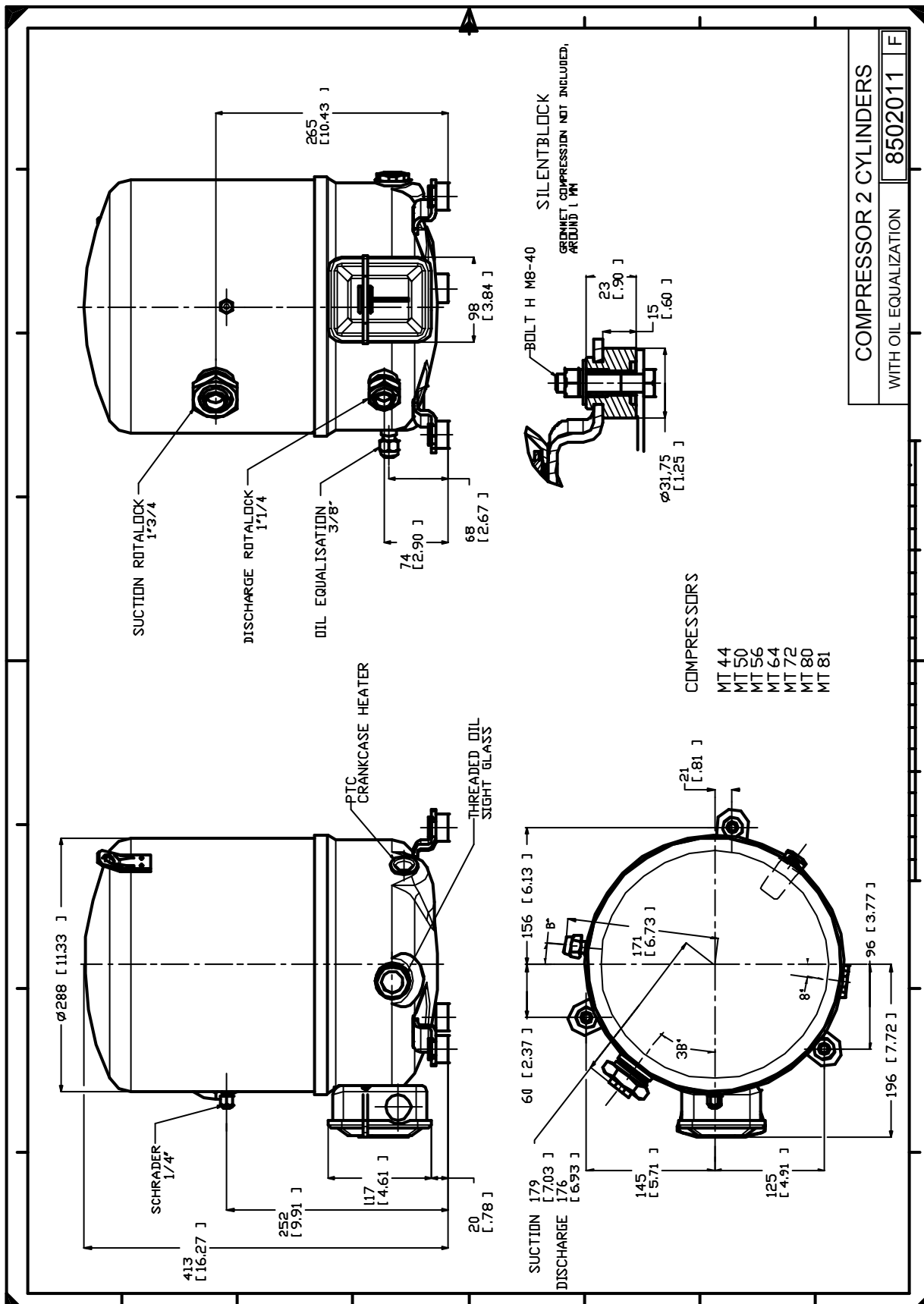
Cond Temp in °F (tc)	Evaporating Temp °F (to)								
	-10	0	10	20	30	40	45	50	55

#### Cooling Capacity in Btu/h

90	24144	34098	45975	60001	76404	95408	105957	117240	129288
100	21475	31012	42353	55724	71353	89464	99521	110284	121781
110	19173	28214	38940	51577	66352	83492	93108	103221	114128
120		25766	35798	47622	61465	77554	86510	96113	106390
130			32989	43921	56754	71712	80059	89023	98631
140				40536	52279	66028	73727	82011	90911
150					48103	60565	67574	75141	83293

OUTLINE DRAWINGS

Compressor: 2 Cylinder



## OUTLINE DRAWINGS

### R-22 60 Hz Performance Data ARI rating conditions

**MT 100** (Nominal 100,000 Btu)  
 Connections: 1 1/4" Rotolock X 3/4" Solder and 1 3/4" Rotolock X 1 1/8" Solder  
 132 oz. Mineral Oil  
 RLA: 230/3 - 27.6a 460/3 - 14.1a

Cond Temp in °F (tc)	Evaporating Temp °F (to)								
	-10	0	10	20	30	40	45	50	55

#### Cooling Capacity in Btu/h

90	30998	42525	56690	73872	94450	118803	132514	147311	163241
100	26435	37439	50930	67286	86888	110115	123207	137346	152582
110	22445	32826	45543	60975	79503	101504	113926	127358	141849
120		28799	40643	55051	72404	93080	104783	117459	131155
130			36340	49625	65704	84955	95889	107759	120611
140				44808	59514	77241	87357	98370	110329
150					53945	70049	79296	89404	100419

**MT 125:** (Nominal 125,000 Btu)  
 Connections: 1 1/4" Rotolock X 3/4" Solder and 1 3/4" Rotolock X 1 1/8" Solder  
 132 oz. Mineral Oil  
 RLA: 230/3 - 34.6a 460/3 - 17.3a

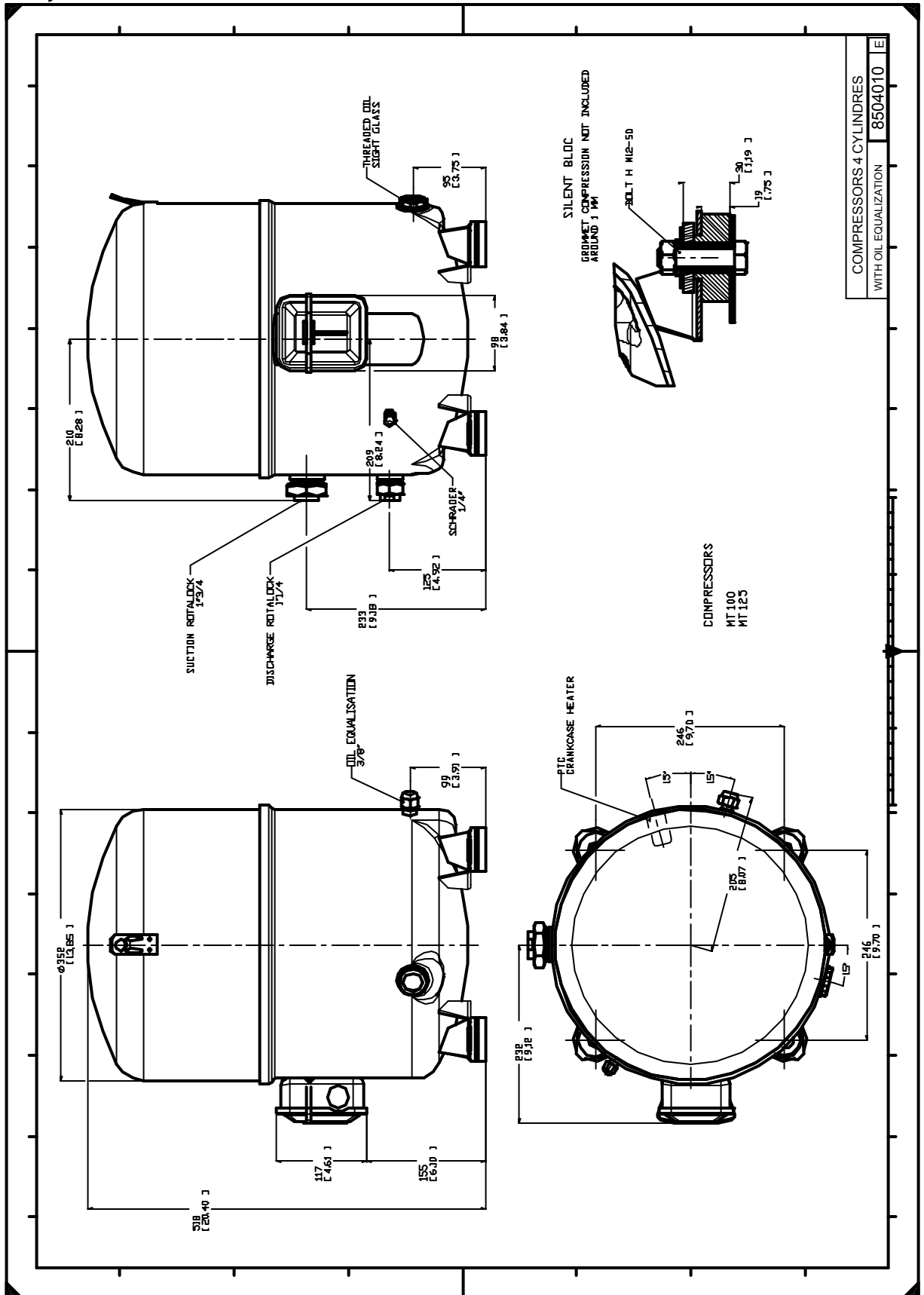
Cond Temp in °F (tc)	Evaporating Temp °F (to)								
	-10	0	10	20	30	40	45	50	55

#### Cooling Capacity in Btu/h

90	40348	55213	73402	95381	121612	152559	169946	188686	208837
100	35955	50106	67377	88233	113136	142550	159094	176940	196145
110	31953	45255	61473	81070	104509	132255	147888	164771	182963
120		40726	55754	73957	95798	121740	136394	152248	169358
130			50287	66961	87067	111071	124678	139434	155396
140				60146	78383	100312	112806	126397	141142
150					69811	89530	100842	113200	126661

# OUTLINE DRAWINGS

## Compressor: 4 Cylinder



## ELECTRICAL CONNECTIONS AND WIRING

### R-22 60 Hz Performance Data ARI rating conditions

**MT 144:** (Nominal 144,000 Btu)  
 Connections: 1 1/4" Rotolock X 3/4" Solder and 1 3/4" Rotolock X 1 1/8" Solder  
 132 oz. Mineral Oil  
 RLA: 230/3 – 41.0a 460/3 – 19.2a

Cond Temp in °F (tc)	Evaporating Temp °F (to)								
	-10	0	10	20	30	40	45	50	55

#### Cooling Capacity in Btu/h

90	46440	63150	83724	108719	138689	174190	194187	245776	239024
100	41295	57155	76637	100294	128684	162359	181353	201877	223999
110	36622	51472	69699	91859	118505	150195	168104	187482	208399
120		46182	62993	83494	108237	137780	154524	172676	192305
130			56601	75281	97960	125194	140693	157538	175800
140				67302	87756	112521	126693	142152	158965
150					77706	99841	112606	126597	141882

**MT 160:** (Nominal 160,000 Btu)  
 Connections: 1 1/4" Rotolock X 3/4" Solder and 1 3/4" Rotolock X 1 1/8" Solder  
 132 oz. Mineral Oil  
 RLA: 230/3 - 44.9a 460/3 - 23.1a

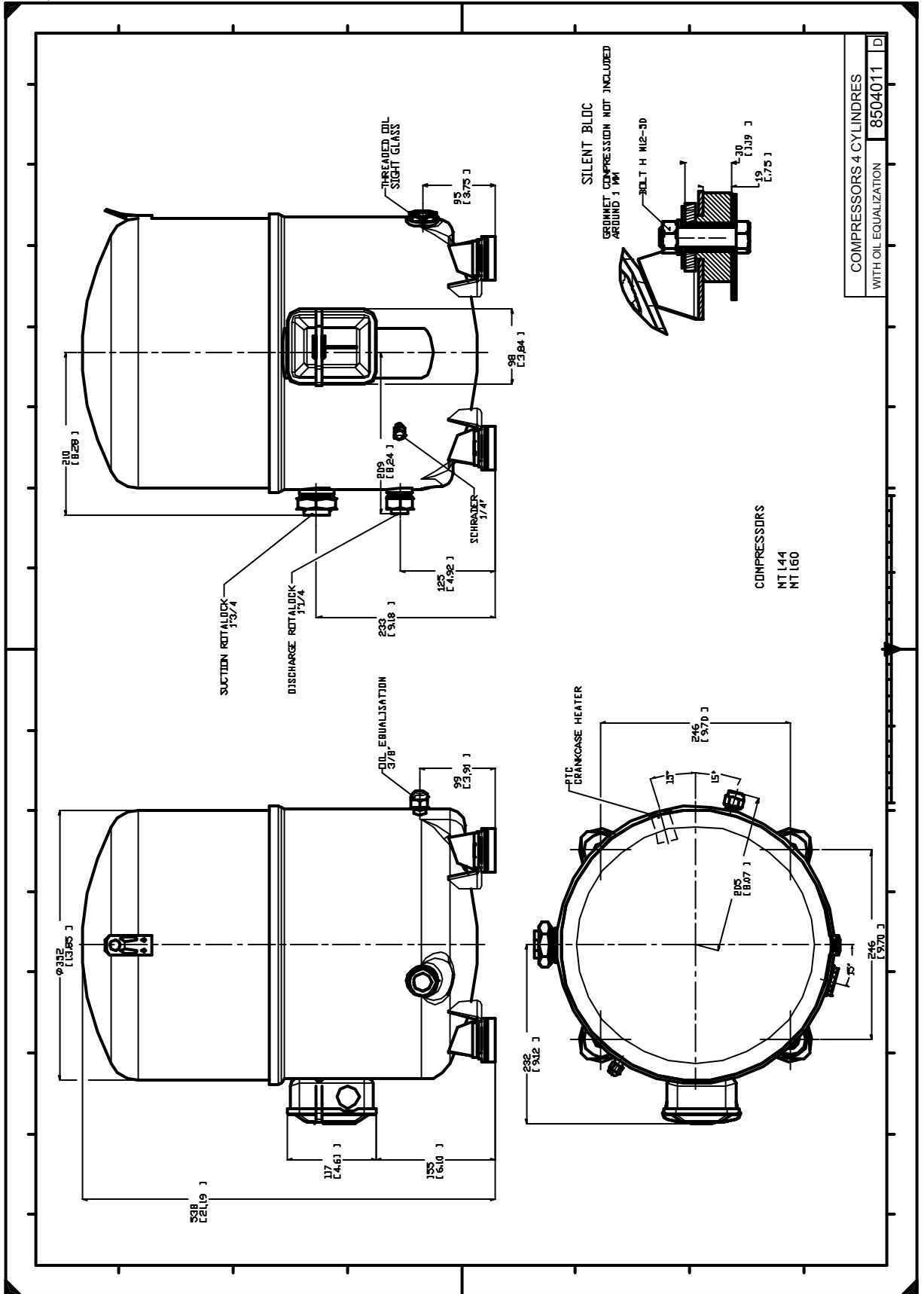
Cond Temp in °F (tc)	Evaporating Temp °F (to)								
	-10	0	10	20	30	40	45	50	55

#### Cooling Capacity in Btu/h

90	51476	69731	92232	119598	152444	191387	213338	237045	262584
100	16038	63405	84762	110729	141920	178954	199854	222446	246807
110	41048	57358	77403	101802	131170	166125	185891	207284	230382
120		51660	70225	92887	120264	152972	171519	191629	213381
130			63296	84054	109271	139565	156807	175551	195871
140				75373	98262	125972	141827	159119	177924
150					87305	112263	126647	142403	159609

**OUTLINE DRAWINGS**

**Compressor: 4 Cylinder**







## The Danfoss product range for the refrigeration and air conditioning industry

Danfoss Refrigeration & Air Conditioning is a worldwide manufacturer with a leading position in industrial, commercial and supermarket refrigeration as well as air conditioning and climate solutions.

We focus on our core business of making quality products, components and systems that enhance performance and reduce total life cycle costs – the key to major savings.



*Controls for Commercial Refrigeration*



*Controls for Industrial Refrigeration*



*Electronic Controls & Sensors*



*Industrial Automation*



*Household Compressors*



*Commercial Compressors*



*Sub-Assemblies*



*Thermostats*

We are offering a single source for one of the widest ranges of innovative refrigeration and air conditioning components and systems in the world. And, we back technical solutions with business solution to help your company reduce costs, streamline processes and achieve your business goals.

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