

Enthalpy

Hermetic TD Series Condensing Units (Medium Temperature)

Standard Features

- Weatherproof White Powder Coated Unit Casing
- Hermetic Copeland & Maneurop Compressors
- Compressor Oil Sight Glass
- Crankcase Heater
- Service Shut Off Valves
- HP/LP Control
- Gomax Flexible Control Hoses
- Liquid Line Drier & Sight Glass
- Oil Separator (Pre-charged with POE Oil)
- Liquid Receiver
- Top Discharge High Ambient Condenser
- **Supercoat** Condenser Treatment (5000 Hour Salt Spray Test)
- Space Saving Unit Design
(Can be installed in a corner or back to back – not ML series)
- ebmpapst Condenser Fans – Single Phase
- Saginomiya Condenser Fan Speed Controller
- 3PH Contactor & Electronic Motor Protection Relay
- Phase Loss & Phase Imbalance Protection
- Dust & Weatherproof Electrical Box
- Pre-Wired Back to Electrical Box
- 1.22mm (18G) Interconnecting Copper Pipe Work
- Pre-Drilled ready to fit **IPW** series isolating switch (4 x M4 nutspots & 38mm diameter knockout for switch option)



ENTHALPY TD SERIES CONDENSING UNITS

R404a (R507) – TD Hermetic Condensing Units

Airefrig Part Number	H/P (Nominal)	Displ cm ³ /r	Ambient Temp °C	Refrigeration Capacity Watts				
				Evaporating Temperature °C				
				-15	-10	-5	0	+5
TDCS10ML3001 (Single Phase)	1.30	38.01	32	2322	2910	3530	4214	-
			38	1939	2460	3010	3596	-
			43	1625	2097	2593	3117	-
TDCS14ML4001 (Single Phase) TDCS14ML4003 (Three Phase)	2.0	48.6	32	3425	4245	5079	5942	-
			38	2961	3666	4430	5205	-
			43	2576	3216	3868	4564	-
TDCS18ML4001 (Single Phase) TDCS18ML4003 (Three Phase)	2.5	61.4	32	4087	5116	6138	7181	-
			38	3459	4389	5283	6207	-
			43	2975	3784	4581	5405	-
TDCS20ML4003	3.0	74.3	32	4503	5574	6809	7966	-
			38	3777	4737	5832	6852	-
			43	3222	4083	5081	5995	-
TDCS27MP123	3.5	92.4	32	6067	7513	9057	10616	-
			38	5242	6495	7848	9224	-
			43	4525	5637	6848	8072	-
TDCS33MP123	4.0	106.2	32	6805	8324	10055	11796	-
			38	5768	7127	8676	10204	-
			43	4933	6133	7562	8919	-
TDMTZ72MP273	6.0	120.9	32	9666	11808	14148	16654	19297
			38	8503	10442	12548	14797	17163
			43	7557	9324	11215	13204	15267
TDMTZ100MP383	8.5	171.2	32	12747	15728	18954	22402	26025
			38	11322	13989	16874	19945	23161
			43	10145	12562	15143	17876	20726
TDMTZ125MP383	10.0	215.4	32	15922	19391	23141	27132	31310
			38	14061	17158	20510	24078	27800
			43	12545	15342	18363	21564	24906
TDMTZ144MP383	12.0	241.8	32	18320	22010	25945	30081	34341
			38	16234	19544	23052	26698	30428
			43	14508	17470	20599	23864	27197

Nominal ratings should be used as a guide, based on 20 degree Celsius return vapour and inherent liquid subcooling.

Note: Fan speed controller is set for continuous running @ low speed, select fan OFF option at low speed in low ambient applications to prevent over condensing.

ENTHALPY TD SERIES CONDENSING UNITS

R134a – TD Hermetic Condensing Units

Airefrig Part Number	H/P (Nominal)	Displ cm ³ /r	Ambient Temp °C	Refrigeration Capacity Watts					
				Evaporating Temperature °C					
				-15	-10	-5	0	+5	+10
TDCS10ML3001 (Single Phase)	1.30	38.01	32	1387	1858	2291	2862	3468	4227
			38	1147	1555	1934	2421	2932	3578
			43	952	1312	1650	2077	2517	3069
TDCS14ML4001 (Single Phase) TDCS14ML4003 (Three Phase)	2.0	48.6	32	1986	2631	3199	3921	4939	6000
			38	1717	2272	2990	3372	4156	5071
			43	1494	1993	2436	3012	3644	4446
TDCS18ML4001 (Single Phase) TDCS18ML4003 (Three Phase)	2.5	61.4	32	2370	3171	3866	4739	5734	6996
			38	2006	2721	3453	4292	4956	6147
			43	1725	2346	2986	3767	4416	5366
TDCS20ML4003	3.0	74.3	32	2611	3455	4299	5257	6361	7761
			38	2213	2933	3674	4522	5452	6675
			43	1868	2531	3201	3956	4757	5810
TDCS27MP123	3.5	92.4	32	3426	4458	5608	6969	8725	10914
			38	3043	4005	5034	6290	7898	9874
			43	2705	3618	4558	5712	7151	8957
TDCS33MP123	4.0	106.2	32	3800	4995	6406	8037	9785	11573
			38	3336	4379	5718	7247	8870	10600
			43	2930	3905	5127	6604	8144	9809
TDMTZ72MP273	6.0	120.9	32	5097	6653	8463	10536	12871	15460
			38	4492	5969	7676	9622	11803	14217
			43	3992	5395	7009	8841	10891	13153
TDMTZ100MP383	8.5	171.2	32	6442	8505	10929	13727	16902	20445
			38	5689	7630	9897	12501	15449	18727
			43	5128	6953	9072	11500	14242	17288
TDMTZ125MP383	10.0	215.4	32	8100	10564	13419	16669	20304	24309
			38	7103	9434	12114	15150	18529	22238
			43	6324	8528	11046	13886	17038	20488
TDMTZ144MP383	12.0	241.8	32	10221	13080	16351	20024	24081	28482
			38	9068	11862	14922	18336	22091	26146
			43	8329	10866	13732	16915	20403	24164

Nominal ratings should be used as a guide, based on 20 degree Celsius return vapour and inherent liquid subcooling.

Note: Fan speed controller will require to be adjusted to suit R134a refrigerant at time of commissioning.

Fan speed controller is set for continuous running @ low speed, select fan OFF option at low speed in low ambient applications to prevent over condensing.

ENTHALPY TD SERIES CONDENSING UNITS

R449a – TD Hermetic Condensing Units

Airefrig Part Number	H/P (Nominal)	Displ cm ³ /r	Ambient Temp °C	Refrigeration Capacity Watts				
				Evaporating Temperature °C				
				-15	-10	-5	0	+5
TDCS10ML3001 (Single Phase)	1.30	38.01	32	2045	2624	3253	3965	-
			38	1707	2222	2785	3404	-
			43	1426	1894	2405	2965	-
TDCS14ML4001 (Single Phase) TDCS14ML4003 (Three Phase)	2.0	48.6	32	3016	3827	4681	5591	-
			38	2606	3311	4099	4927	-
			43	2261	2905	3588	4341	-
TDCS18ML4001 (Single Phase) TDCS18ML4003 (Three Phase)	2.5	61.4	32	3599	4613	5657	6757	-
			38	3045	3964	4888	5875	-
			43	2611	3418	4249	5141	-
TDCS20ML4003	3.0	74.3	32	3965	5026	6275	7496	-
			38	3325	4279	5396	6486	-
			43	2828	3688	4713	5702	-
TDCS27MP123	3.5	92.4	32	5342	6774	8347	9990	-
			38	4614	5867	7261	8731	-
			43	3972	5092	6352	7678	-
TDCS33MP123	4.0	106.2	32	5992	7505	9266	11100	-
			38	5077	6438	8027	9659	-
			43	4330	5540	7015	8483	-
TDMTZ72MP273	6.0	120.9	32	8511	10646	13038	15671	18522
			38	7485	9432	11610	14007	16604
			43	6633	8423	10403	12559	14777
TDMTZ100MP383	8.5	171.2	32	11224	14180	17468	21080	24980
			38	9966	12636	15612	18880	22407
			43	8905	11348	14047	17003	20061
TDMTZ125MP383	10.0	215.4	32	14020	17483	21326	25531	30053
			38	12377	15498	18977	22792	26895
			43	11012	13859	17034	20511	24107
TDMTZ144MP383	12.0	241.8	32	16131	19844	23910	28306	32963
			38	14290	17653	21329	25272	29437
			43	12735	15781	19108	22698	26324

Nominal ratings should be used as a guide, based on 20 degree Celsius return vapour and inherent liquid subcooling.

Note: Fan speed controller is set for continuous running @ low speed, select fan OFF option at low speed in low ambient applications to prevent over condensing.

ENTHALPY TD SERIES CONDENSING UNITS

TD Hermetic Unit Specifications & Dimensions

Unit Model	Connections Inches		Unit Weight Kg	Compressor		Condenser Fan Motor(s)				Receiver @ 90% (R404a) KG	Dimension Drawing
	Suction	Liquid		Voltage	MCC maximum continuous current	Voltage	Diam.	Qty	Amps per Fan		
TDCS10ML3001	3/4"	1/2"	110	1Phase 50Hz	14.2	230V 1Phase 50Hz	300mm	1	0.32	4.29	A
TDCS14ML4001	3/4"	1/2"	110		17.5		400mm	1	0.73	4.29	A
TDCS18ML4001	3/4"	1/2"	110		19.1		400mm	1	0.73	4.29	A
TDCS14ML4003	3/4"	1/2"	110	D.O.L. 380-400V 3Phase 50Hz	6.6		400mm	1	0.73	4.29	A
TDCS18ML4003	3/4"	1/2"	110		6.6		400mm	1	0.73	4.29	A
TDCS20ML4003	3/4"	1/2"	110		7.1		400mm	1	0.73	4.29	A
TDCS27MP123	7/8"	5/8"	150		11.8		450mm	1	1.55	8.1	B
TDCS33MP123	7/8"	5/8"	150		13.8		450mm	1	1.55	8.1	B
TDMTZ72MP273	1-1/8"	5/8"	220		17.0		500mm	2	3.0	12.0	C
TDMTZ100MP383	1-1/8"	5/8"	285		22.0		630mm	2	2.7	12.0	D
TDMTZ125MP383	1-1/8"	5/8"	290		27.0		630mm	2	2.7	12.0	D
TDMTZ144MP383	1-1/8"	5/8"	295		30.0		630mm	2	2.7	12.0	D

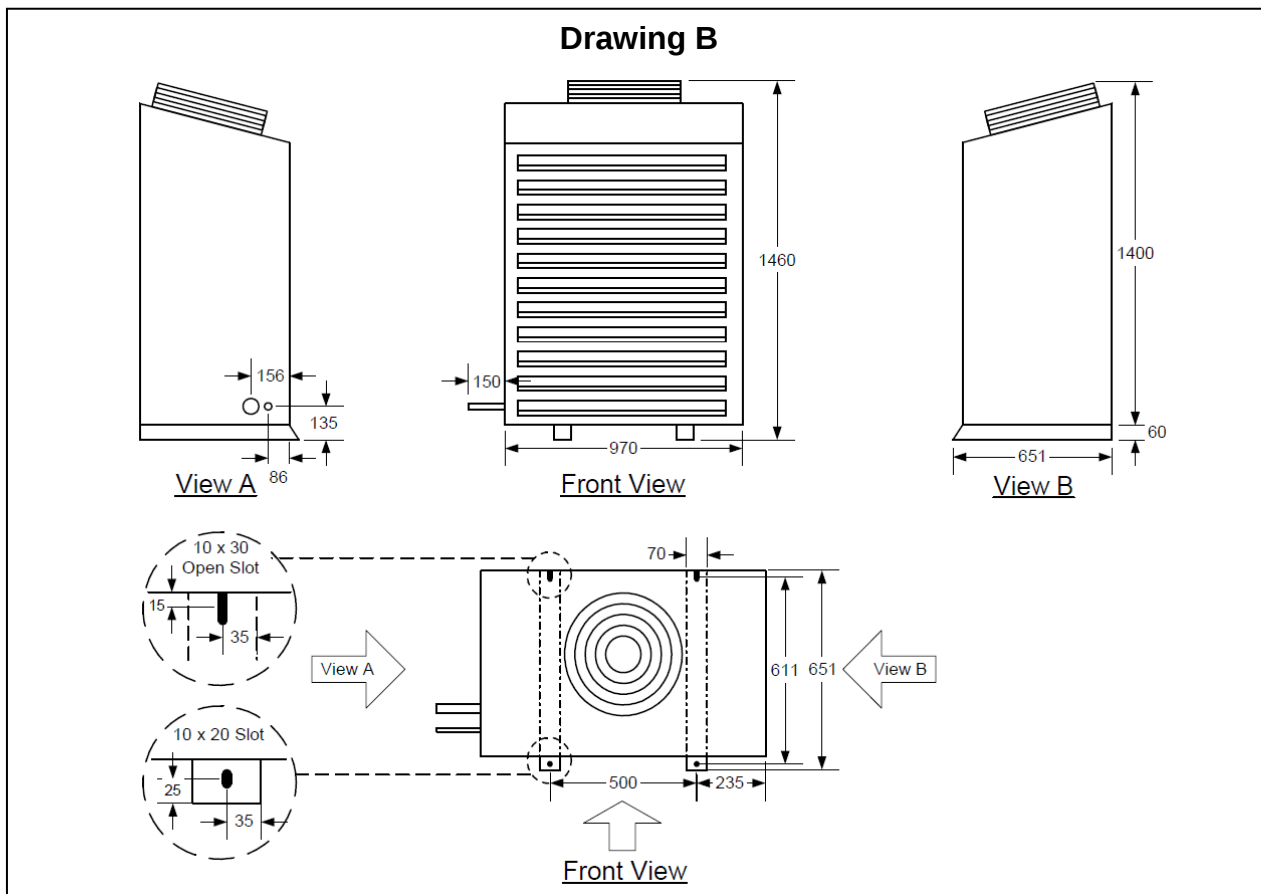
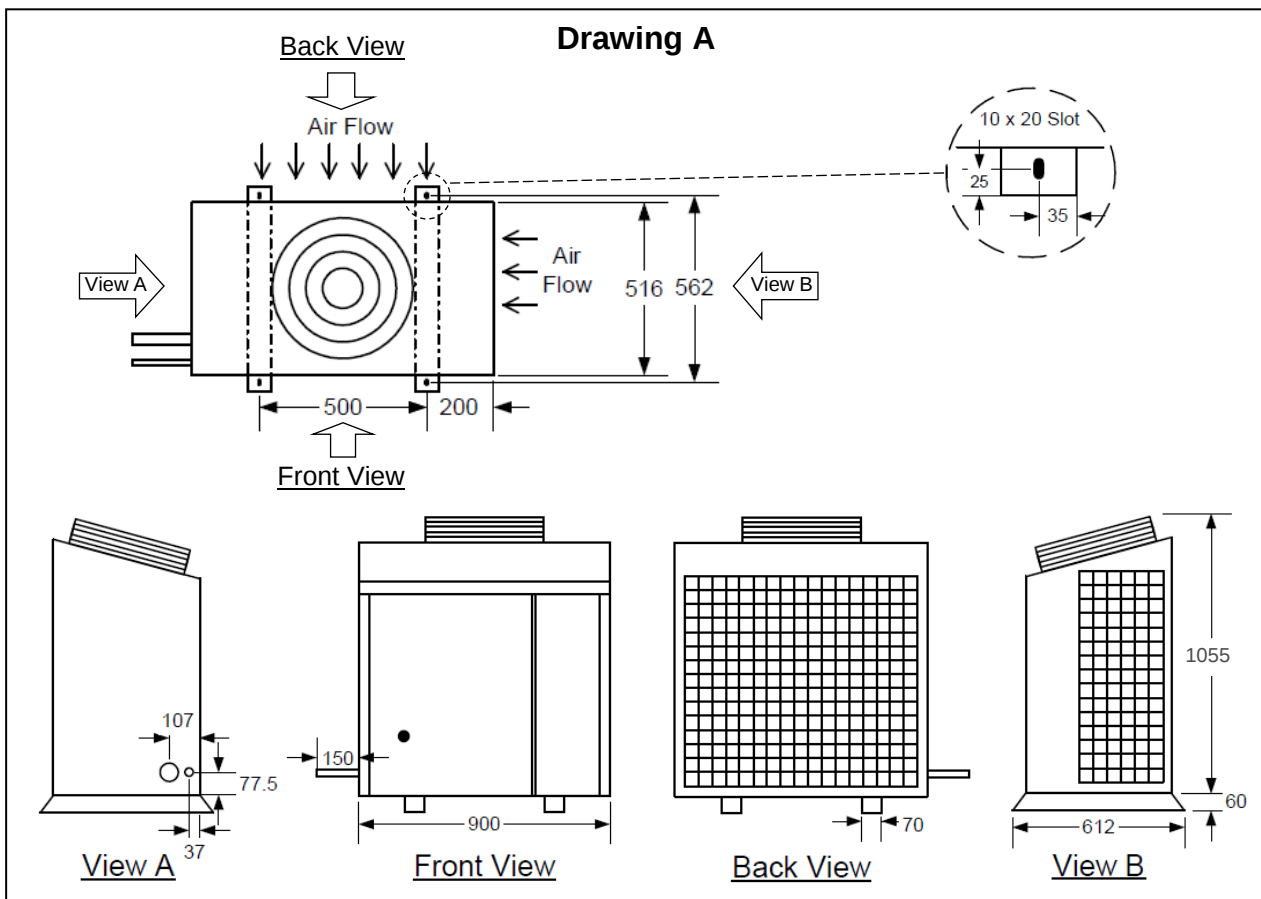
Note: Copeland CS Compressor Crankcase Heaters are external wrap 240volts 40 watts.

: Maneurop MTZ Compressor Crankcase Heaters are Internal PTC self-regulating 200-600 volts 35 watts.



ENTHALPY TD SERIES CONDENSING UNITS

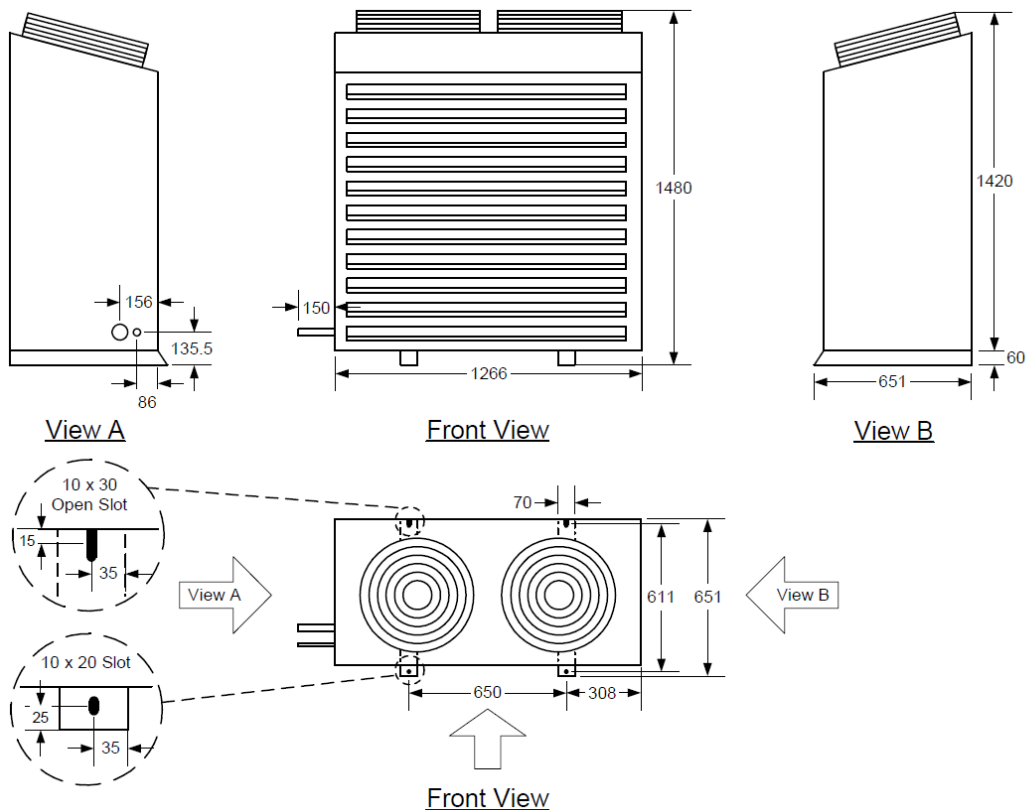
TD Hermetic Unit Dimensions



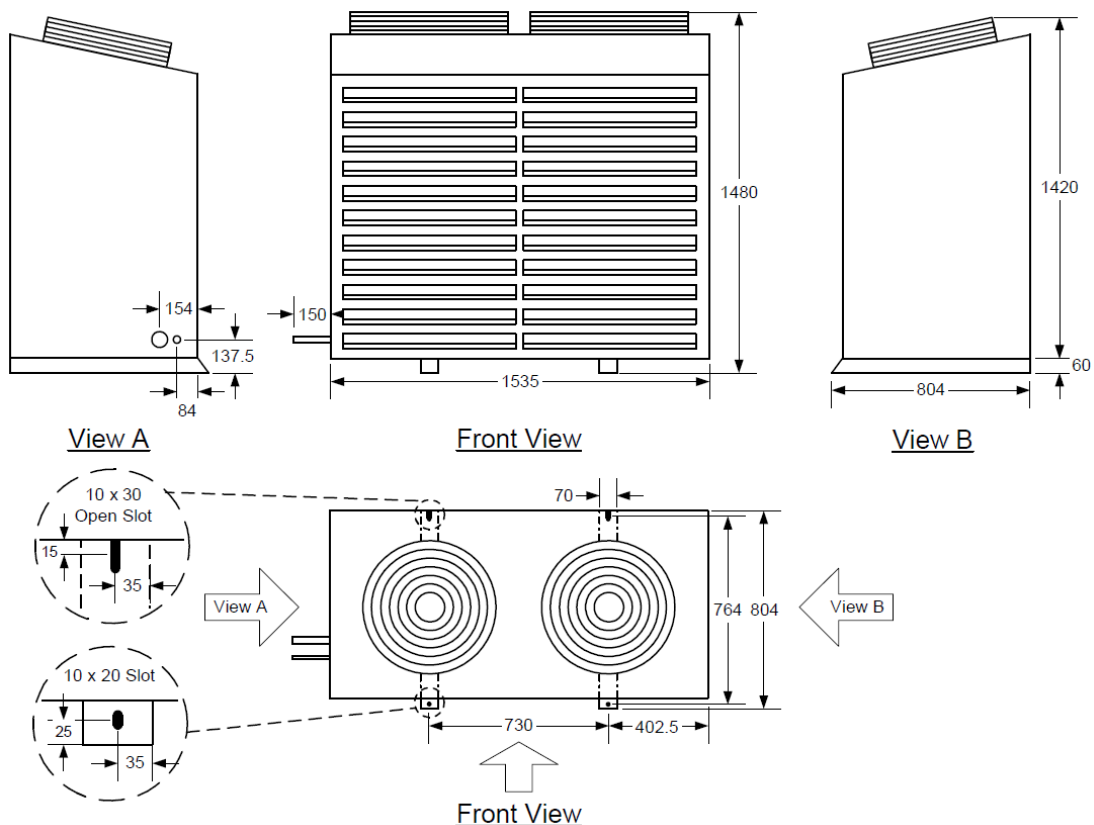
ENTHALPY TD SERIES CONDENSING UNITS

TD Hermetic Unit Dimensions (cont'd)

Drawing C

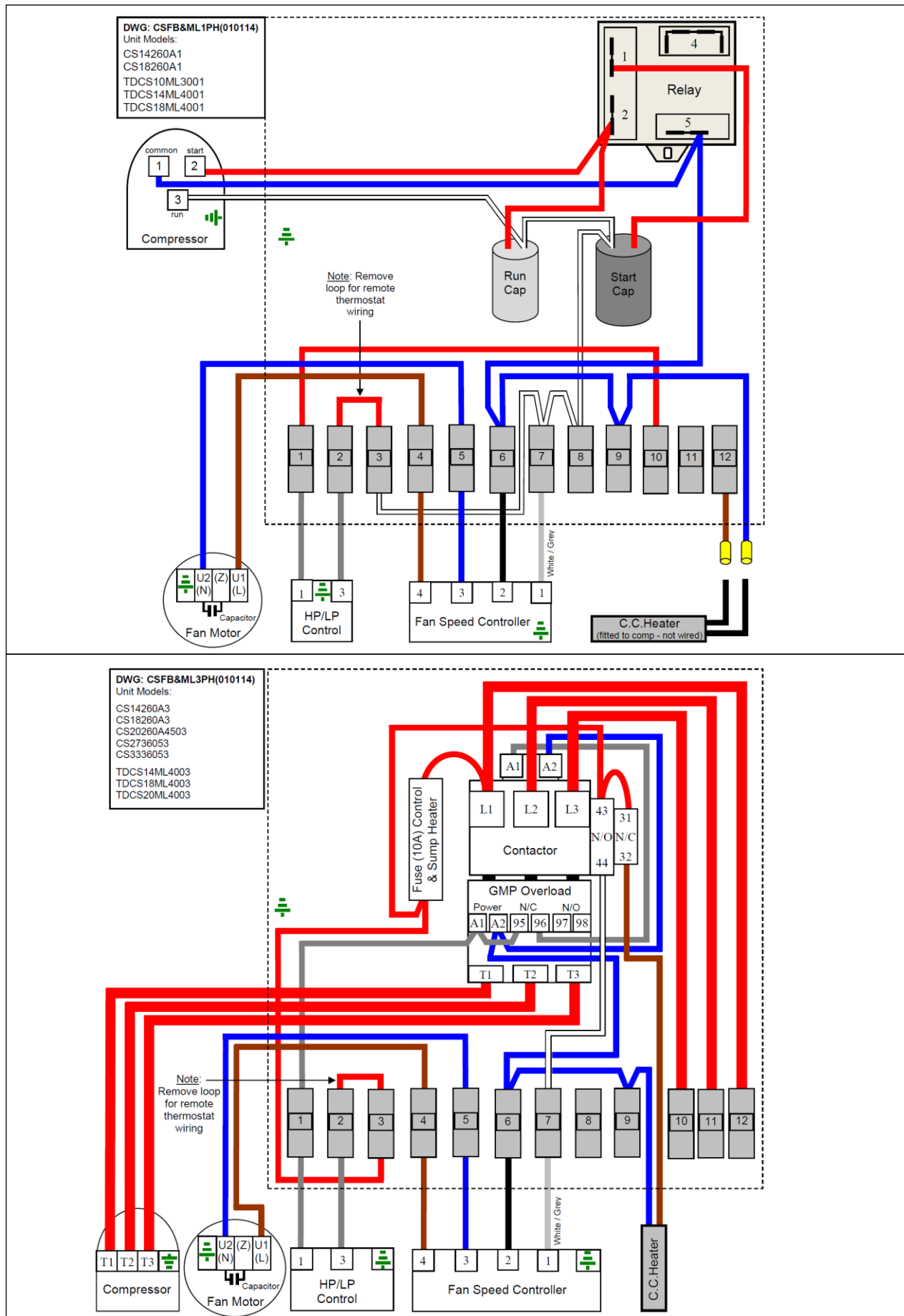


Drawing D



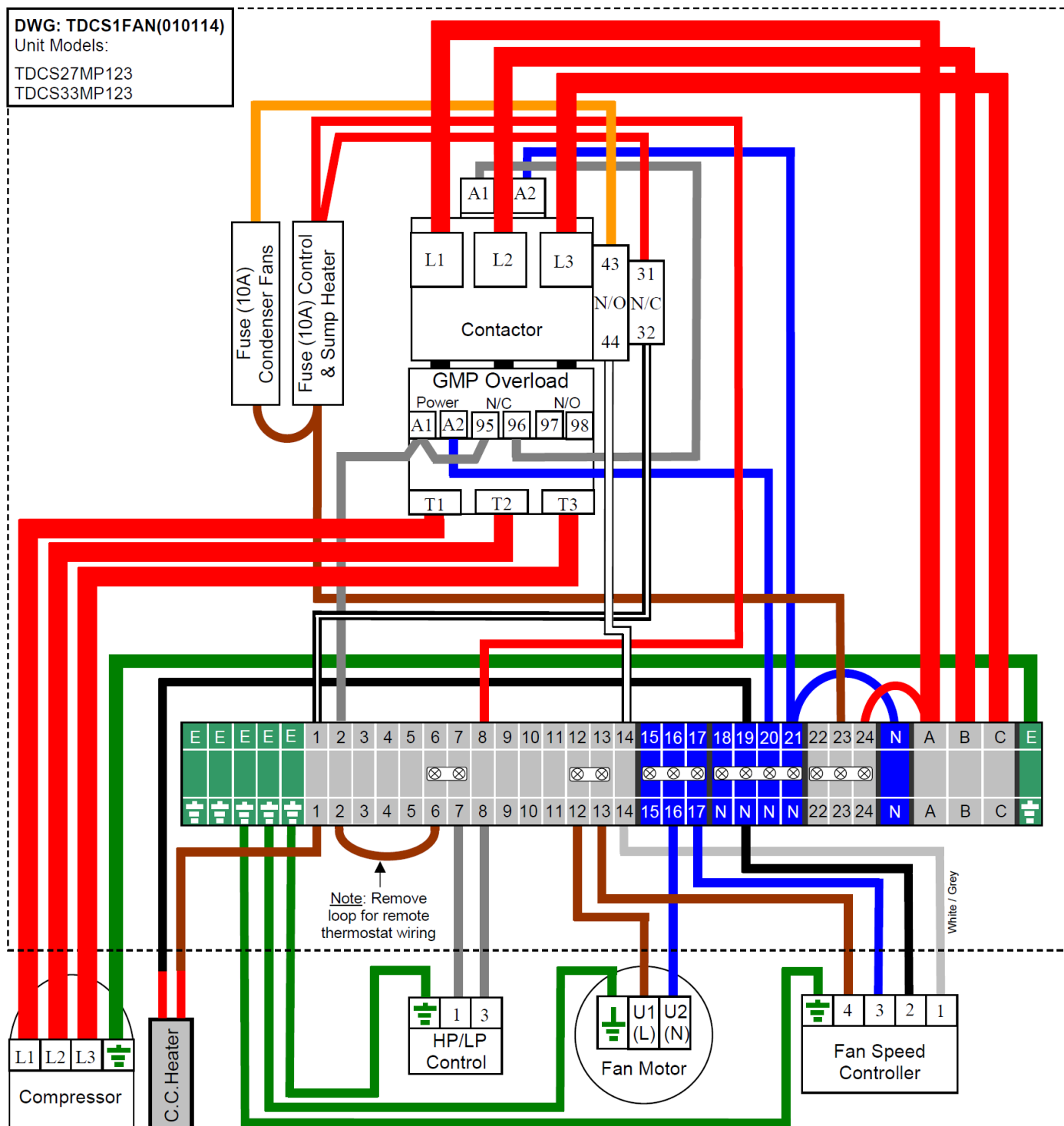
ENTHALPY TD SERIES CONDENSING UNITS

TD Hermetic Unit Wiring Diagrams



ENTHALPY TD SERIES CONDENSING UNITS

TD Hermetic Unit Wiring Diagrams (cont'd)



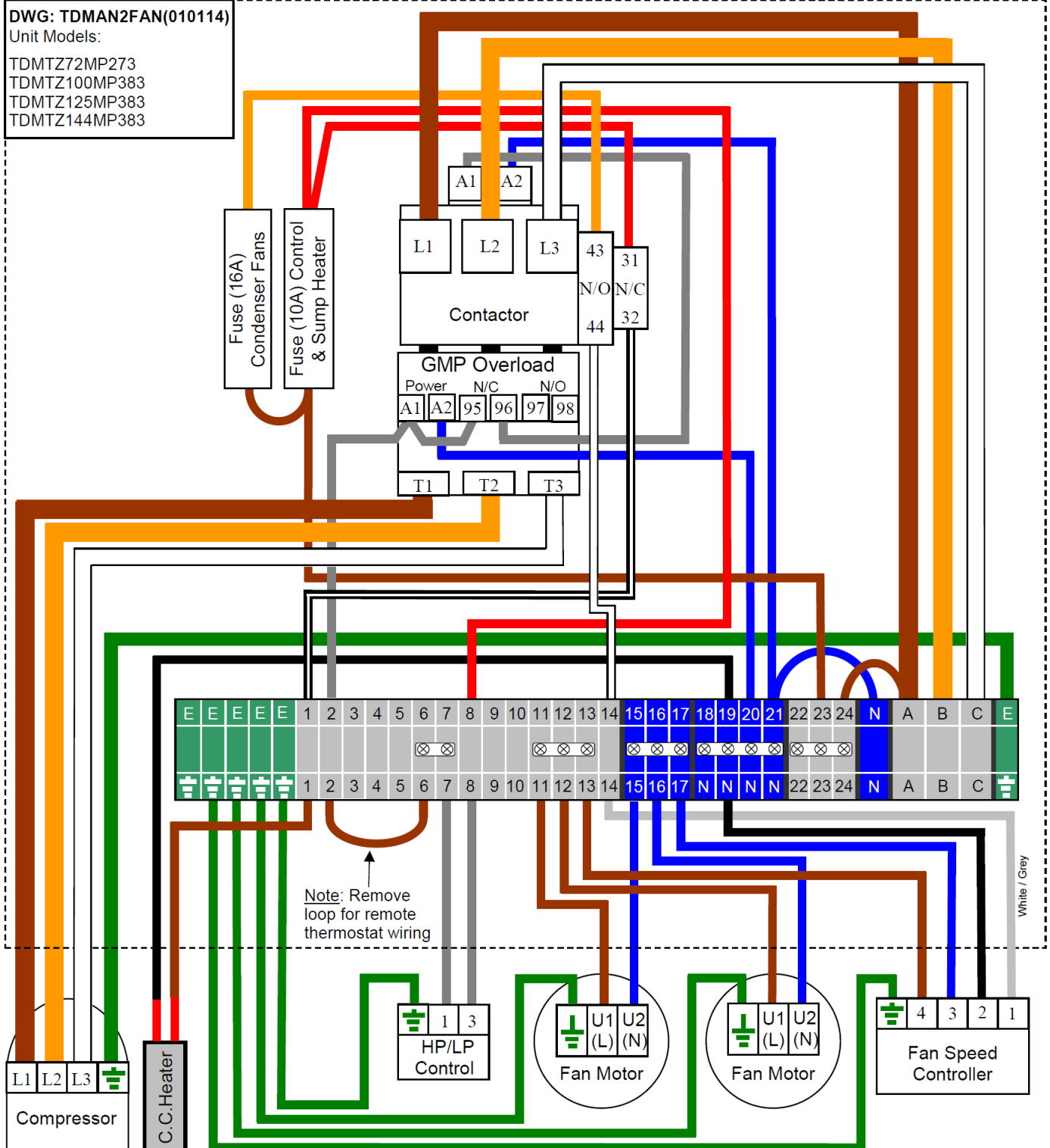
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TD Hermetic Unit Wiring Diagrams (cont'd)

DWG: TDMAN2FAN(010114)

Unit Models:

TDMTZ72MP273
TDMTZ100MP383
TDMTZ125MP383
TDMTZ144MP383



ENTHALPY TD SERIES CONDENSING UNITS

TD Hermetic Unit Spare Parts

Part Description	Model			
	TDCS10ML3001	TDCS14ML4001	TDCS14ML4003	TDCS18ML4001
Compressor - Copeland	CS10K6EPFJ595	CS14K6EPFJ595	CS14K6ETFD595	CS18K6EPFJ595
ebm Fan Motor	S4E300AS7244 (x1)	S4E400AP0244 (x1)	S4E400AP0244 (x1)	S4E400AP0244 (x1)
Speed Controller	RGEZ1N45MFQ1	RGEZ1N45MFQ1	RGEZ1N45MFQ1	RGEZ1N45MFQ1
HP/LP	DNSD306X	DNSD306X	DNSD306X	DNSD306X
Compressor Contactor	-	-	MC12B240V	-
Thermal Overload Block	-	-	GMP223P22A	-
Control/Fan Fuse Holder	CMS101	CMS101	CMS101	CMS101
Control/Fan Fuse	10G10	10G10	10G10	10G10
Oil Separator	EOS1004L	EOS1004L	EOS1004L	EOS1004L
Liquid Receiver	1300134B	1300134B	1300134B	1300134B
Receiver Outlet Valve	R051FA8DS	R051FA8DS	R051FA8DS	R051FA8DS
Receiver Valve Gasket	020002800	020002800	020002800	020002800
Suction Service Valve	R052FB4DS	R052FB4DS	R052FB4DS	R052FB4DS
Suction Valve Gasket	020002802	020002802	020002802	020002802
Discharge Service Valve	R051FA8DS	R051FA8DS	R051FA8DS	R051FA8DS
Discharge Valve Gasket	020002800	020002800	020002800	020002800
Liquid Drier & Sight Glass	CSG084S (combo)	CSG084S (combo)	CSG084S (combo)	CSG084S (combo)
Electrical Box	AIRENTENCL	AIRENTENCL	AIRENTENCL	AIRENTENCL

Part Description	Model			
	TDCS18ML4003	TDCS20ML4003	TDCS27MP123	TDCS33MP123
Compressor - Copeland	CS18K6ETFD595	CS20K6ETFD595	CS27K6ETFD595	CS33K6ETFD595
ebm Fan Motor	S4E400AP0244 (x1)	S4E400AP0244 (x1)	S4E450AU0337 (x1)	S4E450AU0337 (x1)
Speed Controller	RGEZ1N45MFQ1	RGEZ1N45MFQ1	RGEZ1N45MFQ1	RGEZ1N45MFQ1
HP/LP	DNSD306X	DNSD306X	DNSD306X	DNSD306X
Compressor Contactor	MC12B240V	MC12B240V	MC12B240V	MC12B240V
Thermal Overload Block	GMP223P22A	GMP223P22A	GMP223P22A	GMP223P22A
Control/Fan Fuse Holder	CMS101	CMS101	CMS101	CMS101
Control/Fan Fuse	10G10	10G10	10G10	10G10
Oil Separator	EOS1004L	EOS1004L	EOS1005	EOS1005
Liquid Receiver	1300134B	1300134B	1320315A	1320315A
Receiver Outlet Valve	R051FA8DS	R051FA8DS	R051FB2DS	R051FB2DS
Receiver Valve Gasket	020002800	020002800	020002800	020002800
Suction Service Valve	R052FB4DS	R052FB4DS	R052FB7DS	R052FB7DS
Suction Valve Gasket	020002802	020002802	020002802	020002802
Discharge Service Valve	R051FA8DS	R051FA8DS	R051FB2DS	R051FB2DS
Discharge Valve Gasket	020002800	020002800	020002800	020002800
Liquid Drier & Sight Glass	CSG084S (combo)	CSG084S (combo)	CSG165S (combo)	CSG165S (combo)
Electrical Box	AIRENTENCL	AIRENTENCL	AIR50650	AIR50650

ENTHALPY TD SERIES CONDENSING UNITS

TD Hermetic Unit Spare Parts

Part Description	Model			
	TDMTZ72MP273	TDMTZ100MP383	TDMTZ125MP383	TDMTZ144MP383
Compressor - Maneurop	MTZ724VI	MTZ1004VI	MTZ1254VI	MTZ1444VI
ebm Fan Motor	S4E500AM0301 (x2)	S6E630AN0101 (x2)	S6E630AN0101 (x2)	S6E630AN0101 (x2)
Speed Controller	RGEZ1Q45MFQ1	RGEZ1Q45MFQ1	RGEZ1Q45MFQ1	RGEZ1Q45MFQ1
HP/LP	DNSD306X	DNSD306X	DNSD306X	DNSD306X
Compressor Contactor	MC22B240V	MC32A240V	MC32A240V	MC32A240V
Thermal Overload Block	GMP223P22A	GMP403P40A	GMP403P40A	GMP403P40A
Control Fuse Holder	CMS101	CMS101	CMS101	CMS101
Control Fuse	10G10	10G10	10G10	10G10
Fan Fuse Holder	CMS101	CMS101	CMS101	CMS101
Fan Fuse	10G16	10G16	10G16	10G16
Oil Separator	EOS1005	EOS1007	EOS1007	EOS1007
Liquid Receiver	1320620A	1320620A	1320620A	1320620A
Receiver Outlet Valve	R051FB2DS	R051FB2DS	R051FB2DS	R051FB2DS
Receiver Valve Gasket	020002800	020002800	020002800	020002800
Suction Service Valve	R053FC2DS	R053FC2DS	R053FC2DS	R053FC2DS
Suction Valve Gasket	020002803	020002803	020002803	020002803
Discharge Service Valve	R052FB2DS	R052FB2DS	R052FB2DS	R052FB2DS
Discharge Valve Gasket	020002802	020002802	020002802	020002802
Liquid Drier & Sight Glass	CSG165S (combo)	C305S & SA15S	C305S & SA15S	C305S & SA15S
Electrical Box	AIR50650	AIR50650	AIR50650	AIR50650

