

Asia Pacific - Catalogue

Lighter and more compact

Fast installation and
easy maintenance

D48 Version | R404A/R507, R134a, R448A/R449A - 50Hz



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Reduced refrigerant charge

Condensing units with a micro-channel condenser use up to 30% less refrigerant charge compared to units with a fin-tube condenser, which means savings for the customer and higher efficiency.



Lightweight condensing units

The new condensing units with micro-channel condenser are up to 15kg lighter than conventional units.



Quicker installation

Reduced time spent on charging refrigerant due to the smaller amount of refrigerant used.

The vacuum time is also reduced, due to the fact of having lower inner volume required by the micro-channel condenser when compared to fin&tube design.

Quicker installation increases the installer's productivity on daily use.

The lighter weight of the unit also helps on the installation handling and productivity increase.



Easier maintenance

The units are equipped with suction, discharge, solenoid and GBC valves, which make carrying out maintenance quick and easy.

The micro-channel condensers are easier and quicker to clean than fin-tube condensers.

Both factors mean that preventive maintenance on these units can be carried out up to 50% faster than on traditional units.

Learn more about our different solutions

Crankcase heater



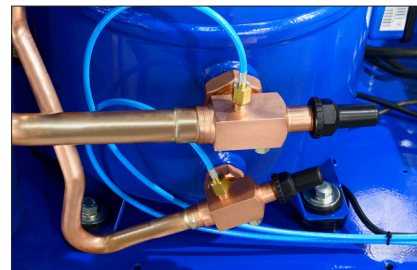
- The crankcase heater reduces the risk of compressor breakdown due to flooded start by up to 23.5%, which extends the service life of the condensing unit.

Micro-channel condenser



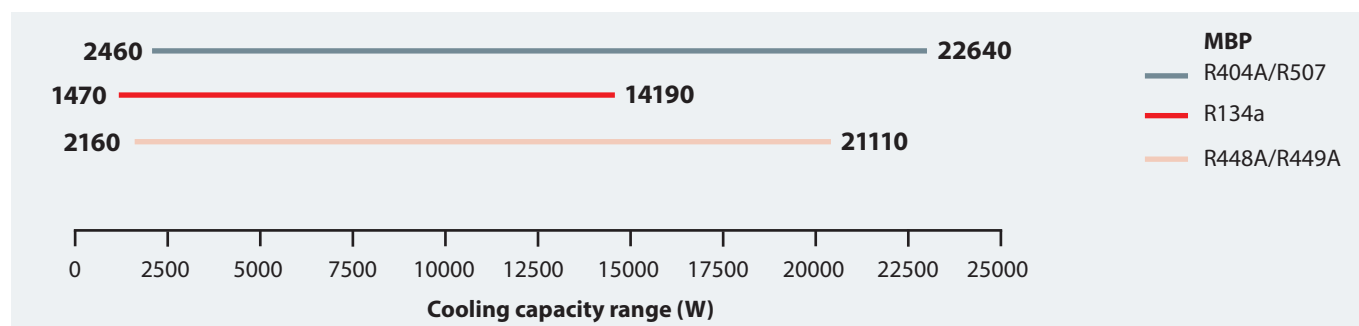
- The micro-channel condenser has a smaller internal volume, which uses less refrigerant charge and is more efficient, reducing the time spent on charging and emptying the unit. Cleaning and maintenance work is made simpler and quicker.

Rotalock valves



- The Rotalock valves on the suction and discharge lines in the condensing unit allow for the compressor to be replaced more quickly and reduce emptying time, which streamlines maintenance work.

Nominal capacity ranges (W)



MBP Rated conditions, Saturated suction temperature -10°C. Ambient air temperature +32°C. Superheat 18K. Subcooling 3K

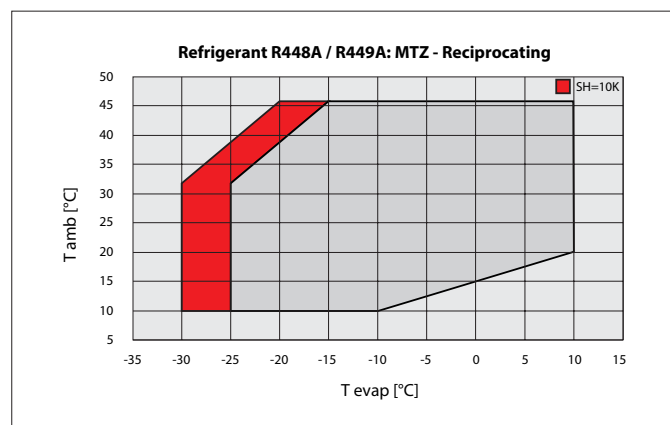
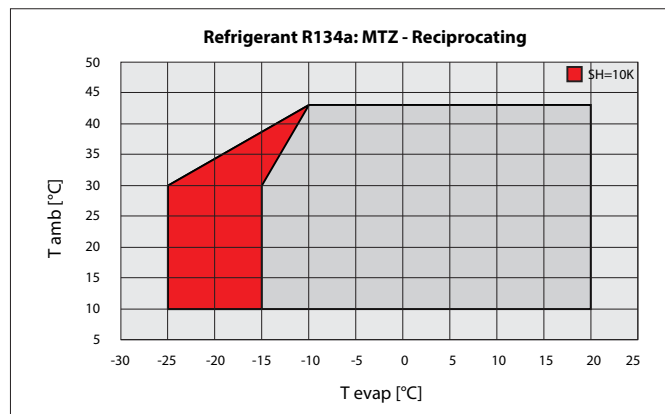
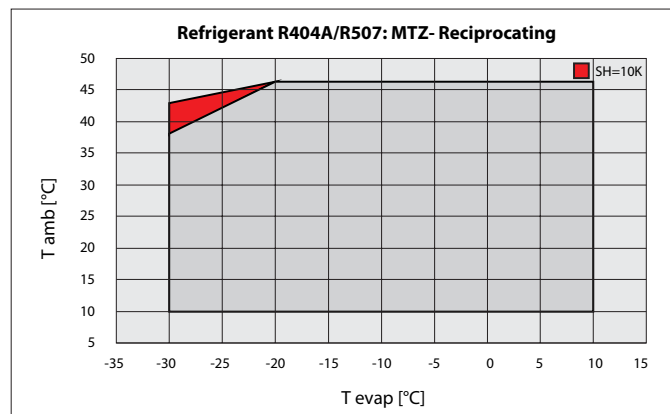
T Evaporation [°C]	Min	Max
MBP R404A/R507	-30	10
MBP 134a	-10	20
MBP R448A/R449A	-25	10

Limits depends on the selected unit

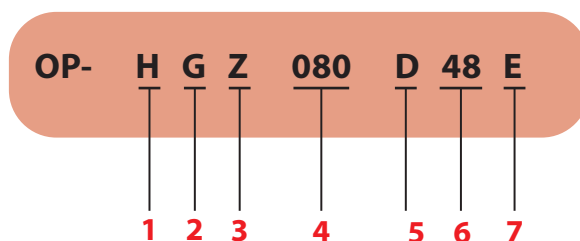


For more information, please refer to Coolselector® at coolselector.danfoss.com or contact Danfoss

MBP



Designation system



1	Application: H = HBP / MBP	4	Compressor type and model: MTZ Series for hermetic MBP
2	Design: G = Condensing unit with hermetic compressor, two fans	5	Platform: D = Micro-channel technology
3	Compressor Oil: Z = Polyolester oil (POE) 175PZ Reciprocating Compressor MTZ	6	Product configuration: 48 = See table below
		7	Electrical code: E = 400V 3Ph 50Hz Comp. & 230V 1Ph Fan Motor

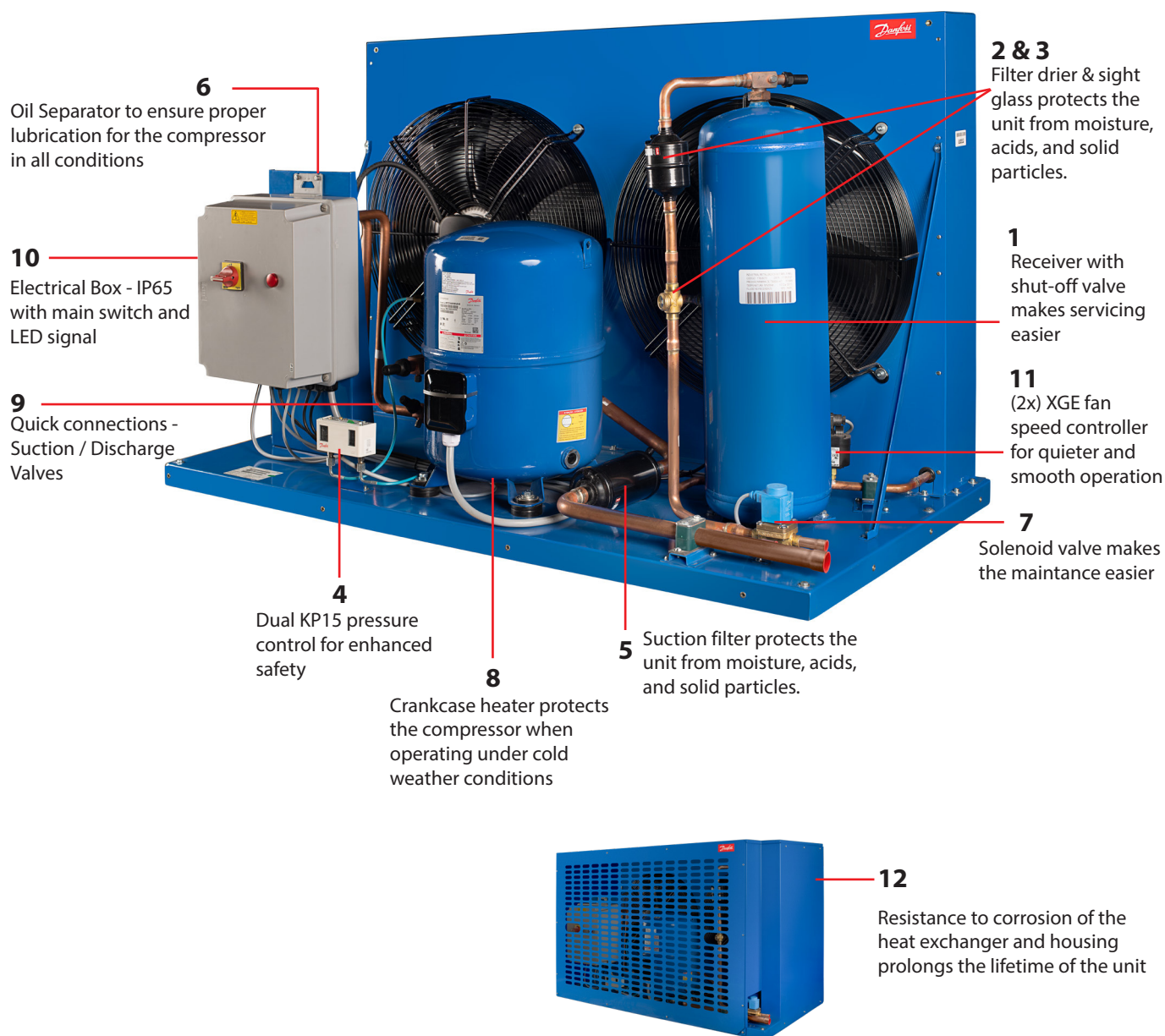
Note

The unit can only be used with the refrigerants given in the capacity tables.

Label - Designation

OPTYMA™		<i>Danfoss</i> MADE IN BRAZIL	
A- Modelo:			
B- Código:			
C- Serial:			
D- Compressor:	230V 60Hz 1Ph LRA 51A RLA 9,2A	Teste:	LP(BP): 174 psi HP(AP): 331 psi – E
Ventilador:	230V 60Hz 1Ph FLA0,96	Refrigerante:	R404A/R507/R134a – F
MCA: 14,2A		Óleo Tipo:	Polyolester — G
Danfoss do Brasil Ind. E Com. Ltda		Diagrama Elétr:	
		CNPJ: 62.158.480/0001-70	

- A: Model
- B: Code number
- C: Serial number and bar code
- D: Supply voltage, Locked Rotor Ampere
- E: Housing service pressure
- F: Refrigerant gas
- G: Oil type



Version - Product configuration

S No.	Application	MBP
	Component	
1	Liquid Receiver	X
2	Filter Drier	X
3	Sight Glass	X
4	Low / High Pressure Switch - KP15	X
5	Suction Filter	X
6	Oil Separator	X
7	Solenoid Valve	X
8	Crankcase Heater	X
9	Quick connections - Suction / Discharge Valve	X
10	Electrical Box - IP65 with LED signal	X
11	2 X Fan Speed Controller	X
12	Housing	X

Mechanical data

Application	Consensing Unit	Compressor			Condenser		Fan motor			Receiver	Connection		Weight (Kg)	
		Model	Displacement @2900rpm	Swept Volume	Type	Internal Volume	No.	Diameter	Air Flow		Suction Line	Liquid Line	Gross	Net
			(m ³ /h)	(cm ³ /rev.)		(L)		Ø (mm)	(m ³ /h)				D48	D48
MBP	HGZ080	MTZ80	23.6	135.78	N8	1,6	2	450	8800	18	1 1/8"	5/8"	155	140
	HGZ100	MTZ100	29.8	171.26	N8	1,6	2	450	8800	18	1 1/8"	5/8"	171	156
	HGZ125	MTZ125	37.5	215.44	Q8	2,5	2	600	13980	24	1 1/8"	5/8"	257	239
	HGZ144	MTZ144	42.1	241.87	Q8	2,5	2	600	13980	24	1 1/8"	5/8"	262	244
	HGZ160	MTZ160	47.3	271.55	Q8	2,5	2	600	13980	24	1 1/8"	5/8"	262	244

Electrical data

Application	Condensing Unit			Fan motor			
	Model	400V 3Ph 50Hz (E code)	400V 3Ph 50Hz (4 code)	No.	220V 1Ph 50-60Hz		
		MOC	MOC		Amper (FLA)	Power (W)	
MBP	HGZ080	16.2	13.6	2	2.6	2 x 310	
	HGZ100	18.3	15.7	2	2.6	2 x 310	
	HGZ125	24.5	19.3	2	5.2	2 x 430	
	HGZ144	26.6	21.4	2	5.2	2 x 430	
	HGZ160	30.9	25.7	2	5.2	2 x 430	

FLA: Full Load Current

MOC: Maximum operating current is the current when the compressors run at maximum load of operating envelope within voltages printed on the nameplate. MOC can be used to select cables and contactors.

Model	Version code	Electrical Code	Compressor	Ambient temperature (°C)	Cooling capacity (W) at evaporating temperature													
					-10°C		-5°C		0°C		5°C		10°C		15°C		20°C	
	D48				CC	PC	CC	PC	CC	PC	CC	PC	CC	PC	CC	PC	CC	PC
HGZ080	115F0901	E	MTZ80	32	6741	4535	8658	4833	10906	5141	13501	5460	16454	5798	19771	6157	23456	6544
				35	6402	4595	8252	4912	10426	5236	12940	5574	15807	5928	19034	6306	22625	6710
				38	6070	4652	7852	4987	9951	5330	12384	5686	15165	6059	18301	6454	21797	6878
				43	5532	4741	7198	5108	9171	5483	11469	5871	14105	6276	17089	6703	20426	7158
HGZ100	115F0902	E	MTZ100	32	7874	5250	10229	5616	12979	5967	16133	6303	19691	6625	23646	6938	27988	7249
				35	7485	5325	9755	5710	12406	6085	15447	6449	18882	6804	22705	7154	26905	7506
				38	7097	5394	9280	5800	11831	6200	14761	6593	18072	6982	21763	7370	25822	7764
				43	6451	5494	8491	5937	10875	6381	13618	6827	16724	7275	20193	7728	24018	8194
HGZ125	115F0903	E	MTZ125	32	10187	5977	13164	6449	16648	6891	20661	7297	25216	7667	30320	7999	35971	8297
				35	9672	6048	12546	6544	15910	7016	19787	7459	24192	7870	29132	8250	34607	8602
				38	9153	6106	11922	6628	15165	7132	18906	7614	23160	8069	27936	8499	33235	8907
				43	8281	6176	10874	6747	13914	7309	17426	7858	21427	8391	25928	8908	30934	9412
HGZ144	115F0904	E	MTZ144	32	12669	7109	16134	7650	20124	8191	24652	8729	29719	9266	35320	9805	41440	10352
				35	12091	7223	15442	7786	19301	8353	23680	8923	28582	9496	34003	10076	39930	10667
				38	11503	7330	14740	7916	18466	8511	22695	9114	27430	9724	32670	10346	38404	10984
				43	10509	7495	13551	8122	17052	8767	21027	9426	25484	10102	30422	10795	35833	11512
HGZ160	115F0905	E	MTZ160	32	14236	7739	17902	8374	22122	9036	26911	9735	32276	10479	38216	11279	44724	12147
				35	13582	7860	17125	8526	21211	9219	25854	9949	31064	10726	36840	11558	43176	12458
				38	12936	7981	16354	8679	20303	9405	24799	10167	29852	10976	35463	11841	41628	12773
				43	11877	8181	15083	8935	18800	9716	23048	10535	27836	11399	33170	12321	39046	13310

Superheat 18K
Subcooling 3K

Superheat 10K
Subcooling 3K

CC: Cooling capacity (W)
PC: Power input (W)



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Model	Version code	Electrical Code	Compressor	Ambient temperature (°C)	Cooling capacity (W) at evaporating temperature																	
					-30°C		-25°C		-20°C		-15°C		-10°C		-5°C		0°C		5°C		10°C	
					CC	PC	CC	PC	CC	PC	CC	PC	CC	PC	CC	PC	CC	PC	CC	PC	CC	PC
HGZ080	115F0901	E	MTZ80	32	4452	4961	5974	5552	7759	6123	9819	6680	12159	7232	14778	7785	17668	8348	20818	8928	24214	9531
				35	4129	4960	5587	5584	7293	6185	9259	6771	11490	7350	13989	7928	16749	8515	19763	9116	23017	9739
				38	3815	4951	5209	5609	6834	6242	8704	6859	10826	7465	13204	8070	15834	8681	18711	9305	21825	9949
				43	3205	4916	4591	5634	6081	6324	7790	6994	9729	7651	11905	8303	14319	8957	16969	9622	19852	10303
HGZ100	115F0902	E	MTZ100	32	4672	5849	6477	6515	8605	7162	11063	7795	13834	8418	16896	9037	20222	9659	23783	10287	27549	10926
				35	4310	5850	6045	6555	8077	7242	10415	7912	13045	8570	15949	9224	19104	9878	22486	10536	26068	11203
				38	3939	5830	5606	6577	7543	7304	9762	8013	12253	8710	15000	9399	17986	10086	21190	10776	24591	11473
				43	3198	5750	4855	6567	6637	7365	8662	8144	10926	8908	13417	9661	16126	10409	19040	11155	22146	11905
HGZ125	115F0903	E	MTZ125	32	6601	7105	8893	7864	11636	8621	14851	9380	18548	10148	22725	10935	27369	11749	32452	12605	37939	13517
				35	6105	7123	8282	7918	10887	8713	13942	9514	17460	10327	21441	11159	25876	12021	30737	12926	36005	13886
				38	5632	7132	7693	7963	10158	8798	13052	9641	16389	10499	20174	11377	24397	12288	29036	13243	34087	14252
				43	4744	7131	6758	8024	8987	8925	11609	9840	14643	10772	18096	11730	21966	12723	26240	13761	30932	14854
HGZ144	115F0904	E	MTZ144	32	7890	8024	10508	8890	13576	9764	17110	10650	21114	11556	25571	12493	30464	13473	35764	14507	41440	15610
				35	7318	8048	9820	8953	12744	9869	16109	10800	19919	11753	24163	12740	28826	13770	33884	14855	39310	16010
				38	6760	8059	9143	9004	11920	9962	15112	10939	18727	11940	22756	12976	27189	14057	32006	15195	37183	16402
				43	5676	8051	8036	9062	10562	10094	13461	11148	16746	12231	20417	13351	24466	14519	28881	15745	33653	17041
HGZ160	115F0905	E	MTZ160	32	8562	8768	11388	9785	14681	10798	18454	11831	22705	12907	27421	14050	32573	15285	38113	16641	43974	18149
				35	7948	8784	10652	9852	13793	10917	17386	12000	21434	13126	25926	14317	30837	15599	36124	17002	41724	18554
				38	7347	8786	9926	9907	12912	11025	16323	12161	20165	13337	24432	14578	29101	15910	34135	17360	39475	18961
				43	6176	8762	8740	9975	11461	11184	14564	12411	18059	13676	21946	15005	26213	16423	30826	17958	35736	19643

Superheat 18K
Subcooling 3K

Superheat 10K
Subcooling 3K

CC: Cooling capacity (W)
PC: Power input (W)



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Model	Version code	Electrical Code	Compressor	Ambient temperature (°C)	Cooling capacity (W) at evaporating temperature															
	-25°C				-20°C		-15°C		-10°C		-5°C		0°C		5°C		10°C			
	CC				PC	CC	PC	CC	PC	CC	PC	CC	PC	CC	PC	CC	PC	CC	PC	
HGZ080	115F0901	E	MTZ80	32	5109	5067	6764	5573	8705	6095	10938	6635	13464	7196	16273	7784	19350	8408	22665	9077
				35	4777	5101	6404	5631	8267	6180	10411	6749	12838	7342	15539	7963	18497	8621	21688	9327
				38	4477	5129	6042	5681	7826	6257	9881	6855	12208	7479	14800	8133	17642	8826	20710	9567
				43	---	---	5375	5751	7090	6369	8994	7015	11153	7690	13564	8399	16214	9148	19078	9947
HGZ100	115F0902	E	MTZ100	32	5402	5631	7340	6228	9631	6844	12282	7481	15288	8143	18634	8835	22302	9567	26267	10350
				35	5002	5657	6893	6280	9084	6927	11620	7599	14499	8298	17709	9031	21233	9806	25047	10634
				38	4645	5678	6455	6326	8545	7004	10966	7710	13719	8447	16794	9221	20174	10039	23836	10913
				43	---	---	5676	6394	7666	7121	9898	7883	12441	8683	15289	9525	18428	10416	21835	11368
HGZ125	115F0903	E	MTZ125	32	7414	6903	10108	7660	13318	8431	17060	9213	21339	10007	26149	10818	31473	11654	37292	12524
				35	6870	6938	9494	7731	12564	8544	16147	9373	20251	10218	24871	11085	29994	11980	35601	12912
				38	6381	6967	8892	7794	11821	8647	15246	9523	19174	10420	23605	11342	28526	12295	33920	13288
				43	---	---	7824	7883	10608	8802	13767	9754	17403	10735	21517	11748	26101	12799	31139	13895
HGZ144	115F0904	E	MTZ144	32	9306	7848	12185	8679	15525	9522	19338	10392	23625	11307	28378	12285	33582	13345	39219	14506
				35	8657	7910	11486	8790	14693	9682	18355	10601	22477	11564	27050	12591	32061	13701	37488	14915
				38	8081	7958	10804	8890	13877	9834	17389	10804	21345	11818	25738	12897	30554	14059	35768	15328
				43	---	---	9585	9032	12550	10068	15813	11129	19492	12234	23583	13404	28069	14661	32921	16029
HGZ160	115F0905	E	MTZ160	32	10568	8701	13815	9660	17571	10646	21842	11672	26626	12756	31907	13915	37661	15169	43859	16539
				35	9830	8774	13025	9785	16630	10824	20732	11905	25329	13045	30408	14261	35945	15576	41905	17010
				38	9174	8833	12251	9899	15707	10995	19641	12133	24052	13330	28928	14607	34244	15984	39963	17487
				43	---	---	10864	10061	14206	11256	17860	12496	21961	13797	26496	15181	31440	16670	36746	18293
Superheat 18K			Superheat 10K		CC: Cooling capacity (W)															
Subcooling 3K			Subcooling 3K		PC: Power input (W)															



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Mechanical components

Condensing Unit		HGZ080D48E	HGZ100D48E	HGZ125D48E	HGZ144D48E	HGZ160D48E
Condensing Unit code no.		115F0901	115F0902	115F0903	115F0904	115F0905
Compressor		MTZ80-4VI	MTZ100-4VI	MTZ125-4VI	MTZ144-4VI	MTZ160-4VI
Condenser		N8	N8	Q8	Q8	Q8
		191U0645E	191U0645E	193U8025E	193U8025E	193U8025E
Oil Lubricant		120Z0638	120Z0638	120Z0638	120Z0638	120Z0638
Fan Motor		119-8254	119-8254	119-8255	119-8255	119-8255
Fan Speed Controller		XGE 2C	XGE 2C	XGE 2C	XGE 2C	XGE 2C
		061H3144	061H3144	061H3144	061H3144	061H3144
Liquid Receiver		193U6264	193U6264	193U6265	193U6265	193U6265
Oil Separator		191U007710	191U007710	191U007810	191U007810	191U007810
Basket type suction filter		191U9907	191U9907	191U9907	191U9907	191U9907
Filter Drier		DML165s	DML165s	DML305s	DML305s	DML305s
		023Z4581	023Z4581	023Z0069	023Z0069	023Z0069
Burn-out filter drier		DAS 309S	DAS 309S	DAS 419S	DAS 419S	DAS 419S
		023Z1016	023Z1016	023Z1018	023Z1018	023Z1018
Sight Glass		SGP 16s	SGP 16s	SGP 16s	SGP 16s	SGP 16s
		014L0184	014L0184	014L0184	014L0184	014L0184
Solenoid Valve	Body	EVR10	EVR10	EVR 15	EVR 15	EVR 15
		032L1214	032L1214	032L1228	032L1228	032L1228
	Coil	018F6271	018F6271	018F6271	018F6271	018F6271
Rotolock Valve	Suction	6804506V02	6804506V02	6804506V02	6804506V02	6804506V02
	Discharge	6804503V04	6804503V04	6804504V05	6804504V05	6804504V05
	Receiver	6804507V10	6804507V10	6804502V09	6804502V09	6804502V09
Dual Pressure Switch (KP15)		060-126466 or 060-126941	060-126466 or 060-126941	060-126466 or 060-126941	060-126466 or 060-126941	060-126466 or 060-126941
		120Z0459	120Z0459	120Z0459	120Z0459	120Z0459
Housing		191U127767	191U127767	191U127867	191U127867	191U127867
Presssure relieve valve		118U5304	118U5304	118U5304	118U5304	118U5304

Eletrical Components

Condensing Unit		HGZ080D48E	HGZ100D48E	HGZ125D48E	HGZ144D48E	HGZ160D48E
Electrical Box		193U7044	193U7045	193U7046	193U7047	193U7047
Electrical Diagram		193U7043	193U7043	193U7043	193U7065	193U7065
Thermomagnetic Breaker		GV2P21	GV2P22	GV2P32	GV3P40	GV3P40
Handle Kit Thermo Breaker		GV2APN01	GV2APN01	GV2APN01	VCF2	VCF2
Contactora		LC1D25M7	LC1D32M7	LC1D32M7	LC1D40M7	LC1D40M7
Supply Monitoring Relay		RM22TG20	RM22TG20	RM22TG20	RM22TG20	RM22TG20
Fuse		10A	10A	10A	10A	10A

(1) The condenser kit consists of a microchannel, hood and seal.

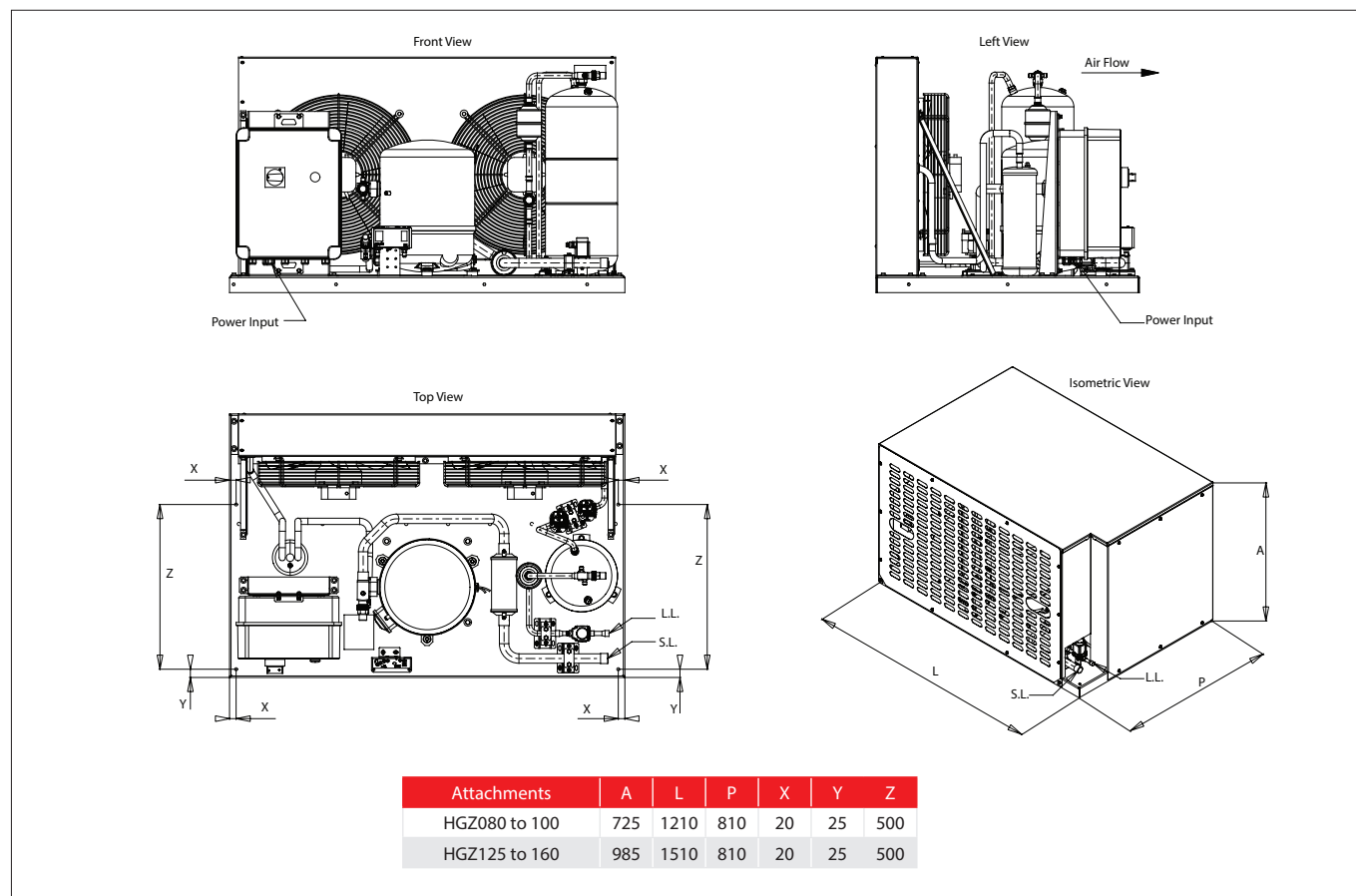
(2) The fan kit is supplied in assembled form with all parts (motor, guard, blades and capacitor).

(3) The oil separators are spare parts.

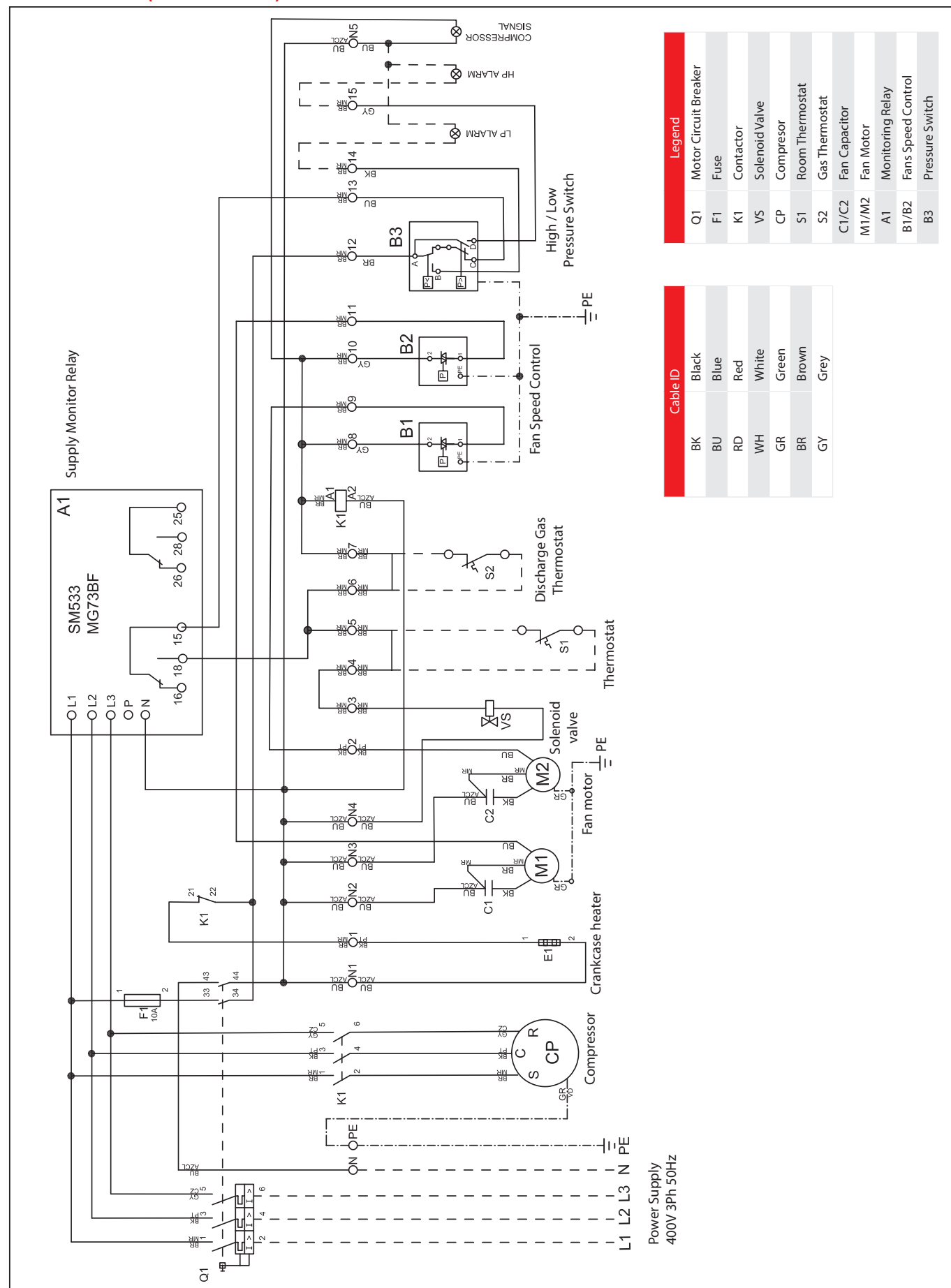
(4) The housings are spare parts.

(5) The Electrical components (Thermomagnetic Breaker, Handle Kit, Contactor and Supply Monitoring Relay) are produced by Schneider Electric.

Version D48 (2 Fans)



Electrical code E (HGZ080 to 125) - 400V 3Ph 50Hz



The diagram illustrates the electrical wiring for a 400V 3Ph 50Hz power supply. It shows the connection of various components including a Compressor, Crankcase heater, Fan motor, Solenoid valve, Discharge Gas Thermostat, and High/Low Pressure Switch. The wiring is organized into a structured layout with terminals and components labeled with cable IDs.

Legend

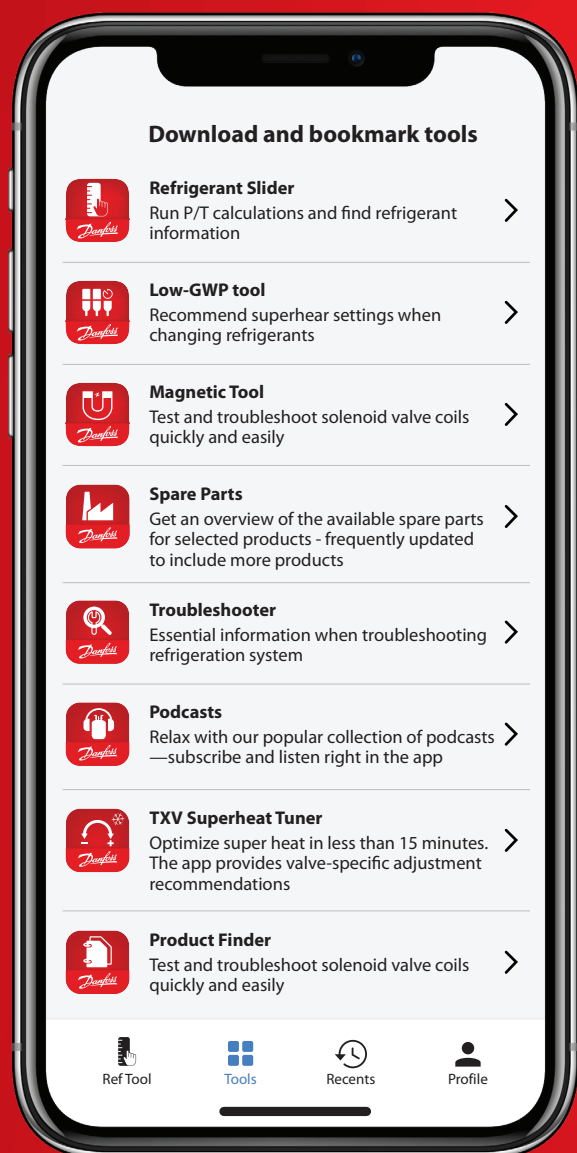
Cable ID	Color
BK	Black
BU	Blue
RD	Red
WH	White
GR	Green
BR	Brown
GY	Grey

Components

Component	Symbol
Q1	Motor Circuit Breaker
F1	Fuse
K1	Contact
CH1	Main Switch
VS	Solenoid Valve
CP	Compressor
S1	Room Thermostat
S2	Gas Thermostat
C1/C2	Fan Capacitor
M1/M2	Fan Motor
A1	Monitoring Relay
B1/B2	Fans Speed Control
B3	Pressure Switch

Notes:

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