



Model: NR-D513XB-S8
NR-D513XR-S8

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Service Manual

REFRIGERATOR



MODELS:

NR-D513XB-S8

NR-D513XR-S8



 **WARNING**



CFCs have been used in refrigerator as refrigerant and the insulation materials for many years. But it is now known that these compounds which once seemed so ideal for use as cleaning agents and in refrigeration systems, destroy the earth's ozone layer. As a result, an international body decided on a total worldwide ban of harmful CFCs by the end 1995.

EXPLANATION OF COLOUR CODE

The suffix of model number shows the colour of that units as in the following table.

Suffix	Color
S	STEEL SILVER

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Panasonic®

1 Specifications

MODEL	NR-D513XB-S8
SPECIFICATIONS	
Storage Capacity	432 L (FC:87 L,PC:263 L,VC:82 L)
Gross Capacity	512 L (FC:125 L,PC:280 L,VC:107 L)
Outside dimensions	
Width	774 mm
Depth	745 mm
Height	1832 mm
Net weight	88 kg

Type	Frost-free refrigerator
Temperature control	Micro-computer control (FC : FCC sensor) / Full-automatic direct control (PC : Damper thermo.)
Defrosting	Full-automatic control Start : micro-computer ; Finish : Defrost sensor
Defrost water disposal	Full-automatic (Forcible evaporated into the air)
Exterior finish	Polyester coated finish
Inner liner	Vacuum formed ABS resin
Insulation	Polyurethane foam (cabinet & door)
Power source	a.c 220 V/ 50 Hz , a.c 230 V/ 50Hz , a.c 240 V/ 50 Hz

SEALED UNIT

Compressor	ENI68C13DCH
Winding Resistance (measured at 20°C)	(U-W) 5.79 Ω
	(U-V) 5.79 Ω
	(V-W) 5.79 Ω
Evaporator	Fin tube type
Condenser	Wrapper type (Consealed condenser)
Refrigerant charge	HFC-134a , 140 g
Oil charge	215 ml

ELECTRIC PARTS

Overload protector	MM3-71CCQ
FCC Sensor	R-20 19.09KΩ B:3850K
DEF. Sensor	R13 3.4338KΩ B:3850K
Fan motor	U11P14BS1Z3 (DC14 V,0.19 A)
Fuse	E4A00072C , 250 V/ 10 A/ 72 °C or SF70E , 250V/10A/73 °C
Defrost heater	230 V/200 W/ 264.5 Ω
VC separator heater	230 V / 6.25 W / 8464 Ω
VC Heater	230 V / 6.25 W / 8464 Ω
PC damper thermo.	SD-8001-1
LED	d.c 12 V 3.5 W
Door switch (PC)	(PC : 8203) 250 V/ 5 A

2 Specifications

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.5 TEMPERATURE CHARACTERISTIC

TEMPERATURE OF EACH COMPARTMENT,COMPRESSOR RUNNING RATIO

Temperature Adjuetment	FREEZER COMPARTMENT	MIN	MED	MAX
	REFRIGERATOR COMPARTMENT	1	MED	7
Freezer compartment (FC) Temp.(degree)		-16.0	-18.0	-20.0
Refrigerator compartment (PC) Temp.(degree)		5.0	4.0	0.0
Fine Fresh room (FF) Temp.(degree)		3.5	-0.5	-1.0
Vegetable compartment (VC) Temp.(degree)		8.0	6.5	1.0
Compressor running ratio (%)		70.0%	80.0%	75.0%

CONDITION)

Atmosphere Temperature : 32 degree

NO LOAD (NO FOODS), NO DOOR OPEN AND CLOSE

These indicating temperature is stable condition. (Approximately)



TEMPERATURE CONTROL OF THE FREEZER

The temperature can be adjusted for MIN-MED-MAX levels indicating operate and level.

MIN Higher by approx -17°C ~ -20°C

MAX Lower by approx -21°C ~ -23°C

- The temperature for freezer compartement can be set in steps,more detailed than as

"MIN" and "MED" and "MAX" as show in the table.

- 1.Set "MIN" with the "FREEZER CONTROL."button.
- 2.Press the "FREEZER CONTROL." button(for 10 Seconds).
- 3.Set by pressing the "FREEZER CONTROL." button.

To reset the setting,repeat steps 1 , 2 and 3.

Cooling Level	LED display at "FREEZER CONTROL" botton		
	MIN	MED	MAX
MIN ↓	●	—	—
	●	○	—
	●	●	—
MED ↓	○	●	—
	—	●	—
	—	●	○
MAX	—	○	●

● Lighting

○ Blinking

Remark

When operate the refrigerator for the first time, after connect the plug, adjust the temperature to center position of each control and leave it for 24 hours for the effective cooling operation. After that, adjust the temperature as you prefer. If you want to save the energy, do not adjust the temperature lower than the actual operating condition.



R134a Inverter compressors
Application : L.B.P. (Low Back Pressure)

Category	Series	Model	Speed range	Performance with inverter board "WBAE1WN" Incl. Inverter board circuit loss					Displacement cm ³	Motor type	Accessories OLP 3/4 disc	Dimension Height mm	Compressor cooling / Oil cm ³		Net weight kg	
				Speed rpm rps	H/L=40/-30 deg C		ASHRAE						CECOMAF	BT		F
					1,500	2,520	3,120	4,320					3,360			
ENI	ENI68C13DCH*	25 to 72rps	Capacity	W					6.80	DC motor	MM3-71CC	153.8	215	215	7.0	
			Input power	W												
			C.O.P.													
			Capacity	W	63	137	172	240								-
ETI	ETI57C13DCH	25 to 72rps	Input power	W	39.1	79.7	103	-	5.65	DC motor	MM3-71CC	153.8	215	215	7.0	
			C.O.P.		1.61	1.72	1.67	-								

<Test conditions>

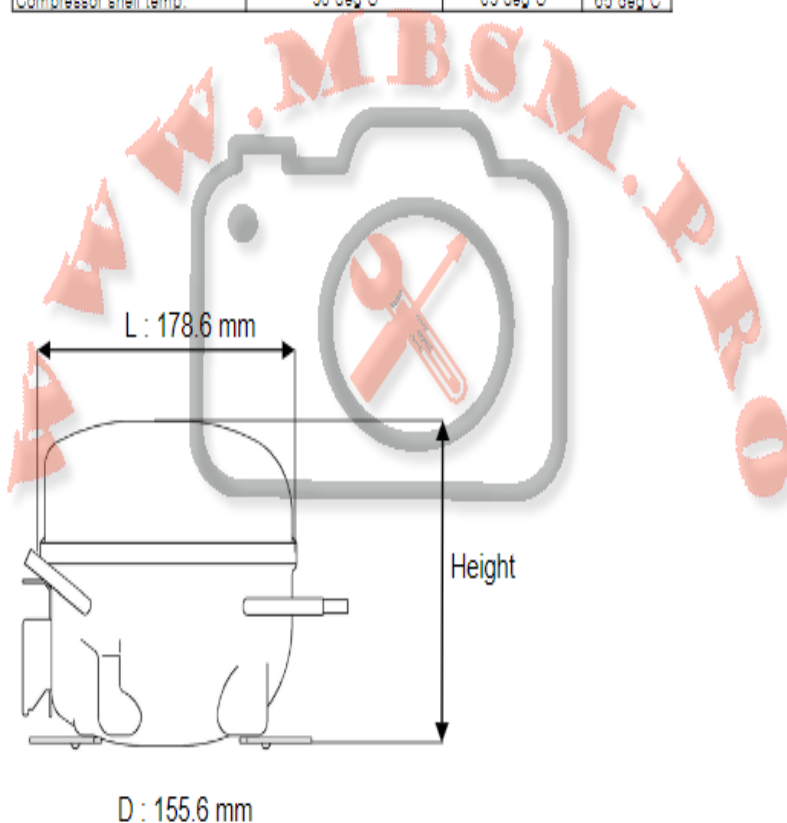
R134a	H/L=40/-30 deg C	ASHRAE	CECOMAF
Evaporating temperature	-30 deg C	-23.3 deg C	-25 deg C
Condensing temperature	40 deg C	54.4 deg C	55 deg C
Gas superheated to	32 deg C	32 deg C	32 deg C
Liquid sub cooled to	32 deg C	32 deg C	55 deg C
Ambient temperature	32 deg C	32 deg C	32 deg C
Compressor shell temp.	50 deg C	65 deg C	65 deg C

<Compressor cooling>

BT: Static cooling
F: Fan cooling

<Status>

* : Under development / Preliminary data



NOTES:

All data covered by this catalogue are given as general information only. Since we are constantly improving our products, the specifications and availability are subject to change without notice.