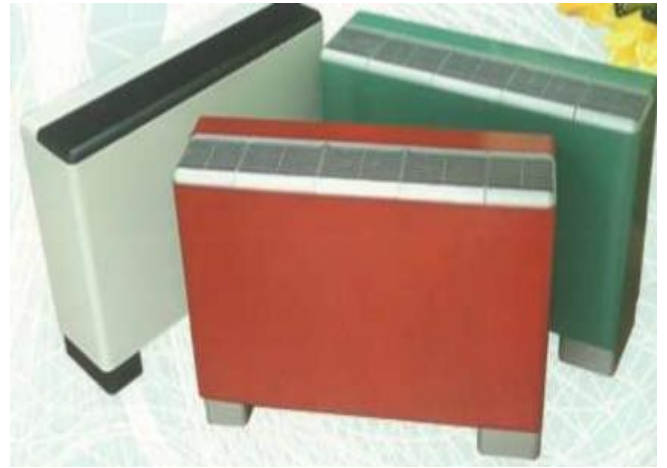


AIR CONDITIONING PLANT

(MARINE TYPE) CAPACITY : 40 TON

MODEL: TVA 60 B
TURKEY



GENERAL SPECIFICATION

Model	TVA 60 B
Make	Termko
Origin	Turkey
Type	Marine and Chilled water type
Capacity	3 in no plant (capacity of each plant -40 Tons)
Dimensions	Length: 250 cm, Breadth: 130 cm, Height: 170 cm
Capacity Control	100-50%
Refrigerant	R-134a
Duty Cycle/ Nature of Duty	24 hour operation per day

Outdoor design/ combined conditions

Outside air temperature	5°C to 45°C
Inside Air Temperature	20°C or less
Relative Humidity (RH)	Up to 95%
Water temperature	Salty and highly muddy

Indoor design conditions

	Indoor design conditions for air-conditioned spaces of ship/craft
Dry Bulb Temperature	38°C
Relative Humidity (RH)	50%

ELECTRICAL POWER SUPPLY

The available power supply onboard ship from Generator is 450 V, 60 Hz, 3 Phase and the shore power supply is 410 -440V, 50 Hz, 3-Phase.

All machineries and equipment of the plant will be compatible to run with both onboard generated supply (450 V, 60 Hz, 3 Phase), and shore power supply (410-440 V, 50 Hz, 3-Phase)

The input power supply tolerance of compressors, pumps and associated motors of the plants will be $\pm 10\%$ of the rated electric supply.

COMPRESSOR SPECIFICATION

Origin	Germany
Brand	Bitzer
Type	Semi-Hermetic, Marine Type, Type Approved.
Model	8FE-60Y
Capacity	40 Tons each
Weight	361 kg
Dimension	L : 901x W: 485 x H: 539 mm
Operating voltage, Phase, Frequency	410-450 V, 3 Phase, 50 and 60 Hz
Lubrication System	Reinforced, Centrifugal
Grade of lubricating oil	BSE32 (Standard), R134a tc>70°C: BSE55 (Option)
Drive	Electric motor driven
Power	63,0 kW
Motor Type	Electrical
RPM	(1450rpm 50Hz), (1750rpm 60Hz)
Mounting	By bolt and nut

SAFETY DEVICES/ FEATURES

Necessary HP and LP cut outs
Low and high refrigerant pressure gauge
Oil pressure gauge
Manual/electrical reset high and low pressure cut out
Thermal and overload trip mechanism for compressor motor with provision for manual reset

CONDENSER SPECIFICATION

Origin	Germany
Brand	Bitzer
Type	Horizontal Shell and Tube (Water Cooled)
Model	K1053
Weight	87 kg
Dimension	L: 1634 x W: 216 x H: 311 mm
Tube Material	Seawater resistant design : Copper-nickel 90/10 (ISO Code CuNi10Fe1Mn; UNS Code C70600) Shell: Carbon steel P265GH Tube sheet: carbon steel P265GH, Plastic-coated Coolant reversing covers: Cast iron EN-GJL-250 or carbon steel P265GH, plastic-coated in the seawater resistant desing
Pressure relief valve	fitted
Type of relief valve	Internal thread 3/8-18 NPTF External thread 1 ¼-12 UNF
Water capacity per condenser	22,7 m3/h
Designed pressure	Max. pressure : 33 bar Max pressure coolant side : 10 bar
Min & Max Temperature	Water inlet temp: 25,0 °C Water outlet temp: 42,2 °C
Cooling Media	Sea Water

EVAPORATOR SPECIFICATION

Origin	Germany
Brand	Bitzer
Type	DRY-EXPANSION EVAPORATORS
Model	SQD2506208-15-6035
Tube Material	Shell, tube sheets: Carbon steel Refrigerant headers: cast iron; carbon steel Tubes: copper, Baffles: plastic polymer
Min & Max Temperature	Min Temperature: -10 °C Max Temperature: 90 °C
Designed pressure	Design pres. refrigerant -1/24.5 bar Design pres. heat tr. fluid-1 / 10 bar
Weight	277 kg
Dimension	L: 1974 x W: 441 x H: 425 mm
Water Capacity	3413,2 kg/h

FAN COIL UNIT SPECIFICATION

Air flow rate	250-1000 ft3/m
Cooling capacity	For 29 in no –5200 Btu/hr, For 28 in no –9200 Btu/hr For 7 in no –12800 Btu/hr, For 9 in no –21200 Btu/hr For 6 in no–48000 Btu/hr.
Fan Type	Snail-type
Coil Type	Copper Tube Coil Radiator
Power supply	220 V /50 Hz
Mounting	Ground

AC Circulating /Chiller Water Pump

Brand	Grundfos
Origin	Netherlands
Type	Centrifugal
Model	CM 25-3 A-R-A-E-AQQE F-A-A-N
Drive	Electric motor driven
Suction Head	10mSS
Discharge Head	22 m3/h, 49,3mSS
Motor Power	5.5 kW, 50 Hz, 3 Phase, 440 V (Compatible with existing Chiller water pipelines).