



GENERAL INFO	
Basic Function	Harbour duties, berthing, towing, firefighting and assisting pollution control
Design	Macduff Ship Design Ltd.

MAIN PARTICULARS	
Length Over All (LOA)	30m
Breadth (B)	11m
Depth (D)	5m
Draught (Max)	3m
Bollard Pull	67 TBP (Aft) 65 TBP (Fwd)
Speed	11.5 Knots
Accommodation	11 Persons

CLASSIFICATION	
Class Society	Bureau Veritas (BV)
Class Notation	BV \boxtimes Hull • Mach, Tug Fire Fighting Ship 1 - Water Spaying, AUT-UMS, Unrestricted Navigation

TANK CAPACITIES	
Fuel	157,210 litres
Fresh Water	30,160 litres
Sewage	11,620 litres
Detergent	9,340 litres
Lube Oil	9,910 litres
Propeller Oil	4,200 litres
Dirty Oil / Bilge	9,910 litres
Hydraulic Oil	4,200 litres
Foam	9,340 litres

ACCOMMODATION & NAVIGATION	
Accommodation	3 x 1-man Cabin (en-suite), 1 x 2-man Cabins

	2 x 3-man Cabins 2 x WC & Shower Galley & Mess-Room
Air Condition	Cooling Capacity :2x31kW Additionally, 1 x 36000 BTU for wheelhouse and 1 x 12000 BTU for ECR
Chairs (Helmsman)	1 x Helmsman
Search Light	2 x 3000 W
Navigation & Communication Equipment	1 x Radar 1 x Echo Sounder 1 x Speed Log 1 x GPS Compass & Navigator 1 x GPS Receiver 1 x AIS 1 x BNWAS 1 x Auto Pilot 1 x Wind Indicator 2 x VHF Sets 1 x NAVTEX 1 x EPIRB 1 x SART 2 x GMDSS VHF 1 x MF/HF 1 x Magnetic Compass 2 x INMARSAT C 1 x Talkback system 1 x VSP Telephone 2 x UHF Fire Fighter 1 x S-VDR 1 x ECDIS 1 x Internal Telephone 1 x PA 1 x CCTV 1 x Aldis lamp

FIRE & SAFETY	
Safety Equipment	2 x 12-man inflatable Life raft
External Fi-Fi System & Water Spring	2 x Remote operated water, foam monitor
Fixed Fire Fighting Equipment	FM200- Fire Fighting System
Fire & Smoke Detection Systems	For E/R, Accommodation and all compartment monitored from wheelhouse & call (alarm) points at several locations' c/w general alarm system from the central alarm panel
Rescue Boat	4m GRP Rescue Boat, 6 Persons, 25 HP outboard engine

DECK MACHINERY	
Anchor & Chain	2 X 375 kg HHP Power type anchor, 2 X 165 m 19 mm Q 3 Chain Cable
Fwd Towing Winch & Windlass	Hydraulic driven, deck and bridge controlled. Double Drum, storage capacity 2x150m for 50mm dia synthetic rope. The drums work independent. Band brake holding load on 1st layer: 1650 kN. Duty on drum 1st layer nominal pull 300kN @ 10.5 m/min (low speed), 30kN @ 38.5m/min (High-speed). Two chain lifters. Two warping heads. Tension, length, speed monitoring system. Render operation by bandbrake.
Aft Towing Winch	Hydraulic driven, deck and bridge controlled. Single Drum, storage capacity 800m for 54mm dia steel wire. Band brake holding load on 1st layer: 1650 kN. Duty on drum 1st layer nominal pull 450 kN @ 7m/min (low-speed) ,54 T @ 35.5m/min (High-speed) Chain driven spooling device. One warping head. Length Tension Monitoring System. Tension, length, speed monitoring system.
Tugger Winch	2 x Hydraulic driven, locally controlled with a proportional valve. Winch equipped with manual operated band brake and manual operated Jaw clutch. Single Drum, storage capacity 130m for

	26mm dia steel wire. Duty on drum 1st layer 100 kN @ 0-18 m/min (approx.) Band brake holding load on 1st layer: 200 kN.
Capstan	1 x Nominal speed 50kN @ 0-15 m/min
Tow Pin	1 x SWL 50T (Design Load 100 T)
Stern Roller	1 x Ø1000mm
Deck Crane	Hydraulic operated 1.6 T@7.8m outreach

MACHINERY	
Main Engine	2 x 2000 kW @ 1600 Rpm
Shafting & Propeller	2 x ASD, FP , 2.5m propeller, HD Slipping Clutch
Generator	2 x 200 ekW, 440V, 60Hz
Harbour Generator	1 x 76 ekW 440V, 60Hz
Fi-Fi Pump	Fire pump Capacity 2 x 1350 m ³ /h , Water/Foam Monitor 2 x 1200/300 m ³ /h , Integrated control System , External Water Spray System
Service Air Compressor	1 x 1.5 kW 10 bar Air Compressor, 1 x 18 m ³ /h dryer, 1 x 100 lt air receiver
Oily Water Separator	1 x 0.5 m ³ /h and 15 ppm.
Sewage Treatment System	1 x for 11 persons
FW Maker	1 x 5m ³ /day reverse osmos type
GS & Bilge & Fire Pump	2 x 25,00 m ³ /h x 6,06 bar
Fuel Transfer Pump	2 x 22,38 m ³ /h x 2,50 bar
Sump Oil Suction Pump	1 x 0,88 m ³ /h x 1,00 bar
Emg. Diesel Fire Pump	1 x 25,00 m ³ /h x 5,56 bar
Sewage Discharge Pump	1 x 4,00 m ³ /h x 2,03 bar
A/C Cooling Pump	1 x 20,00 m ³ /h x 1,98 bar
HPP Cooling Pump	1 x 20,00 m ³ /h x 1,98 bar
FW Hydrophore Set	2 x 3.2 m ³ /h - 200 lt with UV, 160 lt 2X3kW heater



