



**VIKING
NORSAFE**
Boats and davits

Enterprise No.: NO940411696
www.VIKING-life.com

Munin-1000



TECHNICAL SPECIFICATION

VIKING Norsafe Life-Saving Equipment Norway AS

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VIKING Project No.: TBA

VIKING Doc. No.: TSB-0256

Rev. Date: 25.07.2019

Rev. No: 3

1. REGULATION AND CERTIFICATION

Applicable rules and regulations	RCD 2013/53/EC – Design category B
Certificate	Class certificate or flag acceptance on request

2. BOAT SPECIFICATION

2.1. GENERAL BOAT

Type	Search and Rescue Craft (SAR)
Model	Munin-1000
Length overall	10,60 m
Length on fender	10,00 m
Beam	3,51 m
Height	3,40 m
Capacity, maximum	24 persons
Weight, fully equipped	6.150kg
Davit load, with 6 pers@82,5 kg	6.645kg
Davit load, with 24 pers@82,5 kg	8.130kg
Color	Orange (RAL 2004)
Operation temperature:	-20°C till +40°C
Hull/deck material	Fire retardent glass reinforced polyester
Buoyancy material	Polyurethane foam
Bollards/towing	Aft bollard P & S, painter hook in bow
Steering	Hydraulic
Fender	Polyethylene closed cell foam fender with double skinned heavy duty PVC cover
Deck	Self-bailing
Console cover	PVC
Loose equipment	According to SOLAS

The search and rescue craft has excellent reliability, maneuverability and sea keeping abilities in order to fulfil its prime function - to provide an effective means of search and recovery for persons missing at sea. Design and construction fulfil the need for reliable, low maintenance standby and operation.

The boat is further designed to serve the patrol, boarding and inspection role, with deck layout allowing the crew to operate efficiently and comfortably over long time periods. The layout and performance of the boat ensures optimum diving support, survey and work boat duties.

Two longitudinal bulkheads, three longitudinal stringers along the length of the hull and transverse bulkheads provide structural strength. The hull is a fully planning, deep-V type with transom, giving optimum sea keeping ability at all speeds in all sea conditions.



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The space between hull and inner liner is filled with polyurethane buoyancy foam. If damaged below the waterline, the boat will float at safe level in fully flooded and loaded condition. The deck is self-bailing through two drainage outlets at the stern, and has an anti-slip surface. Lifelines are fitted on the gunwale.

A heavy duty fender protects the hull by absorbing impacts. The foam fender is protected by a double skin of reinforced PVC, secured with sail tracks at gunwale.

Lifting is done by a single point lifting-arrangement, and a 4-legged lifting frame is bolted to the cabin shoulder. An approved Off-load release hook with connection ring is installed on top of the lifting frame. There is a painter hook in bow, and bollards are placed each side astern.

The boat is designed to provide a protected and safe working environment for the crew, engine and equipment.

2.2 PROPULSION AND PERFORMANCE

Propulsion	Twin inboard diesel engines with waterjets
Engine size	Approx. 2 x 230-315hp
Speed, with 3 persons	Approx. 30-40 knots
Bollard pull	Approx. 800-1500 kg
Instrument gauges	Fuel level, tachometer, (subject to standard engine type), audible alarm for temperature and oil pressure
Engine cooling	Engine fresh water cooling with header tank and heat exchanger as primary circuit. Secondary sea water circuit cooling heat exchanger with supply from waterjet
Engine freshwater flushing	Connectors and valves installed for flushing of secondary circuit
Exhaust system	Seawater cooled
Fuel tank	2 x 220 L, Seawater resistant Aluminium
Fuel valves	Shut-off on top of fuel tank and tank drain

Typical data – subject to variation in engine installation and specified equipment. Engines of at least 169kW can be installed. Please note that boat weight, bollard pull and speed are only for reference and may vary with several factors.



4. OPTIONS

Note: Some options influence weight and performance, some option combinations may be incompatible. Maximum certified weight must not be exceeded.

marking means to be supplied by maker, marking means not supplied by maker.

GENERAL BOAT	
Spare parts for 1 year, 2 years, 5 years or 10 years	<input type="checkbox"/>
Anchor	<input type="checkbox"/>
Anti-skid sand on deck and gunwale	<input type="checkbox"/>
Outside safety rails on cabin, Port & Starboard	<input type="checkbox"/>
CO2 fire extinguisher system in engine room	<input type="checkbox"/>
Dive ladder	<input type="checkbox"/>
Fire pump	<input type="checkbox"/>
Labelling in dual language	<input type="checkbox"/>
Painted railings and hand rails	<input type="checkbox"/>
Rescue cradle and lifting boom	<input type="checkbox"/>
Shock mitigating seats	<input type="checkbox"/>
Trawler net on fender	<input type="checkbox"/>
White top-coat in engine and jet room	<input type="checkbox"/>
Toilet	<input type="checkbox"/>
Rails on extended aft deck	<input type="checkbox"/>
Additional steering position outside	<input type="checkbox"/>
Canvas cover	<input type="checkbox"/>
Life jackets	
PROPULSION AND PERFORMANCE	
Dual oil or fuel filters	<input type="checkbox"/>
Flywheel protection on engine	<input type="checkbox"/>
MEC – Mechanical Engine Control (Steyr)	<input type="checkbox"/>
Sand filter for cooling water	<input type="checkbox"/>
Oil pressure instruments	<input type="checkbox"/>
Water temp. instruments	<input type="checkbox"/>
Rudder pos. instruments	<input type="checkbox"/>
Wireless Deadman switch	<input type="checkbox"/>
RELEASE SYSTEM	
Off-load Release hook	HMKR 15
Height, keel to lifting point	Height 3.70m
Hang-off system	Hang-off lugs on lifting frame with connection points for shackles



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ELECTRIC SYSTEM AND NAVIGATION

AIS system	<input type="checkbox"/>
12V outlet in console	<input type="checkbox"/>
Ex plug for ext. power supply	<input type="checkbox"/>
Ex battery box	<input type="checkbox"/>
Bilge water detector in engine and waterjet room	<input type="checkbox"/>
Crew finder	<input type="checkbox"/>
Echo sounder	<input type="checkbox"/>
Engine room heater	<input type="checkbox"/>
Cabin heater	<input type="checkbox"/>
EIPRB	<input type="checkbox"/>
Fire detector in engine room	<input type="checkbox"/>
FLIR camera	<input type="checkbox"/>
GPS equipment	<input type="checkbox"/>
Loud hailer	<input type="checkbox"/>
Intercom system	<input type="checkbox"/>
HID or LED search lights	<input type="checkbox"/>
LED illumination in engine room	<input type="checkbox"/>
LED illumination of instrument panel	<input type="checkbox"/>
Loose el. cable for ext. power supply	<input type="checkbox"/>
Electrical system according to NMD requirements	<input type="checkbox"/>
Radar equipment	<input type="checkbox"/>
SART	<input type="checkbox"/>
Strobe lights	<input type="checkbox"/>
VHF equipment	<input type="checkbox"/>
Waterproof battery box	<input type="checkbox"/>
Work lights on top of canopy	<input type="checkbox"/>

DOCUMENTATION

Factory acceptance test procedure	<input type="checkbox"/>
Factory acceptance test report	<input type="checkbox"/>
Inspection and test plan	<input type="checkbox"/>
Shipping, handling and lifting procedure	<input type="checkbox"/>
Packing & unpacking procedure	<input type="checkbox"/>
Commissioning procedure	<input type="checkbox"/>
TAG list	<input type="checkbox"/>
Fuel system drawing	<input type="checkbox"/>
Bilge system drawing	<input type="checkbox"/>
Steering system drawing	<input type="checkbox"/>
Engine, propulsion, exhaust and cooling system drawing	<input type="checkbox"/>



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Noise test report	<input type="checkbox"/>
Weight and COG datasheet	<input type="checkbox"/>
Weighing report/certificate	<input type="checkbox"/>
Other drawings/documentation/procedures	<input type="checkbox"/>

5. YARD SUPPLY / RESPONSIBILITY

Transport	Depending on contract
Fuel	Marine diesel oil according to engine manual specification
Connection cable	From host to boat supply plug