

APPENDICE A
CARATTERISTICHE TIPICA NAVE DA RICERCA SISMICA

R/V ODIN FINDER



MAIN DETAILS

| | |
|-------------------|---|
| Type vessel: | Research / Bathymetry / Survey / Geotechnical / ROV survey. |
| Class: | DNV ✕ 1A1 Eo ICE-C RINA C ✕ SPECIAL SERVICE: RESEARCH SHIP |
| Call sign: | I Z E R |
| IMO number: | 7031761 |
| Built: | Storvik Shipyard 1970 |
| Converted: | Baatbygg A/S 1981 I 85 / Ravenna 2001 |
| Port of registry: | RAVENNA (ITALY) 2. R.I. |
| Trading area: | Unlimited |
| GMDSS area: | A1 -A2-A3-A4 |

G.A.S.

Geological assistance & services srl a socio unico
 sede operativa: via prati, 1/1 - loc. ponte ronca
 40069 zola predosa (bo) italy
 phone +39 051 6516716
 fax +39 051 6516719
 soggetta a coordinamento e controllo della LIGHTHOUSE GROUP srl p.i. 02585771203.

c.f. \ p.i. 03582530378

r.e.a. bologna 301090

numero iscrizione registro imprese 03582530378

capitale sociale 90.000,00 euro i.v.

sede legale: via calzavecchio, 23

40033 casalecchio di reno (bo) italy

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MAIN DIMENSIONS

| | |
|----------------|---|
| Length o.a.: | 46.50 m |
| Beam: | 9 m |
| Draft: | F 5,5 m. - A 6 m. |
| Gross tonnage: | 600 GT. |
| Net. tonnage: | 180 GT. |
| Moon Pool | Diameter cm. 77 Moon Pool pole 6 m long for equipment installation |

CAPACITIES

| | |
|------------------|----------------|
| Free deck area: | 135 m2 |
| Instrument room: | 24 m2 |
| Processing room: | 35 m2 |
| Wet lab: | 9 m2 |
| Cap. deck cargo: | 25 t. |
| Cap, bunkers: | 155 m3 |
| Fresh water: | 42 m3 |
| Evaporator cap.: | 5 t. / 24 hrs. |
| Max speed: | 10 knots |
| Economy speed: | 7 knots |
| Cruising range: | 9.000 nm. |

MACHINERY

| | |
|----------------|---|
| Main engine: | 1 x MAK 1500 BHP |
| Aux.: | 1 x Daewoo 100KVA 1 x Volvo 180 HK Gen. 125 KVA 1 x Detroit Diesel 415 BHK (Bow thruster) 1 x Deutz 923 HK 300 KVA |
| Thruster fwd.: | 1 x 2,8 tons side thrust / 240 Hk |
| Thruster aft: | 1 x 3,5 tons side thrust / 300 Hk |

CRANES / A-FRAME

| | |
|-----------|---|
| Cranes: | 1 x Hiab Seacrane 18 t/m. Portside midships |
| | 1 x Storkvik crane 2 ton. Starboard midships. |
| A- Frame: | 1 x A-frame aft. 5-6 ton. |
| Winch: | 1 x Braftvåg M2202, 6 ton. |

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NAVIGATION EQUIPMENT

| | |
|---------------------|---|
| DP – system: | 1 x Simrad Roberson DP |
| ECDIS | 1 x Simrad Planning Station |
| Radar: | 1 x Furuno FAR 2830S 10 cm. ARPA |
| | 1 x Furuno FR 2120 3 cm. |
| GPS | 1 x Furuno GP-50 |
| DGPS.: | 1 x Magnavox MX 300 |
| Beacon receiver: | 1 x Magnavox MX-50R |
| Loran: | 1 x Furuno LC 90 Mark II Loran C |
| Echosounder: | 1 x Skipper GDS 101, 50 kHz |
| Autopilot: | 1 x Robertson AP9 Mark II |
| | 1 x Anschutz |
| Gyro: | 1 x Anschutz MK IV |
| | 1 x Robertson SKR 82 |
| Log: | 1 x BEN ALS48 Electromagnetic |
| HPR: | 1 x Simrad HPR 410 |
| HPR transponder | 1 x Sub-miniature transponder, Type 7109, Channel 3 |
| | 1 x Sub-miniature transponder, Type 7109, Channel 5 |

COMMUNICATION EQUIPMENT

| | |
|----------------------|--|
| Inmarsat - B: | 1 x Satum BM (Telephone / Tlx. / Fax /Data /e mail) |
| Inmarsat - C | 1 x Sailor H 2095 B |
| Inmarsat - Mini M | 1 x Nera Wordphone Marine (Telephone / Fax / Data) |
| Main transmitter: | 1 x Sailor HF SSB 600 W |
| Spare transmitter: | 1 x Sailor HF SSB 250 W |
| Main receiver: | 1 x Sailor Compact /RX, Duplex |
| Spare receiver: | 1 x Sailor Compact /RX |
| Radiotlx /I DSC: | 2 x Sailor HF SSB Telex / DSC RM2151 |
| DSC Decoder MF / HF: | 1 x Sailor HF SSB DCS RM 2150 |
| VHF: | 1 x Sailor RT 143 |
| | 2 x Sailor VHF RT 2048 |
| | 2 x Tron VHF (Portable) |
| DSC Decoder VHF: | 2 x Sailor VHF DSC RM 2042 |
| Mobil telephone: | 1 x Motorola (NMT 450) |

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| | |
|------------------------------------|---|
| | 1 x Motorola 7600X (NMT 900) |
| Cospas - Sarsat EPIRB: | 1 x Newcom NC-200 |
| Radar transponder 9 GHZ: | 1 x Tron Sart |
| E-mail/Data Link facilities | V-SAT KU Band |
| Intercom: | Duplex telephone between all recreation rooms - cabins - instrument room - processing room - bridge - engine. |
| | Phonico. Lntercom. Between bridge - instrument room - processing room - wetlab - deck |

ELECTRICAL SUPPLY

| | |
|-------------------------|---|
| Outlet on deck: | 440 V AC 60 Hz 125 A |
| | 440 V AC 60 Hz 270 A |
| | 380 V AC 50 HZ 125 A |
| | 220 V AC 50 HZ |
| Outlet instrument room: | 220 V AC 50 HZ / 110 V AC 50 HZ/ 24 V DC |
| Outlet Processing room: | 220 V AC 50 HZ / 110 V AC 50 HZ |
| Outlet wet lab: | 220 V AC 50 HZ / 110 V AC 50 HZ / 24 V DC |

HYDRAULICS SUPPLY

| | |
|---------------------|--------------------|
| Variable hydr. pump | PAVC 100 ccm |
| Working pressure | 205 bar, 130 l/min |

AIR-CONDITIONING - HEATING

| | |
|---------------------|--|
| Air cond. / heating | All cabins/ living / working quarters are connected to the central heating plant. Also individual heating. |
|---------------------|--|

ACCOMODATION

| | |
|------------------------------------|---|
| Accommodations for scientific crew | 16 Beds in Single/Double Cabins for technicians & Clients |
|------------------------------------|---|

PERMANENT INSTALLED EQUIPMENT

| | |
|--------------------|---|
| DGPS Navigation | C-Nav and Veripos QPS or PDS2000 |
| Gyro | Ochtsans Ixsea Anschutz Standard 22 |
| Motion Sensor | Ochtsans Ixsea TSS DMS 05 |
| USBL | Simrad HPR 410 |
| MBES deep water | Simrad EM 300 |
| MBES shallow water | R2SONIC 2024 200-400 kHz |
| SVP | Reson Navitronic SVP20/25 / - Valeport 606 |
| Side Scan Sonar | Edgetech 4200 100-500 kHz SSS Klein 3000 100-500 kHz SSS c/w 3000 m tow cable |
| Sub Bottom Profile | SBP hull mounted 3x3 chirp array |
| Magnetometer | Marine Magnetics SeaSpy |
| Coring Equipment | Kullemberg Type Drop Corer, , Van Veen Grab, |

EQUIPMENT AVAILABLE ON REQUEST

| | |
|--|--|
| Side Scan Sonar | Benthos Chirp SIS 1000 SSS /SBP integrated system |
| Coring Equipment | Piston Corer Vibrocorer |
| Geotechnical Equipment | MCPT Datem Neptune |
| Single Channel | Geo-Spark 200 source system Geo-Spark 1000 Pulsed Power Supply Geo-Sense Single-Channel Streamer Hydrophone Array Geotrace georesources acquisition system: |
| Multichannel Seismic Acquisition & Processing Systems (optional-on Client request) | Hydrophone Array: Sercel SEAL 24bit digital array Digicourse 5010 Levellers Recording System :Sercel HR SEAL 408 system Air Guns volume on request QC & processing system: Promax 2D |
| EQUIPMENT IN THE PROCESSING ROOM | Caris Hips & Sips – Bathymetric data processing SonarWiz Mosaic software AutoCAD and G.A.S. software 1x Gb NAS Server 4 Personal Workstation HP Plotters AoColour Printers |
| ROV | AGEOTEC Sirio, Perseo and Pegaso |

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A view of the bridge.



A detail of the living room is arranged with comfortable sofas, sat TV and video.
The living room is close to the mess room