

General information about the ship

General:

Owner: Federal Republic of Germany,
represented by the BMBF

Owner/operator: Alfred Wegener Institute,
Helmholtz Centre for Polar and Marine
Research

Shipping company: Bries Research, Leer

Flag: Germany

Call sign: D B C K

Classification: GL + 100 A5 M E2 Research
Ship + MC E2 AUT

Entered into service: 1990

Crew: 12

Principal dimensions

Length: 54.59 m

Length between perpendiculars: 48.40 m

Breadth: 12.50 m

Moulded Depth: 5.90 m

Draught: 4.16 m

Cruising speed: 12.50 kn

Deadweight tonnage: 1,463 t

Measurement: 1,322 GT; 396 NRZ

Operating range: ca. 7,500 nm

Engine

Main engine

Type: MAN D.2842LE301
Number: 3
Power: 532 kW / Machine

Emergency diesel

Type: KHD MWM F4L 912 D
Power: 31 kW

Generators

Main: 3 x 810 kVA, 380 V, 50 Hz
Port: 1 x 228 kVA, 380 V, 50 Hz
Emergency: 1 x 40 kVA, 380 V, 50 Hz

Propulsion

DMT DC-motor GC 395/103/6 1,100 kW

Schottel Pump-Jet 620 kW in bow

Science:

Scientists: 12

Laboratories

Dry: 42 m²

Wet: 28 m²

Measurement: 10 m²

Thermo: 12 m²

Freezing: 9 m²

Deck areas

Work deck: ca. 100 m²

Container: 38 m²

Hoisting gear

Crane: A-Frame SWL 3 t with auxiliary winch

Side boom SWL 3 t

Main crane SWL 2.5 t up to 12.5 m outreach

SWL 5.0 t up to max. 7.5 m
outreach

Auxiliary cranes 0.99 t.

Winches

Fishery: 2 x 1,200 m, 20 mm; whip line winch
(currently fitted with 2400/2250 m, 18 mm)

4 t net winch

Anchor mooring winch

Scientific winches:

4 – Drum winch with capstan:

W1: Single conductor 8mm max. 3,000 m
currently 2,900 m

W2: Series 12 mm max. 2,000 m currently
2,000 m

W3: COAX/LWL, 11 mm max. 2,000 m
currently 2,000 m

W4: COAX 11 mm max. 2,500 m currently
2,300 m

Scientific acoustic equipment:

Fishing pilot EK 60, Kongsberg, four
frequencies (38, 70, 120 and 200 kHz)



Foto: R.Krone



Foto: M.Hirsehorn



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Tank capacity

Fuel: 144 t Type: Marine gas oil

Fresh water: 21.9 t

Aquarium: 29 t

Ballast water: 146.6 t

Wireless mains probe SCANMAR

ADCP, RDI, 150 kHz
ADCP, RDI, 600 kHz

Fan sonar, EM710, Kongsberg, 70 - 100 kHz

Sediment echosounder, SES 2000 Innomar,
85 - 100 kHz

Underwater navigation GAPS, IXSEA



Foto: M.Hirsehorn

Provisions

Dry/beverages: 16/16 m³

Frozen: 24 m³

Computer systems:

Data acquisition and display system, D-Ship,
Werum

Network to the laboratories and to the berths

Internet access

PC for general use

Printer, copier and scanner

Crew and other facilities

Kitchen: 1

Dining areas: 1

Common rooms: 1

Treatment room: 1

Washing/drying room: 1

Garbage room: 1

Meteorological Station:

Automatic weather station is operated by
DWD for:

Air temperature, air pressure, air humidity and
water temperature

Wind speed and wind direction

Global radiation, tilt & zones, CGR 4 and
CMP11



Foto: R.Krocker

Hydroacoustic equipment

Navigation Echolot "Skipper GDS 101"
Kongsberg, 50 kHz

Doppler Speed Log, SAM-Electronic FAM
4682, 270 and 540 kHz

Other scientific systems:

Thermosalinograph, SeaBird SBE 21 with SB
38-Temperature sensor

Chlorophyll Fluorometer, WET Labs, ECO
FLRT

SV&T-Sensor, Valeport Mini SVS, Kongsberg

CTD SeaBird SBE 911+ with 12 Water scoop
4 litres each, Hydrobios

SBE 43 Dissolved Oxygen Sensor for the CTD

Motion-Sensor, PHINS III, IXSEA

Positions-Sensor TRIMBLE SPS461;
NMEA- Distributor for GPS telegram

Mobile high-pressure compressor, Sauer &
Sohn, 20" container.



Foto: MWB

Navigation Equipment

Gyrocompass, Sperry Marine NAVIGAT XMK1

2 x Autopilot

2 x Radar system, SAM-Electronic S- and X-
Band, electronic Sea chart

Trimble NT300 D

DGPS Debeg 4412

EM-log Naviknot II, Sperry Marine

Radio Equipment

VHF main band, all channels

HF-SSB-radio 1.6-30 MHz

Crew Finder, PRONAUTAS, RT-RT202

IRIDIUM Open Port + IRIDIUM Certus

SAT-TV

Leased line 128 kbt/s, own land system at AWI

Intercom

For details see: [Wissenschaftliche
Einrichtungen u. Geräte](#)

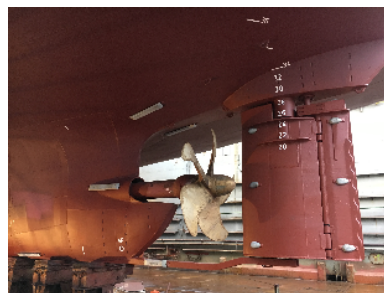


Foto: M.Hirsehorn

Telephone

2 x talkback systems crew / scientists

Generalplan

Flyer Briese