



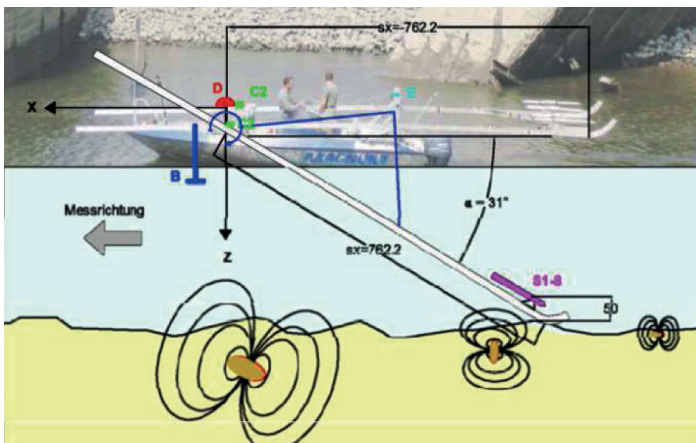
TOOLBOX 1

NEARSHORE SURVEY



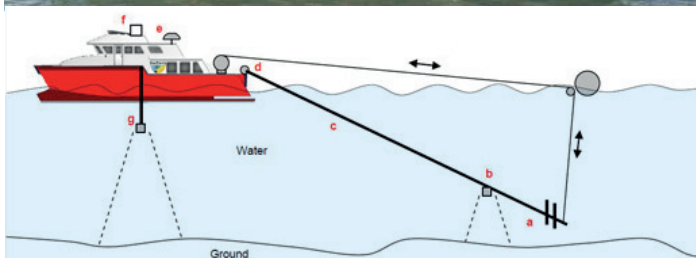
MAG Inflatable

Water depths:	1 m – 2 m
Operational areas:	in-shore, near-shore
Sensors:	4 – 6 Geometrics G822
Sensor type:	total magnetic induction (TMI)
Positioning:	DGPS, Compass
Sensor spacing :	1 m
Line spacing:	4 m
Height above ground:	water depth + 0.5 m
Operational speed:	4 – 6 kn
Productivity 12h:	2 – 10 ha
Limitations:	waves > 0.5 m



ST01 MAG (fixed frame)

Water depths:	1 m – 10 m
Operational areas:	in-shore, near-shore
Sensors:	4 – 8 geometrics G822
Sensor type:	total magnetic induction (TMI)
Positioning:	DGPS, Compass, angle sensor
Recording:	SeaTerra AGSDat
Sensor spacing:	1 m
Line spacing:	4 m
Height above ground:	fixed frame, ground + 0.5 m
Operational speed:	1 – 2 kn
Productivity 12 h:	1 – 4 ha
Deployment:	slip, crane
Limitations:	waves > 0.7 m



SV Solo (fixed boom)

Water depths:	3 m – 20 m
Operational areas:	in-shore, near-shore
Sensors:	4 – 8 Geometrics G822
Sensor type:	total magnetic induction (TMI)
Positioning:	DGPS, Compass, angle sensor
Recording:	SeaTerra AGSDat
Sensor spacing:	1 – 1.5 m
Line spacing:	6 m
Height above ground:	fixed frame, ground + 1 m
Operational speed:	1 – 2 kn
Productivity 12h:	2 – 8 ha
Systems in operation:	3
Power requirements:	12V batteries / power supply
Deployment:	slip, crane
Limitations:	waves > 1 m



TOOLBOX 2

OFFSHORE SURVEY



SV TRIO

Dimension:	17 m
Width:	4.28 m
Draft:	1.05 m
Build:	2002 (1987)
Speed:	20 kn
Class:	BG Verkehr
Operational area:	River, harbour, North Sea and Baltic Sea
Task:	Magnetic-Survey, Sonar- Survey Electromagnetic-Survey, ROV-inspection



SV DUO

Dimension:	26.45 m
Width:	6.70 m
Draft:	3.60 m
Build:	2012/13 (1958)
Speed:	8 kn
Flag:	Panama
Class:	RINA
Accommodation:	4 x 2 + 1 x 4 bed cabins
Operational areas:	North Sea and Baltic Sea
Task:	Magnetic-Survey, Sonar- Survey Electromagnetic-Survey, ROV-Inspection, Guard Vessel



SV MIMER

Dimension:	24.46 m
Width:	7.17 m
Draft:	3.51 m
Build:	2010 (1997)
Speed:	9,5 -11.5 kn
Flag:	Germany
Class:	RINA
Accommodation:	4 x 1 + 5 x 2 bed cabins
Operational areas:	North Sea, Baltic Sea, worldwide
Task:	Magnetic-Survey, Sonar - Survey Electromagnetic-Survey, ROV-Inspection, Guard Vessel



TOOLBOX 3

OFFSHORE CLEARANCE



Clearance Vessel: SEASCAN 1

Dimension:	45.70 m
Width:	10.00 m
Depth moulded:	3.70 m
Draft:	2.44 m
Clear Deck:	160 m ²
Deck loading:	5.00 t/m ²
Deck Cargo:	80 t
Tonnage:	456 t
Capacities Fuel:	130 t
Consumption:	7.5 t/d – 6.0 t/d
Build:	2014/15 (1985)
Speed:	11 kn (max. 12.5 kn)
Flag:	Panama
Class:	American Bureau of Shipping
Accommodation:	9 x 1, 4 x 2 bed cabins
Operational areas:	North Sea, Baltic Sea, worldwide
Task:	Magnetic-Survey, ROV inspection, UXO clearance, detonation, Diving support vessel



Clearance Vessel: GULF WAVE

Dimension:	30.50 m
Width:	7.42 m
Draft:	4.00 m
Clear Deck:	19 m ²
Tonnage:	192 t
Capacities Fuel:	130 t
Consumption:	2.9 t/d – 1.2 t/d
Build:	1992
Speed:	6 kn (max. 8 kn)
Flag:	Panama
Class:	Bureau Veritas
Accommodation:	3 x 1, 1 x 2, 1 x 3, 4 x 4 bed cabins
Operating area:	Persian Gulf, North Sea, Baltic Sea, worldwide
Task:	Magnetic-Survey, ROV inspection, UXO clearance, detonation, Diving support vessel



MV MIMER

Call Sign: DKA A2 / **MMSI:** 211628260 / **IMO:** 8661812

OPERATIONAL AREA: North Sea, Baltic Sea plus coastal areas worldwide

OPERATION PURPOSE: survey / scientific in Geophysics, Hydrographic, Geology, Biology, ROV-Inspection



flag:	Germany	lengths o. a.:	27 m	MGO capacity:	28 m ³
class:	RINA Cargo Vessel, Ice A1	lengths pp:	24.46 m	fresh water capacity:	14 m ³
tonnage:	BR Z/NRZ 220/66	draft:	3.85 m	sewage capacity:	4 m ³
shipyard:	Gryts Varv, Sweden	breadth:	7.10 m	grey water capacity:	3 m ³
build:	1997, rebuild 2010	depth to work deck:	2.10 m		
hull material:	Steel	main engine:	Caterpillar, 3508, 655 kW		
speed:	0–11.5 kn	aux. engines:	77.5 kVA + 40 kVA / 50/400 Hz / kW		
fuel Consumption:	Eco_50 ltr / 9 kn	hydraulic system:	3 x PTO + electr. emergency pump unit		
cons. at survey:	10 liters / hour	propulsion:	CCP, 2200 mm		
cabins:	10 (4x2 + 6x1) Σ 14 persons	thrusters:	Bow: 66 kW / Stern: 120 kW		



navigation:	ARPA- RADAR Koden MDC-2900 / RADAR Furuno, FR-2110 / Autopilot: AP50 / GPS: Furuno, GP-150, Shipmate, RSS800 / Satellite- Gyro, ECDIS, AIS class B
communication:	Nav.- Area: A2 GMDSS: 3x VHF, 1 x MF/HF, 2 x handheld VHF, V- SAT: KVH (Internet + telephone) UMTS, GSM
deck equipment:	<u>stern- A-frame:</u> 0.9t, <u>MOB- deck crane:</u> 0.9t, <u>cargo crane:</u> 1.74/0.43 t, Palfinger, PK 8501 M
others:	2 x mooring winches aft, 1x mooring winch fore, 1 sonar winch, 1 towing winch (5t), 1x sample winch 10 mm / 1000 m, 1x cargo winch wet laboratory incl. laminar box
safety Equipment:	rescue boat: DSB 5m, 40 HP/ live rafts: 2 x Viking 20 pers. / 16 x immersion suits
accommodation:	<u>Main Deck:</u> mess room, 4 x single crew cabins, WC, bath room, galley, stores, wet lab., Scientific's office <u>1st Deck:</u> 6 cabins (4 optional double), 2 x bath room, laundry, store, pharmacy class B
survey equipment:	19° survey computer rack, Trimble BX982-2 DGPS, Trimble SPS GPS, Edgetech ORE Bat USBL, MRU, Side-Scan Sonar, MAG + TFEM ROTV, MAG + TFEM ROV, Blue View Sonar, soils sampling, Multi-Beam Sonar, Sub-Bottom Sonar, UW Video



DSV SEASCAN 1

IMO: 8417352 / **MMSI:** 355012000 / **Call Sign:** HO9346

OPERATIONAL AREA: North Sea, Baltic Sea, Worldwide A1-A3

DIVE/OFFSHORE SUPPORT VESSEL: UXO Clearance, ROV-Inspection, Dive Support, Marine Construction, Offshore Support

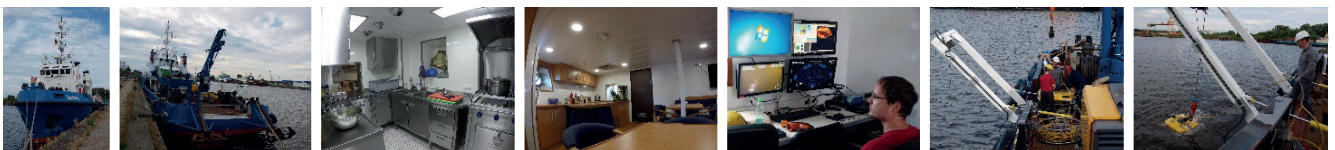


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Flagg state:	Panama	Lengths over all:	45.70 m	MGO Capacity:	151m ³
Class:	ABS-Tug/Offshore Suppl.	Lengths pp:	41.50 m	Fresh Water Capacity:	108m ³
Tonnage:	490 GT / 147 NT	Draft:	3.20 m	Sewage Plan:	3 stage
Shipyard:	SHINA/Daewoo Korea	Breadth:	10.40 m		
Build:	1985/ SAS-279	Depth to Work Deck:	1.15 m		
Hull Material:	Steel	Main Engine:	2 x MAN 9L20/27, 1827.7 KW		
Speed:	Serv.: 8kn/ Max: 10kn	Aux. Engines:	3 x MAN D 2566 MLE, 224 KW each / 60 Hz/ 110/440 V		
Fuel Consumption:	4 t/d @ 8kn	Propulsion:	2 x 4 blade, fixed pitch, ABS Type 2		
Max. Stay at Sea:	14 days	Thrusters:	Bow: Nakashima Sone Vickers TFN-150/ 160 KW, 2 t lateral trust		
Cabins:	15 (5 x 2 , 10 x 1) Σ=20 P				



Navigation:	ARPA Radar Koden MRD-105P, Radar Koden MDC 1540, Autopilot Tokyo Keiki PR-2000, GPS Koden KGP 820 GPS Furuno GP-32, Gyro Compass Tokyo Keiki TG-5000, AIS Samyung SI 30A Class A
Communication:	Nav.-Area: A3 GMDSS, 4 x VHF, 2 x VHF DSC, 1 x HF/MF, 1 x HF/MF DSC, 3 x handheld VHF, 8 x UHF radios
Internet:	V-SAT Broadband / UMTS, GSM/ Thuraya SAT-Tel
Deck Equipment:	Iron Fist Marine crane 5t/20t @18,4m/5,9m (radio - remote), Palfinger PK 1000M (2t@4.4m, 1.1t@8m)/ A-Frame: 1 t
Other:	Mooring 4 x anchor: 2 t, 500m 34 mm wire/ Clear Deck: 160 m2/ Deck Cargo: 80 t/ Sonar Dome/ Air Compressor/ Generator 220/400V 50Hz, 40KW
Safety Equipment:	Working boat: 4 m, 25 HP/ live rafts: 2 x 25 pers./ 18 x immersion suits
Survey Equipment:	19" survey computer rack, Trimble BX982-2 DGPS, Trimble SPS GPS, Edgetech ORE Bat USBL, MRU, MAG + TFEM ROTV, MAG + TFEM ROV, Blue View Sonar, soils sampling, UW Video, Airlift, Dive Control Container
Interior:	galley, stores, mess, laundry, wet lab, surveying + DSV lab, bath, toilet



DSV SEASCAN 1

IMO: 8417352 / **MMSI:** 355012000 / **Rufkennzeichen:** HO9346

EINSATZGEBIETE: Nordsee, Ostsee, Weltweit A1-A3

TAUCH/OFFSHORE SUPPORT VESSEL: Kampfmittelräumung, ROV-Inspektion, Tauch Support, Marine Construction, Offshore Supp.

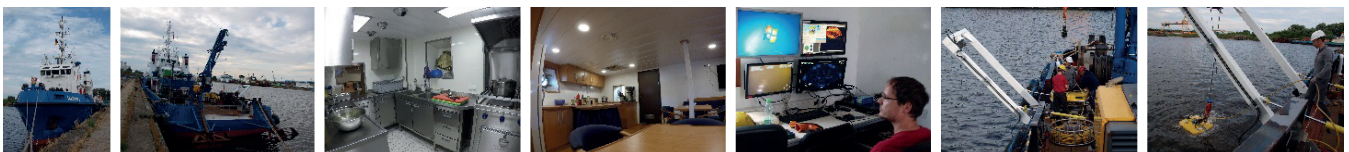


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Flagge:	Panama	Länge über Alles:	45,70 m	Diesel MGO:	151m ³
Klasse:	ABS-Tug/Offshore Suppl.	Länge pp:	41,50 m	Frischwasser:	108 m ³
Tonnage:	490 GT / 147 NT	Tiefgang:	3,20 m	Abwasser:	3 Stufen Kläranl.
Werft:	SHINA/Daewoo Korea	Breite:	10,40 m		
Baujahr:	1985/ SAS-279	Arbeitshöhe Deck:	1,15 m		
Bauart:	Stahl	Hauptmaschine:	2 x MAN 9L20/27, 1827.7 KW		
Geschwindigkeit:	Serv.: 8 kn/ Max: 10 kn	Generatoren:	3 x MAN D 2566 MLE, 224 KW each / 60Hz/ 110/440 V		
Verbrauch Diesel:	4 t/d @ 8 kn	Antrieb:	2x4 blade, fixed pitch, ABS Type 2		
Max. Einsatzzeit:	14 Tage	Querstrahlruder:	Bug: Nakashima Sone Vickers TFN-150/ 156 kW, 2 t Lateralschub		
Kabinen:	15 (5 x 2, 10 x 1) Σ=20 P				



Navigation	ARPA Radar Kodan MRD-105P, Radar Kodan MDC 1540, Autopilot Tokyo Keiki PR-2000, GPS Kodan KGP 820 GPS Furuno GP-32, Gyro Compass Tokyo Keiki TG-5000, AIS Samyung SI 30A Class A
Kommunikation	Nav.-Area: A3 GMDSS, 4 x VHF, 2 x VHF DSC, 1 x HF/MF, 1 x HF/MF DSC, 3 x handheld VHF, 8 x UHF radios
Internet	V-SAT Broadband / UMTS, GSM/ Thuraya SAT-Tel
Deck Ausstattung	Iron Fist Marine crane 5 t/20 t @18,4 m/5,9 m (radio - remote), Palfinger PK 1000M (2 t@4.4 m, 1.1 t@8 m)/ A-Frame: 1 t
Sonstiges	Mooring 4 x anchor: 2 t, 500 m 34 mm wire/ Clear Deck: 160 m ² / Deck Cargo: 80 t/ Hydrophone/ Druckluft Kompressor/ Generator 220/400V 50 Hz/60 Hz, 70 KW
Sicherheit	Arbeitsboot: 4 m, 25 HP/ Rettungsinseln: 2 x 25 Pers./ 20 x Überlebensanzüge
Sondier-Technik	19" Vermessungs-Computer Rack, Trimble BX982-2 DGPS, Trimble SPS GPS, Edgetech ORE Bat USBL, MRU, MAG + TFEM ROTV, MAG + TFEM ROV, Blue View Sonar, Probeentnahme, UW Video, Air-Lift, Tauch-Container
Einrichtung	Kombüse, Messe, Lager, Nasslabor, Computer Kontrollraum