**Qualification**

- MIL-STD 810E 512.2  
- MIL-STD 810E 514.4-1  
- MIL-STD 810E 516.4  
- MIL-STD 810E 516.4  
- MIL-STD 810E 501.3  
- MIL-STD 810E 502.3  
- MIL-STD 810E 503.3  
- MIL-STD 810E 506.3-1  
- MIL-STD 461 D RE 1025.3.13.1  
- MIL-STD 461 D RS 103

**Characteristics**

- Passive flux gate magnetometer
- Detection of ferromagnetic material/UXO e.g. bombs, grenades ...
- Precise handling, light weight
- High detection sensitivity
- Tension band technology
- Alignment for lifetime
- Modular design
- Compatible to GPS
- Compatible to laser positioning
- Data logger option
- Software for evaluation and display of data
- Documentation according to AECMA 1000D
- Operator and service training
- World wide service
**Versions**

Detection-Toolbox with interchangeable components:

**FEREX® 4.032 API**
- single channel pointer instrument

**FEREX® 4.032 DLG**
- data logger instrument, up to 4 channels

**FEREX® 4.032 DLG KARTO**
- data logger instrument with additional GPS positioning capability

**Application**

- Land surface detection
- Borehole detection
- Underwater survey
FEREX® KITS

FEREX® 4.032 API
Mk26 Mod1 (US)
NSN 6665-01-503-7886

• Control unit
• FEREX® probe
  CON 650
• Carrying rod
• Battery pack
• Carrying belt
• 30 m extension cable
• Pulling rope
• Ballast weight
• Headphones
• Case
• Batteries
• Tools
• User manual

FEREX® 4.032 API
NSN 6665-12-359-9684

• Control unit
• FEREX® probe
  CON 650
• Carrying rod
• Battery pack
• Carrying belt
• Case
• Batteries
• User manual

Headphones

Extension cable, waterproof
FEREX® 4.032 DLG
NSN 6665-12-359-9685
- Control unit DLG
- FEREX® probe CON 650
- 0.6 m cable
- Carrying rod
- Battery pack
- Carrying belt
- Case
- Batteries
- Start/Stop-handgrip
- Data transfer cable
- User manual

FEREX® 4.032 DLG
KARTO
NSN 6665-12-354-4078
- Control unit KARTO
- FEREX® probe CON 650
- 0.6 m cable
- Carrying rod
- Battery pack
- Carrying belt
- Case
- Batteries
- Start/Stop-handgrip
- Data transfer cable
- User manual

GPS supported navigation
ACCESSORIES

3-probe-holder
- Carrying frame
- Probe cable, threefold
- Battery cable

4-probe-holder
- Carrying frame
- Probe cable, fourfold
- Battery cable

Options:
- Adapter for GPS-antenna
- Adapter for laser prism

Application and benefits
- Large-area detection
- Adjustable probe-spacing
- Ergonomic design

Borehole detection
- FEREX® probe CON 400
- Battery cable
- Extension cable, waterproof
- Ballast weight
## Technical Specifications

### Probe specification

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Design</td>
<td>tension band, alignment for lifetime</td>
</tr>
<tr>
<td>Measuring uncertainty</td>
<td>&lt;2% ref. ±10,000 nT</td>
</tr>
<tr>
<td>Resolution</td>
<td>&lt;0.2 nT</td>
</tr>
<tr>
<td>Stability</td>
<td>&lt;1 nT</td>
</tr>
<tr>
<td>Temperature drift</td>
<td>&lt;1 nT/K</td>
</tr>
<tr>
<td>Band width</td>
<td>240 Hz</td>
</tr>
<tr>
<td>Measuring range</td>
<td>±10,000 nT</td>
</tr>
<tr>
<td>Linearity</td>
<td>&lt;1 nT ref. to max. measuring range</td>
</tr>
</tbody>
</table>

### Specification data logger

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Memory</td>
<td>16 MB</td>
</tr>
<tr>
<td>per value</td>
<td>3 Byte</td>
</tr>
<tr>
<td>Channels, max.</td>
<td>4</td>
</tr>
<tr>
<td>Sampling rate</td>
<td>max. 100 Hz per channel</td>
</tr>
</tbody>
</table>

### Operating time with one set of alkaline batteries

<table>
<thead>
<tr>
<th>Configuration</th>
<th>API</th>
<th>DLG</th>
</tr>
</thead>
<tbody>
<tr>
<td>intermitted operation</td>
<td>1 probe &gt;60 h</td>
<td>1 probe &gt;36 h</td>
</tr>
<tr>
<td>continuos operation</td>
<td>&gt;50 h</td>
<td>&gt;35 h</td>
</tr>
</tbody>
</table>

### Power supply

- Voltage ±6 V DC
- 4 x 1.5 V D-cells, ANSI STD. Size «D» (IEC LR 20) or 4 rechargeable batteries (optional)

### Measuring ranges

- Voltage ranges: 8 linear ranges from 0 to 3 nT up to 0 to 10,000 nT or logarithmic range

### Temperature ranges

- Storage temperature: -57°C to +71°C
- Operation ambient temperature: -37°C to +71°C

### Weight (Masses)

- 4.7 kg incl. batt. in case 10.0 kg
- 4.9 kg incl. batt. in case 10.5 kg

### Dimensions

- Case: L x W x H 1,400 mm x 1,000 x 280 x 340 mm

### FEREX® probes

<table>
<thead>
<tr>
<th>Type</th>
<th>Ø-tube (mm)</th>
<th>Length (mm)</th>
<th>Sensor basis space (mm)</th>
<th>Weight (kg)</th>
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<tbody>
<tr>
<td>FEREX® probes CON 650</td>
<td>35</td>
<td>853</td>
<td>650</td>
<td>0.65</td>
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<tr>
<td>FEREX® probes CON 400</td>
<td>35</td>
<td>603</td>
<td>400</td>
<td>0.50</td>
</tr>
<tr>
<td>FEREX® probes CON 1600</td>
<td>35</td>
<td>1,800</td>
<td>1,600</td>
<td>1.10</td>
</tr>
<tr>
<td>Basic unit</td>
<td>Detection on land</td>
<td></td>
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<tr>
<td>-------------------------------</td>
<td>----------------------------------------</td>
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<tr>
<td></td>
<td>Evaluation Software</td>
<td>Multi channel systems for large area detection</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>hand-held</td>
<td></td>
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</tr>
<tr>
<td>FEREX® 4.032 API</td>
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<td></td>
</tr>
<tr>
<td>FEREX® 4.032 DLG</td>
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<td></td>
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<tr>
<td>Data logger</td>
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<td></td>
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<tr>
<td>FEREX® 4.032 DLG</td>
<td></td>
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</tr>
<tr>
<td>KARTO</td>
<td></td>
<td></td>
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</tr>
<tr>
<td>D A T A 2 L I N E® 4.810</td>
<td>- Basic</td>
<td></td>
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</tr>
<tr>
<td></td>
<td>- UXO</td>
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<tr>
<td></td>
<td>- GEO</td>
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<tr>
<td>FOERSTER-Multi-probe-holder</td>
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<td></td>
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<td></td>
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<tr>
<td>FOERSTER-3-probe-holder</td>
<td>needed in addition: 2 FEREX® probes</td>
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<tr>
<td>FOERSTER-4-probe-holder</td>
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<tr>
<td>GPS-system on request</td>
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<tr>
<td>Tachymeter-total-station</td>
<td></td>
<td></td>
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<td></td>
</tr>
<tr>
<td>FOERSTER-DATAMONITOR software</td>
<td>Only together with DGPS and FEREX® 4.032 DLG KARTO</td>
<td>Display inside detection-vehicle</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Positioning</td>
<td>Navigation</td>
<td>Borehole-search</td>
<td>Underwater-search</td>
</tr>
<tr>
<td>-----------------------</td>
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<td>---------------------------------------------</td>
<td>---------------------------------------------------------------------------------</td>
<td>-----------------------------------------------------------------------------------</td>
</tr>
<tr>
<td></td>
<td>vehicle-based</td>
<td>Software for support of vehicle based large area detection</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>FEREX® 4.032 API</strong></td>
<td></td>
<td></td>
<td>Hardware: Extension-cable with sealing-plug up to 100 m length for use down to 100 m water-depth, pulling rope, ballast-weight</td>
<td>Extension-cable with sealing-plug up to 100 m length for use down to 100 m water-depth, pulling rope, ballast-weight</td>
</tr>
<tr>
<td><strong>Evaluation Software DLG: STD DATALINE® BM</strong></td>
<td></td>
<td></td>
<td>Evaluation</td>
<td></td>
</tr>
<tr>
<td><strong>FEREX® 4.032 DLG</strong></td>
<td></td>
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<td></td>
</tr>
<tr>
<td><strong>FOERSTER-3-probe-holder</strong></td>
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</tr>
<tr>
<td><strong>2 FEREX® probes</strong></td>
<td></td>
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</tr>
<tr>
<td><strong>FOERSTER-Multi-probe-holder</strong></td>
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<tr>
<td><strong>FOERSTER-4-probe-holder</strong></td>
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</tr>
<tr>
<td><strong>4 FEREX® probes and cable-set for 8 channel use adapter 8 channel (2. DLG KARTO needed)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>GPS-cables and antenna-adaption</strong></td>
<td></td>
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<tr>
<td><strong>Option: foam-marking</strong></td>
<td></td>
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<td></td>
</tr>
<tr>
<td><strong>Additional 4 FEREX® probes and cable-set for 8 channel use adapter 8 channel (2. DLG KARTO needed)</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Tachymeter-total-station on request</strong></td>
<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td><strong>FOERSTER DATAMONITOR software</strong></td>
<td></td>
<td></td>
<td>Only together with DGPS and FEREX® 4.032 DLG KARTO</td>
<td></td>
</tr>
<tr>
<td><strong>Display inside detection-vehicle</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>DATAMONITOR software</strong></td>
<td></td>
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</tr>
</tbody>
</table>
FOERSTER MULTICAT® 4.850

Probe vehicle kit
• Probe drawbar trailer
• Cable kit
• 3 FEREX® probes
• FEREX® 4.032 DLG KARTO

Options
• Foam marking system
• Adapter for GPS
• Adapter for laser prism
• DATAMONITOR navigation software

DATAMONITOR Navigation software
**DATA2LINE® 4.810**

**Latest Software Technology for high-end Data-Evaluation with:**

- Integrated Project Administration
- Geo-referenced mapping
- Full-support for FEREX DLG
- State-of-the-art solutions for Data-Visualization and Reporting

Tailored modules for Military, Industry and Science:
- Basic (Project handling)
- UXO (Unexploded Ordnance)
- VertiCalc (Borehole)
- GEO (Geology, Archeology)
- NAV (Real-time Navigation)

**Scope of supply**

- Software CD/ROM
- User manual CD/ROM
- Hard lock drive
MINEX® 4.600

Operational Characteristics

- Metal Detector with high sensitivity for all metals
- Smallest metal content detection, e.g. minimum metal mines
- Dual tone detection signal for excellent pinpointing
- Visual indication of targets
- Automatic suppression of interference signals on saline soils/in salt water
- Searching along fences, rails, pipelines and below cars is possible
- 50/60 Hz suppression
- Ground learning function
- 5 sensitivity ranges
- Constant sensitivity during battery lifetime
- Military mode with switch off visual displays
- Automatic self-test and malfunction alarm

MINEX® 4.600 kit

- MINEX® metal detector
- Case
- Batteries
- User manual
Design Characteristics

• All control and display elements integrated into the handle
• Socket for:
  - Headphones
  - Data Transfer Cable
  - External Battery Pack
• Adjustable built-in loudspeaker, muted by headphone
• Detailed visual display of signal strength featuring 14 LEDs
• 2x extendable telescope with robust clamping levers
• Easy collapsable to a compact size

Qualification

MIL-STD-810G, 514.6 I, Cat. 4, Transport Vibration
MIL-STD-810G, 505.5 II Solar Radiation
MIL-STD-810G, 516.6 IV, Transit Drop
MIL-STD-810G, 503.5 I-C, Temperature Shock
MIL-STD-810G, 502.5 I + II Cold Temp.
MIL-STD-810G, 514.6 I, Sinusoidal Vib.
MIL-STD-810C, 516.3 III, Mech. Shock
MIL-STD-810G, 512.5 I, Immersion
MIL-STD-810F, 506.4 I Blowing Rain

EMC see leaflet

Technical Specifications

<table>
<thead>
<tr>
<th>Specification</th>
<th>MINEX® 4.600</th>
</tr>
</thead>
<tbody>
<tr>
<td>Weight</td>
<td>2.2 kg</td>
</tr>
<tr>
<td></td>
<td>approx. 2.6 kg (with batteries)</td>
</tr>
<tr>
<td></td>
<td>approx. 7.6 kg</td>
</tr>
<tr>
<td></td>
<td>approx. 0.4 kg</td>
</tr>
<tr>
<td>Power supply</td>
<td>3 x 1.5 V batteries or 3 x 1.2 V rechargeable batteries</td>
</tr>
<tr>
<td></td>
<td>IEC LR 20 (ANSI STD size „D“)</td>
</tr>
<tr>
<td>Operating time</td>
<td>approx. 40 h at an ambient temperature of 20°C (68°F)</td>
</tr>
<tr>
<td></td>
<td>(with alkali-mangan batteries)</td>
</tr>
<tr>
<td>Ambient temperature range</td>
<td>-37°C to +71°C</td>
</tr>
<tr>
<td></td>
<td>(-99°F to +160°F)</td>
</tr>
<tr>
<td>Storage temperature</td>
<td>-57°C to +71°C</td>
</tr>
<tr>
<td>(without batteries)</td>
<td>(-135°F to +160°F)</td>
</tr>
<tr>
<td>Waterproof</td>
<td>IP 68, 2 m, 30 min.</td>
</tr>
</tbody>
</table>

Length
minimum: 657 mm
maximum: 1.677 mm

Search head
oval, 210 x 285 mm

Headphones

Backpack

Headphones
Training ground for simulating real situations

Practical Tests

FOERSTER has set up a training ground next to the Division DM buildings especially for demonstration and training purposes. In an underground pipe system objects can be placed in a defined position and depth to simulate real life conditions for operators.

It is also possible to experience equipment handling in ground conditions which are typical of worldwide operation sites.

FOERSTER uses these grounds for training and seminars, but also allows companies and organisations to use these unique test facilities. In this way, specialists who are trained here under expert tuition can put their knowledge directly into practice.
S E M I N A R S

Passing on experience – learning to operate efficiently

**Theory and practice**

FOERSTER detection technology is designed to enable the operator to be able to cope quickly so that he can carry out his work. The training stage can be considerably reduced however if the training includes transfer of information to the operating personnel as well as obtaining the technology.

The FOERSTER training program firstly offers basic seminars, which, besides training for equipment usage, also provide advice on operation and evaluation.

Furthermore, extension seminars containing up-to-date information are offered which convey further knowledge and information about the present situation of the international efforts and results regarding disposal of unexploded munitions as well as mine clearance etc.

All training is carried out on a practice-oriented basis and contains training with detection devices as well as the theoretical basics.