

REFLEX MAXIBOR II®

Optical Borehole Survey System



The Reflex MAXIBOR II is an advanced optical instrument for accurate surveying of drill holes and tunnels in magnetically disturbed environments. The Reflex MAXIBOR II is the ultimate surveying tool for long inclined and horizontal holes. It can be used in boreholes with diameters of 45 mm or more (BQ-size).

Key Features & Benefits

- Fully sealed electronics reduce the risk of accidental water entry whilst on the surface
- Integrated lithium battery pack ensures a long operating lifetime
- Infra-red data link ensures reliable and rapid data communications
- Silicon accelerometers measure tool orientation and provide inclination and roll information directly
- 44mm outer diameter which increases the versatility of the tool
- Windows based software improves data processing ability in the field

Economical

- The Reflex MAXIBOR II is a dependable tool of robust design, ensuring a low cost of ownership.
- Sealed electronics and optics help prevent accidental water entry.
 - The integrated lithium battery pack does not need recharging or regular maintenance.
 - Low power consumption assures many years of normal use between battery replacements.
 - The infra-red data link provides reliable and simple data communications.
 - Robust optics eliminate the need for continual re-calibration.

Accurate

- The Reflex MAXIBOR II is a highly accurate surveying tool.
- Solid state silicon accelerometers guarantee precision and provide inclination and roll information directly.
 - No calibration to perform and no manual calculations.
 - No instrument drift corrections required.
 - Surveys both in and out of the hole for instant repeatability check.

Note: The Reflex MAXIBOR II measures relative data, therefore the starting azimuth has to be entered carefully.

Versatile

- The Reflex MAXIBOR II is a versatile survey instrument with an outer diameter of only 44 mm, which allows it to be used in a wide variety of applications.
- Optional centralisers are available for measurement inside large diameter holes.
 - May be run on rods or wireline, or be pumped into the hole.
 - Measures inclination and azimuth every 1.5 or 3 metres, depending on operating mode.
 - Surveys can be run and results can be presented in either metres or feet.
 - Convenient for roll orientation of in-hole tools.

Effective

- The Reflex MAXIBOR II is an effective instrument which reduces time and costs.
- Comprehensive and straightforward operation.
 - No need to pull the drill rods before the survey.
 - Quick to use. A 100m survey can be performed in only 20 minutes (depending on the rig).
 - Integrated lithium battery pack ensures uninterrupted operation.
 - Totally automated calculations with immediate presentation of results on site.

Proven concept – modern design

The Reflex MAXIBOR II is based on a proven and successful principle for measuring the deviation of boreholes and tunnels. Whilst underground, the Reflex MAXIBOR II uses exactly the same measuring concept that a surveyor with a theodolite would use on the surface, that is, the optical measurement of angles and distances. Extensive electronic and optical re-design has resulted in a state-of-the-art instrument which considerably improves reliability and lowers the cost of ownership.



Reflex MAXIBOR II Technical Specifications



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Dimensions	Tool diameter 44.0 mm Tool length 1,200 mm																		
Optics	Optical CMOS image sensor Light source 6 x high intensity LED Exposure interval minimum 5 s typical 10 s																		
Solid State Electronics	Down hole electronic recording Non-volatile memory and data retention Thermal modelling for accurate calibration																		
Batteries	Interchangeable industrial alkaline batteries																		
Memory	Memory capacity over 16 hours at 10 second intervals																		
System Accuracy	Better than 1:1000 relative to hole length																		
Pressure and shock rating	3,500 metre water pressure gives 50% safety margin Shock survival 6,000 g, 0.5 ms ½ sine																		
Operating Temperature	-40°C to +65°C (-40°F to + 150°F) (within lithium batteries) -20°C to +65°C (-4°F to + 150°F) (within alkaline batteries)																		
Standard Equipment	<table border="0"> <tr> <td>Camera probe</td> <td>TDS Recon Pocket PC</td> </tr> <tr> <td>Reflector tubes</td> <td>Reflex Maxibor II Pocket PC</td> </tr> <tr> <td>Reflector rings</td> <td>Application</td> </tr> <tr> <td>Reflector tube couplings</td> <td>Reflex SProcess software</td> </tr> <tr> <td>Bottom coupling</td> <td>Reflex Maxibor II Manual</td> </tr> <tr> <td>Camera cap</td> <td>Spare reflector material</td> </tr> <tr> <td>Sealing ring exchanger device</td> <td>Spare sealing rings</td> </tr> <tr> <td>Reflector ring extractor</td> <td>Silicon grease</td> </tr> <tr> <td></td> <td>Transport boxes</td> </tr> </table>	Camera probe	TDS Recon Pocket PC	Reflector tubes	Reflex Maxibor II Pocket PC	Reflector rings	Application	Reflector tube couplings	Reflex SProcess software	Bottom coupling	Reflex Maxibor II Manual	Camera cap	Spare reflector material	Sealing ring exchanger device	Spare sealing rings	Reflector ring extractor	Silicon grease		Transport boxes
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Rental, Sales & Support

Reflex is a leading global manufacturer of survey and orientation instruments for drill holes. Its product portfolio includes a complete program of borehole surveying instruments for mining, tunnelling, construction, and other geotechnical applications. Reflex is established in all major markets; the Americas, Africa, Europe and Asia Pacific. The success of Reflex is based on its leading innovative technology, customer focus and a network of local service centres world wide.

Contacts

Reflex Asia Pacific
T +61 (0) 8 9445 4020

Reflex North America
T +1 (705) 235 2169

Reflex South America
T +56 (2) 589 9300

Reflex Africa
T +27 (0) 11 864 3467

Reflex Europe
T +44 1273 483 700

reflex@imdexlimited.com
www.reflexinstruments.com

