INNOVATING SURVEY TECHNOLOGY WHEREVER YOU ARE
# Current Products March 2019

## Borehole Survey Instruments

<table>
<thead>
<tr>
<th>PRODUCT NAME</th>
<th>DESCRIPTION</th>
<th>VERSION</th>
<th>LAUNCHED</th>
</tr>
</thead>
<tbody>
<tr>
<td>isGyro</td>
<td>Multi-shot &amp; continuous gyro</td>
<td>300-series</td>
<td>December 2015</td>
</tr>
<tr>
<td>TwinGyro</td>
<td>Dual multi-shot &amp; continuous gyro</td>
<td>800-series</td>
<td>March 2017</td>
</tr>
<tr>
<td>SlimGyro</td>
<td>Slimline multi-shot &amp; continuous gyro</td>
<td>200-series</td>
<td>June 2017</td>
</tr>
<tr>
<td>NorthFinder</td>
<td>Gyro compass multi-shot</td>
<td>000-series</td>
<td>April 2014</td>
</tr>
<tr>
<td>isCompass</td>
<td>Magnetic multi-shot</td>
<td>200-series</td>
<td>March 2013</td>
</tr>
<tr>
<td>CorePro</td>
<td>Core orientation system</td>
<td>100-series</td>
<td>Coming September 2019</td>
</tr>
</tbody>
</table>

## Borehole Survey Software

<table>
<thead>
<tr>
<th>PRODUCT NAME</th>
<th>DESCRIPTION</th>
<th>VERSION</th>
<th>LAUNCHED</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surveyor</td>
<td>Multi-shot and continuous gyro software</td>
<td>1.3.3.0</td>
<td>Current version: March 2019</td>
</tr>
<tr>
<td>isAnalysis</td>
<td>Survey data analysis software</td>
<td>1.7.8.0</td>
<td>Current version: November 2018</td>
</tr>
<tr>
<td>ISurveyor</td>
<td>Multi-shot gyro software</td>
<td>4.9.1.0</td>
<td>Current version: November 2018</td>
</tr>
</tbody>
</table>

## Survey Instrument Accessories

<table>
<thead>
<tr>
<th>PRODUCT NAME</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Feeder Reel</td>
<td>SlimGyro Feeder Reel</td>
</tr>
<tr>
<td>WDT</td>
<td>Wireless depth tracker</td>
</tr>
<tr>
<td>Smart Aligner</td>
<td>GPS sighting system</td>
</tr>
<tr>
<td>LiPAD-100</td>
<td>Gyro compass sighting system</td>
</tr>
<tr>
<td>ADW600/800</td>
<td>Survey winch</td>
</tr>
<tr>
<td>Tripod</td>
<td>Support for vertical surveys</td>
</tr>
<tr>
<td>Running gear</td>
<td>Pressure barrels, centralizers, fixtures, scopes</td>
</tr>
</tbody>
</table>

## Recommended Survey Packages

- **BlastGyro** | SlimGyro – Feeder Reel
- **Underground Continuous** | TwinGyro – WDT – LiPAD
- **Surface Continuous** | isGyro – WDT – Smart Aligner
BOREHOLE SURVEY INSTRUMENTS
• Most cost efficient gyro
• Fast continuous survey mode
• 0.2% position accuracy
• 200 hours battery
• Ultra-rugged
isGyro Specifications

• Azimuth 0.5°
• Inclination 0.1°
• Highside 0.2°
• Toolface 0.5°
• Position < 2 ft/1000ft (subject to wellbore profile)

• Power consumption 0.2 W
• Standard gear O.D. 38 mm
• Heat shield O.D. 1.75”/1.55”
• Battery survey time 200 hours
• Two independent surveys in one run
• Fast continuous survey mode
• 0.2% position accuracy
• 100 hours battery
• Ultra-rugged
TwinGyro Specifications

- Azimuth: 0.5°
- Inclination: 0.1°
- Highside: 0.2°
- Toolface: 0.5°
- Position: < 2 ft/1000ft (subject to wellbore profile)

- Power consumption: 0.4 W
- Standard gear O.D.: 38 mm
- Heat shield O.D.: 1.75”/1.55”
- Battery survey time: 100 hours
• World’s smallest gyro
• Fast continuous survey mode
• 0.2% position accuracy
• 80 hours battery
• Slim and light-weight
SlimGyro Specifications

- Azimuth: 0.5°
- Inclination: 0.1°
- Highside: 0.2°
- Toolface: 0.5°
- Position: < 2 ft/1000 ft (subject to wellbore profile)

- Power consumption: 0.2 W
- Standard gear O.D.: 26 mm
- Heat shield O.D.: 1.20”
- Battery survey time: 80 hours
• True MEMS gyro-compass
• Low-power technology
• Fast WiFi transfer
• Vertical wellbores
NorthFinder Specifications

- Azimuth: 2.5° (1-σ equatorial)
- Inclination: 0.1°
- Highside: 0.2°
- Toolface: 2.5° (1-σ equatorial)
- North finding time: 5 mins
- Power consumption: 0.8 W
- Temperature range: -20° C to +70° C
- Standard gear O.D.: 38 mm
- Heat shield O.D.: 1.75”/1.55”
- Battery survey time: 20 hours
• Magnetic multishot
• Fully integrated
• Wireless communication
• Standard battery cells
isCompass Specifications

- **Azimuth**: 0.35° (Magnetic field components available)
- **Inclination**: 0.15° (Gravity field components available)
- **Highside**: 0.20°
- **Magnetic Toolface**: 0.35°
- **Power consumption**: 0.2 W
- **Temperature range**: -20° C to +70° C
- **Diameter**: 35 mm
- **Length**: 1210 mm (instrument unit)
- **Battery survey time**: 100 hours
- Integrated running gear
- Easy-switch adapters
- Wireless orientation
- Android app
CorePro Specifications

• Inclination 0.15°
• Inclination range ± 90°
• Orientation 0.5°
• Orientation range ± 88° inclination
• Temperature range -20° C to +85° C
• Diameter 52 mm,
• Length 340 mm
• Weight 2 kg
• Battery survey time 3 months
Surveyor™

- The latest gyro software from Inertial Sensing
- Operates TwinGyro, SlimGyro and isGyro 300-series
- Inclined, orientation and vertical surveys
- Fast continuous & traditional multi-shot surveys
- Reprocess continuous data for increased resolution
- Data synch function for Cloud based solutions

<table>
<thead>
<tr>
<th>Hole depth</th>
<th>300 m</th>
<th>600 m</th>
<th>1200 m</th>
</tr>
</thead>
<tbody>
<tr>
<td>No of 3 m stations</td>
<td>100</td>
<td>200</td>
<td>400</td>
</tr>
<tr>
<td>TwinGyro continuous</td>
<td>10 min</td>
<td>20 min</td>
<td>40 min</td>
</tr>
<tr>
<td>TwinGyro multi-shot</td>
<td>1 hr</td>
<td>2 hrs</td>
<td>4 hrs</td>
</tr>
<tr>
<td>isGyro/SlimGyro multi-shot</td>
<td>2 hrs</td>
<td>4 hrs</td>
<td>8 hrs</td>
</tr>
<tr>
<td>North finding multi-shot</td>
<td>13 hrs</td>
<td>26 hrs</td>
<td>52 hrs</td>
</tr>
</tbody>
</table>

* Assuming an average wireline speed of 30 m/min. Depending on winch this can be faster.
• The standard gyro software from Inertial Sensing
• Operates isGyro and SlimGyro
• Procedures for inclined, orientation and vertical surveys
• Traditional multi-shot mode
• Data synch function for Cloud based solutions

<table>
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<tr>
<th></th>
<th>Hole depth (m)</th>
<th>No of 3 m stations</th>
<th>TwinGyro continuous</th>
<th>TwinGyro multi-shot</th>
<th>isGyro/SlimGyro multishot</th>
<th>North finding multishot</th>
</tr>
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</tr>
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<td></td>
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<td>4 hrs</td>
<td>26 hrs</td>
</tr>
<tr>
<td></td>
<td>1200</td>
<td>400</td>
<td>40 min</td>
<td>4 hrs</td>
<td>8 hrs</td>
<td>52 hrs</td>
</tr>
</tbody>
</table>

* Assuming an average wireline speed of 30 m/min. Depending on winch this can be faster.
• Edit, correct and export survey data
• Import and visualize data from groups of surveys
• Horizontal and vertical section plots
• Bull’s eye and 3D plots
• Survey misclose analysis
• Tie in multi-leg surveys
• Automated survey reports
SlimGyro Feeder Reel

- Manual feeding system for short hole surveys
- All inclinations - up/down/horizontal
- Robust & reliable
- Standard feeder rod - 50 meter x 11 mm diameter
- Dimensions 1100 x 950 x 500 mm
- Weight 35 kg
WDT

- Digital wireless depth tracker
- Transform drill rig wireline into a logger for surveying
- Built for drillers - robust & reliable - safe & simple
- Long battery life
- Light weight

WDT Specifications

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Depth accuracy</td>
<td>0.1 %</td>
</tr>
<tr>
<td>Wireline diameter</td>
<td>Up to 12 mm</td>
</tr>
<tr>
<td>Wireline speed</td>
<td>100 m/min</td>
</tr>
<tr>
<td>Communication</td>
<td>Bluetooth 4.0</td>
</tr>
<tr>
<td>Battery type</td>
<td>Re-chargeable Li-ion with 15 hours continuous operation.</td>
</tr>
<tr>
<td>Temperature range</td>
<td>-20° C - 85° C</td>
</tr>
</tbody>
</table>
Smart Aligner

- Portable GPS for survey and alignment
- Instant measurements in real time
- Measure, verify and save data with Android app
- Send reports wirelessly
- Suitable for surface applications

### Smart Aligner Specifications

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Angle accuracy</td>
<td>Azimuth ≤ 0.5°, Inclination &amp; roll: ≤ 0.2°</td>
</tr>
<tr>
<td>Position accuracy</td>
<td>60 cm with SBAS</td>
</tr>
<tr>
<td>Set up time</td>
<td>&lt; 30 s</td>
</tr>
<tr>
<td>Size</td>
<td>483x114x76 mm</td>
</tr>
<tr>
<td>Weight</td>
<td>2.3 kg</td>
</tr>
<tr>
<td>Battery runtime</td>
<td>Re-chargeable Li-ion with 10 hours continuous operation.</td>
</tr>
<tr>
<td>Operating temperature</td>
<td>-30° C - 70° C</td>
</tr>
</tbody>
</table>
| Environmental       | Waterproof (NEMA 4X, IP63), shockproof (IEC-68-2-27 / IEC 68-2-6) }
LiPAD-100

- Portable gyro compass for survey and alignment
- Based on high performance fiber optic gyroscopes
- Instant measurements in real time
- No inclination limitation
- Suitable for underground applications

**LiPAD-100 Specifications**

<table>
<thead>
<tr>
<th>Specification</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>Accuracy</td>
<td>Azimuth ≤ 0.35°/Cos(latitude), Inclination &amp; roll: ≤ 0.025°</td>
</tr>
<tr>
<td>Repeatability</td>
<td>Azimuth ≤ 0.15°(1σ), Inclination &amp; roll: ≤ 0.025° (1σ)</td>
</tr>
<tr>
<td>Set up time</td>
<td>5 min stationary</td>
</tr>
<tr>
<td>Size</td>
<td>305x158x205 mm</td>
</tr>
<tr>
<td>Weight</td>
<td>4.12 kg</td>
</tr>
<tr>
<td>Battery runtime</td>
<td>Re-chargeable Li-ion with 6 hours continuos operation.</td>
</tr>
<tr>
<td>Operating temperature</td>
<td>-20° C - 65° C</td>
</tr>
<tr>
<td>Environmental</td>
<td>Waterproof (IP65), shockproof (20 mg / 20 ms)</td>
</tr>
</tbody>
</table>
ADW Survey Winch

- Compact and portable
- 600/800 m of 1/8” wire
- Helicoidal cable spindle
- Electronic depth encoder with display
- Asynchronous electric motor (0.75 kW)
- Electric brake
- Interface for continuous gyro surveys
  (monoconductor wire available on request)
Tripod

- For single operator vertical surveys
- Detachable pulley
- Telescopic legs
- Adjustable ties
- 3 ground anchors
Running gear

- 38 mm RG for isGyro/TwinGyro/NorthFinder
- 26 mm RG for SlimGyro
- 26 mm & 38 mm spring blades centralizers
- Back sighting tripod for Smart Aligner
- Vertical survey sighting accessory for LiPAD
- Wireline encoder USB converter
- Optical sighting device
RECOMMENDED SURVEY PACKAGES
BlastGyro

- SlimGyro - GyroMax Feeder Reel
- Slim - 26 mm diameter
- Short - 1.4 m
- Light weight - 5 kg
- Designed for blast hole surveys
Underground Continuous

- TwinGyro - WDT - LiPAD
- Two independent surveys in every run
- Underground operations
- North Finding
- Flexible
- Fast continuous
Surface Continuous

- isGyro - WDT - Smart Aligner
- High rate - high accuracy
- Surface operations
- North Finding
- Flexible
- Fast continuous