

## 3D Mechanical Scanning Sonar

BlueView's BV5000-1350 and BV5000-2250 3D mechanical scanning sonar create high-resolution imagery of underwater areas, structures, and objects. With the touch of a button, these new 3D mechanical scanning sonar create 3D point clouds of an underwater scene with minimal training required. The compact, lightweight units are easily deployed on a tripod or an ROV. The scanning sonar head and integrated mechanical pan and tilt mechanism generate both sector scans and spherical scan data. For the first time, get 3D laser-like scanning capabilities underwater, even in low and zero visibility conditions and seamless integration with traditional laser scan imagery.



### APPLICATIONS

- 3D site survey
- 3D structure inspection
- Rig decommissioning
- Bridge inspections
- Underwater metrology

### BENEFITS

- Easy, one touch scan function
- 3D mosaic imaging without position info
- Easily combined with laser scan imagery
- Compact size fits into tight spaces
- Operates in low & zero visibility conditions

### FEATURES

- 2 model options (1.35 & 2.25 MHz)
- Standard Ethernet/RS485 interface
- Easy Windows based software
- Leica Cyclone data compatible
- Sector & Spherical Scans

## Inclusions

Included	BV5000-1350	BV5000-2250
Hardware	<ul style="list-style-type: none"> <li>• MB1350-45 Sonar</li> <li>• Pan &amp; Tilt w/ mounting hardware</li> <li>• Sonar, Pan &amp; Tilt junction box</li> <li>• Shipping case</li> <li>• Accessory kit*</li> </ul>	<ul style="list-style-type: none"> <li>• MB2250-45 Sonar</li> <li>• Pan &amp; Tilt w/ mounting hardware</li> <li>• Sonar, Pan &amp; Tilt junction box</li> <li>• Shipping case</li> <li>• Accessory kit*</li> </ul>
Software	<ul style="list-style-type: none"> <li>• RS485 to USB drivers</li> <li>• ProScan 1.3 (or current)</li> <li>• MeshLab (included w/ ProScan)</li> </ul>	<ul style="list-style-type: none"> <li>• RS485 to USB drivers</li> <li>• ProScan 1.3 (or current)</li> <li>• MeshLab (included w/ ProScan)</li> </ul>
Manuals	<ul style="list-style-type: none"> <li>• BV5000 User Handbook</li> <li>• Quick Start Guide</li> </ul>	<ul style="list-style-type: none"> <li>• BV5000 User Handbook</li> <li>• Quick Start Guide</li> </ul>
Warranty	<ul style="list-style-type: none"> <li>• 1 year</li> </ul>	<ul style="list-style-type: none"> <li>• 1 year</li> </ul>

\*Accessory kit includes: Retract-A-Bit Hex Driver; 7 ft. Cat 5 Ethernet Cable; 15 ft. Sonar/Pan & Tilt Cable; 2 m USB Cable; 15A US Power Cord; RS485 to USB driver CD; ProScan 1.3 (or current) + MeshLab CD

# BV5000

## Options

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Optional	BV5000-1350 & BV5000-2250
Hardware	<ul style="list-style-type: none"> <li>• 15 ft. Sonar, Pan &amp; Tilt Cable (1 included w/ BV5000 Accessory Kit)</li> <li>• 200 ft. Sonar, Pan &amp; Tilt Cable Assembly (needed for tripod and fixed mount systems)</li> <li>• 4 ft. Sonar, Pan &amp; Tilt Cable Whip Kit w/ Wiring Diagram (needed for ROV mount systems)</li> <li>• EXC500 Ethernet Extender Kit (includes 500 ft. Cable Assembly)</li> </ul>
Software	<ul style="list-style-type: none"> <li>• Leica Cyclone Register</li> <li>• Leica Cyclone Model</li> <li>• Leica Cyclone Register Customer Care Package (CCP)</li> <li>• Leica Cyclone Model Customer Care Package (CCP)</li> </ul>
Manuals	<ul style="list-style-type: none"> <li>• Cyclone/BlueView (ships with Cyclone software)</li> </ul>
Training	<ul style="list-style-type: none"> <li>• On-Site "Getting Started" hardware/Software (per day)</li> <li>• Leica Cyclone "On-Site" Training (2-day)</li> </ul>
Warranty	<ul style="list-style-type: none"> <li>• BV5000-1350 Extended Warranty (per year)</li> <li>• BV5000-2250 Extended Warranty (per year)</li> </ul>

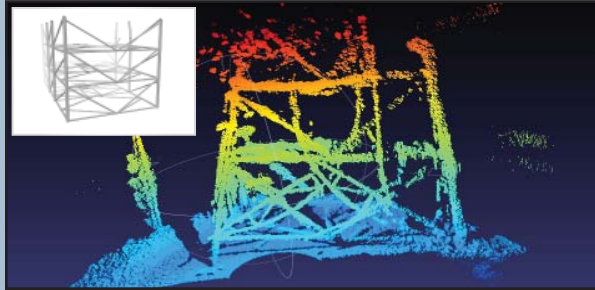
## Specifications

	BV5000-1350	BV5000-2250
<b>Sonar &amp; Software</b>		
Sector/Spherical Scan Area (°)	45 - 360	45 - 360
Sonar Field of View (°)	45 x 1	45 x 1
Update Rate (Hz)	Up to 40	up to 40
Frequency (MHz)	1.35	2.25
Maximum Range	30 m (98 ft.)	10 m (32 ft.)
Optimum Range	1 - 20 m (3.2 - 65 ft.)	0.5 - 7 m (1.6 - 23 ft.)
Number of Beams	256	256
Beam Width (°)	1 x 1	1 x 1
Beam Spacing (°)	0.18	0.18
Time Resolution	0.0042 m (0.164 in.)	0.0025 m (0.098 in.)
Data Output Format	.son, .off and .xyz files	.son, .off and .xyz files
<b>Mechanical</b>		
Size (L x W x H in inches)	10.5 x 9.2 x 15.4	8.9 x 8.6 x 15.4
Weight in Air/Water(lbs.)	21.7/8.2	19.1/6.0
Depth Rating	300 m (1,000 ft.)	300 m (1,000 ft.)
Coms (Sonar/Pan & Tilt)	Ethernet/RS485	Ethernet/RS485
Power Consumption (W)	45 max.	45 max.
Power Requirement (V DC)	20- 29	20- 29

# BV5000 3D Mechanical Scanning Sonar

## Applications

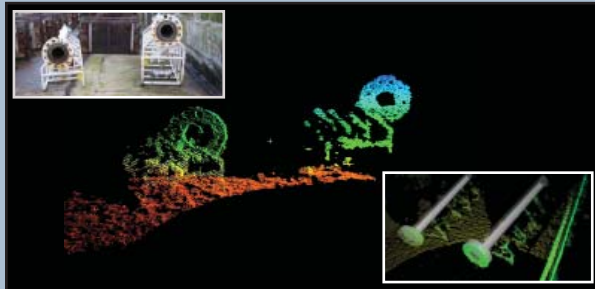
High resolution 3D imagery made easy for a wide variety of underwater applications. Visit [www.blueview.com](http://www.blueview.com) to view our collection of 3D sonar case studies, movies and imagery.



**Detailed 3D Structure Inspection** - on demand point cloud generation delivers new levels of data quality with less work.



**Full View Imagery** - easily add underwater details to above-water laser scan data for full, detailed 3D viewing of structures, objects and sites.

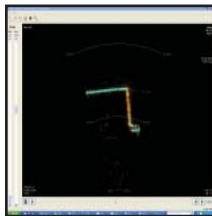


**Modeling, Rendering, and Object Identification** - improve efficiency and save time by using common laser scanning measurement techniques underwater.



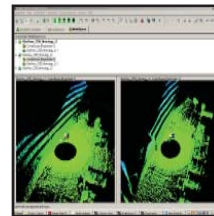
**High Resolution Mapping & Imaging** - quickly create high-resolution 3D maps and images of underwater scenes for accurate analysis and effective planning.

## Software



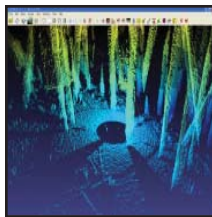
### ProScan

BlueView's real-time scan control, monitoring, and post processing software. Exports industry standard point clouds. Comes standard with BV5000 systems.



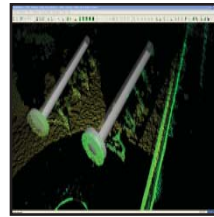
### Cyclone-REGISTER

Leica Geosystems' software used to quickly clean 3D data and combine multiple scans together. Optional software for BV5000 systems.



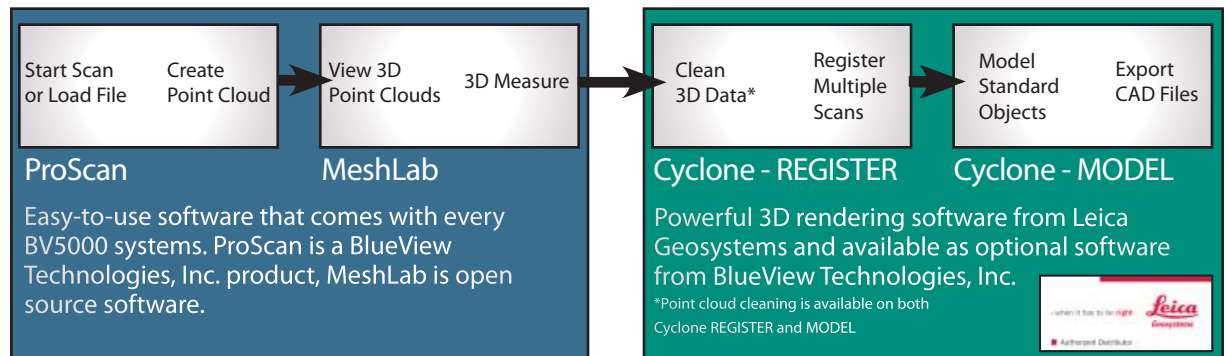
### MeshLab

An easy-to-use point cloud viewer with point-to-point measurement capabilities. Included with BV5000 systems.



### Cyclone-MODEL

Leica Geosystems' software used to model standard components and export a CAD file. Optional software for BV5000 systems.



# BV5000 3D Mechanical Scanning Sonar

## Diagrams

DIAGRAM OF BV5000-1350

Dimensions are in inches

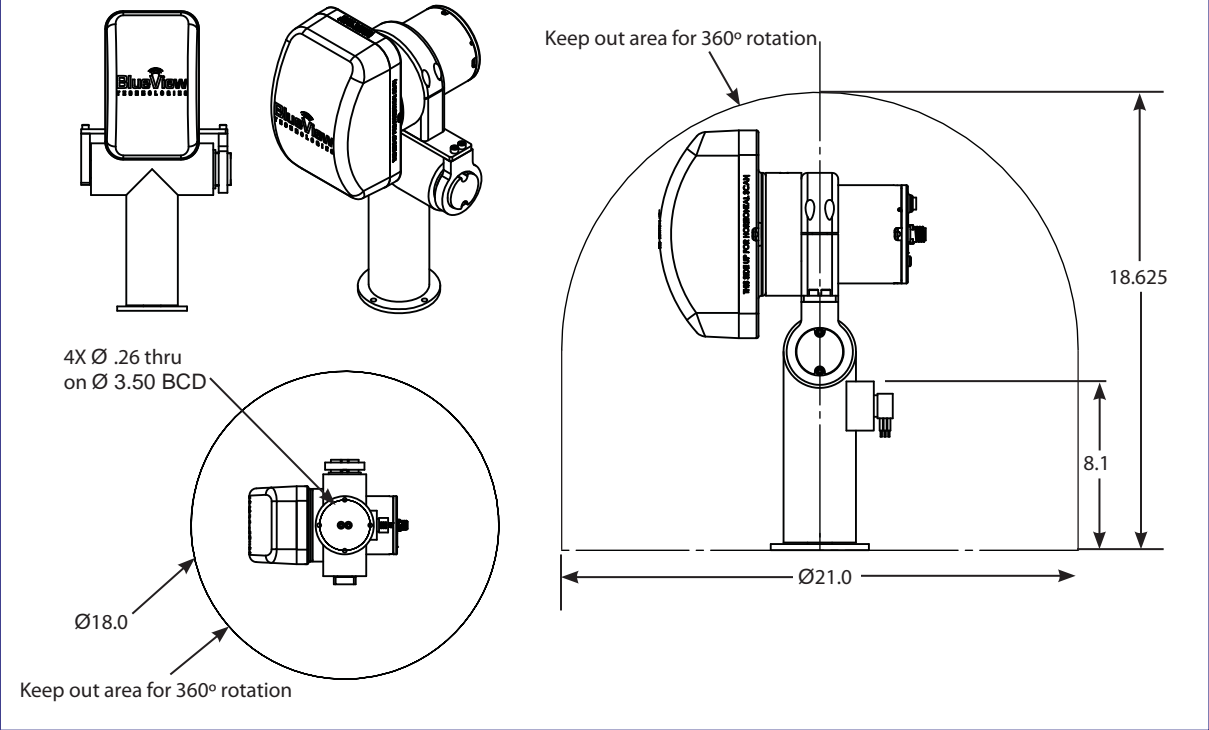


DIAGRAM OF BV5000-2250

Dimensions are in inches

