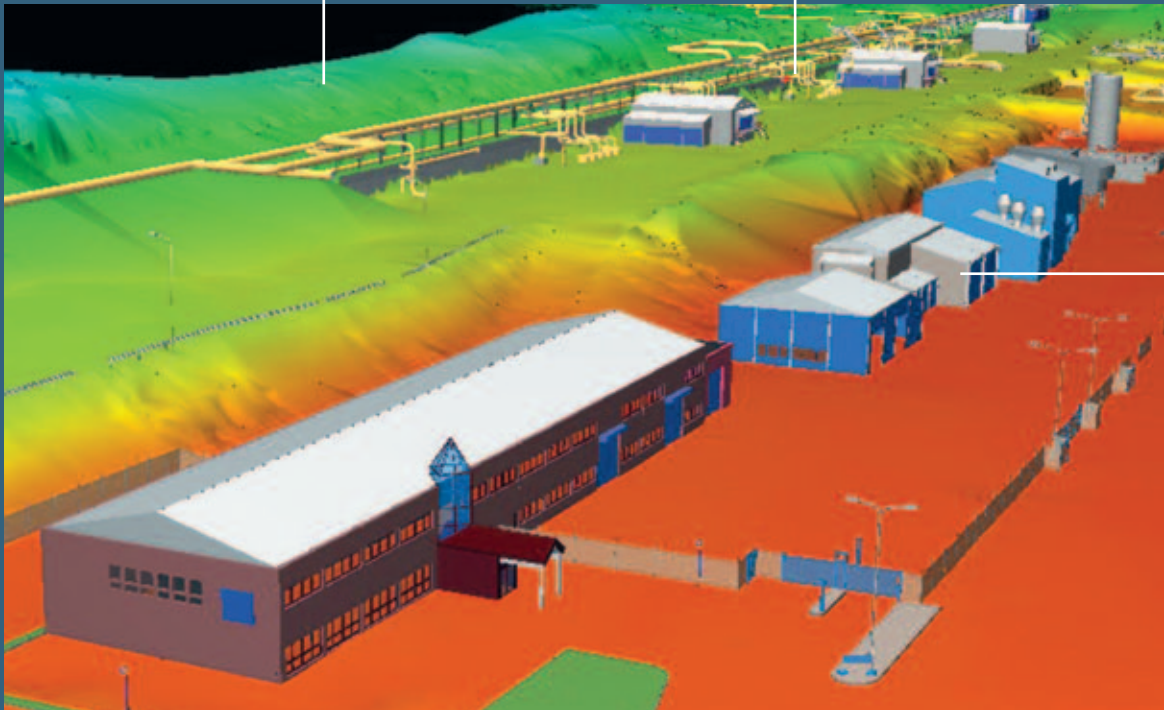


# Leica Cyclone MODEL 7.2

## Processing Laser Scans into Deliverables

The meshed ground surface is shown displayed with colors mapped by elevation.

A detailed plant model is integrated with structure and ground surface models.



Users can easily model buildings, roads, structures, bridges, light poles, etc.

### For civil, plant, architectural and other 2D & 3D projects

Unmatched versatility and performance help make Leica Cyclone MODEL the industry's most popular standalone software for analyzing rich, laser scan data and converting the data into deliverables.

Among its advantages, Cyclone MODEL boasts powerful visualization & point cloud navigation plus the industry's most complete tool set. These tools cover a wide range of High-Definition Surveying™ (HDS™) applications in engineering, construction, asset management, heritage, forensics, and other areas.

Cyclone MODEL provides unmatched office productivity, automating many time-consuming tasks and even letting multiple users

work on the same data sets simultaneously – thanks to Cyclone's Object/Database foundation. Finally, Cyclone MODEL reflects the data quality & accuracy-consciousness advantages that users worldwide expect from Leica Geosystems.

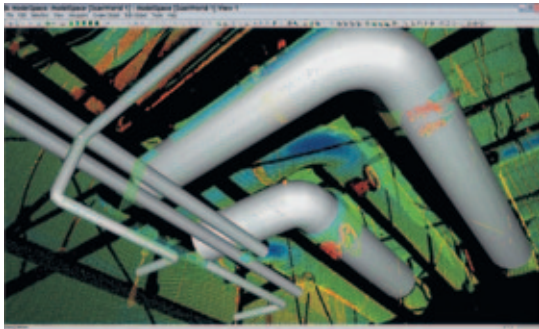
### Features and Benefits

- Multiple, fast, convenient visualization modes
- Texture mapping and rectified orthophotos
- Plant & building tools include:
  - Best-fit modeling, catalog fitting, clash detection
  - Automated pipe run, intelligent modeling
- Civil & related tools include:
  - Data collector emulation, contours and cross sections
  - TIN/mesh creation, volumes, areas, clearances
- Full set of import/export utilities

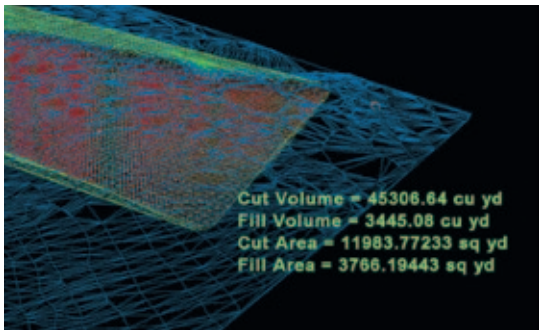
- when it has to be **right**

**Leica**  
Geosystems

# Leica Cyclone MODEL 7.2



The automated "Pipe Run" feature lets users select points on connected, straight pipe sections and the system automatically models a best fit pipe run with elbows in seconds.



Ground surface TINs and other meshes are easily created and offer great value. Here is an automated report analyzing cut and fill quantities using "before-and-after" scan data of a ground surface.

## Efficient Point Cloud Manipulation & Navigation

Leica Cyclone has many features that let users work efficiently with rich laser scan data sets. Cyclone's Level of Detail (LOD) graphics display and visualization modes allow users to "see through" walls, apply shaded rendering, or enhance edges for improved comprehension of dense point clouds. Texture mapping tools allow users to accurately "drape" photos of the scanned scene onto point clouds for an even more realistic viewing experience. Cyclone MODEL's friendly key plan and TruSpace panoramic viewing modes provide intuitive navigation and viewing options.

## High-Performance Modeling for a Wide Range of Applications

Accurately model a selected geometry type, such as pipes, planes, and topographic surfaces. Least-squares fitting and quality-of-fit statistics ensure reliable results, while Cyclone's advanced memory management provides high performance.

## Wealth of Plant & Structure-specific Tools

Continuous pipe runs, including elbows, can be modeled automatically. Leica Cyclone MODEL's Piping Mode even lets plant designers add intelligent piping data including specification, line ID, insulation thickness and SKEYs. Validation of proposed design models – including clash detection – can be done within Leica Cyclone or via export to popular plant design applications.

## Rich Tool Set for Civil, Architectural and Other Applications

For excavation and grading, Surface Deviation tools provide accurate quantity calculations. Volume and area for cut and fill are precisely calculated. Output options include volumes, contours, and/or tables including elevation differences at a user-specified grid sample. A Clearance tool even finds and reports absolute minimum vertical and horizontal clearances for overpasses, bridges, interchanges, and overhead sign structures. A Virtual Surveyor tool emulates a data collector for creating topographic maps.

## Leica Geosystems HDS Software Family

Cyclone MODEL is part of a full software family for managing laser scan data. Check the web address below for additional information.

Leica Cyclone MODEL 7.2 Specifications*		Hardware and System Requirements
<b>Survey</b>	Includes all functionality of Cyclone SURVEY	<b>Processor:</b> 2 GHz Pentium® 4 or higher <b>RAM:</b> 1 GB (2 GB for Windows Vista) <b>Hard Disk:</b> 2 GB <b>Network card:</b> Ethernet (required for licensing) <b>Display:</b> SVGA or OpenGL accelerated graphics card (with latest drivers) <b>Operating system:</b> Microsoft Windows 7 (32 or 64), Vista** (32 or 64), or Microsoft Windows XP (SP2 or higher) (32 or 64) <b>File System:</b> NTFS  <small>** Some systems may not support Windows Vista's Desktop Windows Manager (DWM) with Leica Cyclone and must be operated in Windows Classic Look.</small>
<b>Large point cloud mgt</b>	3D limit boxes, slices, interactive visualization of massive data sets Cyclone Object Database Technology: fast efficient point cloud mgt.	
<b>Visualization</b>	Full 3D fly, pan, zoom, rotate. Control color mapping using intensity, true-color, gray scale, color by elevation, one-sided (front or back), silhouette (enhanced edges). Map external photos to point cloud. Key plan and panoramic viewing.	
<b>3D Modeling</b>	Least-squares fitting of 3D geometry. User defined error tolerance. Statistical QA reports. Fit cloud to standard object tables items, AISC steel, ASME pipe, user defined tables.	
<b>Piping tools</b>	Embed attribute info Line-ID, Spec, SKEY. Fit flange and tie point, automated pipe run with elbows.	
<b>Animation</b>	Create fly-through animations of 3D point clouds and models	
<b>COE</b>	Seamless two-way data integration with AutoCAD and MicroStation	
<b>Import</b>	Data from CAD via COE (Cyclone Object Exchange) Control data from ASCII formats & X-Function DBX	
<b>Export</b>	Point data in standard formats: XYZ, PTS, PTX, DXF, X-Function DBX, Land XML, etc. Point data in special formats: ZFS, TOPO pci & cwf Image and model data: COE, BMP, JPEG, TIFF	

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\* Reference the Leica Cyclone 7.2 Technical Specifications document for a complete listing of product specifications.

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