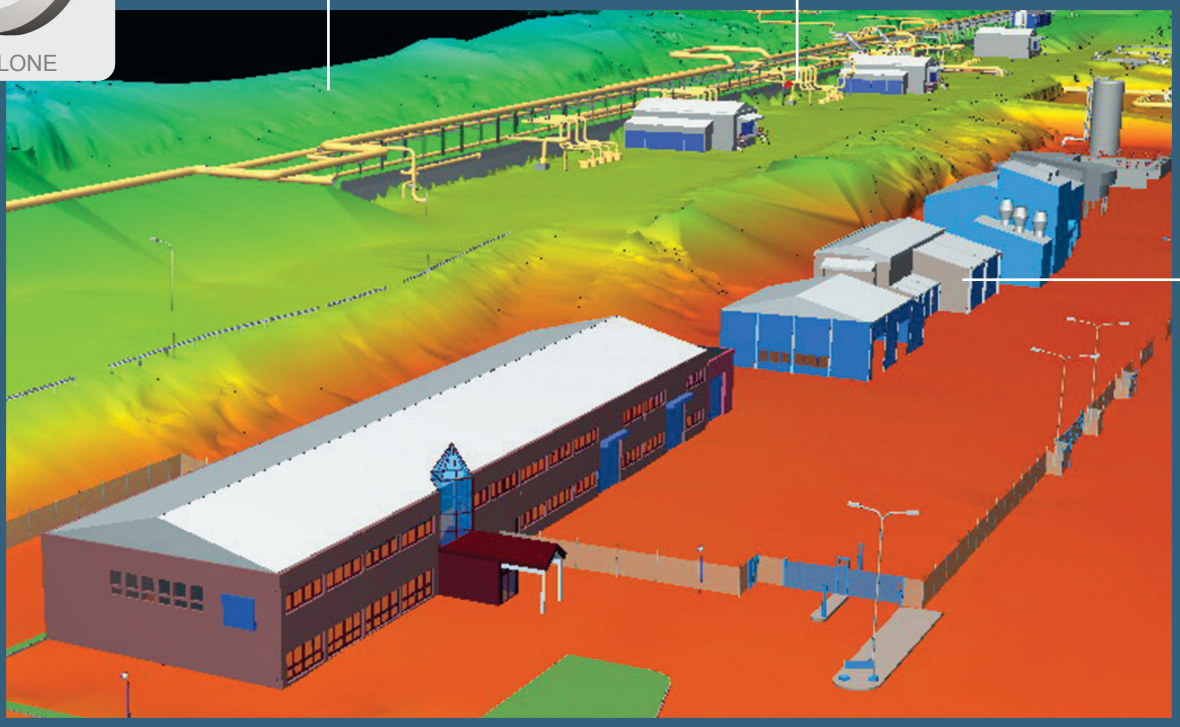
Leica Cyclone MODEL 9.1

Processing laser scans into deliverables



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 and point cloud navigation plus the industry's most complete tool set. These tools cover a wide range of 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

- New! Model Catalog for saving, sharing and inserting models
- New! Scripting functionality
- Auto Pipe finder – automatically find cylinders
- Texture mapping and rectified orthophotos

Plant & building tools include:

- Best-fit modeling, catalog fitting, clash detection
- Automated pip run, steel fitting and intelligent modeling

Civil & related tools include:

- TIN/mesh creation, volumes, areas, clearances
- Fast import/export utilities

- when it has to be **right**

Leica Geosystems

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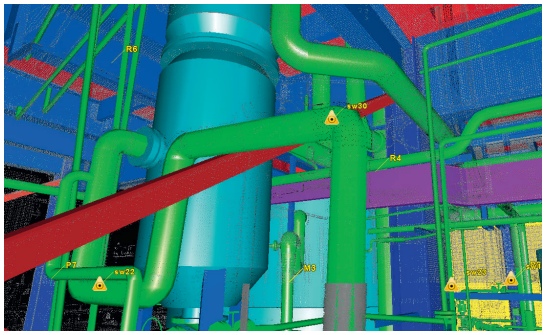
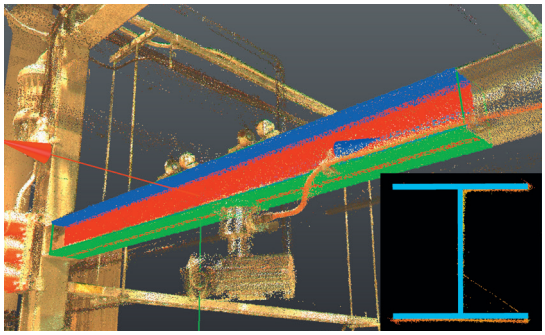


The automated Pipe Run feature lets users select points on connected, straight pipe sections, and the system automatically models a best fit pipe run with elbows in seconds.



Industry first robust steel fitter that automatically places catalog steel shapes quickly and accurately.

Efficient Point Cloud Manipulation & Navigation

Leica Cyclone has many features that let users work efficiently with rich laser scan data sets. 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

A new Model Catalog allows user to save complex models and save them to a catalog. Users can then insert these models and or share them with others. New Automatic pipe finder finds all cylinders in a point cloud or group of points clouds.

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 with 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 Specifications*	
Survey	Includes all functionality of Cyclone SURVEY
Large point cloud mgt	3D limit boxes, slices, interactive visualization of massive data sets Cyclone Object Database Technology: fast efficient point cloud mgt.
Visualization	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.
3D Modeling	New Model Catalog, Auto Pipe Finder and Move commands. Least-squares fitting of 3D geometry. Statistical QA reports. Fit cloud to standard object tables items, AISC steel, ASME pipe, user defined tables.
Piping tools	Embed attribute info Line-ID, Spec, SKEY. Fit flange and tie point, automated pipe run with elbows.
Animation	Create fly-through animations of 3D point clouds and models
Scripting	New Scripting capabilities in the ModelSpace
COE	Seamless two-way data integration with AutoCAD and MicroStation
Import	Data from CAD via COE (Cyclone Object Exchange) Control data from ASCII formats & X-Function DBX
Export	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

Hardware and System Requirements
Minimum Specifications
Processor: 2 GHz Dual Core processor or better
RAM: 2 GB (4 GB for Windows Vista or Windows 7)
Hard disk: 40 GB
Display: SVGA or OpenGL accelerated graphics card (with latest drivers)
Supported operating systems: Windows 7 (32 or 64), or Windows 8 & 8.1 (64bit only)
File system: NTFS
Recommended Specifications
Processor: 3.0 GHz Quad Core w/ Hyper-threading or higher
RAM: 32 GB's or more 64 bit OS
Hard disk: 500 GB SSD Drive
Large project disk option: RAID 5, 6, or 10 w/ SATA or SAS drives
Display: Nvidia GeForce GTX 680, Quadro K4000 or ATI Radeon 7850 or better, with 2GB's memory or more
Operating system: Microsoft Windows 7 – 64bit
File system: NTFS

* Reference the Leica Cyclone 9.1 Technical Specifications document for a complete listing of product specifications.

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