

Structural Life-Cycle Solutions from GRAITEC



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Table of Contents

Structural Life-Cycle Solutions from GRAITEC.....	3
Advance Steel – Structural Modeling & Detailing	4
Advance Design – FEA Calculation for 2D/3D Structures	5
Advance Concrete – Concrete Modeling & Drawing Creation	6

Structural Life-Cycle Solutions from GRAITEC

GRAITEC is a true software, engineering and R&D organization involved in the complete structural solution lifecycle: New technology R&D, CAD and design software development with quality assurance. GRAITEC provides consistently improving cutting edge products matched by comprehensive support services to fulfil the highest production and quality requirements.

For more than 20 years, GRAITEC has been committed to developing high performance CAD and analysis software for the construction industry. Over 6000 customers now rely on GRAITEC's complete suite of fully compatible and integrated products covering design and detailing for the reinforced concrete and steel construction industries. The GRAITEC Structural Life-Cycle Solutions are as follows:

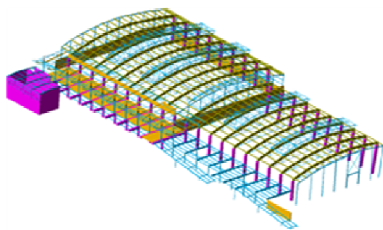
Advance Steel is a major extension of AutoCAD® that accelerates structural steel modeling and automatically creates the general arrangement drawings, fabrication Drawings, material lists and NC files. Advance Steel is specially developed for the steel industry to increase design productivity and production quality.

Advance Design conducts static and dynamic analysis of 2D and 3D structures based on the finite element calculation method. Advance Design is your in-house steel / concrete construction expert that features a 3D Climatic generator, non-linear calculation, support for large displacement phenomenon, structural optimization, etc.

Advance Concrete is a major AutoCAD® extension that accelerates modeling and drawing creation for concrete reinforcement and formwork drawings. It's automatically increases productivity while maintaining or increasing drawing quality.

GRAITEC is a better tool got improved workflow for more productivity...

- 100% dedicated to Structural Design, Engineering and Detailing
- Three high-end 3D modeling: Structural Design & Detailing (both Steel & Concrete)
- Eliminates data re-entry with unique bi-directional synchronization technology
- Automatically creates and updates construction and fabrication drawings
- Integrated drawing management
- Detailing packages are major AutoCAD® extensions
- Provides dramatically increased general project productivity



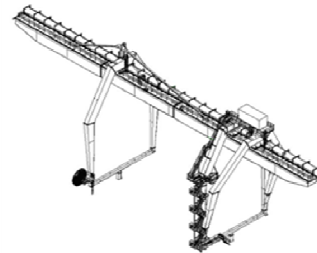
Industrial Building

▪ Ingénierie Construction, France



Plant Design

▪ CAB Company, Czech company



Harbor Crane

▪ IB Streb, Germany

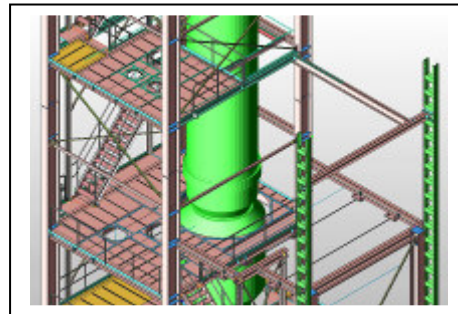
Advance Steel – Structural Modeling & Detailing

Advance Steel is dedicated to Steelwork Construction for 3D structural modeling, detailing and fabrication (creates NC Code). Advance Steel is a major AutoCAD® extension that transforms the generic platform into an unsurpassed professional structural steel creation environment. Advance Steel dramatically increases general project throughput by extensive use of drag and drop intelligent objects (profiles, joints, etc.), wizards, single click functions and visual management tools. Correspondingly, it has a small learning curve hence novice users can create, manage, modify complex intelligent 3D models and all associated drawings faster and with less effort than static 2D drawings.

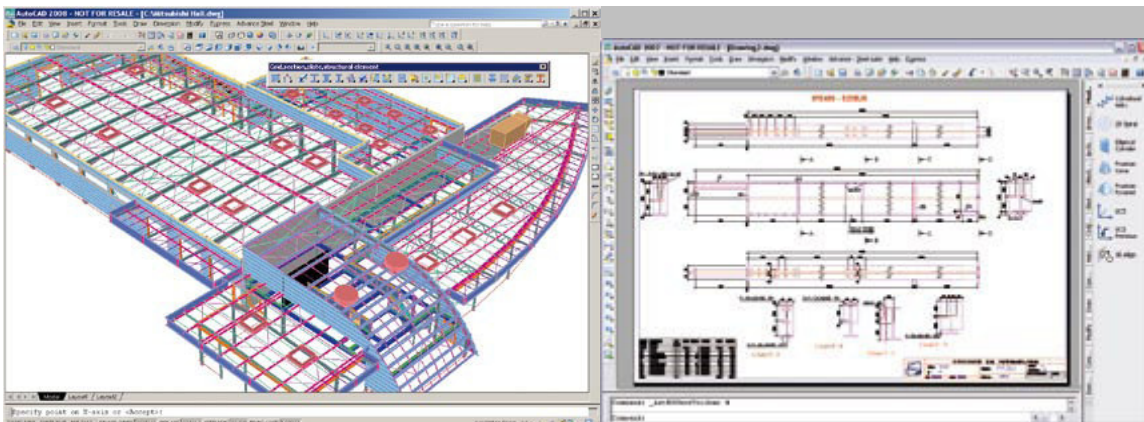
Seven easy steps to create you're drawing in Advance Steel:

Create your columns, floor-beams, bracings and girts with the same approach as drawing AutoCAD® lines and then call on the automatic connections library!

1. Structural Modeling
2. Intelligent Connections
3. Quick connection with design
4. General arrangements drawings
5. Fabrications drawings
6. NC Code Generation
7. Bill of Materials generation



From a technical point of view, Advance Steel uses the latest and most powerful 100% AutoCAD® compliant development technology: Object ARX. This ensures the current and future AutoCAD® compatibility of objects that support most basic functions (stretch, shorten, copy, move, etc.). The Advance Steel native format is the same AutoCAD® DWG file.



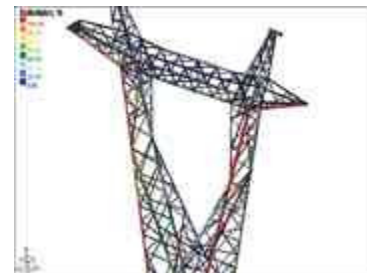
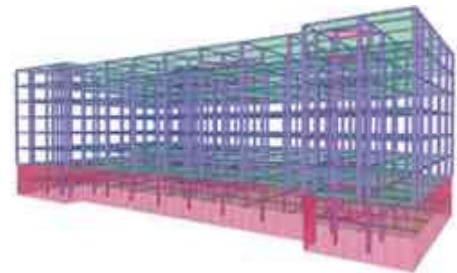
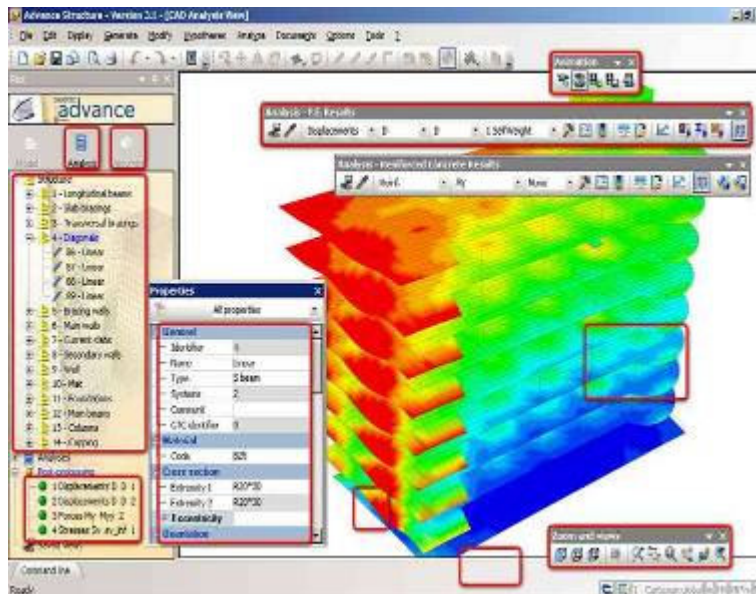
Advance Design – FEA Calculation for 2D/3D Structures

Advance Design was specifically developed for industry professionals that require a superior solution for the structural analysis and design of Reinforced Concrete and Steel structures. Advance Design features include easy modeling, a powerful FEM analysis engine, top-level design wizards, automated post-processing of results and automated reports.

Advance Design got 12 modules working on a single platform allow engineers to design and verify all types of structures from bridges and culverts to buildings and towers. A large database of materials and shapes (steel, composite, wood, reinforced and pre stressed concrete) is integrated. Custom objects can be created and a public or private distribution can be assigned. Building and truss generators along with ice and wind loads generation on open structures increase the productivity and quality control for consulting engineers.

1. Static Analysis
2. Dynamic Analysis
3. Steel Design
4. Timber Design
5. Tower Design
6. Foundation Design
7. Reinforced Concrete Design
8. Prestressed Concrete Design
9. Generation of Culverts
10. Bridge Evaluation
11. Moving Load Analysis
12. Generation of Abutments, Piers

Advance Design comes with 2 versions one is according to the North American Standard and another is according to the European Standard



Advance Concrete – Concrete Modeling & Drawing Creation

Perfectly integrated into AutoCAD®, **Advance Concrete significantly accelerates the initial design phase** of buildings by offering detailers and engineers a library of drag and drop structural elements (slabs, beams, columns, walls, foundations), openings (doors, windows, depressions, openings, niches), bars (straight bars, point bars, frames, pin bars, stirrups), materials and standard sections.

Advance Concrete provides all the specialized functionalities required for the creation of reinforced concrete structures:

- Complete library of structural elements (slabs, beams, columns, walls, foundations)
- Complete library of openings (doors, windows, depressions, floor openings, niches)
- Complete library of hole shapes (rectangular, circular, polygonal)
- Materials and sections libraries
- Levels management tools

Once the model is complete, Advance Concrete generates all construction drawings using a large selection of view production tools, dimensions, locations, symbols and automatic layout functions and it also create sections, elevations, foundations drawings, isometric views, total or partial cuts, etc.

Using **Advance Concrete and Autodesk Architectural Desktop** guarantees accelerated and consistent drawing creation. Engineering offices can re-use the architects ADT objects and directly convert them to structural elements. Advance's automated tools analyze the individual objects and global structural stability and then create construction drawings in compliance with local standards.

Advance Concrete facilitates the creation of paper drawings

- Automation of AutoCAD® paper space
- Simple drag and drop of drawings on the paper
- Views have dynamic properties : scales, rotations
- History of drawings and views (version control)

In addition to creation of construction drawings, Advance Concrete also provides complete structural estimation: volume of concrete, surface of formwork, etc.

