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GRAITEC ADVANCE

Advance Concrete

BIM SOFTWARE FOR STRUCTURAL CONCRETE
ENGINEERING, DETAILING AND FABRICATION

 GRAITEC

www.graitec.com

Part of Liège Courthouse's expansion
(Belgium)
TPF Engineering Design Department

Advance Concrete

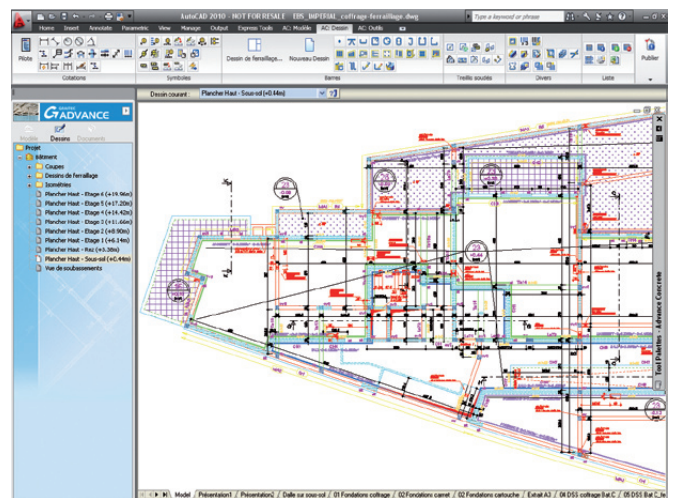


Advance Concrete® is specifically designed for structural engineers and reinforced concrete detailers who require a professional and easy-to-use 3D software that automates the production of drawings, BOMs and NC files. It drastically increases productivity and drawings quality, while reducing risk of errors.

Perfectly integrated into AutoCAD®, Advance Concrete® accelerates the design phase (single or multi-user mode) by offering an extensive library of structural and reinforcement elements and generating all construction drawings by using a large selection of production tools, dimensions, symbols and automatic layout functions.

With its short learning curve, novice users can create, manage and modify complex intelligent 3D models and all associated drawings faster than static 2D drawings.

Advance Concrete® is part of the GRAITEC structural BIM solution and provides data exchanges with Autodesk Revit as well as with IFC enabled applications.



EBS / "L'Impérial" Housing building

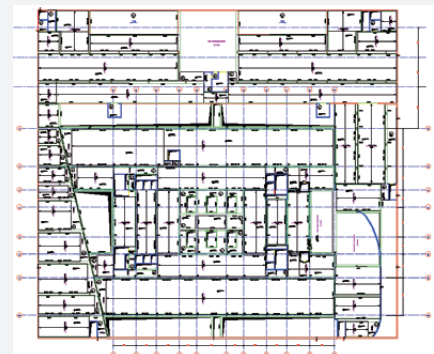
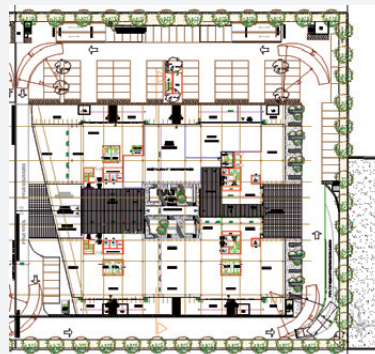


Le jardin des Peintres in Amiens - 250 flats, 20 buildings
Design Office: STRUCTUBAT - Architecture Office: Marianne Leemann

Collaboration Optimize information exchange between Architects, Design Department, and Construction Companies

Advance Concrete optimizes complete communication with your partners due to complete integration with AutoCAD®:

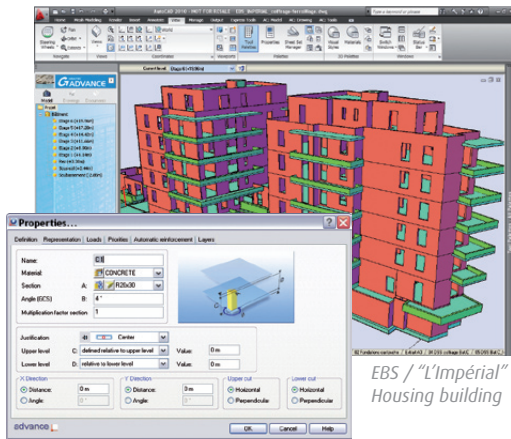
- Advance Concrete's database technology provides a simultaneous multi-user environment.
- Communicate with Autodesk Revit suite (Autodesk Revit Architecture / Autodesk Revit Structure) using Graitec's exclusive BIM technology.
- Communicate with AutoCAD® users: open the DWG file provided by the architect and use the powerful conversion tools to transform lines and polylines into structural objects: slabs, beams, columns, walls, etc.
- Communicate with Autodesk Architectural Desktop® (ADT) users: Advance Concrete directly recognizes the structural objects!
- Communicate with construction companies: simply send Advance Concrete's AutoCAD® compatible DWG drawings.



Project in Velizy, France - TPF Engineering Design Department (Bruxelles / Belgium)

1

ACCELERATED MODELING



EBS / "L'Impérial"
Housing building

Modeling must be precise, efficient, and fast since the model is an essential component in the creation of all structural and reinforcement drawings, lists, etc.

For easy modeling, Advance Concrete provides a comprehensive library of smart objects that have real world properties (slabs, beams, columns, walls, stairs, foundations, and openings). Select an element on the toolbar and drop it in the workspace: it's that simple to use!

Maintain your AutoCAD® working habits with Advance Concrete. Draw your structure in plan view at a specified height or level, and Advance Concrete creates the third dimension, automatically creating your sections and isometric views!

Numerous automated functions are also available: creation of footings, positioning of slopes, roofs and stairs, level duplication, element copy/paste, etc.

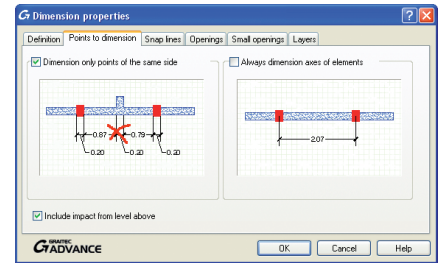
Overlapping elements, collision detection and openings correction are easily accomplished with this sophisticated software.

2 OPTIMIZE YOUR WORKFLOW WITH AUTOMATED DRAWING CREATION

Advance Concrete automatically creates, plan views, cuts or local sections, elevations, and isometric views from the model.

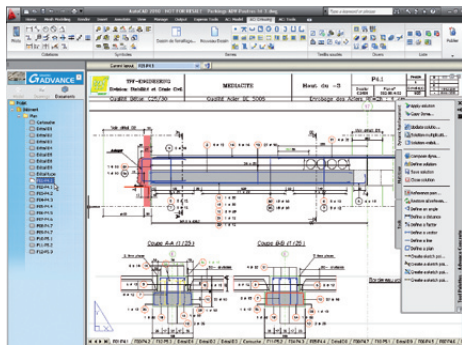
Advance Concrete offers automatic numbering and dimensioning tools to further enhance workflow and optimize the drawing creation process. Advance Concrete immediately shows which drawing has to be updated in the project to save time and reduce the risk of errors.

Improve cost estimates throughout your projects using Advance Concrete's bill of materials, created directly from the model, at any stage of the design process.



3

REINFORCEMENT: DOUBLE YOUR PRODUCTIVITY!



TPF Engineering / "Les Jardins de la Source" - block of flats

Two unique approaches are available for reinforcement with Advance Concrete:

1. Reinforcement drawing: A comprehensive reinforcement library (straight, rectangular, pin or circular bar, etc.) enables the reinforcement of a structure drawn on a 2D plan. Advance Concrete precisely manages the concrete covers, bar diameter, fillet radius, etc. In addition, Advance Concrete outlines the fabrics and optimizes the trimming.

The reinforcement cage 3D viewer provides control over the reinforcement arrangement and checks collisions. Advance Concrete offers many other tools (labels, bending details, specific dimensions, etc.). Lists are also automatically created and updated when modifications occur.

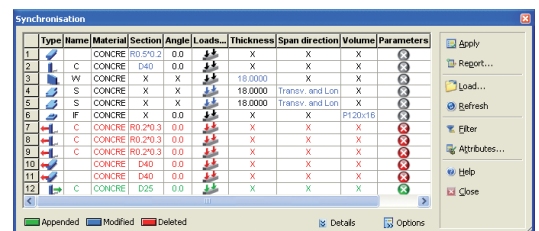
NC files (aSa, SteelPac, Soule, BVBS, etc.) can be automatically generated from the reinforcement drawings. Increases productivity and drastically reduces the potential errors.

2. Parametric reinforcement: Use Graitec's exclusive DYNamic reinforcement technology. Associate a reinforcement style to every structural element. Specify the number of bars, diameters, concrete covers, and spacing. Advance Concrete then creates the views with the necessary reinforcement and visual elements. The reinforcement cage adjusts to the formwork and is updated when modifications occur. Reinforcement of beams, columns, walls, footings, elevator cages, and stairs... is automatic!

4 HAVE COMPLETE CONTROL OVER YOUR MODEL'S DESIGN REQUIREMENTS

Advance Concrete is part of the GRAITEC Advance CAD / Design suite. This modular end-to-end solution offers the advantage of fluid workflow from the initial structural concept to final design and production output. Our software is integrated BIM technology* that saves considerable time by virtually eliminating double entries and redundant work! For example, Advance Concrete can retrieve in real time all modifications (section optimization, new structural elements, etc.) made in Advance Design and automatically update all drawings!

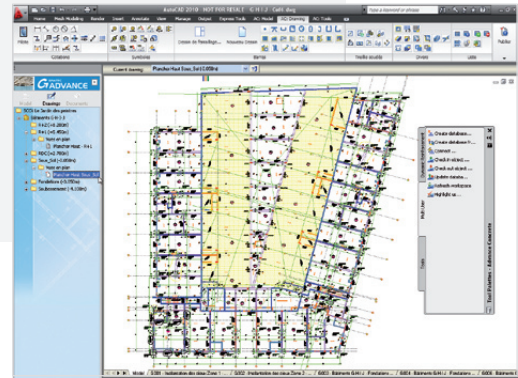
*The BIM technology, included in all GRAITEC Advance software, enables data synchronization.



100% AutoCAD®

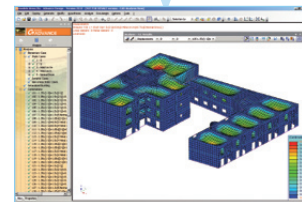
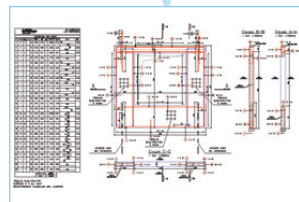
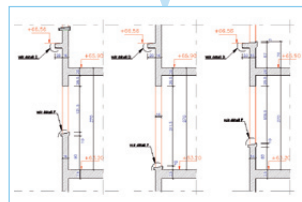
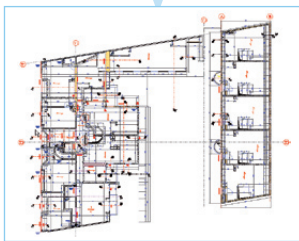
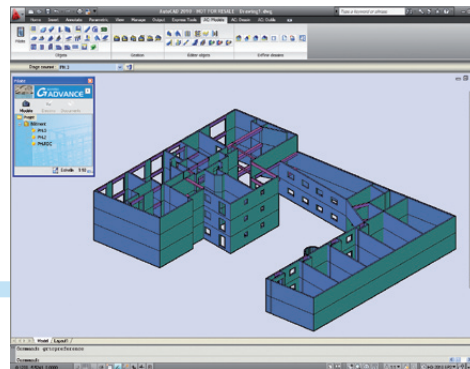
Working with AutoCAD® ensures a flexible and solid industry standard software platform. It reduces running costs and risks through its large established user base, shorter learning curve, quick integration into production, and smooth file exchange between project partners (DWG file).

From a technical standpoint, Advance uses the latest and most powerful AutoCAD® development technology: Object ARX. This technology ensures compatibility of smart objects that support all basic functions (stretch, trim, extend, copy, and move).



STRUCTUBAT / EDHEC Business School - Croix Roubaix

Advance Concrete® is part of the GRAITEC structural BIM solution, automating the entire structural design process, from engineering analysis and design to detailing and fabrication.

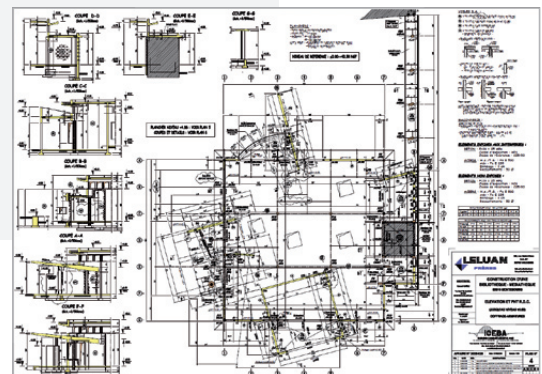


Drawing content

Create your drawings with a few mouse clicks

Advance Concrete considerably reduces drawing setup time by automating paper space functions. This eliminates the tedious work associated with any printing preparation in AutoCAD®.

Select your paper format, insert an intelligent title block and use Windows® standard functions to drag and drop drawings with the appropriate scale. Whether texts (i.e., labels and dimensions) come from Advance Concrete or from AutoCAD®, GRAITEC software automatically adapts the character font size to a suitable printing scale!



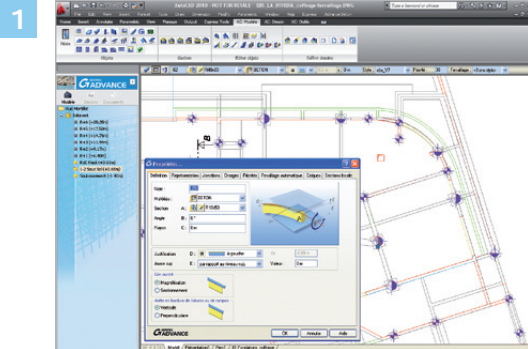
ICEBA / Media library of Montebourg



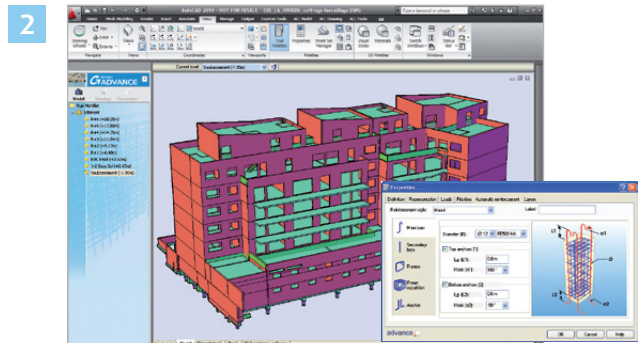
Liège Courthouse's expansion (Belgium)
TPF Engineering Design Department

YOUR PROJECT AT A GLANCE

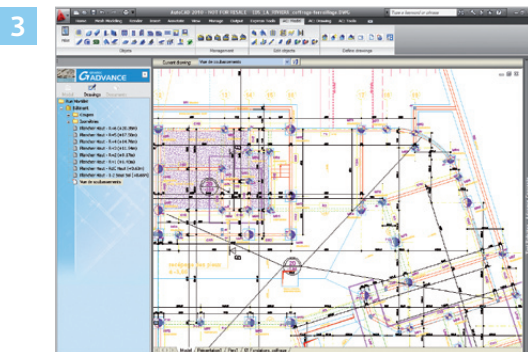
Model your Advance Concrete structure from scratch or from the architect's draft. Create your slabs, beams, columns, walls, foundations, stairs, openings... exactly as you would draw AutoCAD® lines!



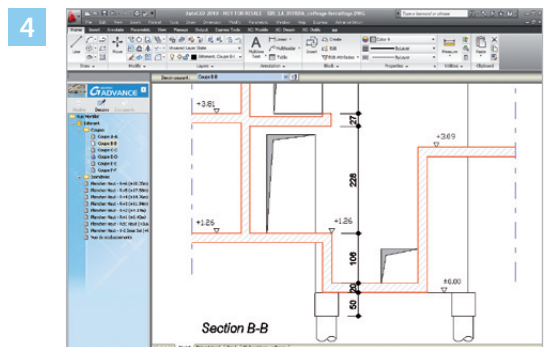
Create the building model in plan view (2D)



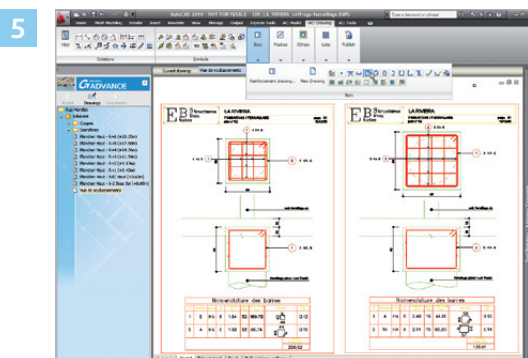
Apply the parametric reinforcement



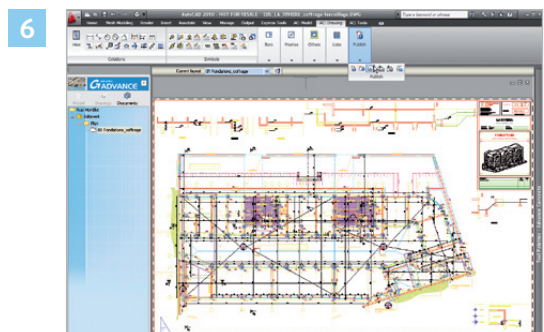
Produce formwork drawings



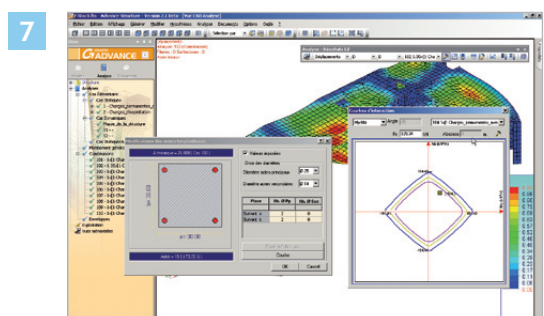
Create cuts



Generate reinforcement drawings and bar schedules

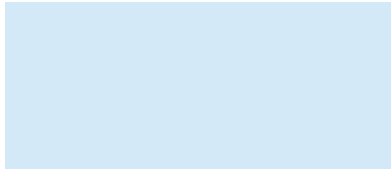


Print final layouts



Connect to Advance Design for analysis

Automatically create all structural and reinforcement drawings from the model... and prepare the final layout! The flash connection with Advance Design lets you conduct several structural analyses from global stability analysis to the reinforcement setup.



THE STRUCTURAL BIM SOLUTION FOR CONSTRUCTION PROFESSIONALS

Better tools, improved workflow, increased productivity...

- 100% dedicated to Structural Design, Engineering and Detailing
- Automatically creates and updates construction and fabrication drawings
- FEM analysis and structural optimization
- Multi-user environment and integrated document management
- Eliminates data re-entry with unique bi-directional synchronization technology



Advance Steel®

Advance Steel® is specifically designed for structural engineers and steel detailers who require a professional and easy-to-use 3D structural steel detailing software that automates the production of drawings, BOMs and NC files. Advance Steel® drastically increases productivity and drawing quality, while reducing the risk of errors.



Advance Design®

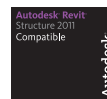
Advance Design® is specifically dedicated to structural engineers who require a professional and easy-to-use solution for simulating and optimizing all their projects. Advance Design includes: a user-friendly structural modeler, an automatic load generator, a powerful FEM engine, comprehensive wizards for designing concrete and steel members according to Eurocodes and efficient post-processing and report generators.



Advance Concrete®

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THE Software Suite that optimizes structural design and detailing... Are you ready for GRAITEC Advance?



Autodesk
Authorized Developer
Autodesk
Authorized ISV Partner

GRAITEC is ADN (Autodesk Developer Network)

GRAITEC is ISV (Independent Software Vendor)

www.graitec.com/revit

Minimum recommended configuration:

Pentium IV with min. 2 GHz, 2 GB RAM and 128 MB graphic card.
Windows 7, Windows Vista or Windows XP Professional. AutoCAD® 2007 or higher.
This configuration may change depending on the evolution of operating systems and AutoCAD®.

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For almost 25 years, GRAITEC has been committed to developing high performance CAD and analysis software for the construction industry.

Over 30,000 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.

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, quality assurance, training, support, specific solution/project consulting and outsourcing.

GRAITEC provides consistently improving cutting edge products matched by comprehensive support services to fulfil the highest production and quality requirements.

GRAITEC is a unique source for complete construction software expertise!

Headquartered in France, GRAITEC has subsidiaries in the USA, Canada, UK, Germany, Czech Republic, Romania, Russia and Singapore and works closely with Value Added Resellers worldwide.

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