ATHENA₂₀₀₉

The Upgrade with the Built-In Increase in Productivity

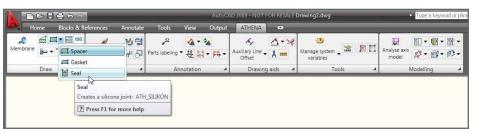
Something good becomes even better.

Carefully developed further, ATHENA 2009 now boasts numerous innovations to increase productivity. We have again taken the wishes of customers into account and more practical and useful functions have been added, enabling you to solve every-day design tasks more efficiently. With many dialog boxes, under ergonomic aspects the modifications that have been carried out lead to even better clarity and an increase in the ease of operation. In view of the significant increase in international planning, in ATHENA 2009 we have further optimized the compatibility of the drawing data between the metric and imperial (inch) systems.

The new multifunction bar

In AutoCAD 2009 a new multifunction bar is now being employed which many users will recognize as the command navigator from AutoCAD 2007 and 2008. All tools and options are clearly grouped in so-called ribbons, which means that the desired commands are accessible with a minimum of clicks, enabling more efficient drawing production.

ATHENA 2009 takes up this innovative user guidance. Now ATHENA commands can also be accessed in a dedicated ribbon via the AutoCAD multifunction bar - an attractive alternative to the well-known toolbars.



itandard Parts	
	Properties Find standard Standard regions Administration
-	Properties Properties Properties Screen with imperial thread School and Scho
Daboscrew SH2:5,0 Countersunk head screw with TORX drive, T20 Screwed joint on wood subframe Display DIN V	
Form	Sizes Nominal size SH2:5 Standard lengths Length S5:00 mm Pick <

Standard Parts

The dialog box has been reorganized with new register buttons. About 10,000 standard parts have been added so that a total of approx. 72,000 parts is now available. The following important standard and manufacturers' parts, for example, have been supplemented:

- Precision steel tube DIN EN 10305-1, -2 and -3.
- Halfen channels and screws have been supplemented.
- Setscrews DIN 915 and DIN 916.
- Thumbscrew DIN 316.
- Straight grooved pin DIN EN ISO 8740.
- Dowel pin DIN EN ISO 8752.
- Single screws for Fischer frame fastening dowel
- EJOT self-drilling screws and EJOT sealed screws have been supplemented.
- EJOT countersunk timber screws have been added.





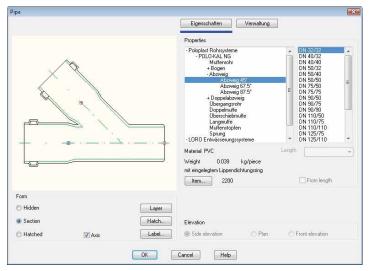
Semi-Finished Products

The dialog box has been reorganized with new register buttons. The shape "octagonal" has been added.

		Semi-finished product	Administration	
		Properties		Variant
		Height <		
		Width <	60.00	
		Thickness <		0
		💿 Sharp 🙁 Canted 🔿 B	ending radius	Ō
				\bigcirc
		Material Aluminum		Ľ
Form		Fold		L
 Outline 	Layer	Item		
Filled	Hatch			
Hatched	Label			

Pipe

This new function facilitates the insertion and combination of pipe objects, such as for example POLOPLAST or LORO (straight sections, bends, branches or sleeves). The objects can be modified retrospectively at any time with a double click. This "piping system" is very useful in the drains sector.



System requirements

- · AutoCAD 2007 to 2009
- · ADT 2007
- AutoCAD Architecture 2008 to 2009
- · AutoCAD Mechanical 2007 to 2009

Operating System: Windows XP prof. or Windows Vista

Hardware: ATHENA requires the same hardware configuration as AutoCAD.

AutoCAD – registered trademark of Autodesk Inc. Windows (XP, Vista) MS-Excel – registered trademark of Microsoft Inc.

Drilled hole

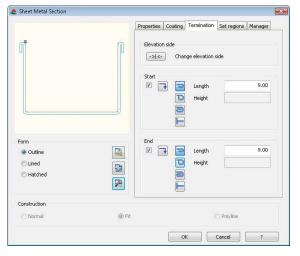
This dialog box has also been reorganized with new register buttons and imperial standard sizes have been added. Furthermore, you can save defaults in a dedicated library under the "Manager" register button so that they are again available for use at any time.

		Drilled hole Count	ersink	Administration
		Туре		
		Blind hole		
		Through hole		
		Slotted Hole		
	- 7	Thread		
		No reference	N N	letric Standard
		Through hole fine	S	heet metal
		Through hole medium		nch Class 2A nch Sheet Type A *
		Through hole coarse	h	16 +
		Female thread		
		Item		
Form		Dimensions		
 Side elevation 		Diameter <	6.60	mm
🔿 Plan		Width <	6.60	mm
Front elevation	Layer	Depth <	30.00	mm
Center lines	Label	Thread depth <		mm
	OK Ca	incel Help		

Sheet Metal Section

This dialog box now has new tabs:

- Under "Coating" you can now define coating lines on both sides and on the face side of the sheet metal.
- Under "Termination" terminating folds can be attached to the start and finish of the sheet metal.
- Familiar from other ATHENA dialog boxes, "Manager" offers you the option of saving sheet metal sections in a dedicated library.





Welded Seam

This dialog box has also been reorganized with new register buttons. Under "Manager" defaults can be saved for convenient reuse. You can now create a welded seam from an existing AutoCAD polyline. Using the new button "Label", label settings can be carried out.

Welded Seam	×
	Einfach Erweitert Verwaltung
mummun	Fillet weld
Form Cross Bulge Unde Unde Unde Unde Unde Unde Unde Und	Dimensions Nominal size z 30 a a z Interrupt Length Distance
Fillet weld	Alignment
	🕤 Start 🔘 Centered 💮 End
	Form Width < 3.00 Layer
	Item
OK	Cancel Help

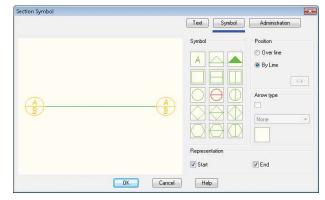
Stairway calculation

There is a new tool for the design of a stairway using various parameters. You can insert the created stairway into the drawing showing the steps in section.

		Dimensions			
		Vertical Height Flight length	1500.0 1850.0		Eingabe <
	\square	Properties			
			Target		Result
			Minimum	Maximum	
		Rise	160.0	190.0	187.5
		Tread depth	240.0	290.0	264.3
		Step proportion	560.0	670.0	639.3
form		Number of steps		ä	© <u>8</u>
Axis	Outline	Layer Slope	Ideal at :	30.0*	35.4*
Baseline	_	Hatch Comfort	Ideal at :	120.0	76.8
Mark deviation	Filled Hatched	Sure-footed safety	Ideal at :	460.0	451.8
	U Hatohod				

Section symbol

A new addition is the possibility of generating an intersection line for the position of the section with a section symbol (e.g. an arrow).



2D interface to LogiKal (only 32 bit)

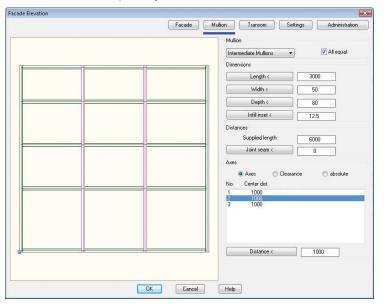
Apart from the well-known 3D interface, there is now a new 2D interface to LogiKal. Using a LogiKal dialog box, positions such as for example, facade elements, windows or doors, can be input directly in ATHENA. The LogiKal master data represent the basis here. The finished position is inserted as an intelligent view, so a double click is sufficient to carry out modifications, which, for example, may affect the geometry, infills, profiles, etc. Any sections can then be generated from the finished view.

The big advantage of this interface is that the user remains in his familiar CAD environment and his generated views or sections can be processed further using ATHE-NA (e.g. designing wall joints or calculating isothermals).

Facade elevation

The dialogue for producing facade elevations has been completely revised and now has new functions.

- · It is now possible to optionally specify a raw shell size.
- The mullion and transom spacing can now be automatically apportioned. Additionally, you can specify the spacing optionally as unit spacing, as clearance dimensions or as absolute dimensions.
- For exterior and interior profiles you can specify different properties (e.g. profile facing widths).
- With the optional entry of a mullion supplied length ATHENA automatically produces butt joints if the supplied length is less than the mullion total length.
- You can insert infills.
- The facade elevation can be provided with sections and symbols for the section and profile joints.





Divide dimension

A new routine to distribute dimension objects evenly over a selected distance.

Apply	
Segments Equal	
Distribution	
Distance <= Nominal distance	
🔘 Start-/End Distance Variable	
Array	Alignment
Distance 6	55.66 🔿 Start
Number	5 🕐 End
Nominal distance 1	21.13
Min. Remaining Distance	C Middle
Start/End Distance	5.00 Centered

Vertical and horizontal levels

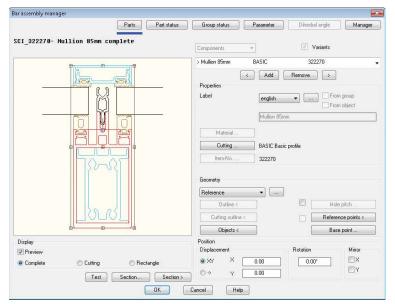
Using the option Settings, different level blocks can now be used in one level group. The option "New" is now the default in pointed brackets for these functions.

Level			
Language	english 👻	Properties	Block
(0)		Scale factor	SYMBOL_002 -
Level definition	Definition item	Scale 1.0	
Prefix 🔷	Suffix	Precision 0	•
Values			
Axis Bottom level ceiling	New	Attributes	
Bottom level susp. ceilin Ceiling top level	Change		
Element axis Parapet top level	Erase		
Top level FFL Top level terrain ~ (Save Settings		
Axis			
		Cancel Help	

Bar Assembly Manager

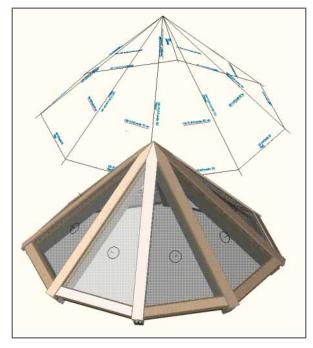
The dialog box has been reorganized with new register buttons.

- With the button "Objects" a group of inserted references can now be inserted into a bar assembly.
- Using the new checkbox "Section", you can specify whether a component is output in the 2D bar assembly section.
- And further checkboxes offer you the possibility of assigning one of the three display modes "Full", "Cutting outline" or "Rectangle" to a component.



Position model

This command generates from a 3D position a wire model, to the axes of which the position numbers with designations as label objects are attached. You obtain an assignment of the position numbers according to the list which is generated with "Bar diagram". In this way an assembly drawing can be conveniently produced.



Infill Manager

The dialog box has been reorganized with new register buttons. Now you can insert folds, which you have saved with the command "Sheet processing", on layers to which a material with folds has been attached.

Reset axis model

This new routine enables you to reset an already analyzed axis model or a 3D position occupied with bars. The result is a wire model of line objects without 3D data.

Remove cutting

With this new command you can remove a cutting between two bars with a click.

Assembly list

With this new function you can write a list of all assemblies of a drawing to the clipboard and then paste it into Excel or another program. The routine is just as easy to use as the already familiar commands "Bar list" and "Infill list".

64 bit version

ATHENA 2009 is also available as a 64 bit version which offers advantages, above all, when processing large 3D designs. This version can be run under Windows XP/Vista 64 Bit and AutoCAD 64 Bit.

ATHENA 2009 – drawing, planning and designing productively

Features	ATHENA 2000 ADV ¹ ATHENA 2002 ²	ATHENA 2003 ³ ATHENA 2004 ⁴	ATHENA 2006 ⁵ ATHENA 2007 ⁶	ATHENA 2008	ATHENA 2009
2D drawing and design					
Standard parts library (curr. 58,000)	x+	x+	x+	x+	x+
Draw sheet metal section	x+	x+	x+	x+	x+
Draw thermal insulation	x	х	x+	x+	x+
Draw sealing foil	x	x	x+	x+	x+
Interrupted dimensions/levels	X	x+	x+	x	x
Automatic labeling (multi-lingual)	x	x	x+	x+	x+
Fillings (glazing and panels)	x	×+	x+	x+	x+
				x+	x+
Position symbol	X	X	X		
Layer and material management	X	X+	x+	x+	x+
	X	X	X	x+	X+
ARX objects (intelligent objects)	x+	x+	x+	x+	x+
Draw welded seam	X	Х	x+	x+	x+
Unify sheets, foils or welded seams	X	X	X	X	X
Automatic object dimensions	x	х	x	x+	x+
Draw semi-automatic positioning symbols	x	х	x	x+	x+
Draw element views (window, door)		x	х	x+	x+
Arrange viewport		х	x+	x+	x+
Draw holes (incl. slotted holes, tapped holes, etc.)		х	x+	х	x+
Generate window sill		х	x+	x	х
Slice and brake ATHENA objects		х	х	x+	x+
Activate and deactivate ATHENA objects			x	x	х
Hide and unhide objects			x	x	х
Draw and manage screwed joints			x	x+	x+
Profiled sheet generator			x	x+	x+
Sheet processing and development			x	x+	x+
Sheet processing composite panels			X	X	X
Save standard parts, foils and others in libraries				× ×	× ×
Draw axes					
				X	X
Sort dimension text				X	X
Array Division of polygonal areas				X	X
Labeling in two languages				X	Х
New MFC dialog boxes				X	Х
Pipe					X
Stairway calculation					X
LogiKal Element (2D-Interface)					х
Divide dimension					Х
3D drawing and design					
Create assemblies and transfer them to axes	x	х	x+	x+	x+
Assign profile cuttings	х	х	x+	x+	x+
2D production documentation (drawing and MS Excel)	х	х	x+	х	Х
Duplication of profile cuttings			х	х	х
Fully automatic analysis of axes with profile assignment (3D+)			х	x+	x+
Apply processes and components (3D+)			x	x	x
3D interface to LogiKal				x	x
Save display modes				x	x
Position model					X
Reset axis model					X
Engineering (structural analysis and building physics)					^
Panel / solid thickness calculation	x	x	x	x	x
Center of gravity and moments of cross-section	×	X	x+	x+	X+
Required moment of inertia / deflection	x	X	x+	x+	x+
Thermal resistance computation	X	X	x	X	X
Isothermal calculation (flixo AT)		X	x+	X	X
UCW value calculation for a facade			x	X	X
RW value calculation for a material layer			x	х	х
AutoCAD-Version	¹⁾ AutoCAD 2000(i) ²⁾ AutoCAD 2002	³⁾ AutoCAD 2000 ³⁾ AutoCAD 2002 ⁴⁾ AutoCAD 2004	⁵⁾ AutoCAD 2006 ⁶⁾ AutoCAD 2007	AutoCAD 2004 - 2008 Architecture 2008 ADT 2007	AutoCAD 2007 - 2009 Architecture 2008 - 2009 Mechanical 2007 - 2009 ADT 2007



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