CADvent Plug-In for AutoCAD

for version 1.8 AutoCAD only

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Manual for Lindab CADvent Plug-in for AutoCAD

General Information

The Lindab CADvent Plug-In is developed to support CADvent advanced production orientated features on top of MagiCAD using the production orientated objects in MagiCAD.

Additional to this, the Plug-In offers features that are also available on computers without MagiCAD.

Please read more about this in ‘List of functions and User Interface’

Installation and activation

The latest version of the CADvent Plug-in can be downloaded from
http://itsolution.lindab.com/downloads/cadventplugin/cadventplugin.exe

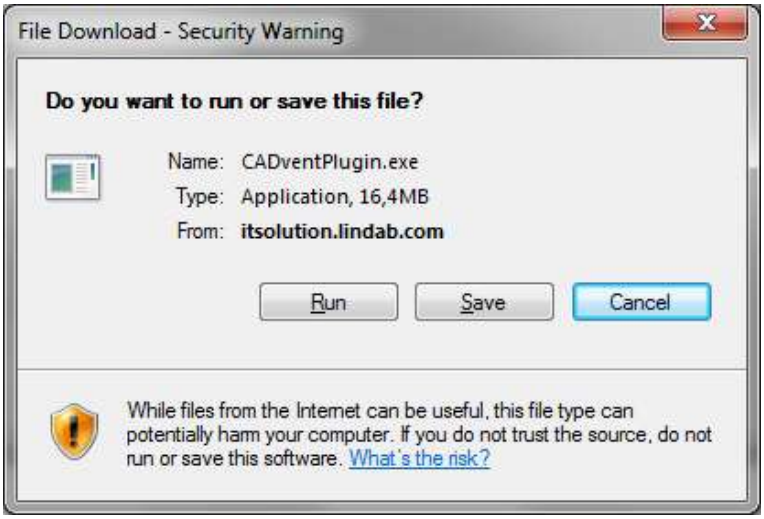
Installation requirements

The CADvent plugin supports AutoCAD 2010 to 2015 on 32 or 64 bit computer.

For the extended version the plug in requires MagiCAD 2013.11 which runs on AutoCAD 2010 to AutoCAD 2014 or MagiCAD 2014.4 for AutoCAD 2010 to 2015 on 32 or 64 bit computers. The plugin supports Windows 7 and Windows 8.

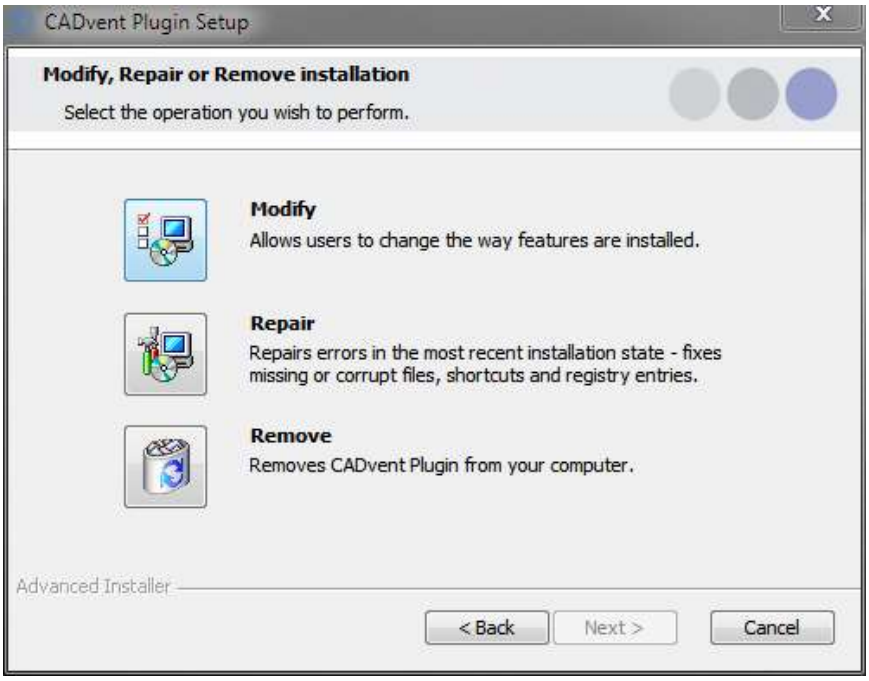
NOTE: You need to have local administrator rights to install the Plug-in on your computer.

Installation process

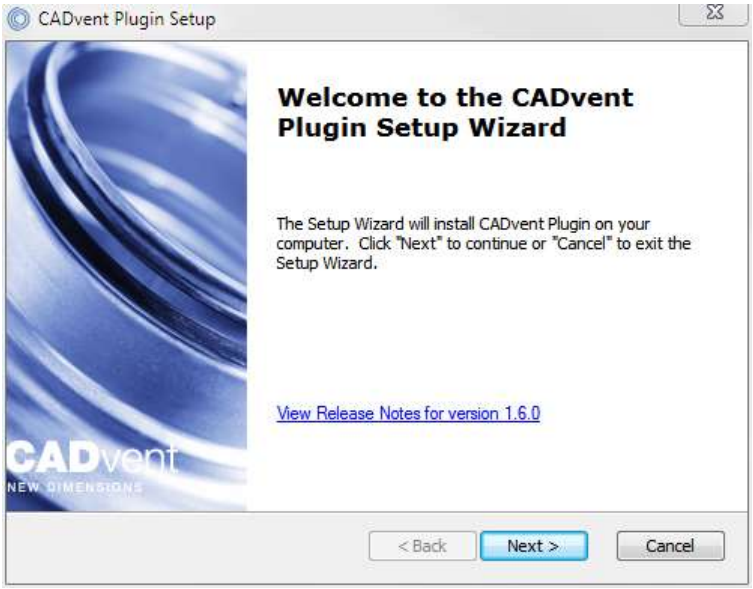


Download the installation file and save it on your computer for later installation or install it by pushing the “Run” button. If you have an earlier version of CADvent Plug-In installed the installation process first likes to uninstall the current version of the Plug-In.

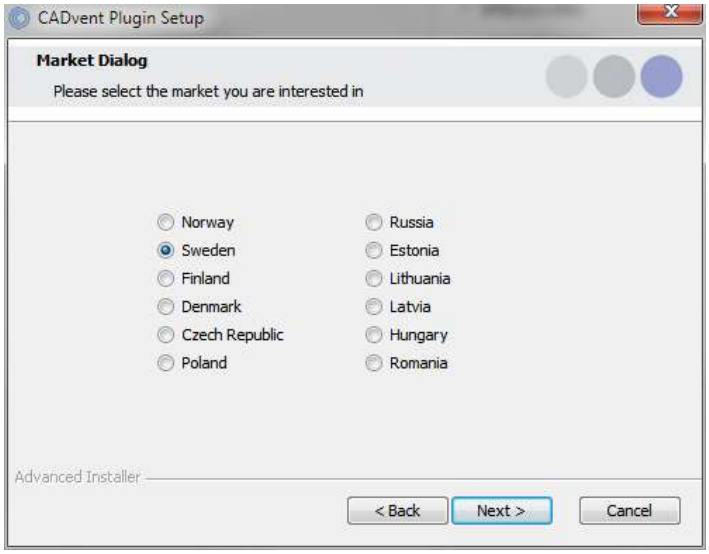
Press *Next* and in the following Window *Remove* to uninstall the current version.



Now you can install the software. Please activate the installation file again. The newest features can be listed up with the link you can find in the middle of the popup window.

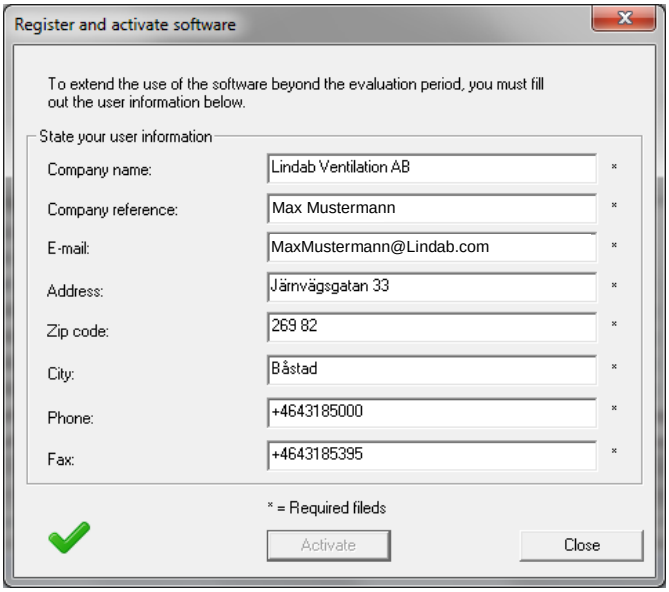


The next dialog ask you to select a market area. The selection includes certain translations and local settings for the production such as standard duct lengths and flange types:



At the end of the installation process you will be asked to register the software. Enter your contact details and press “Activate”, the green tick confirms the activation. Then close the dialog by pressing the “Close” button.

NOTE: You need to be online for the registration process.



Now the installation is completed and you can launch MagiCAD including the CADvent Plug-in.

List of functions and User Interface

Graphical User Interface for CADvent Plug-In

The Graphical User Interface for CADvent Plug-In without MagiCAD
The CADvent Plug-In on computers without MagiCAD contains a Ribbon palette to access the commands.

List of functions

Space	Add Space	Create a 3D space object to add room information for uploading to lindQST, to calculate air devices or water products optimized for the specific room requirements
	lindQST Upload	Upload the 3D spaces to lindQST
	Wall Panels	Draw an InCapsa wall panel system. The cost effective system that makes it easier to mount and cover ventilation systems in buildings
	Free Panels	Draw an InCapsa fee hanging panel system.
Common	Bill of Materials	Generates reports for all ventilation products.
	About	In the About button you can find information about market settings, contact information and CADvent plugin version number.

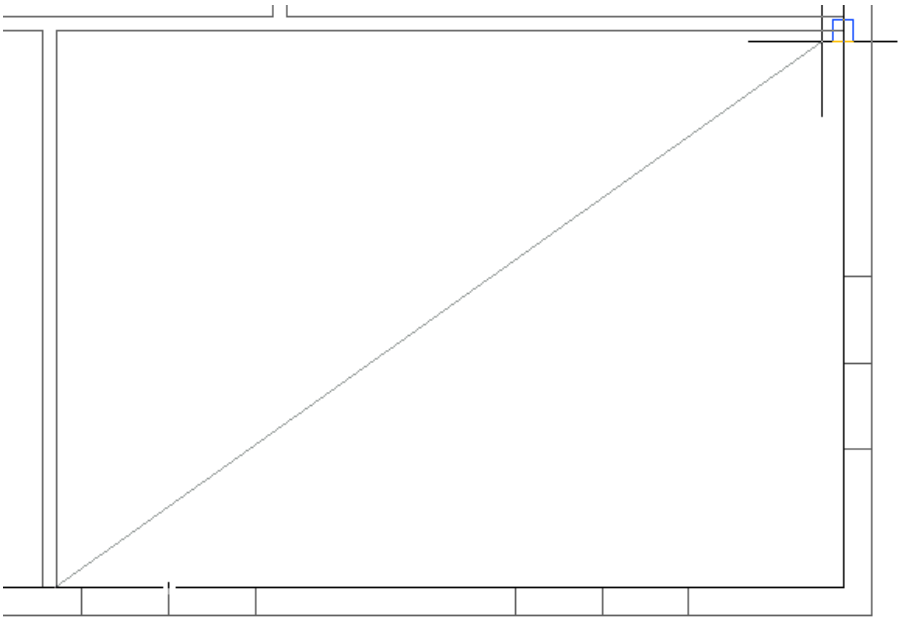
Add Space

The 3D Space element gives the user the possibility to create 3D objects in the drawing to create zones. The zones can be created as simple rectangular boxes (default) or as Polylines (Type P in the command Line, or activate Polyline on the right click menu) to create zones which follow the architecture.

The Space object allows the user to divide the drawing into several rooms or zones which can be uploaded to LindQST, the Lindab Quick Selection Tool, for selecting and calculating water and air products.

Rectangular rooms:

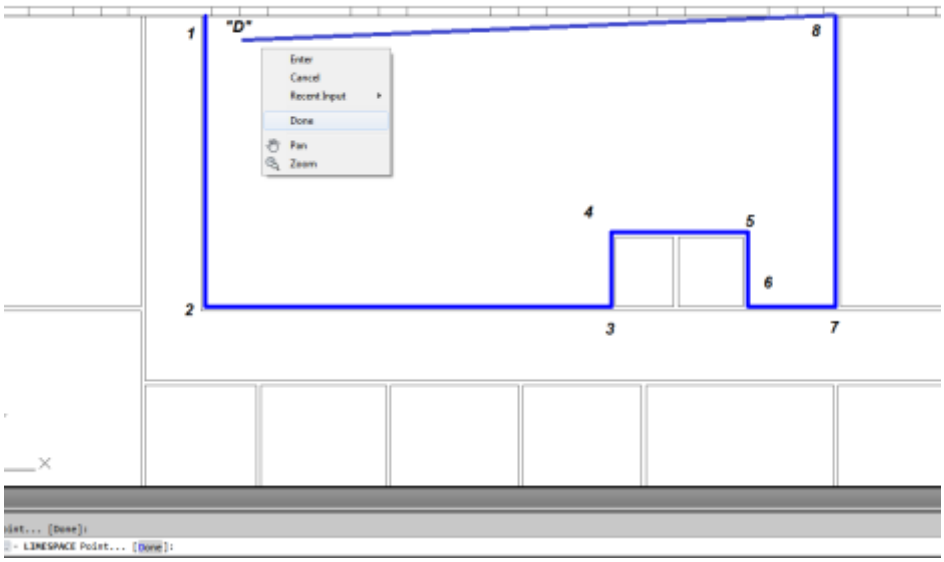
- Activate the *Add Space* command.
- Click on one edge of the room
- Click on the opposite edge of the room



Define a rectangular space object

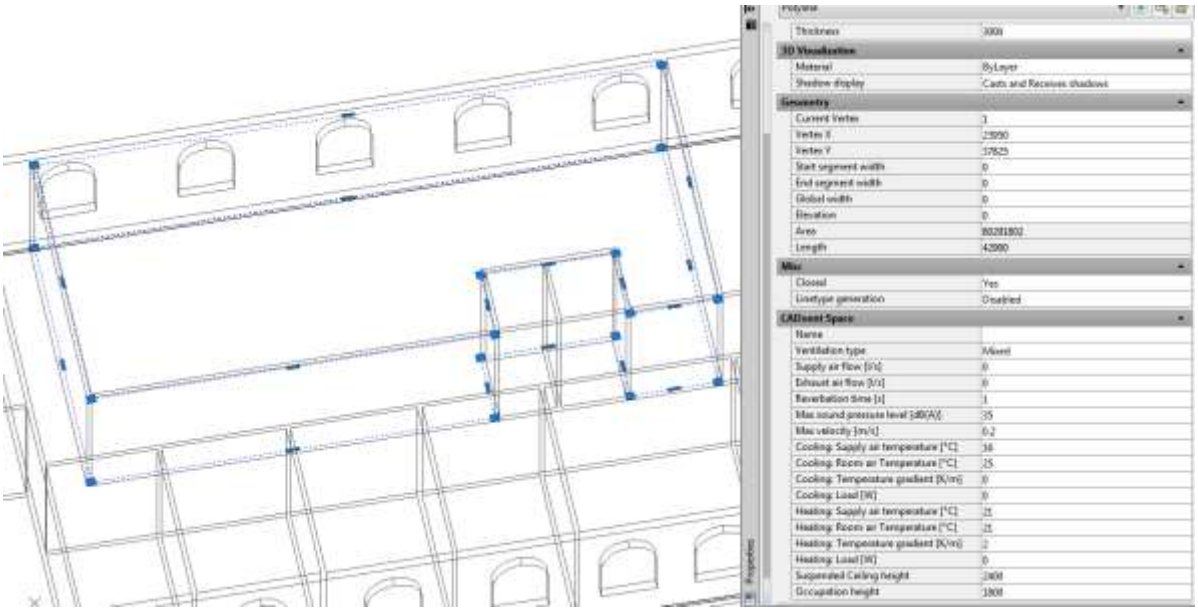
Non rectangular room:

- Activate the *Add Space* command.
- Type P in the command line to activate the polyline command
- Click on one edge of the room
- Follow the walls of the room, by clicking on each edge
- Stop at the last edge and type D (done) to close the Polyline



Define a non-rectangular space object

When you have created a zone you can change the parameter in the AutoCAD Properties to define the requirements for the room.



CADvent Space in drawing with AutoCAD properties

Thickness:	Height of the space object
Name:	Name of the Room/ Zone (**required**)
Ventilation Type:	Mixed, Displacement or Chilled Beams
Supply and Exhaust air flow in l/s:	Total air volume for this room/space

Reverberation time in s:	Sound reverberation time
Max. sound pressure level in dB(A):	Max allowed sound level in the occupied zone
Max. velocity in m/s:	Allowed average air velocity in the occupied zone
Occupation distance:	Max. distance from displacement unit where the air velocity is allowed to prevail
Cool./Heat. Supply air temp. in °C:	Temperature of the supply air
Cool./Heat. Room air temp. in °C:	Temperature of the room air
Cool./Heat. Load in W:	The required power for the room
Suspended ceiling height:	Distance from floor to suspended ceiling
Occupation height:	Height of the occupancy zone

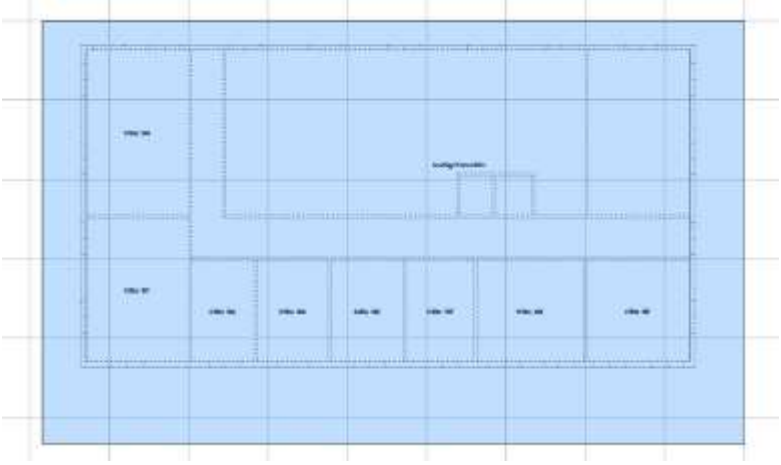
You can edit the zone afterwards by dragging on the AutoCAD Grip points in the corners or on the lines.

lindQST Upload

After creating rooms / zones with the Add Space command you can upload the spaces into lindQST.

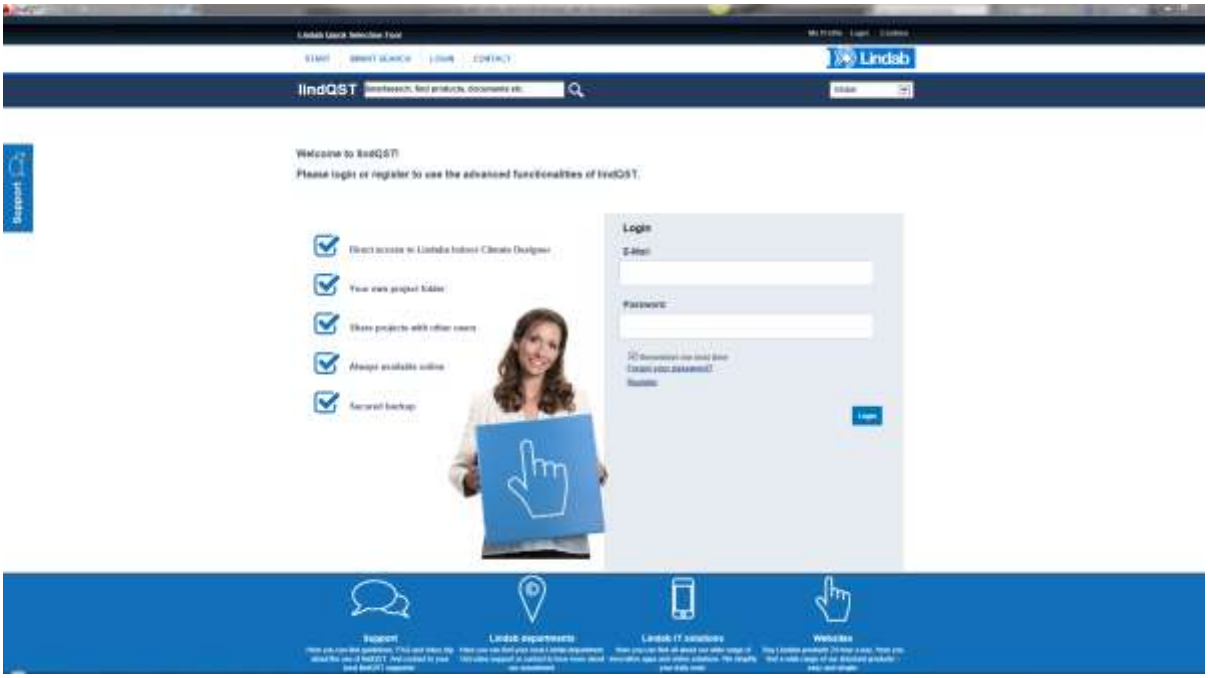
Note: The upload is not limited to a single room. You can upload multiple rooms in one process.

1. Activate the lindQST Upload command
2. Mark all spaces you like to update to your project in lindQST.
   Note: You can all time add more spaces to your project in lindQST



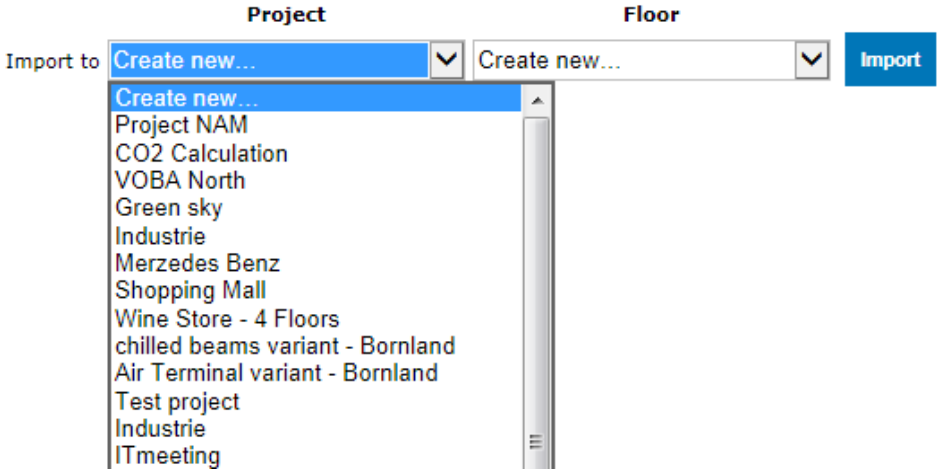
Mark multiple CADvent spaces for the upload to lindQST

3. Accept your selection with Enter
4. A browser window opens and ask you to log in.
5. Please enter your login data or register for the project area in LindQST



lindQST welcome page for non registered or logged out users

6. The following window allows you to add the spaces to an existing or a new project. Please select your choice from the drop down menu
   If you chose an existing project, you can select from existing floors or add a new.

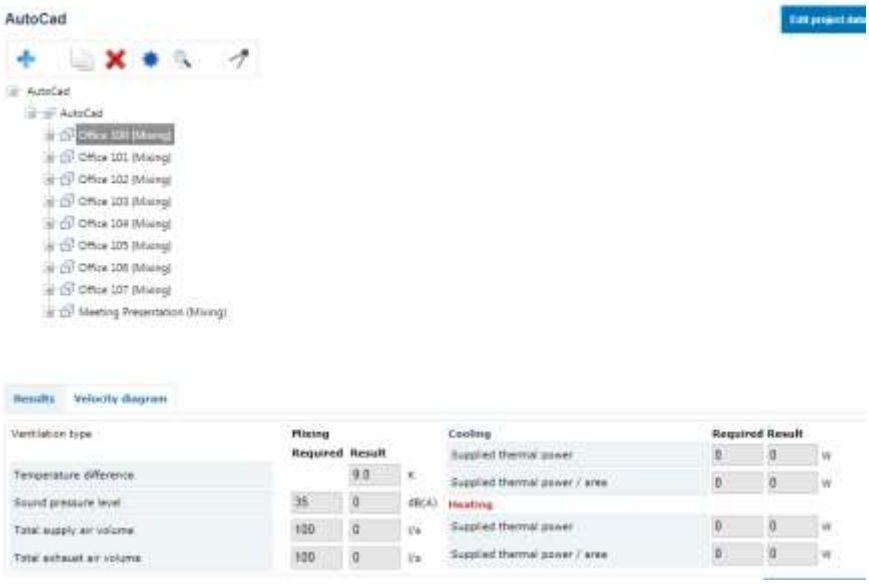


lindQST project selection

7. If you select ‚Create new…' for project and floor. Lindqst will automatically name the project and floor „AutoCAD", which you can rename in a later state.

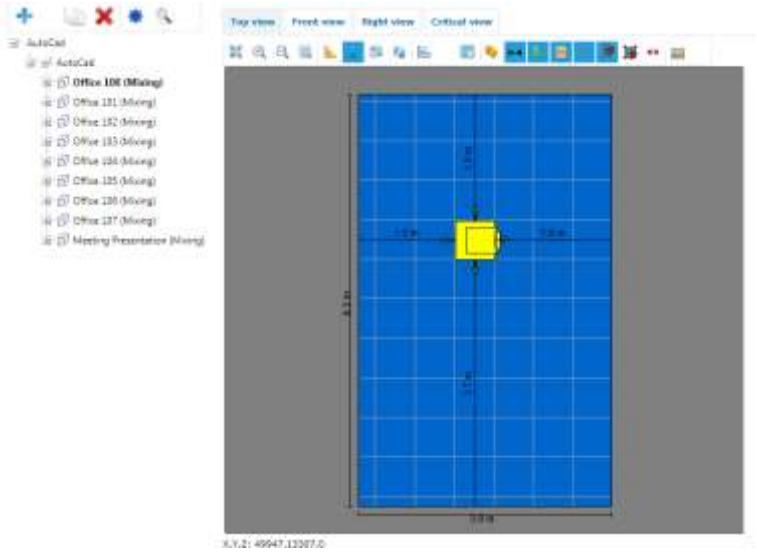
lindQST verification of the project upload and link to Project Manager

8. The import complete message confirms the correct upload process. Using the Project Manager link jumps you directly to your project in lindQST.



lindQST project tree

9. Here you can define a suitable diffuser or chilled beam based on the given room size and technical requirements.



InCapsa Design Tool – Draw a wall panel system.

InCapsa is a cost effective system that makes it easier to mount and cover ventilation systems in buildings. InCapsa is developed to be used in building that were built in the 50's, 60's and 70's in large scale.

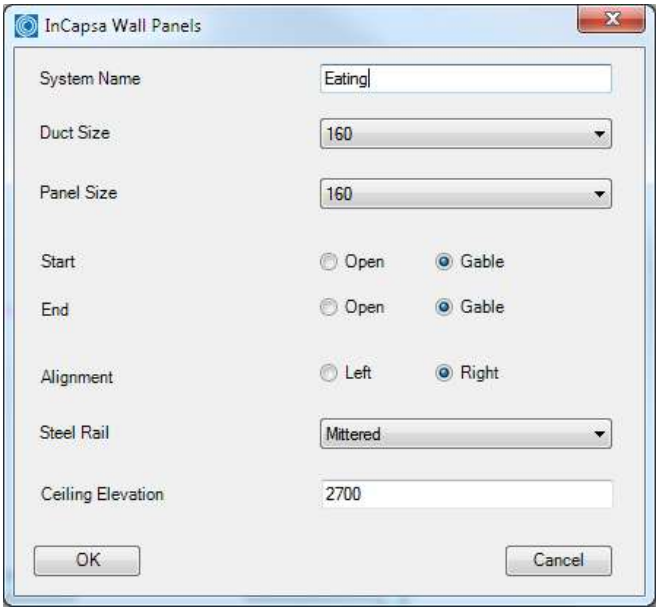
InCapsa consists of different parts that is easy to combine to find solutions for most apartments. In a few simple steps the ventilation system is mounted and covered behind panels made of sheet metal.

InCapsa is adapted to rooms with straight walls and corners. In other cases traditional covering of the ventilation system is recommended.

The system is adjusted to function with Lindab's Safe system and Lindab's assortment of air terminal units and valves.

Push the button "Wall Panels"

Following window appears:



Fill in the **System Name**

Each InCapsa installation is called a system. A system has a start and end point, but can contain consoles for different duct sizes.

Select the **Duct Size**. Available sizes are 100, 125 and 160. The suitable consoles will automatically be selected. The duct sizes can be changed during the drawing process.

Select the **Panel Size**. The panel size is dependent on the duct sizes

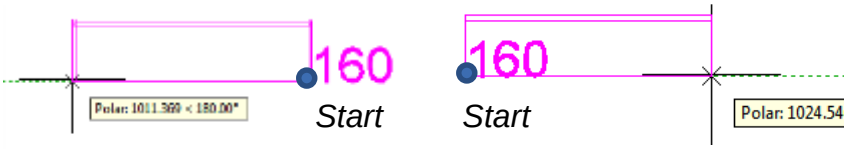
Panel dimension	Duct dimension
100	100
125	100
125	125
160	100
160	125
160	160

Decide if the **Start** and the **End** of the System shall get a **Gable** or stay **Open**

Gable: A gable is used when the start or end of the system shall get a visible closing

Open: The open end is used when the duct leads thru the endpoint e.g. to transfer into the next room.

Alignment defines the drafting direction



Alignment Right *Alignment Left*

Steel Rails

Steel rails which are held in place by consoles have a fold in which the panels are attached. You can define if you like to get the rails mitered or straight.

Ceiling Elevation

Type in the elevation of the room ceiling. The system will be drawn directly below the ceiling. While drawing the z coordinates will be ignored. The system will automatically draw with upper side = ceiling elevation.

Accept the selection with OK

Select the start point of the system. We recommend to use the ACAD snap functions. Move the mouse along the walls, the InCapsa System will follow the mouse.

Click with the left mouse button to fix a **change point**.

A change point can be a corner to change direction or a point to change the duct dimension.

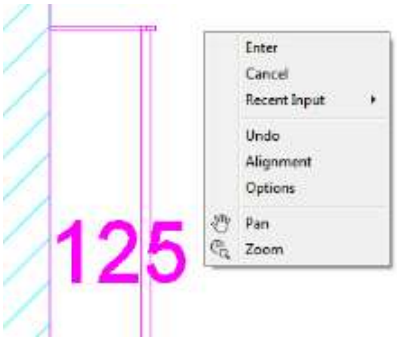
Corner

Click with the left mouse button into a corner to define a change point. We recommend to use the ACAD snap functions.

Move the cursor to the next direction. Only 90° angles are possible.

Right Click Menu

During the drafting process, the InCapsa drawing tool offers a right mouse click menu



Undo: Undo the drawing until the last change point

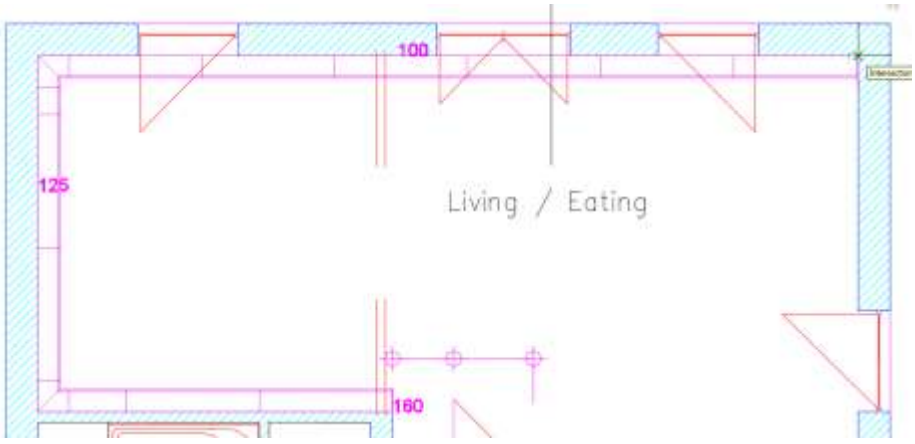
Alignment: Change the alignment direction

Options: opens the InCapsa property window to change

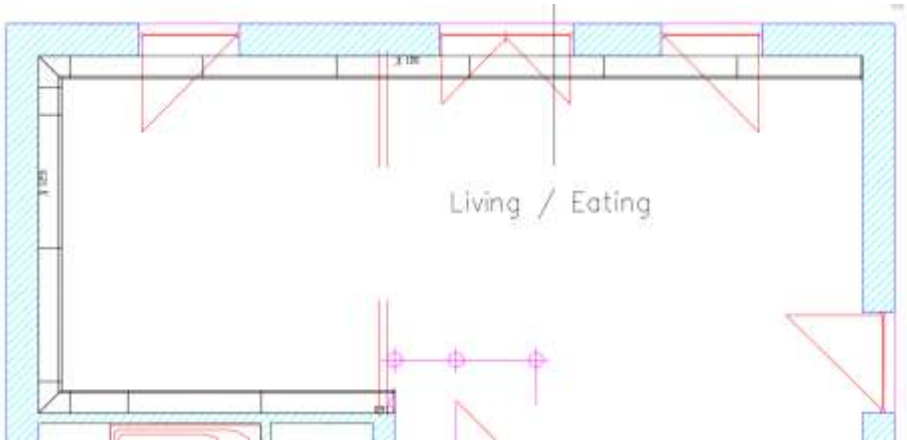
Duct size (offers only duct sizes, that are available for the selected panel size)

The changing of duct size, will create a size note. The note will be more specified after finishing the system. A symbol marks the click point of the change point. The symbol can be used as a snap point when implementing the duct work.

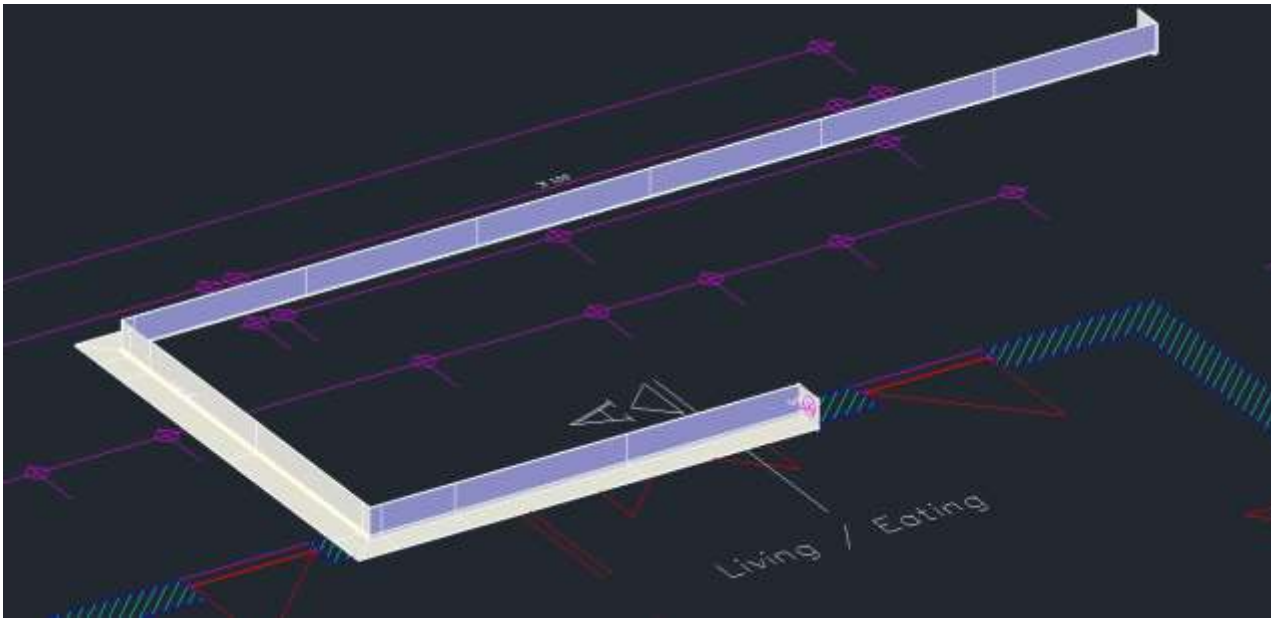
Finish the drafting process with a last change point (left mouse click) and press **Enter**



View before finish. The drawing process uses the current Layer.



View after finish with Enter. The system gets the CADventInCapsa Layer, dimension changing points get a symbol and marker with new dimension size.



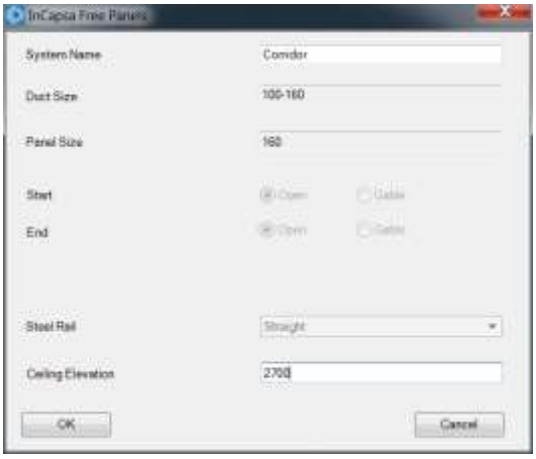
InCapsa Design Tool – Draw a Free Panel system.

A Free Panel is a U-Panel that can be mounted at the ceiling or the wall.

Activate the button **Free Panels**

Following window appears.

Fill in System Name and Ceiling Elevation.



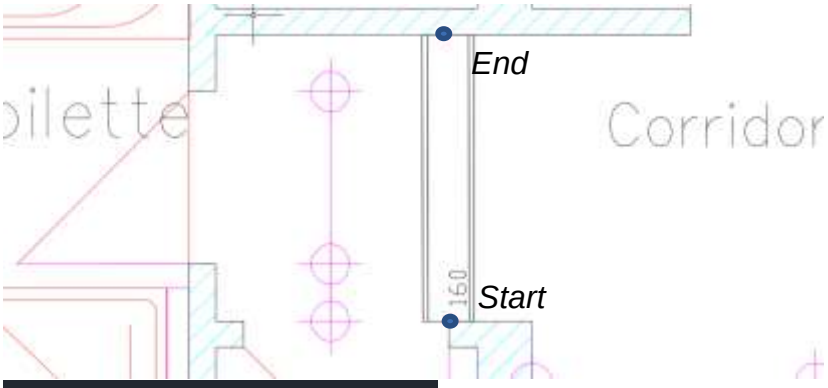
Note:

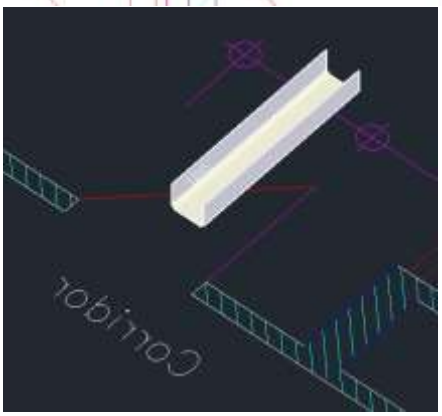
Only Duct Size and Panel Size 160 is available. **Whereby the consoles are usable for duct sizes 100, 125 and 160.**

Press OK

Select start and end point with the left mouse button.

Only straight systems can be drawn - angles are not available!





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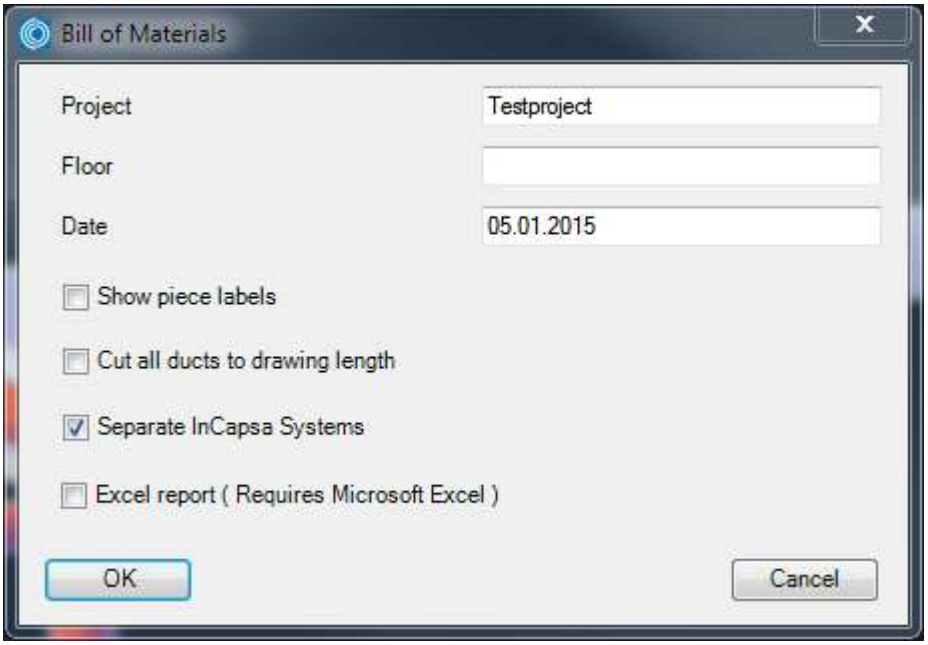
Create Bill of Material for InCapsa Systems

Activate the BOM command.



Fill in in the information for Project name, Floor and Date (actual date auto selected)

Select your option:

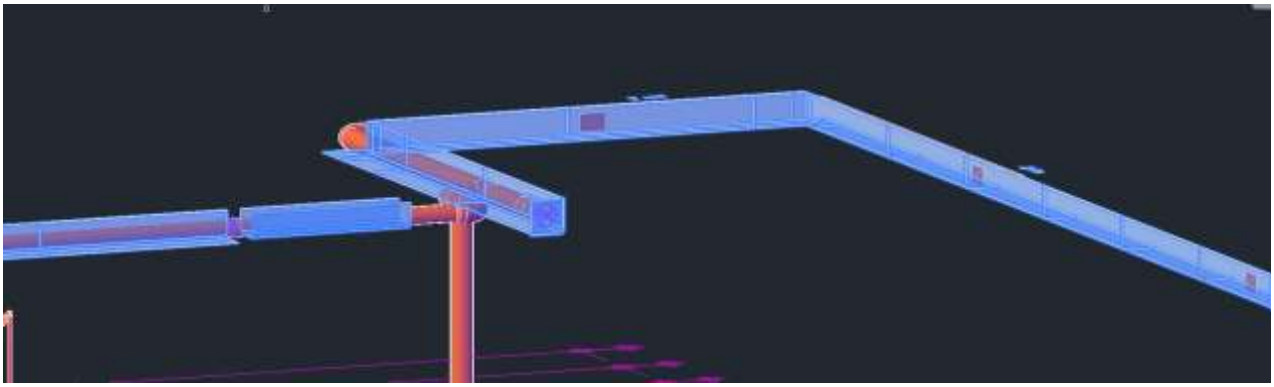
Note! "Show piece labels" and "Cut all ducts to drawing length" are not active in AutoCAD only version.

"Separate InCapsa Systems": Creates a detail list per system if selected or a summary of all components if not selected.

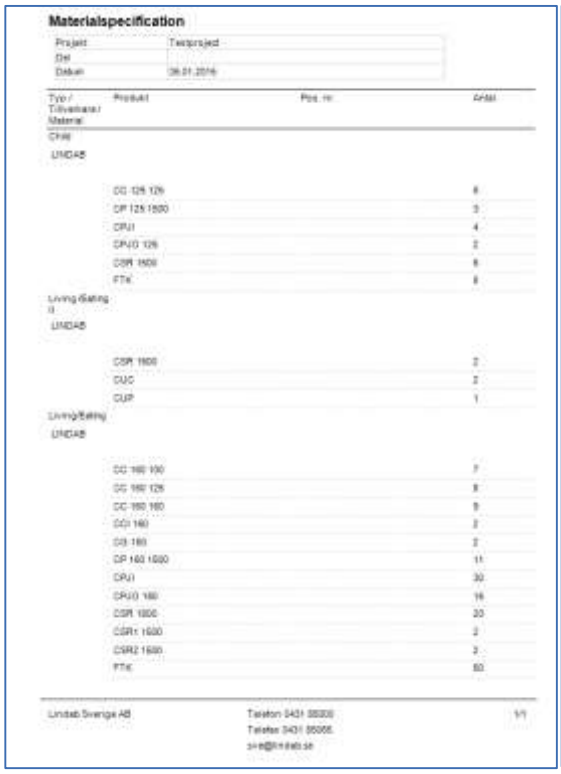
"Excel report": Create the BOM in Microsoft Excel format. This option eliminates the option for the separation of the system

Press OK

Select all InCapsa Systems you like to add to your BOM.



Press Enter



BOM with activated

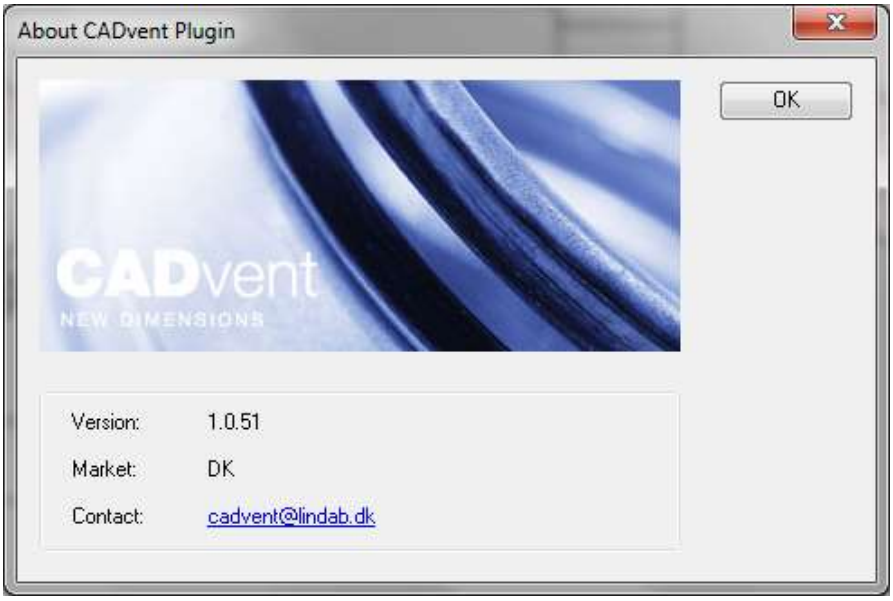
and not activated “Separate InCapsa Systems” option

	A	B	C	D	E	F	G	H	I
	Projekt	Testproject	Material	Tillverkare	Typ	Produkt	Antal	Pos. nr.	Comments
	Del			LINDAB		CC 125 125	6		
	Utfort av			LINDAB		CP 125 1500	3		
	Datum	05.01.2015		LINDAB		CPJI	4		
				LINDAB		CPJO 125	2		
				LINDAB		CSR 1500	6		
				LINDAB		FTK	8		
				LINDAB		CSR 1500	2		
				LINDAB		CUC	2		
				LINDAB		CUP	1		
				LINDAB		CC 160 100	7		
				LINDAB		CC 160 125	8		
				LINDAB		CC 160 160	9		
				LINDAB		CCI 160	2		
				LINDAB		CG 160	2		
				LINDAB		CP 160 1500	11		
				LINDAB		CPJI	30		
				LINDAB		CPJO 160	15		
				LINDAB		CSR 1500	20		
				LINDAB		CSR1 1500	2		
				LINDAB		CSR2 1500	2		
				LINDAB		FTK	60		

BOM Excel report for InCapsa

About

In the About button you can find information regarding version number of the CADvent plugin, which market is installed and contact information for technical assistance.



CADvent plugin About dialog