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DYNAMIC HVAC BIM

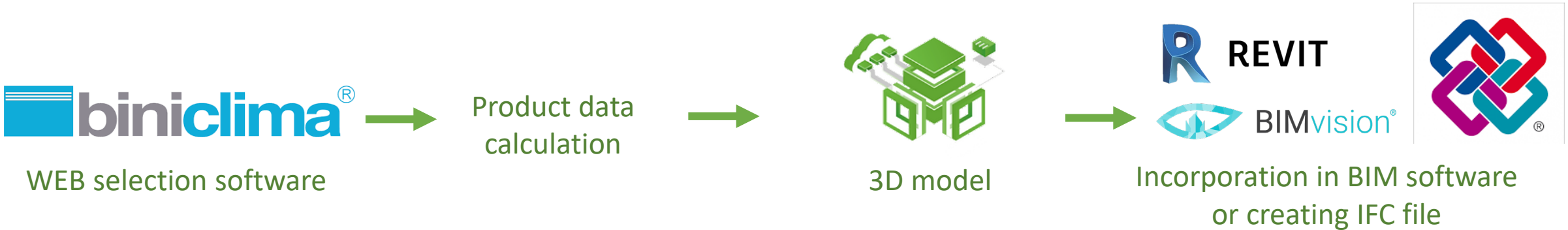
By IDEA

AUTODESK
Authorised Developer

What is Dynamic HVAC BIM?

- New application developed by IDEA
- Combines:
  - selection software of HVAC equipment
  - BIM compatible softwares (REVIT, Vectorworks, Allplan, Tekla, etc.)

- brings the **specific parameters** of HVAC equipment, selected in selection software (I-CHILL, I-FCU, etc) into BIM model



Why BIM? Building Information Modelling

- BIM made an important transformation in engineering, therefore also in HVAC industry.
- BIM objects can be upgraded with very important information in 21st century, such as: building's life cycle, estimation of energy consumption requirements, cost estimates and sustainability
- BIM is becoming a must in designing process for public projects.
- BIM objects help designers and engineers to understand the product and to integrate them in the project
- Use of correct BIM objects with detailed **(dynamic)** parameters speeds up the designing process and gives the designer the possibility to make a wide range of evaluations in a short period of time before choosing the most suitable product for his project.

Example of specific parameters:

Data sheet pdf
Fluid type
Fluid inlet temperature
Fluid outlet temperature
Flow rate
Pressure drop

DYNAMIC HVAC BIM

Why DYNAMIC approach is important?

- saves more than the 80% of time for designing and decision making, compared to use of regular 'static/general' BIM models.
- Many BIM objects of HVAC equipment have generic parameters (nominal values)
- Combining selection software and BIM, IDEA created a way of including all specific calculation from selection software, directly in BIM object.
- These parameters can be integrated directly in BIM compatible software like BIM vision, Revit, or saved in IFC file format.
- IFC is an interoperation solution used in different BIM software. It allows to save all model information during transmission from different applications, designers etc.

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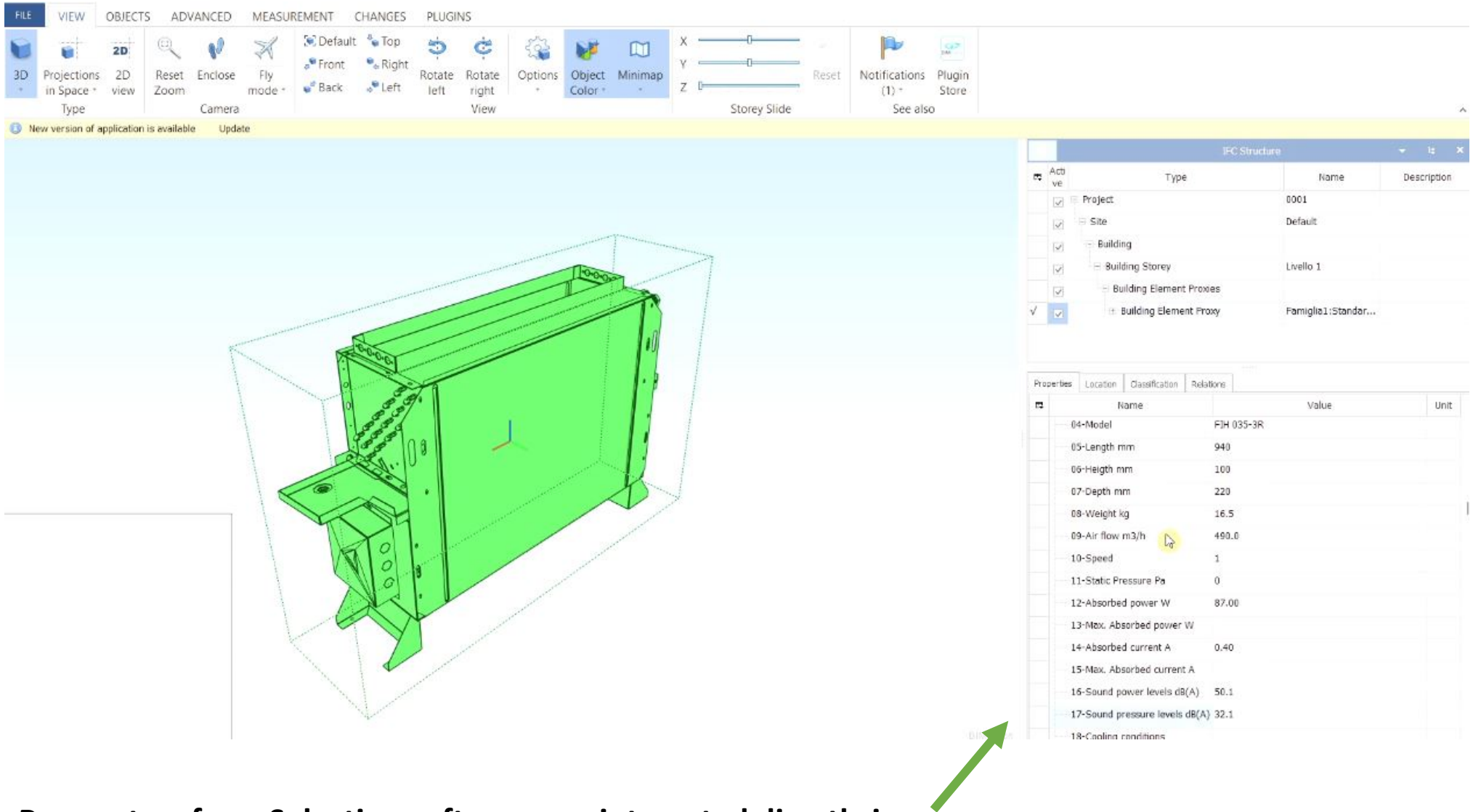
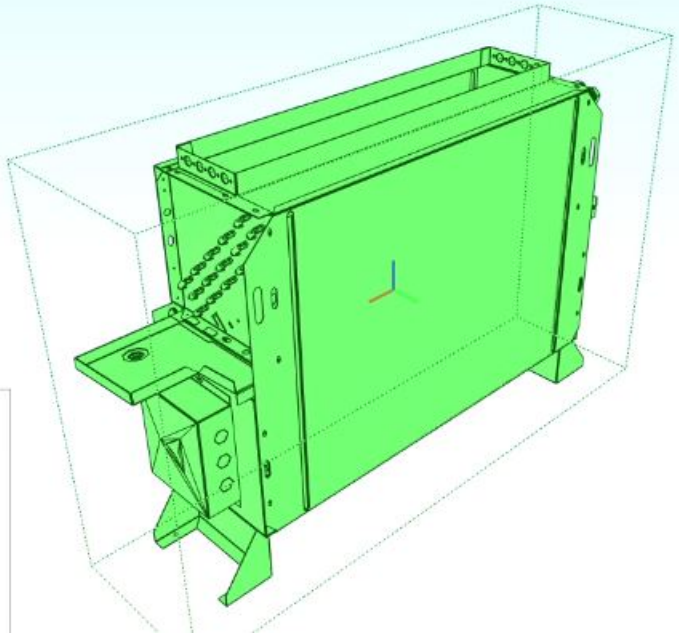


Parameters from Selection software are integrated directly in Revit (or other BIM software)



IFC Structure

Active	Type	Name	Description
☑	Project	0001	
☑	Site	Default	
☑	Building		
☑	Building Storey	Livello 1	
☑	Building Element Proxies		
√ ☑	Building Element Proxy	Famiglia1:Standar...	

Properties | Location | Classification | Relations

Name	Value	Unit
30-Wet bulb air temperature °C	10.5	
31-Relative humidity %	93	
32-Cooling performances		
33-Total cooling capacity kW	3.68	
34-Sensible cooling capacity kW	2.42	
35-Dehumidification kg/h	1.97	
36-Rows	3	
Data-sheet pdf	https://fancoils.ideasw.net/Bin115.pdf	
Dati identità		
Codice assieme		
Descrizione assieme		
Nome codice		

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Model: FIH 035-3R

TECHNICAL DATA

Series		
Version		
Model		FIH 035-3R
Length	mm	940
Heigth	mm	100
Depth	mm	220
Weight	kg	16.5
Air flow	m3/h	490.0
Speed		1
Static Pressure	Pa	0
Absorbed power	W	87.00
Max. Absorbed power	W	
Absorbed current	A	0.40
Max. Absorbed current	A	
Sound power levels	dB(A)	50.1
Sound pressure levels	dB(A)	32.1
Cooling conditions		
Fluid		Water
Inlet fluid temperature	°C	7.0
Outlet fluid temperature	°C	12.0
Fluid flow	l/h	631.4
Pressure drop	kPa	13.7

Data Sheet is available on one click while designer is in 3D program

DYNAMIC HVAC BIM benefits:

- designer brings in his model complete list of technical information for each selected product, e.g:
  1. Full list of performance and energy calculation
  2. Specific product dimension (*size and weight*) including precise position of hydraulic and electrical connections
  3. Technical catalogue and product specification based on input provided by designer
  4. IOM manual
  5. Product life cycle
  6. Product disposal and recycling information
  7. Product certification (*ARI, EUROVENT, SAFETY, CE, etc.*)
  8. Building energy assessment (*referring only to the selected HVAC product*)
  9. Integration of QR code in BIM object

THANK YOU FOR YOUR ATTENTION!

IDEA

ENGINEERING AND SOFTWARE HVAC SOLUTION

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