Armacell's plug-in for BIM User's Manual





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Configuration of insulation with Armacell plug-in

- The configuration process uses the functions and capabilities of Revit.
- ✓ With Armacell's plug-in the designer selects :
- the type of system in which they will add insulations
- the material of the pipes from which the system will be made
- minimum insulation thicknesses for the selected range of pipe diameters
- ✓ For each range of pipe diameters the designer defines the number of layers and Armaflex insulation material.
- The configuration created by the designer can be used in subsequent projects. The export/import of configurations is possible.

New Armacell plug-in

- The plug-in will be available for downloading from armacell home page and Autodesk store.
- It works with Windows 7, Windows 10 and Revit 2017, 2018, 2019, 2020, 2021
- ✓ The software uses local languages (DE, EE, FR, PT, IT, NL, SE, NO, DK, FIN, PL, CZ, HU, RO, RU, SL, HR, SRB)
- \checkmark Plug-in can be updated online, when a new version is available.

Armacell plug-in main Tools

Armacell plug-in tools are displayed in the Add–Ins tab



- *Configuration* - allows creating your options for adding insulation to pipelines and ducts from System type with defined parameters

- *Update* - Update of already designed pipes and ducts (with or without insulation)

- *Info* - displays information about assigned insulation for the selected object

- BOM (Bill of materials) - Creates a bill of insulation materials in the form of a table

- Help - plug-in version info, and updates,



Start the work with the plug-in by setting the product parameters for insulating pipes/ducts

- Press the configuration button
- Select the Region to load the relevant database, and the language (it is assigned depending on the previous selection of the region)

Select a country	x
Select a country for the database.	
United Kingdom	~
	ОК

Select a language	x
Select a language for the database.	
English	~
	ОК



The proper configurator window opens :

armacell [®]	Overview	Х
Automatic insulation 1	Country 📧 Language 🖼	🔮 🕕 3
	(+) ₄	
		5
		\bigotimes

Functions of the Buttons

- Enable to turn on automatic addition of insulation to the model
- 2. Change of the country and language
- 3. Import/Export of saved configuration
- 4. Add a new configuration
- 5. Save configuration



Turn on the Automatic Insulation button

armacell	Overview	Х
utomatic insulation	Country 📟 🚱 (11
	Ð	
		\bigotimes

 Now you can start the process of adding a new configuration by pressing the button "Plus"

armacell waking a difference around the world	Configuration		Х
$\overset{\oslash}{\oslash}$	Name System type : System material :	Cooling Water	
	(+)		
) 🛞

If you work with pipes green icon for pipes should be highlighted

9

if you work with ducts blue icon for ducts should be highlighted

- Now you can enter a new configuration name in the configurator window
- Example "Cooling Water"



armacell	Configuration	X
\bigcirc	Name	Cooling Water
\bigotimes	System type :	Hydronic Supply
	System material :	Domestic Cold Water Domestic Hot Water
		Fire Protection Dry
	(+)	Fire Protection Other Fire Protection Pre-Action
		Fire Protection Wet
		Hydronic Return
		Hydronic Supply
		Sanitary
		Vent

- Next, select the pipe System type to which the insulation will be added. The selection should be made from a list of systems read from the Revit project.
- Example : Hydronic Supply
- If you have previously selected the "Duct" option, the program will display duct's systems instead of pipe systems.



armacell MAKING A DIFFERENCE ARGUND THE WORLD	Configuration	X
\bigcirc	Name	Cooling Water
\bigotimes	System type :	(Hydronic Supply
	System material :	
		Copper - A
	(+)	Copper - B Copper - C Copper - D
		Iron, Ductile - 22 Iron, Ductile - 30 Polyvinyl Chloride, Rigid - Schedule 40 Polyvinyl Chloride, Rigid - Schedule 80
		Stainless Steel - 10S Stainless Steel - 5S
		Steel, Carbon - Schedule 40 Steel, Carbon - Schedule 80

- In the second drop down, select the material of the pipes to be insulated. They are directly used in specific pipe types. The list of pipe material is read from the Revit project
- Example Copper A
- If you have previously selected the "Duct" option you do not select Material.

armacell	Configuration		Х
\bigcirc	Name System type :	Cooling Water Hydronic Supply	
	System material :	Copper - A	•
	(\div)		
	Ŭ		

 Now you can start adding ranges of diameters, for which specific types of insulation will be assigned, by pressing "Plus" button



Х		Configuration	armacell [®]
•	Cooling Water Hydronic Supply Copper - A	Name System type : System material :	$\overset{\oslash}{\oslash}$
	Minimum insulation Thickness(i	Maximum outer diameter(mm) 32 (+)	Minimum outer diameter(mm)
		(+)	

- In subsequent windows, specify the minimum and maximum external diameter for your pipe Range and the minimum insulation thickness that will be added to the pipes from your Range.
- Example minimum OD 15 mm, max.
 OD 32 mm, insulation thickness 13 mm.
- When configuring the insulation for the duct, do not enter the diameter values (leave the number 0 in the windows) The entire selected ventilation system will be insulated with one thickness.



You have two options when defining insulation layers for your Pipe dimensions

- Option 1 The required insulation thickness can be provided by one layer of tube or sheet
- **Option 2**. The required insulation thickness is higher that our maximum one layer and has to be provided by **multilayers** of tube or sheets



• Defining insulation products for the Layer

	Article	
Refrigeration & Air Conditionin	• UD-32-99/E	
Heating to mention	✓ UD-03-99/E	
Acoustic Applications		
solar Applications		
	✓ UD-13-99/E	
	UD-19-99/E	
Product	- UD-25-99/5	
AF/Armaflex		
AF/Armaflex Class 0	◆ 00-32-39/E	
Armaflex Duct Plus_AL	▲ lube	
Armatiex Duct Armatiex Duct Duct	• 9,0 mm	
Armanex Duct Plus Armafley Tuffcoat	13,0 mm	
Armaflex Ultima	✓ 19,0 mm	
HT/Armaflex	✓ 25 mm insulation	
NH/Armaflex	▼ 32,0 mm	
	▼ 9,0 mm	
	▼ 19,0 mm	
	 Z5 mm insulation 	
		J

You have to select the correct application, product and article:

Trade:e.g.Refrigeration,air-conditioning and ventilationProduct:e.g.Armaflex UltimaArticle:e.g.Tube 12 mm

Article : e.g. Tube 13mm

• Save the changes by pressing button



• **Option 1** The required insulation thickness can be provided by **one layer** of tube or sheet:

armacell [®]	Configuration	X
	Name System type : System material :	Cooling Water Hydronic Supply Copper - A
Minimum outer diameter(mm)	Maximum outer diameter(mm)	Minimum insulation Thickness(i
	(+)	
	(+)	

 After selecting the article for the Layer the configuration window for Range OD 15-32 mm will look like the one on the left side

Save the configuration for your Range by pressing button "Save"

Cancel the configuration for your Range by pressing button "Cancel"

• **Option 2**. The required insulation thickness is higher than Armaflex maximum one and has to be provided by multilayers of tube or sheets

armacell MAKING A DIFFERENCE AROUND THE WORLD	Configuration	X
\bigotimes^{\oslash}	Name System type : System material :	Cooling Water Hydronic Supply Copper - A
Minimum outer diameter(mm) 100 Layers	Maximum outer diameter(mm)	Minimum Insulation Thickness()
Armaflex Ultima	UD-19-99/E (+)	Sheet ()
)

- ✓ Add and define the I-st layer in the way described in Option 1
- than you add and define the second layer by pressing the button + "Add Layer"

• **Option 2**. The required insulation thickness is higher than our maximum one and has to be provided by multilayers of tube or sheets

armacell®	Configuration	X
\oslash	Name	Cooling Water
\bigotimes	System type :	Hydronic Supply
	System material :	Copper - A
Minimum outer diameter(mm)	Maximum outer diameter(mm)	Minimum insulation Thickness(
100	125	40
Armaflex Ultima	UD-19-99/E 5	iheet 🖉 🗊
Armaflex Ultima	UD-25-99/E	iheet 🥏 🕦
	(+)	
	(+)	

- When defining the second Layer select the correct article. The total thickness of first and second layer has to be bigger that "set minimum insulation thickness" in our example 40 mm). For bigger thickness you may need more layers.
- Save the configuration of your range by pressing button "Save"
- Cancel the configuration of your range by pressing button "Cancel"



AKING A DIFFERENCE AROUND THE WORLD	Configuratio	n)
	Name	Cooling Water	
\bigotimes	System type :	Hydronic Supply	•
\smile	System materia	I: Copper - A	•
Minimum outer diameter(mm)	Maximum outer diameter(mm)) Minimum insulation Thickness(
Lavers	125		۳I
Armaflex Ultima	UD-19-99/E	Sheet 🧭 🤇	
Armaflex Ultima	UD-25-99/E	Sheet	
	+		
	(+)		

- After defining the first Range of pipes diameters (100-125 mm) you can add the next Range of pipes by pressing the lower + buton
- Define the minimum insulation thickness and add the Layers in the same way like you did for the first Range

• After adding and defining layers of two pipe's ranges, the configuration window looks like this:

⁶⁰ 6	king a difference around the world	C	Configuratior	ı		
	 Ø 		Name System type : System material :	Coc Hyd Cop	oling Water Ironic Supply oper - A	•
	Minimum outer diameter(mm)	Maximum	outer diameter(mm)		Minimum insulation Thickness(
	Lavers		125		40	W
(Armaflex Ultima	UD-19-99/E		Sheet	\bigcirc (
(Armaflex Ultima	UD-25-99/E		Sheet	\bigcirc (
(+			
	Minimum outer diameter(mm)	Maximum	outer diameter(mm)		Minimum insulation Thickness()	
Î (Layers Armaflex Ultima	UD-25-99/E		Sheet	\bigcirc	
	Armaflex Ultima	UD-32-99/E		Sheet	\bigcirc	
			(+)			
			(+)			
					E	

- You can delete with the button
 the pipe ranges and the Layers
- You can continue your work by adding next pipe range, by pressing
 + button

(+)

After all the settings have been made, save the configuration with the button at the bottom

• The configurator window now presents all defined sets for "Cooling Water". In this case, only the insulation for copper A pipes OD from 100 mm do 150 mm in the *Hydronic Supply* system type will be added.





• Import/Export button



• Select Export button and save your configuration under own name in your files.



- Select Import button and open required configuration in your project.
- Now the cofiguration will work for this project.

Armacell plug-in Tool - Update

ts objects in a Povit, without insulatio

If you have project with designed pipe or ducts objects in a Revit without insulation and set your new Configuration, press *Update button*.

All the pipes and ducts from your System type and with consistent material specified in the configuration will be automatically insulated.



- If you made changes in your Configuration
 press top Update button.
 All the changes will be implemented to the project.
- You can choose the lower update button to make updates only to the selected objects

Armacell plug-in Tool - Info



You can display information about assigned insulations for the selected object.

Press button ,info" and click on the selected insulated pipe or duct. You will see the window with information about the assigned Armacell's insulation

PRODUCT INFORMATION ×
Layer 1 : ACE/P-32X080
Product : Armaflex ACE Plus
Details :
Max. service temperature :
+110 °C
Min. service temperature :
-50 °C
Themal Conductivity :
+/-0 °C,λ= Tubes, Sheets, Tapeλ∠0.035W/(m·K)[35 + 0,1 · ϑ m + 0,0008 · ϑ m 4/1000
Water vapour diffusion resistance :
sheets 3-32 mm; tubes 6-32 mmµ≥10000 sheets > 32-50 mm; tubes > 32 -45 mmµ≥7000
Fire performance :
tubes, open tubes (up to 300 mm insulated Ø a)BL -s3, d0 sheetsB-s3,d0 tapeB-s3,d0
Ūk
la.

Armacell plug-in Tool - BOM



You can display a bill of materials in the form of a table for pipes, pipe fittings, and ducts using utton. We have separate view for pipes, pipe fittings and ducts and ducts fittings.

The BOM list contains article number, product name and product parameters, product quantities: tubes in metres, sheets in m^2 . Specified material quantities also include material for layers used in multilayer insulation.

	Bill of Materials	Material list for pipe insulation		
Pipe Pipe fit	ang Duct fitting	material net for pipe mediation		
Article	Details			
UD-19X042	Product : Armaflex Ultima			
	Details :	Article Details Amount Tube(m) Amount Sheet(m ²)		
	Safety and Environment :	UD-32X089 Product : Armaflex Ultima 1,3 0		
	Meets the requirements for sustainable construction in combination with Armaflex Ultima SF900 adhesive such as LEED. Type III Environmental Product Declaration (EPD): Declaration number "EPD-ARM-20150109-IBB1-DE", Institut Bauen und Umwelt e.V. (IE	UD-09-99/E Product : Armaflex Ultima 0 0,66		
	Max.service temperature :			
	+110 °C	Material list for fittings insulation		
	Min. service temperature :	material net for manyo mountaion		
	-50 °C (-200 °C)			
	Thermal Conductivity :	Article Details Amount Tube(m) Amount Sheet(m ²)		
	±0°Cλ= λs0.040W/(mK)[40 + 0,1· é m + 0,0009· é m ²]/1000	UD-19X042 Product : Armaflex Ultimal 0,08 0		
	Water vapour diffusion resistance :			
	μ27000			
	Fire performance :			
	fubes, Tubes self-adhesive, open tubes (up to 300 mm insulated Ø a)B L -s1,d0 Sheets, sheets self-adhesive B-s2,d0 TapeB-s1,d0			
∉	\otimes			

The table allows an export to Excel. The lists of pipes, ducts and fittings will be displayed separately in the respective Excell sheets.

Armacell plug-in Tool - Help



Using "Help" tool You can display information about plug-in version, you can update your version selecting the highlighted icon

- E-mail connection to Armacell Help desk
- Freequently asked questions

The history of the plug-in transactions to assist in diagnosing technical problems

		HELF	P X	
Version	2.20.4.1461	\bigcirc	UP TO DATE	
Database version	2.0.0	\bigcirc	UP TO DATE	
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