ARMACELL PLUG-IN 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's homepage and Autodesk store
- It works with Windows 10 and 11 and Revit versions 2020, 2021, 2022, 2023 and 2024
- The software uses local languages
 (DE, EE, FR, PT, IT, NL, SE, NO, DK, FIN, PL, CZ, HU, RO, RU, SL, HR, SRB)
- Plug-in can be updated online, when a new version is availabe

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

select a language	
Select a language for the d	atabase.
English	
	OK



The proper configurator window opens

armacell	Overview	Х
Automatic insulation	Country 100 Countr	
Ø	+	
	9	X)

Functions of the buttons

- 1 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



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

armacell	Configuration		х
0	Name System type : System material :	Cooling Water	•
	(+)		





If you work with **ducts** blue icon for ducts should be highlighted

- Now you can start the process of adding a new configuration name in the configurator window
- Example Cooling Water

armacell"	Configuration	x
	Name	Cooling Water
\oslash	System type :	(Hydronic Supply
	System material :	Domestic Cold Water Domestic Hot Water
	+	Fire Protection Other Fire Protection Pre-Action
		Fire Protection Wet
		Hydronic Supply
		Sanitary Vent
		(B) (S)

 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

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Example: Hydronic Supply

 If you have previously selected the **duct** option, the programme will display duct systems instead of pipe systems

armacell"	Configuration	х
	Name	Cooling Water
\oslash	System type :	Hydronic Supply
<u> </u>	System material :	· · ·
		Copper - A
	(+)	Copper - 8 Copper - C Copper - D
		Iron, Ductile - 22
		Iron, Ductile - 30
		Polyvinyl Chloride, Rigid - Schedule 40
		Poryvinyl Chlonde, Kigid - Schedule 80 Staiplass Staal - 105
		Stainless Steel - 103
		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		x
0	Name	Cooling Water	
\otimes	System type :	Hydronic Supply	•
	System material :	Copper - A	-
	(\bigcirc)		
			(B) (X)

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

±

armacell	Configuration	X
0	Name System type : System material :	Cooling Water Hydronic Supply • Copper • A •
Minimum outer diameter(mm) 15 Layers	Maximum outer diameter(mm) 32	Minimum insulation Thickness()
	+	
		(ii) (x)

- 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 15mm, max. OD 32mm, insulation thickness 13mm
- 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
- Now you can start defining the insulation for your range of diameters by pressing the + button

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 than our maximum one layer and has to be provided by multilayers of tubes or sheets

Defining insulation products for the layer

T to a to	Article	
Refrigeration & Air Conditioni	ng vD-32-99/E	
Heating to many a	▼ UD-03-99/E	
Acoustic Applications Solar Applications		
and regenerations	✓ UD-09-99/E	
	 UD-13-99/E 	
	- UD-19-99/E	
Product		
AF/Armaflex	 UD-32-99/E 	
AR/Annaflex Class 0 Annaflex Durt Blue Al	+ Tube	
Armafiex Duct	▼ 9,0 mm	
Armafiex Duct Plus	• 13.0 mm	
Armafiex Tuffcoat	- 19.0 mm	
Armaflex Ultima	 25 mm insulation 	
HT/Armaflex	¥ 320 mm	
	. 90 mm	
	- 12.0 mm	
	- 190 mm	
	• isomm	
	 25 mm insulation 	

Select the correct application, product and article:

+

Trade: e.g. **refrigeration**, air-conditioning and ventilation

Product: e.g. ArmaFlex Ultima

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

Name Cooling Water System type : Hydronic Supply System material : Copper - A Minimum outer diameter(mm) Maximum outer diameter(mm) Minimum insulation Thickness() 15 32 13 15 32 13	Armacell MAXANO A DIFFERENCE AMOUND THE WORLD	Configuration	>
Minimum outer diameter(mm) Maximum outer diameter(mn) Minimum insulation Thickness) 15 32 13 10 • Layers •	0	Name System type : System material :	Cooling Water Hydronic Supply Copper - A
* Layers	Minimum outer diameter(mm)	Maximum outer diameter(mm)	Minimum insulation Thickness)
Armaflex Ultima 13,0 mm Tube 🥑 🕕	Armaflex Ultima	13,0 mm 1	lube 🖉 📵

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

Save the configuration for your range by pressing the **save** button



Cancel the configuration for your range by pressing the **cancel** button



Option 2 - The required insulation thickness is higher than ArmaFlex maximum one and has to be provided by multilayers of tubes or sheets

armacell .	Configuration	x	• Add and define the first layer in the way described
0	Name Cooling Water System type : Hydronic Supply System material : Cooper - A		in Option 1
Minimum outer diameter(mm) 100 Augers Armaflex Ultima	Maximum outer diameter(mm) 125 UD-19-99/E +	on Thickness(Next, 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 tubes or sheets

armacell [®]	Configuration		X
	Name	Cooling Water	
\oslash	System type :	Hydronic Supply	•
Ŭ	System material :	Copper - A	-
Minimum outer diameter(mm)	Maximum outer diameter(mm)	Minimum insulation Thickness()	
100	125	40	
Layers			_
Armaflex Ultima	UD-19-99/E	Sheet 🧭	0
Armaflex Ultima	UD-25-99/E	Sheet 🧭	
0	(+)		
	0		$ \rightarrow $
	(+)		

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

Cancel the configuration for your range by pressing the cancel button

 \otimes

Armacell	Configuration	
0	Name System type : System material :	Cooling Water Hydronic Supply Copper - A
Minimum outer diameter(mm) 100 Layers	Maximum outer diameter(mm)	Minimum insulation Thickness() 40
Armaflex Ultima	UD-19-99/E	Sheet 🥏 📵
Armaflex Ultima	UD-25-99/E :	Sheet 🖉 💿

÷

 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:

armacell"	Configur	ation
0	Nam System t	e Cooling Water ype : Hydronic Supply • tterial : Copper - A •
Minimum outer diameter(mm)	Maximum outer diamete	r(mm) Minimum insulation Thickness(:
Armaflex Ultima	UD-19-99/E	Sheet 🧭 🗊
Armaflex Ultima	UD-25-99/E	Sheet 🖉 📵
	(+)	
Minimum outer diameter(mm)	Maximum outer diamete	r(mm) Minimum insulation Thickness() 55 0
Armaflex Ultima	UD-25-99/E	Sheet 🧭 📵
Armaflex Ultima	UD-32-99/E	Sheet 🧭 🗊
	(+)	
	(+)	
		(B) (B)

You can **delete** the pipe ranges and the layers with this button



- You can edit and make corrections to your layer by pressing this button
- You can continue your work by adding next pipe range, by pressing the + button

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



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arma	acell [®]	Overview	х		allows to switch off the configuration
Automatic insulation		Country 1988 Language 1988	(1)		allows to edit the configuration
Cooling wa	ater			e	alle le salt lie selligaration
100 Pipe	150 Hydronic Supply	txtblk_DSD Copper - A		(allows to delete configuration
	(+)			$\langle \times$	allows to save configuration
				(1	allows to start the new configuration
			\otimes	/	

Import/Export button



 Select the export button and save your configuration under a unique name in your files

+



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

Armacell plug-in tool - update

If you have a project with designed pipe or duct objects in a Revit without insulation and set your new configuration, press the **update** button

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



- If you made changes in your configuration press the 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



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

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

PRODUCT INFORMATION		×
Layer 1 : ACE/P-32X080		
Product : Amaflex ACE Plus		
Details :		
Max. service temperature :		
+110 °C		
Min. service temperature :		
-50 °C		
Thermal Conductivity :		
+/-0 °C.λ= Tubes, Sheets, Tapeλ≤0.035W/(m·K)[35 + 0.1· @m. + 0.0008 · @m.¶/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		
	Ok	



You can display a bill of materials (BOM) in the form of a table for pipes, pipe fittings, and ducts using the button. We have a 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 m². Specified material quantities also include material for layers used in multilayer insulation.

ar	macell Bil of Materials	
Ppe Ppe Attclc	Petala	Material list for pipe insulation
00-1964	Interest is Annahes Utwas Details : Safety and Environment: Neets the requirements for sustainable construction in combination with Annahes Utions \$7000 adhesive such as LEED Type III Environmental Process: Declaration number "270 ARM 20150100 IBB1 DC; Institut Bauen and Unrecht e.M. (New service temperature : +10 °C New service temperature : +0° °C (>20 °C) Internal (cond shudy: ±0° C/- ±0° C/- ±0° C/- ±0° C/- ±0° C/- Mar report offusion resistance : ±1°00 Fre performance : Tables, Tables self-subtraine, Seg_0 Marting DDC 2000 mm insulated 0 +38 L =1.400 Sheety, Jacks as final fusion Bin2_0.0 Marting DDC 2000 mm insulated 0 +38 L =1.400 Sheety -1.400	Article Details Amount Tube(m) Amount Sheet(m ²) UD-19X042 Product : Armaflex Ultima 1,42 0 UD-32X089 Product : Armaflex Ultima 1,3 0 UD-09-59/E Product : Armaflex Ultima 0 0,66 Material list for fittings insulation Article Details Amount Tube(m) Amount Sheet(m ²) UD-19X042 Product : Armaflex Ultima 0,08 0
	8	

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

Armacell plug-in tool - help ?

With the **Help** tool you can display information about the plug-in version, and update your version selecting the highlighted icon (



E-mail connection to Armacell Help desk

FAQ) Frequently asked questions

History of the plug-in transactions to assist in diagnosing technical problems

armacell		HELF	⊳ X
Version	2.20.4.1461	\bigcirc	UP TO DATE
Database version	2.0.0	\oslash	UP TO DATE
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As the inventors of flexible foam for equipment insulation and a leading provider of engineered foams, Armacell develops innovative and safe thermal, acoustic and mechanical solutions that create sustainable value for its customers. Armacell's products significantly contribute to global energy efficiency making a difference around the world every day. With more than 3,300 employees and 25 production plants in 19 countries, the company operates two main businesses, Advanced Insulation and Engineered Foams. Armacell focuses on insulation materials for technical equipment, high-performance foams for acoustic and lightweight applications, recycled PET products, next-generation aerogel technology and passive fire protection systems.



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