



MagiCAD for Revit

Release notes for version 2025 UR-1

03/10/2024

Content

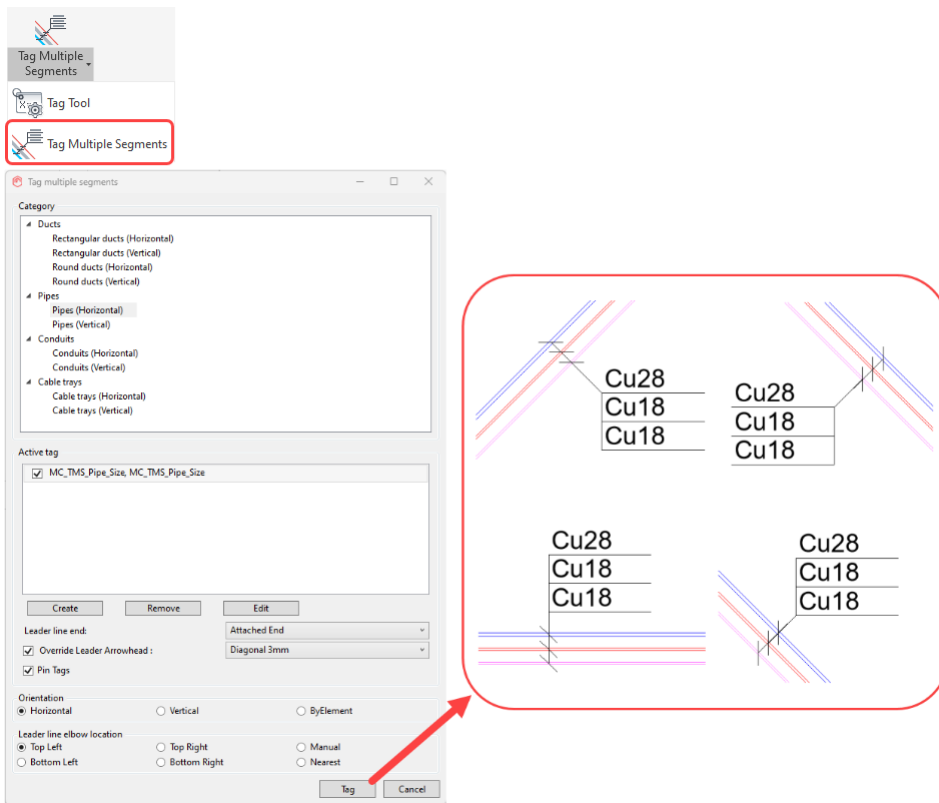
1	NEW FEATURES	3
1.1	Common	3
1.2	Common/IFC related	6
1.3	Ventilation and Piping	7
1.4	Electrical	13
1.5	Schematics	19
1.6	Supports & Hangers	19
2	RESOLVED ISSUES	20
2.1	Common	20
2.2	IFC-related	20
2.3	Ventilation and Piping	21
2.4	Electrical	21
2.5	Schematics	21

1 New features

1.1 Common

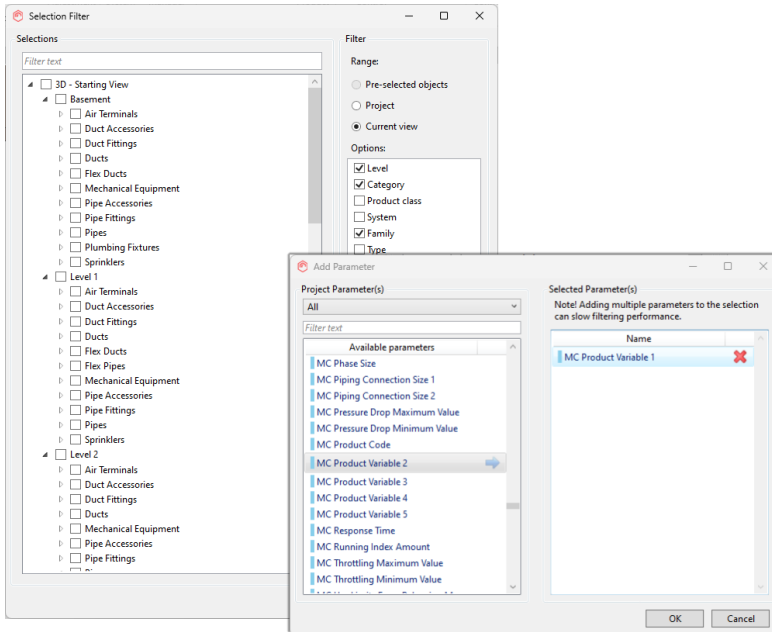
Tag multiple segments

The new Tag Multiple Segments -tool makes it much easier to add tags to system segments. Users can create suitable tags for the tool with the help of a tag family template and assign the tags for different types of system segments, for example horizontal pipes. The tags are then applied to the model simply by clicking the segments. Each segment is automatically tagged according to their assigned tag family and the order of the tags follows the order in which segments are selected. The tool provides various options that can be used to achieve the desired visual presentation.



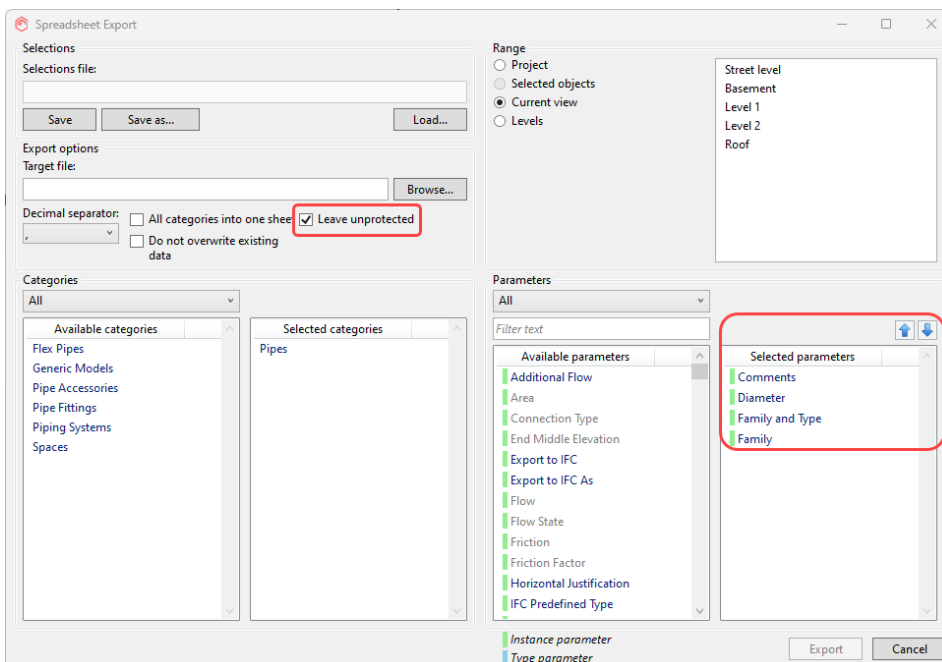
Improved Selection Filter tool

Selection Filter now allows adding any parameter from the project to the filter options, making it more flexible to use.



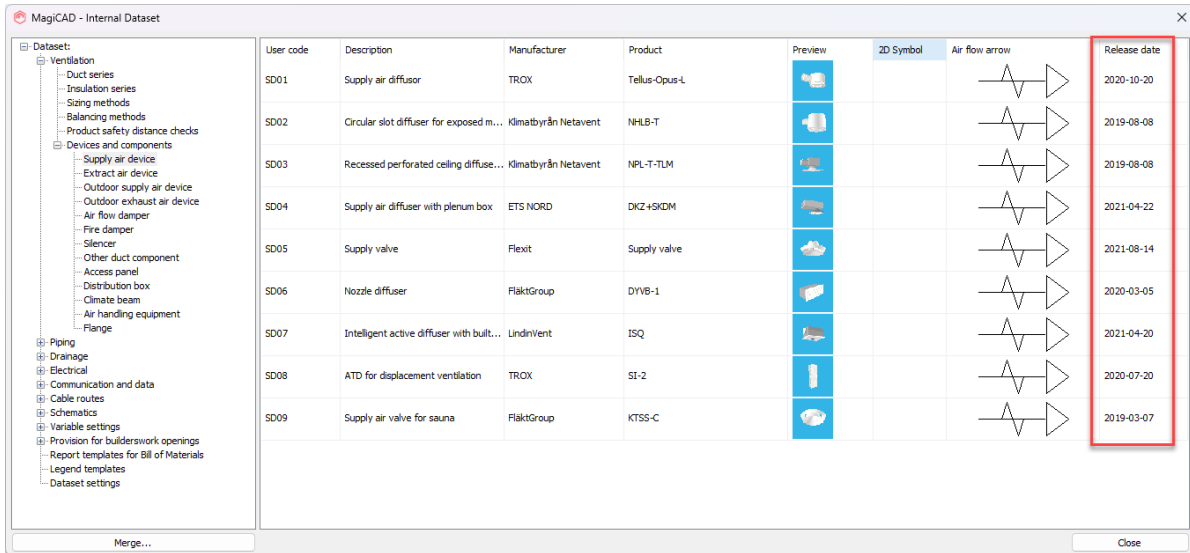
Spreadsheet export improvements

Export to Spreadsheet -tool has been improved to support list sorting and drafting views. Sorting is done in ascending order and can be changed by moving parameter up and down in the selected parameters list. In addition it is now possible to select "Leave unprotected" in the dialog which makes it easier to work with the file when opened.



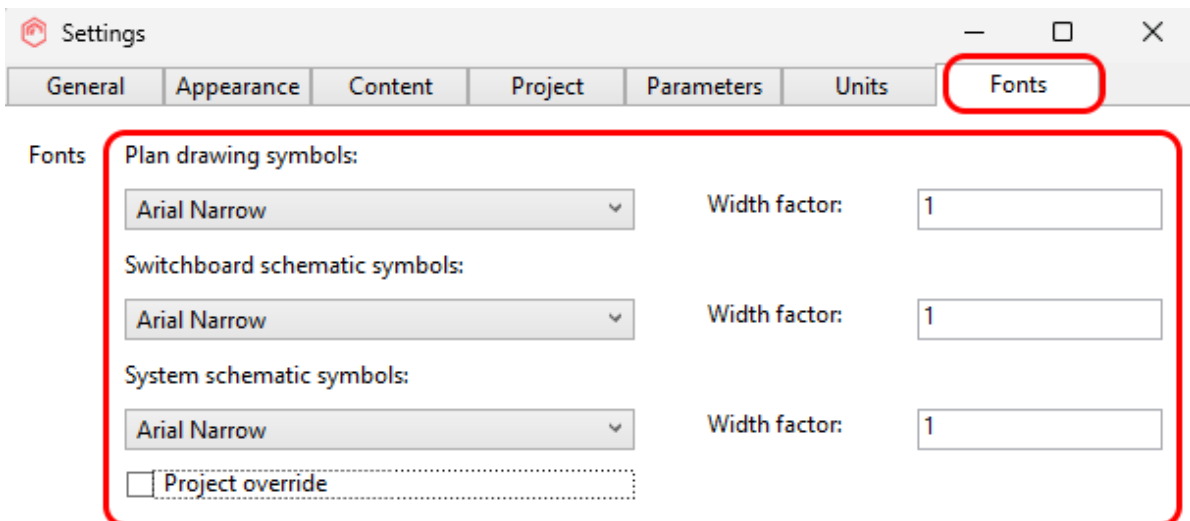
Product release date in the dataset

Product database release date can now be shown to dataset column. Which helps to identify if the products are up to date.



Font selection for labels and texts in converted symbols

In the MagiCAD Settings dialogue, you can now define which fonts are used in labels and texts when 2D symbols are converted/generated directly from symbol databases. Both the Symbol Organiser and the Legend tool assume that all symbols use the defined fonts and spacing is calculated accordingly. With the project override checkbox, you can set different fonts to be used in different projects per projects' needs. Otherwise, common font settings from the dialogue will be used.



Override Revit commands updates

New message has been added for the user when MagiCAD license check fails, if override functions are wanted to be turned off so that plain Revit can be used. Changing the setting doesn't require restarting the Revit anymore. Draw override has also been improved to perform better in certain scenarios.

Dataset "read only" mode updates "Internal error" from dataset with write restrictions

Dataset has been improved to inform user if dataset is in read only mode due to file locking or simultaneous usage.

Floating toolbars general improvements

Floating toolbars can now be found from the taskbar in case it is lost behind windows.

Improved Tag Tool override option

It is now possible to use Tag Tool override option with linked files as well.

1.2 Common/IFC related

IFC Export and Psets support new Revit categories

Updates to the mapping of IFC categories:

Added IFC support for

- Mechanical Control Devices
- Plumbing Equipment.

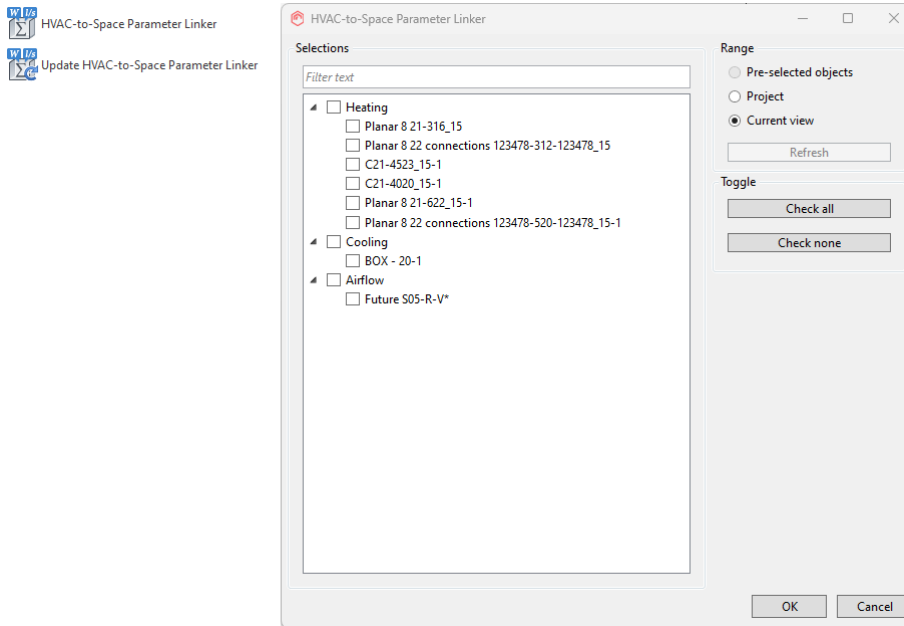
Changed mappings

- Fire Protection => IfcTypeFireSuppressionTerminalType,
- Audio Visual Devices (IFC2x3) => IfcTypeElectricApplianceType.

1.3 Ventilation and Piping

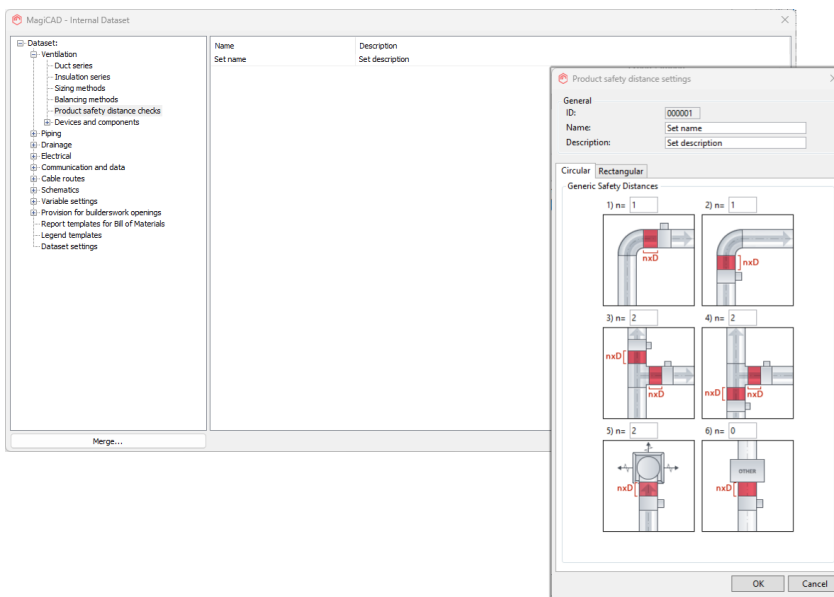
Collect actual data values, summarise and place that value into the space

New feature for summarizing HVAC data which is collected from certain devices into respective spaces.



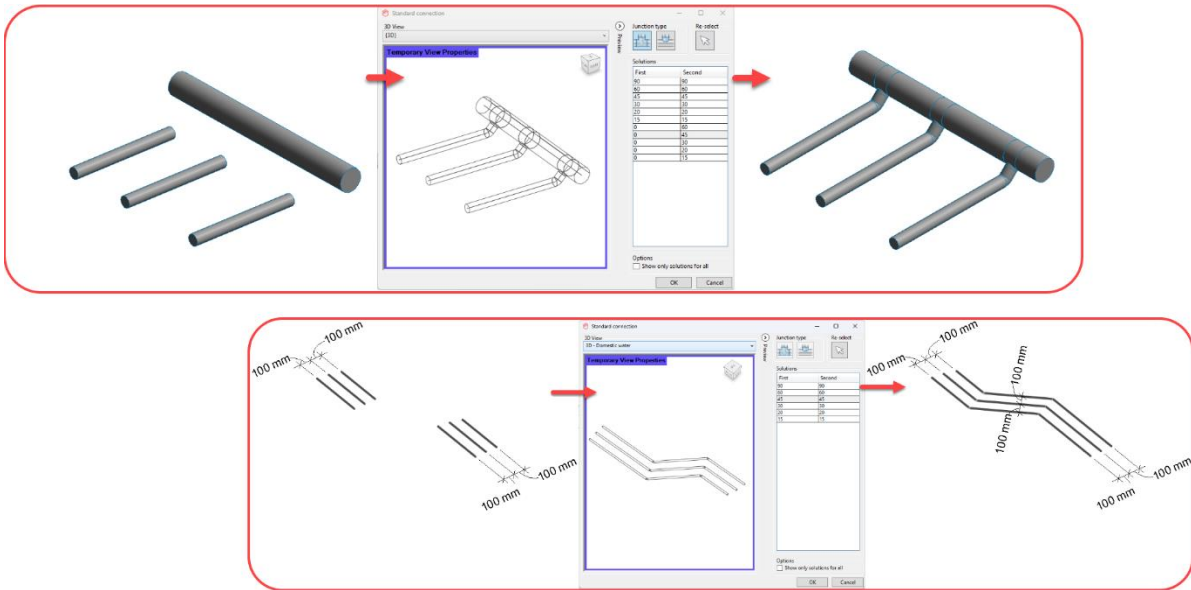
Damper placement safety distance check

New feature for checking flow damper safety distances has been included into "Extended flow analysis". Tool gives an option to check the placement of the dampers based on scenarios. User can create generic rules in dataset for the checking which then can be used for all products or the ones missing the manufacturer data.



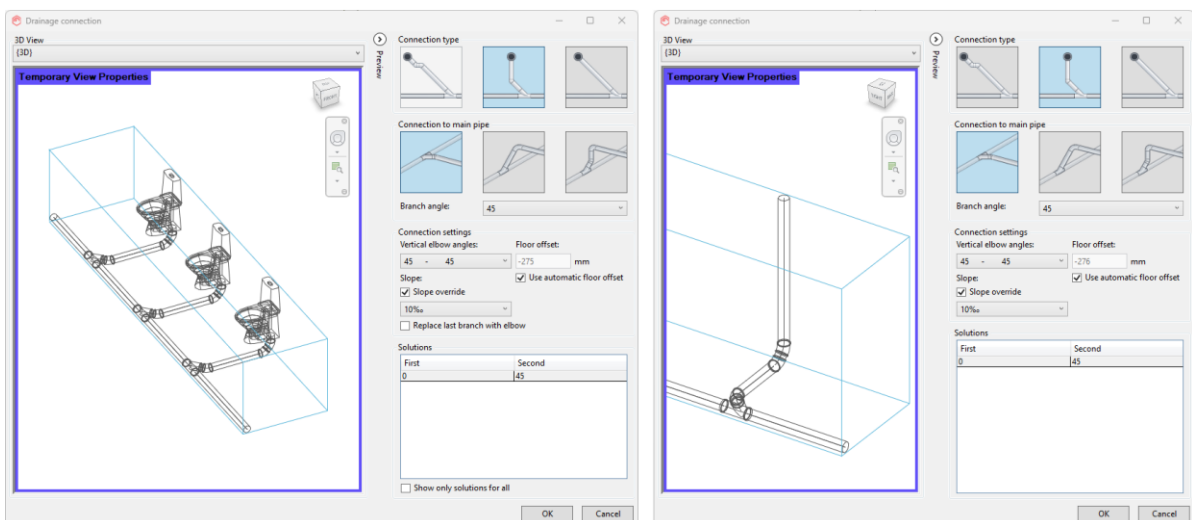
Standard Connection improvements

Standard Connection -tool now support new connection scenarios. Multiple segments can be connected to same main segment when their system classification is the same and the segments are perpendicular to the main segment. In addition, the tool can now maintain correct spacing between segments when multiple segments are connected end-to-end simultaneously. This requires that segments are parallel and on the same plane.



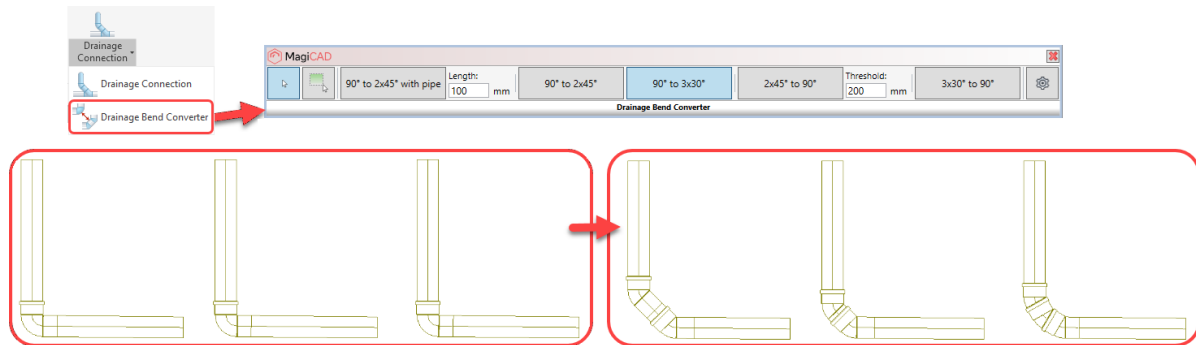
Drainage Connection tool improvements

Multiple drainage devices can now be connected simultaneously, instead of creating connections one-by-one for each device. In addition, it is possible to connect vertical pipe to horizontal as well with the tool.



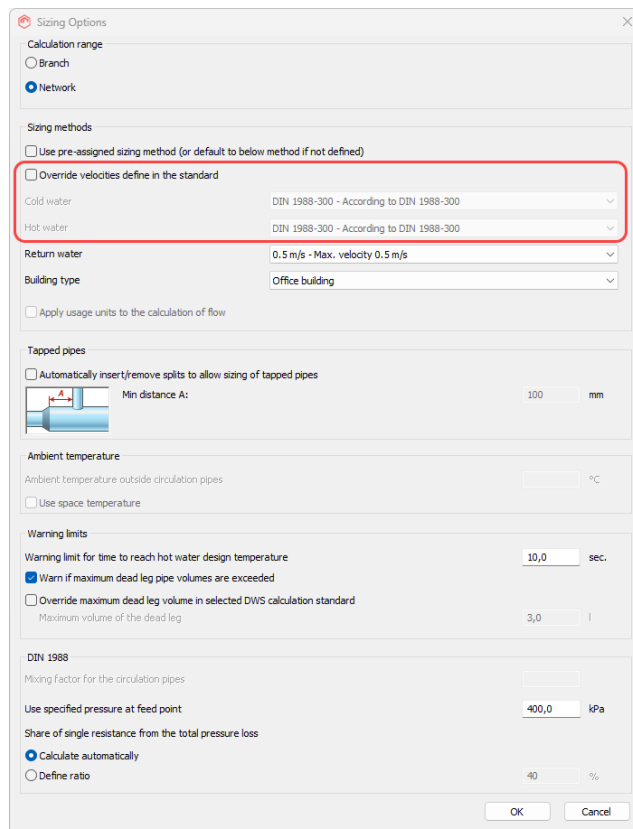
Change 90° drainage bend to 2x45° or 3x30° and back

Drainage Bend Converter is a new tool for changing 90-degree bends to 2x45-degree bends or to 3x30-degree bends and back. Tool reduces the need of doing this change manually in section view afterwards.



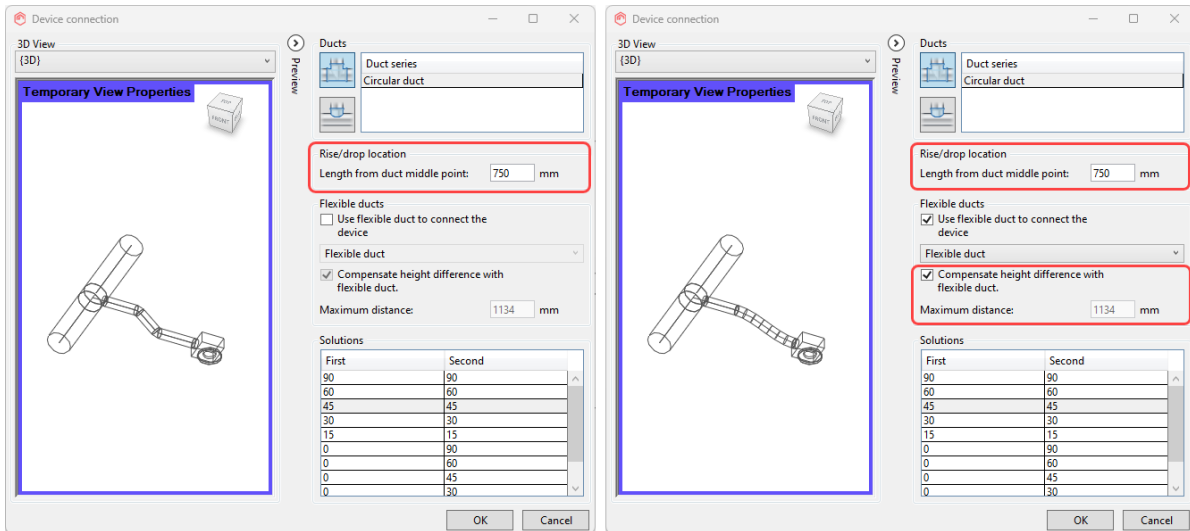
Allow overriding velocities in DW standards DIN, French, and UNE

In some cases, domestic water standards such as DIN 1988-300 allow water flow velocities in pipes which may cause excessive noise. Hence, designer may want to limit maximum flow velocities lower than is required by the standard. Checkbox "Override velocities defined in the standard" allows users to set maximum flow velocity for cold and hot domestic water networks.



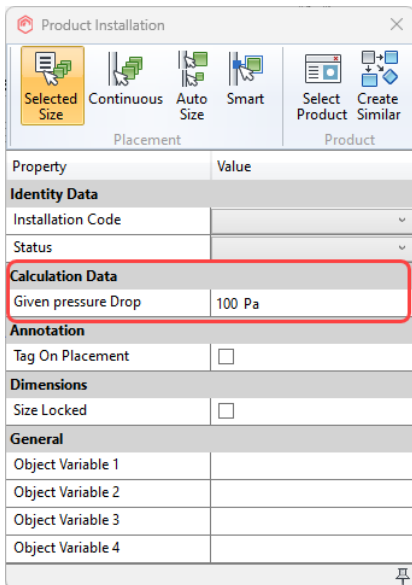
Improved Device Connection -tool

New options has been added to Device Connection -tool to enable easier air terminal connection. User can now define the exact distance between the rise or drop connection point and the middle point of the connected duct when there is an elevation change to the device. The tool also includes an option to use flexible duct and the shortest possible route for elevation changes.



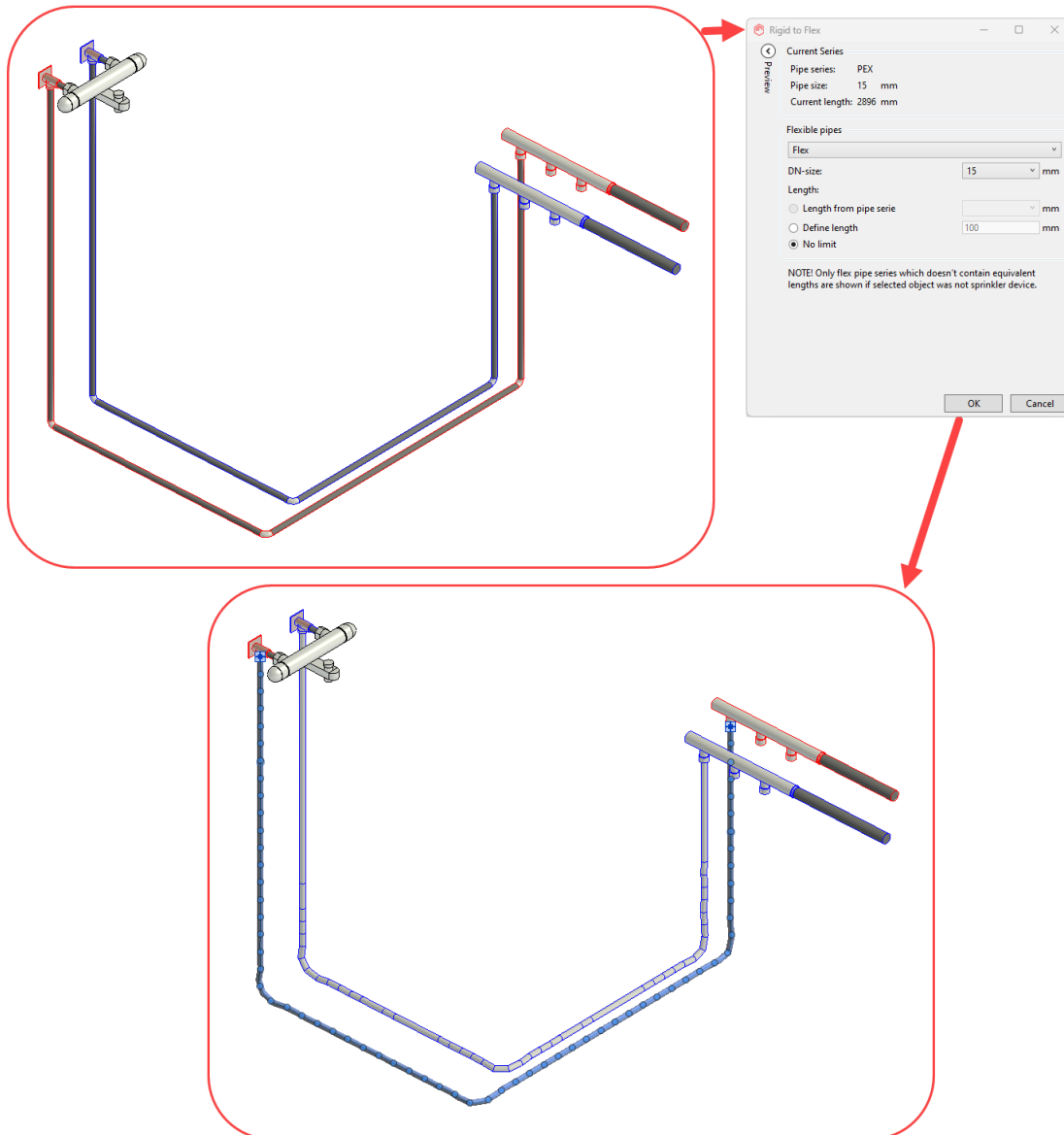
Giving pressure drop to elements with parameter

It is now possible to give pressure drop for components in product installation dialog if the component does not have pressure drop in product data and has two ports. This value is then used in ventilation, domestic water, heating and cooling network calculations.



Improved Convert to Flex -tool

Convert to Flex now allows you to convert any part of a piping network from rigid pipe to flexible pipe. This was previously only possible for sprinkler connection pipes. The Convert to Flex tool helps user to save time, especially in situations where flexible pipe is transitioning from horizontal orientation to vertical.



Domestic water calculation standard according to PN-B-92-01706

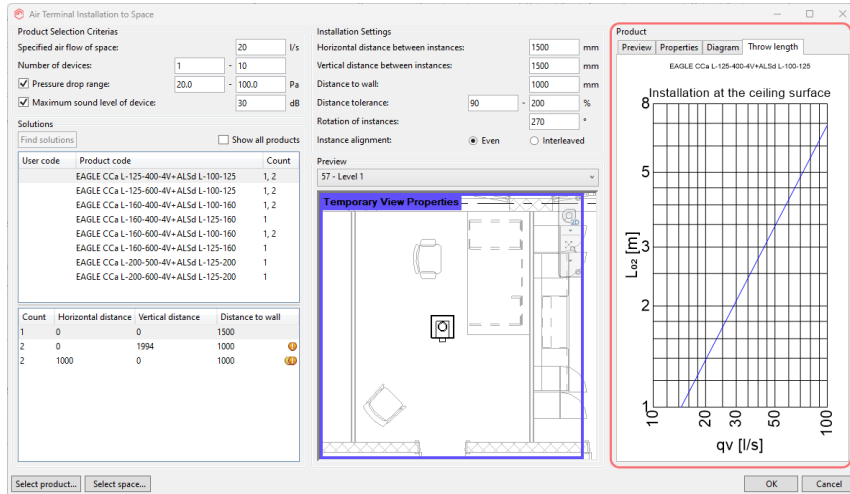
Added support for Polish domestic water calculation standard PN-B-92-01706.

Fan coil unit room calculation point

Room calculation point is added for fan coil units by default when installing product to project.

Air terminal throw length (L 0.2) data

Throw length data has been added to supply air devices. Data diagram can be seen where ever the product properties are visible. Example in picture where throw length is shown when example product is installed with install to space tool.



Drainage flow calculation improvement

Drainage calculation now supports sanitary connection to air terminals, cooling beams, fan coil units, fans and other air components in drainage networks.

Alignment points added to fire dampers

Reference planes for installation point has been added to some fire damper families for easier installation.

1.4 Electrical

Single core cable handling and parallel supplies

Now it is possible to specify single core cables very accurately. You can define the amounts and cross-sectional areas (CSA) of each conductor type in each cable setup.

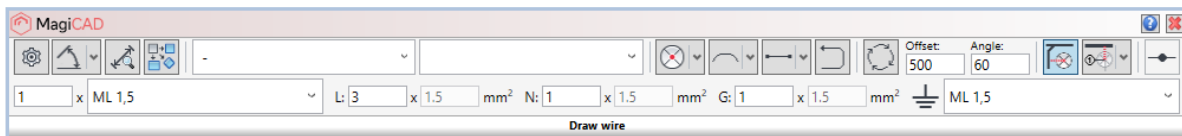
When defining wire types in Wire Type Management, you can first of all make a wire type act as a product by setting a weight for it. When it is defined, it locks the given amounts and CSAs of conductors when set for a multi-core cable but locks only the CSA of a single-core cable. When weight is not given, the wire type acts as a product family. In this case amounts and CSAs are always defined per instance/setup, and cable layouts require the total dimensions given in circuits in order to work properly.

In the Wire tool, you can now set also a parallel supply multiplier for the used cable setup. When making reports, the multi-core and/or single-core cables will be multiplied accordingly.

When using a product family, you can freely define the amounts of conductors and their CSA sizes.

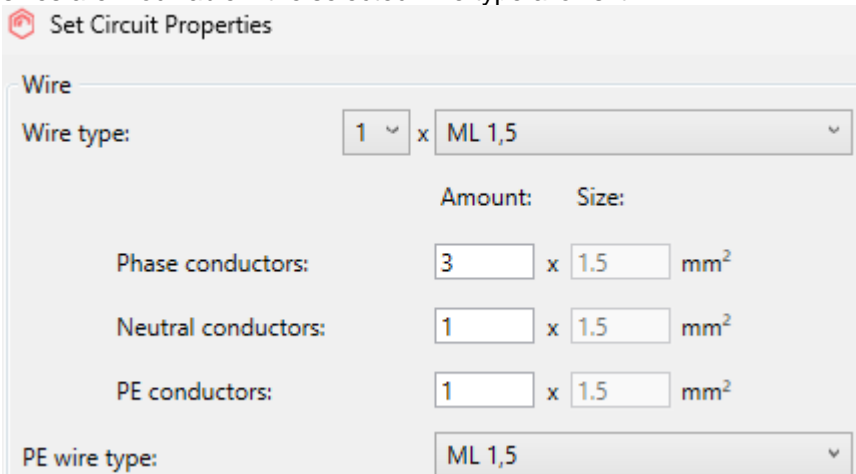
When using a multi-core product, amounts and sizes of conductors are locked.

When using a single-core product, sizes of conductors are locked but you can define how many different conductors are used.



MultiplierWire typePhase amount x CSANeutral amount x CSAPE amount x CSAPE wire type
 (available when "Separate PE" is set on in the main wire type)

From Set Properties, you can modify the wire setup as well. The multiplier and conductor amounts and sizes are modifiable if the selected wire type allows it.



PE wire type is also available when the wire type is set to use a separate PE.

When using actual products (which means that weights and other dimensions are defined in the wire types), the Cable Layout tool shows the amounts of conductors/cables with their correct dimensions, taking into account also the possible cable setup multipliers. But note that when using product families (which means that dimensions are not defined in the wire types), you have to define the weights,

heights and widths of the whole supply cable setups manually to the "Total weight/height/width of supply cables" parameters of circuits to get cable layouts to be correct.

When using a wire type with the "Separate PE" selection active, you can change also the PE wire type of a drawn wire afterwards by using Change Properties.

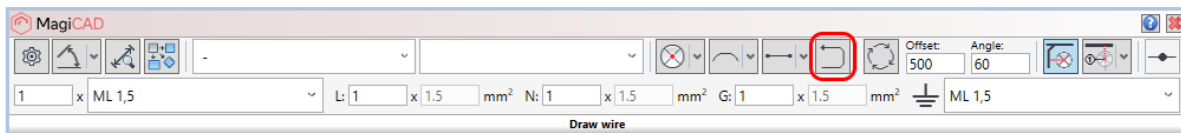
The Export Electrical Network exports the amounts and sizes of different conductor types of each circuit. Import Electrical Network imports back the correct data.

Bill of Materials now have the different conductor types and multipliers available in the export to get as accurate reports as possible.

Manage Circuits now shows the multipliers of cables and that multiplier can be added to switchboard schematics with the parameter "CN" in the symbols or data blocks.

Undo/Back function in the Wire tool

Now when you draw wires with the Wire tool, you can undo missclicks with backspace or by clicking the undo button in the toolbar, and wire drawing will be continued from the last clicked position. You can go back as many steps as you want since starting the tool, so from now on you don't need to cancel wire drawing and start again every time you make a mistake or change your mind about a wire route.

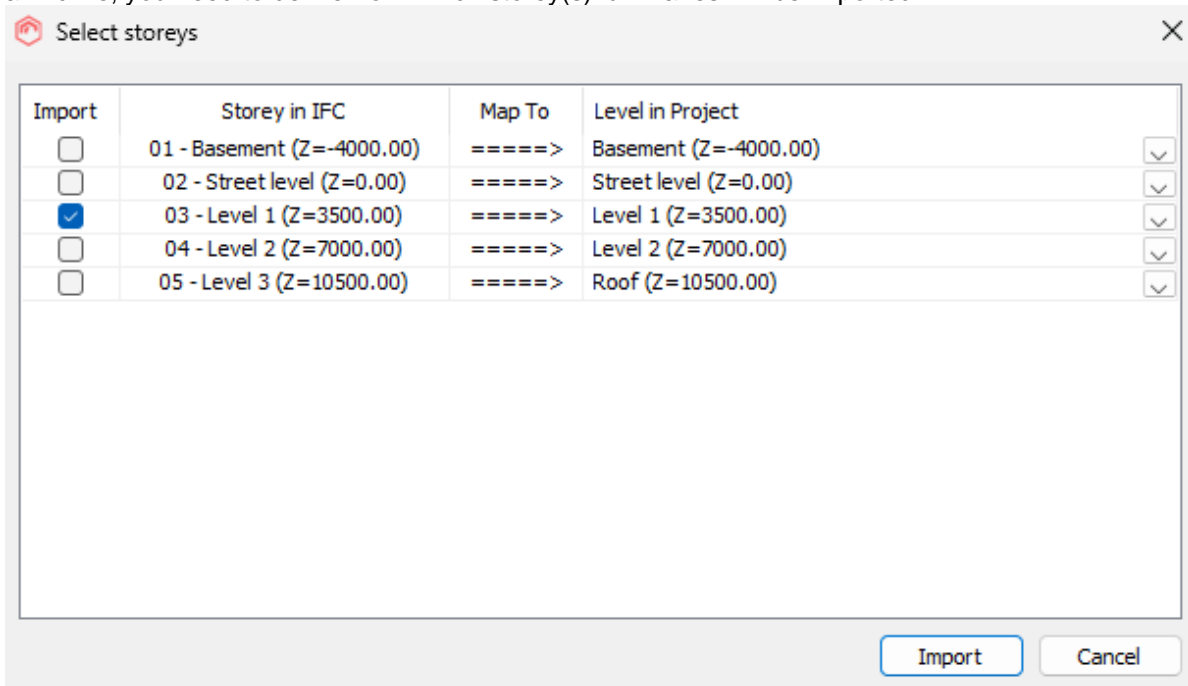


Spreadsheet Import can update Wire Type

Now you can change the Wire Type of a circuit with the Spreadsheet Import. If the imported wire type can be found from the project, it will be updated to the circuit.


Connection to DIALux Evo

Now it is possible to import lighting plans from Dialux Evo by using the IFC file format. After selecting an ifc file, you need to define from which storey(s) luminaires will be imported.



The storeys in the IFC file are automatically mapped to levels found from the Revit project, but in case MagiCAD doesn't succeed in this you then need to map the storeys manually.

When continuing with the import, you will get a new dialogue in which you need to select the used 2D symbols for all created luminaires. You can also set user codes, power factors, systems and descriptions for the luminaires. If an imported luminaire type is already found from the project or from the dataset, you can map it to that and use all its data in the import.

 DIALux Import
✕

Luminaires

Type GUID	Product	Manufacturer	Count	Action	Status	Symbol
3cSEswfAfCUwcZ9zm	BRIGHT SPECIAL LIGHTING S_A_ COM		27	New	Incomplete	
2qCV2Rkw99XAujKSE	BRIGHT SPECIAL LIGHTING S_A_ FUG		60	New	Incomplete	
0vMHErGELBK9yfQKK	Fagerhults Belysning AB Telescope Aqua		11	New	Incomplete	
3QhDfTHJf59u1MZb5	Fagerhults Belysning AB Zoft Ceiling_Wall		12	New	Incomplete	
2mnUduJ\$T6pfr0Z1Yf6	LIGMAN Nybro Junction Pendant luminair		3	New	Incomplete	

Luminaire properties

Apparent load:	<input type="text" value="15.70"/>	CosPhi:	<input type="text" value="1.00"/>
Active power:	<input type="text" value="15.70"/>	User code:	<input type="text"/>
Flux:	<input type="text" value="0"/>		
RFA name:	<input type="text" value="BRIGHT SPECIAL LIGHTING S_A_ COMIS OUT OPAL COVER 1m"/>		
System:	<input type="text" value="---"/>		
Description:	<input style="height: 40px;" type="text" value="\$"/>		

Luminaire mapping options

Create new
 Map to existing
 Map to existing in MagiCAD dataset

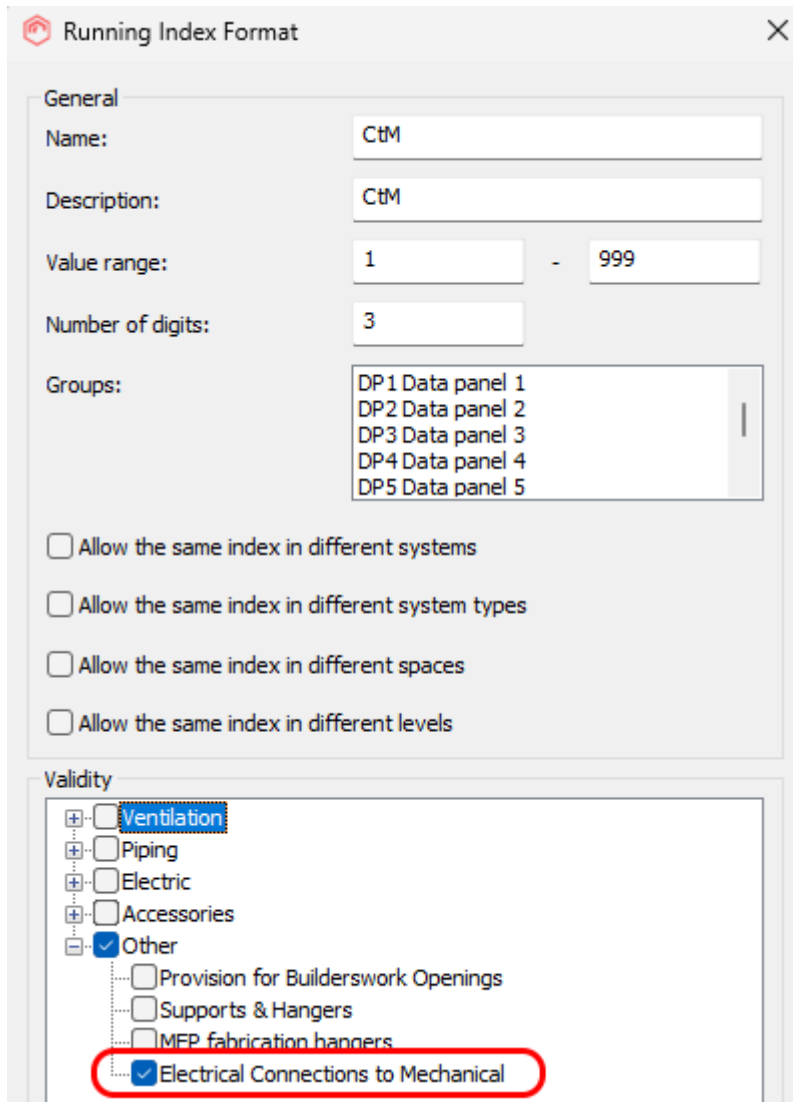
User Code	RFA Name

Use project north
 Update placements of existing instances

Select to use project north (recommended) and the project's coordinate system or leave the checkbox unchecked for using true north and the site's coordinate system. With the update checkbox you can decide to merely update the places and directions of already existing luminaire instances in case they were already imported earlier or decide to create all instances as new objects even if they existed before by leaving it unchecked. Pressing the Import button will create the luminaires to their correct positions in the Revit project and update the placements and directions of existing instances when decided so.

Running indexes for electrical connections to mechanical

Now it is possible to add running indexes for Connections to Mechanical objects. That category has now been added to the validity list of running index definitions.



Running Index Format

General

Name: CtM

Description: CtM

Value range: 1 - 999

Number of digits: 3

Groups:

- DP 1 Data panel 1
- DP 2 Data panel 2
- DP 3 Data panel 3
- DP 4 Data panel 4
- DP 5 Data panel 5

Allow the same index in different systems

Allow the same index in different system types

Allow the same index in different spaces

Allow the same index in different levels

Validity

- Ventilation
- Piping
- Electric
- Accessories
- Other
 - Provision for Builderswork Openings
 - Supports & Hangers
 - MFP fabrication hangers
 - Electrical Connections to Mechanical

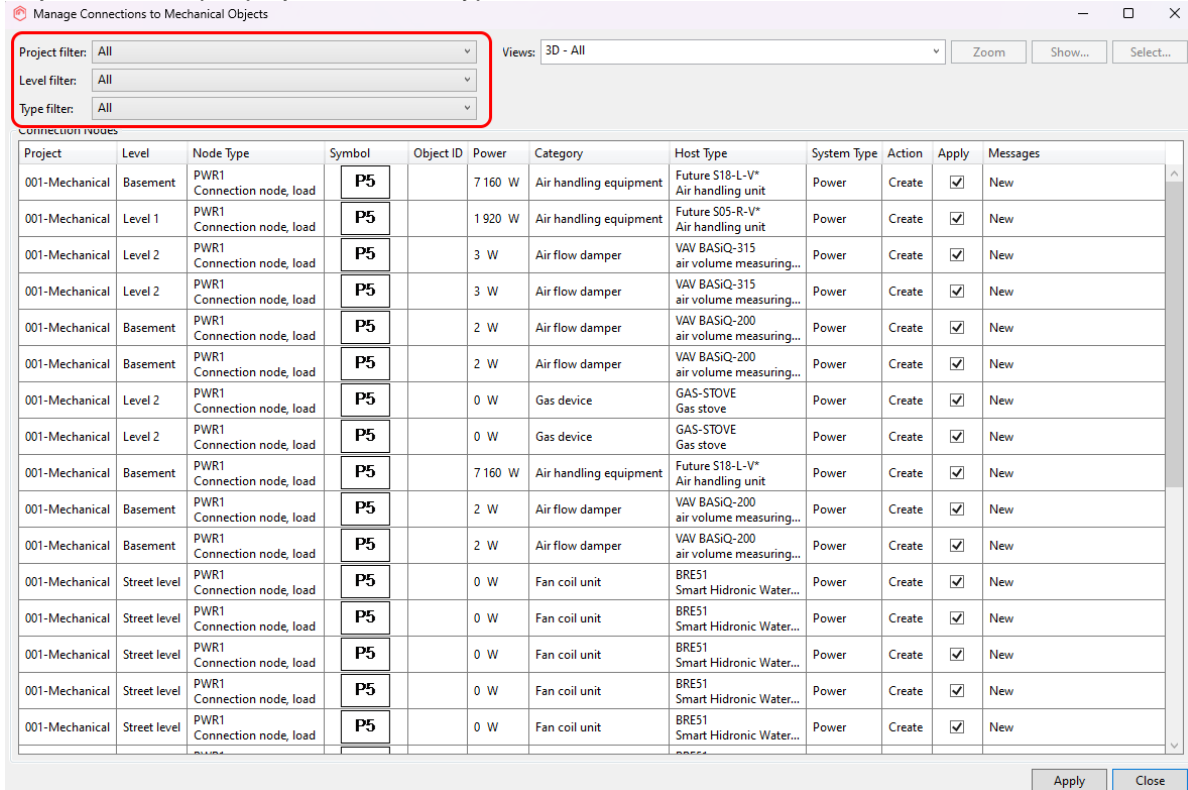
New revit categories available into "Connections to Mechanical"

The following new Revit categories have been added to validity list of Connections to Mechanical:

- Food Service Equipment
- Medical Equipment
- Signage
- Vertical Circulation
- Mechanical Control Devices
- Plumbing Equipment

One or more electrical/ELV connectors are required in the elements so that Connections to Mechanical function will be able to find them.

Also, now you have the possibility to filter found nodes in the Manage Connections to Mechanical Objects window per project, level and type.

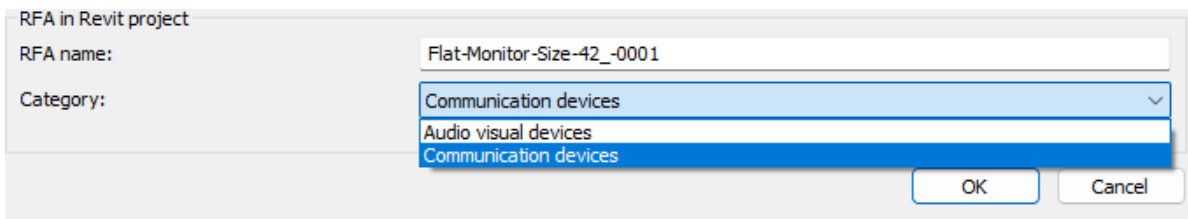


Project	Level	Node Type	Symbol	Object ID	Power	Category	Host Type	System Type	Action	Apply	Messages
001-Mechanical	Basement	PWR1 Connection node, load	P5		7 160 W	Air handling equipment	Future S18-L-V* Air handling unit	Power	Create	<input checked="" type="checkbox"/>	New
001-Mechanical	Level 1	PWR1 Connection node, load	P5		1 920 W	Air handling equipment	Future S05-R-V* Air handling unit	Power	Create	<input checked="" type="checkbox"/>	New
001-Mechanical	Level 2	PWR1 Connection node, load	P5		3 W	Air flow damper	VAV BASIQ-315 air volume measuring...	Power	Create	<input checked="" type="checkbox"/>	New
001-Mechanical	Level 2	PWR1 Connection node, load	P5		3 W	Air flow damper	VAV BASIQ-315 air volume measuring...	Power	Create	<input checked="" type="checkbox"/>	New
001-Mechanical	Basement	PWR1 Connection node, load	P5		2 W	Air flow damper	VAV BASIQ-200 air volume measuring...	Power	Create	<input checked="" type="checkbox"/>	New
001-Mechanical	Basement	PWR1 Connection node, load	P5		2 W	Air flow damper	VAV BASIQ-200 air volume measuring...	Power	Create	<input checked="" type="checkbox"/>	New
001-Mechanical	Level 2	PWR1 Connection node, load	P5		0 W	Gas device	GAS-STOVE Gas stove	Power	Create	<input checked="" type="checkbox"/>	New
001-Mechanical	Level 2	PWR1 Connection node, load	P5		0 W	Gas device	GAS-STOVE Gas stove	Power	Create	<input checked="" type="checkbox"/>	New
001-Mechanical	Basement	PWR1 Connection node, load	P5		7 160 W	Air handling equipment	Future S18-L-V* Air handling unit	Power	Create	<input checked="" type="checkbox"/>	New
001-Mechanical	Basement	PWR1 Connection node, load	P5		2 W	Air flow damper	VAV BASIQ-200 air volume measuring...	Power	Create	<input checked="" type="checkbox"/>	New
001-Mechanical	Basement	PWR1 Connection node, load	P5		2 W	Air flow damper	VAV BASIQ-200 air volume measuring...	Power	Create	<input checked="" type="checkbox"/>	New
001-Mechanical	Street level	PWR1 Connection node, load	P5		0 W	Fan coil unit	BRE51 Smart Hydronic Water...	Power	Create	<input checked="" type="checkbox"/>	New
001-Mechanical	Street level	PWR1 Connection node, load	P5		0 W	Fan coil unit	BRE51 Smart Hydronic Water...	Power	Create	<input checked="" type="checkbox"/>	New
001-Mechanical	Street level	PWR1 Connection node, load	P5		0 W	Fan coil unit	BRE51 Smart Hydronic Water...	Power	Create	<input checked="" type="checkbox"/>	New
001-Mechanical	Street level	PWR1 Connection node, load	P5		0 W	Fan coil unit	BRE51 Smart Hydronic Water...	Power	Create	<input checked="" type="checkbox"/>	New
001-Mechanical	Street level	PWR1 Connection node, load	P5		0 W	Fan coil unit	BRE51 Smart Hydronic Water...	Power	Create	<input checked="" type="checkbox"/>	New

Support for new family categories (Fire Protection, Audio Visual Devices, Nurse Call Devices)

The Revit categories: Fire Protection, Audio Visual Devices and Nurse Call Devices are now supported in MagiCAD.

When creating new products under Fire, Audio&video or Signal in MagiCAD, you can select these Revit categories to be used for them.



RFA in Revit project

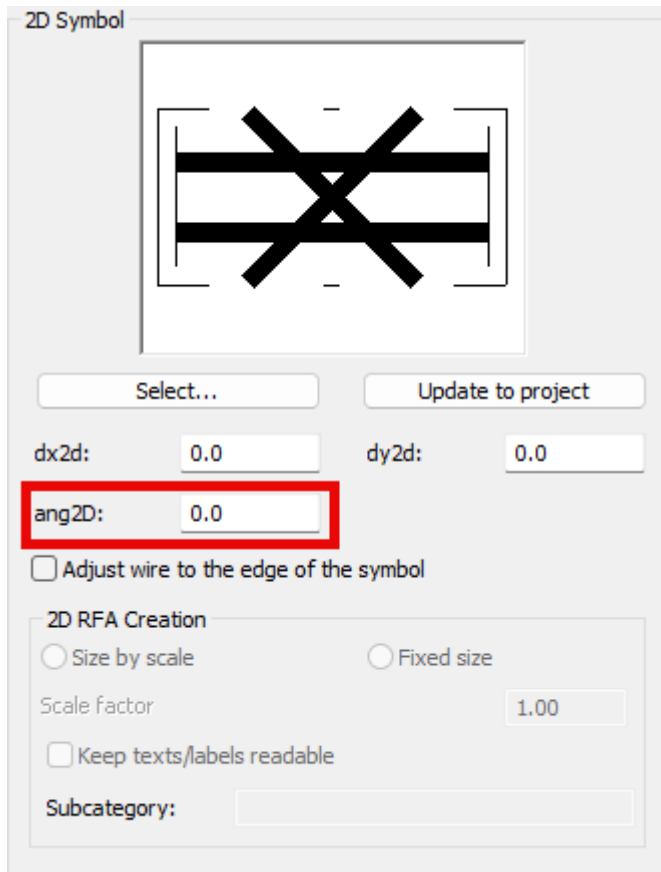
RFA name: Flat-Monitor-Size-42_-0001

Category: Communication devices

OK Cancel

Default ang2D into dataset

You can now define the default angle for 2D symbols in the dataset. It is used as default when placing new instances to the project.



Support for electrical calculations in Revit 2025

Calculation engine has been updated and now calculations work with Revit 2025. With the updated calculation engine, calculations work with older MagiCAD versions.

Localised calculation engines no longer work in Revit 2025 due to changes in Revit. You can make calculations with localised engines in Revit 2023 and Revit 2024, but the report function doesn't work with them.

1.5 Schematics

Mark Linked Symbols update

When using the "Mark Linked Objects" only the linked pair was highlighted even if the element belongs to a group. Now all elements in the symbol or device group will be marked to give better visual presentation of marked elements.

1.6 Supports & Hangers

Support for Revit 2025

MagiCAD 2025 UR-1 Supports and Hangers module now supports Revit 2025.

2 Resolved issues

2.1 Common

Change properties - Status doesn't work if you specify "Value from"

User was not able to change Status "Value from:" -field with Change Properties -tool.

Segment override with primary mouse button on right -bug

Segment drawing override were causing secondary mouse button list to open if primary mouse button was on the right and user tried to draw segment from the connector.

Clash checking not detecting soft clashes for fittings after Revit 22 version

Soft clashes for fittings were not found in real time or clash report in Revit 2023 and 2024 versions.

Disable localized Whats New page support, only EN site supported

Due to help manuals in various languages not being available the "What's new"-link led to a "404 page not found" for many of the different language-versions. Because of this and to make it better maintained for now we do direct all language-versions to the English version of the "New features" from the "What's new"-link.

2.2 IFC-related

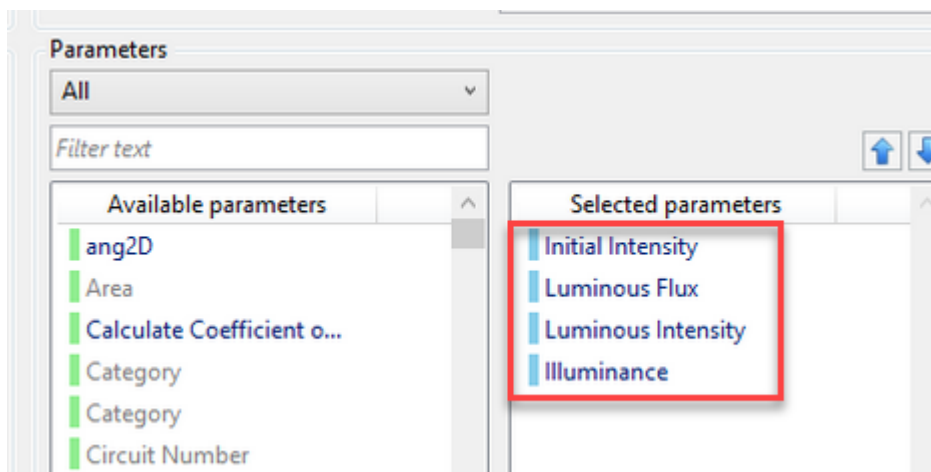
IFC export fails on some elements

Corrected the problem when some elements could not be exported to IFC.

Issue with photometric parameters to IFC propertyset

Issue with photometric parameters not being exported to IFC.

This has been corrected for these:



Piping pressures corrections

It was noted that IFC files says that pressure is in "Pascal", but still pressure of pipes were exported as kPa. Now IFC Export uses "Pa" for pressure instead of "kPa".

Ifc export slow on some projects

Additional improvements to the speed of IFC Export.

Now improved speed when starting IFC Export in a view with lots of objects.

2.3 Ventilation and Piping**Generic AHU connector issue**

Some special dimensions of AHU were causing wrong position of duct connections

Domestic water calculation with multiple heating plants doesn't work when connection node between models have been used

Domestic water calculation didn't work when network consisted more than one heating plant and heating plants were located in different .rvt files.

Standard Connection causes error

Standard connection and device connection gave exception if fitting was used in selection and it didn't have same shaped connectors as its neighboring ducts.

Unknown component type in sprinkler calculation

Sprinkler calculation gave "Unknown component type" error from a tap fitting.

Radiator installation tool doesn't work properly in MC25

Radiator install tool connection location selections didn't appear with some of the radiators in MC25 version.

2.4 Electrical**Wire type management changed properties of all selected rows automatically**

When multi-selecting rows in Wire type management, some data were automatically unified to all of them. Now it doesn't change any data automatically.

Unexpected error with Hide Conduit

When a conduit for some reason had been connected to a cable tray, and you tried to hide a part of that conduit with the Hide Conduit function, you got an unhandled exception error.

This situation is now handled properly.

Manage Links opened much slower if a switchboard schematic was in one model sheet

When opening Manage Links for the first time, it took a lot of time with larger switchboards. Now loading times are much faster.

2.5 Schematics**Create ELV diagram and create distribution diagram lead to unexpected error**

If there were unavailable styles or line styles in the project, schematic creation functions might give unexpected error. Unavailable styles and line styles are now filtered out from schematic creation functions.

Update to project for schematic symbols freezes/crashes Revit

Revit crashed after using "Update to project" with schematic 2D symbols in dataset.