



MagiCAD for Revit

Release notes for version 2023 UR-2

09/02/2023

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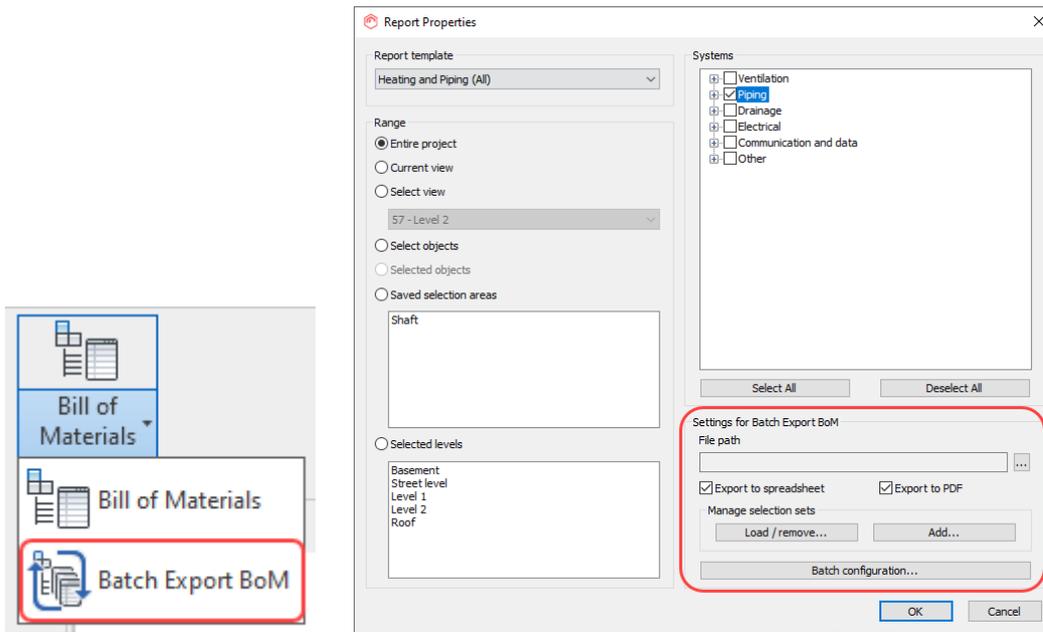
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1 New features

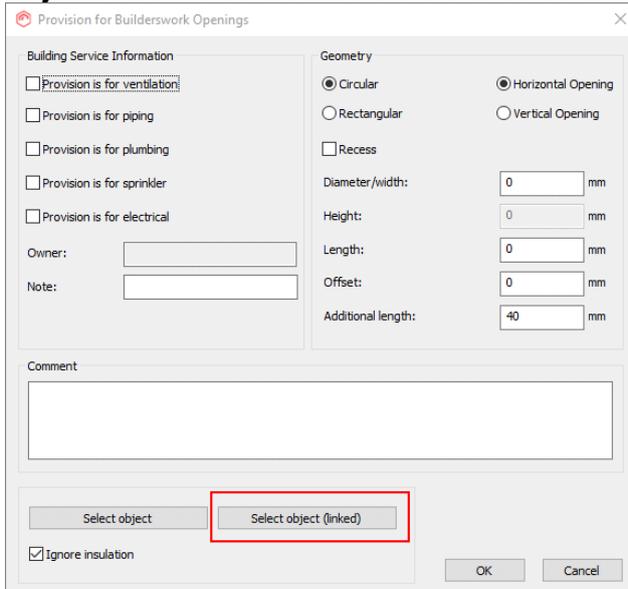
1.1 Common

Export multiple reports with Bill of Materials

Bill of Materials now allows to export multiple reports at the same time. Create and select selection sets which you wish to export and export them with "Batch Export BoM"-function.



Objects from linked model can now be selected in the builderswork openings



Added Crossing tools to contextual ribbon tab

Crossing tools have been added into contextual ribbon for better accessibility during modeling, reducing unnecessary movement between tabs.



Product Browser family level preview picture

MagiCloud shows in family level picture which based .qpd family level material mapping definitions. Same functionality is now implement also for the product browser in MagiCAD.

Currently MagiCAD's product browser shows always the picture of the first variant. This make different view between Browser and Cloud and also for manufactures who are inspecting modeling projects. This has been changed to MagiCAD and product browser now shows preview pictures in a similar way as MagiCloud.

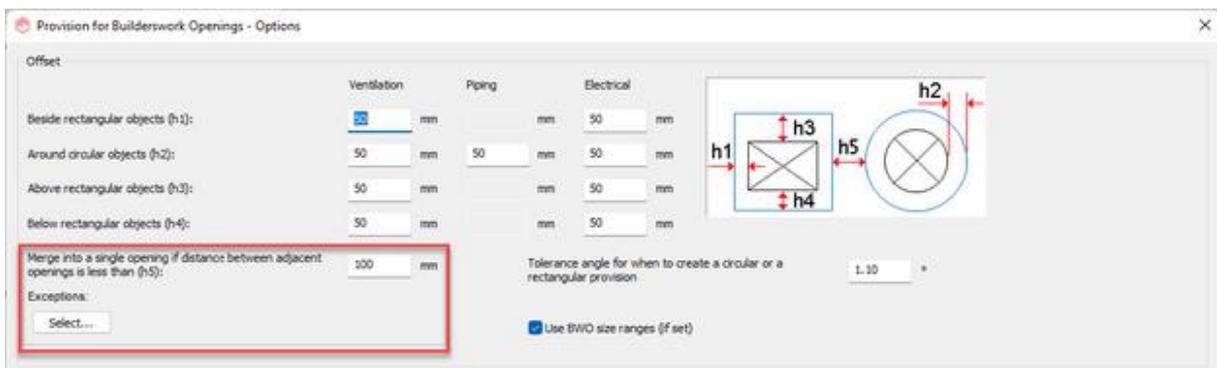
Additional mechanism for when NOT to join provisions

The purpose of this task is to add an exception that controls when two or more provisions shouldn't be merged into one single provision, despite other criteria says they should.

The reason for this demand can for example be that electrical cable trays shouldn't be placed in the same opening as the water pipes.

In the current Provisions for BWO options dialog we do have an option that controls when to join provisions (or openings) depending on a certain distance between the provisions (h5).

But for the cases described above, we need to add two exceptions that prevents them from merging, even then the H5 criteria is fulfilled.



Improved data exchange workflow between MagiCAD and Building Performance Simulation tools

The workflow for data transfer between MagiCAD and Building Performance Simulation (BPS) tools has been improved for increased flexibility. When working with an external Building Performance Simulation tool, the building geometry is exported to either IFC or gbXML format—the file format depends on the BPS software—using native Revit export tools. The simulation results can then be imported into the Revit project with MagiCAD’s import tools.

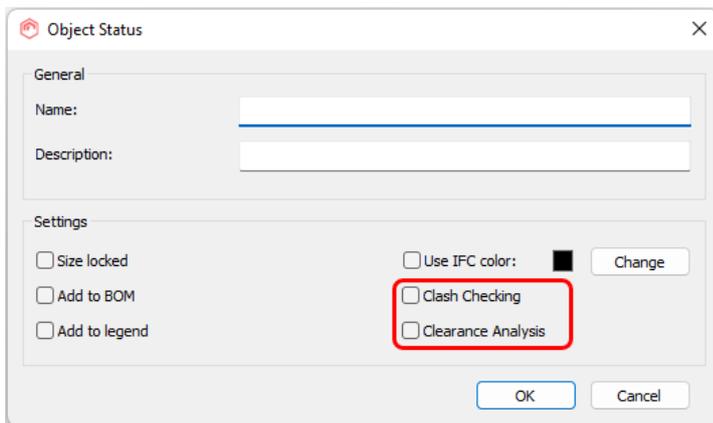
In the new version, space mapping between the Revit project and the BPS tool is always done by matching space number and name combinations. This allows users to edit the models in MagiCAD and the BPS tool independently without waiting for the simulation to be finished. When the simulation results are imported back to the Revit project, all changes made in the meantime are merged.

The newest addition to the selection of supported BPS tools is IES Virtual Environment. A MagiCAD extension is available for IES Virtual Environment that enables the software to export IFC files that are compatible with MagiCAD. The other currently supported BPS tools are Riuska, IDA-ICE and Design Builder.



Improvement to MC Object status and MC analysing tools

MC Object status has been improved with settings to define if objects should be included in Clearance analysis and Clash checking reports. This will create more flexible use of MC Object status and improving the quality of clash and clearance tool reports. As normal status is managed in dataset or in design data when working on project side.



Shared parameter for object status description

New shared parameter called "MC Object Status Description". This parameter can be updated with "Update Parameters"-tool.

Clash checking improvement

Real time clash checking tool has been expanded to work in dependent views as well as in plan regions when normal level view range definitions as being exceeded. Real time clash still has restriction to show only current model collisions inside the plan region. Also sloped element collisions have been improved to show more reliable result in BCF reporting.

Some text typos have been corrected

1.2 Common/IFC related

Insulation handling in IFC Export.

The export feature has been updated in regards to the insulation to be in line with Revit's own IFC Export. Earlier MagiCAD's IFC export didn't export the insulation if the host object wasn't exported. Now the IFC export handles the insulation according to what is shown in the exported view.

If the insulation and the object are both visible, then both exported to the IFC.

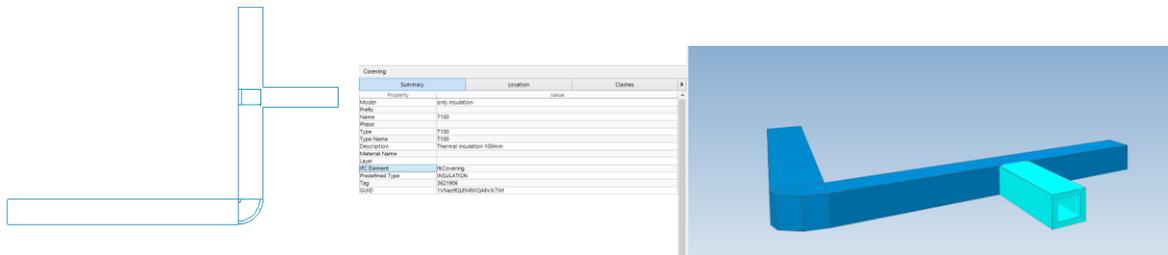
If only the insulation or object is visible, then only that part is exported.

Examples:

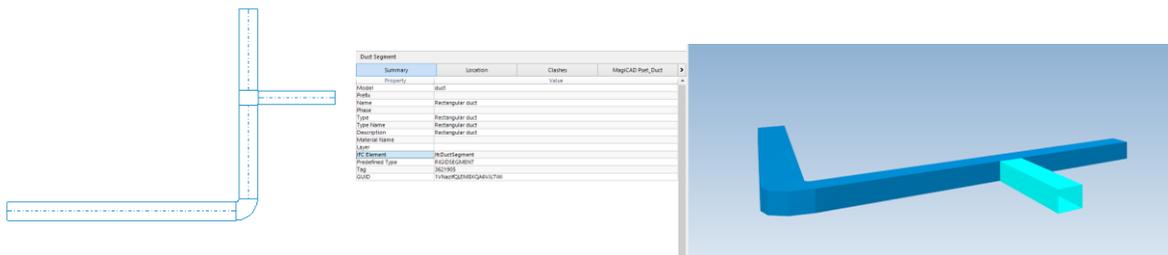
Segment and insulation visible in the exported view - both are exported:



Only the insulation is visible in the exported view - only the insulation is exported:

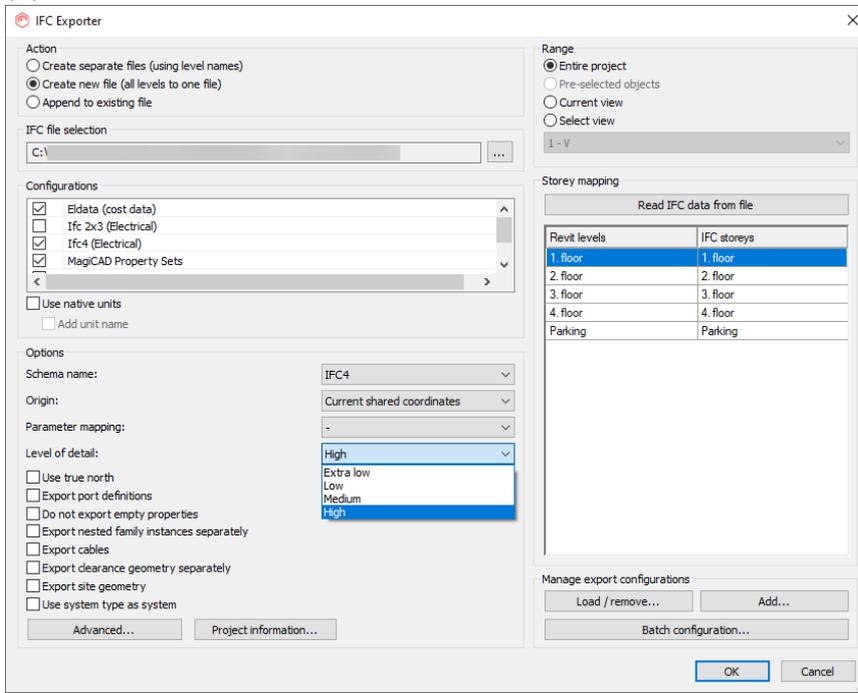


Only the segment is visible in the exported view - only the segment is exported:



Level of detail of IFC files

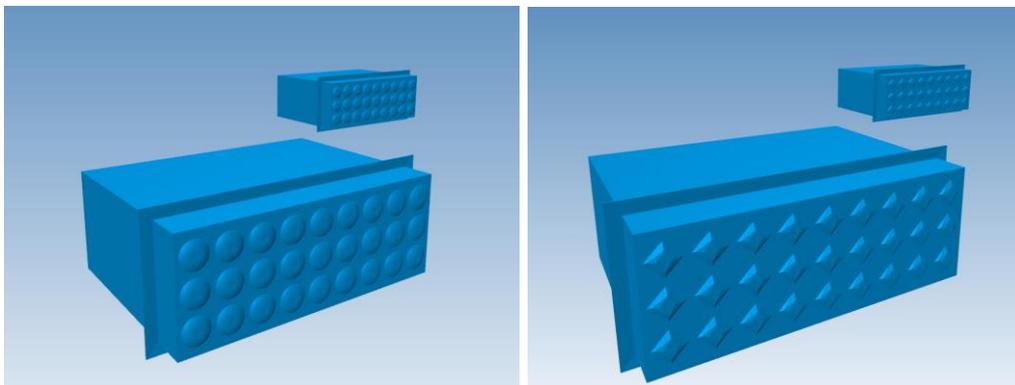
The "Level of detail"-option for the IFC file affects with what level of detail the objects in the IFC file are drawn.



This affects how the geometry's accuracy is set in the file, which can have a large effect on the size of the IFC file as can be seen in the example below:

Name	Type	Size
Demoproject - high level of detail.ifc	IFC File	79 086 KB
Demoproject - extra low level of detail.ifc	IFC File	26 516 KB

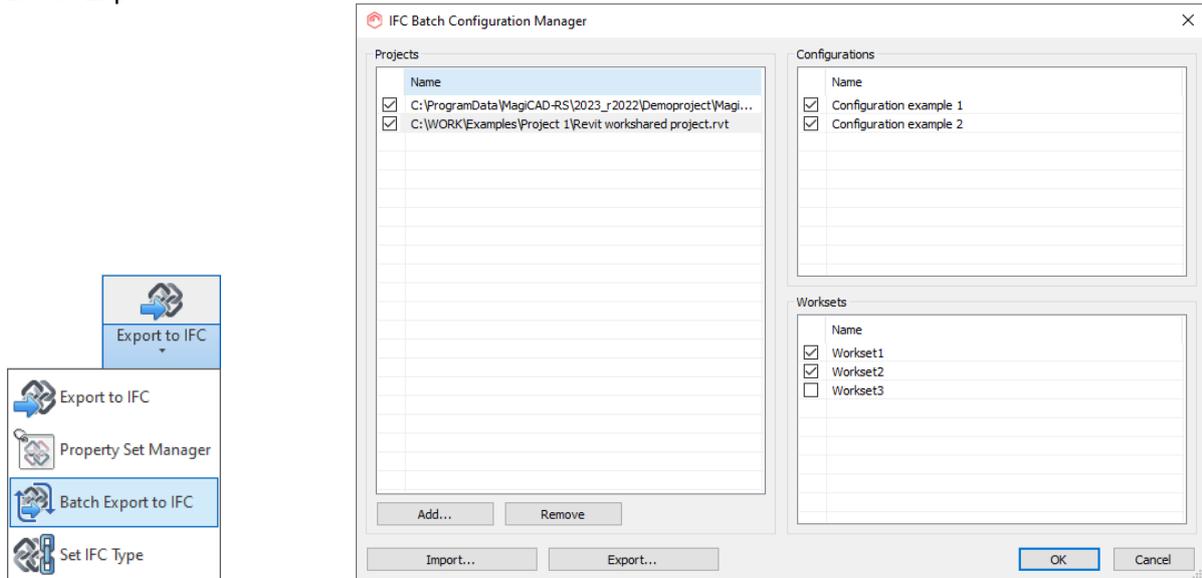
Below is an example of a product, which has a high level of detail vs the same one with an extra low level of detail, where one can see that the detail elements are drawn much more unprecisely and sharply in the second image:



User Interface for IFC Batch Export definitions

Earlier did the IFC Batch Export run according immediately according to what was set in the "Export to IFC" dialog, but we have now implemented a dialog which opens and where the user can specify different options and also add multiple projects to be exported.

This makes it easier and more flexible to work with this feature, and it is also easier to set up the MC IFC Batch Export Configuration.xml file with the help of this dialog, when creating Scheduled IFC Batch Exports.



Selection sets for export configurations

Instead of opening the project and selecting the created configurations by hand, this has been implemented: Now it is possible to specify configurations to be exported in "MC IFC Batch Export Configuration.xml":

```
<?xml version="1.0" encoding="utf-8"?>
<IFCBatchExport>
  <!-- Define the full path of the projects that are going to be exported. -->
  <Project Path="C:\ProgramData\MagiCAD-RS\2023_r2022\Demoproject\001-Mechanical.rvt">
    <Configurations>
      <Configuration>My config 1</Configuration>
      <Configuration>My config 2</Configuration>
    </Configurations>
  </Project>
</IFCBatchExport>
```

Also, now when running IFC Batch Export manually, configuration selection dialog is shown.

Domestic water

Support for Spanish UNE 149201:2017/DB-HS4 domestic water calculation standard

Domestic water calculation based on Spanish 149201:2017/DB-HS4 standards has been added to MagiCAD.



MagiCAD now supports domestic water and hot water circulation calculations according to the Spanish UNE 149201:2017/DB-HS4 standard. The available appliance types are according to the standard and the design flow rates for cold and hot water connections are automatically set based on the selected appliance type.

Piping

Fitting: Use pressure drop coefficient (k-factor) from the product database if available

Flow in the domestic water systems:

DB-HS4 / UNE 149201:2017

Flow in the hot water circulation system:

DB-HS4

Defaults

Installation level of device: 900 mm

Outlet fitting/Appliance: Shower

Design flow rate (Hot)

Design flow rate (Cold)

Installation code:

BWO Product offsets:

- Bath
- Bidet
- Domestic dishwasher
- Domestic kitchen sink
- Garage tap
- Industrial dishwasher (20 services)
- Industrial washing machine (8 kg)
- Non Domestic kitchen sink
- Shower
- Sink
- Spillway
- Tap
- Toilet (flush tank)
- Toilet (flush valve)
- Urinal (individual flush tank)
- Urinal (temporized tap)
- Washbasin
- Washing machine
- Wash tub
- Other

Defaults

Installation level of device: 900 mm

Outlet fitting/Appliance: Shower

Design flow rate (Hot) 0,100 l/s

Design flow rate (Cold) 0,200 l/s

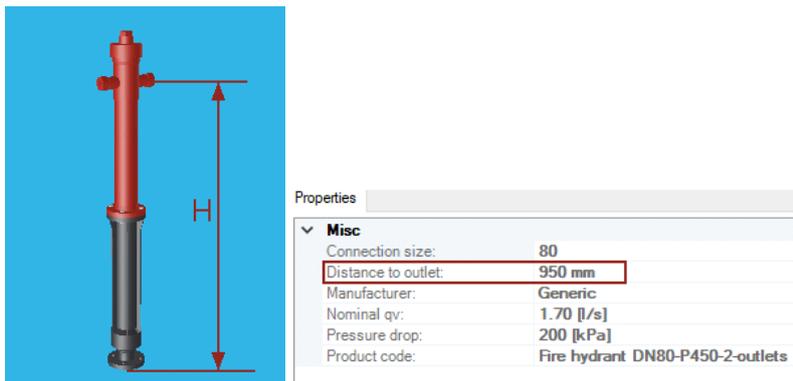
Calculate qv % flow for domestic water connection nodes

The flow percentage is shown in the report also to the domestic water connection nodes.

Sprinklers

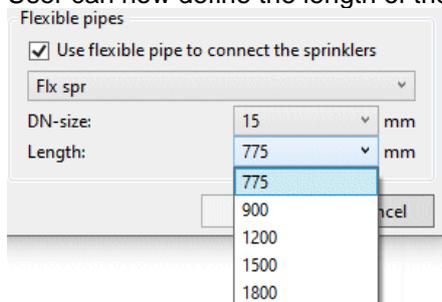
The internal static pressure drop of pillar fire hydrants is now handled in the sprinkler calculation. Some manufacturers give the pressure drop of their pillar type fire hydrants in a horizontal position. For this reason MagiCAD sprinkler calculation now adds the static pressure loss caused by the height of fire hydrant to the required pressure at the device.

The distance from the installation point to the outlet is shown in the product properties of the fire hydrant.

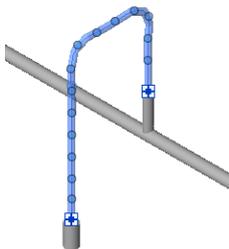


Better connection tools for flexible sprinkler pipes

User can now define the length of the flexible pipe to be used in the sprinkler connection.



Also the connection routine no longer stops at the first bend, instead the whole length of flexible pipe is used.

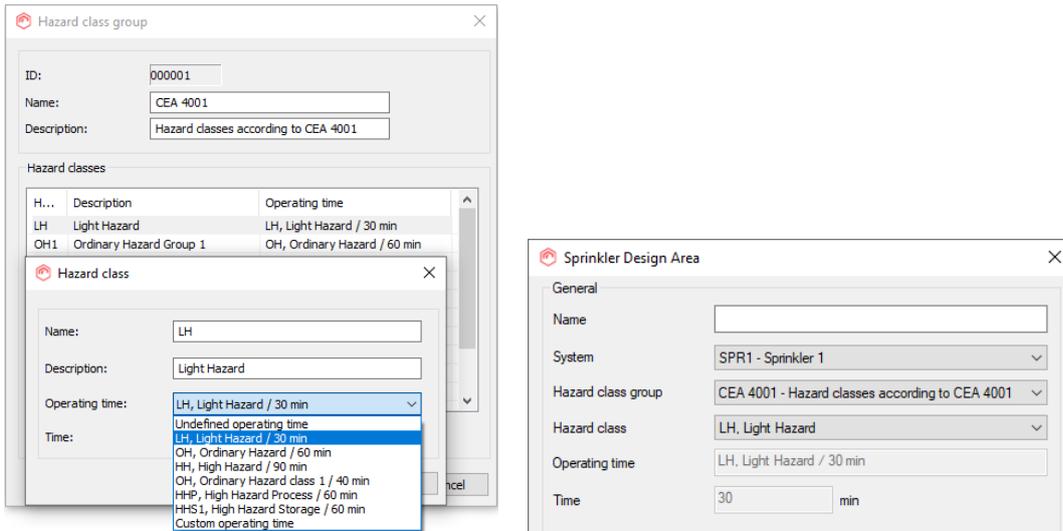


The length of the corrected length of the pipe is written to the parameter MC Actual Length, so that it can be used for tagging.

Calculation of the water tank size has been added to sprinkler calculation

It is now possible to define minimum operating for the hazard classes. The operating times are from CEA 4001, but you can also define a custom operating time.

When the sprinkler design area is defined, a hazard class is assigned to it. Along with the hazard class, the minimum operating time is also assigned to the design area. The operating time and flow at the root are used to calculate the minimum size of the water reservoir. Note that sprinkler regulations may require bigger tank size what is calculated by MagiCAD.



The operating time and water tank size are shown in the report

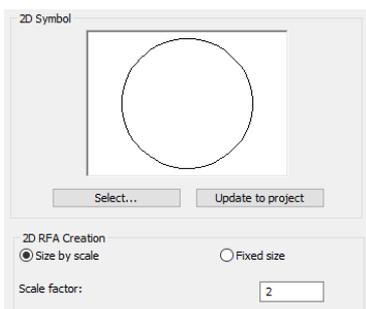
Design area:	abc	
Hazard class:	OH1, Ordinary Hazard Group 1	
Operation time:	Custom operating time / 75 min	
Hydraulic model:	Hazen-Williams	
Calculation is based on:	EN 12845	
Note:	Equiv. length of short connection branches is ignored	L < 50 mm

Calculation results:		
Pressure level at the feed point:	975	[mbar]
Flow at the feed point:	377.4	[l/min]
Suggested minimum water tank size:	28307	[l]
-The water tank size is based on the flow and required operation time.		
-The sprinkler regulations may require different minimum tank size.		

Added possibility to select scalable symbols for sprinklers

Possibility to select between corrected or scalable symbol sizing provides increased flexibility to edit the sprinkler drawing presentation.

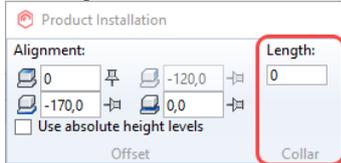
Select whether to use corrected or scalable sizes for sprinkler symbols. The size selections provide increased flexibility to edit the symbol presentation in drawings according to need.



Other

Collar length option for drainage devices which has adjustable collar

If drainage device has adjustable collar option, it is now possible to adjust collar length from that drainage device.

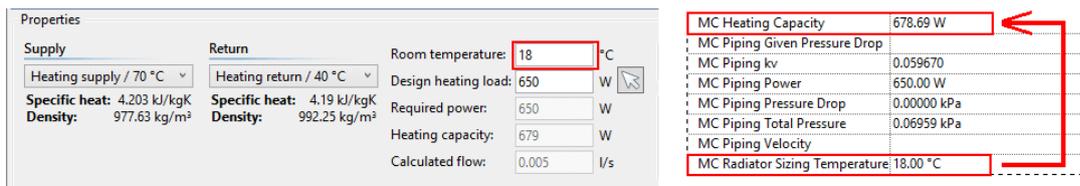


The given room temperature is now saved to a radiator parameter

When the radiator is installed, the user has a possibility to enter the room temperature. This temperature is used in radiator selection to show the heating capacity of the radiator.

The given temperature is now saved to a new parameter "MC Radiator Sizing Temperature".

This has an effect to the calculation. The calculation now uses radiator "MC Radiator Sizing Temperature" parameter value so that the heating capacity value does not change as before. Earlier the calculation used fixed temperature 21°C. The default value is still 21 if the value is not set



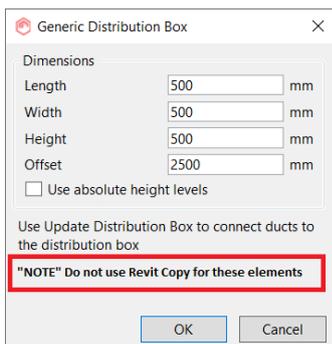
Dialog visual and information updates

In dataset Duct series dialog general group has been re-arranged to match with Pipe series dialog. Updated object information to various dialogs, now displaying User code - Type - Description or Name

Change Property	Ventilation Calculation	Piping Calculation
<ul style="list-style-type: none"> • Installation code • Insulation code • Pipe/Duct series • Sizing method • Status 	<ul style="list-style-type: none"> • Vent Sizing • Pressure Drop • Balancing • Sound Calculation • Extended Flow Analysis 	<ul style="list-style-type: none"> • Heating/Cooling Sizing • Pressure Drop Calculation • Heating/Cooling Balancing • Water Sizing • Sprinkler Sizing

Do not copy text has been added to Distribution box and Drainage manhole dialogs

When Revit copy function is used to copy distribution box or manhole, it is impossible to update pipe and duct connections. MagiCAD's own "Create similar" prevents copying of these objects, but we can't prevent using Revit's copy function. For this reason we have added a warning text to dialogs "Note: do not use Revit copy for these elements".

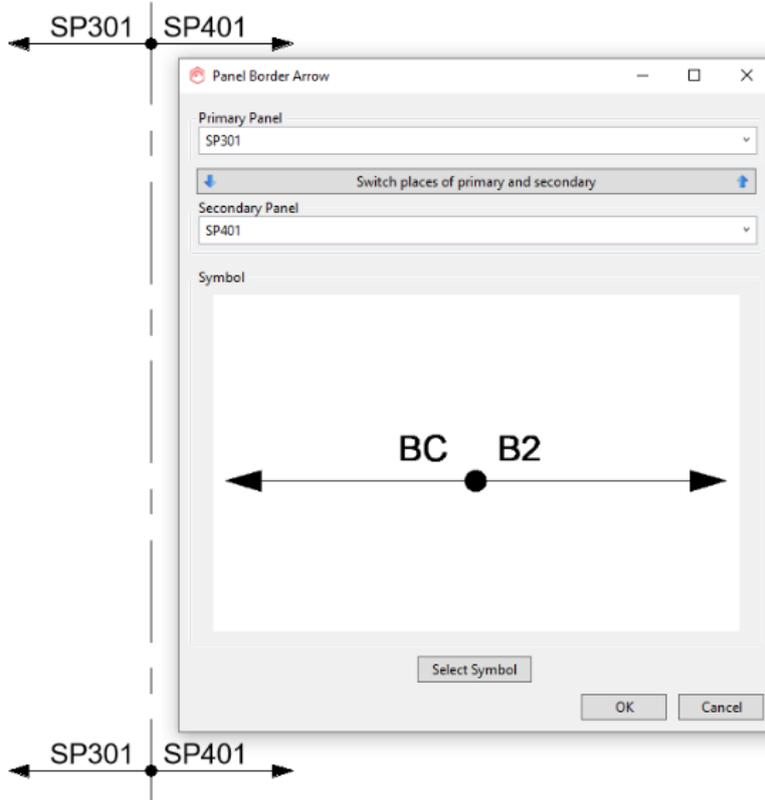


1.4 Electrical

Tool for creating panel border arrows

You can now insert intelligent panel border arrows into printout views. The arrows can be link to panels in the project, and they can be updated in case panels are renamed.

With these arrows you are able to show in your printouts which panels are supplying which areas in the building.

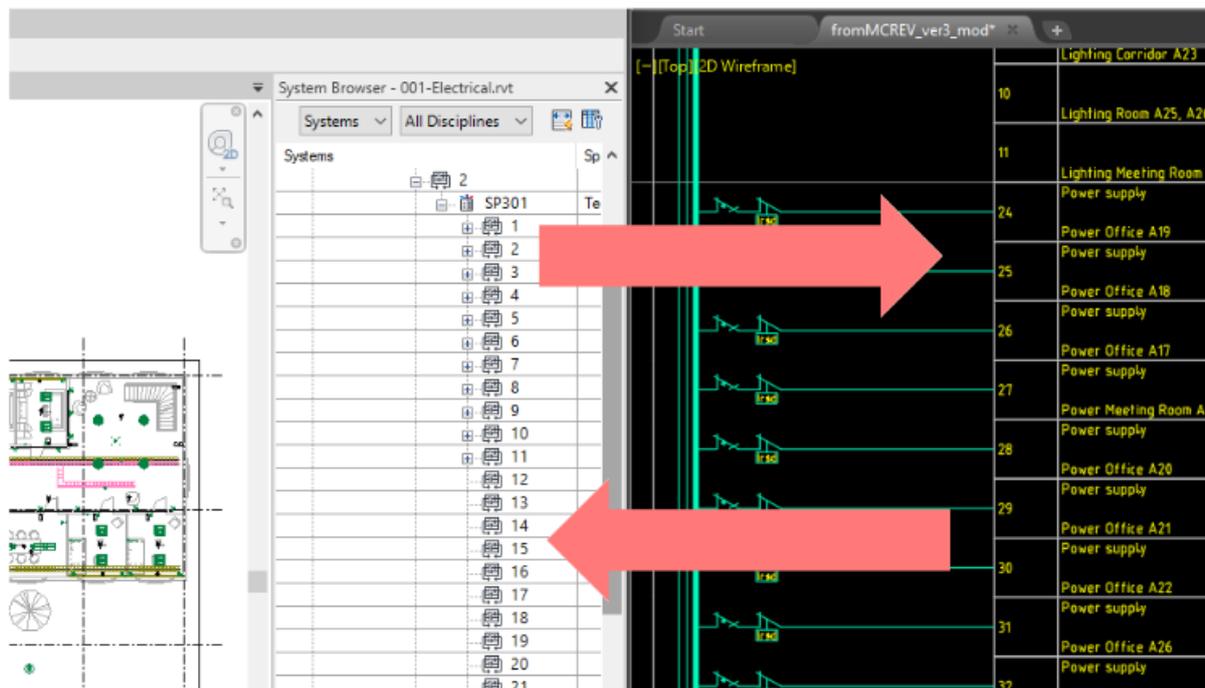


Transferring circuits to MagiCAD for AutoCAD for making switchboard schematics

You can now transfer circuits to MagiCAD for AutoCAD for making switchboard schematics there and eventually transfer the desired data back to the Revit project.

Use the Spreadsheet Export and Spreadsheet Import for doing the transactions. The spreadsheet file should contain at least the panel name of the circuits so that MagiCAD knows to which panel they belong, but other data is highly recommended as well. The recommended properties are at least:

- Panel
- MC Circuit Symbol
- MC Circuit Number
- MC Description 1
- MC Description 2
- MC Description 3
- MC Overload
- MC Fault Current
- Wire Type

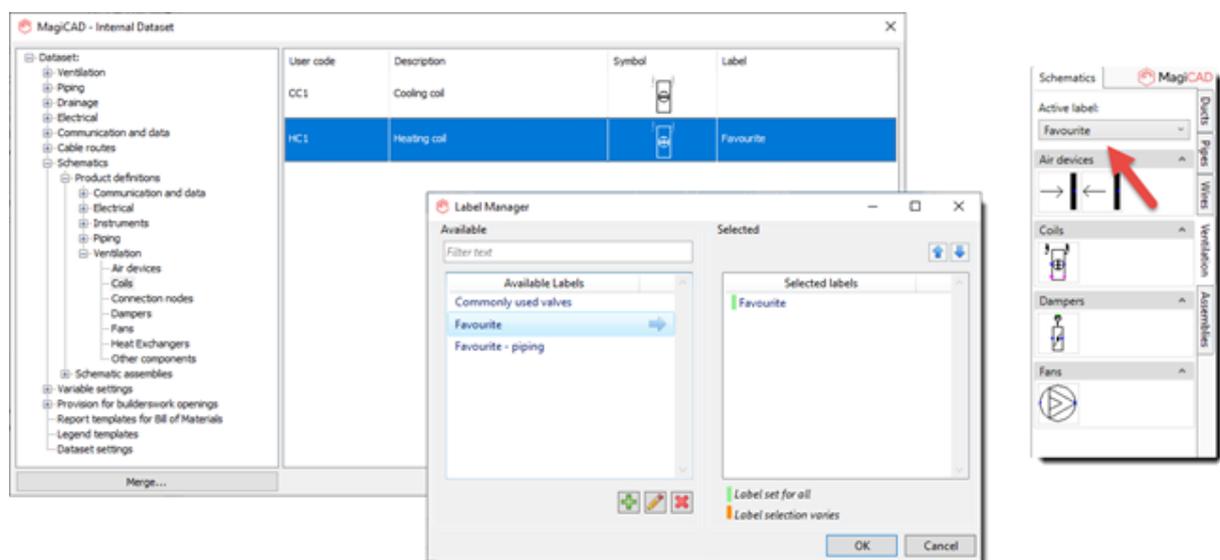


1.5 Schematics

Easy sorting of schematic symbols with label-based filtering

Finding a specific symbol from a tool palette full of them can sometimes be difficult. New additions help you find your favourite symbols easily and allow you to sort the selection according to need.

You can now assign labels to symbols and symbol assemblies in the dataset and then filter the symbols in the tool palette based on the labels. When you switch between schematic drawings, you can simply change the active label in the tool palette to adjust the symbol selection to suit the current drawing. Labels also make it easy to create a selection of frequently used symbols for quick access.



Schematics - Create a filter option

MagiCAD Selection Filter has been updated and improved so that it now have support for MagiCAD Schematics.

It's now possible to use the options of Category, Family, Type and/or System code to make your selection.

We have also added more Options for filtering in Electrical, Ventilation and Piping so that it's possible to filter your selection also to Size, System code and/or User code.

Merge Parameter - support for schematic objects added

The Merge Parameters tool has been updated to support Revit detail items. When you include detail items in a configuration that will be updated, their parameter values are merged with symbols and lines that were drawn with MagiCAD Schematics.

Link Status mark – support for devices objects added

The Mark Link Status tool has been improved. The tool allows users to mark whether a symbol in the schematic drawing is linked to an object in the model. In the new version, you can also mark the linking status for devices and components in the model.

2 Resolved issues

2.1 Common

Automatic provision for builderswork shows unexpected error when certain pipe accessory is installed

When trying to do automatic provision, it pops up an unexpected error.

This error was caused from some complex solid objects, which were not handled correctly.

This error has been corrected.

Merge Dataset reports different data when target and source are identical

The error appeared in the Usage check boxes under the Installation codes. Merge Dataset reports a different data even though data is identical in the source and target.

The source field in the "Show difference" dialog appears empty.

The item comparison of dataset merge of the installation codes is now corrected.

Ignore clashes covered by provision was not working with Duct&Pipe Accessories

When the duct or pipe accessory is clashing with a wall and 'ignore clashes covered by provision' is set, MagiCAD didn't ignore the clash.

The problem was related only to the pipe and duct accessory.

Support has been added to the duct and pipe accessories to ignore the clashes.

BCF Manager fatal error

MagiCAD crashed when the user closed BCF manager dialog when a message "Are you sure that you want to cancel all your changes?" was displayed.

Prevented the user from closing BCF manager dialog when the message is shown. This prevents that crash.

Create Similar did not use Status parameter

Corrected an error that caused Create Similar to show a blank Object Status list.

Parameter configuration fatal error

This happened when merge parameter was used in two projects during the same Revit session.

Open project->Open parameter configuration->Close project->Open the projects again->Open parameter configuration->Unexpected error

This is corrected.

Draw command error with demolished objects

This error happened because the demolished object doesn't have a system assigned to them.

There should no longer be an exception when a demolished element is selected when starting a segment drawing or create similar command.

In the Shared Parameters in the manuals

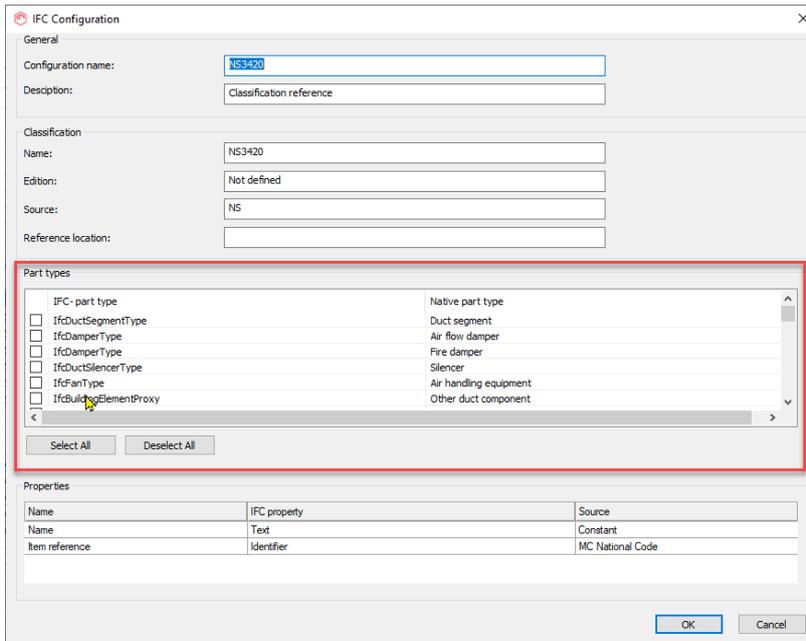
Corrected the GUID of MC Hide Conduit in the list of changes related to MagiCAD for Revit 2023 UR-1. It had the duplicate of the GUID from MC Automatic Provision.

The parameter was correct in the program, it was only here in the list in the manual, for the changes, where the wrong value had been copied.

2.2 IFC-related

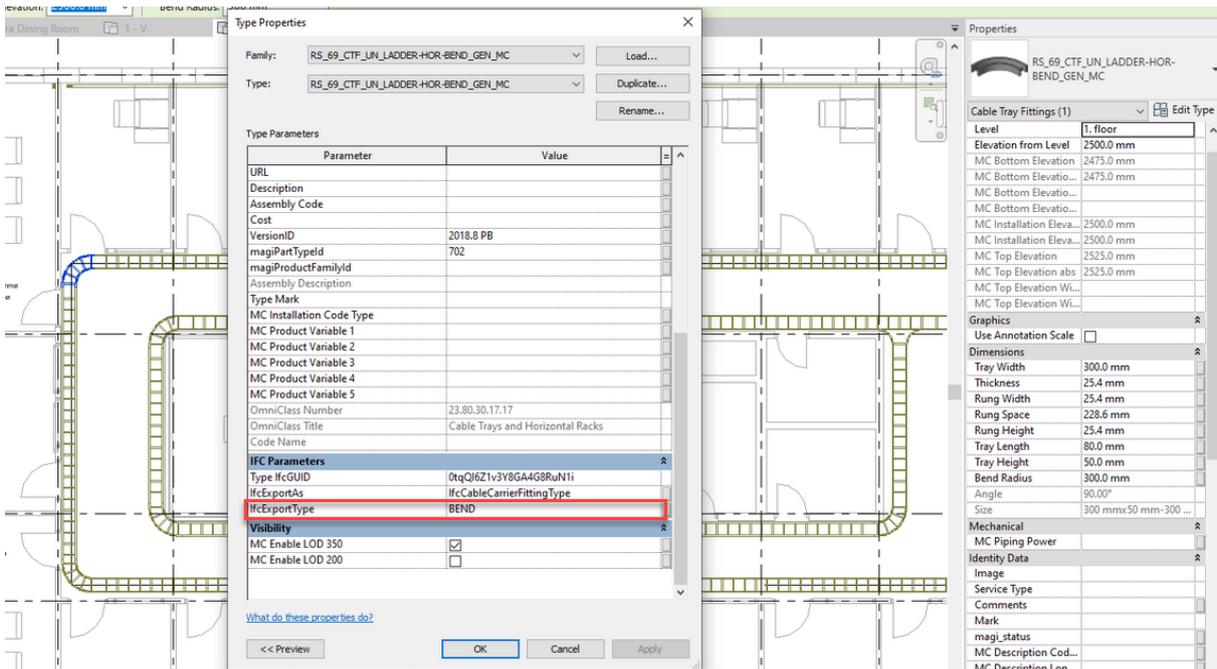
Couldn't save selected part types to IFC classification reference property sets

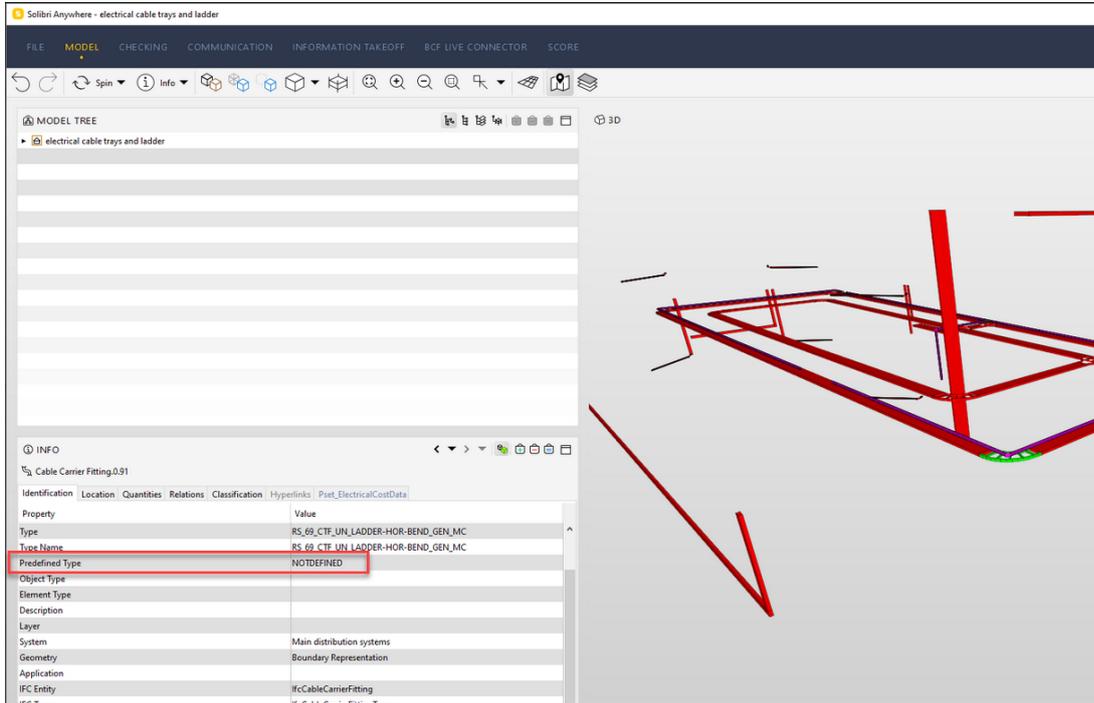
Part type selection was not set when using the IFC classification reference property set dialog. This has now been corrected so that what has been selected stays selected:



Ifc Predefined Type did not work for cable tray fittings

The predefined type was not set for cable tray fittings and was instead exported as "NOTDEFINED":





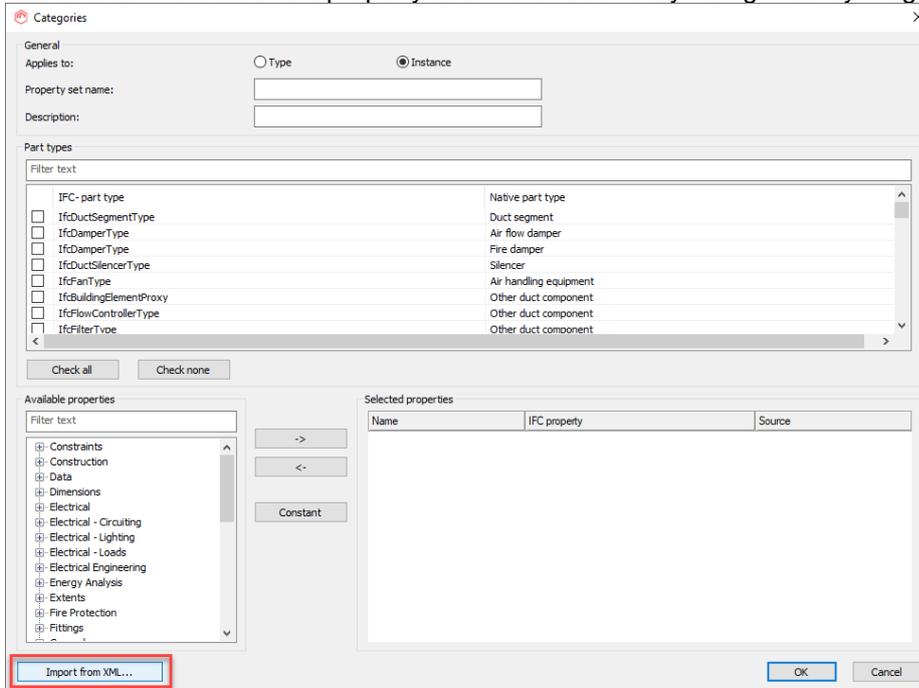
```

<PropertySet context="1" discipline="-1" id="0" AppliesToInstance="0" Name="Pset_PumpOccurrence" Description="Libelle_HC_PumpOccurrence">
  <PartType NativePartTypeID="319" OutputPartTypeID="20" />
  <Property id="1" Name="ImpellerDiameter" OutputType="79" ValueType="1" IsConstantSource="0" ConstantPropertyValue="" PropertySourceID="0" PropertySourceGI
  <Property id="4" Name="BaseType" OutputType="93" ValueType="1" IsConstantSource="0" ConstantPropertyValue="" PropertySourceID="0" PropertySourceGI
  <Property id="5" Name="DriveConnectionType" OutputType="93" ValueType="1" IsConstantSource="0" ConstantPropertyValue="" PropertySourceID="0" Prop
</PropertySet>
<PropertySet context="1" discipline="-1" id="99" AppliesToInstance="1" Name="Pset_PumpTypeCommon" Description="Libelle_HC_PumpTypeCommon">
  <PartType NativePartTypeID="319" OutputPartTypeID="20" />
  <Property id="3" Name="Reference" OutputType="92" ValueType="1" IsConstantSource="0" ConstantPropertyValue="" PropertySourceID="0" PropertySourceGI
  <Property id="12" Name="Status" OutputType="93" ValueType="2" IsConstantSource="0" ConstantPropertyValue="" PropertySourceID="0" PropertySourceGI
  <Property id="5" Name="FlowRateRange" OutputType="29" ValueType="1" IsConstantSource="0" ConstantPropertyValue="" PropertySourceID="0" PropertySou
  <Property id="6" Name="FlowResistanceRange" OutputType="38" ValueType="1" IsConstantSource="0" ConstantPropertyValue="" PropertySourceID="0" Prop
  <Property id="11" Name="ConnectionSize" OutputType="73" ValueType="1" IsConstantSource="0" ConstantPropertyValue="" PropertySourceID="0" Property
  <Property id="8" Name="TemperatureRange" OutputType="84" ValueType="1" IsConstantSource="0" ConstantPropertyValue="" PropertySourceID="0" Property
  <Property id="9" Name="NetPositiveSuctionHead" OutputType="38" ValueType="1" IsConstantSource="0" ConstantPropertyValue="" PropertySourceID="0" P
  <Property id="10" Name="NominalRotationSpeed" OutputType="40" ValueType="1" IsConstantSource="0" ConstantPropertyValue="" PropertySourceID="0" Prc
</PropertySet>
<PropertySet context="1" discipline="-1" id="0" AppliesToInstance="1" Name="Pset_SoundGeneration" Description="xLibelle_HC_SoundGeneration">
  <PartType NativePartTypeID="319" OutputPartTypeID="20" />
    
```

This has now been corrected so that the correct predefined type is set and exported to the IFC-file.

Importing an XML to create a Property set led to the Property set's ID always becoming "0" in MagiCAD's "IFC Property Set Configuration.xml"-file

Utilizing MagiCAD's function to create Property sets from ready-made XMLs caused the ID in MagiCAD's "IFC Property Set Configuration.xml"-file to always become "0", which in turn caused issues elsewhere as these property sets weren't correctly recognized by MagiCAD.



This has now been corrected and the Property sets get individual ID-numbers.

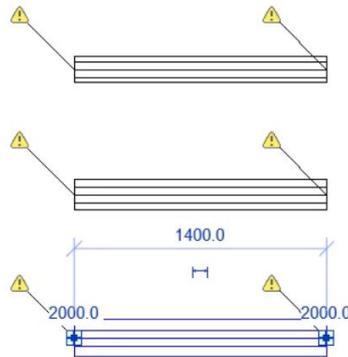
```

<PropertySet context="1" discipline="-1" id="0" AppliesToInstance="0" Name="Pset_PumpOccurrence" Description="Libelle_HC_PumpOccurrence">
  <PartType NativePartTypeID="319" OutputPartTypeID="20" />
  <Property id="1" Name="ImpellerDiameter" OutputType="79" ValueType="1" IsConstantSource="0" ConstantPropertyValue="" PropertySourceID="0" PropertySourceGUID="0" />
  <Property id="4" Name="BaseType" OutputType="93" ValueType="1" IsConstantSource="0" ConstantPropertyValue="" PropertySourceID="0" PropertySourceGUID="0" />
  <Property id="5" Name="DriveConnectionType" OutputType="93" ValueType="1" IsConstantSource="0" ConstantPropertyValue="" PropertySourceID="0" PropertySourceGUID="0" />
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  <Property id="12" Name="Status" OutputType="93" ValueType="2" IsConstantSource="0" ConstantPropertyValue="" PropertySourceID="0" PropertySourceGUID="0" />
  <Property id="5" Name="FlowRateRange" OutputType="29" ValueType="1" IsConstantSource="0" ConstantPropertyValue="" PropertySourceID="0" PropertySourceGUID="0" />
  <Property id="6" Name="FlowResistanceRange" OutputType="38" ValueType="1" IsConstantSource="0" ConstantPropertyValue="" PropertySourceID="0" PropertySourceGUID="0" />
  <Property id="11" Name="ConnectionSize" OutputType="70" ValueType="1" IsConstantSource="0" ConstantPropertyValue="" PropertySourceID="0" PropertySourceGUID="0" />
  <Property id="8" Name="TemperatureRange" OutputType="84" ValueType="1" IsConstantSource="0" ConstantPropertyValue="" PropertySourceID="0" PropertySourceGUID="0" />
  <Property id="9" Name="NetPositiveSuctionHead" OutputType="38" ValueType="1" IsConstantSource="0" ConstantPropertyValue="" PropertySourceID="0" PropertySourceGUID="0" />
  <Property id="10" Name="NominalRotationSpeed" OutputType="40" ValueType="1" IsConstantSource="0" ConstantPropertyValue="" PropertySourceID="0" PropertySourceGUID="0" />
</PropertySet>
<PropertySet context="1" discipline="-1" id="0" AppliesToInstance="1" Name="Pset_SoundGeneration" Description="xLibelle_HC_SoundGeneration">
  <PartType NativePartTypeID="319" OutputPartTypeID="20" />
  
```

Type and Type name for insulation were in some cases set wrong in the IFC

Due to internal data handling the type was in some cases set wrong, as it was read from another object. In the example below the value was set to "24", but the value "21" was read from one of the other segment's insulation. This has now been corrected and the value is read from the correct element.

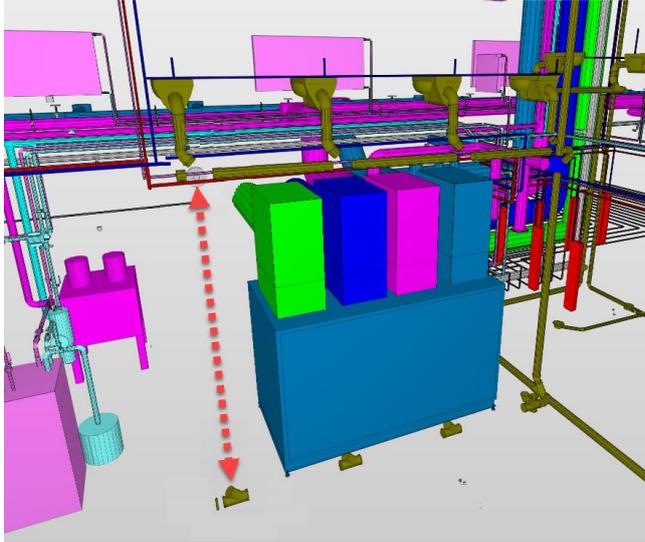
Flow	0.00 L/s
Reynolds Number	0.000000
Relative Roughness	0.000587
Flow State	Laminar
Friction Factor	0.000000
Velocity	0.00 m/s
Friction	0.0000 Pa/m
Pressure Drop	0.000000 Pa
Identity Data	
Image	
Comments	
Mark	
MC Insulation Code	24
MC Insulation Material Code Instance	MW
MC Coating Material Code Instance	IP
Phasing	
Phase Created	New Construction
Phase Demolished	None
IFC Parameters	
IfcGUID	2iqB6Atcr37f2Bt18HjWN8
Insulation	
Overall Size	200 mmø
Insulation Thickness	60.0 mm
Insulation Type	24



Covering	
Summary	Location
Clashes	
MagiCAD Ps...	
Property	Value
Model	Nimi export 1
Prefix	
Name	24
Phase	
Type	21
Type Name	21
Description	Serie 50-120mm
Material Name	

Family instances went to the wrong elevation in certain conditions

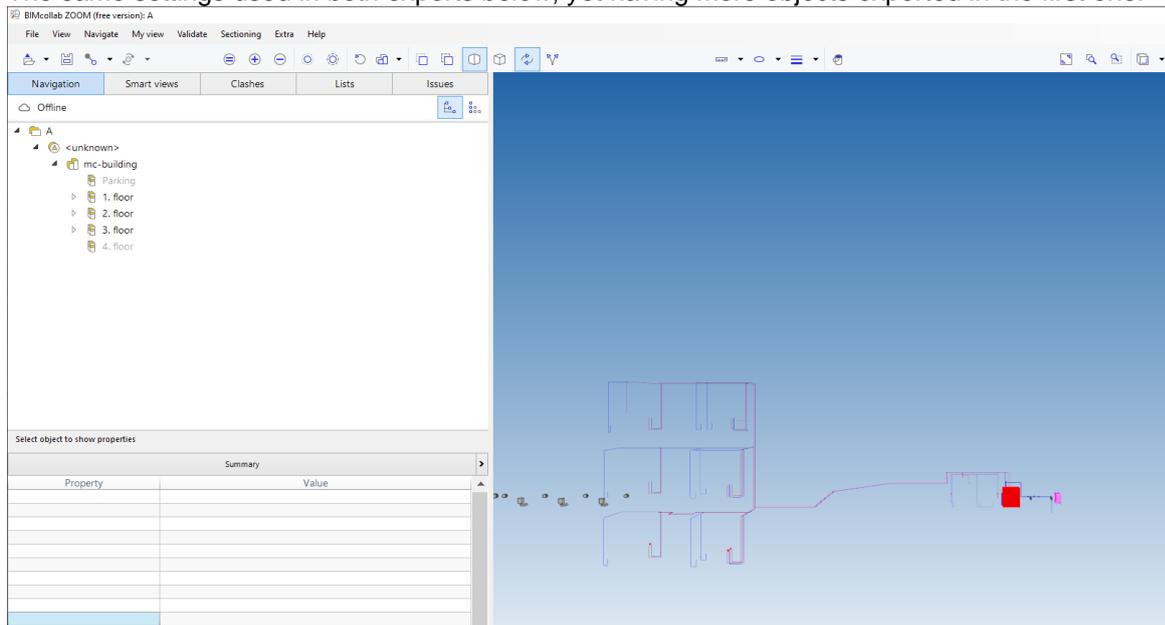
IFC exported family instance level went wrong, If family instance was linked to a space and that space was also selected to be exported:



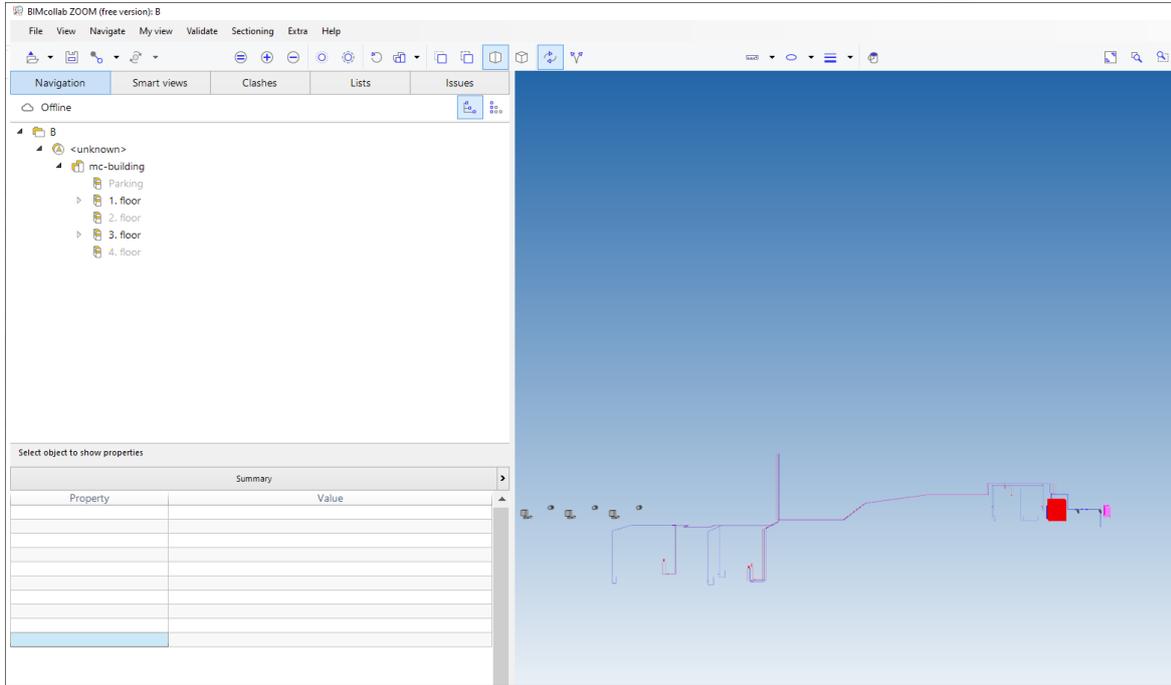
IFC Batch export doesn't work correctly when configuration has view restrictions

Due to some data-handling there were cases when the IFC export did export different objects than intended.

The same settings used in both exports below, yet having more objects exported in the first one:



This has been corrected so that the IFC export function correctly exports what has been set according to the settings.



2.3 Ventilation and Piping

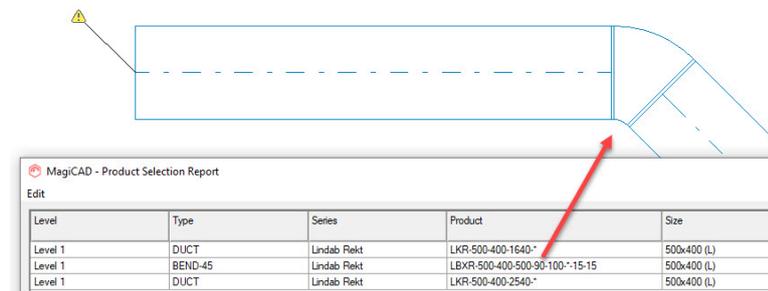
Performance issues in MCREV 2023 UR-1 compared to 2023 MR

In version 2023 UR-1 it took considerably long time to perform calculation compared to older versions. This error was caused by changes made to support connection nodes between different Revit projects.

This is now corrected and calculation is fast.

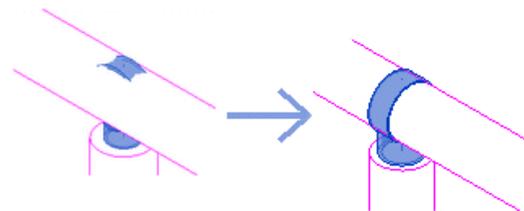
Incorrect angle in the product code for some bends when the fitting is locked

This error happened to the locked 45° bends (e.g LBXR) when the production model updater was applied to the product code. The product code of the bend was generated incorrectly containing angle of 90 degree instead of correct 45 degree. Now MagiCAD generates a correct product code.



Problems with sprinkler connection

In some cases when pipes were connected with a tap having a clamp, the clamps had a wrong orientation. This works correctly now.



Units are different in sprinkler calculation for water source

Unit of flow in water source diagram in the calculation report was given in l/s

It is now shown correctly as l/min.

Domestic water report change

In the domestic water report this "Total flow" has been updated correctly to "Dimensioning flow".

Property	Value
Project Information	
Software version:	MagiCAD for Revit 2023 UR-2 Beta 3
Calculation date:	6.2.2023 10:56
Project name:	MC Demoproject
Project number:	001
Project address:	Enter address in Project Information
Client name:	MagiCAD for Revit demoproject
Project issue date:	
Organization name:	
Organization description:	
Author:	
Project Calculation Data	
Systems:	Domestic Cold Water
Fluid type:	Water
Dimensioning flow:	0.830 l/s
Total pressure:	400.00 kPa
Network volume:	48.0 l
Fluid temperature:	5 °C
Fluid density:	1000 kg/m ³
Fluid dyn. viscosity:	0.00152000 Pa*s
Pipes: Standard / Material	Thermal conductivities
Copper pipe : Default / Metal	390.00000 W/m*K
Plastic pipe PEX : Default / Plastic (according to DIN)	20.00000 W/m*K

The Domestic Water Balancing calculation overrides the given pressure of the connection node

In the balancing (pressure calculation) of the domestic water network there is a possibility to override the pressure drop of the taps by entering the required pressure level at each tap.

Balancing Options

Calculation range

Branch

Network

Pressure at feed point

Use specified pressure 400,00 kPa

Calculate required pressure

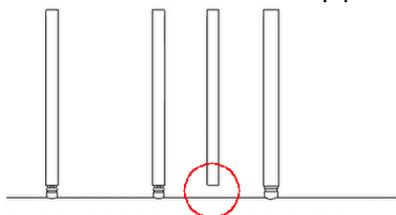
Use specified pressure at outlet 160,00 kPa

Earlier versions of MagiCAD incorrectly used this specified pressure also for the connection nodes even though each connection node has its own given pressure level.

This has been corrected and the given pressure level is no longer used for the connection nodes.

Copy branch did not work correctly on tapped pipe branches.

When copy branch was used to a tapped pipe branch, the tap was not copied and the copied branch was not connected to main pipe



This works correctly now.

0 kPa appears in calculation report when differential pressure controller are used

Removed measurer minimum dp(which is always 0) from the General results

MC Product Code Instance didn't get a value when flange types 1 and 2 has long names

The length of the internal buffer in MagiCAD was too short to contain long flange names.

This has been corrected.

MC Flange Type 1	123456789
MC Flange Type 2	987654321
MC Product Code Instance	LKR-500-300-380-123456789-987654321

Phasing



Piping pressure drop overrides doesn't show the pressure drops correctly in the report

When the simplified pressure drop calculation was done, the report did not show the pressure drops by category (shown in the red rectangle).

This is corrected.

Project Calculation Data	
Systems:	Heating supply / Heating return
Pipes and fittings:	0.59 kPa
My pipe device 1:	5.00 kPa
My pipe devcie 2:	10.00 kPa
Total pressure drop:	15.59 kPa
Total flow:	0.021 l/s
Fluid type:	Water
Fluid temperature:	70 / 40 °C
Fluid density:	978 / 992.3 kg/m ³
Fluid dyn. viscosity:	0.00040000 / 0.00065000 Pa*s
Fluid spec. heat capacity:	4203 / 4191 J/kg*K
Volume of the system	17.8 l

"Duplicate node number" warning was shown in the sprinkler report if the root pipe has taps

This unnecessary warning about duplicate node number on the root pipe was shown on the second and subsequent calculation of the sprinkler network. ie. after the node numbers were already given.

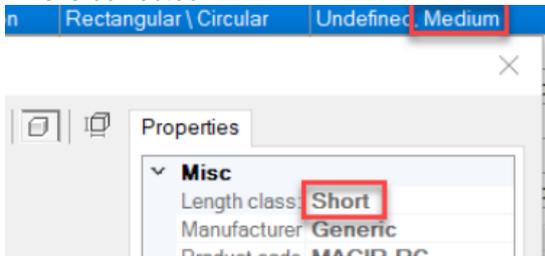
This is now corrected and the unnecessary error is not shown anymore.

Pipe roughness minimum value in Pipe Series Updater

Changed minimum roughness from 0.001 to 0.0001 in pipe series updater.

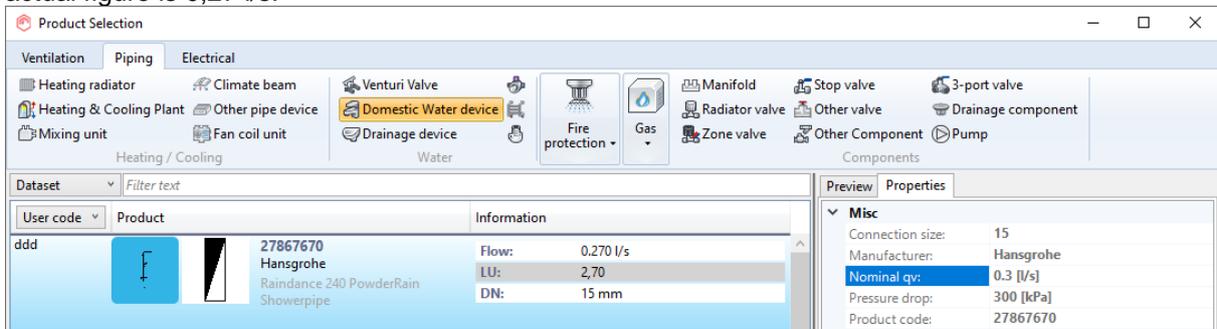
Duct series dialog shows wrong reducer subtype

Properties dialog shows the correct length class while the subtype column shows the incorrect one. This is corrected.

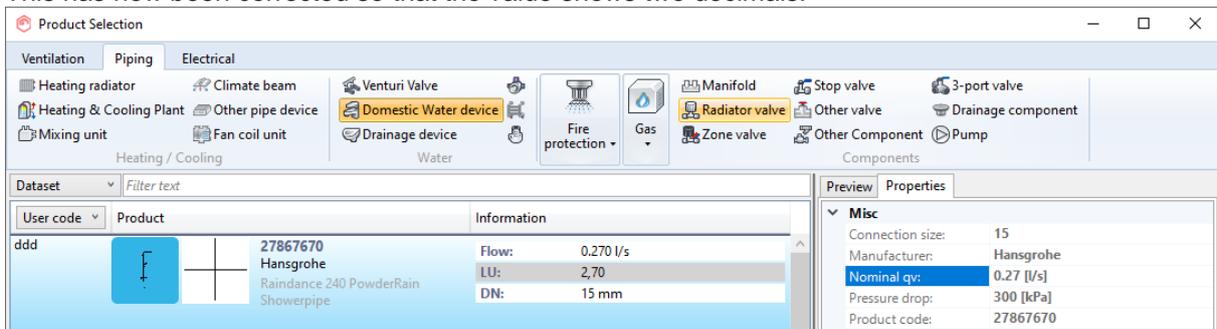


Too few decimals were shown in water and drainage devices for the nominal qv

The value for nominal qv was rounded to just a single decimal, which meant that devices which had more precise values were rounded and not shown correctly, like in the below example where the actual figure is 0,27 l/s:



This has now been corrected so that the value shows two decimals:



2.4 Electrical

Revit errors while installing cover+backbox

When an installed product didn't have any connectors and a backbox was selected for it, an error came. This has now been corrected.

Update Circuits was not able to update certain numerical values to labels

Update Circuits wasn't able to update the following labels into switchboard schematics:

- EP
- ES
- EI
- GI

The issue is now corrected.

Hide/Show Packet Connections generated a Revit error

Hide/Show Packet Connections sometimes caused an error in Revit. This has now been corrected.

Default system of products randomly disappears when opening the dataset properties again

Value of Default system no longer randomly change while opening the dataset properties.

Change property dialog now shows systems correctly.

2.5 Schematics

No errors