MagiCAD for AutoCAD

Release notes for version 2025 UR-1

24/10/2024

MagiCAD

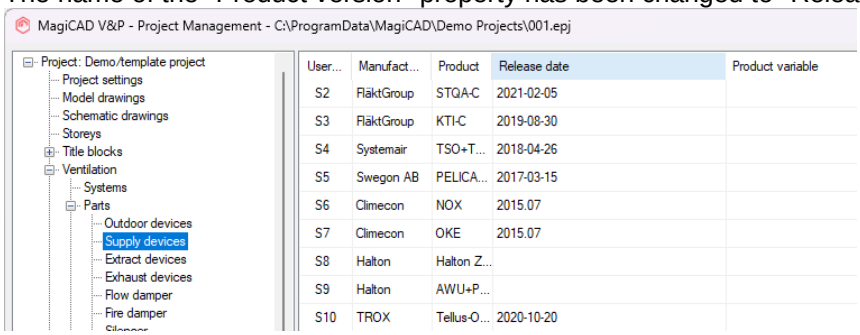
Content

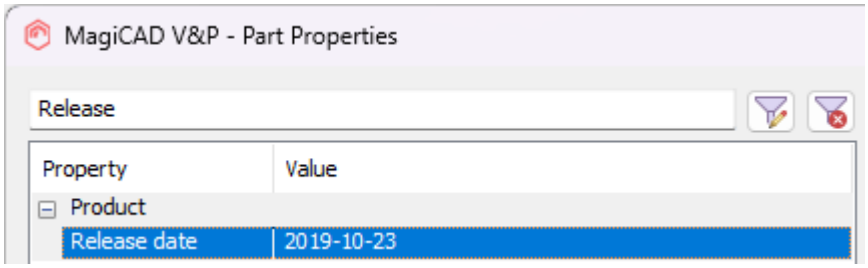
1 New features

1.1 Common

"Release date"-property

The name of the "Product version"-property has been changed to "Release date":



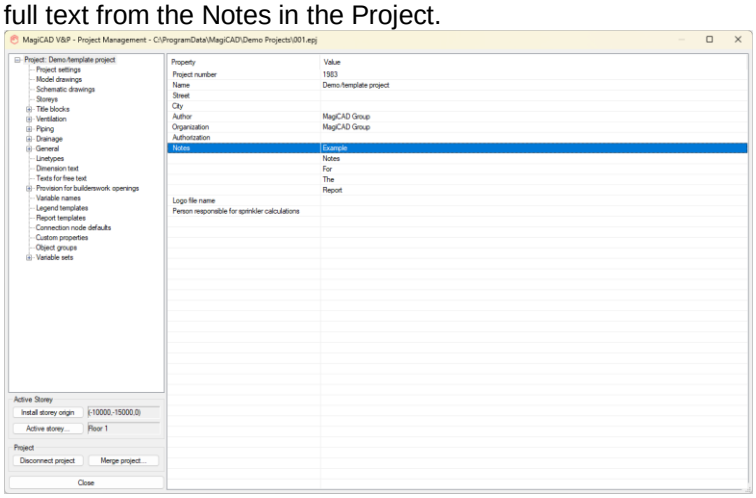


1.2 Ventilation and Piping

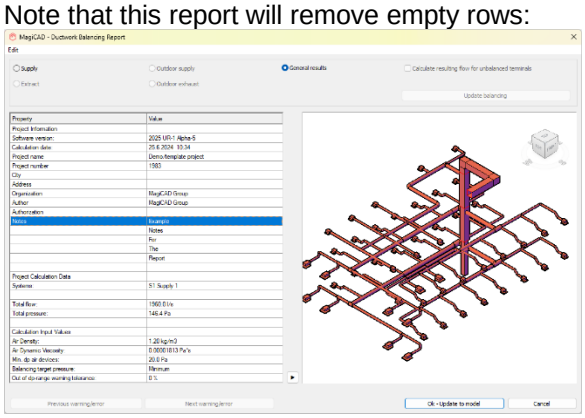
Common

Improvement to Notes used in calculation reports

The Notes-field, which uses values from the project, has been expanded from 3 rows to allow for the full text from the Notes in the Project.



Note that this report will remove empty rows:

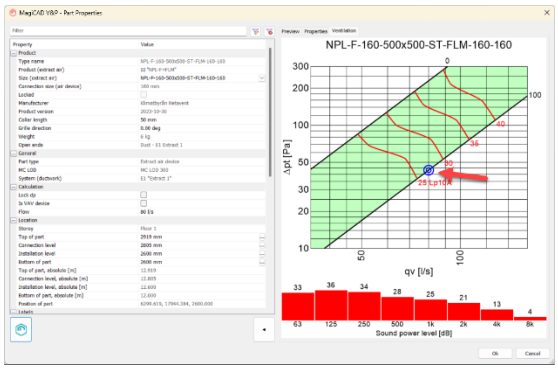


Ventilation

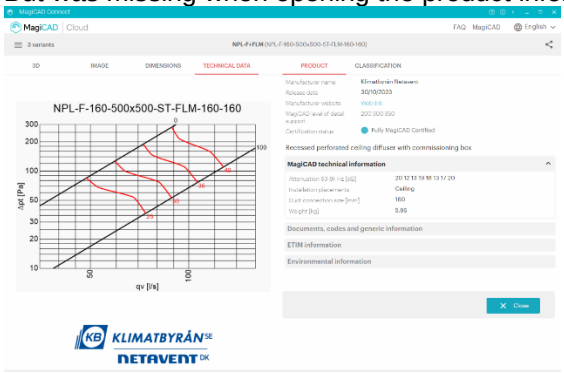
Online duty point was missing in some V&P devices

The duty point was missing in some product categories when checking the product online, via MagiCAD, and it has now been updated to function in more of them as well.
However in some it is still missing so we will continue updating this feature for the Cloud in the future.

It was seen in MagiCAD:



But was missing when opening the product information in MagiCAD Cloud:

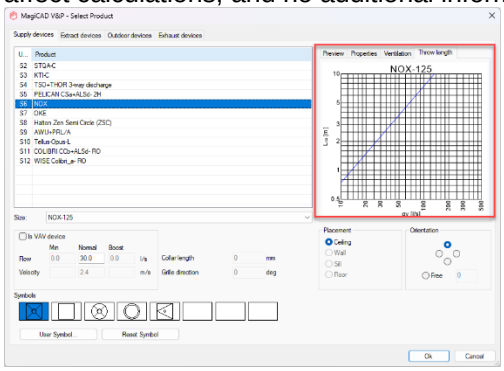


This has now been corrected and the duty point is shown if it is seen in MagiCAD, alternatively can the Cloud inform the user that the calculations need to be run before the duty point is visible.

Throw lengths diagram added to supply air terminals which have the data in the database

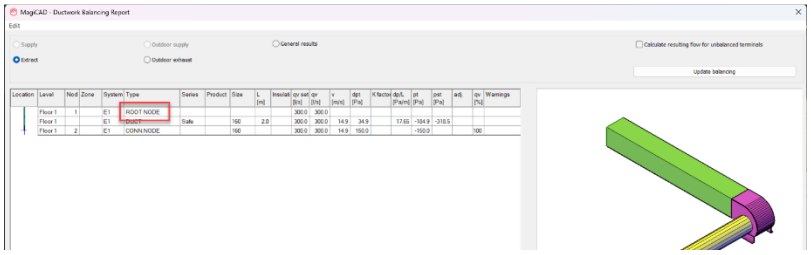
Now supply air terminals which have the data for "Throw length" do have a diagram which is shown in the installation dialog and Part Properties.

Note that the throw length is only shown in the diagram. No duty point is currently shown, this does not affect calculations, and no additional information is written to any parameters.

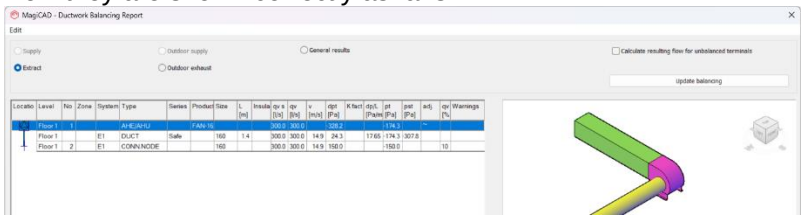


Centrifugal fans with extract and exhaust connections have been included in the calculation reports

Centrifugal fans that have both extract and exhaust were earlier set in the calculation report as a root node.



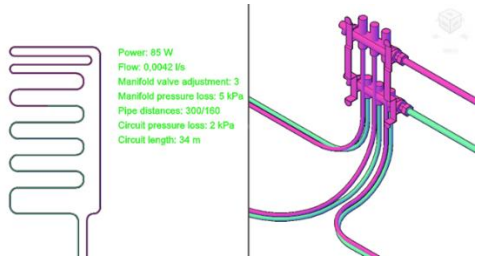
Now they are shown correctly as fans:



Piping

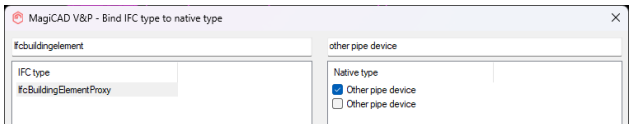
Additional information in the underfloor heating nodes

To improve the underfloor heating we have added information which is written to them in the drawings.



The new information is:
Manifold valve adjustment value
Manifold valve pressure loss
Pipe distances
Circuit pressure loss
Circuit length

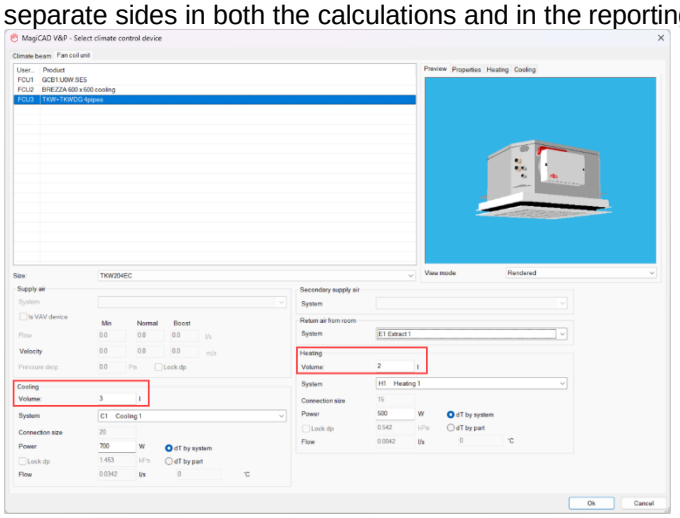
It's important to note that in this version the node in the IFC is an "Other pipe device", which is seen as a duplicate in the IFC Property Set.
The second one is for the actual devices.



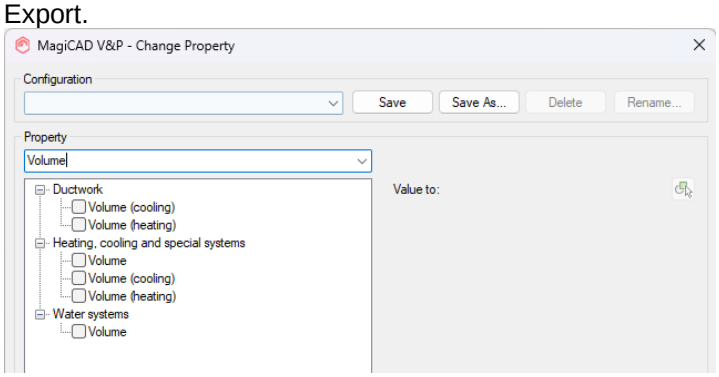
This will be improved in future versions of MagiCAD to better show the difference between these in the dialogs.

Water Volume improvement for Climate beams and Fan Coil Units

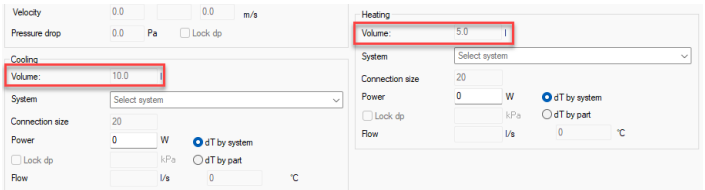
The Volume has now been split in Climate beams and Fan Coil Units, to take into account the separate sides in both the calculations and in the reporting functions:



In addition two new properties have been added:
Volume (cooling)
Volume (heating)
which are available in Change Properties, Dimension texts, Part Property Line function, and IFC Export.

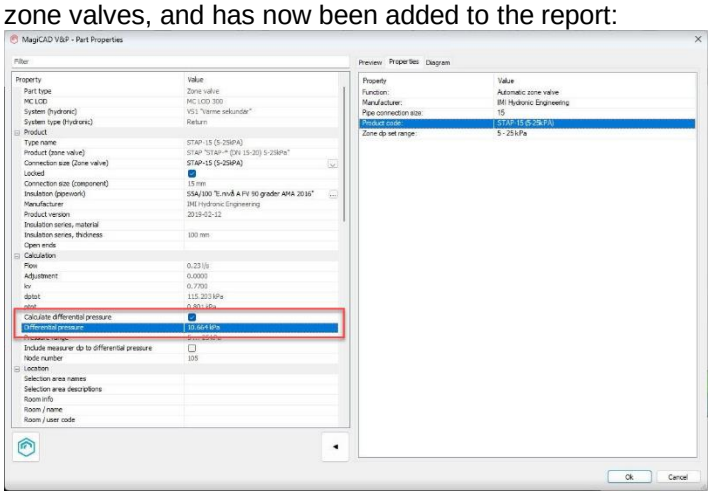


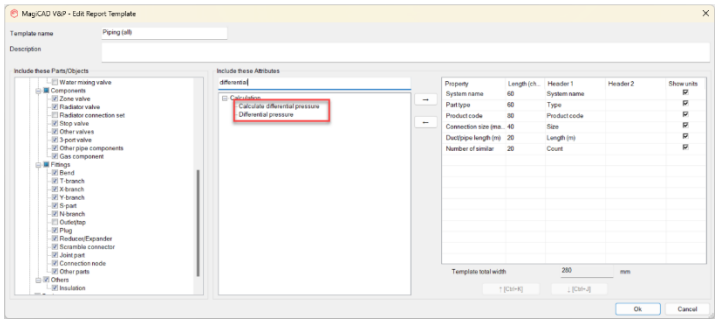
This improvement does now also take into account data from the database, in which case the values are shown but the fields can't be edited:



Differential pressure information in the Report function

The "Calculate differential pressure" and "Differential pressure" were available in Part Properties of the zone valves, and has now been added to the report:

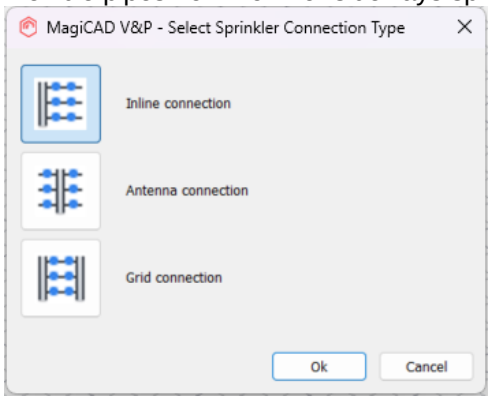




Sprinkler

Improved sprinkler connection functionality

Flexible pipes now work for sideways sprinklers using the inline connection:



1.3 Electrical

Bus systems report

Now it is possible to create a report from bus host and circuit data. You can select which hosts you want to make the report from and whether it contains only host information or if it should also show circuits or devices separately in the cad block. Number of connections, bus current and cable length is shown from all hosts, circuits and devices. Warnings can also be shown for hosts and circuits if there are any.

Circuits & devices	Number of connections	Bus current [mA]:	Cable length [mm]
Dali1	32	18.0	41016.1
DA1-1	21	12.0	24471.8
DA1-2	11	6.0	16544.3
Dali2	51	28.0	76508.7
DA2-1	30	16.0	49999.1
DA2-2	21	12.0	26509.6

In addition, you can copy data of the selected hosts/circuits to the clipboard to be then pasted to some other program.

More improvements to busbar drawing

The following improvements have been done to busbar drawing:
When you start drawing from the middle of an existing busbar, you can no longer add a feed unit to that place. Instead, a T-branch is created.
Vertical T-branches can now be done (going upwards or downwards).
When installing a supply unit, it automatically tries to find the supplied switchboard via the busbar as before, but if it cannot find one, message is shown in the command console for selecting the supplying switchboard by clicking on it.
Fitting subtypes are now fixed.
Horizontal/vertical bends are now identified correctly.
Supply and circuit units get correct dimensions now.
T-branch created from plusgrip now uses correct branch length.
The attribute "Inner bend radius" has been removed from T- and X-branches.
Fitting lengths are now shown properly in reports.
Default branch lengths of a busbar product/series can now be defined in the projec for all different type of fittings.
Busbars are now available in Merge Project and Purge Project.
Circuit and supply units are created into correct direction when drawing swapped busbar.
Multi-crossing now uses correct bend types for busbars.
Size ranges now work with busbars in provisions for openings.
IFC type is now set correctly for new busbars in the project.

Dialux Evo import follow up

If the imported IFC file is invalid or it doesn't contain any storeys, an error message is shown.
If there is only one storey in the IFC file, it will be automatically used.

Clear referred switchboard

Now it is possible to clear switchboard reference from the switchboard schematic when there is no dwg reference. This situation happens when you make spreadsheet import to create your switchboard schematics.

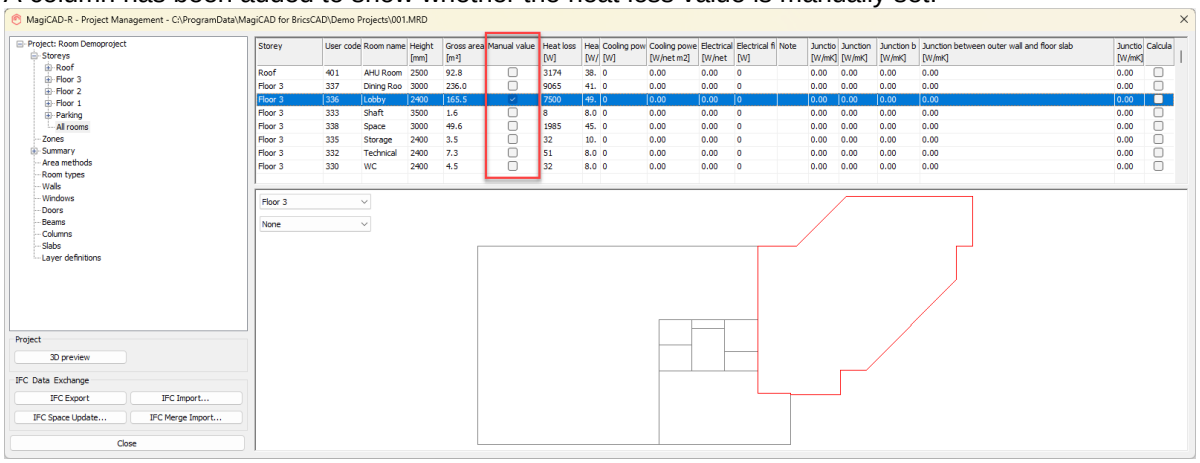
1.4 Room

Room's IFC4 export with DesignTransferView

We changed the IFC4 export to use IFC4DesignTransferView instead of IFC4ReferenceViewWithBuildingServiceExhangeRequirement.
This because Space Boundaries are ruled out from IFC4 Reference View schemas.

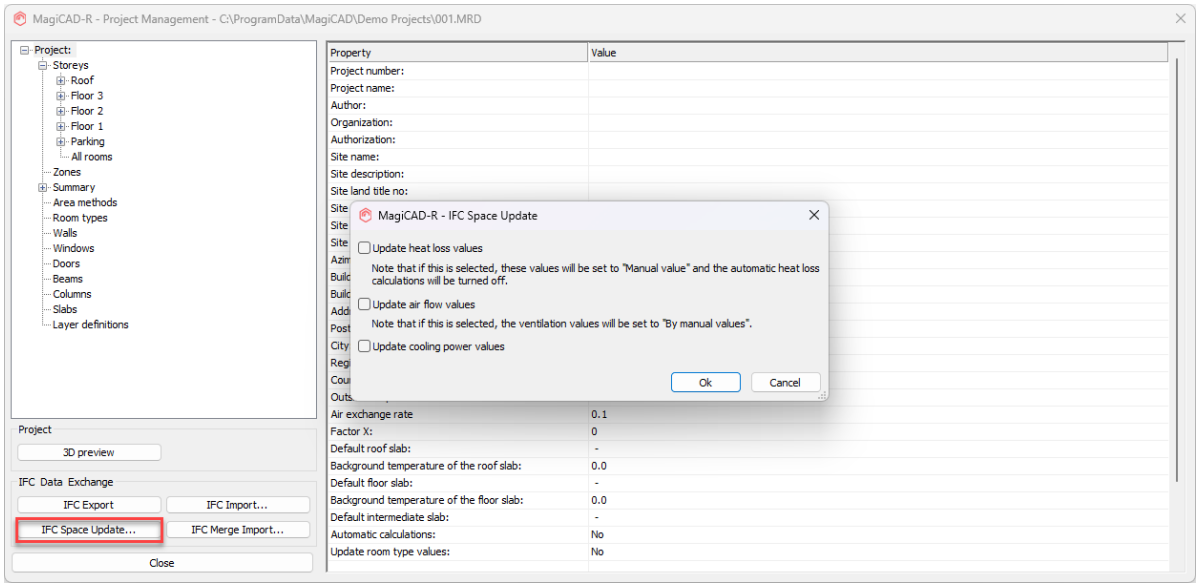
Added column in Room for "Manually given heat loss"

A column has been added to show whether the heat loss value is manually set:



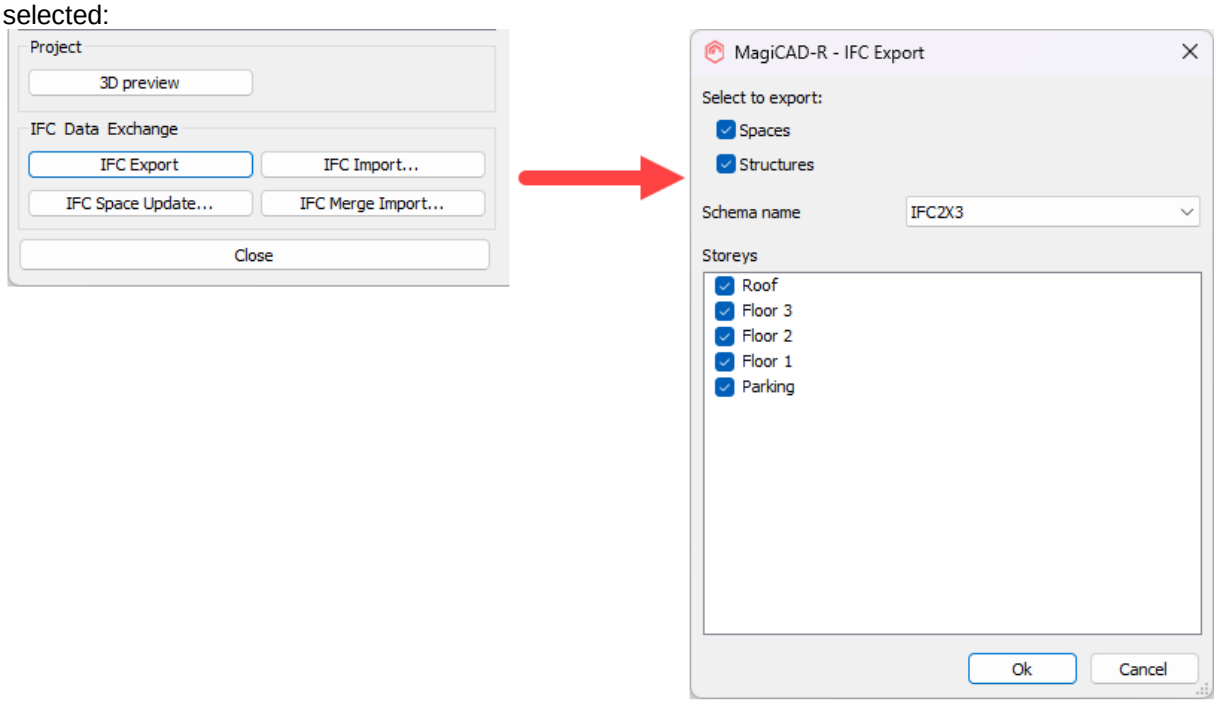
MagiCAD Room IFC Space Update improvement

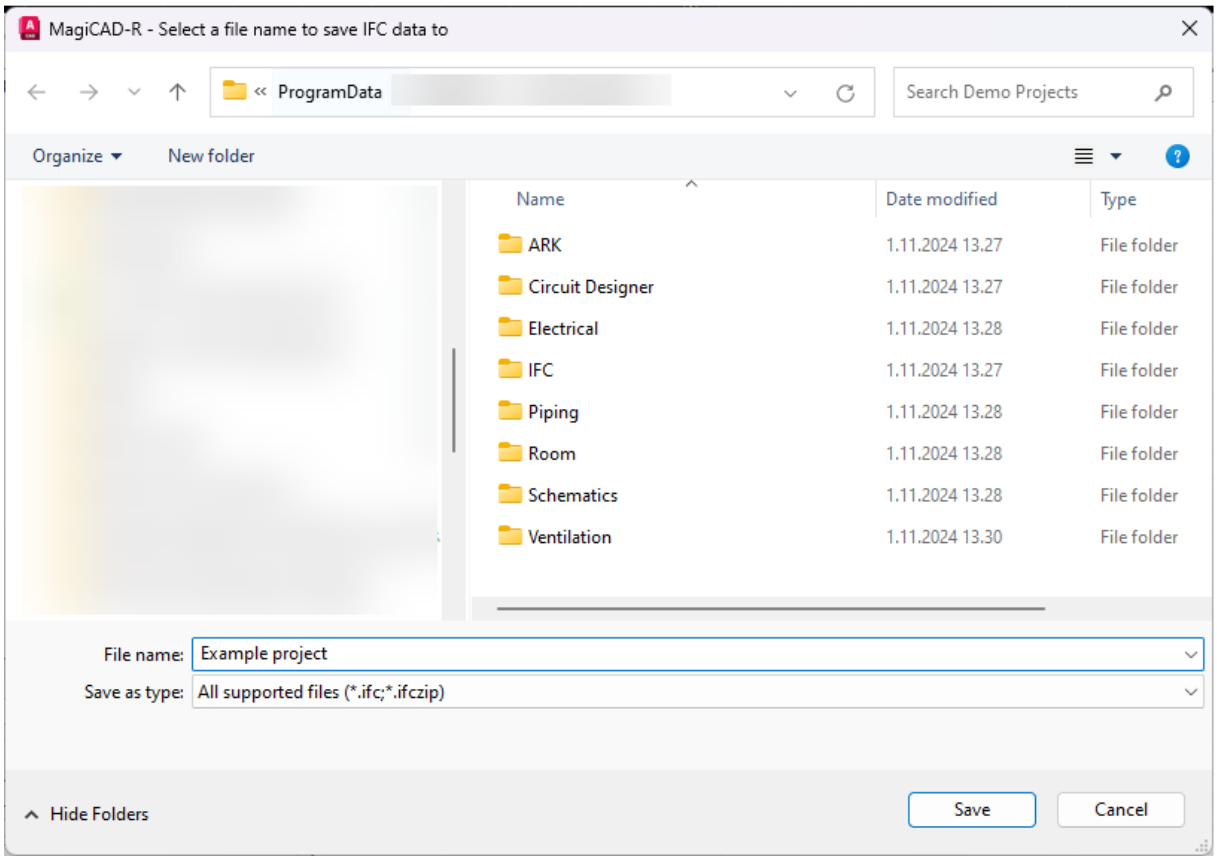
The user can now select what to be updated when selecting to update the information from an IFC File.



Select which storeys should be exported to the IFC-file

A filter has been added to the IFC Export so that the storeys which should be exported can be selected:



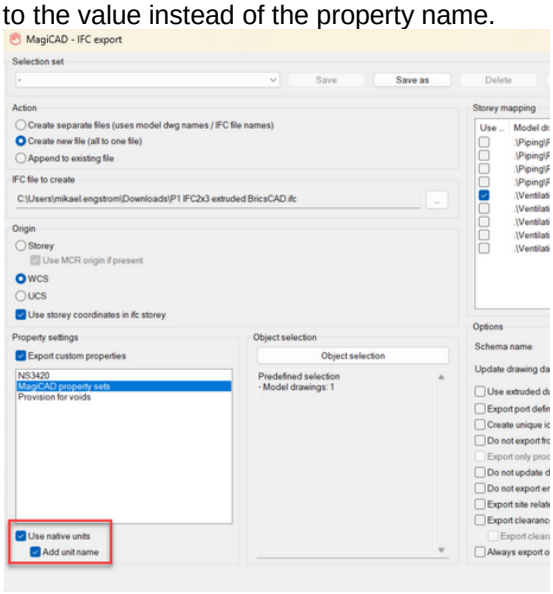


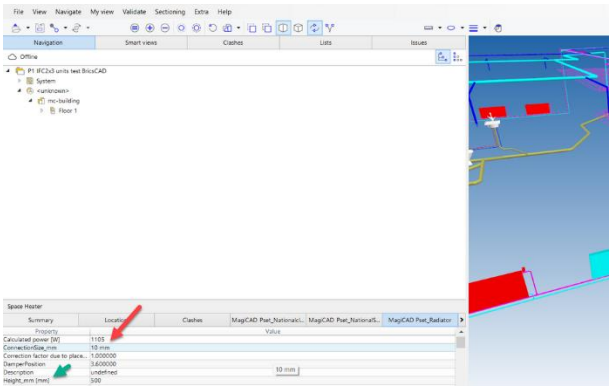
2 Resolved issues

2.1 Common

Connection size property's unit was incorrectly set to the value instead of the property name in the IFC-file

When using the units-option, in the IFC export, the connection size property's unit was incorrectly set to the value instead of the property name.





```
411  #404=IFCPROPERTYSINGLEVALUE('Status',$,IFCTEXT('Not defined'),$);
412  #405=IFCPROPERTYSINGLEVALUE('ProductCode',$,IFCTEXT('C11-500-1200'),$);
413  #406=IFCPROPERTYSINGLEVALUE('Manufacturer',$,IFCTEXT('Purmo'),$);
414  #407=IFCPROPERTYSINGLEVALUE('ConnectionSize_mm',$,IFCTEXT('10 mm'),$);
415  #408=IFCPROPERTYSINGLEVALUE('pTot [kPa]',$,IFCTEXT('3.9'),$);
416  #409=IFCPROPERTYSINGLEVALUE('P_Heating_W [W]',$,IFCTEXT('600'),$);
417  #410=IFCPROPERTYSINGLEVALUE('IntegratedValve',$,IFCTEXT('Calypso TRV-3-10+TRV 300-22'),$);
418  #411=IFCPROPERTYSINGLEVALUE('kvValue',$,IFCREAL(0.0900),$);
419  #412=IFCPROPERTYSINGLEVALUE('DamperPosition',$,IFCREAL(3.7000),$);
420  #413=IFCPROPERTYSINGLEVALUE('Length_mm [mm]',$,IFCTEXT('1200'),$);
421  #414=IFCPROPERTYSINGLEVALUE('Height_mm [mm]',$,IFCTEXT('500'),$);
422  #415=IFCPROPERTYSINGLEVALUE('dpTot [kPa]',$,IFCTEXT('4'),$);
```

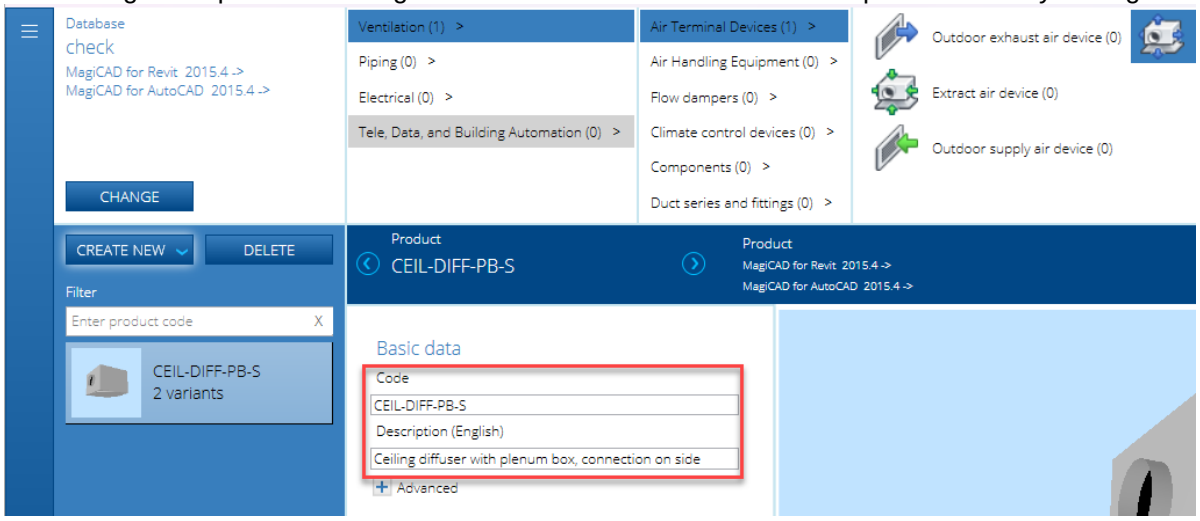
This has now been corrected and the unit is set correctly to the property name.

Now the F1- and "What's new"-commands always use English language even for other languages

Now the F1- and "What's new"-commands always use English language even for other languages. This as the other languages' manuals are not currently updated.

Product- and Description properties weren't written back to project from MagiCAD Create

The "Product" and "Description"-properties weren't updated to the MagiCAD project when they were edited for generic products in MagiCAD Create. Now this information is updated correctly in MagiCAD:



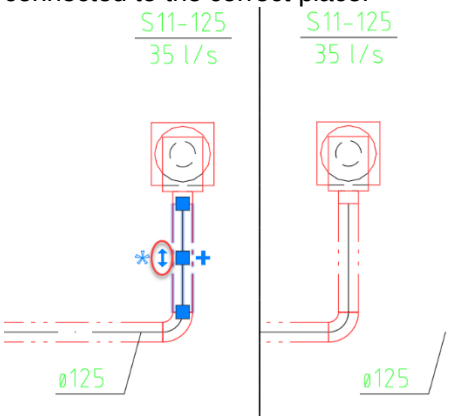
Legend tool was rotating texts into WCS direction

Previously, the legend tool was rotating texts into WCS direction in blocks even though you would be working in an UCS. This issue is now fixed.

2.2 Ventilaion and Piping

Common

Streching segment didn't keep the dimension text connected to the correct place
Using MagiCAD's stretch the dimension text didn't correctly follow the stretch and didn't stay connected to the correct place:

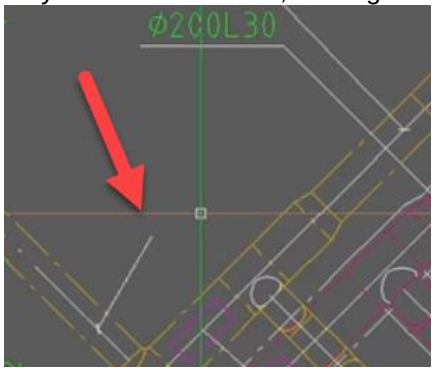


This has now been corrected and the dimension text now stays in the correct place also when using MagiCAD's stretch.

Wipout frame was stuck when deleting the dimension text in V&P
When deleting the dimension text the wipeout frame was still left in the drawing and couldn't be removed anymore. The user had to first remove the wipeout frame and then the dimension text. Now the wipeout frame is removed correctly together with the dimension text.

Direction of text of revision arrow in paper space
Fixed the direction of the text of revision arrow in paper space to follow the User Coordinate System.

Dimension text lost the connection to the host object
In some cases in MagiCAD for BricksCAD did the dimension texts lose the connection to the objects they were connected to, making the values disappear:



Some MagiCAD objects without any properties caused IFC export to crash
Some objects caused a crash when using the IFC Export. These objects contained properties which in some ways were invalid, and this initialized the crash.
Now IFC Export won't crash even if there are issues with the internal properties of some objects.

End side view not working if viewport had been changed
When using "Side view" and resizing the viewport the viewport's settings were reset to the default ones and the side view was locked and it wasn't possible to end it using the "End side view"-command.
These issues have now been corrected and resizing the viewport while working in the side view won't cause these issues.

Ventilation

Rectangular ducts weren't in some cases exported correctly when exporting to the IFC-file
Rectangular ducts weren't exported correctly in some special cases.

Connection nodes rotated in case a rectangular duct had its sizes swapped
In some cases the connection nodes of vertical rectangular ducts rotated in relation to the opening they were connected to:

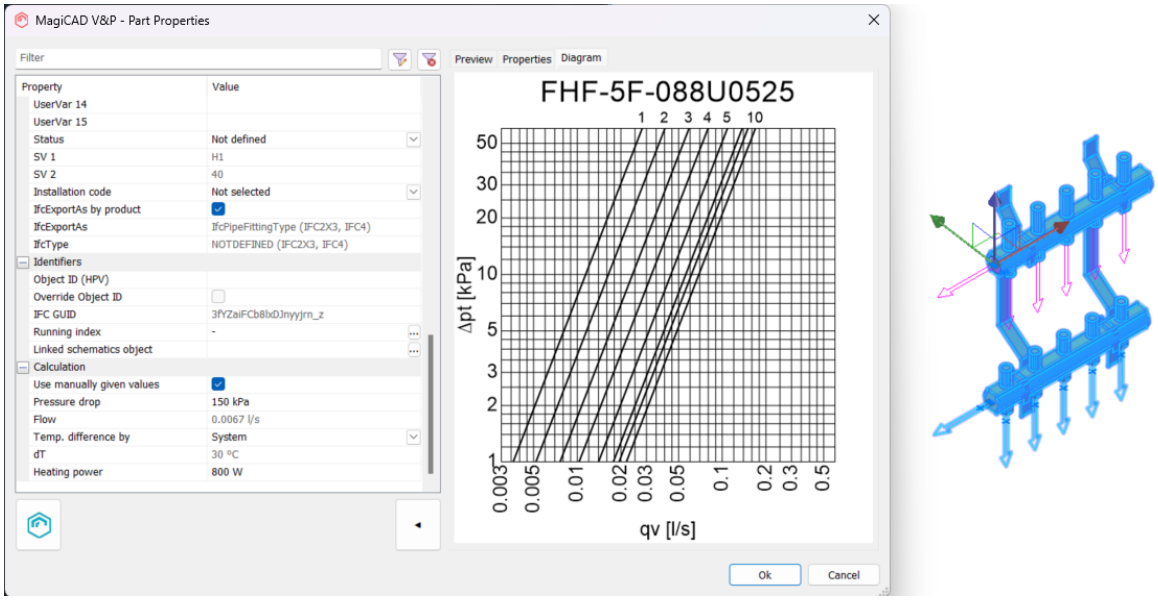
Now their direction stays as it should be.

Piping

Sprinkler sizing didn't work for the root pipe if it contains tapped branch
When using sprinkler sizing on a network that used taps, main pipe did not get sized which caused the branches to disconnect from the main pipe.
This issue has now been corrected and the main pipe is also sized when using sprinkler sizing.

"Use manually given values" values didn't work correctly in the new Part Properties dialogs for manifolds

The connectors for the loops were incorrectly shown when setting the manual values to be active in the manifolds:



2.3 Electrical

Using separate insertion point for the 3D model with different direction than for the 2D symbol did not work
When using separate insertion point for a 3D model, the direction of the 3D model always followed the direction of the 2D symbol. Now symbol directions can be different for both the 2D and the 3D symbol when installing products.

Updating supply areas with Update DWG saved all model drawings
Previously, when supply areas were selected to be updated in the Update DWG function, all model drawings were gone through and they were saved even if the used range was "Current drawing". Now all drawings will be gone through but only the supply areas of switchboards which are included in the range filter will be updated. If a model drawing doesn't have supply areas or supply areas are not from switchboards which are included in the range filter, that dwg will not be saved.

Drawings gave an Application error: "ByEntity properties must be defined" multiple times on the command line
Previously, when opening a drawing it might give multiple application errors and also possible clearance and maintenance zones were not drawn. These issues have now been fixed.

Busbars were missing from the Property Set Manager
Busbars were not shown automatically in property set definitions, they had to be binded manually. Busbar fittings were exported to IFC as IfcCableSegmentType by default. Now they are exported as IfcCableFittingType.

Parallel cables did not update properly
Previously, the amount of parallel cables did not update properly between model drawings and switchboard schematic drawings, and you might not get any notification about different data. These issues are now fixed.

Running indexes were not removed in one case
If you tried to remove running indexes by only selecting the desired numbering rule from which indexes should be removed, it didn't work. You had to select also a text group, or use asterisk (*) in both group and format. Now indexes can be removed properly.

2.4 Room

IFC4 Import crashing
Importing an IFC4-file caused a crash. This issue has now been corrected.

Room crashed in some cases when running "Save, Calculate and Update Texts"
In some cases when running Save, Calculate and Update Texts" in very large projects, MagiCAD Room crashed.