# **MagiCAD for AutoCAD**

Release notes for version 2023 UR-1

21/11/2022





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# **1** New features

#### 1.1 Common

#### Product selection text updates

Texts have been updated to better clarify via which feature the products are added.

"Select products to project" is now "Select product with Product Browser" and "Select products to project from MagiCAD Cloud" is now "Select product with MagiCAD Connect".

<ul> <li>Schematic drawings</li> </ul>	^	UserCode	Manufacturer	Product	Product v	National c	Ins	Nationa	al classification code	HyperLink	KcEx	KcTy
- Storeys		51	Bevent Resch	BRDJ-1-0			Not	OMC 2	Description of supply.		KcArT	NOTD
- Systems		52	FliktGroup	STQAC			Not	QMC.1	Description of supply.	https://www.f.	fcArT	NOTE
Outdoor devices		\$3	Fläkt Woods	len.			Not	LONC 2	Description of supply		TcArT	NOTE
- Supply devices Extract devices		S4	Systemair	Properties Linked properties			escription of supply				fcArT	NOTE
Exhaut devices     Row damper     Free damper     Sitencer     Other component     We handling experiment		\$5	Swegon AB						recription of supply.		fcArT	NOTE
		55	Oimecon	Edit			Enter	secription of supply.		FcArT	NOTE	
		\$7	Clinecon					De	secription of supply.		fcArT	NOTE
		58	Halton	Select product with Product Browser					recription of supply.		fcArT	NOTE
- Air handling equipment - Access panel - Climate beam		\$9	Halton	Select product with MagiCAD Connect Change "Manufacturer"				recription of supply.		fcArT	NOTE	
Gimate beam     B)- Fittings		S10	Trox Auranor					secription of supply.		fcArT	NOTE	
Active Storey		\$11	Swegon AB	COLIBRI CCa+A			Not	QMC.2	Description of supply.		fcArT	NOTE
Install storey origin (-10000,-15000,0)		512	Flakt Woods	K2IB-180-X			Not	QMC.2	Description of supply.		FcArT	NOTE
Active storey Floor 1												
Project												
Disconnect project Merge project.												
Oose			Up (Ctrf+K)	Down	s ICM+JI							

#### Use unit name in IFC Export

Now the unit name, of the unit used in the project, can be added and shown in the property name in the IFC file.

MagiCAD - IFC export				
election set				
	✓ Save S	ave as	Delete Rename	
fion			Storey mapping	
Create separate files (uses model dwg r	ames / IFC file names)		Use Model drawing Storey in proje	t Its storey MCLOD
Create new file (all to one file)			JPiping/P_Floor1.dwg Floor1	Floor 1 MC LOD 300
Append to existing file			IPiping/P_Floor2.dwg Floor2	Floor 2 MC LOD 300
file to create			JPiping/P_Floor3.dwg Floor3     JPiping/P_Parking.dwg Parking	Floor 3 MC LOD 300 Parking MC LOD 300
			Wentilation/V, Floor1 Floor1	Floor 1 MC LOD 300
			Ventilation/V_Floor1 Floor 1 Ventilation/V_Floor2 Floor 2	Floor 2 MC LOD 300
igin			Vertilation/V_Floor3 Floor 3 Vertilation/V_Parkin Parking	Floor 3 MC LOD 300 Parking MC LOD 300
Storey			Ventilation/V_Parkin Parking Ventilation/V_Roof d Roof	Parking MC LOD 300 Roof MC LOD 300
Use MCR origin if present				
wcs				
)UCS				
Use storey coordinates in ifc storey				
operty settings	Object selection			
	Object selection Object selection			
Export custom properties	Object selection Predefined selection		Optons	
Export custom properties 183420 1820 AD processory sets	Object selection		Options Schema name	FC2X3
Export custom properties \$3420 tracCAD proceedy sets	Object selection Predefined selection			FC2X3
Export custom properties \$3420 tracCAD proceedy sets	Object selection Predefined selection		Schema name Update drawing data selection set	FC2X3 -
Export custom properties \$3420 tracCAD proceedy sets	Object selection Predefined selection		Schema name Update drawing data selection set Use extruded ducts/pipes	FC23
Export custom properties \$3420 tracCAD proceedy sets	Object selection Predefined selection		Schema name Update drawing data selection set	#C2X3 -
Export custom properties \$3420 tracCAD proceedy sets	Object selection Predefined selection		Schema name Update drawing data selection set Utse extruded ductajopen Export port definitions	#C2X3
Export custom properties 183420 1820 AD processory sets	Object selection Predefined selection		Schema name Update drawing data selection set Use extruited ducts/pipes Export port definitions Create unique identifiers when needed	#C283
Export custom properties 183420 1820 AD processory sets	Object selection Predefined selection		Schema name Update drawing data selection set Ute extruded ducta/pipes Ute extruded ducta/pipes Create unique identifiers De not exeport fooren/turned of layers	#C2X3 -
Inspirity settings	Object selection Predefined selection		Schema name Update drawing data selection set Update drawing data selection set Deport por cleationse Create unique identifiers when needed De not segont bacentamend of layers Boot only products which new 20 Symbol	#C2X3 -

③ INFO			< 🔻	> 🔻 🎭 🕀 Ĉ Ĉ	
Identification	Location MagiCAD Pset_Hydroni	Ouantities	Relations	Classification	
Hyperlinks Property	Magreed Pset_Hydroni	Value	MagiCAD Pset_Nat	ionalclassification	
Uservar12					^
Uservar13					
Uservar14					
Uservar15					
Uservar5					
Uservarő					
Uservar7 Uservar8					
Uservar9					
dpTot [kPa]		0.096			12
dpTot_Pa_m [Pa/m]		32.1429557	80029297		
pTot [kPa]		3.017			
qv_SizingFlow_Is [I/s]		0.04			~



# **1.2 Ventilation and Piping**

# Connection node "None" now works with Change Properties, and additional improvements to updating properties

A number of options have been updated in Change Properties to give the users more freedom to update information in connection nodes and devices. This information is mainly related to the flows and the pressures.

A good note is that if you want to change a property of a device with many different systems, then use the Object selection set to specify which system the change should apply to.



#### Ductwork

"Air device flow" has been changed to "Flow" and does now also work for connection node none. "Pressure drop" has been added and works for both devices and connection node none.

Heating, cooling and special systems

"Pressure drop" has been added and works for both devices and connection node none.

Water systems

"Maximum flow sum", "Nominal flow sum", and "Pressure drop" have been added and works for both devices and connection node none.

#### Drainage systems

"Flow, manual/calculated" has been added. Note that the flow sum, regardless of if it is manual or calculated, does currently override and set the value and the option set in the device. So for example a device with a manual value can be changed to a calculated value, using this option in Change Properties, and vice versa.

Gas

"Flow" has been added and works for both devices and connection node none.

Related to the pressures can the user also select whether to update all pressures, only those where the option has been set to a locked value, or even to unlock the setting:

MagiCAD V&P - Edit pressure drop ×									
Pressure drop: 0.0	Pa								
Change all pressure drops									
O Change only locked pressure d	rops								
O Unlock pressure drops									
Ok	Cancel								

Note: "Change all pressure drops" locks and changes the values which can be locked.



#### Possibility to not select a symbol in the 2D symbol selection

It is now possible to select no symbol in the column selection:

<ul> <li>Domestic water systems</li> <li>Statistics</li> </ul>	^	UserCode	Manufacturer	Product	Product	National	Synbol	held-be-	National	Howlask	fcBpot	Fc73	-	Des.
G Guy			General					Properties.			TEFL.	Non r.,		
C:- Para     Heating solutor     Haddor dive     Redutor onlive     Redutor conviction ref     Operation to the solutor redutor     Solution     Solution     Solution     Coher radius		AT	Amatec	AT1159				Linked prop					591	Check
		PRESC	Hanco Kexcon	Prescor EN				Edt. Erte				-10-	ы.	Safety.
		AT2662FE	females:	AT2662PE				Edit in MagiCAD Casate				FFL.	Swing	
		AT1168M	Amatec	AT1169/J							Del	<b>9</b> 1.	Backl	
		VR	Danloss	VFB3 CN1								29L.	3 way	
- Other value - 3 part valve - Water miding valve - Other size concentrat		TRID	Overtrop	TFLO				Select product with MegiCAD Connect					PR	Tree
Other pipe component     Other pipe device     Onewtic voter device     Sometic voter device								Change "Symbol"						
>														
dtee Stony														
instal storey origin (+10000-15000.0)														
Active storey Roor 1														
ojud.														
Decomment project Hange project														



#### Show warning message if an updated pipe becomes too short

It is possible to change pipes to a larger size so that they become inverted, using both Change Properties and the new Find & Replace function, but earlier didn't the functions inform the user if there was a potential issue.

Now it is still possible to make this change, but the functions do in both cases give warnings about the possible issue:

Change properties gets the general warning message:

System	System	Storey	Part type	Message	Pos (Roor)
All systems 🗸	H1:H	Roor 1	Pipe/supply	Inverted duct/pipe	(6104.7, 13199.9, 2
Storey					
All storeys 🗸 🗸					
Part type					
All parts 🗸 🗸					
Message type					
Al messages 🗸 🗸					
Keep calculated data despite errors					
Roor Coordinates					
UCS Coordinates					
Copy to clipboard					
Mark Selected and Zoom					
Mark Al	<				

#### F&R does also show the issue in the Results-list:





#### Use real diameter with larger than

Viewport preferences have been updated so that the riser symbol of drainage pipes is set separately

MagiCAD V&P - \	/iewport Pref	erences						
ain viewport								
Follow main viewp	ort		s main viewpo	rt				
esentation options	Dimension tex	ts Hide options	Misc					
Pipes Presentation		D	ucts Presentation					
○1D (	∎2D C	) 3D	() 1D	2D	⊖ 3D			
2D PRESENTAT	TION		1D/2D PRES	ENTATION				
Use symbols components, devices in To	(water and dra op view)	-	O Use symb view)	ols for air dev	ices (in Top			
Use 3D geor Components drainage dev			Use 3D geometry for air devices					
Insulation			Insulation and		aterial			
Insulation inv			O Show due					
O Pipe invisible			O Show out					
Draw both			Show all I	ines				
Show in 1D			Show in 1	D				
1D - Symbols			Symbols					
1D size coefficie		00	1D duct symbol devices:	ools and air	1.000			
Use real diamete than:	er with pipes lar	ger	2D air device	s in top view:	1.000			
Piping Drainage	50		Do not sc device's s	ale air device ize	symbol by			
Show only cor	nection points	for		mbol Options				

For drainage pipes the default symbol size which is used for diameters smaller than this limit is 100, while for all other pipes it is 50.

As can be seen with the option like this the 42 mm copper pipe for water systems gets a symbol of 50, while the 54 mm pipe, which is over the 50-limit, gets a symbol with the same size as the pipe size. The same for the drainage pipes, but in this case the limit is 100, as well as the default symbol.



#### Support for new AutoCAD 2023 CUTBASE-command

AutoCAD implemented a new command CUTBASE in AutoCAD 2023. This command did not work in combination with MagiCAD which led to damaged models in V&P.

The command is now supported in MagiCAD as well and functions with our models.



#### Collar length for drainage devices

New option for the drainage device to adjust the collar length of products with such an option:

hafall domes	alic water device		State one	naga devica		
Jacobe	Venderbear	Destart	04	HW	Denny Passies	
24D	Que.	100	1	01		
	Čest.					
2000	Herepote	3104000	0.35	0.16		
NOR	Gade	20044032	0.32	1.52		
20HDS	Generic	Danie rag 2	0.2	0.2		
DHDS	Generic	Generic washing machine connec	4.2			
20102	Ceda	Flam America 2005000	42	0.2		
OHDI	Garantia	Generic-WC-convertion-Onitia	4.1			
						Ŷ
JasCole	Dated				Severale	Perdand whicher sector
JaarCode FD75	Product. Fixer-drain 75				menter mapates	
0.0010		Sek X2 on wearland sort sunds				
POTTO	Place data 110	ACCORD DE VERENNESSEE NES				
800110	ROOT THE P (1998)					
A44		connection and Picide parameters.				
007	1000110 EDD 5554					
FC80	Phore shall not	010				( and a
SALCCR63	BALCER ELP-711	ine.				H H H H H H
01120	WC1					
LEINE	LITERAL.					
Antend:	W6/9-8039-2					
CASEN!	Spawardhasi					
b continue	LIDX In safey		0 0		Viev node	Participation of the second se
dance						
	wer domatic water devic wer domatic water and d		$\left[ \right]$			
						OK Carol

New option here both for drainage devices and manholes. Works like it would be unconnected, meaning that the bottom moves when the values are updated:

🕙 MagiCAD V&P - Inst	all product		×
		Fill data fr	om: 🖓
System:	D1 Drainage 1		~ @
Status:	Not defined		~ @p
Installation code:	Not selected		~ B
Description:			
Height level in current floor	coordinate system		
Collar length:		100	mm
Top level:		0.0	mm 🖏
Connection level:		-264.0	mm 🖏
Installation level:		0.0	mm 🖏
Bottom level:		-350.0	mm 🖏
Show this dialog betwee User variables	en installation		
Property UserVar 1	Value		^
UserVar 2			_
UserVar 3			
UserVar 4 UserVar 5			~
ObjectId			
Override			
Coordinate system			
Use current floor coord     Use absolute coordina			
		Ok	Cancel

New in drainage devices and updated in manholes:

	MagiCAD V&P - P	art Properties				×
	Property		Value			^
	Pattype			& Roof drain		
	System		D1 "Drain	age 1*		
	Storey		Floor 1			
	Storey variable 1					
	Storey variable 2					
	Center of part		H = 200.0			
	Product		UUU "insp	pection-chamber-110-left"		
	Manufacturer		Generic			
	Connection size		110			
0	Top of part		200.0			
	Connection level		-364.0			
	Bottom of part		-439.0			
S	Connection level (flow in					
1.00	Connection level (flow o					
-	Connection size (flow in					
	Connection size (flow ou	(1)				
	Connection fall (flow in)					
	Connection fall (flow out	)				
	Status		Not define	ed.		
	Description					
$\sim$	UserVar 1					
nf a fin	UserVar2					
-1F - 1L-	UserVar 3					~
55-	ADDITIONAL FLOW					_
	Manual value			Collar length:	400	mm
	Firm	0.0000	1/0			_
		0.0000				
	Calculated value					
	Flow:	0.0000	(s.m²			
	Area:	0.0	en <sup>2</sup>			
	Object ID					
					Override	
	Propertie	15	• Pick!	tom schematics	Change RI	
					Ok	Cancel

If unconnected: The bottom moves when the collar length is changed. If connected: The top part moves when the collar length is changed.





#### Some generic products are available from the start:

#### Shorter distance between drainage bends

In earlier versions the pipe between two 45-degree bends, which are drawn when "Smart" is set on in the drawing dialog, was always 150 mm:s long. Many users wanted it to be shorter.

Now it is possible to set the distance of this pipe (a minimum of 1 mm). The default is 150 mm:s, just like earlier but now the value can be changed and is no longer hidden from the user:

General								Product v	ariables		
D:		00002	1	Us Na	erCode: tional code:	Draina PP2	ige pipe PP2	Property National P1 P2	classificati	Value	
					sterial: ject ID format: VO size range	•		<ul> <li>P3</li> <li>P4</li> <li>P5</li> <li>P6</li> <li>P7</li> </ul>			
Sizes								P7 P8			
Size 32 50 75 110 160	Din 28.4 43.4 68.6 103.6 152.0	Dout 32.0 50.0 75.0 110.0 160.0	Valve 32 50 75 110 160	Fit on I 20 22 26 30 36	Bend len 1 1 1 1 1 1 1	JV1		P9 P10 P11 P12 P13 P14 P15			
ut length:	s priority order	0	0	0				Do not split if the resu	it is shorter t		mm Cancel

#### Earlier result without this option:





Now this is possible, for example, a 1 mm length:



#### Connection node "None" for sprinkler networks

It is now possible to add connection node "None" for sprinkler pipes. This was not possible in earlier versions, and the option was disabled.

🙆 MagiCAD V&P - Create C	connection Node X
Identification ID number: 7	
Description:	
Destination Drawing	
None	◯ Left
<ul> <li>This</li> </ul>	Right
O Upward	◯ Front
ODownward	◯ Back
Symbol	
Not selected	Select Reset
Direction angle (UCS):	0
Show direction when install	
Flow Data	
Flow:	I/min
Pressure drop:	mbar
Ok	Cancel



# **1.3 Electrical**

#### **Parallel cables in Electrical**

Now when drawing a cable, you can define the number of parallel ones. You don't need to create a separate cable type for the purpose anymore.

The number of parallel cables can also be defined in the circuit properties and it affects to a lot of places:

Report: cable lengths are calculated according the amount of cables there are

3D presentation: When you have multiple cables, they are drawing side by side

Electrical calculations: Resistance and reactance are adjusted based on the number of parallel cables Power circuit types: You can define whether every parallel cable has its own protective device or not Switchboard schematics: You can define number of cables for every circuit and if they have own protective devices

Connections reports: Number of available pairs are adjusted based on the number of parallel cables Attenuation calculation: Warning is given if parallel cables are in use

MagiCAD-E	- Cable Options		3
General System: Material: Installation: Status: Linetype	W20         LQ/Ixr0            1         Sx255         MM0 Sx255            -not defined -	Presentation  Direct line segments Curved  Conners  Sharp Rounded Beveled	
1D linetype:	ByProject ~	Radus (mm): NOTE: Not used.	0.000
Cable number Number for next	cable: Next free	Elevation	
Xy-routing	Direct     Orthogonal     Side automatic (+)     Side automatic (-)	By highest point     By lowest point     By start     Coordinate system:     Bevation:	Current floor ~ 2400.0 mm dlp
	dy [mm]: 500		Over the top of: 👌
Connection Box		Tolerance:	0 mm
	Not selected Select	Device Basepoint  Insertion point  Nearest point	

#### More operation area possibilities

Now it is possible to add 3 additional sectors into a sector operation area and you can define their directions freely.



Also it is possible to change direction of diamond operation area.

🙆 MagiCAD-E - Operation	Area	×		
Area type	Area size			
○ None	Radius 1 [mm]:	2000		5
◯ Circle	Radius 2 [mm]:	0		
◯ Sector	Radius 3 [mm]:	0		
O Diamond	Angle [deg]:			
	Direction [deg]:	45	$\otimes$	
	Additional direction [deg]:			
	Additional direction [deg]:			
	Additional direction [deg]:			
	Ok	Cancel		



#### New hide functionalities

Now it is possible to hide also cable tray, lighting track and LED stripe segments with the old Hide function.

In addition, the Hide and Unhide functions now have an area option for hiding/unhiding objects inside a selected area.

From Electrical Viewport Preferences you can define how you would like your cables and cable packets or cable routes, lighting tracks and LED stripes be shown when they are overlapping each other and you run the new Auto-Hide function.



From the ribbon you can use the function which allows you to show an area or the whole current viewport where objects will be hidden based on your selections made in Viewport preferences.

Modify -
Devices
Elevation
C Rotate In Place
Cable Routes, Lighting Tracks and LED-stripes
Split Segments
Cables, Cable Packets and Cable Routes
Split
Hide
Unhide
Auto-Hide
Auto-Hide
Reset Auto-Hide

Linetypes for overlapping objects can be dashed or invisible, their distances can be defined and also what kind of overlapping is taken into account.



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There is also the possibility to have MagiCAD automatically hide objects in all marked viewports when saving a drawing. This is done via Drawing Preferences.

🙆 MagiCAD-E - Drawing Prefe	rences				×
Drawing type					
Is System Schematic drawing					
Block Attributes					
Text style:	Standard				$\sim$
World Scale					
1wcs = 1mm		1wcs =	1m		
2D Scale					
Symbol scale factor for new object	:ts:			1.000	
Scale factor is used in the following	g object groups:				
✓ Texts					
Cable markings					
Circuit symbols					
Switchboards (which have r	io real-size symbo	ols)			
General symbols (which hav	e no real-size syn	nbols)			
Cable packet width					
Border arrows					
(Devices have this option in	the product data)				
Misc					
Show section mark boundaries	1				
Show selection areas	-				
Add wipeout frames when saving					
Cable Packet Connections					
Angle of connections [deg]:		45	Free Free		
Connection distance [mm]:		200	Free 🗸		
MC LOD					
MC LOD 300					$\sim$
			Ok		Cancel

#### Extra offset selections improvements

Fine-tuning has been done to the following parts of the function:

Now search circle is in the mouse position, not in the middle of cable tray when using alignment. When connecting conduit to another conduit using alignment, it didn't make straight connection, but created extra bends.

When starting drawing a conduit with alignment and clicking end of another conduit as first point, alignment was drawn incorrectly.



#### Box/cylinder selections for Others/CR

Now it is possible to add box or cylinder as a 3D symbol for products in Others/CR product class.

Seneral				
			2D Symbol	
D: 4				
lser code:				
Description:				
Aanufacturer:				
roduct code:				
imensions				
ength [mm]:		0		
Vidth [mm]:		0		
leight (mm):		0		
			Select	
Default System			3D Symbol	
· ·		~		
Properties				
aver code {PV}:				
ayer code {PV}:				
efault elevation [mm]:		0		
	r of the dwg	0		
efault elevation [mm]:	r of the dwg	0	=	
Default elevation [mm]: Use general 2D scale facto Product Variables	r of the dwg	0		
Default elevation [mm]:		0	-	
Default elevation [mm]: Use general 2D scale facto Product Variables Property		•		
Vefault elevation [mm]: Use general 2D scale factor induct Variables Property National code:			O Nore	
efault elevation [mm]: Use general 2D scale factor troduct Variables Property National code: Hyperlink:			O Autocad block	
efault elevation (mm): Use general 2D scale factor roduct Variables Property National code: Hyperlink: National classification code:	Value		Autocad block	
efault elevation [mm]: Use general 2D scale factor roduct Variables Property National code: Hyperink: National classification code: IfCExportAs:	Value IfcBuildingElementProxy (IFC2X3,		O Autocad block	

#### Stretchable dialogues

The following dialogues have been changed to be stretchable so that all the information can be seen more easily: Select circuit

Select device

External references



### **1.4 Circuit designer**

#### Cable list of control cables

You can now take a cable list from your control cables. It will show the cable ID, cable type and destination of your control cables.

The list can be copied to clipboard or printed.

MagiCAD-CD - Control Edit	cables		
ible ID	Cable type	Destination	
ntroli	MMO 19x1,5	BAC	
dication	NOMAK 12x2x0,5+0,5	BAC	

#### Show all conductors automatically in a control cable symbol

A new selection: "Always show all conductors of the cable" has been added into control cable symbols. When this checkbox is active, any changes to the amount of conductors of the cable will be updated to the symbol when using Update DWG (automatic or manual). This way you can have a <u>control cable symbol showing the full content of a control cable automatically in a drawing</u>.

🙆 MagiCAD-CD - 0	Control cable symbol properties	×
General		
Destination:	BAC Visible	
Cable ID:	Controll 🕑 Visible	
Cable type:	MMO 19x1,5 🕑 Visible	
Cable symbol length		
Show connection		
O Primary conne		
O Secondary co		
-	conductors of the cable	
Preview		
402.201 402.202 202.202 202.202		19
	BAC Controll MMO 19x1,6	
Reselect symb	ol Ok	Cancel

The selection (Always show all) is available already in the right-click-menu when creating a new control cable symbol. Clicking it will jump automatically to the properties dialogue.

Control, MMO 19:1, 5           Indication, NCM4K (12:2:0, 5+0, 5           Numbering rule:         Basic Control Cable Symbol rule           Preview conductor selection	iontrol cable	Conductors count and numbering	
Indexton, NOM4K 12x2x0,5+0,5 Numbering rule:  Preview conductor selection  I 2 3 4 5 6 7 8 9 10 11 12 13 14 15 18 17 11  Always show all  Select all  Select all connected Select all connected	- Install new - Controll, MMO 19x1.5	Count of conductors: 19	
1 2 3 4 5 8 7 8 9 10 11 12 13 14 15 18 17 18 Alweys show all Select all Select all connected Select all unconnected		Numbering rule: Basic Control Cable Symbol rule	
Always show all Select all Select all connected Select all unconnected		Preview conductor selection	
Select all Select all connected Select all unconnected			
Select all Select all connected Select all unconnected		Alwayer phow all	
Select all connected Select all unconnected		Annuys show an	
		Select all	
Select all from page(s)			
		Select all connected	
Deselect all		Select all connected Select all unconnected	



### 1.5 Room

Possibility to zoom and move in MagiCAD Room preview window

It is now possible to zoom and move in MagiCAD Room's preview window:

Project: Room Demoproject Storeys		User cod	Room na									qv-p [1/h]			T-tra [%C]	L-fac						Cooli [W/n				Not	ŕ
B-Roof		110	Office		20.0		40	[()-#]	47	2.0	- Lunca		Supp		-26.	0.47		0 8 5	6.2	1 []	132	0.00					_
Floor 3		111	Office		20.0		47	14			7.2		Supp						6.5	657		0.00					-
E-Floor 2		112	Office		20.0		47	14	50	2.0			Supp								100.	0.00					
E-Floor 1		113	Office		20.0		47	14	50	2.0			Supp								100.	0.00					
- Parking		114	Office		20.0		48	14	50	2.0			Supp									0.00					
- Al rooms		115	Office		20.0		47	14	49	2.0			Supp									0.00			2		
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Project: Room Demoproject	- A -	-		1	_	_		-	-	_	-	La contra	1												
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· Roof	110	Office			0.0 13	45	13	47				Supp 1		-		00 8.5	6.3	834	132.			0.0 0	0		
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Rooms	113	Office	21	.0 20	0.0 13	47	14	50	2.0	7.2	3.0	Supp 1	05 -2	5. 0.2	7 24	00 7.9	6.6	663	100.	0	0.00	0.0 0.0	0		
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# **1.6 Schematics**

#### Link several devices from a model to one symbol in Schematics

In addition to one-to-one linking and data transfer, the Schematics module now includes an option for one-to-many linking. The new option provides increased flexibility when linking devices in a Ventilation & Piping project with symbols in a schematic drawing.

With one-to-many linking you can link a single symbol to a selected group of devices. This allows you to, for example, summarize the total airflow of multiple air devices and add the combined airflow to a symbol in a ventilation system schematic drawing. Changes to the devices are then automatically synchronized to the corresponding symbol, helping you to easily keep schematic drawings up-to-date during the project.



The linking is only from Model to Schematics, not the other way around.

#### Custom header blocks in reports

It is now possible to use custom blocks as headers in reports, which makes it possible to create any sort of header needed for a specific report.







# 2 Resolved issues

#### 2.1 Common

#### Conflict dialog does not show status differences

The conflict dialog didn't show all the necessary information, and has now been completely updated to cover the missing information and also improve the overall visibility of what issues are part of the conflict

roperty	Active	Selected	
ize	Circ200	Rect200x200	
tatus	Not defined	N	
Show only differe	ot		
Show only differe	ric (		
) Change active s	settings		
,			

#### Warning dialog did not work properly for objects in XREFs

Objects in XREFs could not be zoomed in Warning dialog, because they had another floor ID.

System All systems	System		Part type	Message	Pos (Floor)
	- 61 : B	Plan 1	Cable trays	Electrical object-Electrical object	(73256.1, 15414.7, 2450.0)
Storey	61 : E		Cable trays	Duct-Electrical object collision	(71690.3, 15414.7, 2450.0)
All storeys	61:B	Plan 1	Cable trays	Duct-Electrical object collision	(73256.1, 14662.6, 2450.0)
Pat type					
All parts .					
Message type					
Al messages					
Keep calculated data despit errors					
Roor Coordinates					
O UCS Coordinates			•		
Copy to clipboard					
Mark Selected and Zoom					
Mark All	e.				

Now the Warning dialog allows to zoom also to objects in XREFs.

#### IfcType issues and improvements

A number of fixes in MagiCAD Electrical and a common improvement for both V&P and Electrical: In electrical the trays and conduits had the wrong IfcExportAs set visually in the project. Note that this was only visually, and behind the scenes it still worked correctly, but was confusing for the users:

Project: Electrical demo project	Columns b	by user					
Project: Electrical demo project     Project description     Project settings	ID	Code	Description	Default System	IfcExportAs	IfcType	La 2D Va block
Model drawings Other drawings	4	C12	Conduit (pipe)		IfcBuildingElementProxy	NOTDEFINED	P1
Electrical     Communication, data and building automation	3	СС	Cable Canal	E Electric - G	IfcBuildingElementProxy	NOTDEFINED	22
- Cable routes - Systems	41	CR1	Floor Canal	W Trays, Ele	IfcBuildingElementProxy	NOTDEFINED	25
Trays and conduits     Others/CR     Back boxes	1	CTL	Cable Tray, Ladder	W Trays, Ele	IfcBuildingElementProxy	NOTDEFINED	21
Gombination boxes	2	CTP	Cable Tray, plate	W Trays, Ele	IfcBuildingElementProxy	NOTDEFINED	21
Linetypes	22	R	Rail	W Rails	IfcBuildingElementProxy	NOTDEFINED	23

📀 MagiCAD-E - Project Management - C:\ProgramData\MagiCAD\Demo Projects\001.mep



Fittings weren't updated with the correct IfcExportAs and IfcType information when updating the drawing with the information in the project.

When LED-stripes were exported together with other segment elements, the fittings didn't get the correct IfcType in the IFC file.

When the user had set some IfcExportAs and IfcType using Change Properties, in the drawing, this information was overridden when running Update Drawing Data. This was not always the wanted behavior and therefore has both V&P's and Electrical's Change Properties been improved regarding how this information is set, so that it either is "By product" meaning that the information is read from the project or it is set to the object itself, in which case it cannot be overridden using Update Drawing Data:



#### Yellow highlighter cross was unnecessary big

When "zoom to object" was used it sometimes caused unnecessarily large cross markings. This has been fixed and the cross is properly sized in all cases.



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#### Slowness issue when drawings are missing

Slowness in the program had increased in the later version, when the project's drawing list contained drawings which no longer existed.

Optimization has now been implemented to the code to reduce slowness in this case.

It is however recommended to remove the missing drawings from the project to further improve the speed.

# 2.2 Ventilaion and Piping

# Find & Replace did not change segment series correctly and also updates the series of "Do not change" parts

The duct and pipe series name was updated for all segment parts from the "From"-category, even including sizes which had been selected as "Do not change", meaning that all of a "From"-category was updated.

This has now been fixed and the series name is only updated for the sizes which have been selected to be updated.

#### F&R changes to variant that is not selected

The locking of the product was not taken into account and the product was unlocked and then the size changed:





This has now been fixed so that the locking is preserved and the selection is as the user set it in the table:



#### Merge Project data comparison report issues

A number of issues with the Merge Project data comparison have been fixed:

SV7-10 were not included in the report at all.

SV1-6 were shown but report refers to them with the wrong numbering showing SV1-3 twice.

If type was included even if nothing had changed, when both target and source were NOTDEFINED.

#### Series of a bend

When changing the size and the series with Change Properties, using the size property, the series was not changed for fittings and open-ends.

This has now been fixed and all parts are properly updated.

# Preview was empty when "Show objects as saved in model space" was checked in Drawing Preferences

The MagiCAD Select function's preview was empty when "Show objects as saved in model space" was checked in Drawing Preferences

This was as MagiCAD didn't identify correctly if entity was from XREF or not.

This has now been fixed and the preview works correctly.

#### Branch Copy - Between didn't copy dimension text

Using the "Between"-option in Branch copy didn't copy the dimension texts of the copied parts. Now dimension texts are also selected when using branch selection option "Between" in Branch Copy command.

#### Possibility to add flexible length count while adding size from pipe drawing options



The option to add flexible length count, or different equivalent lengths for flexible pipes, was not available via the pipe-drawing dialog, but has now been added:

Supply/	Retum Pij	pe Series:			Si	ze:		Rou	Routing	
PEX	Pl	astic pipe F	PEX			2	~ [	Locked	۲	Smart
PEX	Pla	astic pipe F	PEX			5	^  □	Locked	0	Direct
					2233	2 8 2	⊵	Synchronia	ze	▼▲
	Retum In:	sulation Se	ries:		5	0	g fron	n cursor pipe		
-						dd new	$\sim$			
s [mm]:			0							
-					$\sim$		1	1		
e [mm]-			0							
🙆 Mag	giCAD V8	kP - Pipe S	ize							
Size	Din	Dout	Valve	Zone	Bend	Fit on	Redu	UV1	Flexib	le length coun
2	1.0	1.0	1	1	0.1	0.0	0.0		0	

#### Fixed an issue with an eternal loop in domestic water systems' calculations

In some special cases the sizing calculation, when run with the setting set to "Automatic circulation flow calculation", ended up in an eternal loop and the program got stuck. This has been fixed so that these cases don't occur.

#### Renaming of "kv" for manifolds and "K-value" for valves in the IFC Property Set Manager

There was varying naming for the kv-value, which has now been updated:

"kv" in manifolds in Psets has been renamed to "kv - circuits of manifolds" as it is in dimension texts. "K-value" in the Psets for zone valve, radiator valve and radiator connection set has been renamed to "kv".

#### Sprinkler report failed in some looped networks with tap connections

Fixed a bug which happened with report creation with some tapped pipes.

#### Equipment with one connection couldn't be calculated in a sprinkler network

Sprinkler calculation didn't work for all the equipment which has one connection e.g an expansion vessel.



# 2.3 Electrical

#### **Fatal error with Change Properties**

Fixed a crash which happened when changing bend type with Change Properties.

#### Sorting didn't work properly with every column in the project

Some property columns in the Project didn't sort data correctly. Those have now been fixed. Properties that had checkbox now work correctly with "Change column value" function in the Project

#### Fatal error when changing conceptual to shaded in our electrical demoproject

Crash occurred only with AutoCAD 2023 when changing viewport settings to shaded. It have been fixed.

#### Fixes to Edit electrical project software

Following attributes were not visible in the Edit electrical project: 2D block for Trays and Conduits Layer code and mark for Cables/E and Cables/C,D,BA

# 2.4 Schematics

Schematic link dialogs did not show all product classes when some drawing was selected Not all product classes were shown in the Schematic link dialog. This has now been fixed and the product classes are shown correctly.