



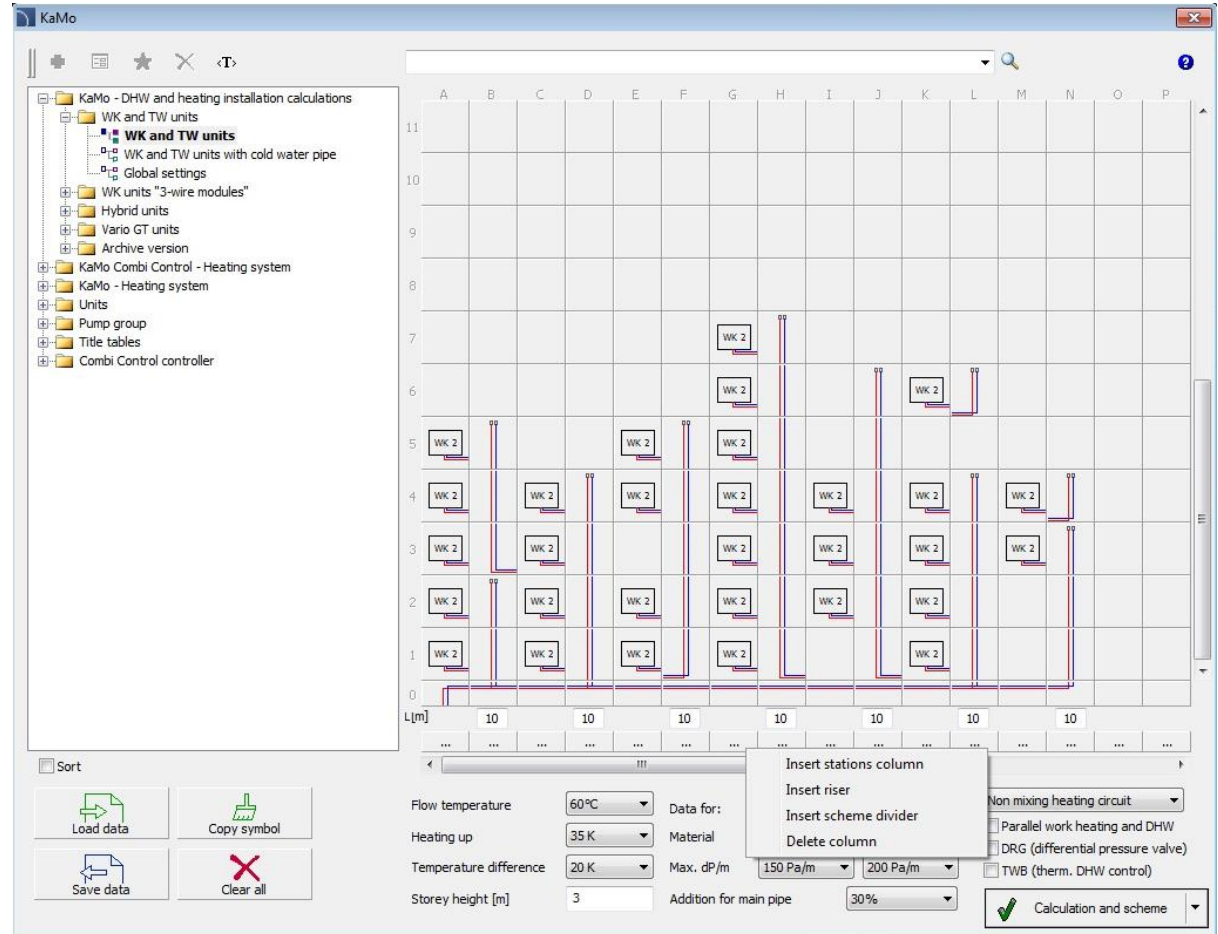
**CADprofi 2020.15**

## ✓ CADprofi – integrated calculations for the central heating and water installations

A completely new schemes generator for decentralized hot water preparation has been introduced in the KaMo library. This generator is integrated with the hydraulic calculations of the central heating system and water installations.

### Program functionality:

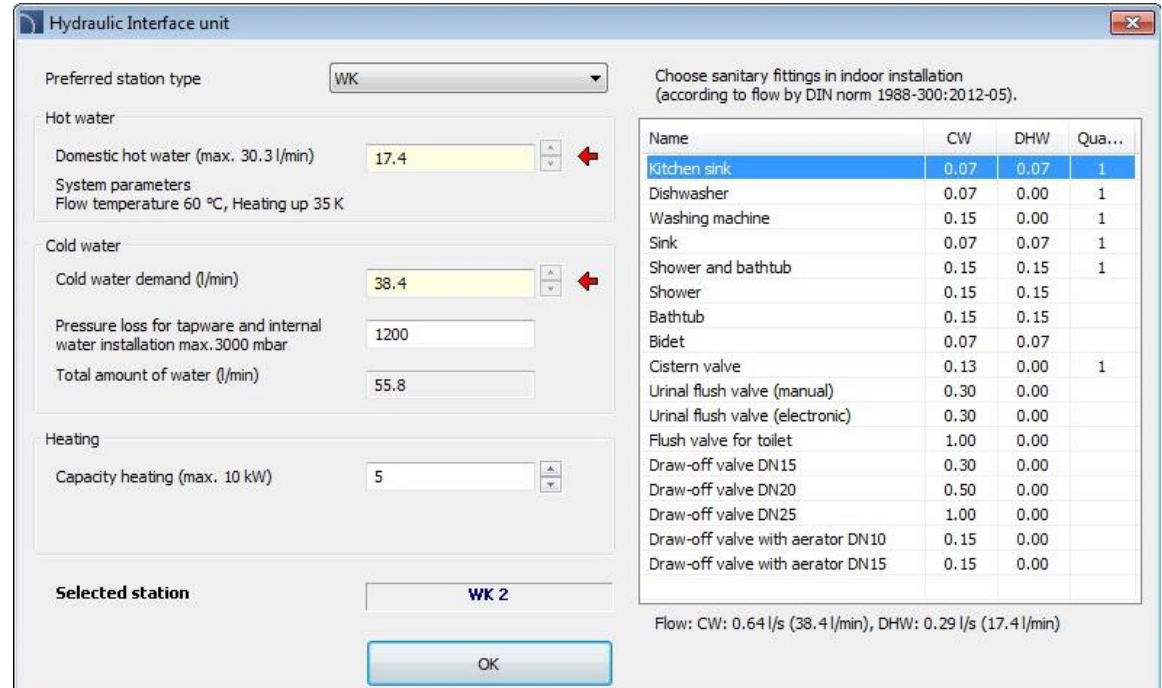
- Unlimited number of risers and floors..
- Any number of receivers connected to the risers.
- Any branching in the scheme with automatic correction of cable routing..
- Possibility to define the beginning of the scheme on the lower floor or at any point (e.g. on the highest floor if there is a heat source there).
- Possibility to use residential stations that work for the needs of central heating and/or hot water. Typical central heating distributors to which radiators or other receivers are connected (e.g. underfloor heating circuits) can be used instead of stations. Thanks to this, program can be used to design any central heating installations.



The main window that allows user to conveniently define any scheme

- Auto-complete, copy and delete receiver modes allows user to quickly define the scheme.
- Possibility of designing installations with "three-wire" stations (with common return pipe and separate supply pipes for central heating and hot water).

- Possibility of defining systems consisting of two schemes. It is needed when one heat source works with two heating circuits.
- Automatic selection of pipe diameters.
- Comprehensive hydraulic calculations for central heating with determination of final pressure losses.
- Automatic selection of circulation pumps and buffer charging pump (Wilo or Grundfos).
- Determination of peak power, buffer capacity and required power of the heat source. The parameters of an additional heat source (e.g. heat pumps or solar panels) are taken into account.
- Automatic selection of housing stations based on the DHW capacity or after determining the type and quantity of sanitary utensils that will be attached to the station.
- Automatic recalculation and re-selection of home stations when the installation operating parameters change (e.g. when the flow temperature changes).
- Calculation of the cold water system with the selection of optimal pipe diameters in order to adjust the pressure losses to the available pressure from the water supply network..
- Automatic drawing of scheme with markings of pipe diameters, pressure drops and flows.
- Ability to save projects to files that allows for later editing or creating installation variants (the structure of the project is saved, not the dwg file).
- Inserting tables with technical parameters and calculation results into the drawing.
- Creating specifications with receivers as well as the number and types of pipes (for central heating and water installations).



Hydraulic Interface unit

Preferred station type: WK

Hot water

Domestic hot water (max. 30.3 l/min): 17.4

System parameters  
Flow temperature 60 °C, Heating up 35 K

Cold water

Cold water demand (l/min): 38.4

Pressure loss for tapware and internal water installation max. 3000 mbar: 1200

Total amount of water (l/min): 55.8

Heating

Capacity heating (max. 10 kW): 5

Selected station: WK 2

OK

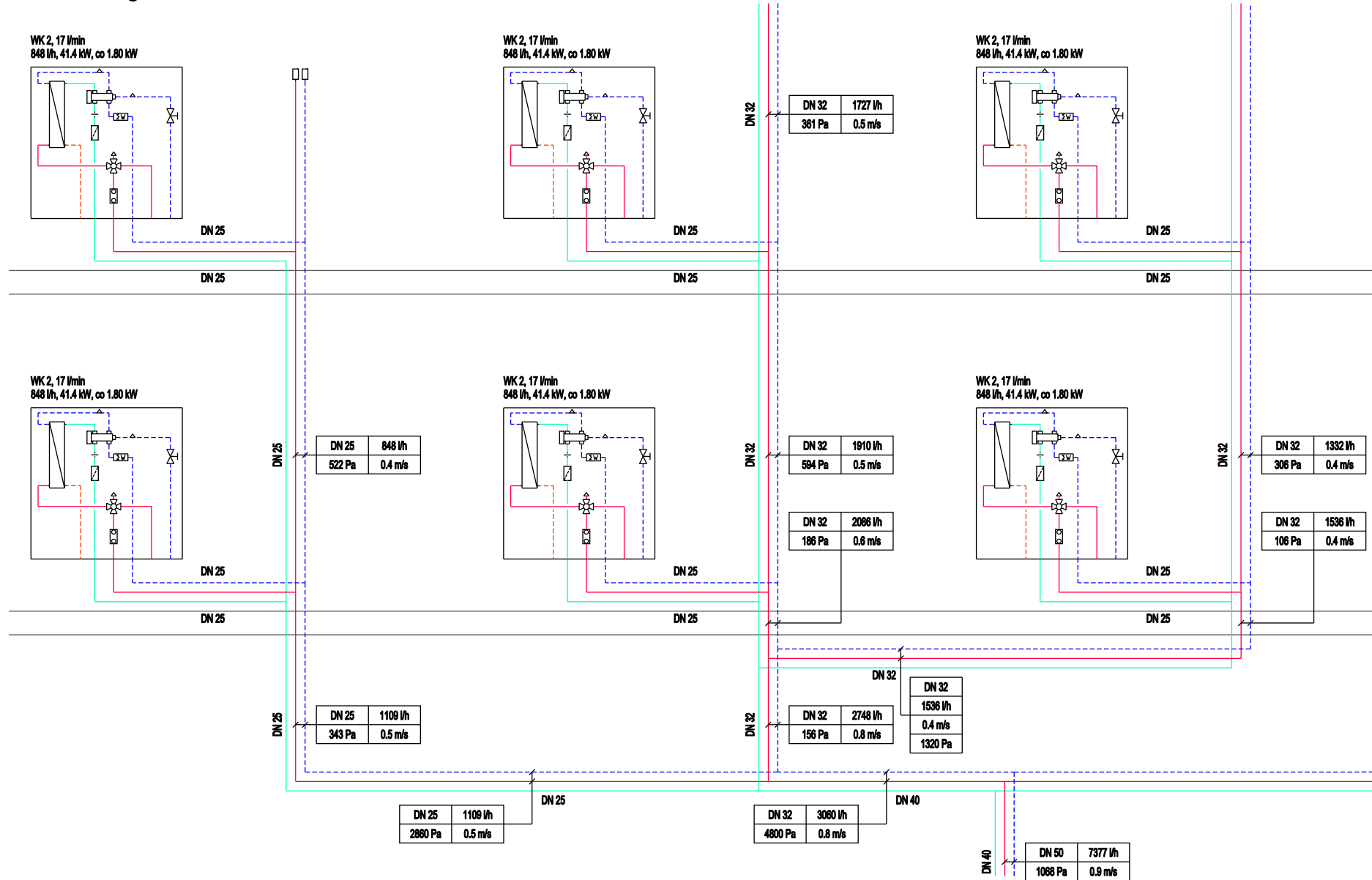
Choose sanitary fittings in indoor installation (according to flow by DIN norm 1988-300:2012-05).

Name	CW	DHW	Qua...
Kitchen sink	0.07	0.07	1
Dishwasher	0.07	0.00	1
Washing machine	0.15	0.00	1
Sink	0.07	0.07	1
Shower and bathtub	0.15	0.15	1
Shower	0.15	0.15	
Bathtub	0.15	0.15	
Bidet	0.07	0.07	
Cistern valve	0.13	0.00	1
Urinal flush valve (manual)	0.30	0.00	
Urinal flush valve (electronic)	0.30	0.00	
Flush valve for toilet	1.00	0.00	
Draw-off valve DN15	0.30	0.00	
Draw-off valve DN20	0.50	0.00	
Draw-off valve DN25	1.00	0.00	
Draw-off valve with aerator DN10	0.15	0.00	
Draw-off valve with aerator DN15	0.15	0.00	

Flow: CW: 0.64 l/s (38.4 l/min), DHW: 0.29 l/s (17.4 l/min)

Window for hot water preparation station selection and determination of calculation flows

Scheme fragment:



## Sample printout with central heating calculations

Heat exchanger type	Number apartme	Section	Simultar DHW producti	Simultan heating	Volume flow DHW production [l/h]	Capacity heating [kW]	Volume flow heating [l/h]	Total volume flow [l/h]	DN	R * l [Pa]	v [m/s]	Z [Pa]	Pressure loss [Pa]
Riser Nr. 7 (apartment on top of another) (N3)													
M3: WK 2, 17 l/min, 848 l/h, 41.4 kW, HZ 1.80 kW	1	Section A 1 (N3)	1.000	0.000	848	0.0	0	848	25	$87 * 14.4 = 1253$	0.41	82	1335
N0: Supply line	1	Section Z 1 (N0)	1.000	0.000	848	0.0	0	848	25	$87 * 20.0 = 1740$	0.41	206	1946

Sum:

3281

Riser Nr. 4 (apartment on top of another) (H7)

G7: WK 2, 17 l/min, 848 l/h, 41.4 kW, HZ 1.80 kW	1	Section A 2 (H7)	1.000	0.000	848	0.0	0	848	25	$87 * 6.0 = 522$	0.41	82	604
G6: WK 2, 17 l/min, 848 l/h, 41.4 kW, HZ 1.80 kW	2	Section A 3 (H6)	1.237	0.763	1050	1.4	59	1109	25	$143 * 6.0 = 858$	0.53	140	998
G5: WK 2, 17 l/min, 848 l/h, 41.4 kW, HZ 1.80 kW	3	Section A 4 (H5)	1.426	1.574	1210	2.8	122	1332	32	$51 * 6.0 = 306$	0.37	67	373
G4: WK 2, 17 l/min, 848 l/h, 41.4 kW, HZ 1.80 kW	4	Section A 5 (H4)	1.590	2.410	1349	4.3	187	1536	32	$66 * 6.0 = 396$	0.42	89	485
G3: WK 2, 17 l/min, 848 l/h, 41.4 kW, HZ 1.80 kW	5	Section A 6 (H3)	1.738	3.262	1474	5.9	253	1727	32	$82 * 6.0 = 492$	0.47	112	604
G2: WK 2, 17 l/min, 848 l/h, 41.4 kW, HZ 1.80 kW	6	Section A 7 (H2)	1.875	4.125	1590	7.4	320	1910	32	$99 * 6.0 = 594$	0.52	137	731
G1: WK 2, 17 l/min, 848 l/h, 41.4 kW, HZ 1.80 kW	7	Section A 8 (H1)	2.003	4.997	1699	9.0	387	2086	32	$116 * 1.6 = 186$	0.57	164	350
H1: Section (branch)	7	Section A 9 (H1)	2.003	4.997	1699	9.0	387	2086	32	$116 * 20.0 = 2320$	0.57	164	2484

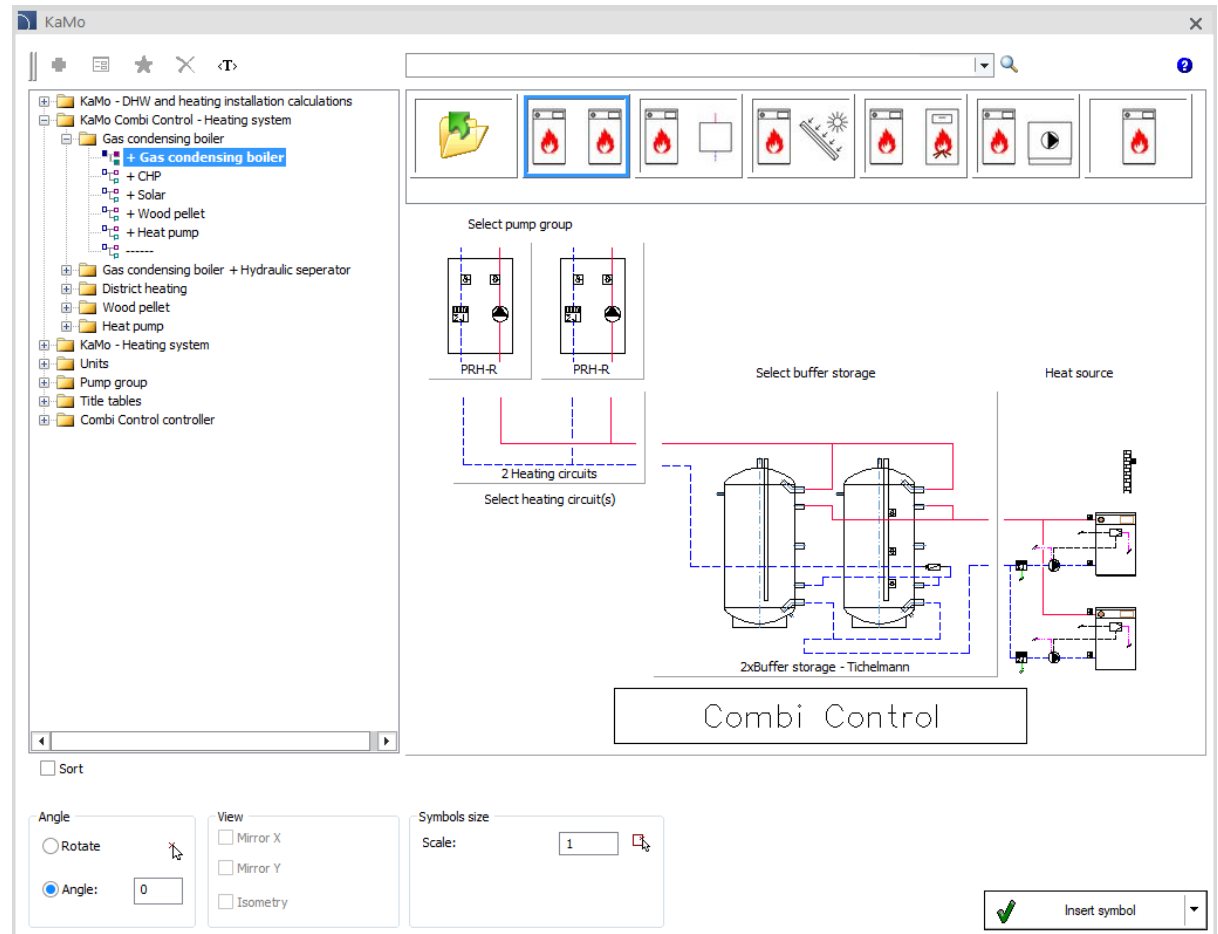
Sum:

6629

## ✓ KaMo – product update and a new boiler room schematic generator

In the boiler room diagram generator, new systems use the universal Combi Control regulator. In the generator, user can select a specific system of buffers (1, 2 or 3 buffers connected in series or in the Tichelmann system). It is also possible to define the number of heating circuits with the selection of the desired pump groups.

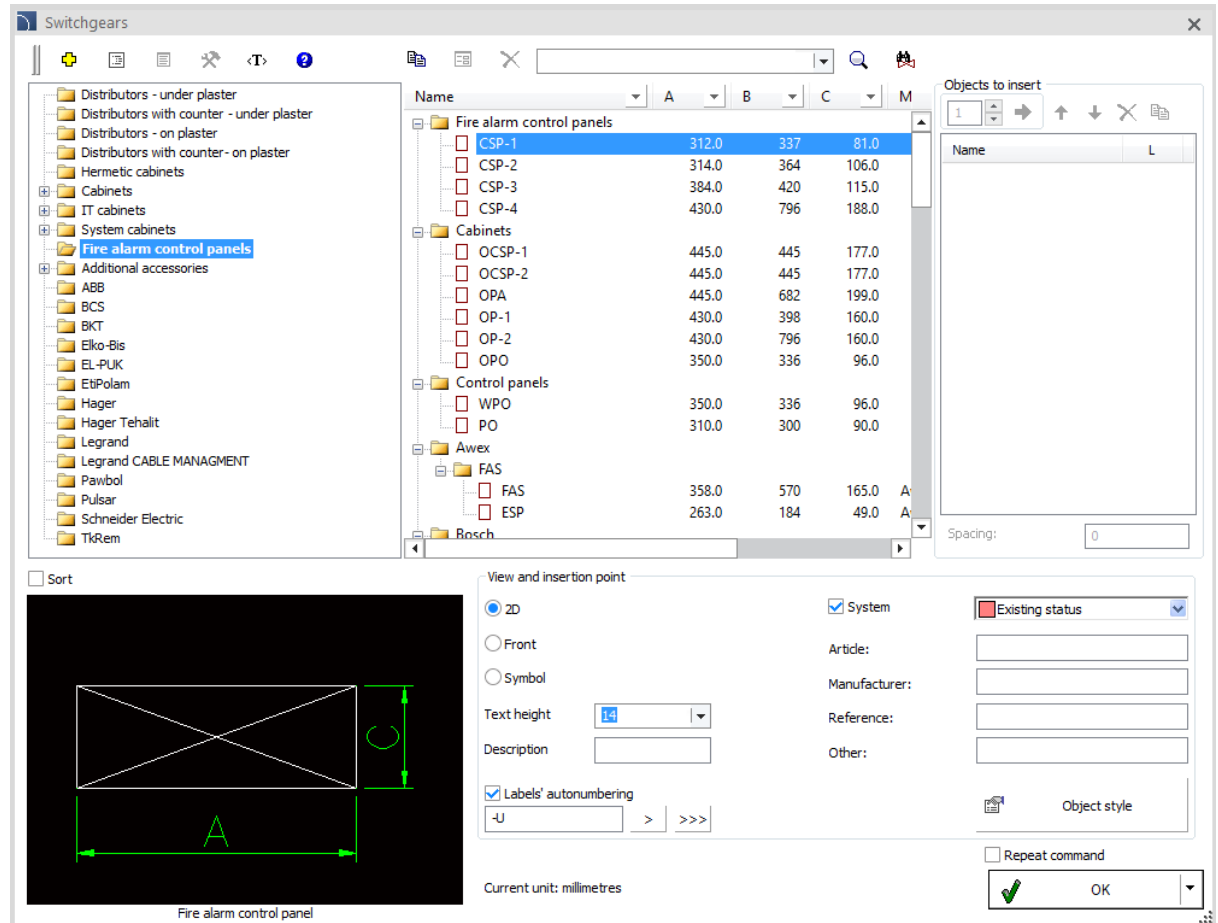
A complete set of new housing stations for decentralized hot water preparation has also been introduced to the KaMo library.



The main window that allows user to conveniently define any scheme

## ✓ CADprofi Electrical – fire alarm control panels

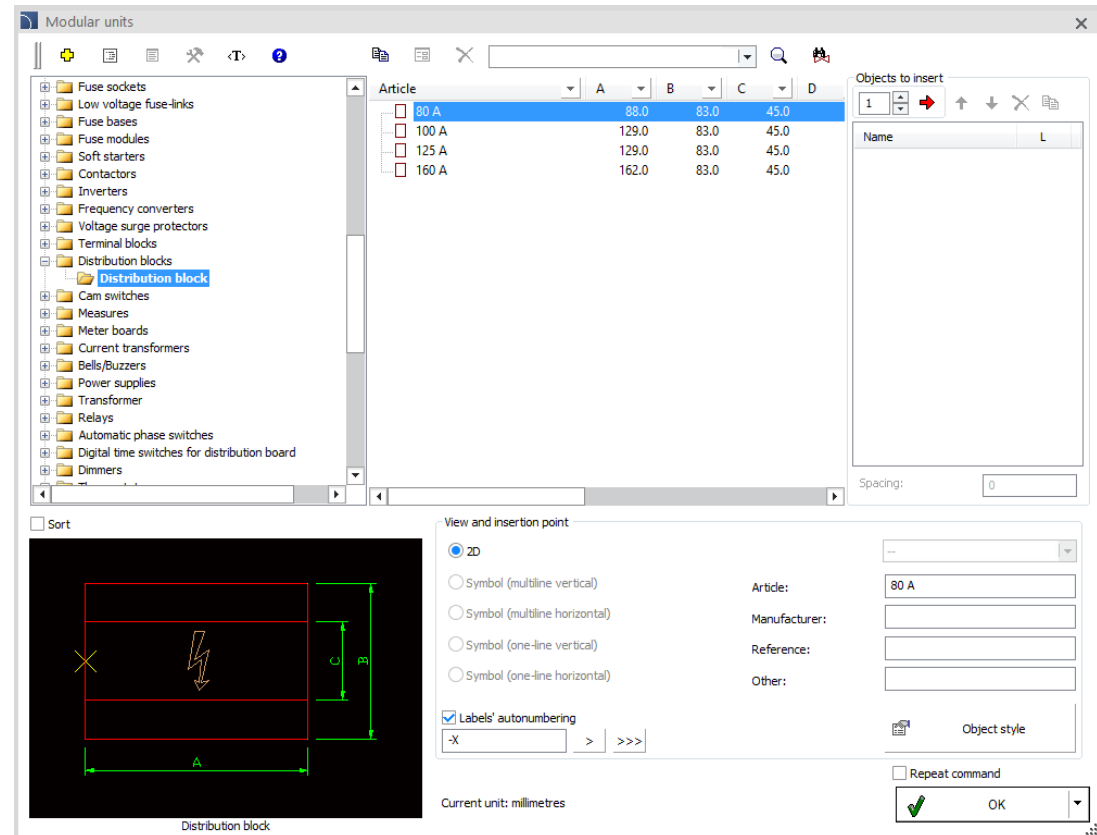
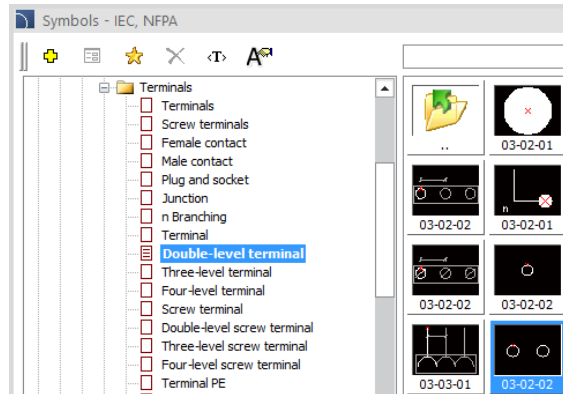
The switchgear library available in CADprofi Electrical has been extended with fire alarm control panels from Awex, Bosch, D + H, LST, POLON-ALFA, Satel, and Siemens.



## ✓ CADprofi Electrical – extension of modular apparatus library


The library of modular apparatus available in CADprofi Electrical has been extended, among others o two-, three- and four-level terminals, connectors and distribution blocks.

IEC and NFPA symbol library has also been extended with the above-mentioned elements.



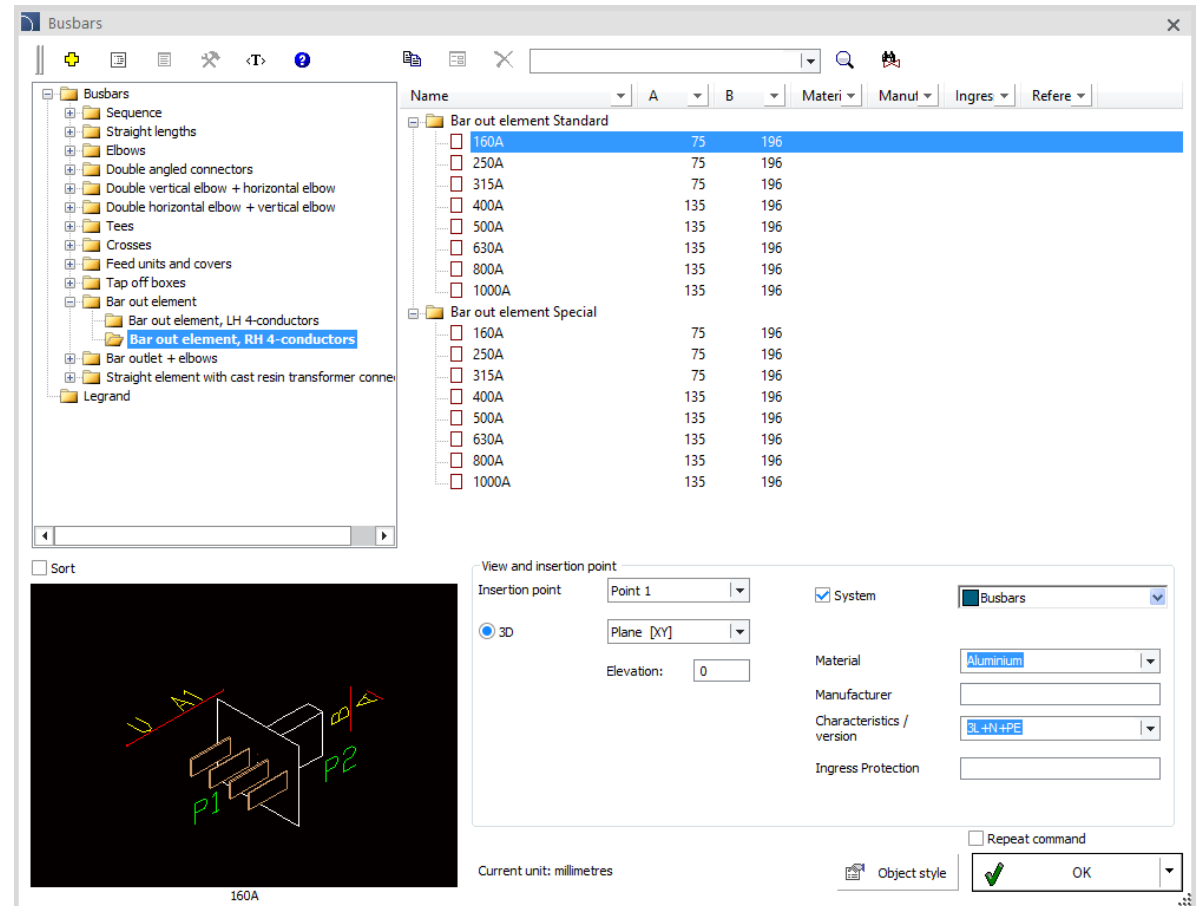


## ✓ CADprofi Electrical – extension of the *Busbars* command

The *Busbars*  command has been extended with bar out elements.

The library contains all the necessary elements (including heads, straight elements, angle connectors, tees, crosses, etc.) to design installations containing busbars.

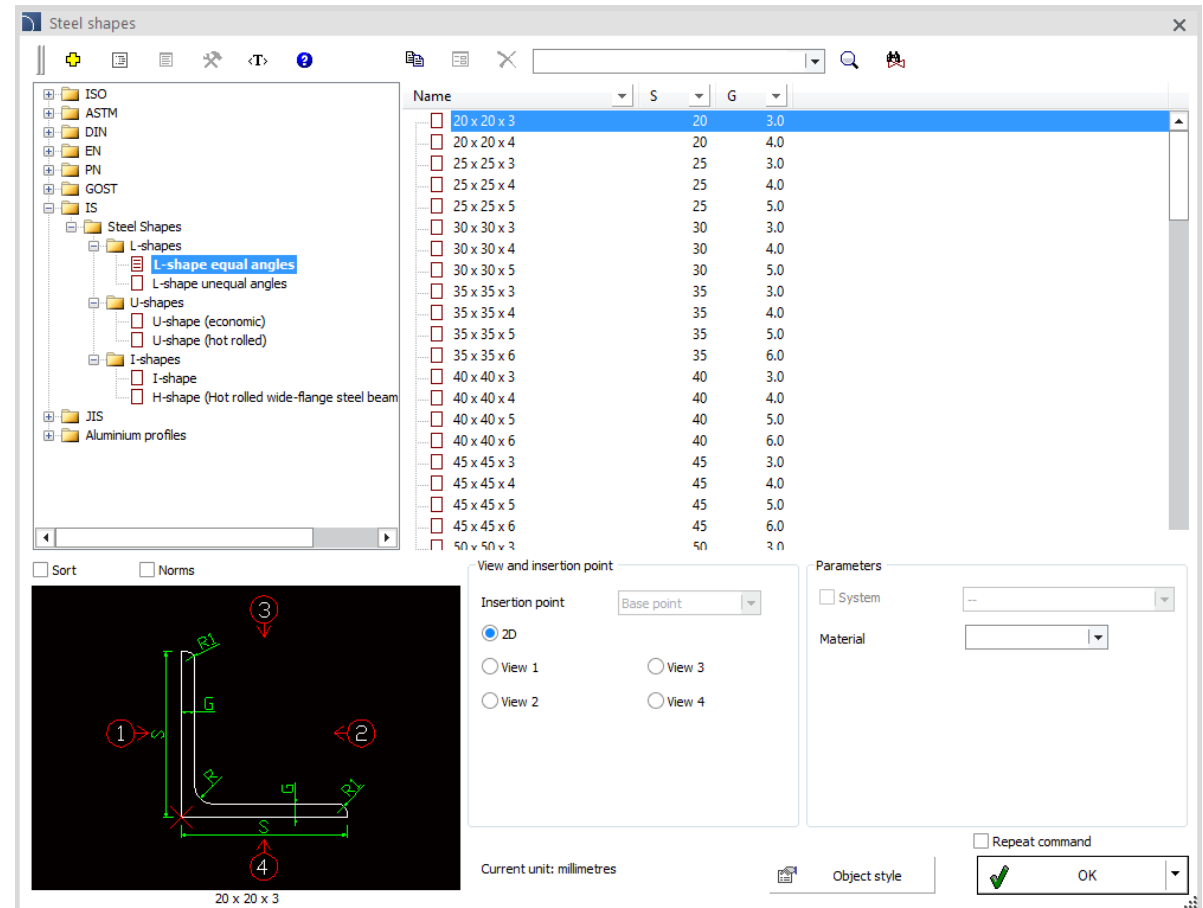
The busbar library is parametric, so by simply entering any dimensions, the library can be independently extended by users with additional types and sizes. As a result, system components from any manufacturer can be used in projects.



## ✓ CADprofi Mechanical – Indian Standards

Elements of the Indian Industry Standard (IS) have been introduced to the program libraries, including:

- Head bolts: hexagonal, cylindrical, square, countersunk, construction bolts, shoulder bolts.
- Rolled head screws.
- Steel shapes (L-Shapes, U-Shapes, I-Shapes).

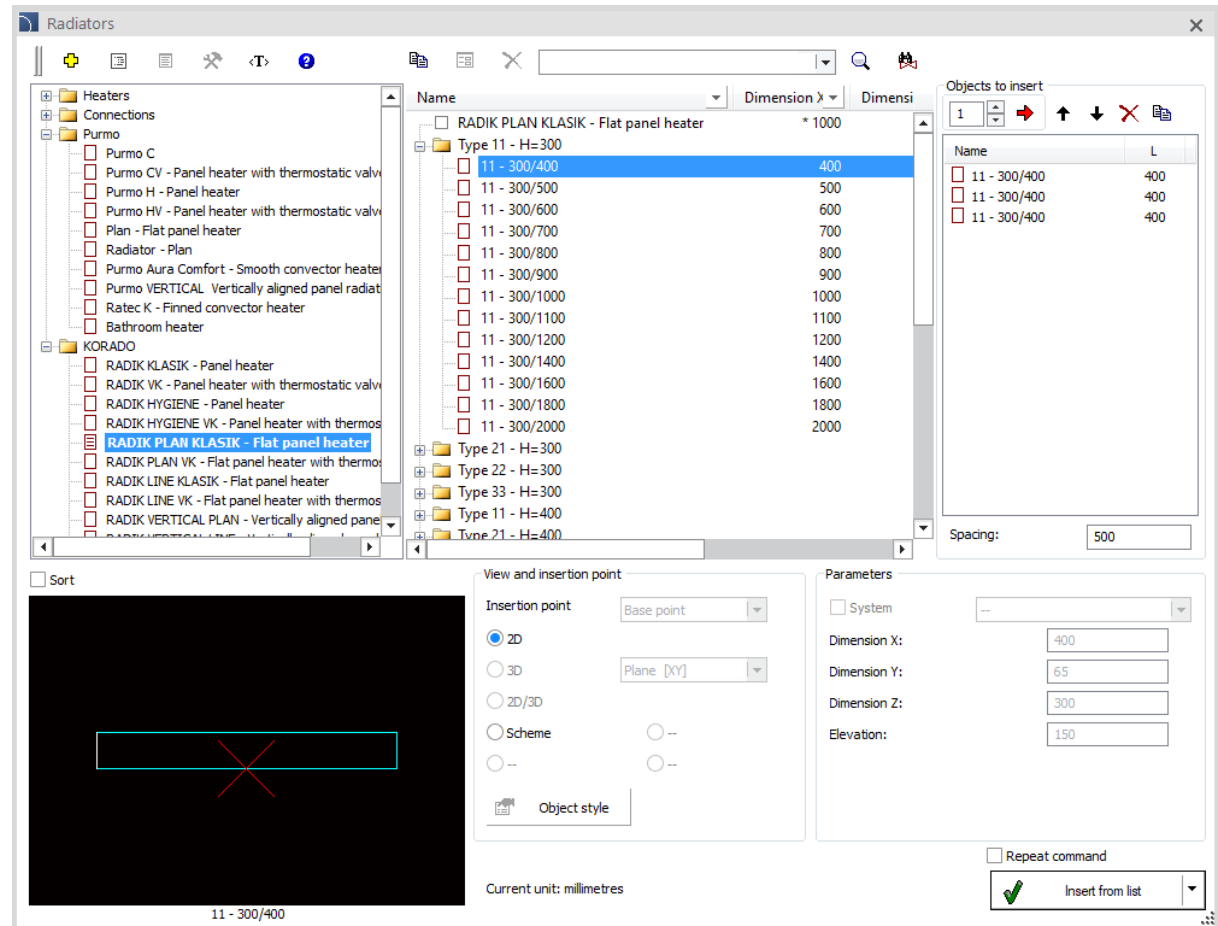




# CADprofi

## ✓ CADprofi HVAC & Piping –Purmo and KORADO radiators

KORADO heaters have been added to CADprofi HVAC & Piping libraries and Purmo heaters have been updated.





# CADprofi

## ✓ CADprofi HVAC & Piping – HAWLE fittings

HAWLE water fittings have been added to CADprofi HVAC & Piping libraries.



The screenshot shows the 'Parametrical armature' software interface. On the left is a tree view of fitting categories, with 'Reducing valve' selected. The main area displays a table of fittings with columns for Name, L, H, C, PN, and Manufac. The 'Hawle-PN16' folder is expanded, showing a list of fittings. The 'DN150x80' fitting is highlighted in blue. Below the table is a technical drawing of the selected fitting, showing dimensions L, H, C, and PN, and the label 'DN150x80'. On the right side of the interface, there are settings for 'View and insertion point', including 'Insertion point' (Point 1), 'System' (checked), 'Supply' (red), 'View 1' (selected), 'Start element', 'End element', 'Insert reducer' (checked), and 'Repeat command' (unchecked). The 'Current unit: millimetres' is displayed at the bottom.

Name	L	H	C	PN	Manufac
DN100x80	190	373	220	PN16	
DN125x100	200	450	250	PN16	
DN150x100	210	462	285	PN16	
DN200x150	230	563	340	PN16	
DN250x200	250	670	405	PN16	
DN300x250	270	753	460	PN16	
Hawle-PN16					
4150					
DN100x65	185	328	220	PN16	Hawle
DN100x80	200	336	220	PN16	Hawle
DN125x80	200	336	250	PN16	Hawle
DN125x100	220	373	250	PN16	Hawle
DN150x80	200	336	285	PN16	Hawle
DN150x100	220	373	285	PN16	Hawle
DN200x100	220	373	340	PN16	Hawle
DN200x150	285	462	340	PN16	Hawle
DN250x150	285	462	405	PN16	Hawle
DN250x200	340	563	405	PN16	Hawle
DN300x150	285	462	460	PN16	Hawle
DN300x200	340	563	460	PN16	Hawle
DN300x250	400	563	460	PN16	Hawle



# CADprofi

## ✓ CADprofi HVAC & Piping –SMAY outlets

Outlets command has been extended with SMAY company outlets.



The screenshot shows the 'Outlets' software window. On the left is a tree view of outlet types, with 'Slotted outlet 3' selected. The main area displays a table of outlets:

Name	D	Capacity	Manufac
Slotted outlet 3			
600	160.0	270	
750	160.0	306	
900	160.0	342	
1050	160.0	378	
1200	160.0	414	
1350	160.0	432	
1500	160.0	468	
1650	160.0	558	
1800	160.0	594	
1950	160.0	612	
Smay			
NSW			
NSW-N-3-800/S3I-2-160	200.0		Smay
NSW-N-3-1000/S3I-2-160	200.0		Smay
NSW-N-3-1500/S3I-2-160	200.0		Smay
NSW-N-3-2000/S3I-2-160	200.0		Smay

Below the table is a preview window showing a 2D view of the selected outlet. The preview includes dimensions: D1, D2, L, and H. The current unit is millimetres.

On the right side, there is an 'Objects to insert' panel with a table:

Name	L
NSW-N-3-1500/S3I-2-160	1500
NSW-N-3-1500/S3I-2-160	1500

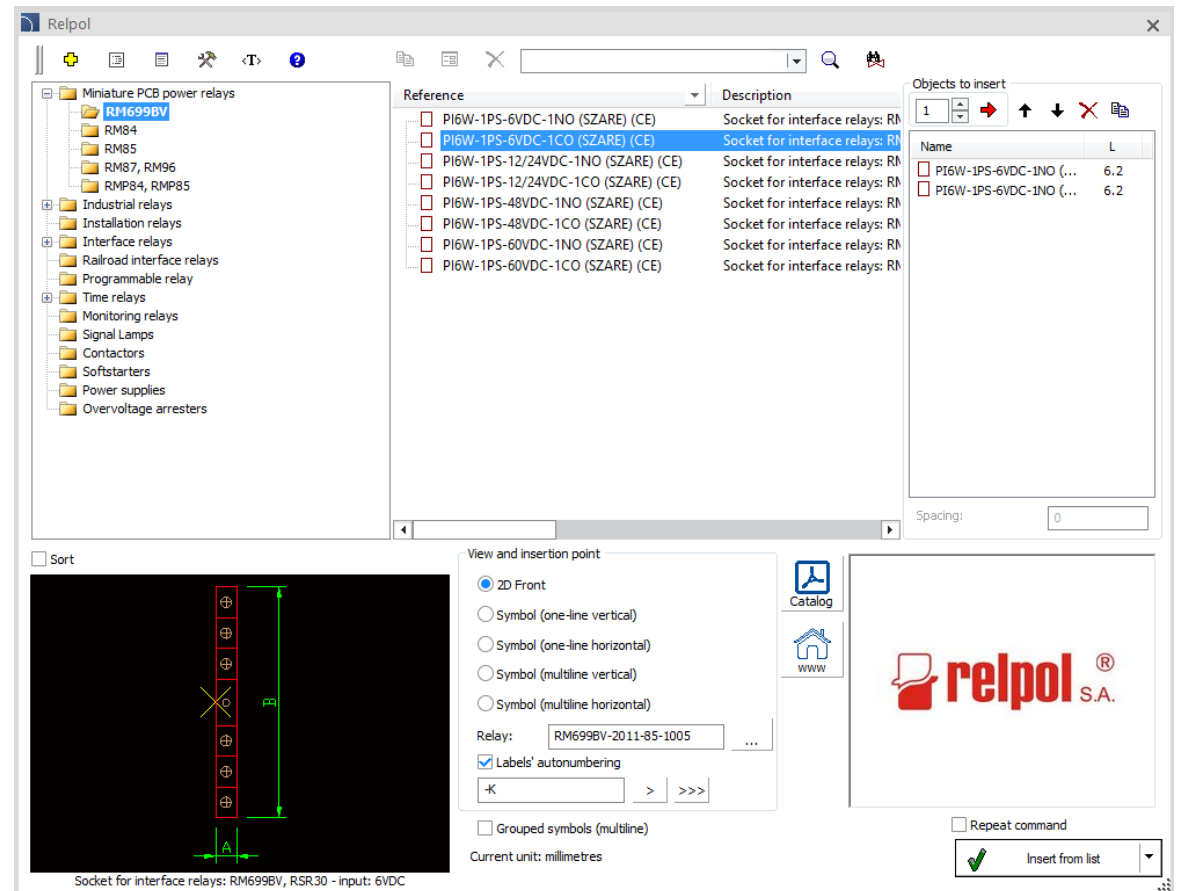
Below this panel is a 'Spacing' field set to 3000.

At the bottom right, there are fields for 'Article' (NSW-N-3-1500/S3I-2-160), 'Manufacturer' (Smay), 'Reference', 'Capacity [m3/h]', and 'Flow [m3/h]'. There is also a 'Repeat command' checkbox and an 'Insert from list' button.

## ✓ New Relpol library

New library available in CADprofi program contains Relpol Electric products, including:

- Miniature, industrial, installation, interface, railroad, programmable, time and monitoring relays.
- Signal lamps.
- Contactors.
- Softstarters.
- Power supplies.
- Overvoltage arresters.

**Reference**

Reference	Description
<input type="checkbox"/> PI6W-1PS-6VDC-1NO (SZARE) (CE)	Socket for interface relays: RM
<input checked="" type="checkbox"/> PI6W-1PS-6VDC-1CO (SZARE) (CE)	Socket for interface relays: RM
<input type="checkbox"/> PI6W-1PS-12/24VDC-1NO (SZARE) (CE)	Socket for interface relays: RM
<input type="checkbox"/> PI6W-1PS-12/24VDC-1CO (SZARE) (CE)	Socket for interface relays: RM
<input type="checkbox"/> PI6W-1PS-48VDC-1NO (SZARE) (CE)	Socket for interface relays: RM
<input type="checkbox"/> PI6W-1PS-48VDC-1CO (SZARE) (CE)	Socket for interface relays: RM
<input type="checkbox"/> PI6W-1PS-60VDC-1NO (SZARE) (CE)	Socket for interface relays: RM
<input type="checkbox"/> PI6W-1PS-60VDC-1CO (SZARE) (CE)	Socket for interface relays: RM

**Objects to insert**

Name	L
<input type="checkbox"/> PI6W-1PS-6VDC-1NO (...)	6.2
<input checked="" type="checkbox"/> PI6W-1PS-6VDC-1NO (...)	6.2

Spacing: 0

Sort

**View and insertion point**

- 2D Front
- Symbol (one-line vertical)
- Symbol (one-line horizontal)
- Symbol (multiline vertical)
- Symbol (multiline horizontal)

Relay: RM699BV-2011-85-1005 ...

Labels' autonumbering

-K > >>>

Grouped symbols (multiline)

Current unit: millimetres

Repeat command

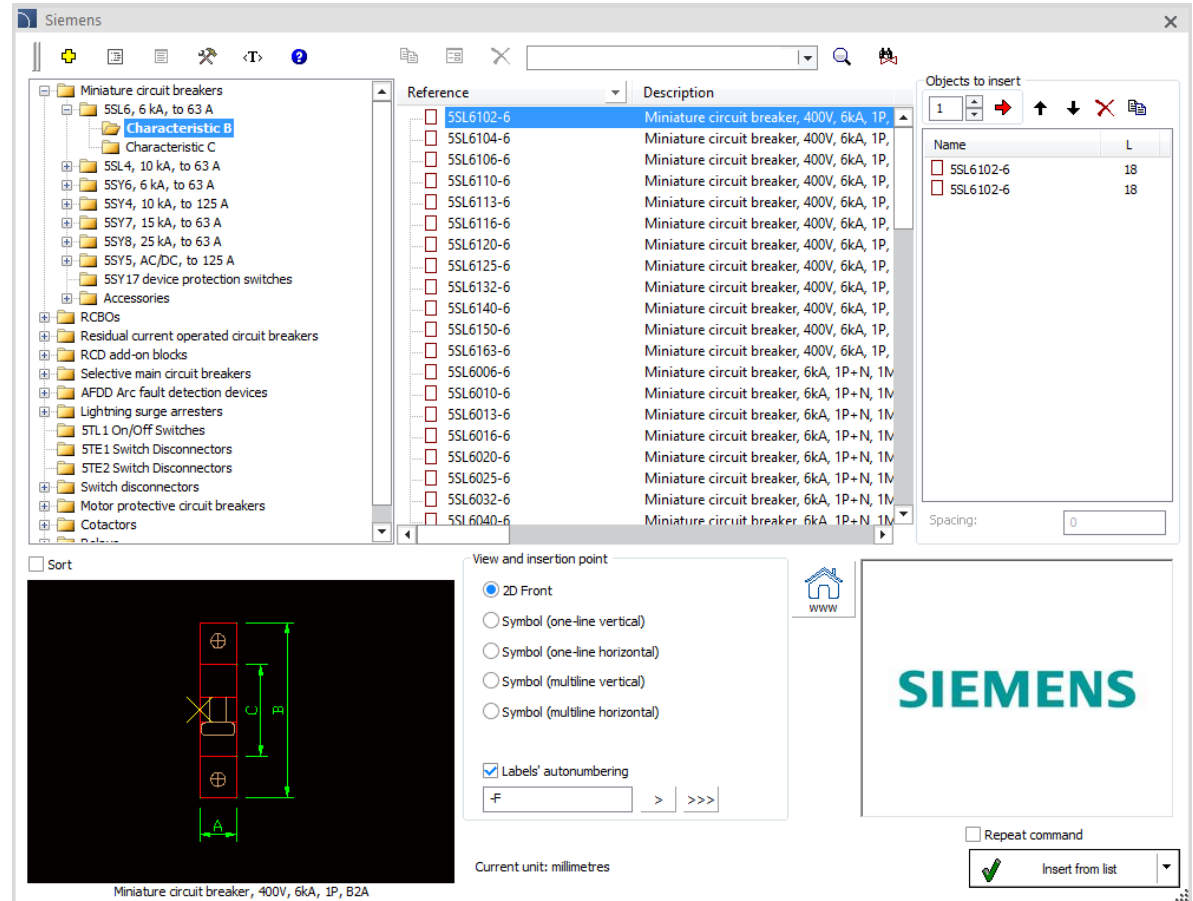
Insert from list

Socket for interface relays: RM699BV, RSR30 - input: 6VDC

## ✓ New Siemens library

New library available in CADprofi program contains Siemens products, including:

- Miniature circuit breakers.
- RCBOs
- Residual current operated circuit breakers.
- RCD add-on blocks.
- Selective main circuit breakers.
- AFDD Arc fault detection devices.
- Lightning surge arresters.
- 5TL1 On/Off switches.
- 5TE1/5TE2 switch disconnectors.
- Switch disconnectors.
- Motor protective circuit breakers.
- Contactors

The screenshot displays the Siemens library interface in CADprofi. The left pane shows a tree view of the library structure, including categories like Miniature circuit breakers, RCBOs, and Residual current operated circuit breakers. The middle pane shows a list of selected items with their reference numbers and descriptions. The right pane shows the 'Objects to insert' list, which includes the selected items. The bottom pane shows a preview of a miniature circuit breaker symbol with dimensions A, B, C, and D. The 'View and insertion point' section allows for selecting the view (2D Front) and the insertion point (Symbol (one-line vertical)). The 'Labels' autonumbering checkbox is checked, and the current unit is set to millimetres. The Siemens logo is visible in the bottom right corner.

Reference	Description
5SL6102-6	Miniature circuit breaker, 400V, 6kA, 1P
5SL6104-6	Miniature circuit breaker, 400V, 6kA, 1P
5SL6106-6	Miniature circuit breaker, 400V, 6kA, 1P
5SL6110-6	Miniature circuit breaker, 400V, 6kA, 1P
5SL6113-6	Miniature circuit breaker, 400V, 6kA, 1P
5SL6116-6	Miniature circuit breaker, 400V, 6kA, 1P
5SL6120-6	Miniature circuit breaker, 400V, 6kA, 1P
5SL6125-6	Miniature circuit breaker, 400V, 6kA, 1P
5SL6132-6	Miniature circuit breaker, 400V, 6kA, 1P
5SL6140-6	Miniature circuit breaker, 400V, 6kA, 1P
5SL6150-6	Miniature circuit breaker, 400V, 6kA, 1P
5SL6163-6	Miniature circuit breaker, 400V, 6kA, 1P
5SL6006-6	Miniature circuit breaker, 6kA, 1P+N, 11V
5SL6010-6	Miniature circuit breaker, 6kA, 1P+N, 11V
5SL6013-6	Miniature circuit breaker, 6kA, 1P+N, 11V
5SL6016-6	Miniature circuit breaker, 6kA, 1P+N, 11V
5SL6020-6	Miniature circuit breaker, 6kA, 1P+N, 11V
5SL6025-6	Miniature circuit breaker, 6kA, 1P+N, 11V
5SL6032-6	Miniature circuit breaker, 6kA, 1P+N, 11V
5SL6040-6	Miniature circuit breaker, 6kA, 1P+N, 11V



# CADprofi

## ✓ CADprofi – program optimization and acceleration

In the current version of the program, many code optimizations have been introduced, thanks to which the opening of dialog boxes with symbol libraries has been accelerated several times, and additionally some CADprofi commands have been significantly accelerated (e.g. isolating 2D fittings, inserting flanges into 2D fittings, generating energy distribution diagrams). The code optimization affects CAD programs based on the arx/zrx /grx/brx technology.

In some commands, additional options have been introduced, e.g. the ability to specify any block names (when adding symbols to the program yourself), the ability to lock the scaling of symbols in graphic legends, and others.







# CADprofi

✓ Update of manufacturers' libraries:





# CADprofi

## ✓ Adjustment to many base CAD programs

CADprofi 2020.15 has been adjusted to work with latest CAD programs, including: 4MCAD 21, ArCADia 12, INTERsoft IntelliCAD 2020, ZWCAD 2021.

CADprofi 2020 currently works with many base CAD programs including: AutoCAD (since the 2000 version), BricsCAD, GstarCAD, IntelliCAD, progeCAD, ZWCAD, ARES Commander Edition and others.

The logo for AutoCAD, with the word "AutoCAD" in a bold, red, sans-serif font.

The logo for ZWCAD, with the word "ZWCAD" in a bold, blue, sans-serif font. The "W" has a green leaf-like shape above it.

The logo for GstarCAD, with "Gstar" in blue and "CAD" in yellow. Below it, the text "An Alternative CAD System" is written in a smaller blue font.

The logo for BricsCAD, featuring a stylized blue "B" shape above the word "BRICSCAD" in a bold, black, sans-serif font.

The logo for progeSOFT, featuring a blue globe with a yellow vertical bar and a yellow triangle on top, above the word "progeSOFT" in a blue, sans-serif font.

The logo for IntelliCAD, featuring a purple diamond shape with a yellow vertical bar and a yellow triangle on top, above the word "IntelliCAD" in a bold, purple, sans-serif font.

The logo for Gräbert ARES Commander, featuring a red stylized flame or wing shape to the left of the text "Gräbert ARES® Commander" in a black, sans-serif font.



**CADprofi**



**CADprofi 2020.03/05**

## ✓ CADprofi – object placement (command extension)

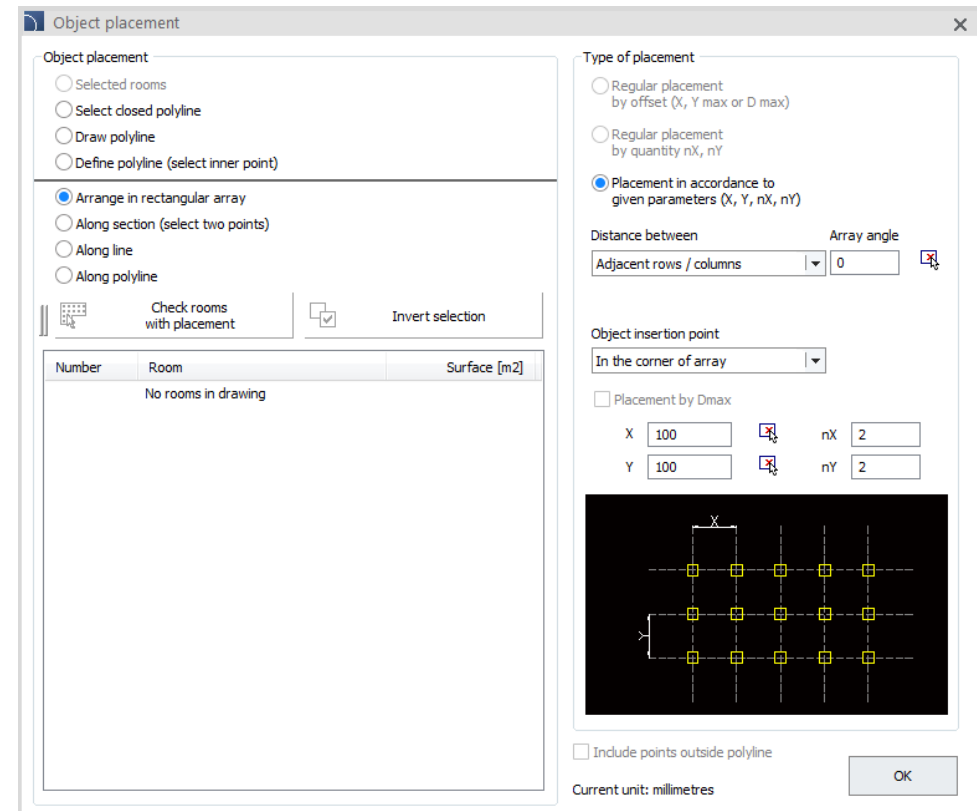
The *Arrange* command allows user to quickly arrange objects in selected rooms. It is possible to arrange objects in selected rooms, in the indicated boundary (polyline) or in the newly drawn boundary. In the latest version of the program, the command has been extended with the possibility of placing objects:

- in rectangular array,
- along indicated points,
- along line or polyline.



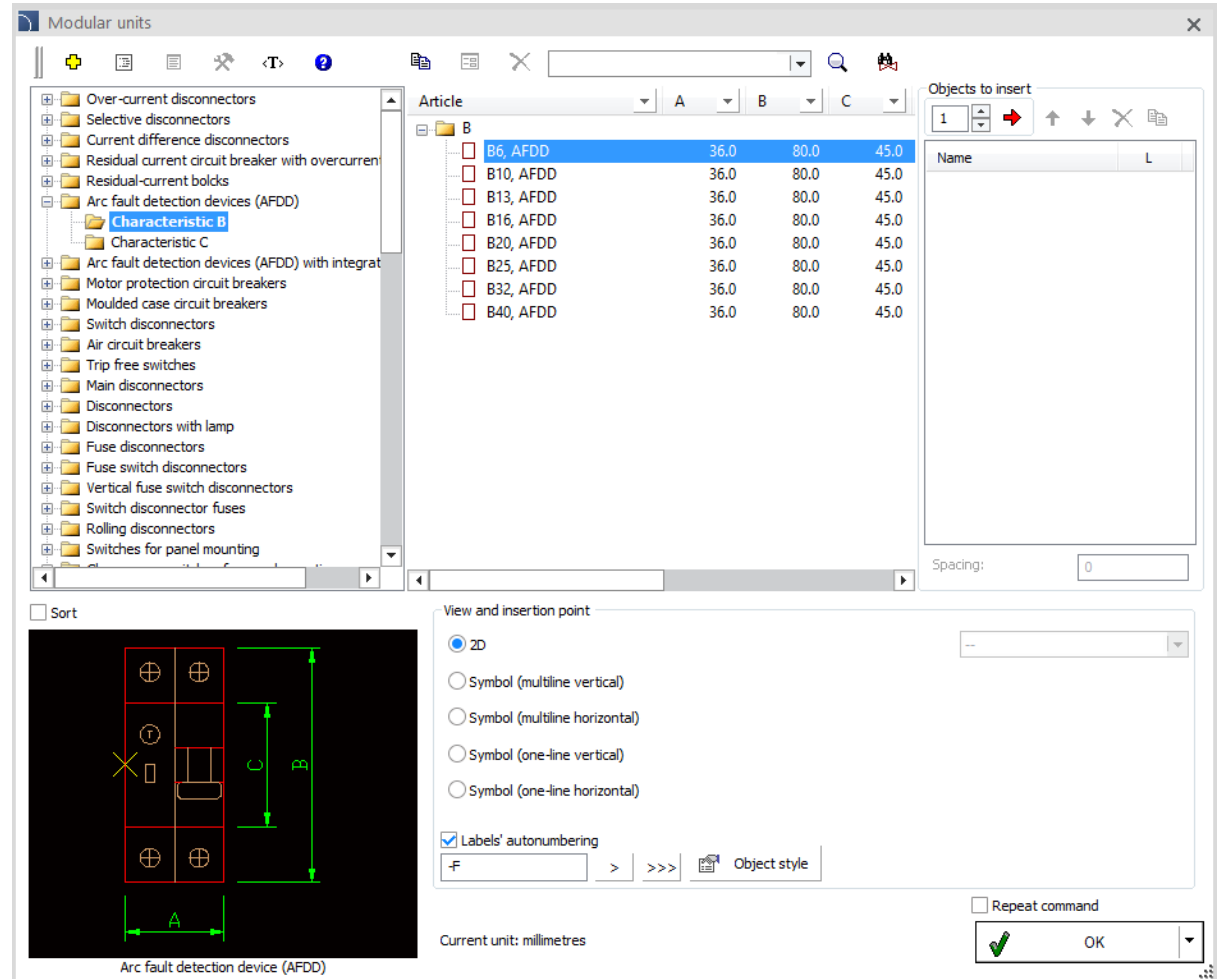
[Watch video](#)

The *Arrange* command significantly speeds up the insertion of fire detectors, sprinklers, lighting and other objects.



## ✓ CADprofi Electrical – update of modular apparatus library

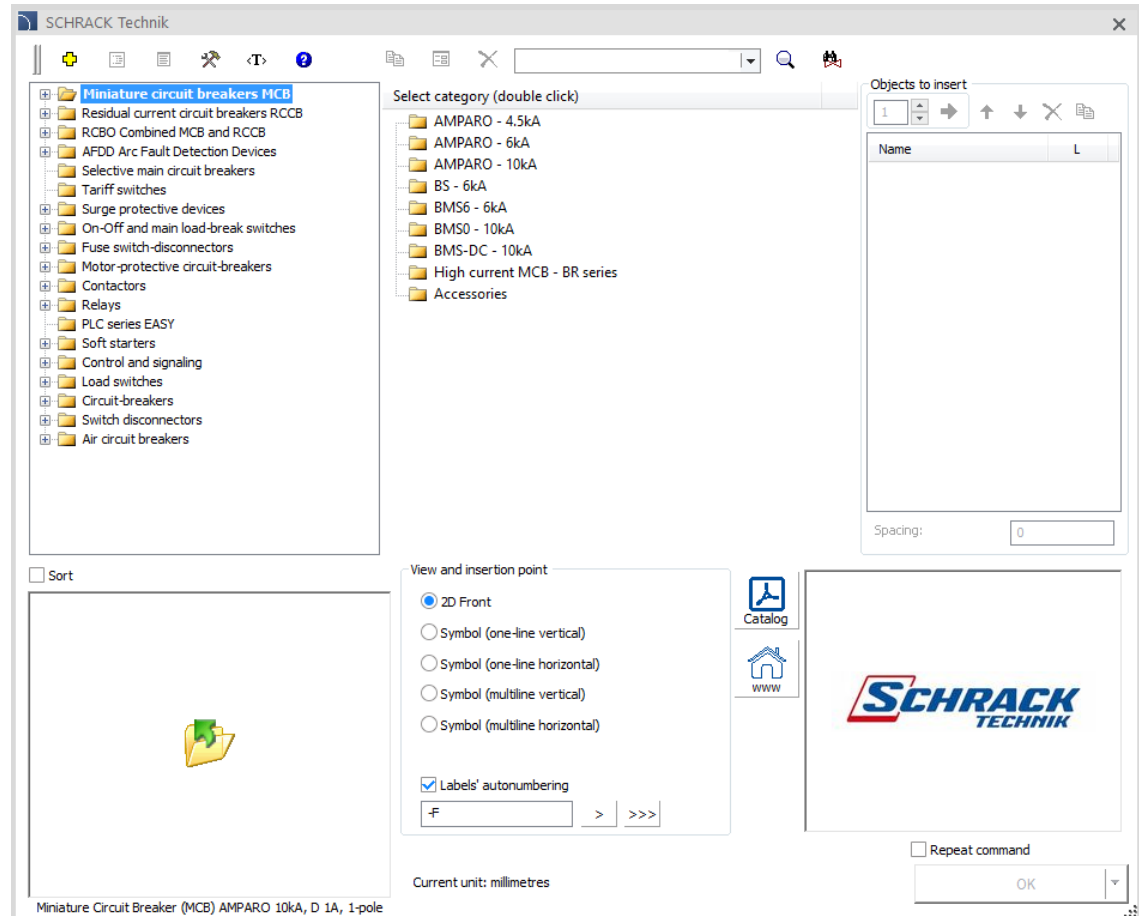
Apparatus library available in CADprofi Electrical has been extended with arc fault detection devices and arc fault detection devices with integrated RCBO (AFDD).



## ✓ New Schrack Technik library

New library available in CADprofi program contains Schrack Technik products, including

- Miniature and residual circuit breakers.
- Arc fault detection devices.
- RCBO Combined MCB and RCCB
- AFDD Arc Fault Detection Devices
- Selective main circuit breakers
- Tariff switches
- Surge protective devices
- On-Off and main load-break switches
- Fuse switch-disconnectors.
- Motor-protective circuit-breakers.
- Relays
- PLC series EASY
- Soft starters
- Control and signalling
- Load switches.
- Soft starters.
- Control and signalling.
- Load switches.
- Circuit and air circuit breakers.
- Switch disconnectors.

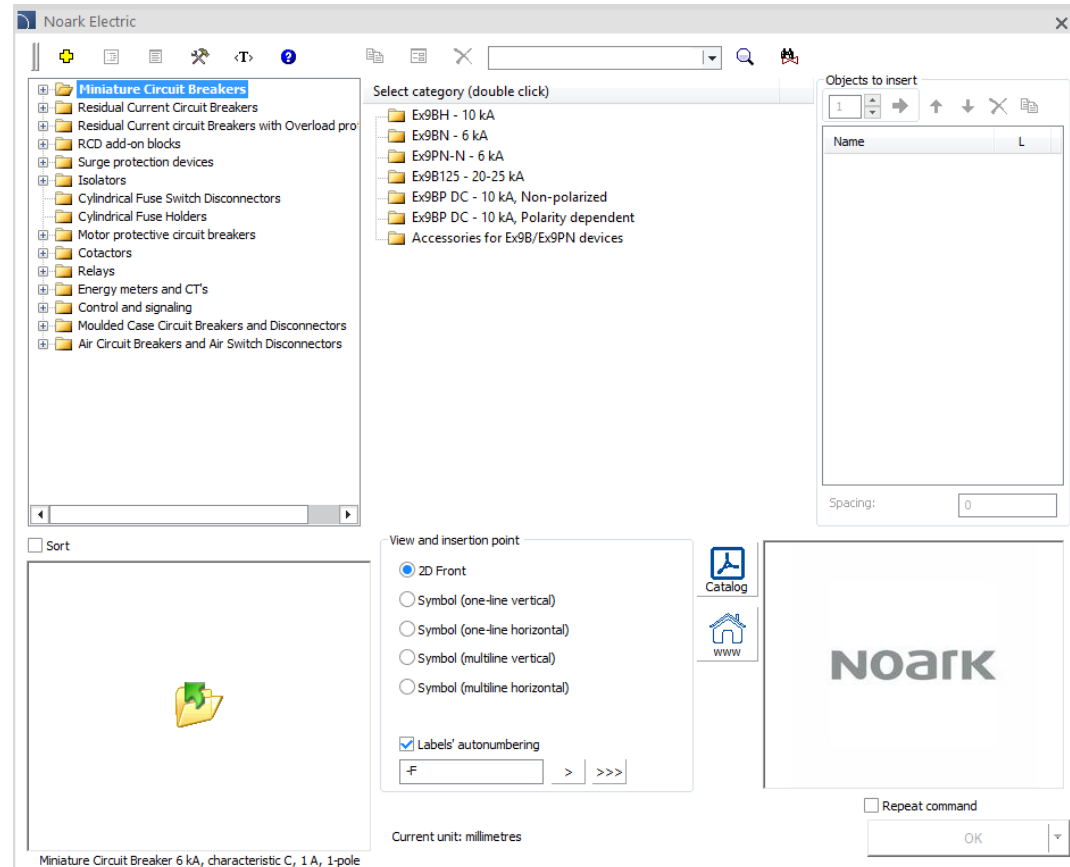


## ✓ New NOARK Electric library

New library available in CADprofi program contains NOARK Electric products, including:

- Miniature and residual circuit breakers.
- RCD add-on blocks.
- Surge protection devices.
- Isolators.
- Motor protective circuit breakers.
- Contactors.
- Relays.
- Energy meters and CT's.
- Control and signalling.
- Moulded case and air circuit breakers and disconnectors.

# NOARK

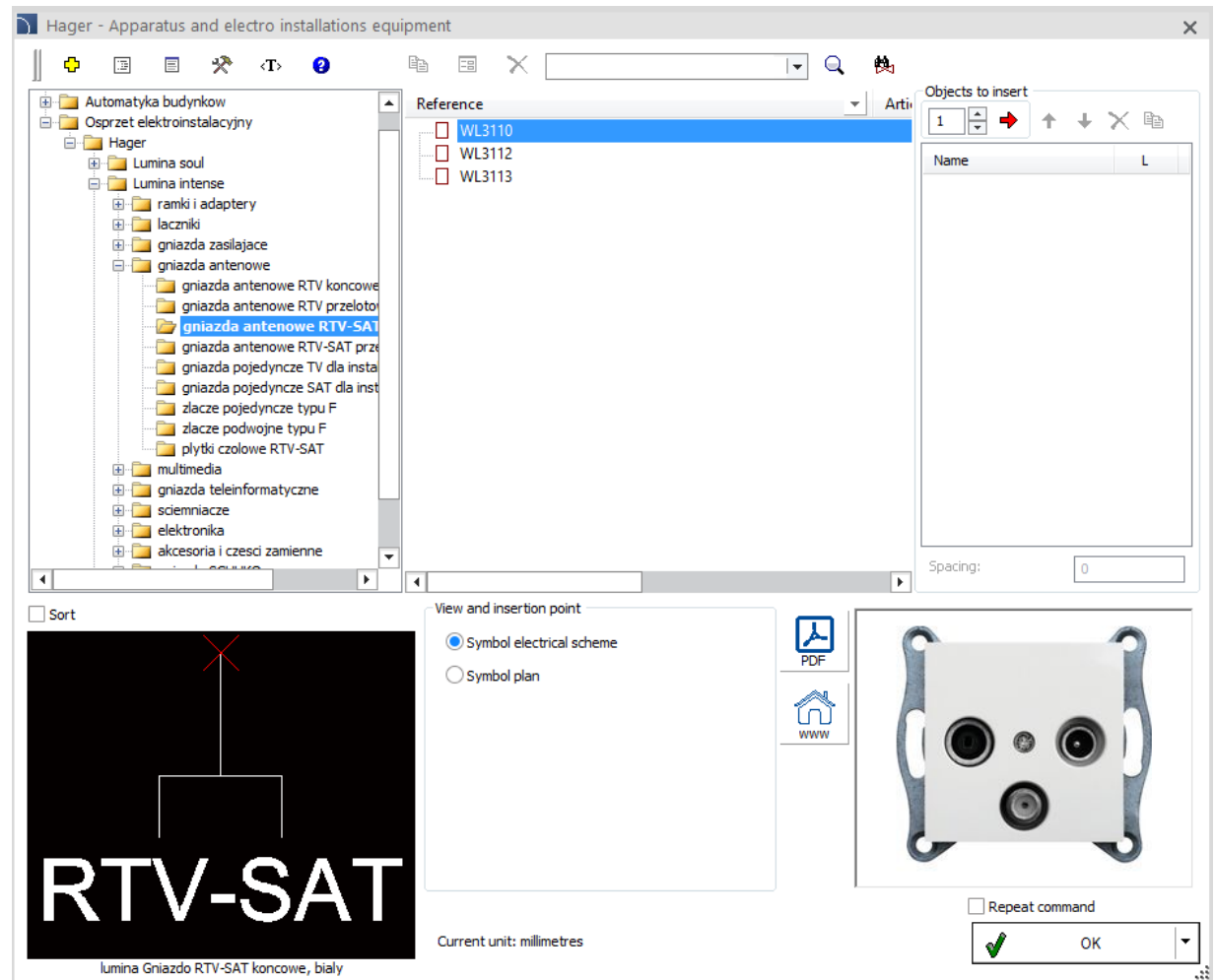


## ✓ Update of Hager library

Hager library has been updated with:

- a new product tree structure that is more intuitive and speeds up device search,
- the latest series of devices with the QuickConnect system,
- an extended library of KNX system building automation products,
- the latest Hager Lumina products.

This library is available in Poland and Ukraine region.







# CADprofi

## ✓ CADprofi HVAC & Piping –Maico Ventilatoren roof blowers

Outlets command has been extended with Maico Ventilatoren roof blowers.



The screenshot shows the 'Outlets' software interface. On the left, a tree view lists various outlet types, with 'Roof blower' selected. The main area displays a table of selected items:

Name	D	Capacity
Roof blower		
160	160.0	1120 m3/h
200	200.0	1420 m3/h
250	250.0	1900 m3/h
315	315.0	5500 m3/h
400	400.0	9000 m3/h
Maico Ventilatoren		
EHD 10	100.0	300 m3/h
EHD 12	125.0	325 m3/h
EHD 15	150.0	550 m3/h
EHD 16	160.0	700 m3/h
EHD 20	200.0	755 m3/h
EHD 25	250.0	825 m3/h
EHD 31	315.0	1160 m3/h

Below the table, there are options for 'View and insertion point' (2D, View 1, View 2), 'System' (checked), and 'Supply air' (selected). A 'Repeat command' checkbox is also present. The current unit is set to millimetres. At the bottom, there is an 'Object style' button and an 'OK' button.

At the bottom left, a technical drawing of a roof blower is shown with dimensions: L1, D, A1, and D1. The drawing is labeled 'EHD 15'.



# CADprofi

✓ Update of manufacturers' libraries:





# CADprofi

## ✓ Adjustment to many base CAD programs

CADprofi 2020.05 has been adjusted to work with latest CAD programs, including: AutoCAD 2021, Ares Commander 2020, ActCAD 2020 (x64) and CMS IntelliCAD 9.2 (x64).

CADprofi 2020 currently works with many base CAD programs including: AutoCAD (since the 2000 version), BricsCAD, GstarCAD, IntelliCAD, progeCAD, ZWCAD, ARES Commander Edition and others.

The logo for AutoCAD, with the word "AutoCAD" in a bold, red, sans-serif font.

The logo for ZWCAD, with the word "ZWCAD" in a bold, blue, sans-serif font. The "W" has a green leaf-like shape above it.

The logo for GstarCAD, with "Gstar" in blue and "CAD" in yellow, followed by the tagline "An Alternative CAD System" in blue.

The logo for BricsCAD, featuring a stylized blue "B" shape above the word "BRICSCAD" in a bold, black, sans-serif font.

The logo for progeSOFT, featuring a blue globe with a yellow vertical bar and a yellow triangle on top, above the word "progeSOFT" in a blue, sans-serif font.

The logo for IntelliCAD, featuring a purple diamond shape with a yellow vertical bar and a yellow triangle on top, above the word "IntelliCAD" in a bold, purple, sans-serif font.

The logo for Gräbert ARES Commander, featuring a red stylized flame or wing shape to the left of the text "Gräbert ARES® Commander" in a black, sans-serif font.



**CADprofi**



# **CADprofi 2020**

Summary of main changes made to the program since the CADprofi 2019.01 version.



# CADprofi

## Table of contents:

- [General commands \(affects all modules\)](#)
- [CADprofi Architectural](#)
- [CADprofi Electrical](#)
- [CADprofi Mechanical](#)
- [CADprofi HVAC & Piping](#)
- [Manufacturers libraries](#)
- [Adjustment to CAD programs](#)

## ✓ CADprofi – object placement

The *Arrange* command allows user to quickly arrange objects in selected rooms. It is possible to arrange objects in selected rooms, in the indicated boundary (polyline) or in the newly drawn boundary. User can arrange objects by regular placement by offset or quantity.

The *Arrange* command significantly speeds up the insertion of fire detectors, sprinklers and other objects.



[Watch video](#)

Object placement
✕

**Object placement**

Selected rooms

Select closed polyline


Draw polyline

Define polyline (select inner point)


Arrange in rectangular array

Along section (select two points)

Along line or polyline



Check rooms with placement



Invert selection

Num...	Room	Surface [m2]
<input checked="" type="checkbox"/>	201 Office	17.13
<input checked="" type="checkbox"/>	202 Office	14.64
<input checked="" type="checkbox"/>	203 Office	14.63
<input checked="" type="checkbox"/>	204 Office	14.23
<input checked="" type="checkbox"/>	205 Office	14.43
<input checked="" type="checkbox"/>	206 Office	14.58
<input checked="" type="checkbox"/>	207 Office	21.96
<input checked="" type="checkbox"/>	208 Office	21.68
<input checked="" type="checkbox"/>	209 Office	29.88
<input checked="" type="checkbox"/>	210 Office	21.99
<input checked="" type="checkbox"/>	211 Office	22.22
<input checked="" type="checkbox"/>	212 Office	22.02
<input checked="" type="checkbox"/>	213 Office	22.21
<input checked="" type="checkbox"/>	214 Office	29.33
<input checked="" type="checkbox"/>	215 Hall	14.18
<input checked="" type="checkbox"/>	216 Toilet	7.84
<input checked="" type="checkbox"/>	217 Toilet	8.26
<input checked="" type="checkbox"/>	218 Office	20.64

**Type of placement**

Regular placement by offset (X, Y max lub D max)

Regular placement by quantity nX, nY

Placement in accordance to given length (X, Y)

Arrange in accordance to Placement angle

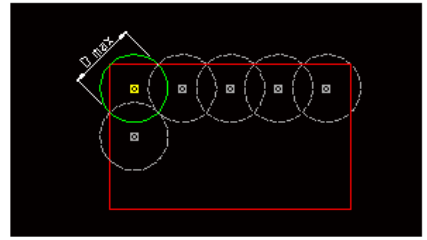
Longest edge 0

Object insertion point

In the middle of the zone

Placement by Dmax

Dmax  ✕ nX



Include points outside polyline


Current unit: millimetres

OK

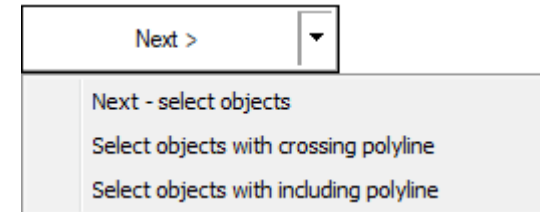


# CADprofi

## ✓ CADprofi – specifications (command extension)

The *Bill of Materials*  command has been extended with the possibility to include select objects with a crossing polyline or an enclosing polyline. Thanks to this it is possible to obtain specifications from specific areas in the drawing.

In addition, it is possible to select objects from specific rooms.

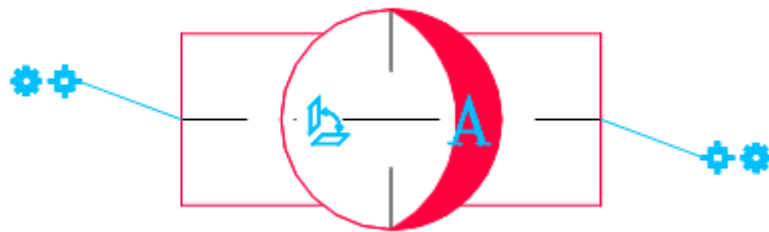


[Watch video](#)

## ✓ CADprofi – side views and additional Z+/Z- views for 2D fittings

2D fittings side views for tees and offsets as well as additional views of Z+/Z- for tees and pipe crosses with reducers have been added to the library.

The new fittings are fully editable using the CADprofi program commands.



Pipes - general views

Installation and drawing

Installation	Supply
Type	Cross (asymmetric) (side)

Manufacturer and type

Manufacturer	--
Type	
Product	

Dimensions

Diameter: D	114.3
Diameter: D3	114.3
Diameter: D4	114.3

Length automatically

Length: L1	105
Length: L2	105
Length: L3	105

Angle: Alfa 90

Draw a symbol 2D

Options

Insert point

- branching (1)
- axis (2)
- edge (3)

Type

- view from right (R)
- view from left (L)

Installation fit

Insulation thickness 0

Description

Fixed dimensions

Apply polar tracking when drawing

Insert multiple

Sort

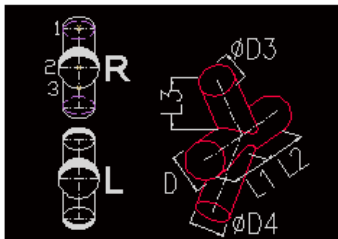
Current unit: millimetres

Copy dimensions >

OK

User objects defining

- Special fittings
  - Tee-piece (asymmetric)
  - Tee-piece (asymmetric) Z+/Z-
  - Tee-piece (asymmetric) (side)
  - Tee-piece with reducer
  - Tee-piece with reducer Z+/Z-
  - Tee-piece with reducer (side)
  - Reducing tee-piece
  - Reducing tee-piece Z+/Z-
  - Reducing tee-piece (side)
  - Cross (asymmetric)
  - Cross (asymmetric) Z+/Z-
  - Cross (asymmetric) (side)**
  - Cross with reducer
  - Cross with reducer Z+/Z-
  - Cross with reducer (side)
  - Reducing cross
  - Reducing cross Z+/Z-
  - Reducing cross (side)
  - Tee-piece branch
  - Tee-piece branch Z+/Z-
  - Tee-piece branch (oblique)
  - Tee-piece branch (oblique) Z+/Z-
  - Pipe truncated
- Pipes flex








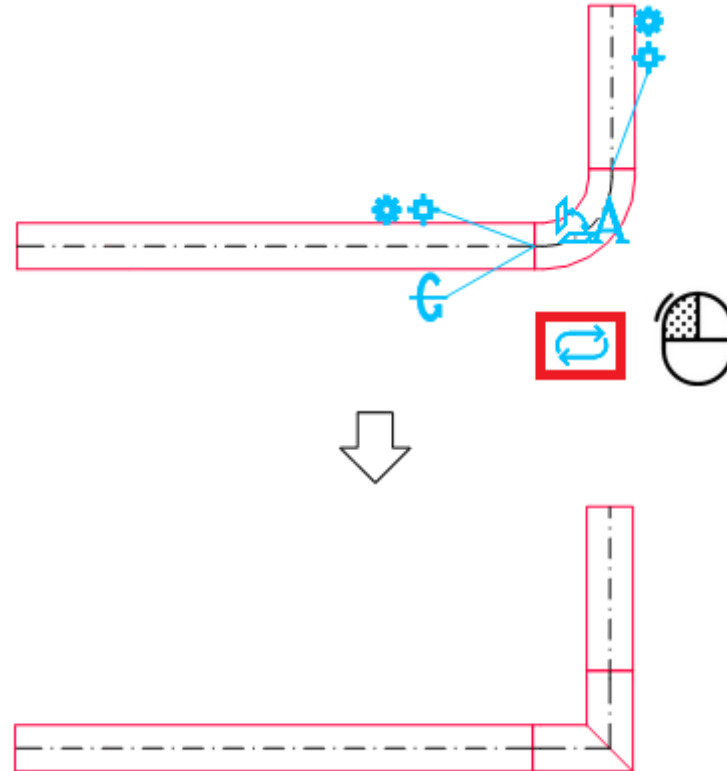
# CADprofi

## ✓ CADprofi – quick change of fitting type

The *Quick Edit* command has been extended with the possibility to quickly change the fitting type .



[Watch movie](#)





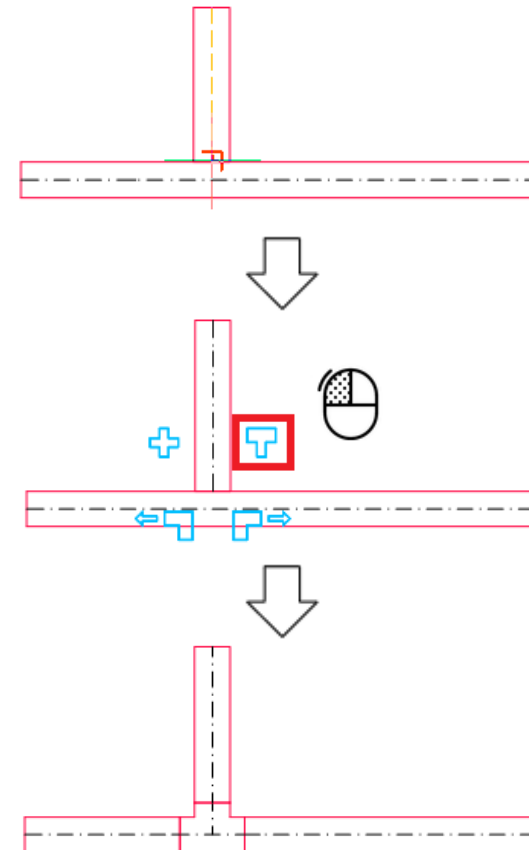
# CADprofi

## ✓ CADprofi – quick 2D connections

When drawing lines / ducts, it is now possible to automatically connect them by using elbows, bends, T-pieces or cross-pieces.



[Watch movie](#)



## ✓ CADprofi Architectural – Windows, doors and garage doors– functionality extension

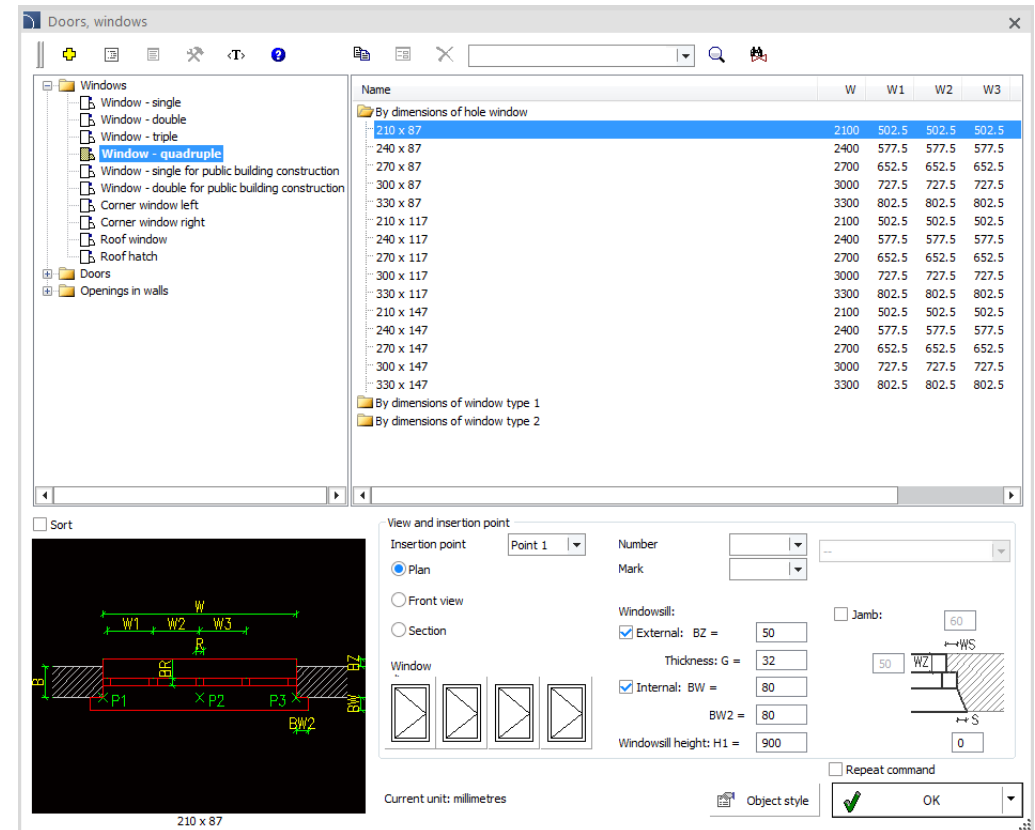
Windows available in the *Doors, windows* command have been extended with the possibility of specifying:

- Jamb dimensions, with an additional optional option of determining wall slant,
- windowsill dimensions, with an optional option of turning them off,
- window diagram (direction of opening of window wings).

Additionally the library of doors and gates has been rebuilt and it's functionality has been expanded. Program now allows user to visually choose models of door leaves, thanks to which user can choose and insert doors with the desired parameters much faster.



[Watch video](#)



Name	W	W1	W2	W3
<b>By dimensions of hole window</b>				
210 x 87	2100	502.5	502.5	502.5
240 x 87	2400	577.5	577.5	577.5
270 x 87	2700	652.5	652.5	652.5
300 x 87	3000	727.5	727.5	727.5
330 x 87	3300	802.5	802.5	802.5
210 x 117	2100	502.5	502.5	502.5
240 x 117	2400	577.5	577.5	577.5
270 x 117	2700	652.5	652.5	652.5
300 x 117	3000	727.5	727.5	727.5
330 x 117	3300	802.5	802.5	802.5
210 x 147	2100	502.5	502.5	502.5
240 x 147	2400	577.5	577.5	577.5
270 x 147	2700	652.5	652.5	652.5
300 x 147	3000	727.5	727.5	727.5
330 x 147	3300	802.5	802.5	802.5
<b>By dimensions of window type 1</b>				
<b>By dimensions of window type 2</b>				

**Configuration Panel:**

- View and insertion point: Insertion point: Point 1, Number: [ ], Mark: [ ]
- Plan view selected.
- Windowsill: External: BZ = 50, Internal: BW = 80, BW2 = 80, Windowsill height: H1 = 900.
- Jamb: 60.
- Thickness: G = 32.
- Repeat command:
- Object style:  OK
- Current unit: millimetres



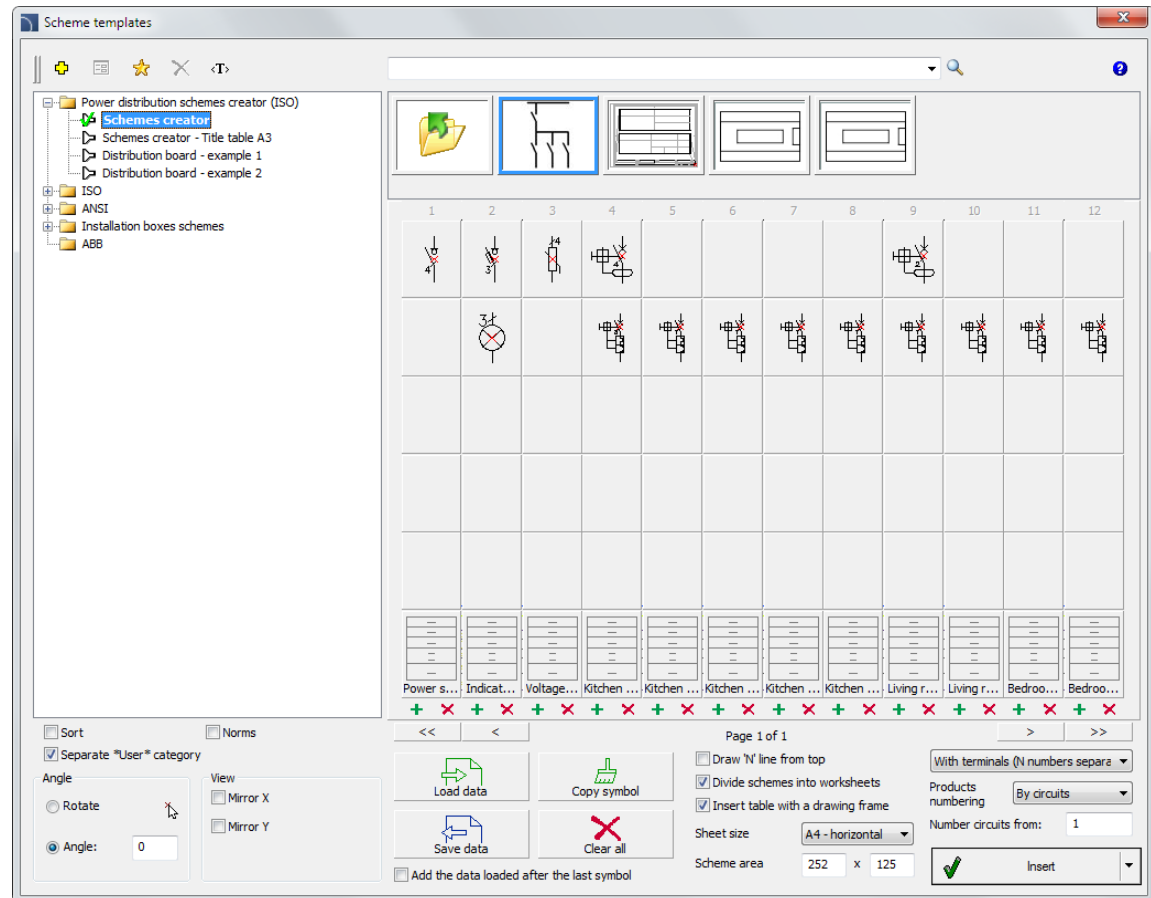
# CADprofi

## ✓ CADprofi Electrical – power distribution schemes creator

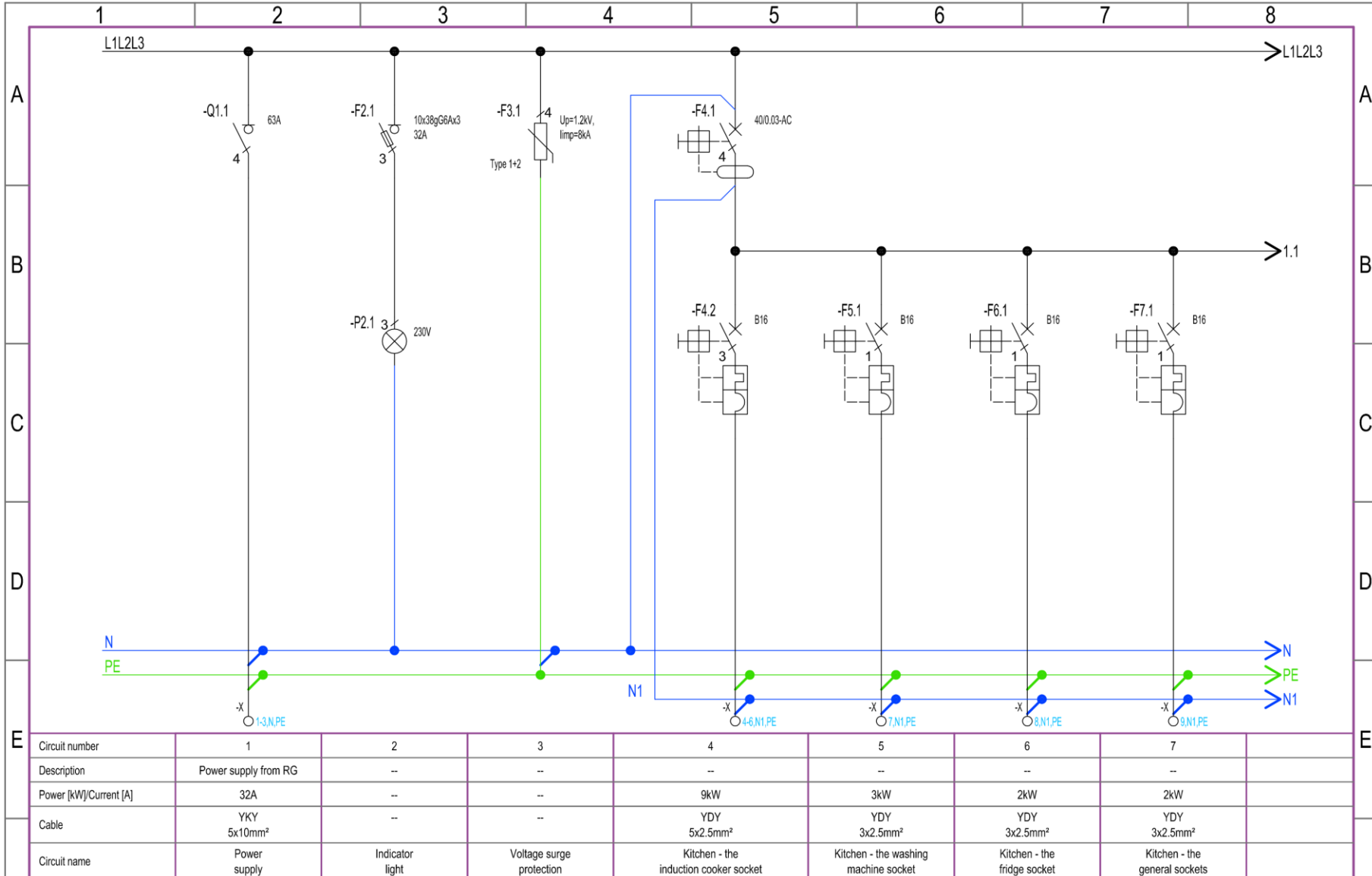
Schemes creator allows user to select products from the modular apparatus library and place them in certain positions in the scheme. This way you can quickly and easily define the logical structure of the whole power distribution by focusing only on the selection of products, rather than draw it manually.



[Watch movie](#)



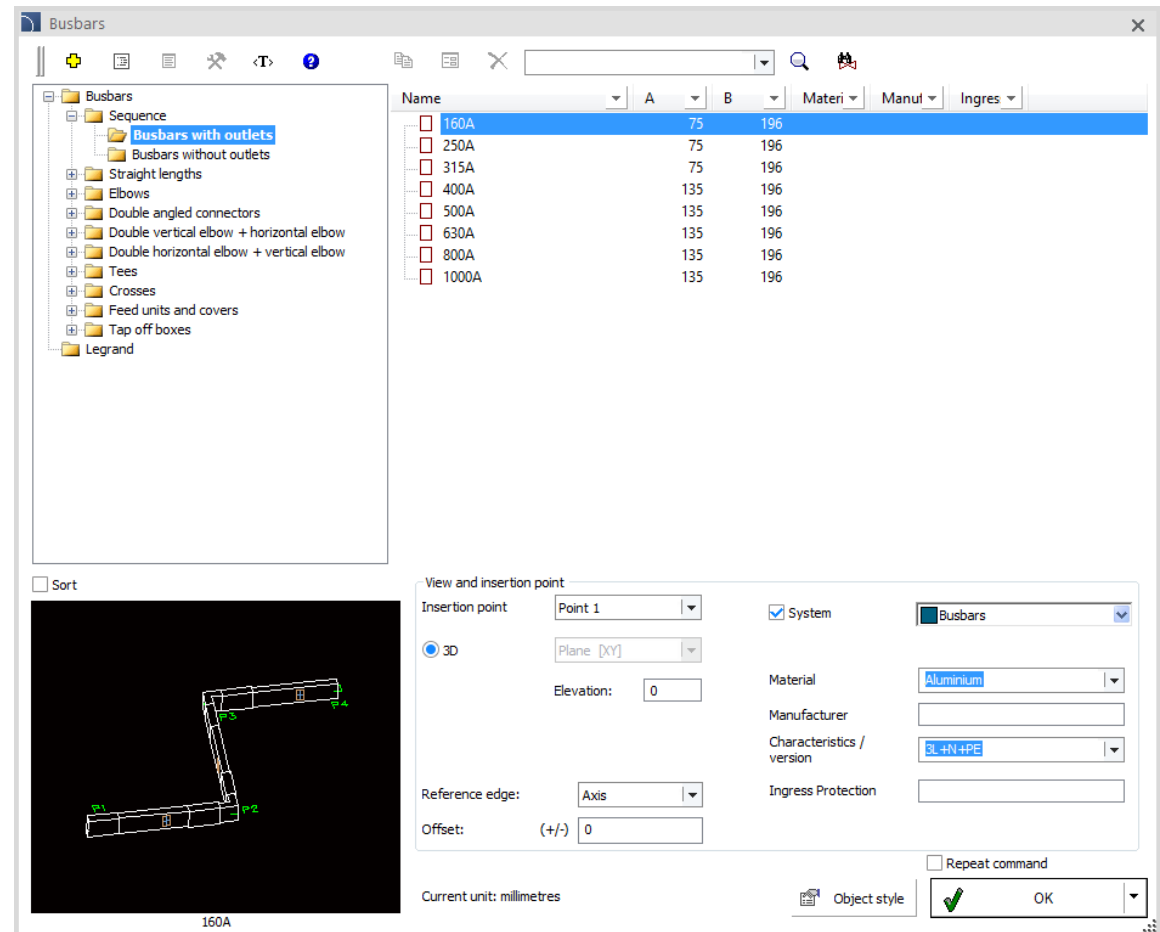
## Example: Switchgear scheme automatically generated by the "Schemes creator" in the CADprofi program



## ✓ CADprofi Electrical – Busbars

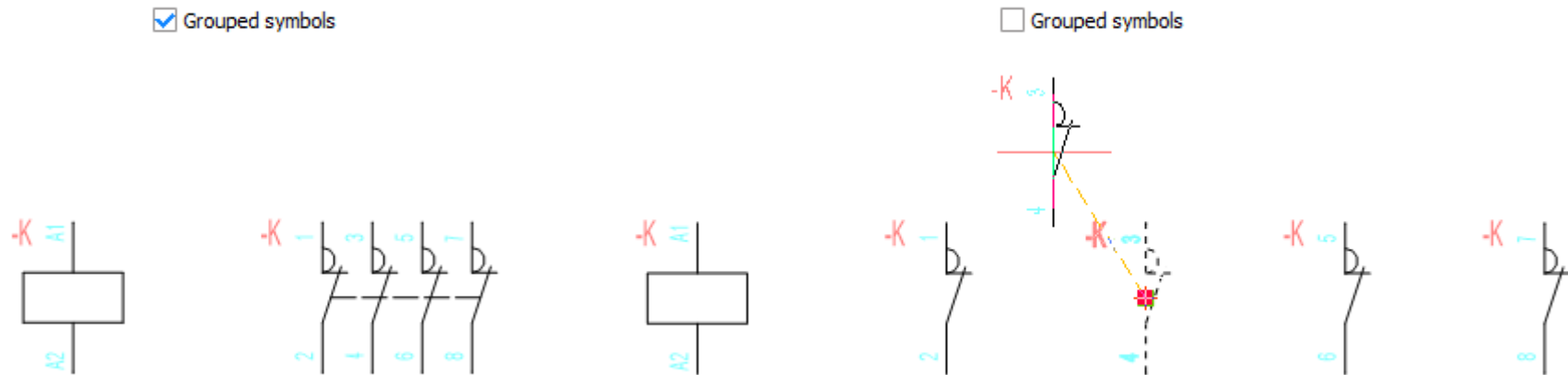
A new command - *Busbars*  has been added to the program. The library contains all the necessary elements (including heads, straight elements, angle connectors, tees, crosses, etc.) to design installations containing busbars.

The busbar library is parametric, so by simply entering any dimensions, the library can be independently extended by users with additional types and sizes. As a result, system components from any manufacturer can be used in projects.



## ✓ CADprofi Electrical – extension of functionality and content of IEC/NFPA symbols

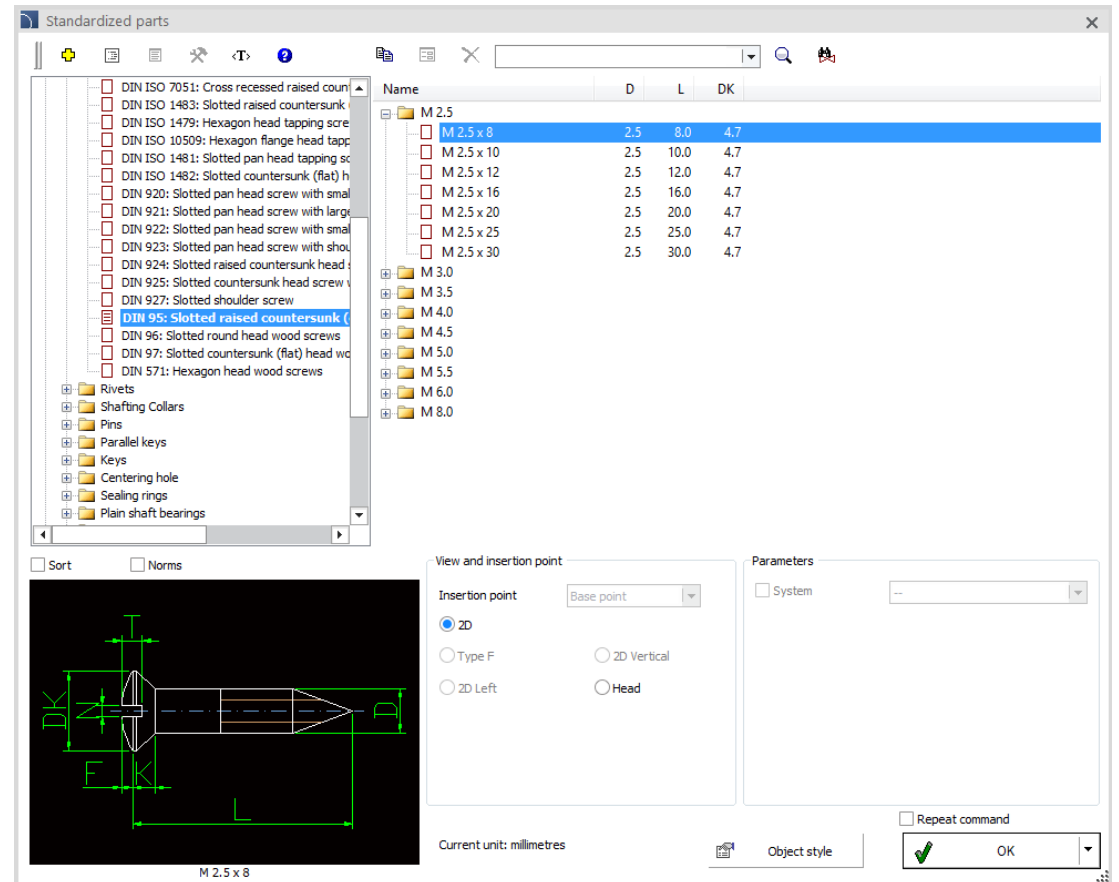
The functionality of complex apparatus and IEC/NFPA symbols available in the CADprofi program has been extended with the possibility of grouping or ungrouping main contacts which significantly improves and accelerates the creation of automation schemes.



Additional symbols were introduced into the program in both vertical and horizontal views based on the IEC 60617:2012 standard. Reference markings were also updated in accordance with the IEC 81246 standard.

## ✓ CADprofi Mechanical – additional standards

Over a dozen of additional standards have been added to the program libraries for wood, sheet metal, plasterboard, self-tapping and self-drilling screws.







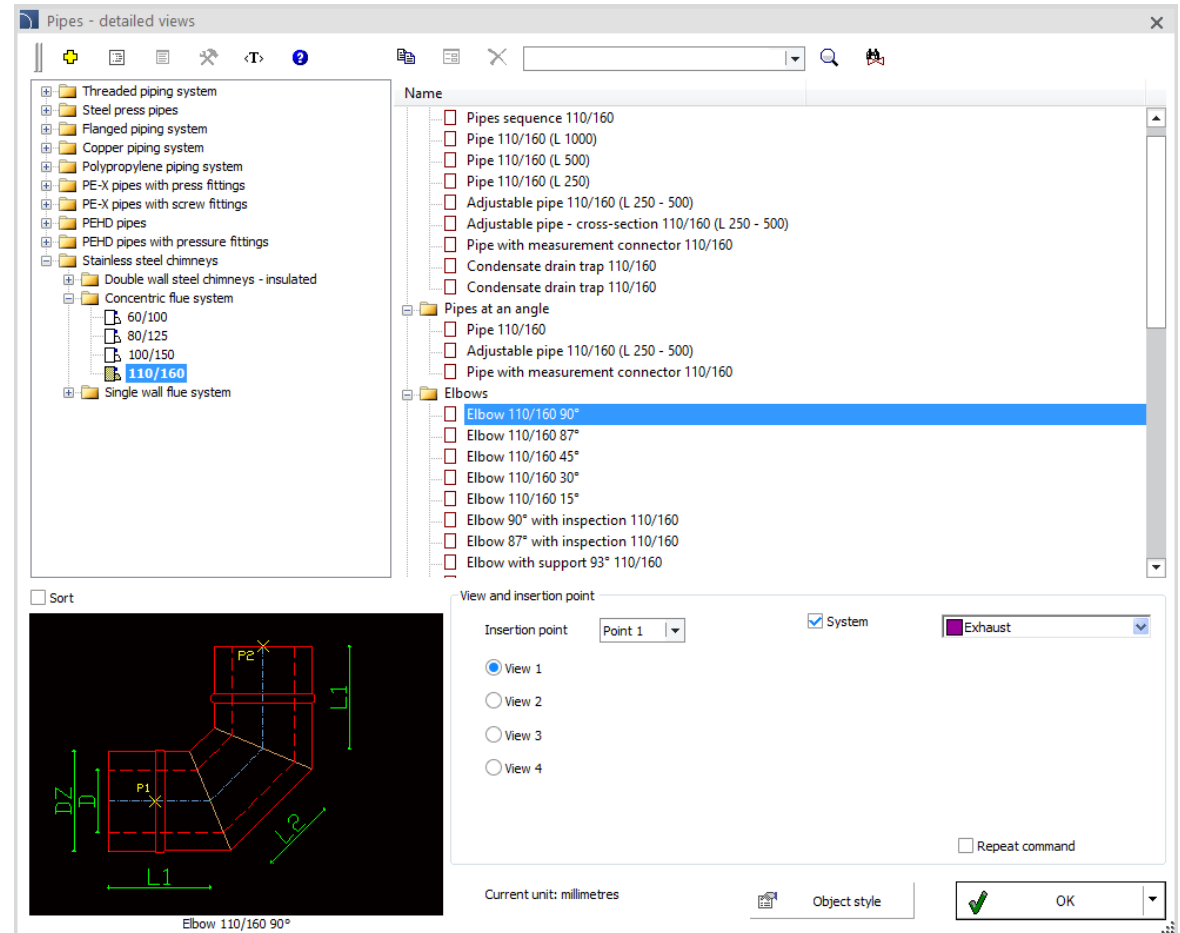
# CADprofi

## ✓ CADprofi HVAC & Piping – wall insulated and concentric flue chimney systems

A single-and double walled chimney system and a concentric air and flue system were added to the *Pipes – detailed views* command.



[Watch movie](#)



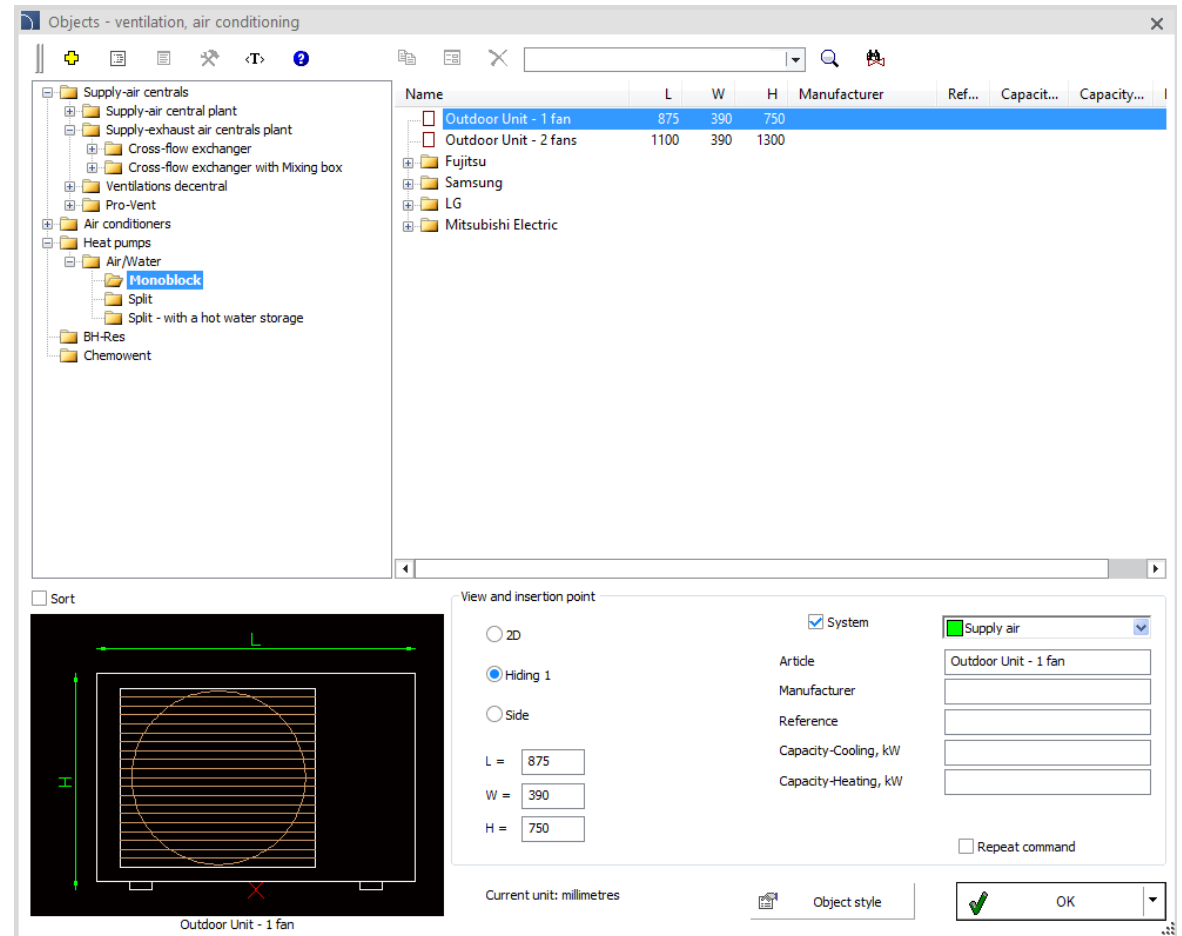


# CADprofi

## ✓ CADprofi HVAC & Piping – heat pumps, supply-exhaust air centrals and air conditioners

Fujitsu, LG, Daikin, Mitsubishi and Samsung (Monoblock, Split, Split with a hot water storage) air/water heat pumps, supply-exhaust air central plants and air conditioners have been added to the *Objects – ventilation, air conditioning* command.

The existing Fujitsu air conditioner library has been completely updated and transferred to the CADprofi HVAC & Piping module.





# CADprofi

## ✓ CADprofi HVAC & Piping – LPG containers

The *Parametrical objects* command has been extended with LPG containers, including Gaspol company containers.



The screenshot shows the 'Parametrical objects' dialog box. On the left is a tree view of container types, with 'LPG container' selected. On the right is a table of container specifications. Below the table is a 2D technical drawing of a 1700 L container with dimension lines for diameter (D), length (L), and height (H). The bottom right of the dialog has options for 'View and insertion point' (2D, Front, Side), 'System' (checked), 'Supply' (red), and 'Repeat command' (unchecked). The current unit is set to millimetres.

Name	D	L	L1	H	H1
1700 l.	1250	1600	500	1600	1400
2700 l.	1250	2500	800	1600	1400
3600 l.	1250	3200	800	1600	1400
4850 l.	1250	4300	800	1600	1400
6400 l.	1250	5500	800	1600	1400
7000 l.	1250	6050	800	1600	1400
9250 l.	1250	7750	800	1600	1400
10000 l.	1250	8550	800	1600	1400
11500 l.	1250	9550	800	1600	1400
<b>GASPOL</b>					
2700 l.	1250	2500	800	1600	1400
4850 l.	1250	4300	800	1600	1400
6700 l.	1250	5800	800	1600	1400



# CADprofi

## ✓ CADprofi HVAC & Piping – Bosch, Junkers and Immergas boilers

Bosch, Junkers and Immergas boilers have been added to the *Objects* command.

The existing Junkers and Immergas library has been updated and transferred to the CADprofi HVAC & Piping module.



# BOSCH



# JUNKERS



# IMMERGAS

The screenshot shows the 'Parametrical objects' window in CADprofi. The left pane shows a tree view of object categories, with 'Boilers' expanded to show various models. The right pane shows a table of selected objects with their dimensions.

Name	A	B	H
400/850	400	360	850
Junkers-Cerapur Compact			
Junkers-Cerapur Comfort			
Junkers-Cerapur Smart			
Bosch-Condens 7000			
GC 7000IW 14P	440	360	840
GC 7000IW 24P	440	360	840
GC 7000IW 24PB	440	360	840
GC 7000IW 35P	440	360	840
GC 7000IW 42P	440	360	840
Bosch-Condens 9000			
Immergas-VICTRIX TERA			

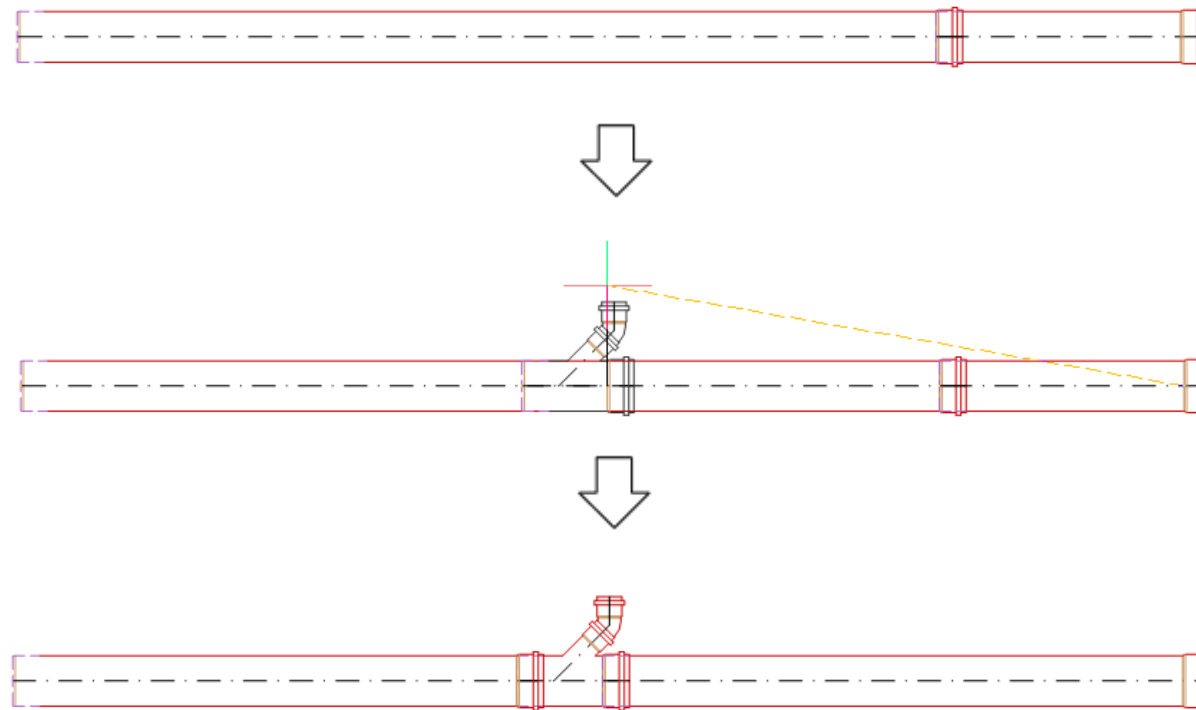
Below the table, there is a 'View and insertion point' section with radio buttons for '2D', 'Front', 'Side', and 'System', and a dropdown for 'Supply'. Dimensions are shown in input fields: A = 440, B = 360, H = 840, D = 80, D1 = 125. A 'Repeat command' checkbox is also present. At the bottom, there is a 'Current unit: millimetres' label, an 'Object style' dropdown, and an 'OK' button.

The diagram shows a top-down view of a boiler footprint. It is a rectangle with a central circle. Dimension A is the width, B is the height, H is the total height including the boiler body, D is the diameter of the central circle, and D1 is the diameter of the boiler body. The diagram is labeled 'GC 7000IW 24P'.

## ✓ CADprofi HVAC & Piping – inserting objects in bare-socket systems

The possibility to insert objects into sewerage and chimney ducts and other bare-socket systems has been added to the program. The new functionality allows for inserting drains, various fittings, revisions, etc.

Additionally, when inserting T-pieces or cross-pieces, it is possible to automatically connect to them other lines.



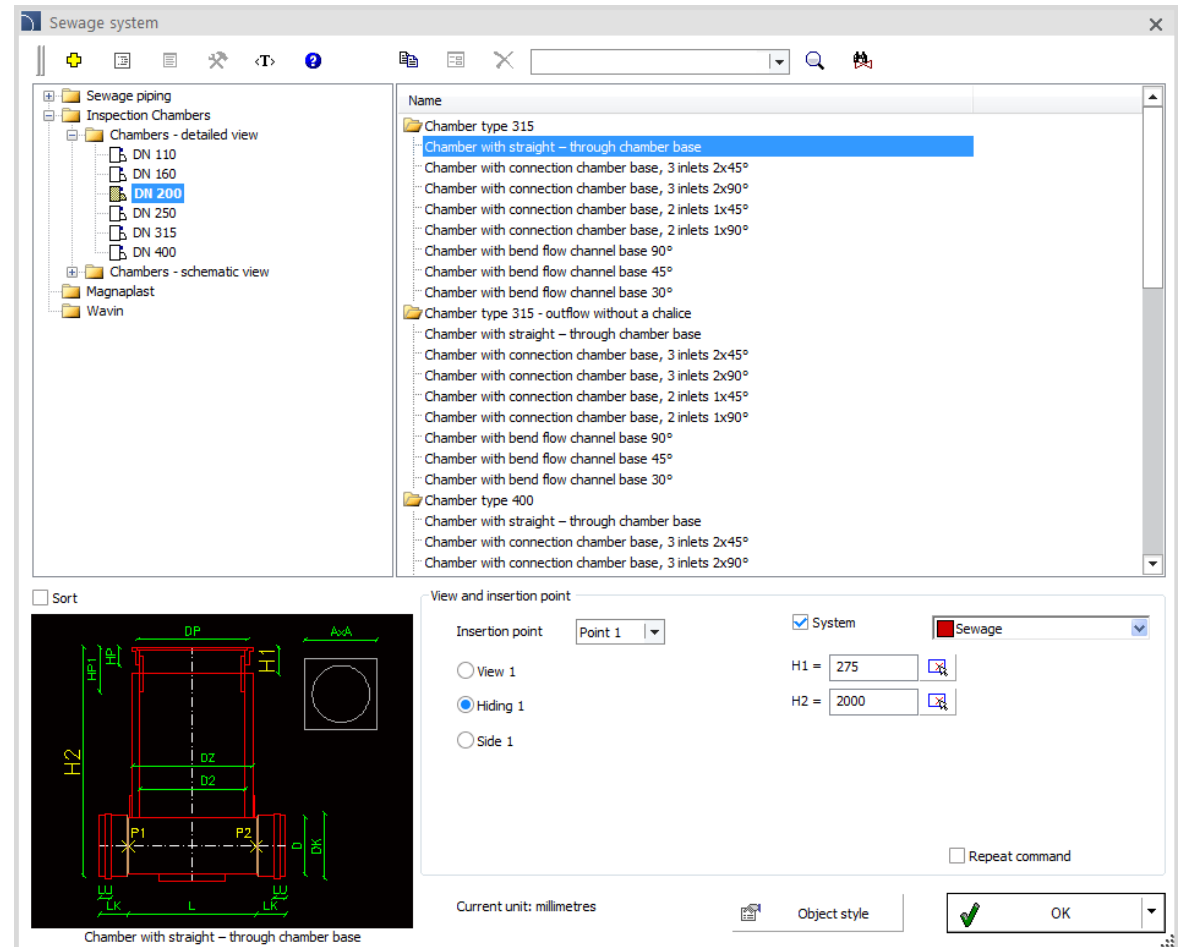


# CADprofi

## ✓ CADprofi HVAC & Piping – inspection chambers

Inspection chambers with detailed and schematic views have been added to the *Sewage system* command.

Additional insertion points have been introduced in the sewer wells in order to facilitate accurate positioning of the wells, e.g. relative to the terrain in the network profiles.

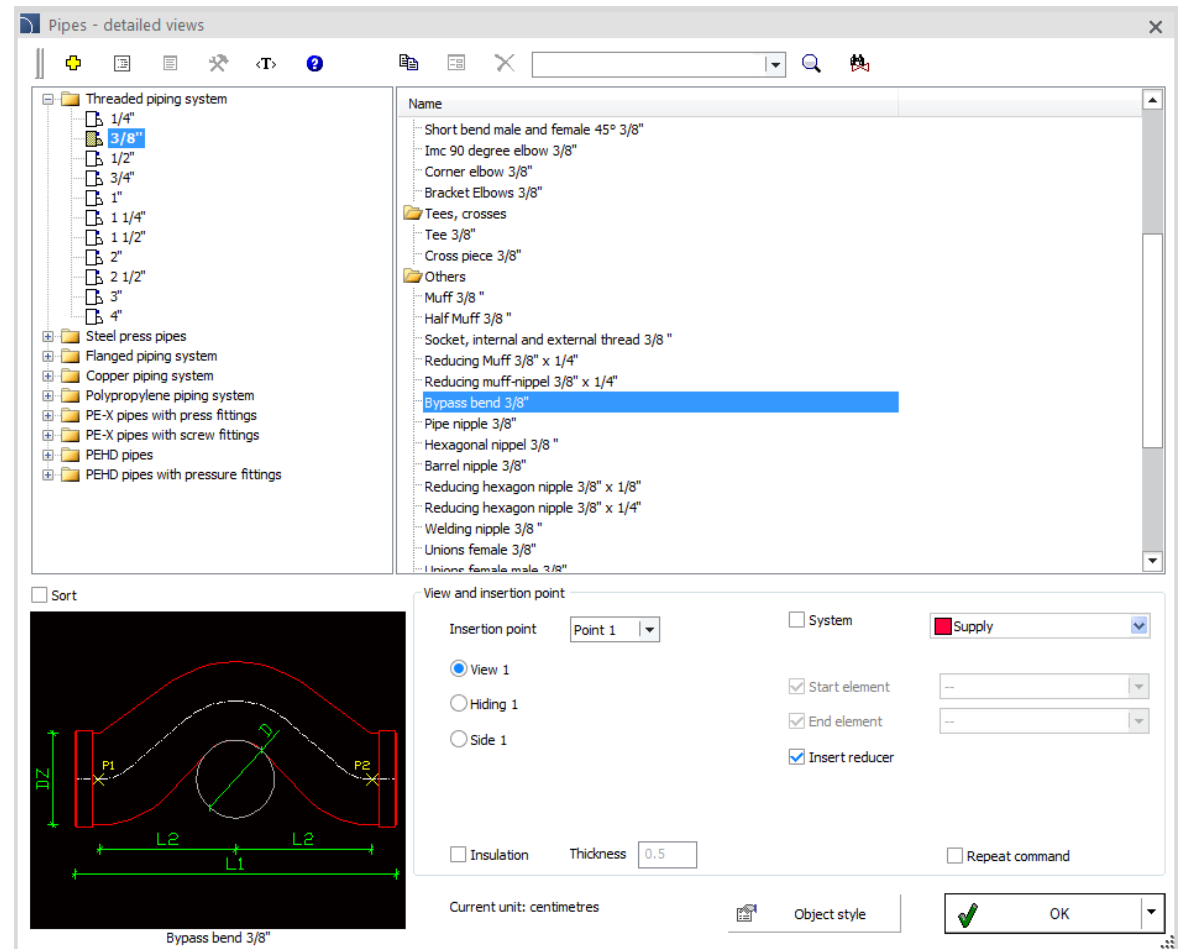




# CADprofi

## ✓ CADprofi HVAC & Piping – extension of the threading piping system

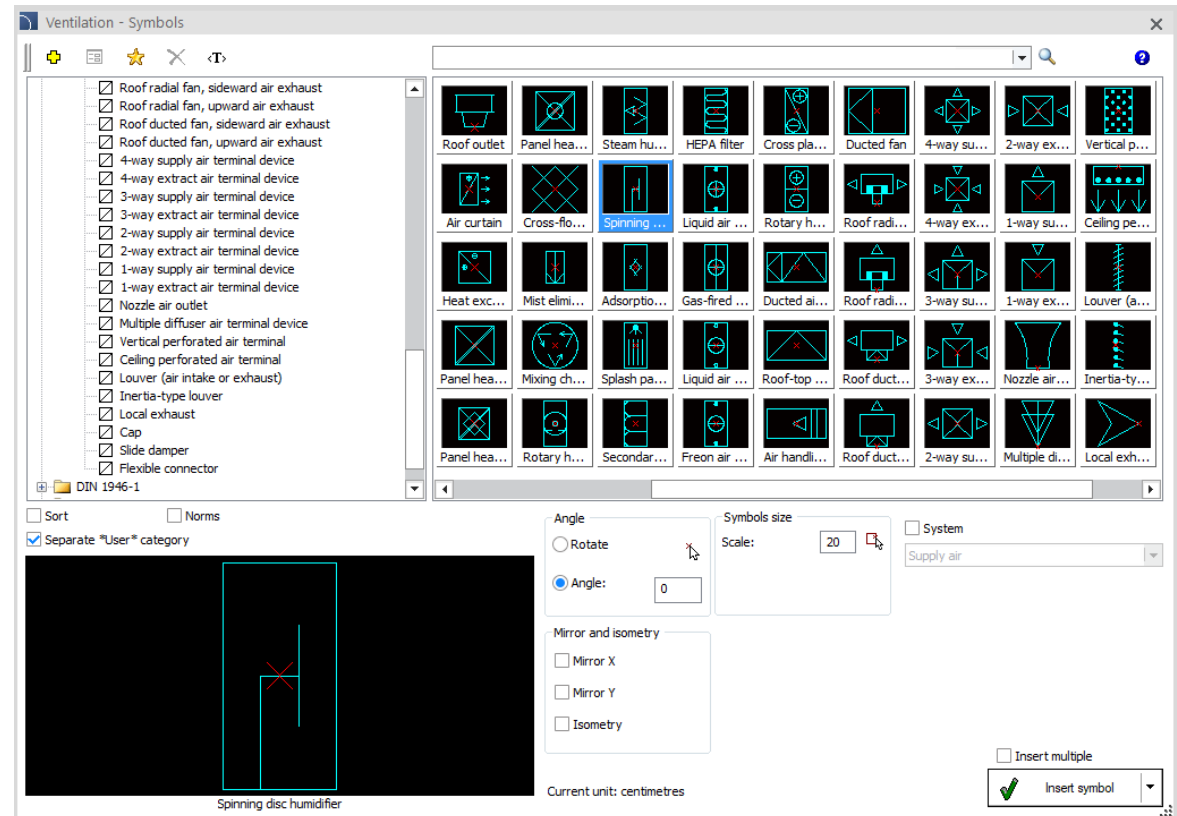
The threaded piping system has been extended with additional elements and fittings, including bypass bends, nipples and elbows.



## ✓ CADprofi HVAC & Piping – extension of ventilation symbol libraries

Additional symbols have been added to the program library, including:

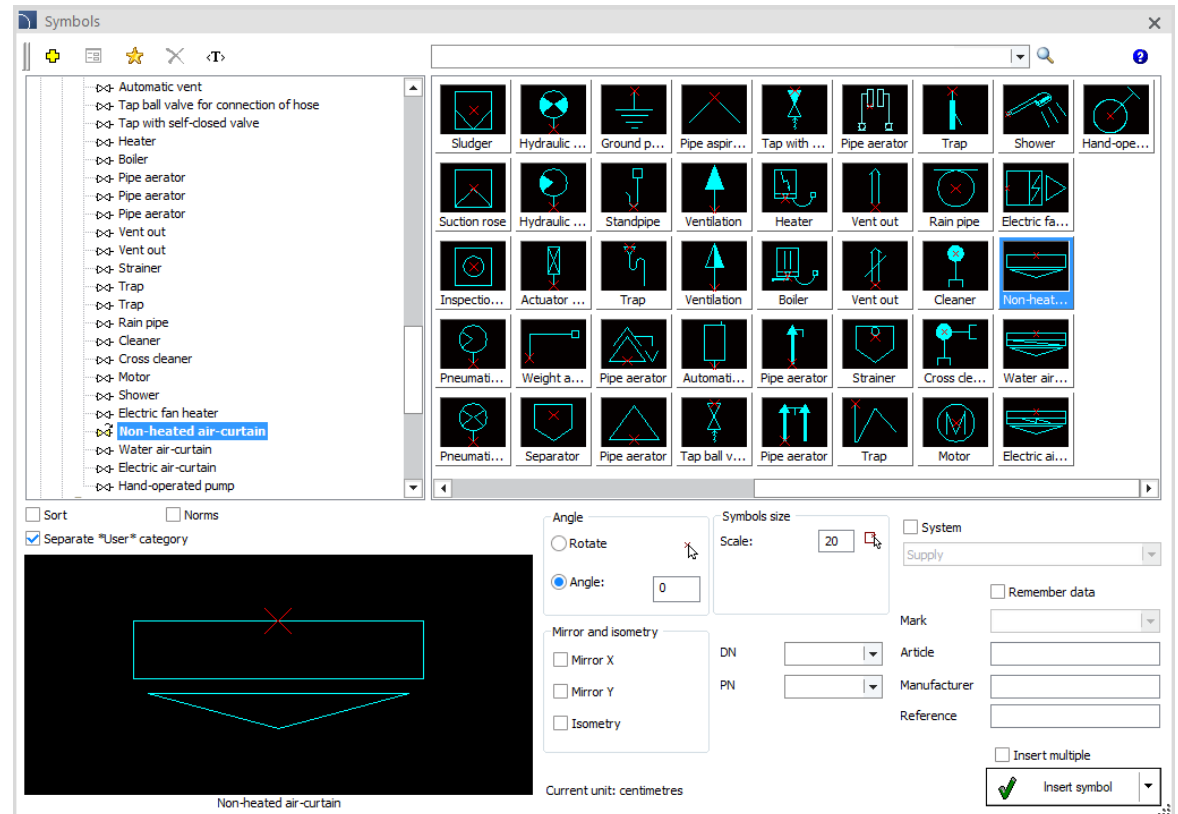
- humidifiers (rotary, steam, spinning disc),
- dehumidifiers,
- filters (secondary, HEPA),
- air heaters (liquid, gas),
- air coolers (liquid, freon),
- air conditioners (duct, roof),
- fans (roof, duct),
- supply and extract air,
- air outlets,
- air terminals,
- louvers,
- caps,
- exhausts.





## ✓ CADprofi HVAC & Piping - extension of sanitary symbol libraries

The sanitary symbol library has been extended with new symbols e.g. air curtains (water, electric), hand operated pumps and fan heaters.





# CADprofi

## ✓ New EATON library

The new library available in the CADprofi program contains EATON products, including:

- Miniature, residual current, motor-protective circuit breakers.
- Accessories for circuit breakers.
- Surge protective devices.
- Main switches.
- Fuse holders.
- Motor-protective circuit-breakers.
- Contactors.
- Relays.
- EASY Control relay.
- Control and signaling.
- Switch disconnectors.
- Circuit-breakers.
- Disconnectors.
- Air circuit breakers.
- Switch-disconnectors, INX...



Name	L
Z-TS25/1	18
Z-TS40/1	18
Z-TS25/3	18

View and insertion point

2D Front

Symbol (one-line vertical)

Symbol (one-line horizontal)

Symbol (multiline vertical)

Symbol (multiline horizontal)

Labels' autonumbering

-F > >>>

Current unit: millimetres

Repeat command

Insert from list



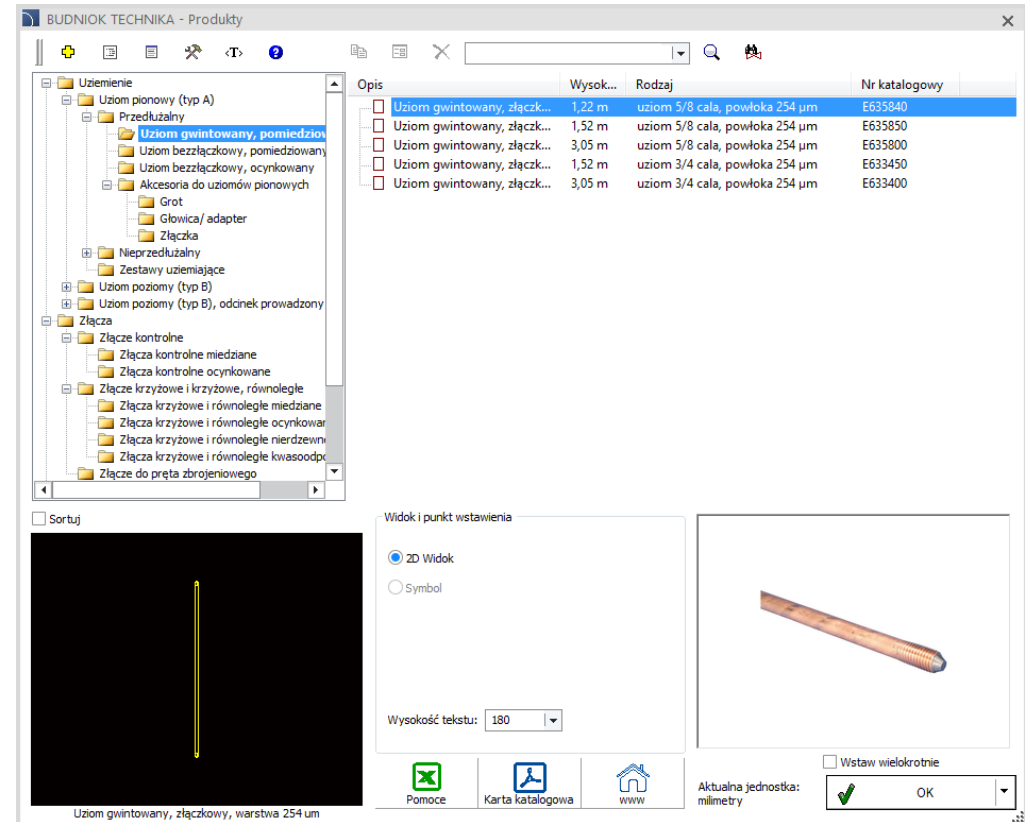
# CADprofi

## ✓ New Budniok Technika library

The new library available in the CADprofi program contains Budniok Technika products in the field of lightning protection.

The library also has additional design tools - a calculator for calculating the resistivity of simple earthing systems and a calculator for elements of vertical earthing sets.

This library is currently available only in Polish language.





# CADprofi

## ✓ New F&F library

New library that is available in CADprofi program contains F&F products, including domestic and industrial automation.



**Article** | **Description**

<input type="checkbox"/> CZD	Czujnik deszczu - sonda
<input type="checkbox"/> CZW	Czujnik wiatru - anemometr
<input type="checkbox"/> STR-1	Sterownik roletowy, dwuprzyciskowy STR-
<input type="checkbox"/> STR-2	Sterownik roletowy, jedнопrzyciskowy STF
<input type="checkbox"/> STR-21	Sterownik roletowy, dwuprzyciskowy STR-
<input type="checkbox"/> STR-22	Sterownik roletowy, jedнопrzyciskowy STF
<input type="checkbox"/> STR-3D	Sterownik rolet do silników AC 100+265V /
<input type="checkbox"/> STR-3P	Sterownik rolet do silników AC 100+265V /
<input type="checkbox"/> STR-421	Sterownik roletowy, dwuprzyciskowy STR-
<input type="checkbox"/> STR-421-24V	Sterownik roletowy, dwuprzyciskowy STR-
<input type="checkbox"/> STR-422	Sterownik roletowy, jedнопrzyciskowy STF
<input type="checkbox"/> STR-422-24V	Sterownik roletowy, jedнопrzyciskowy STF
<input type="checkbox"/> STR-4D	Sterownik rolet do silników DC 10+27V DC
<input type="checkbox"/> STR-4P	Sterownik rolet do silników DC 10+27V DC
<input type="checkbox"/> STR-R	Czujnik deszczu zasilanie 100+265V AC
<input type="checkbox"/> STR-S	Czujnik wstrz'ś'ów (sterowanie do markiz)
<input type="checkbox"/> STR-W	Czujnik siły wiatru zasilanie 100+265V AC

**View and insertion point**

- 2D Front
- Symbol (one-line vertical)
- Symbol (one-line horizontal)
- Symbol (multiline vertical)
- Symbol (multiline horizontal)

Labels' autonumbering

-K > >>>

Current unit: millimetres

Repeat command

OK



# CADprofi

✓ Update of manufacturers' libraries:





# CADprofi

## ✓ Adjustment to many base CAD programs

CADprofi 2020 has been adjusted to work with latest CAD programs, including: AutoCAD 2020, ARES Commander/Standard 2019, BricsCAD 2020, CADopia 19, GstarCAD 2020, IBSCAD 2018, progeCAD 2020 and ZWCAD 2020.

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