

Summary of main changes made to the program since the CADprofi 2020.01 version.



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✓ 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.

The ability to determine the location of objects has been added to the system of creating specifications. Specifications can now contain information in which rooms or zones the individual objects are located. This option allows user to define the amount of materials in regard to e.g. housing units.





✓ CADprofi – object placement (command extension)

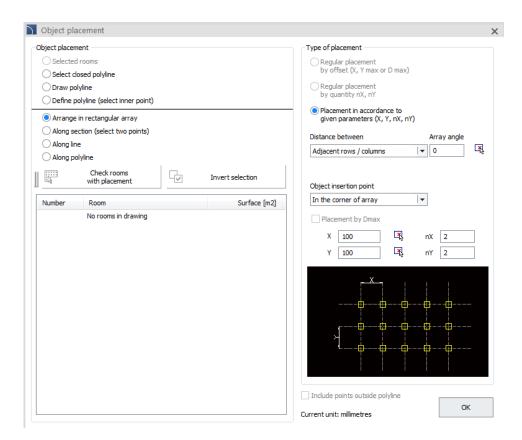
The *Arrange* command allows user to quickly arrange objects in selected rooms. It is possible to arrange objects in selected rooms, in the indicated boundary (polyline) or in the newly drawn boundary. In the latest version of the program, the command has been extended with the possibility of placing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



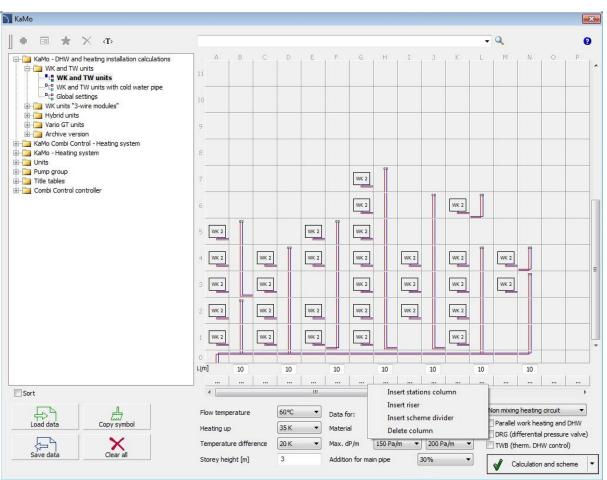


✓ CADprofi – integrated calculations for the central heating and water installations

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.

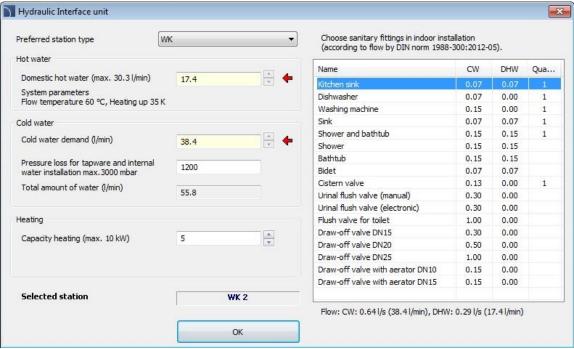


The main window that allows user to conveniently define any scheme

- 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).

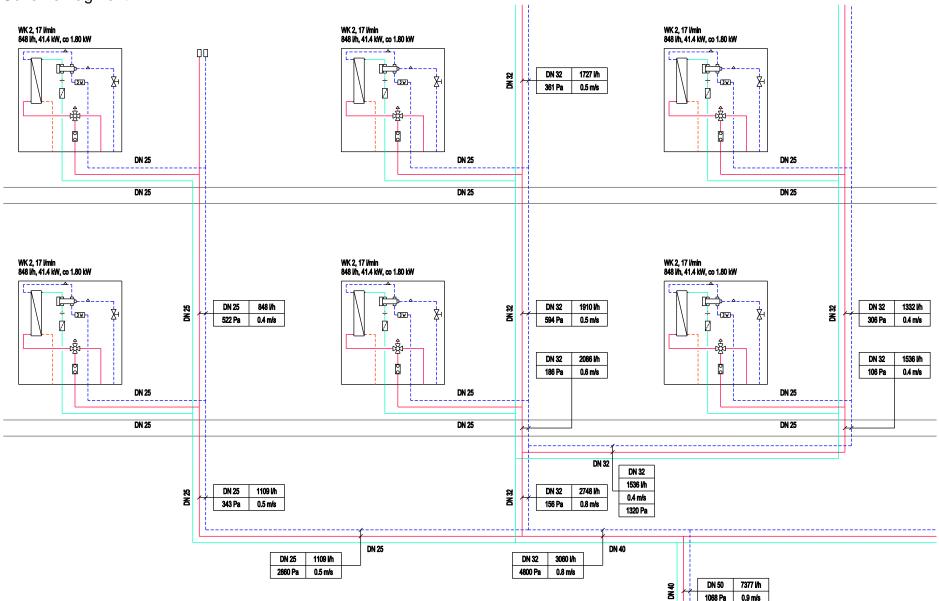


Window for hot water preparation station selection and determination of calculation flows

- 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).



Scheme fragment:





Sample printout with central heating calculations

Heat exchanger type	Number apartme		Simultan DHW producti	Simultan heating	Volume flow DHW production [l/h]	Capacity heating [kW]	Volume flow heating [l/h]	Total volume flow [I/h]	DN	R * I [Pa]	v [m/s]	Z [Pa]	Pressure loss [Pa]
Riser Nr. 7 (apartment on top of another) (N3)													
M3: WK 2, 17 I/min, 848 I/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: Riser Nr. 4 (apartment on top of													3281
another) (H7) G7: WK 2, 17 I/min, 848 I/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 I/min, 848 I/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 I/min, 848 I/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 I/min, 848 I/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 I/min, 848 I/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 I/min, 848 I/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 I/min, 848 I/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

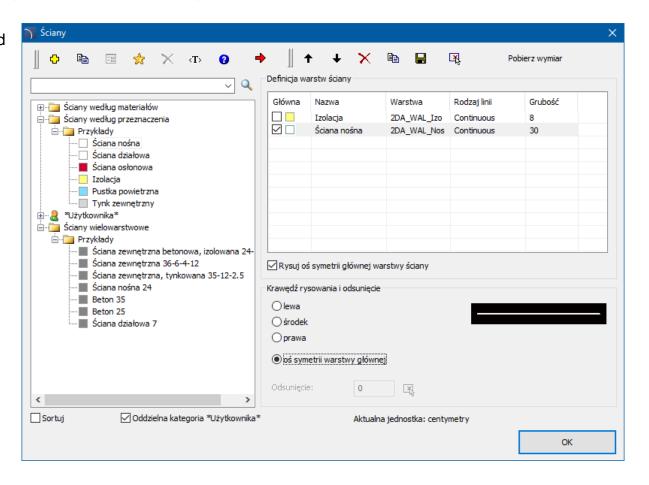
Sum: 6629



✓ CADprofi Architectural – changes in wall drawing

The way of drawing walls has been changed in CADprofi Architectural. Currently, the program allows you to select one of the walls as the main one, which can additionally be drawn with the axis of symmetry.

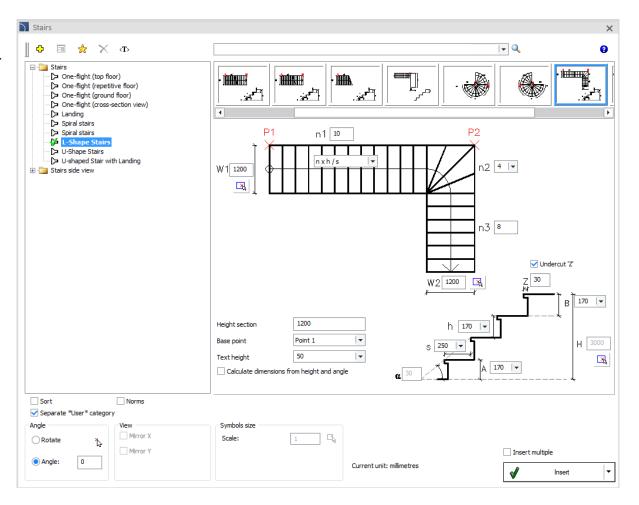
Another new feature is the ability to draw walls along the symmetry axis of the main wall layer.





✓ CADprofi Architectural – L and U shape stairs

The stair library available in CADprofi Architectural has been extended to include L shape stairs, U shape stairs and U shape stairs with landing.





✓ CADprofi Electrical – changes in busbar and cable trays systems

The *Busbars and cable trays* commands have been extended.

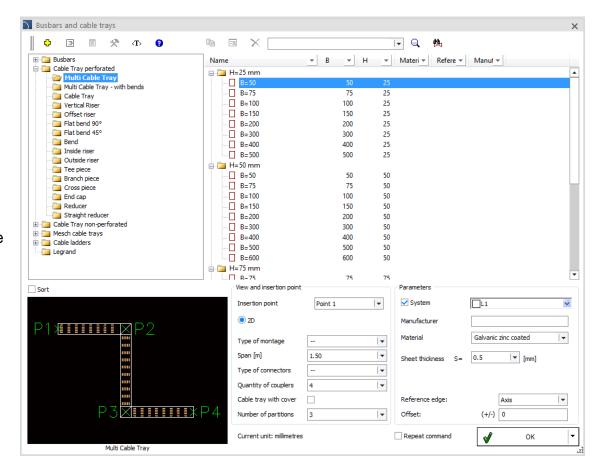
The busbar library has been extended with additional elements, including heads for switchgears and transformers. Currently, the system includes all the elements necessary to design busbars installations.

Cable trays systems were also added to the command: perforated and non-perforated sheet metal trays, mesh trays and cable ladders.

These systems allow user to make more accurate drawings while specifying accessories (fasteners, connectors, partitions and covers). The ability to specify accessories has also been introduced to the former 2D cable tray system.

Attributes						
Mountings						
Mountings distance [m]	1.50					
Couplers	M8					
Quantity of couplers	1					
Cover						
Divider	0					
Material	Aluminium					

All accessories are included in the bill of materials.

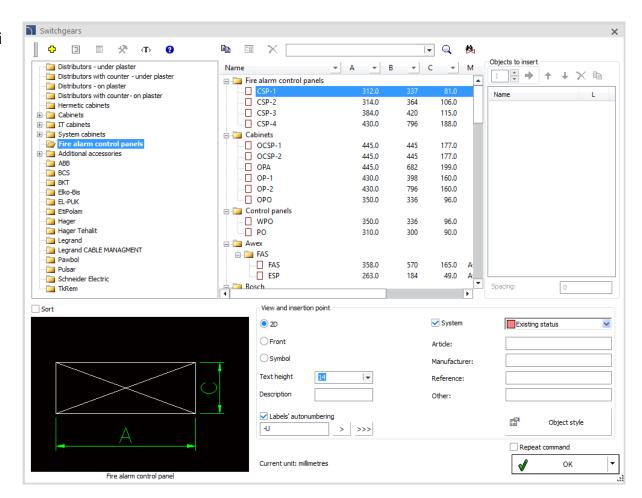


The library is parametric, so by simply entering any dimensions, the library can be independently extended by users with additional types and sizes. As a result, system components from any manufacturer can be used in projects.



✓ CADprofi Electrical – fire alarm control panels

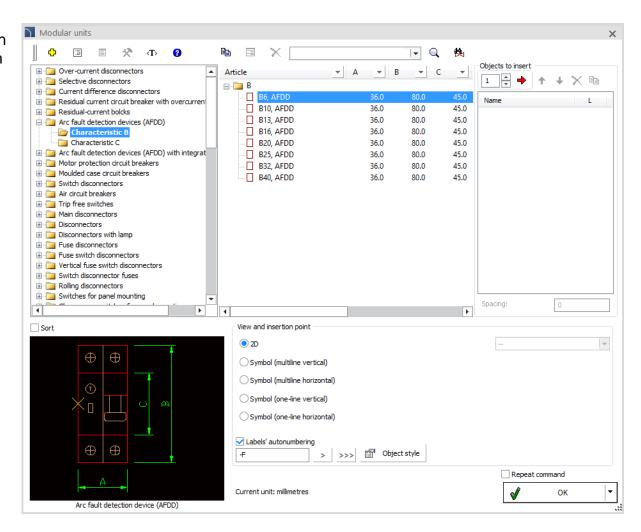
The switchgear library available in CADprofi Electrical has been extended with fire alarm control panels from Awex, Bosch, D + H, LST, POLON-ALFA, Satel, and Siemens.





✓ CADprofi Electrical – extension of modular apparatus library

The library of modular apparatus available in CADprofi Electrical has been extended, with two-, three- and four-level terminals, connectors, distribution blocks, arc fault detection devices and arc fault detection devices with integrated RCBO (AFDD).

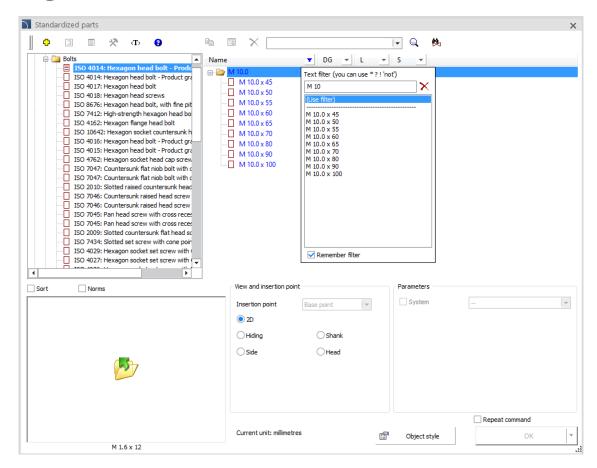




✓ CADprofi Mechanical – easy filtering of libraries

All libraries in the Standardized parts and Steel shapes commands have been optimized for convenient filtering, e.g. by dimensions, names, etc.

Once the filter has been added it can apply to the entire library, making it much easier to select the various elements needed to design a given component - for example, selecting bolts, washers, and nuts of a specific diameter.

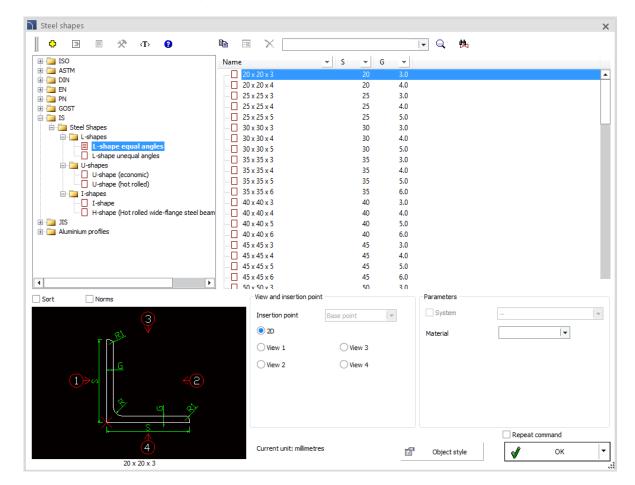




✓ CADprofi Mechanical – library extension including Indian Standards

Program libraries have been extended with additional standards including elements of the Indian Industry Standard (IS):

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



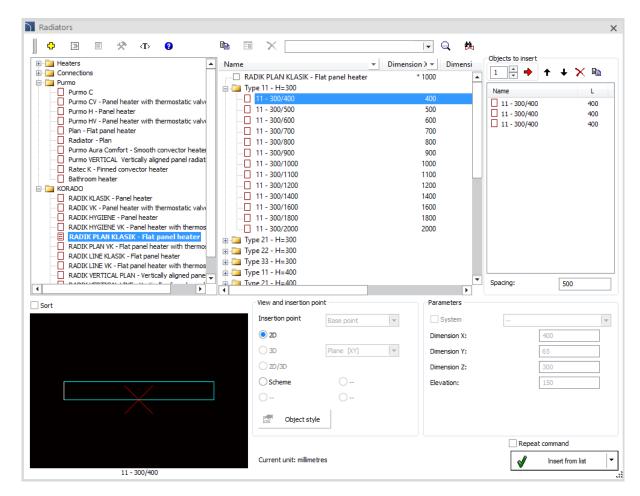


✓ CADprofi HVAC & Piping –Purmo and KORADO radiators

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



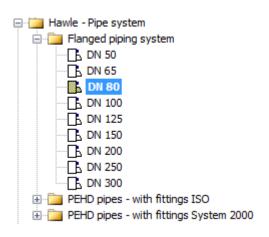




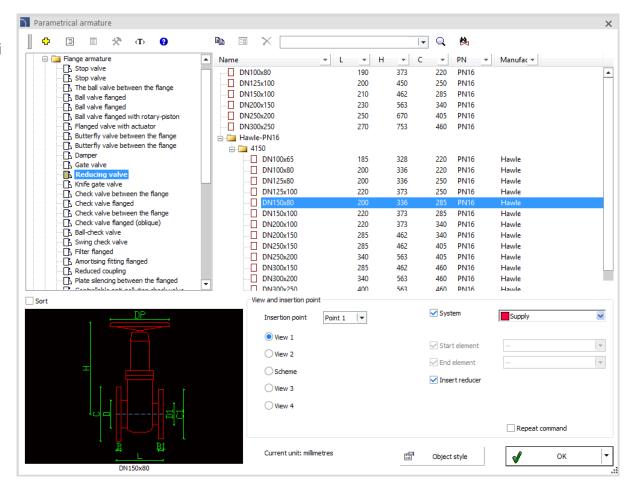


✓ CADprofi HVAC & Piping – HAWLE fittings and Piping system

HAWLE water fittings and piping system in detailed views have been added to CADprofi HVAC & Piping libraries.





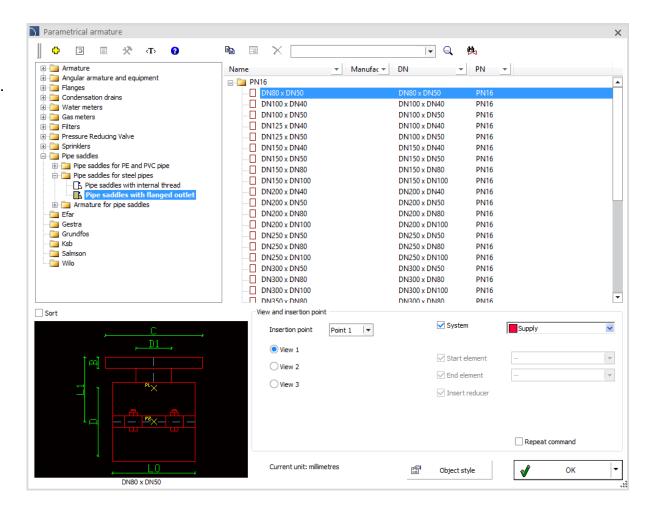




✓ CADprofi HVAC & Piping – pipe saddles

Pipe saddles have been added to the program, including:

- Pipe saddles for PE and PVC pipes.
- Pipe saddles for steel pipes.
- Armature for pipe saddles.



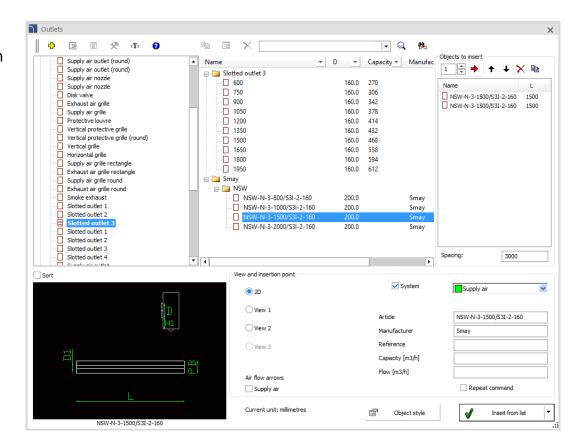


✓ CADprofi HVAC & Piping – extension of the outlets command

Outlets command has been extended with SMAY company outlets and Maico Ventilatoren roof blowers.









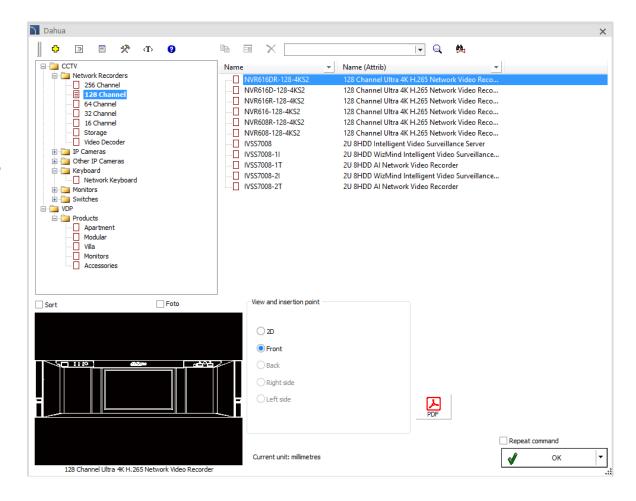
✓ New Dahua library

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

- Network Recorders.
- IP Cameras.
- Network Keyboards.
- Monitors.
- Switches.
- VDP products (apartment, modular, monitors, accessories).

Library also contains VDP Dahua schemes.





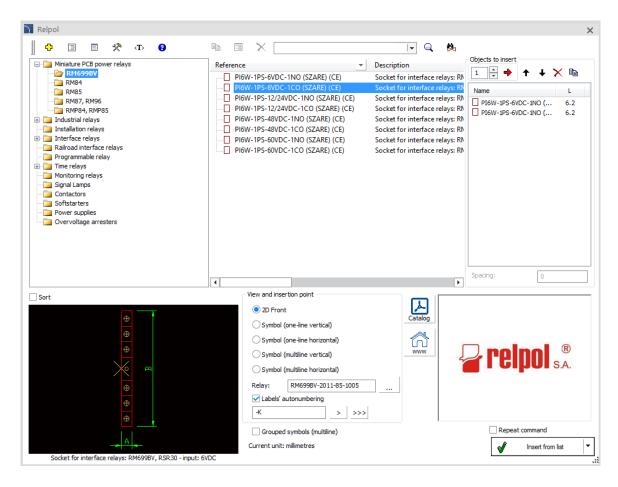


✓ New Relpol library

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.





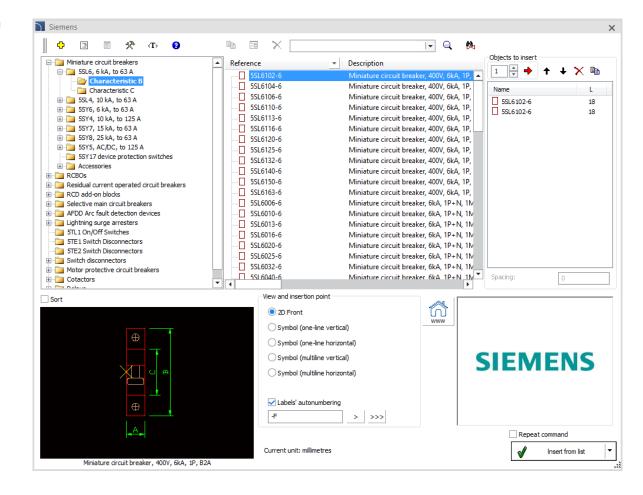


✓ New Siemens library

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





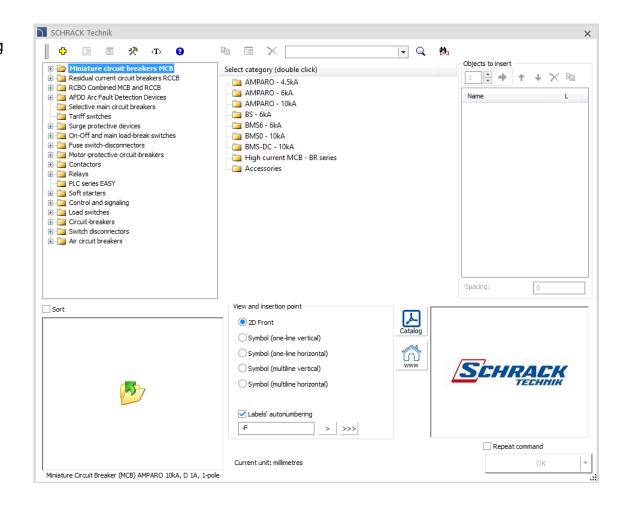


✓ New Schrack Technik library

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

- Miniature and residual circuit breakers.
- Arc fault detection devices.
- Surge protective devices.
- On-Off and main load-break switches.
- Fuse switch-disconnectors.
- Motor-protective circuit-breakers.
- Contactors.
- Relays (PLC EASY series).
- Soft starters.
- Control and signalling.
- Load switches.
- Circuit and air circuit breakers.
- Switch disconnectors.





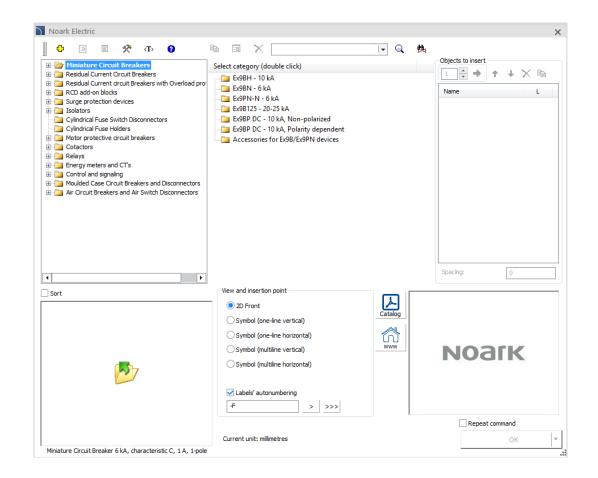


✓ New NOARK Electric library

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 singalling.
- Moulded case and air circuit breakers and disconnectors.



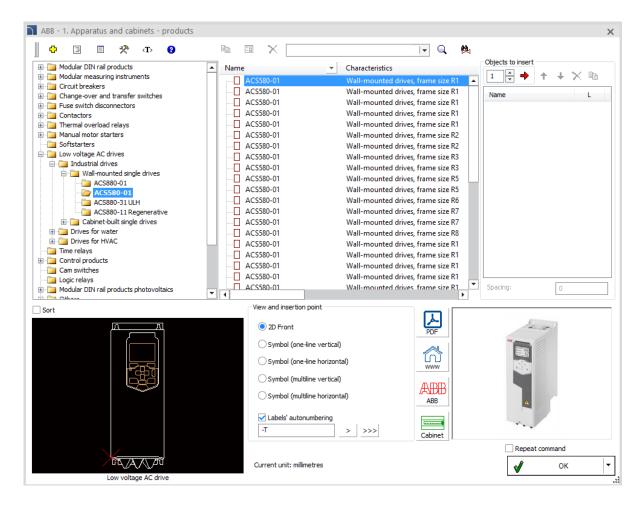




✓ ABB library extension – low voltage AC drives

The ABB library available in CADprofi has been extended with low voltage AC drives (industrial drives, drives for water, drives for HVAC).





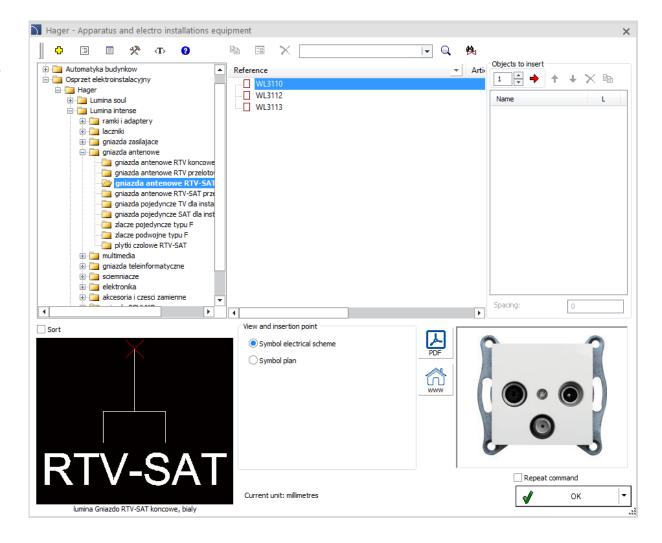


✓ Update of Hager library

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.

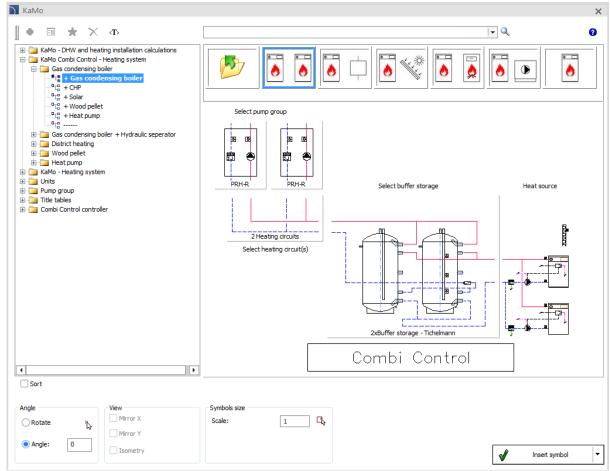




✓ KaMo – product update and a new boiler room schematic generator

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



✓ Update of manufacturers' libraries:



























✓ Adjustment to many base CAD programs

CADprofi 2021 has been adjusted to work with latest CAD programs, including: 4MCAD 21, ActCAD 2020 (x64), AutoCAD 2021, ArCADia 12, Ares Commander 2020, BricsCAD 2021, CMS IntelliCAD 9.2 (x64), INTERsoft IntelliCAD 2020, progeCAD 2021, ZWCAD 2021.

CADprofi 2021 currently works with many base CAD programs including: AutoCAD (since the 2000 version), BricsCAD, GstarCAD, IntelliCAD, progeCAD, ZWCAD, ARES Commander Edition and others.













