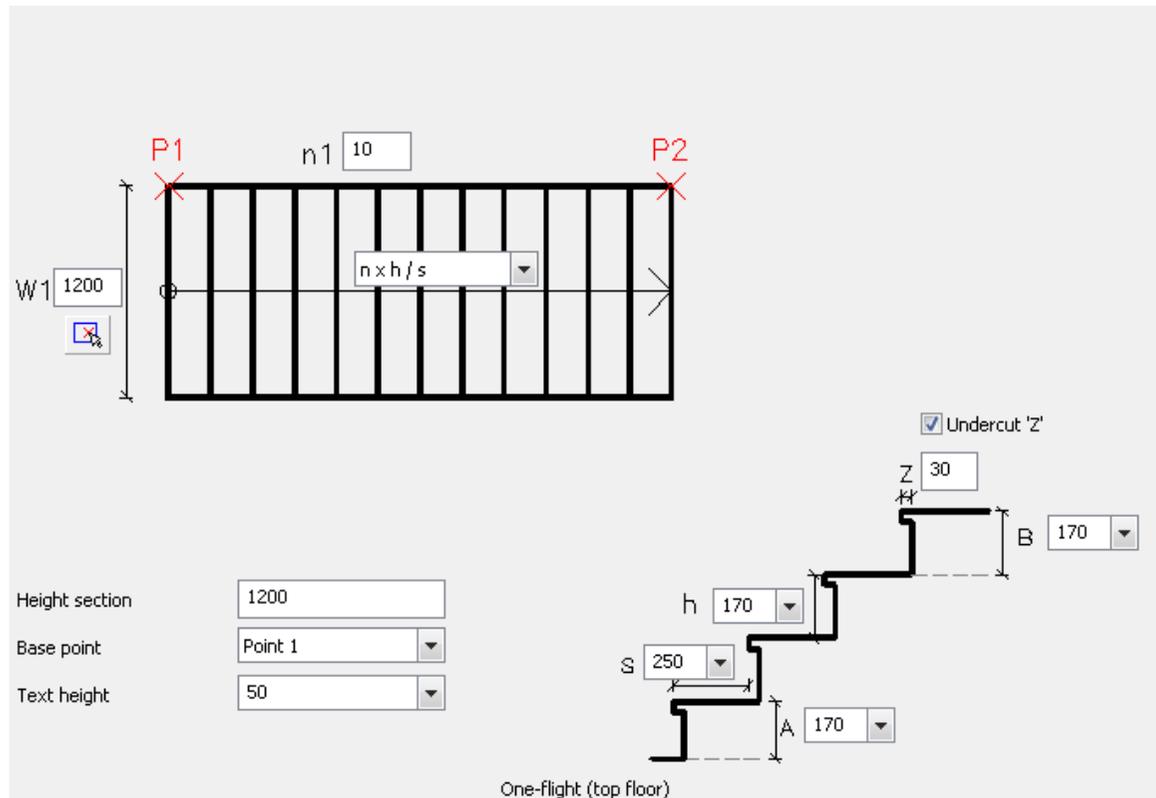


# **CADprofi 8**

## ✓ Stairs – Architecture



New command used to insert stairs.  
 Currently you can insert one-flight stairs in the repetitive and ground floor as well as in the cross-section view. User is able to determine both the size and number of the stairs treads. Defining separately the first and the last tread is also possible.



## ✓ Additional symbols for evacuation and anti-fire plans – Architecture

Additional evacuation, anti-fire, warning and safety symbols.

Improved library display  
(new – improved display of thumbnails for all symbols).

Update of most symbols in order to improve their readability when printed.





## ✓ Additional standards in the mechanical module

ANSI flanges - ANSI 300lb/sq.in. and correction of ANSI 150lb/sq.in.

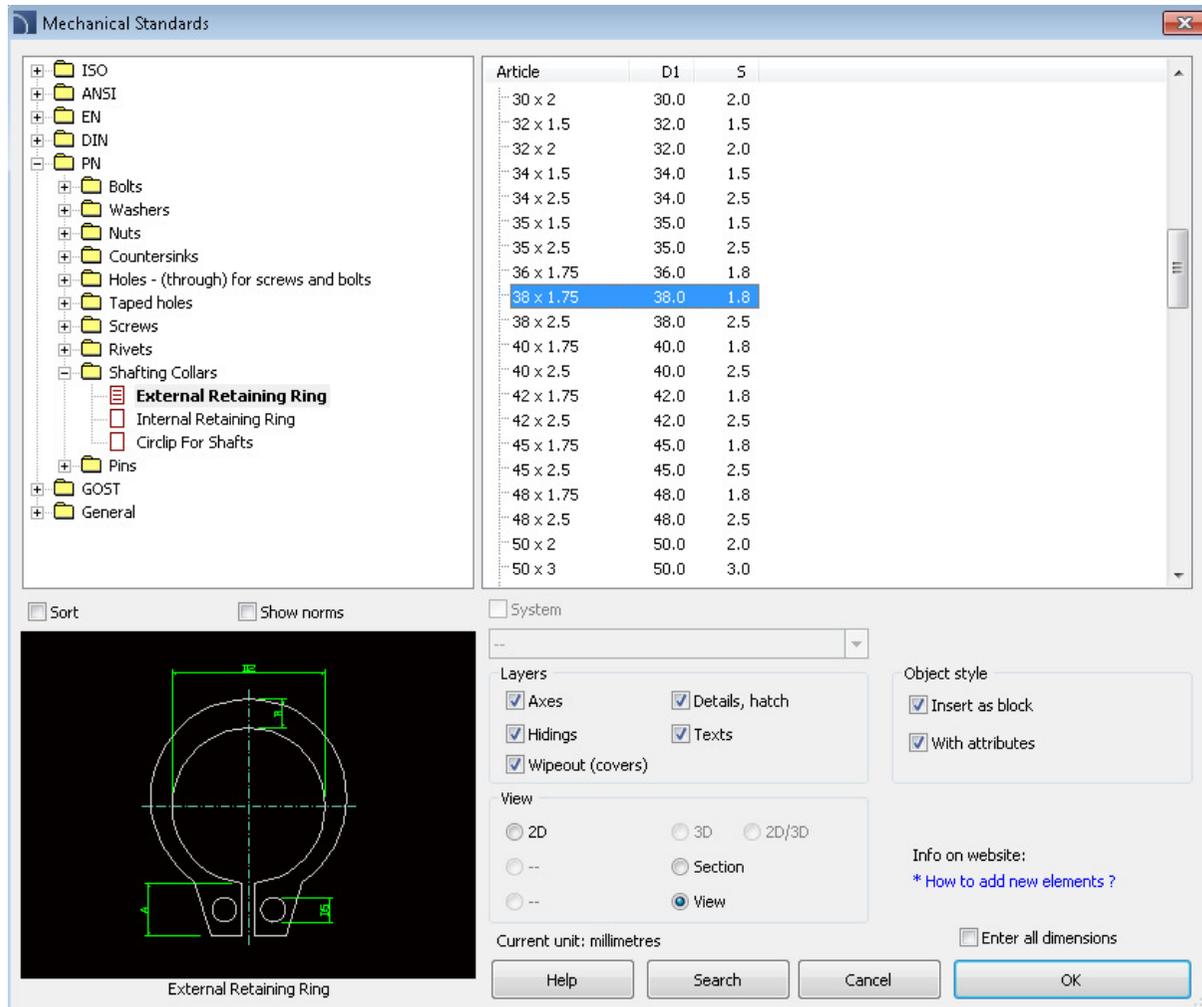
Keyway on shaft - DIN 6885

Additional rivets and screws – including the ones with the GOST standards

Hexagon socket head shoulder screw - ISO 7379

External Retaining Ring - DIN 471, DIN 472, PN 85111

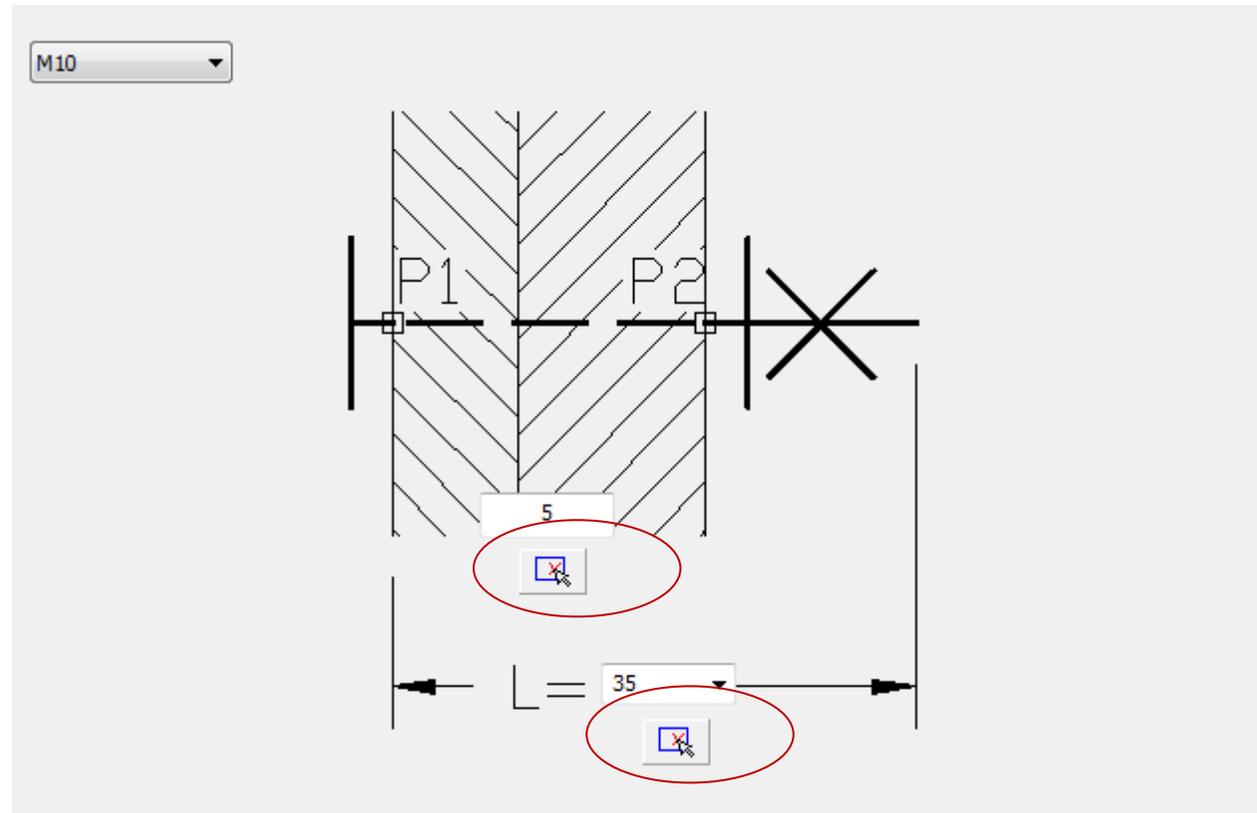
Circlip for Shafts - DIN 6799, PN 85112



## ✓ Extended functionality of symbols and signs in the mechanical module

There is a possibility to measure dimensions directly in the drawing for inserted symbols.

Additional options for many symbols' marks.

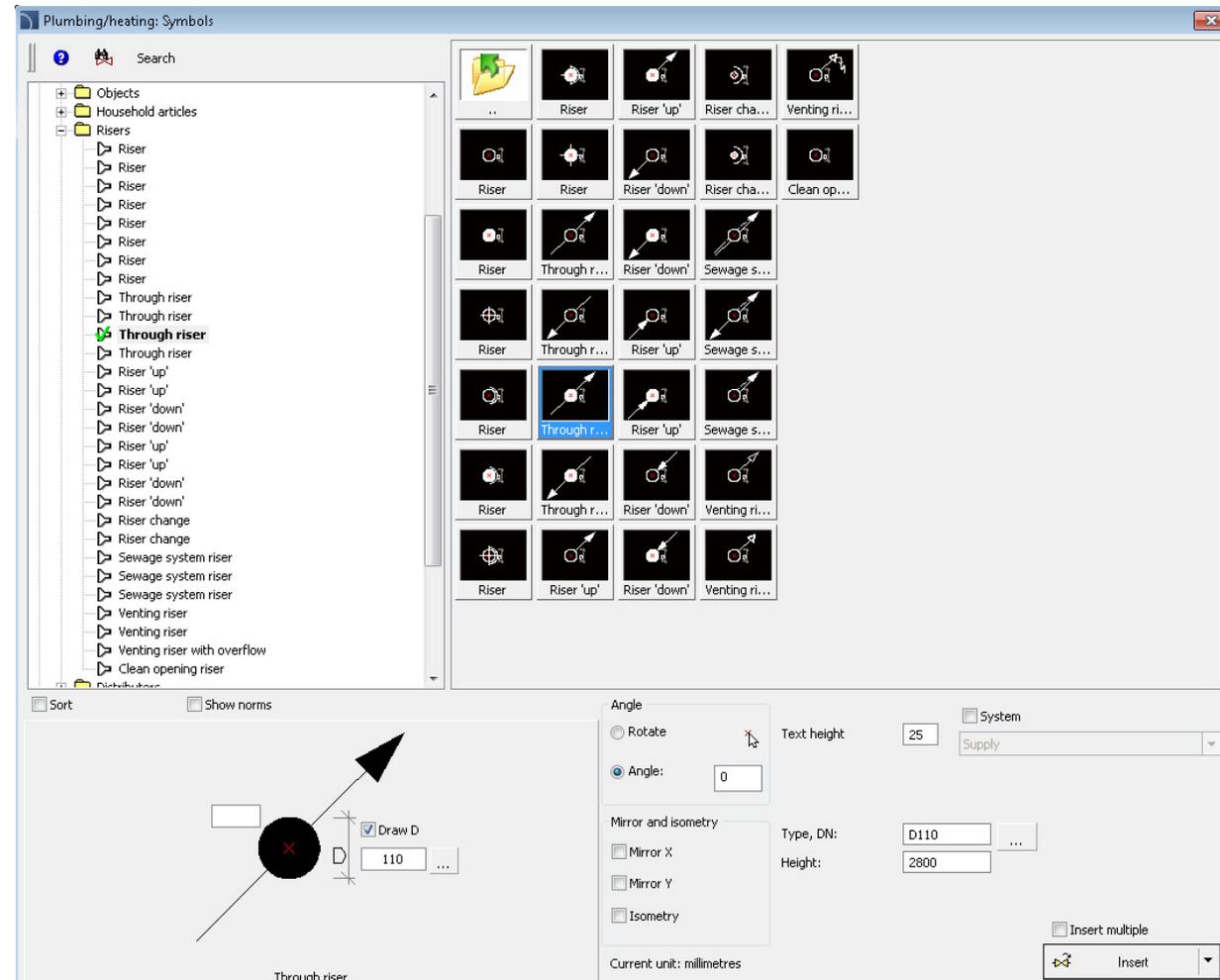


## ✓ Risers in the HVAC & Piping module

New risers symbols for which there is a possibility of inserting in a specific scale or giving the actual dimensions (diameters).

You can also determine the risers height, thanks to which the **the vertical cables are being included in the cables specifications.**

Risers symbols can be edited or converted to into other variants (eg, the through riser into an end riser symbol)

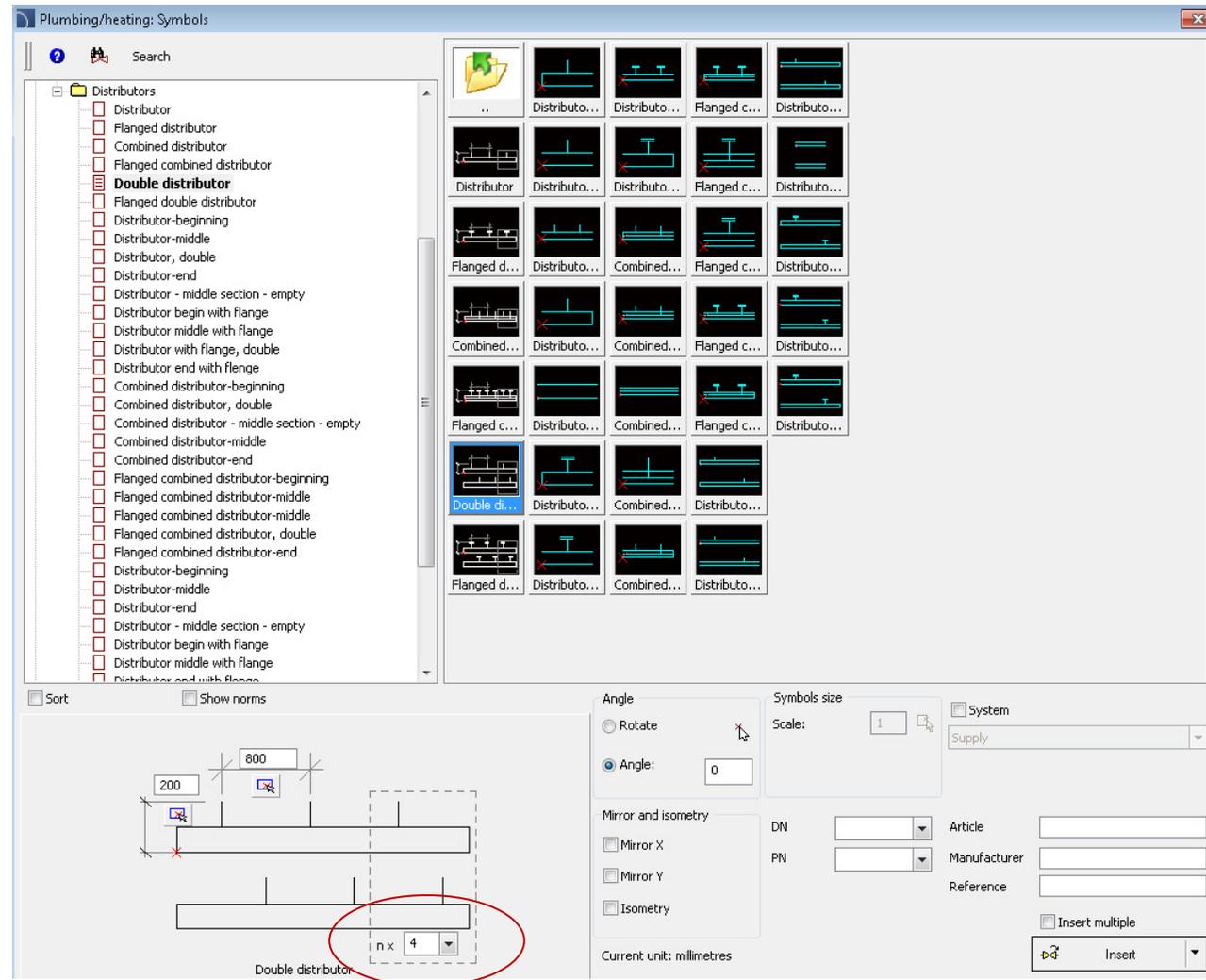


## ✓ Distributors in the HVAC & Piping module

Parametrical distributors' symbols, for which it is possible to define any size type as well as any number of sections.

Previously distributors were „folded” from sections and inserted using the „Multisymbols” command. New symbols make it much more easier and faster to insert distributors.

You can edit both the size and the number of sections for symbols that were inserted into the drawing.

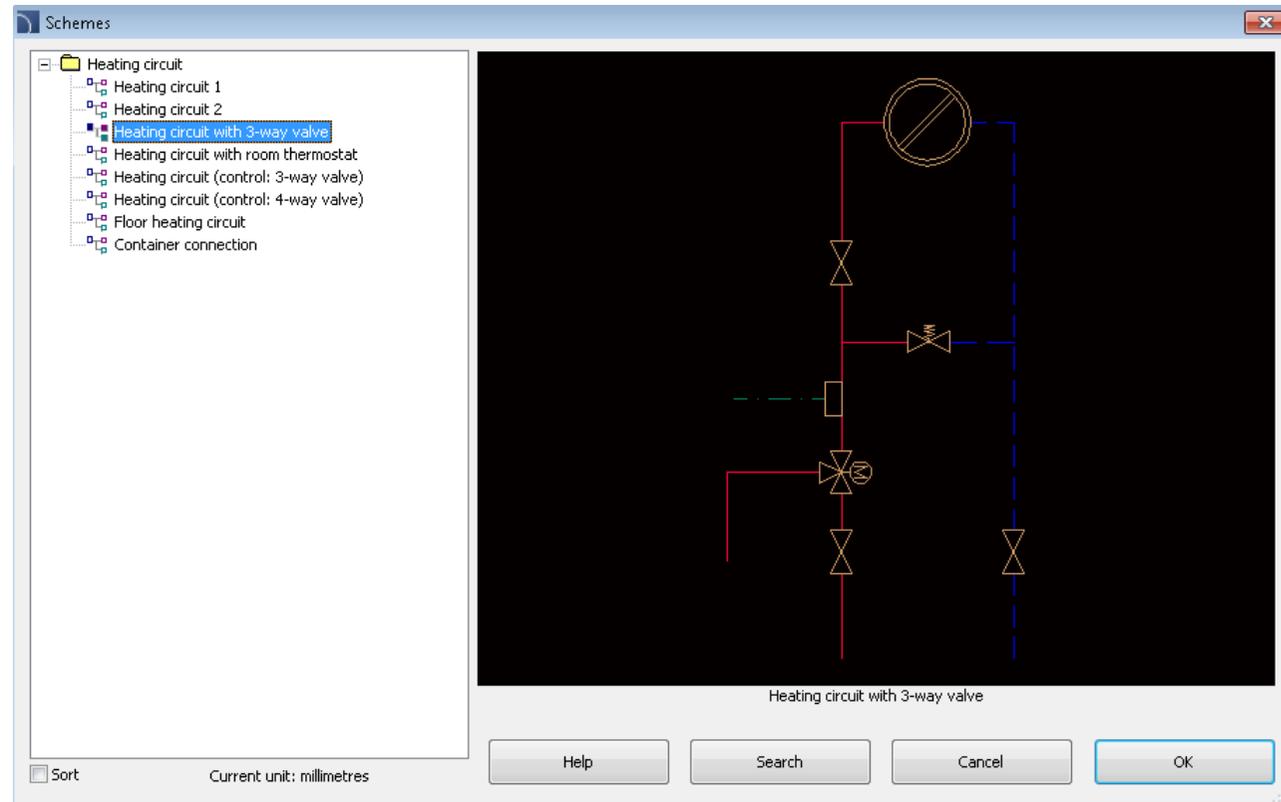


## ✓ Schemes in the HVAC & Piping module

Update of schemes available in the “already made schemes”. Currently all schemes are adapted to be inserted in new distributors’ symbols.

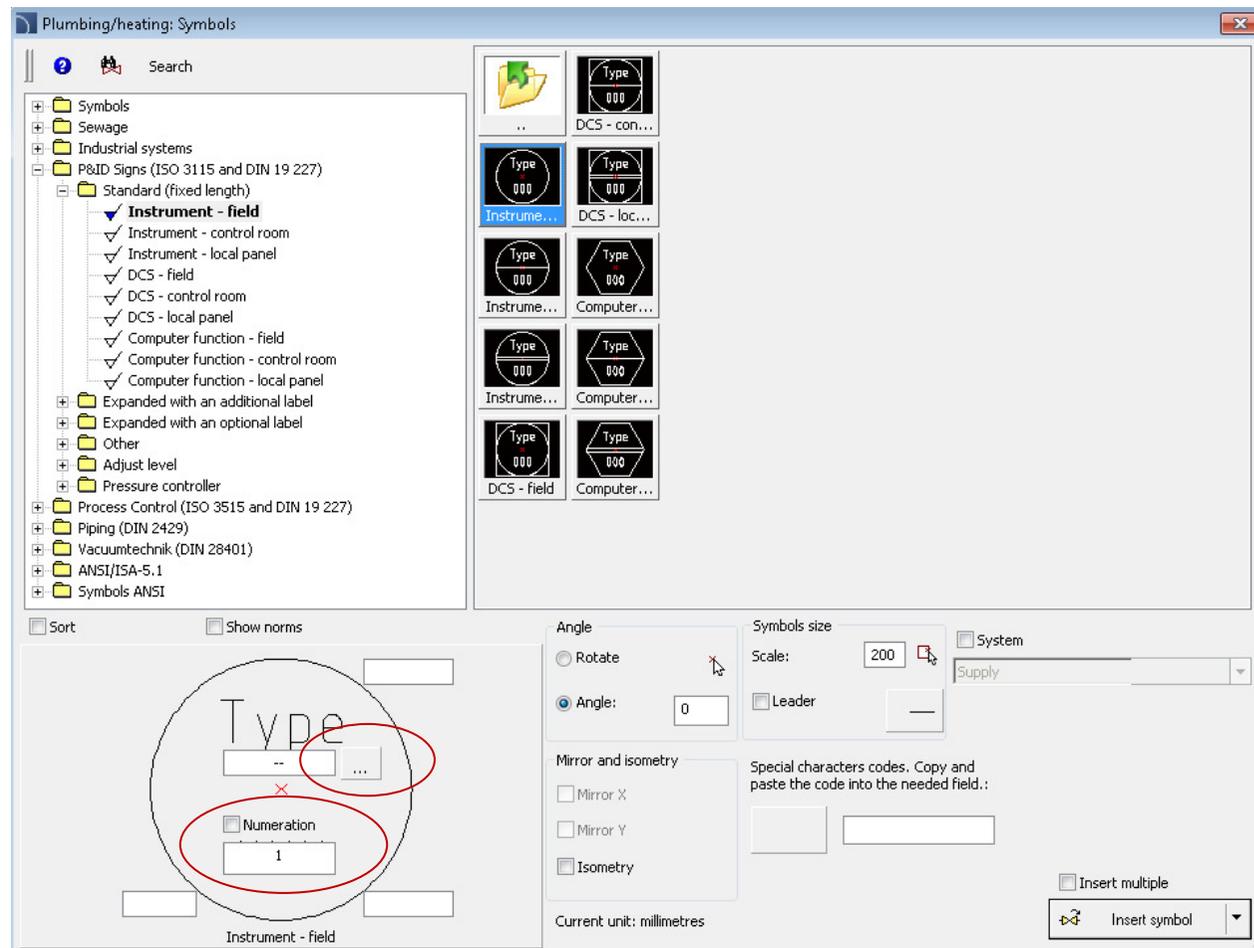
All symbols from the predefined schemes can be edited using the quick edition tool (previously symbols didn’t have this functionality).

What is also new in the schemes is that when they are being inserted to the drawing all elements and lines are being automatically translated in accordance to the program language (previously only Polish and German languages were supported).



## ✓ Extended functionality of many symbols in the HVAC & Piping module

For many symbols an ability to specify or select different parameters was introduced. You can also use the functionality of automatic numbering (eg, for measuring points in symbols of automation process).



## ✓ Frames and templates in the Electrical module

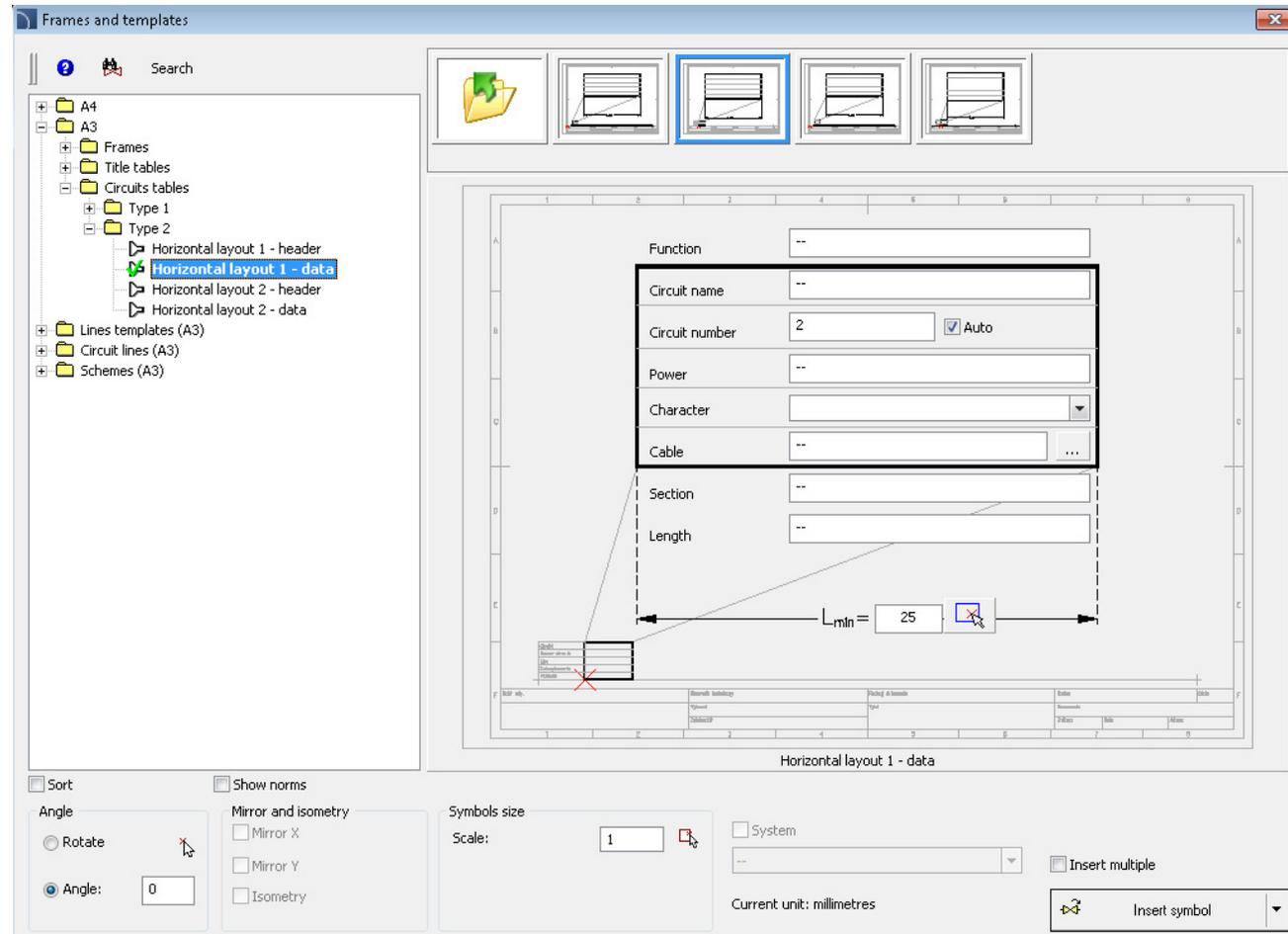
Frames according to ISO 5457 – addition options for frames insertion.

Tables according to ISO 7200 – additional options, including multiline attributes in the company address or the project name.

Cover page sheet – A4.

Additional electrical circuits tables.

Automatic numbering of drawing tables inserted into a one, single drawing.



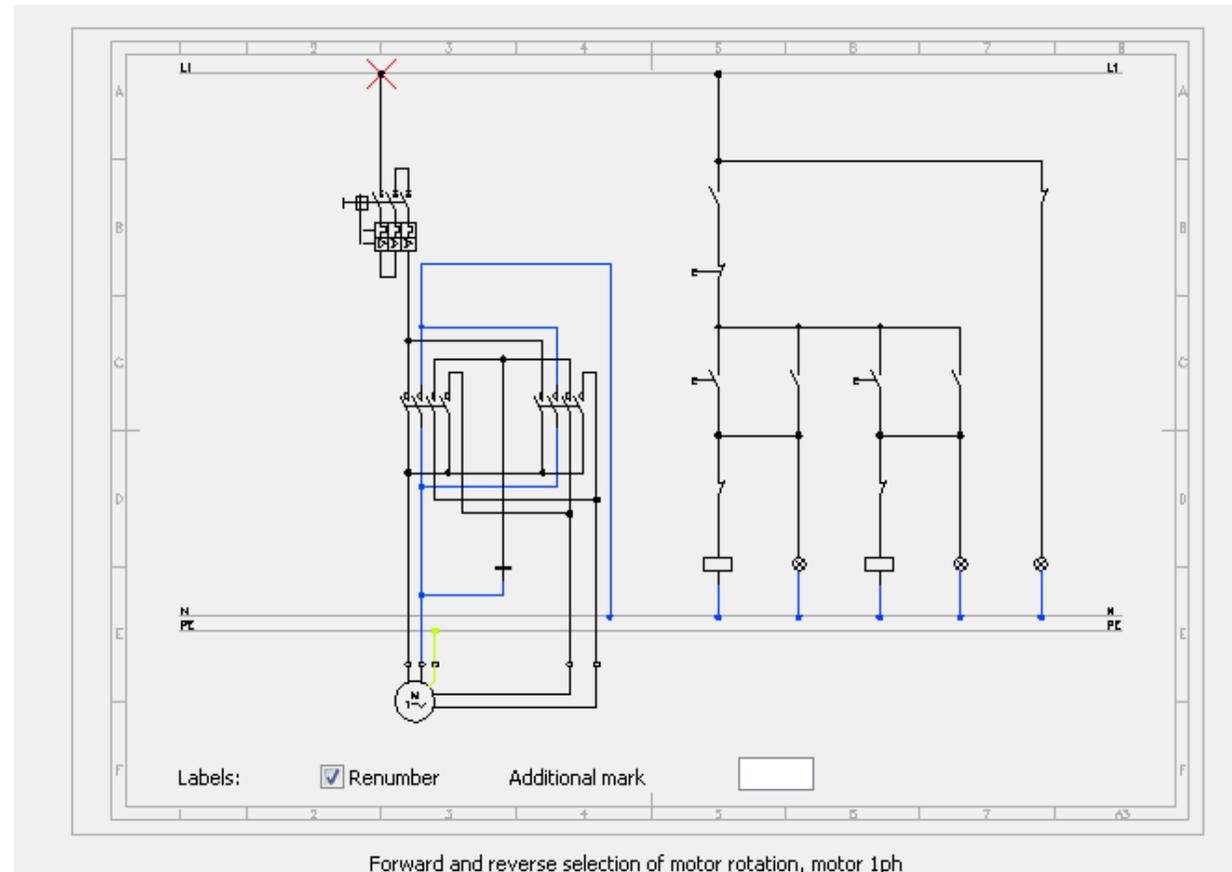
## ✓ Line circuits and already made schemes in the Electrical module

Potential lines – prepared in a parametrical way. Thanks to this it is possible to determine any type of spacing between the schemes' lines (size of the scheme).

Circuit lines – additional lines used to quickly create schemes.

Electrical schemes – already made schemes (Direct-on-line start of 3-phase motors, reversing systems, Star-delta starting, Dahlander).

When inserting the schemes all symbols are being automatically numbered.



## ✓ Expanded library of symbols in the Electrical module

Additional symbols:

Terminals

Complex apparatus – contactors, relays etc.

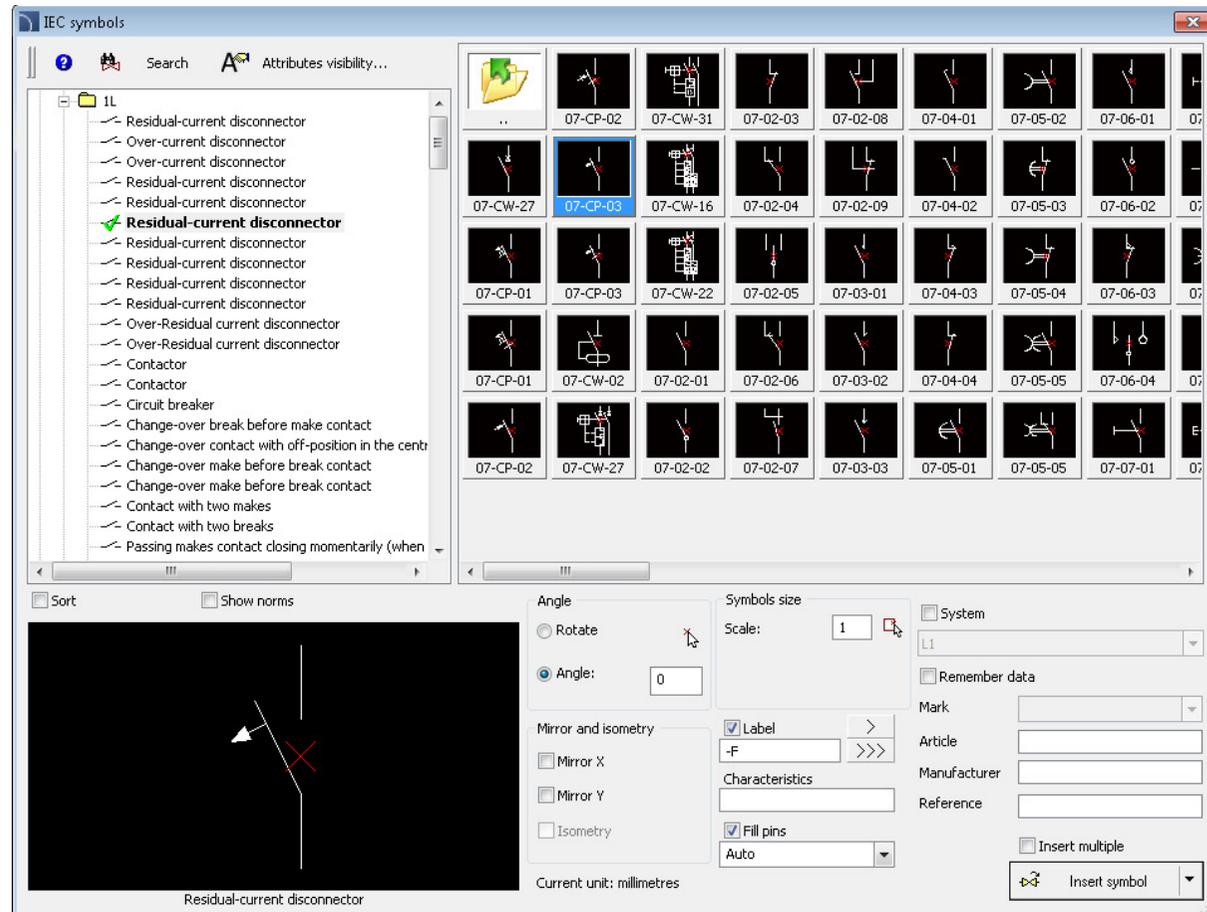
Cable joints schemes

Standard 60617-8:2004 „Measure devices”

Standard 60617-6:2004 „Making and transforming electricity”

Standard 60617-5:2004 „Active elements”

Line address symbols (address to the next or previous sheet).



## ✓ Frames and tables

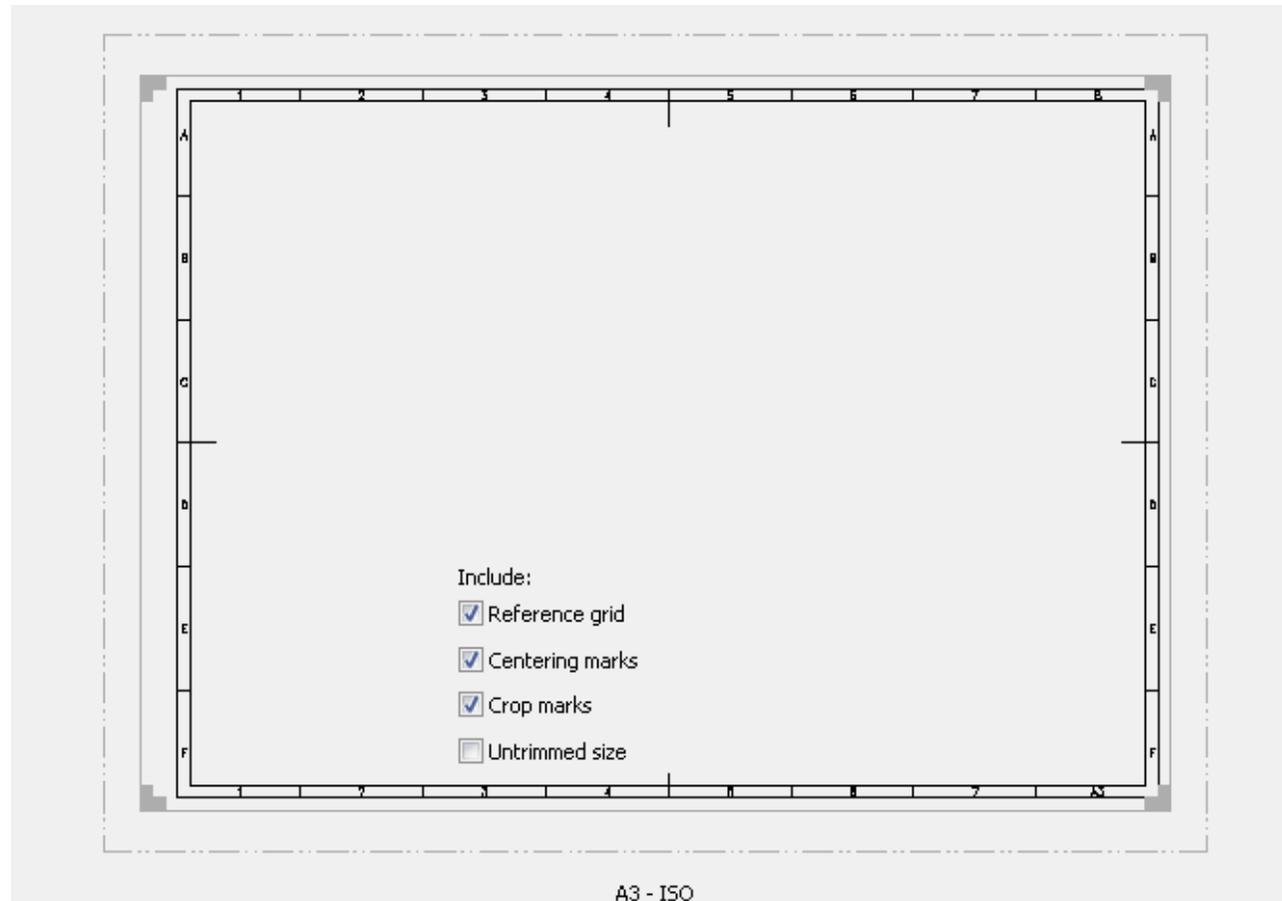
New command that is used to insert frames and tables.

New frames according to ISO 5457. When you insert a frame you can choose the elements which will be included into the drawing (reference grid, centering marks, crop marks and untrimmed size). Frame for the untrimmed size also contains markers for sheets making.

New tables according to ISO 7200, in which we included multiline attributes in the address and project name.

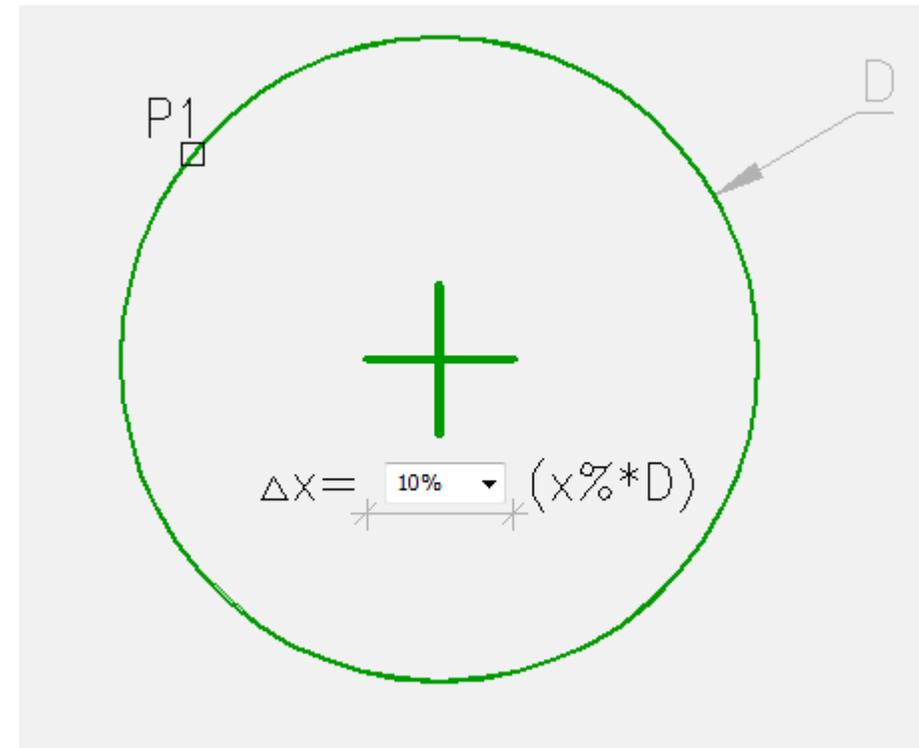
Modified specification tables.

Modified cable legends.



## ✓ Drawing tools

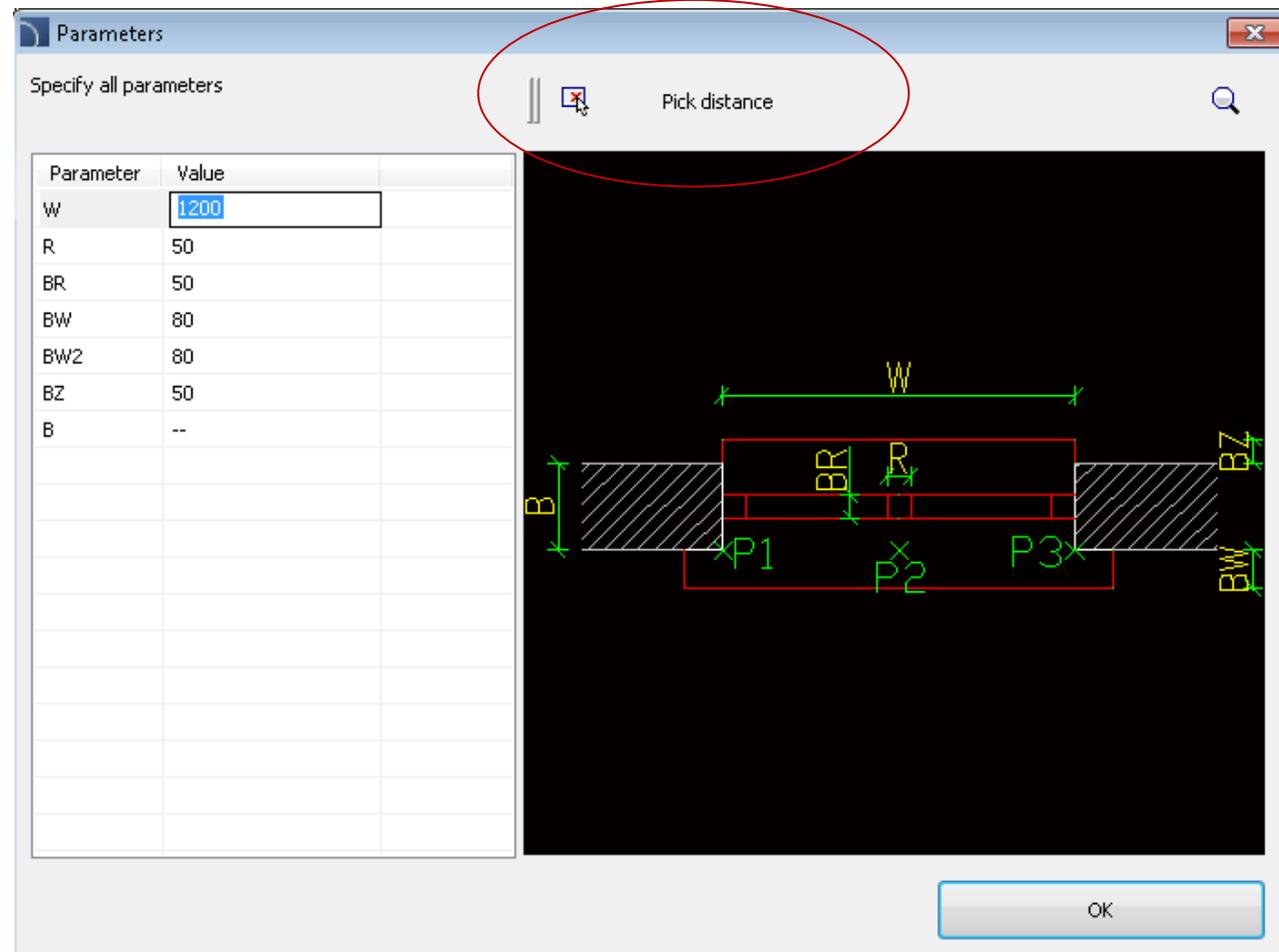
In the command „axis between the lines”, „circles axis”, „center marks” and „bisector” we have included a possibility to define parameters (extension of the symmetry and bisector axis and the mark size).



## ✓ Indicating dimensions, angles and scales in the drawing

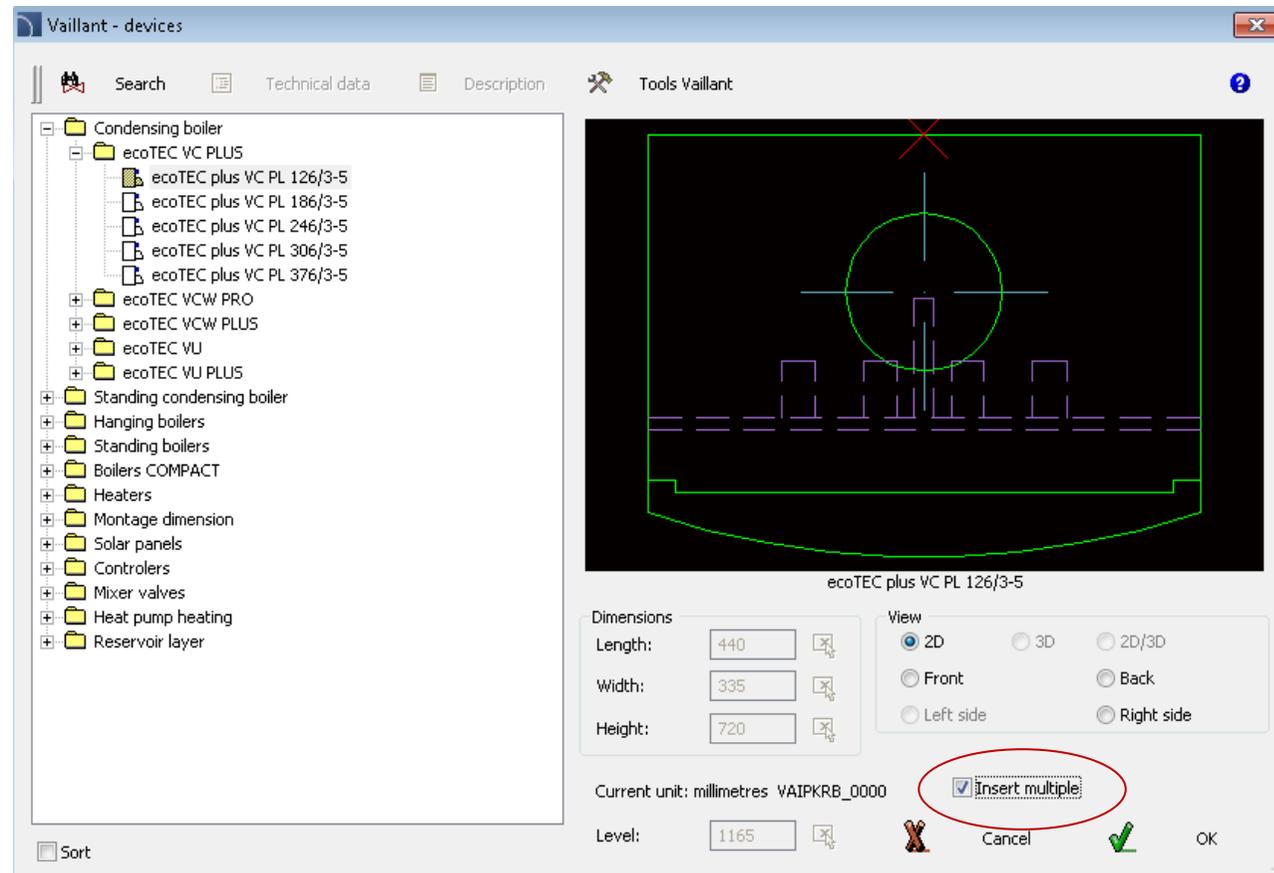
In many dialog windows, buttons were introduced in order to dynamically indicate dimensions and angles directly in the drawing. Thanks to this it is possible for example when you define the parametrical object dimensions to „measure“ all or selected dimensions without having to type them from the keyboard.

In the dialog window where you can insert symbols we have also introduced a possibility to get the scale from other symbols that were previously inserted in the drawing.



## ✓ Insert multiple

In some commands we have added an option „Insert multiple” which allows to insert a selected object multiple times. Symbols and objects that are being inserted using this option benefit from all CADprofi features such as automatic interruption of lines and cables, automatic reduction insertion, adjustment of the angle when connecting to other objects etc. That’s why the “insert multiple” option gives better results than just normal copying with the base CAD command.



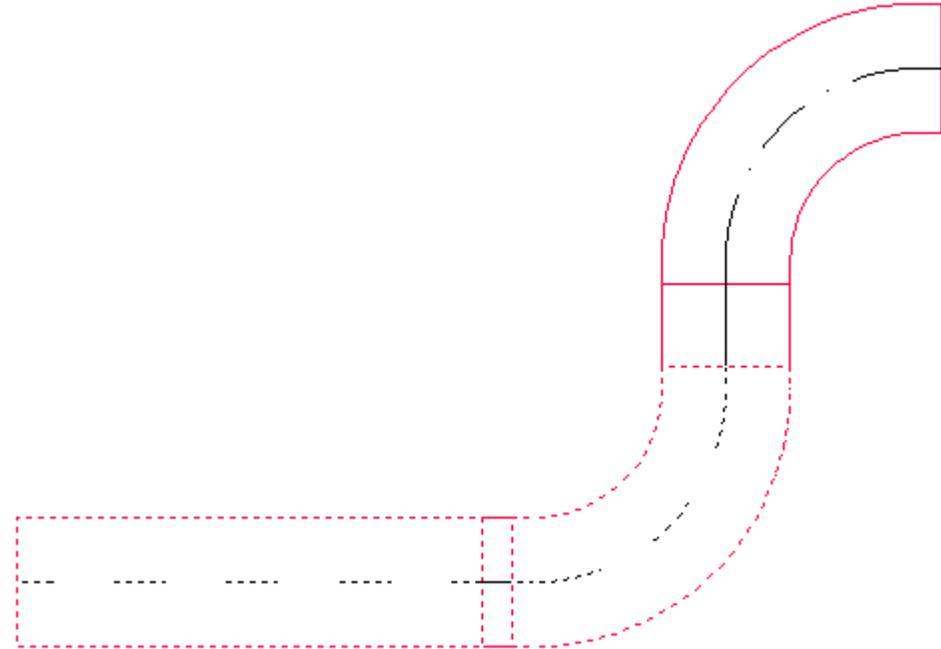
## ✓ Draw similar objects



Insert similar object

This command has been extended and now it also recognizes cables, ducts, trays and fittings.

Schematic objects and cables are also being recognized.



## ✓ Drawing schematic lines

Additional option "Overwrite elements", which allows for faster choosing the right type when drawing single lines. When this option is enabled the chosen line type replaces the lines on the list (so there is no need to delete the lines from the list that user doesn't want to use anymore).

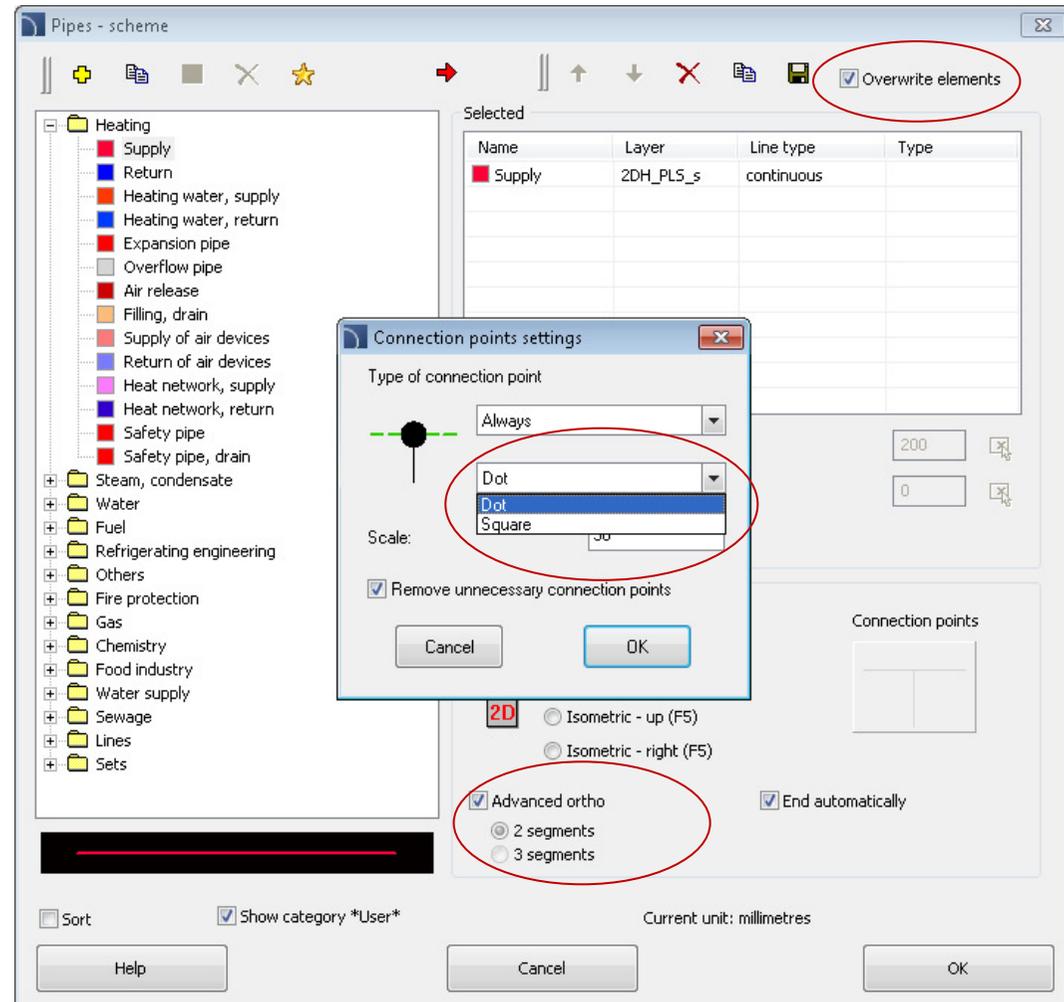
When drawing using the advanced Ortho you can choose in the dialog window to automatically draw two or three lines. Previously this option was only available in the command line.

When drawing lines program will automatically insert connection points.

In the new version user can choose the kind of point.

User can indicate in the drawing the spacing between lines and the offset (when drawing along the walls or other objects).

There is a possibility to draw lines with polyline (see description below).

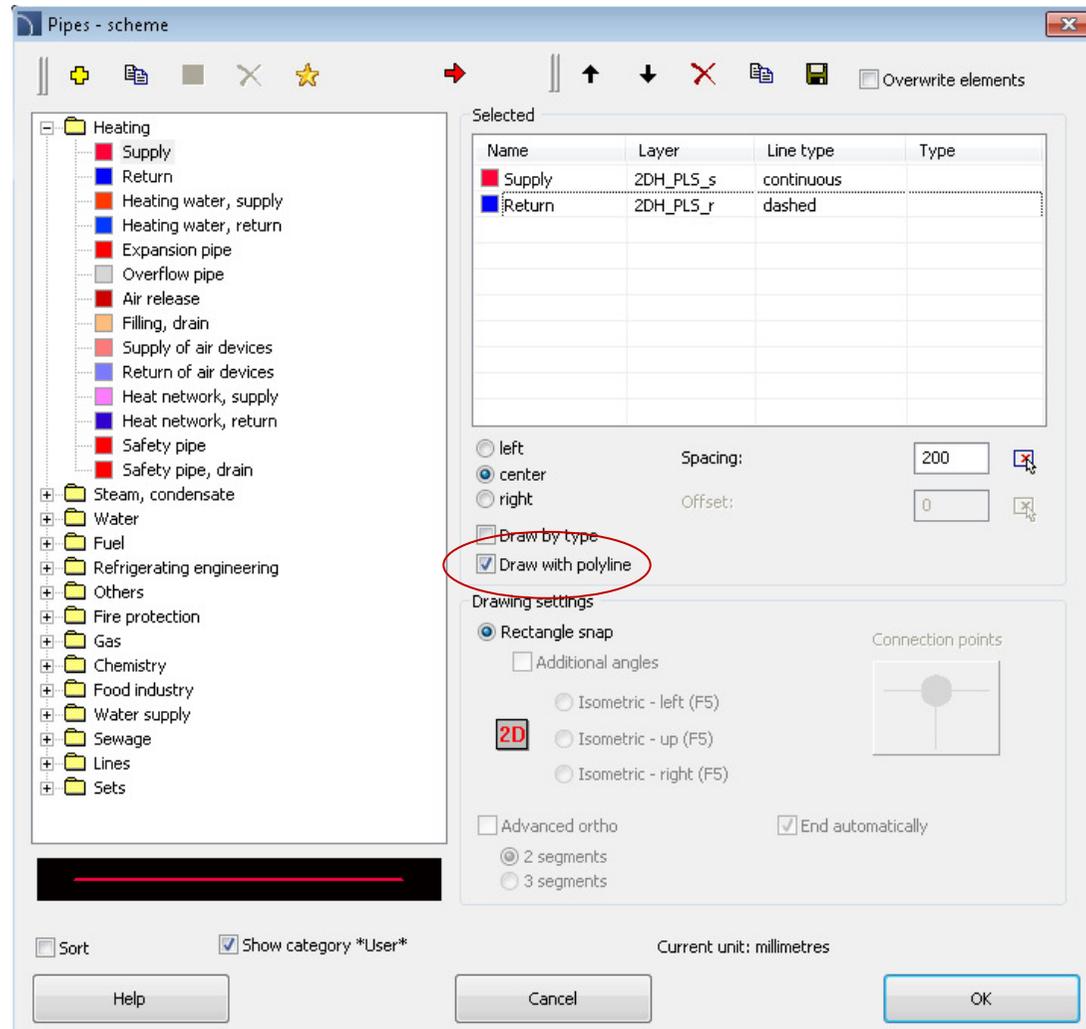


## ✓ Schematic lines - polyline

At the request of many users we have added to the “Pipes – scheme” a possibility to draw lines with the help of a polyline. Therefore, we have added the support of polyline in many other commands. This applies particularly to editing line types, making specifications, describing lines as well as commands used insert symbols into lines (in a polyline you can insert all symbols except for the cross symbols).

When drawing lines with the polyline next lines' sections are one drawing object. When it is necessary it is very easy to select this object, for example when we need to check the length of the whole line. This is important when designing large lines, telecommunications and water networks etc.

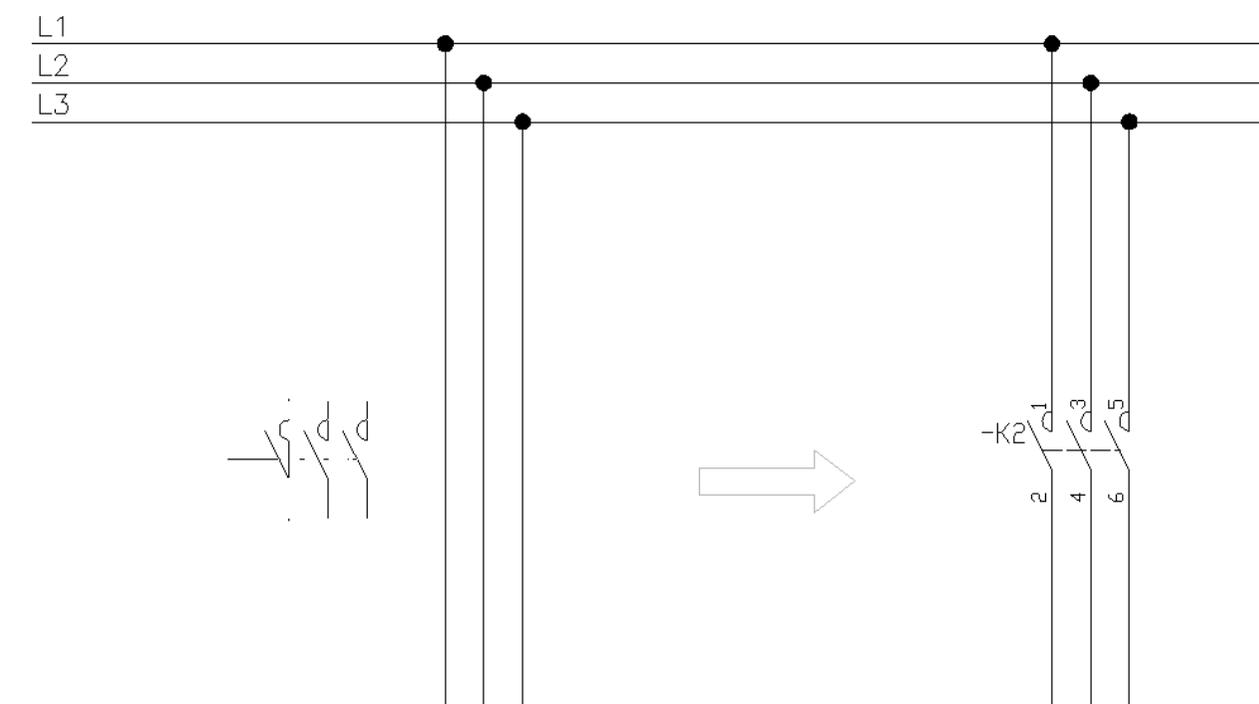
If necessary polylines can be broken into lines using the standard base CAD command „Explode”. Broken lines are still being treated by the CADprofi program as normal lines.



## ✓ Multiline symbols

Many symbols in the CADprofi program are multiline symbols. In the new version those symbols can be inserted with an automatic multiple line break.

When deleting multiline symbols program will automatically connect lines where the symbols have been inserted.



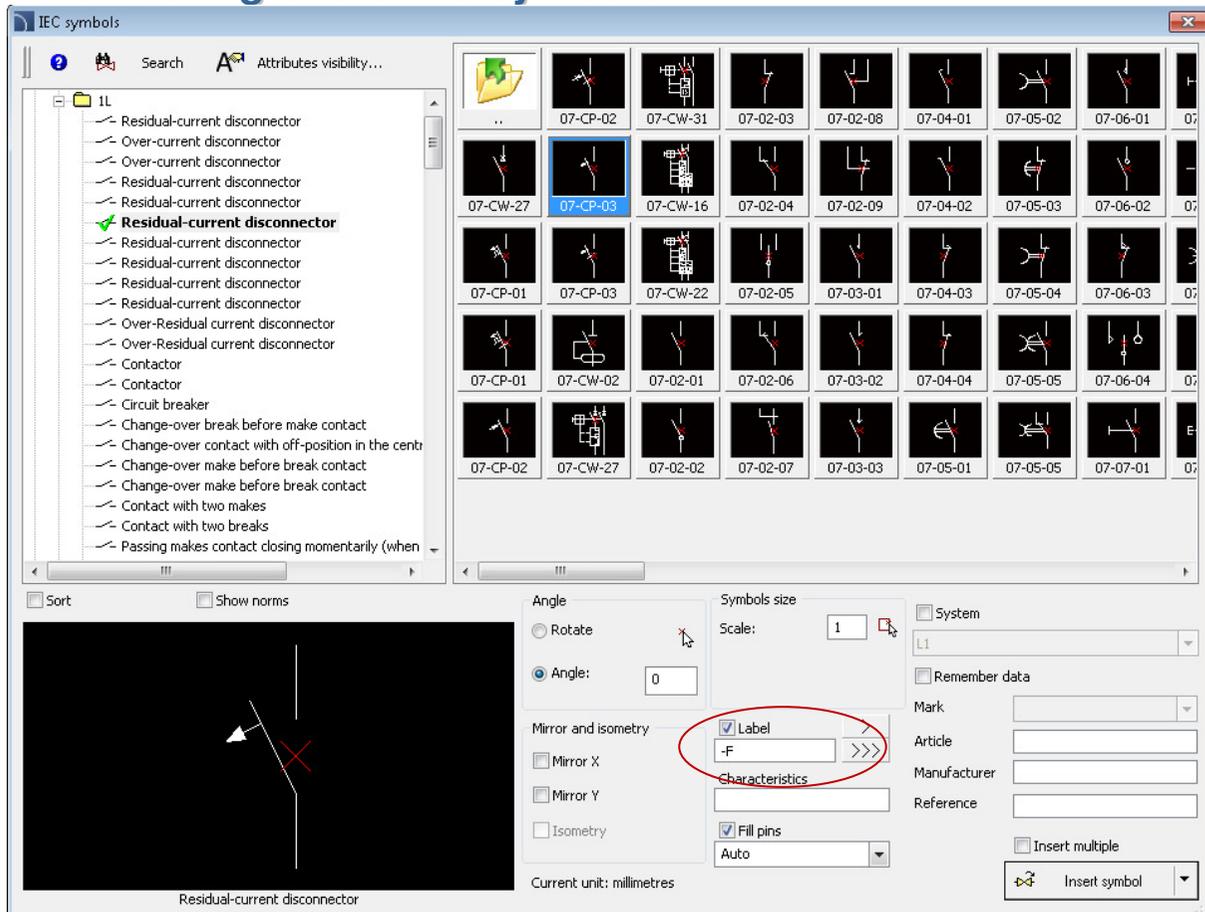
## ✓ Enhanced possibilities of the numbering of the IEC symbols

Possibility to use multilevel numbering.

Faster numbering of symbols in large drawings.

Automatic designation of numbers directly after selecting the right symbol in the library (previously numbering was only available „at request” ie when clicked the „>” or „>>>” buttons).

You can use prefixes in numbers when inserting already made schemes and complex apparatus.





# CADprofi

## ✓ Attributes visibility template

IEC symbols which are available in CADprofi 8 have got visible attributes that include objects' labels (numbers) and their technical parameters. Thanks to the template, user can specify which parameters he wants to have visible for inserted symbols.

Each attributes have been moved to separate layers so you can disable the layer and therefore also a particular attribute for all symbols in the drawing.



## ✓ Isolations

Possibility to draw isolation of pipes and ducts and for all bends, curves and reductions.

Isolations are included when drawing single installation elements as well as when drawing whole lines' strings, when making connections and when editing lines and fittings.



Pipes - plan 2D

- Plumbing/heating
  - Pipe
  - Pipes flex

Elbow parameters

Radius ( 171.45 )

Radius as a multiplier of width

Type

Limit max angle to 90°

Dimension E

Dimension F

Thickness of isolation

Installation and drawing

Installation  Supply

Reference edge

Offset: S

Type

Manufacturer and type

Manufacturer

Type

Product

Dimensions

Diameter: D

Options

Installation fit

Diameter fit

Join object

Thickness of isolation

Thickness of isolation  
Specify isolation thickness

Description

Sort

Always show dialog

Current unit: millimetres

Help Cancel OK

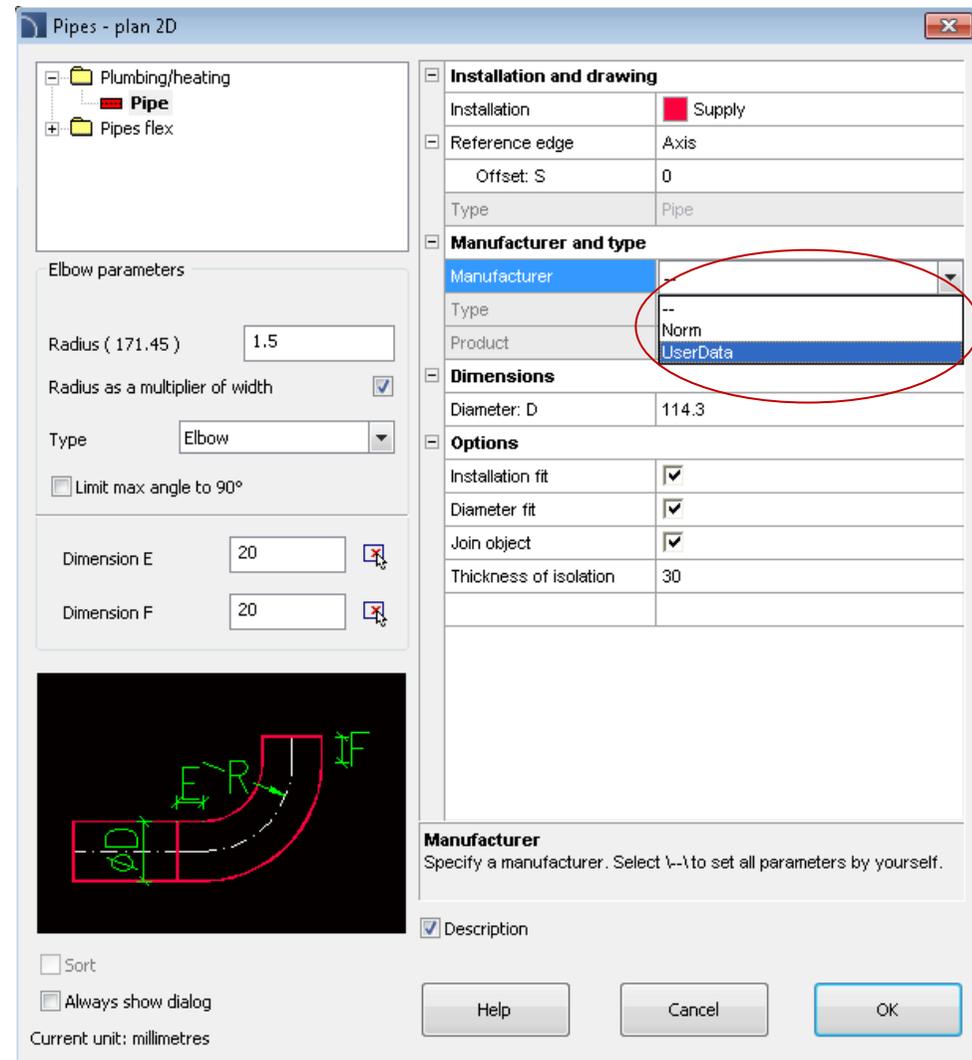
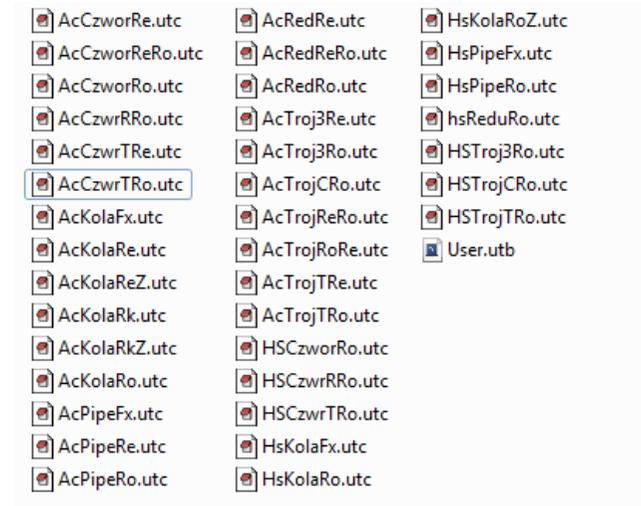
## ✓ Defining user connectors

In CADprofi 8 we have introduced an ability to define and add the user's own type of fittings, ducts as well as cable trays and channels. Currently these data is defined by editing text files that are placed in the User Data folder.

By default for the HVAC & Piping module it is located in the below folder:  
 C:\CADprofi\UserData\Components\Sanit\Pipe2D\User).

And for the Electrical module it is located below:  
 C:\CADprofi\UserData\Components\Electro\Pipe2D\User).

In the next version an editor for these data will appear.



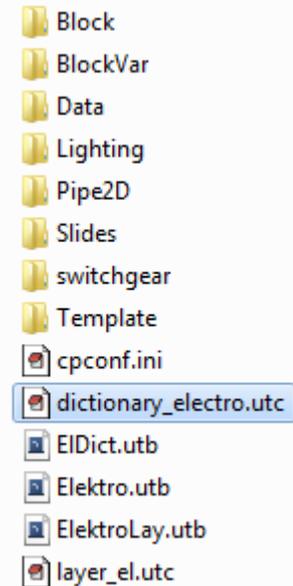
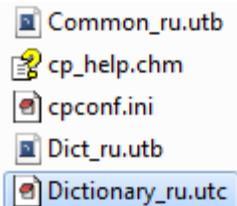


## ✓ Language dictionaries

In CADprofi 8 we have introduced an ability to translate libraries and program content in additional languages. In order to have complete specifications in all languages we have introduced in the program dictionary files, which can be edited by users.

Way how to edit those dictionaries is being described in the dict\*.utc.files.

We have shared files of the substantive program content (symbols' libraries). For those who are interested we can also give dictionaries from the program interface.







## ✓ And many other changes

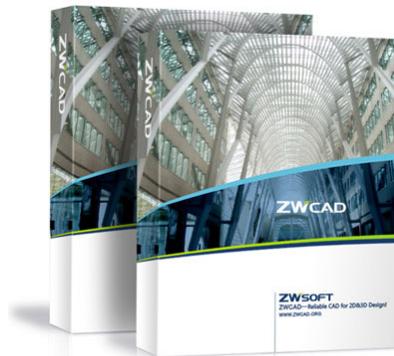
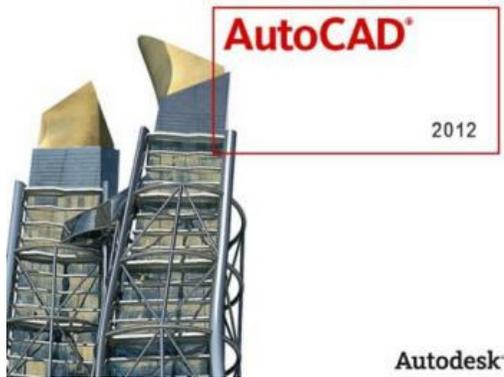
In CADprofi program we have introduced many changes, including:

- Significant acceleration of many commands It's mostly visible in large drawings.
- Increased functionality of symbols and objects that are defined by user.
- Introduction of additional options in objects and parametrical symbols (multiline attributes, inserting objects with a specified detail, remembering of data that is included in the registry etc).
- Improved creation of graphical legends

	Outside temperature sensor
	Swing check valve
	Diaphragm extension tank
	Heating circuit
	Funnel
	Manometer
	Pump
	Pump
	Reducer
	Thermometer sensor general
	Cap valve
	Ball valve
	Stop valve
	Three-way valve
	Overflow valve
	Non-return valve with discharge
	Pipe - Supply
	Pipe - Return
	Pipe - Warm water
	Pipe - Cold water
	Pipe - Circulation

## ✓ Adjustment to many base CAD programs

AutoCAD 2012 with Service Pack, Bricscad V12, ZWCAD 2012, progeCAD 2011, 4M CAD, JetCAD, IntelliPlus, GstarCAD.



## ✓ Update and addition of additional manufacturers' libraries

New products in the manufacturers' libraries:

WILO – update of many pumps (engine change) and introduction of many new pumps

SALMSON – a significant expansion of products' library

Legrand – update of the electrical apparatus. Simultaneous insertion of many apparatus into the project – new feature.

Lovato – new library of electrical equipment (about 7 thousand new devices)

Reflex, EMB, KSB – many new devices

Wavin – update of products in order to use them with the one-click technology





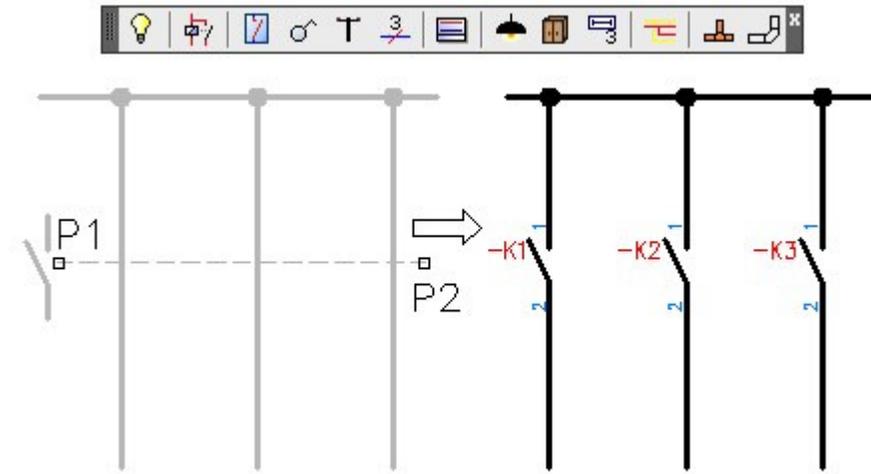
**CADprofi**



**Changes introduced after  
CADprofi 7.01 version**

## ✓ Automatic labels numbering during inserting many symbols

CADprofi 7 introduced automatic label numbering when inserting single symbols. New version also works while inserting many symbols, for example in option „insert into many lines” or when the option „insert multiple” is turned on.

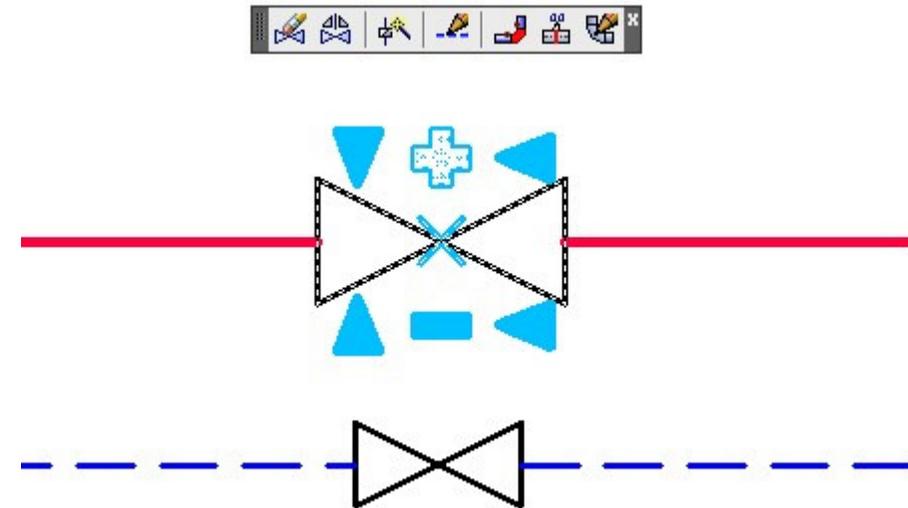


## ✓ Symbols dynamic scaling

In the command that is used for dynamic editing (symbols reverse) we introduced the possibility of scaling symbols using tags „+” or „-” .

When you change the size of the symbols inserted in the cable our program automatically adjusts the connection points.

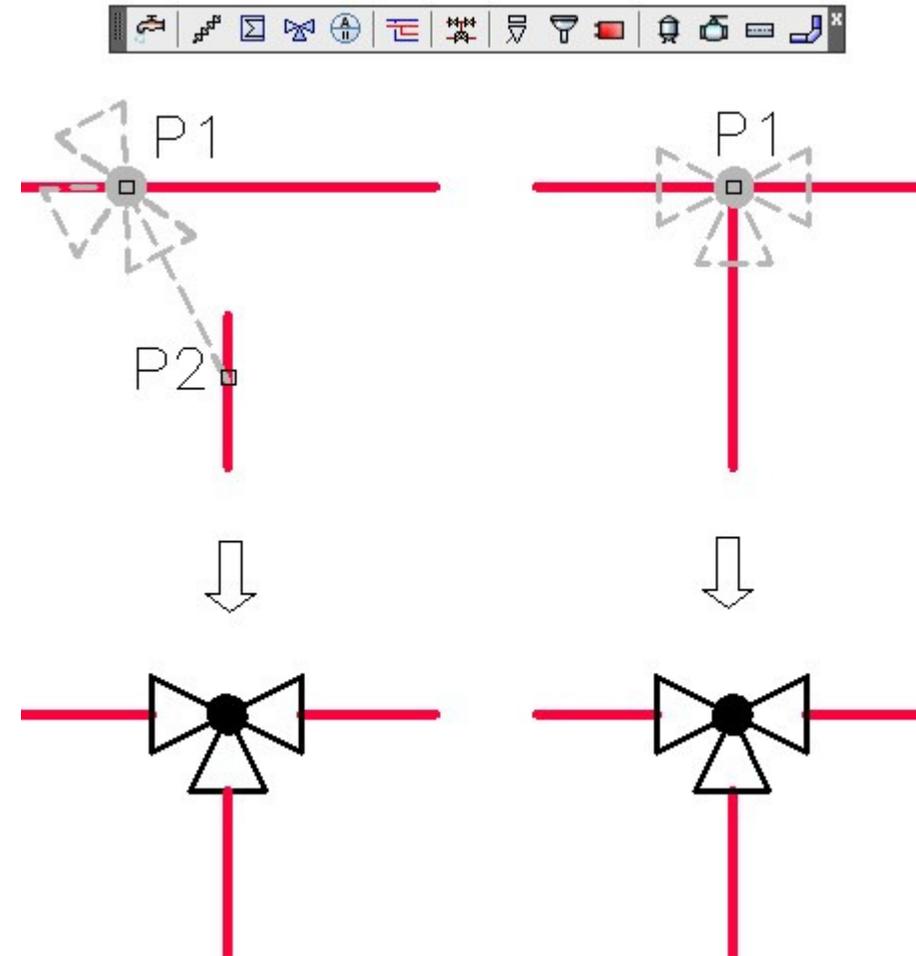
Dynamic scaling can be performed on most symbols except the CADprofi software symbols whose size is dependent on the physical dimensions of objects and isometric symbols.



## ✓ Improved inserting of cross symbols

In CADprofi software it is possible to insert cross symbols. So far, in order to insert a symbol in the crossing of two lines it was necessary to point the main line (P1) and then point the secondary line (P2). It was not possible to directly point the crossing point of two lines.

CADprofi 7.11 introduced automatic insertion of cross symbols with the ability to directly point the line crossing. We have also left the current mode, which simplifies inserting symbols in case when lines are not connected together (command makes it easier to attach these lines).



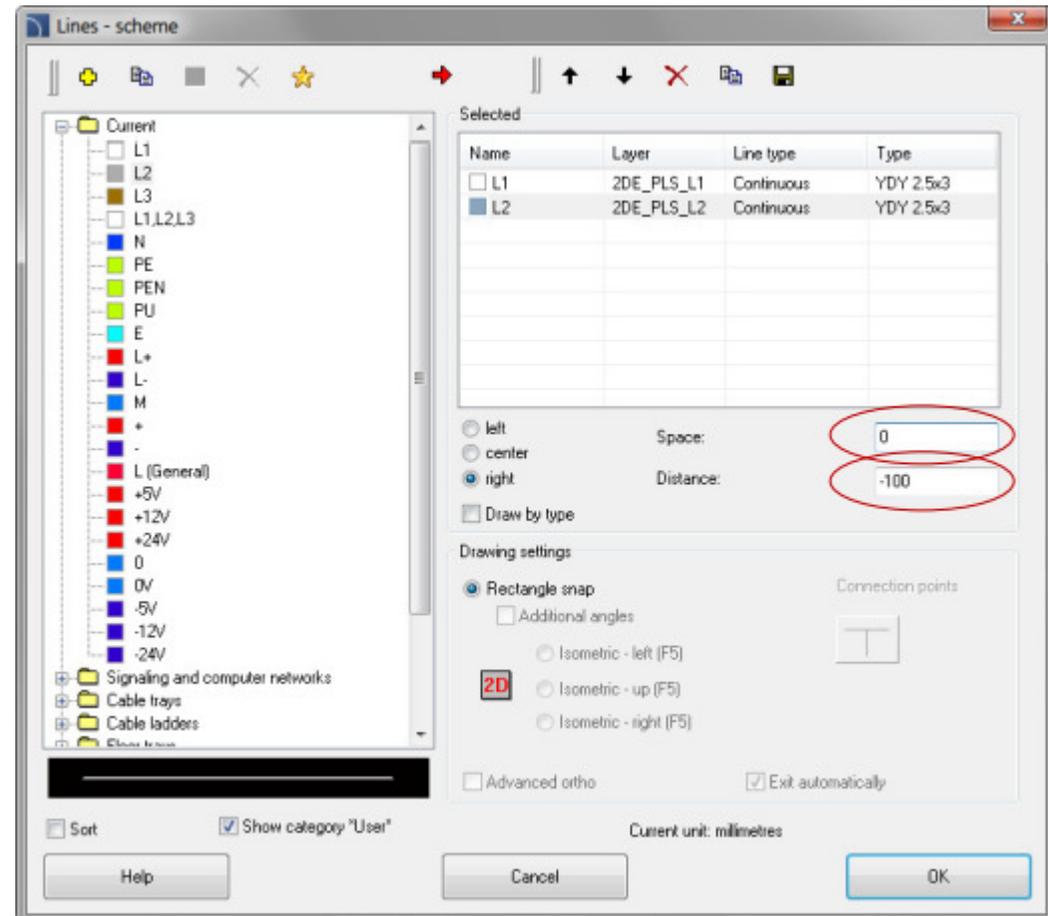
## ✓ Changes during schematic lines drawing

- **Space**

While drawing several lines we have introduced a possibility to put lines „one above the other”, with zero space.

- **Distance**

In the command „Lines - scheme” it is possible to draw lines with specified distance. This option is used for example when drawing lines that run along the walls (designer shows points on the walls and then draws them with the distance). In CADprofi 7.11 we have introduced a possibility to draw lines with negative which can become useful for example when drawing lines that are routed inside the walls.

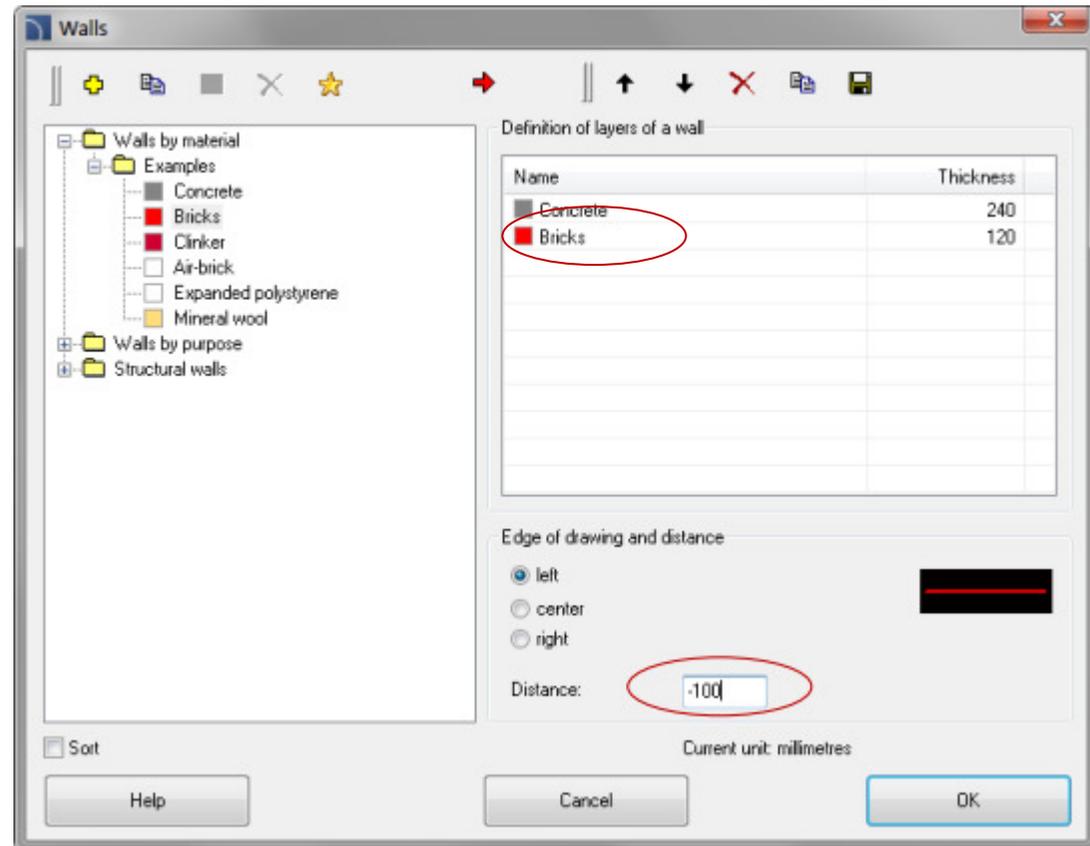


## ✓ Changes during walls drawing

- **Drawing with negative distance**

When drawing walls it is often necessary to draw the symmetry axis of the carrier layer which for a multi-layered wall is not located in the center of the wall.

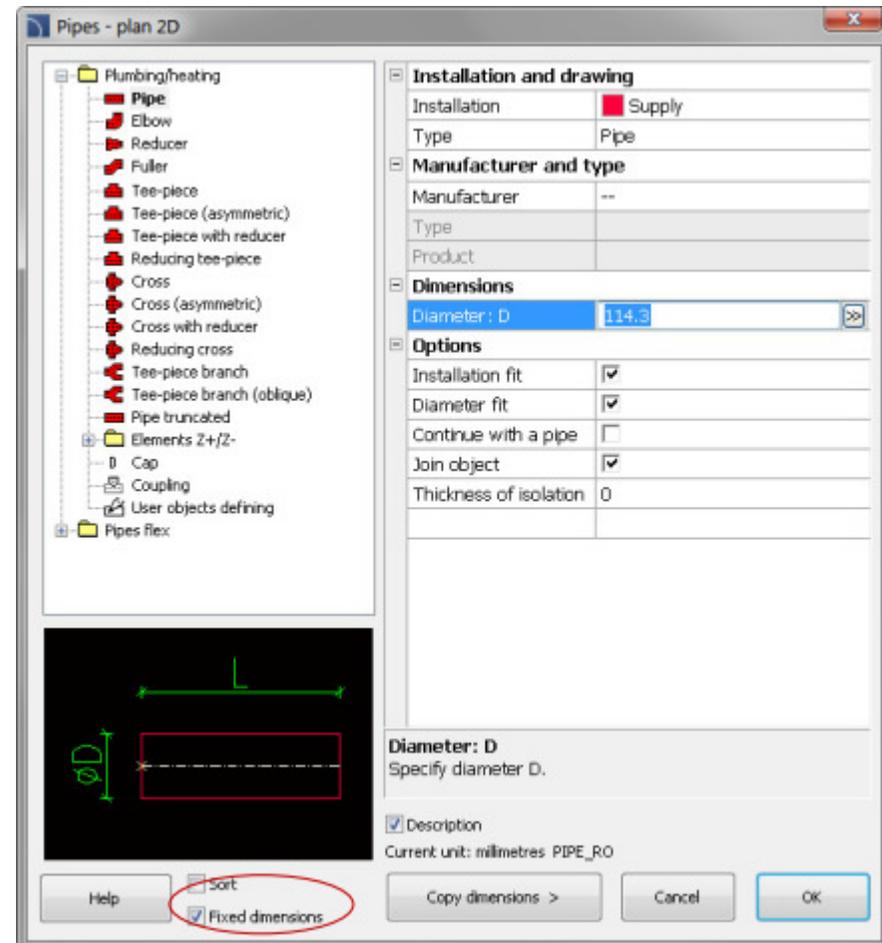
In CADprofi 7.11 we have introduced the possibility to draw walls with negative distance making it possible to implement such a distance that drawing takes place carrier layer symmetry axis.



## ✓ Fixed dimensions while drawing lines and 2D shapes

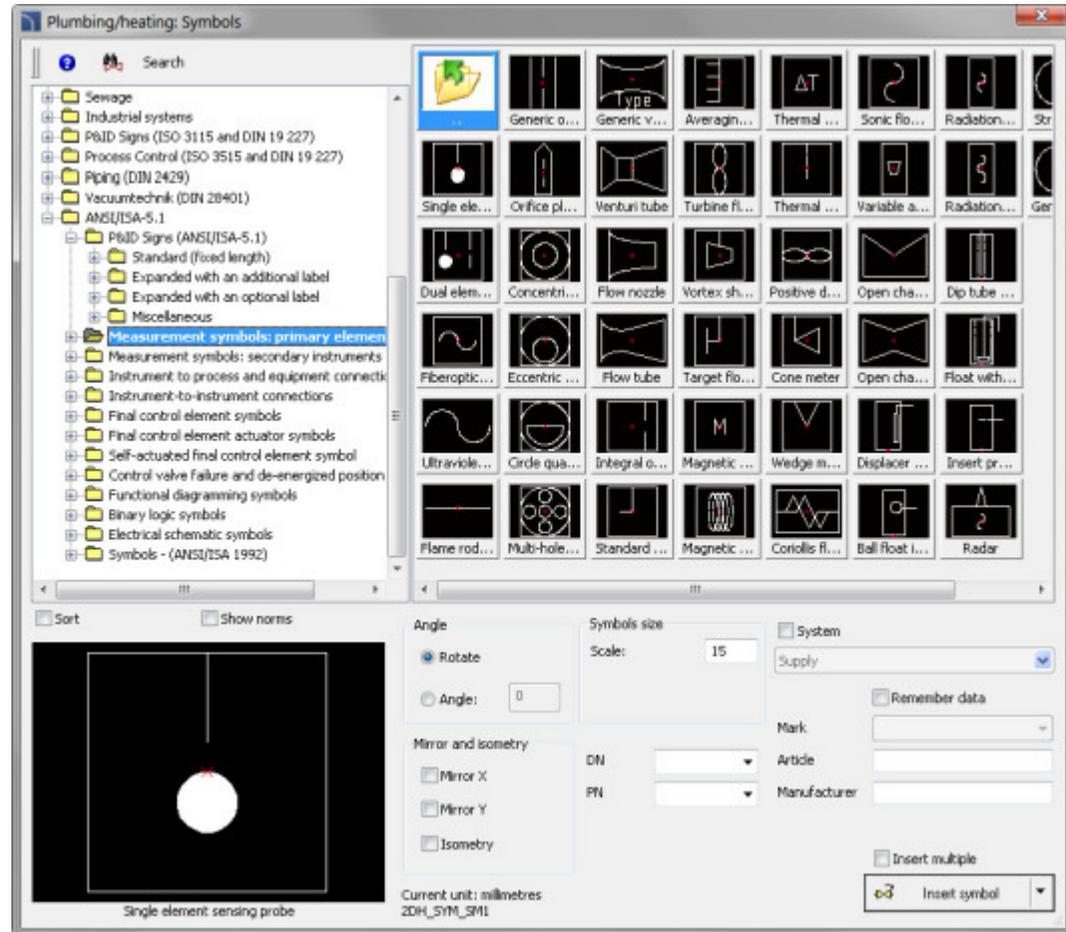
When drawing next lines or 2D shapes CADprofi software proposes the main diameter, the same that had the last line (pipe or ventilation) that was recently drawn. When you insert a reduction the software automatically changes the default line diameter to a diameter of line that was reduced. In this way next lines are drawn with a reduced diameter.

Sometimes this mechanism interferes, therefore in CADprofi 7.11 we have introduced the “Fixed dimensions” option which blocks changes of shapes default dimensions.



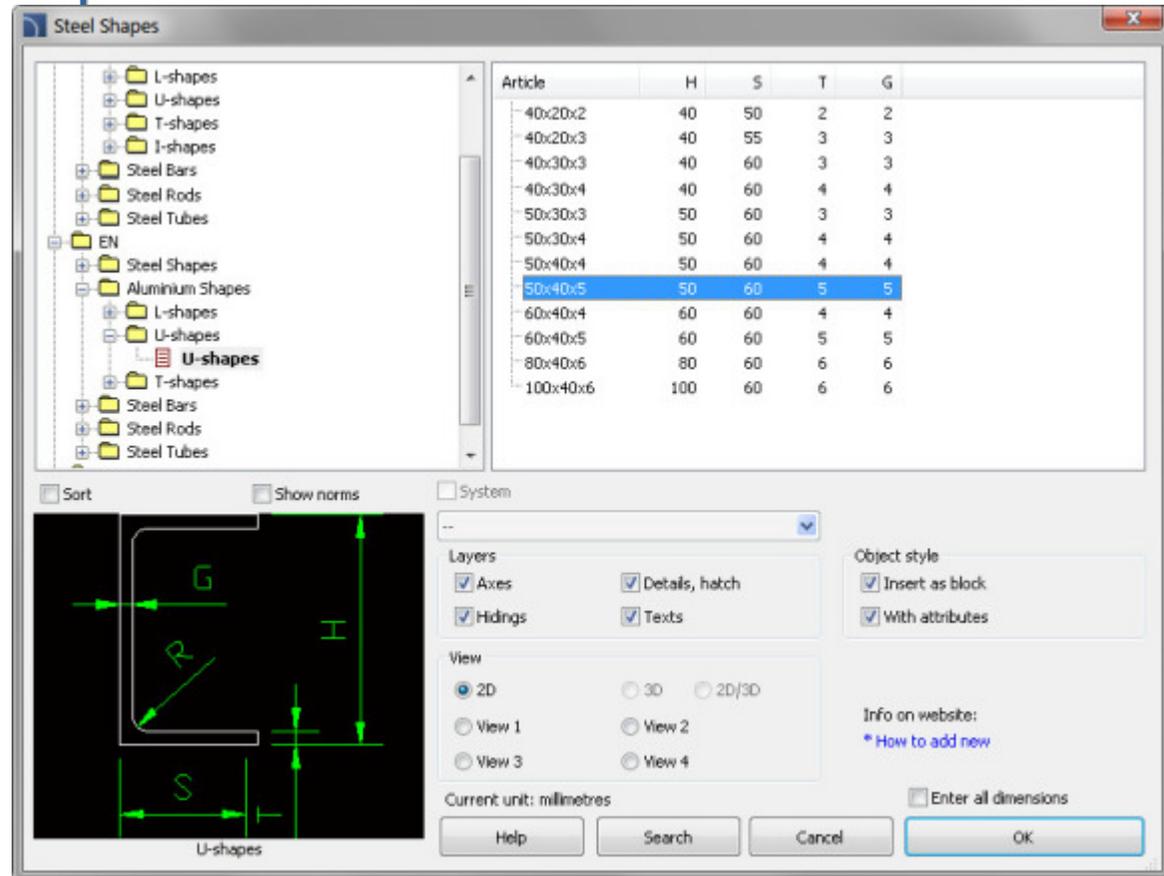
## ✓ New symbols in HVAC & Piping module

CADprofi HVAC & Piping software is being successfully used in designing installations in general construction as well as in industry. In order to extend this we have included many symbols from ANSI / ISA standards which allow better, broader cooperation and implementation of projects according to additional standards.



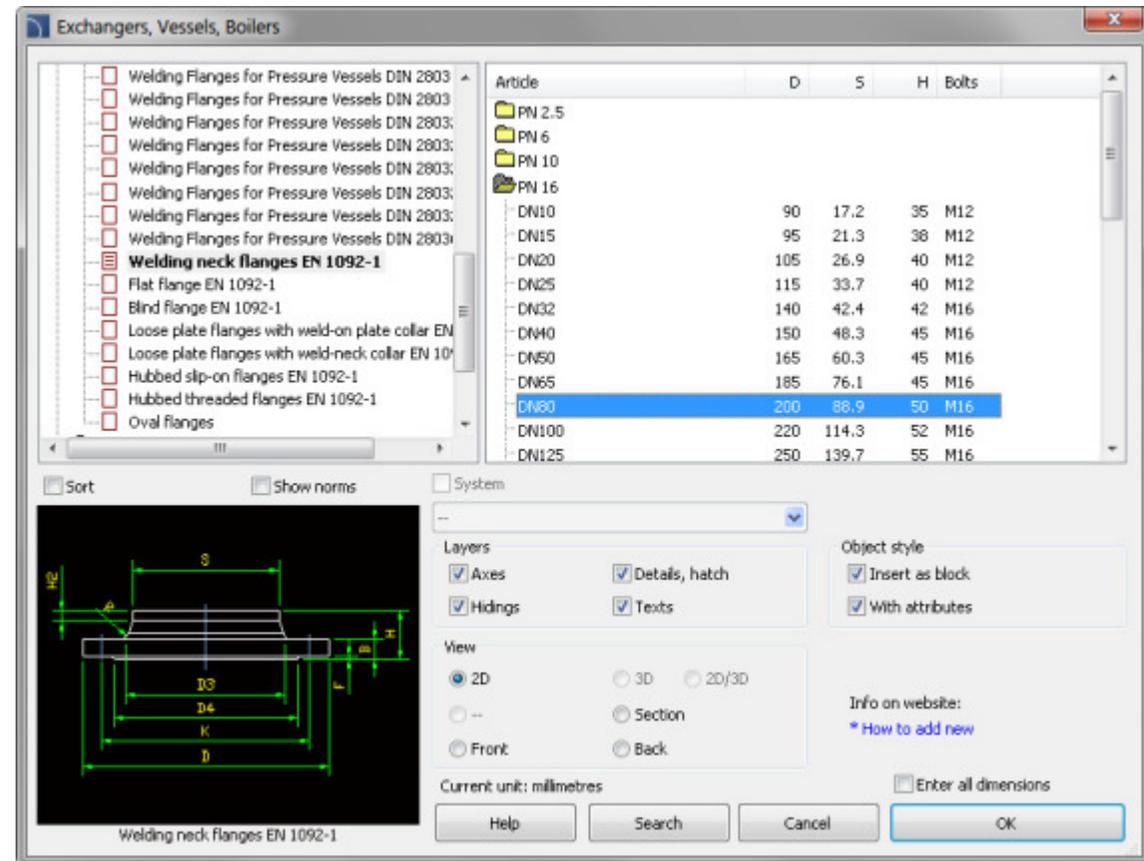
## ✓ Shapes and steel and aluminium profiles

In CADprofi 7.11 we have updated existing standards and we have introduced additional standards: PN, EN, DIN and ANSI including steel shape shapes, steel and aluminum profiles.



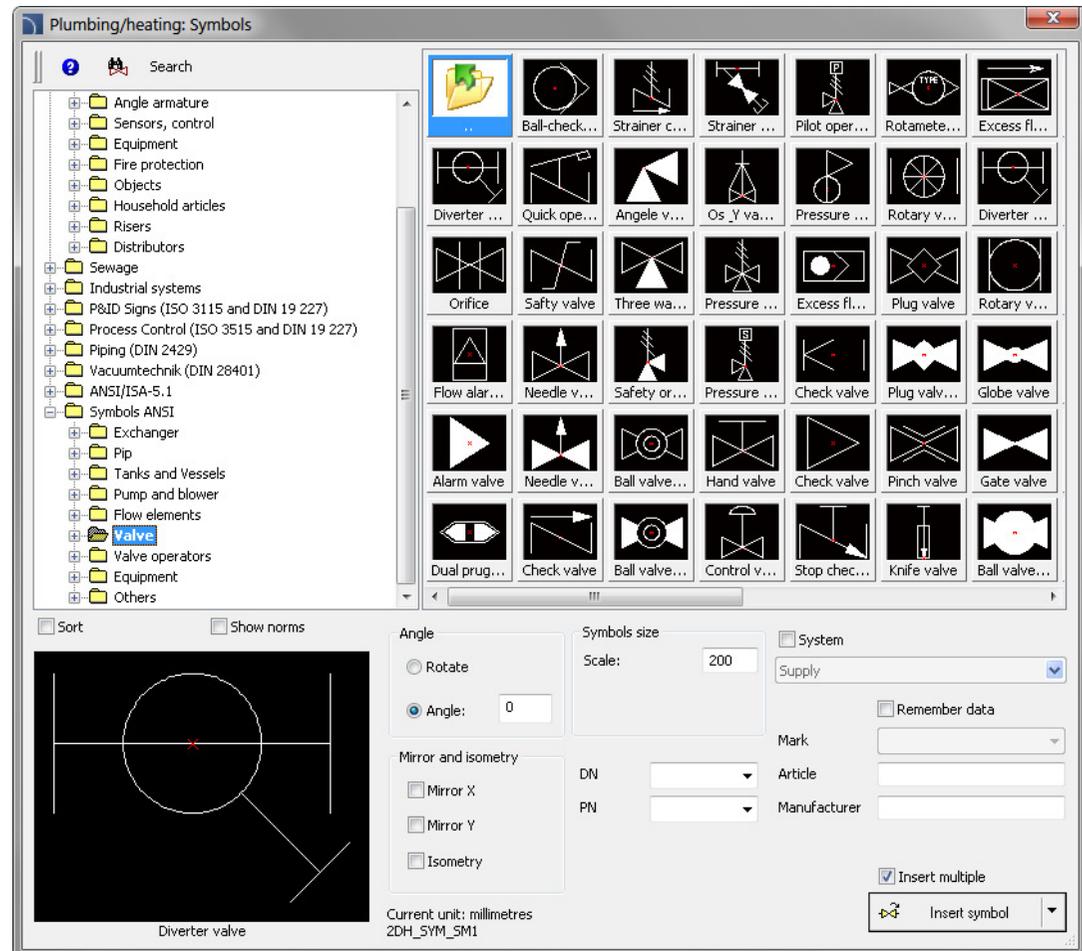
## ✓ PN and EN flanges

New standards (PN and EN) were introduced. They include different types of flanges.



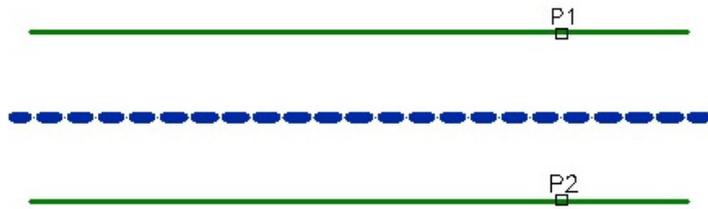
## ✓ ANSI symbols in HVAC & Piping module

For HVAC & Piping module we have added over 300 additional symbols according to ANSI standards.

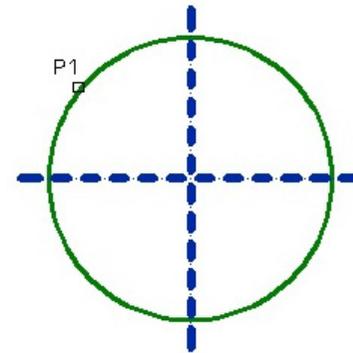


## ✓ Quick tools

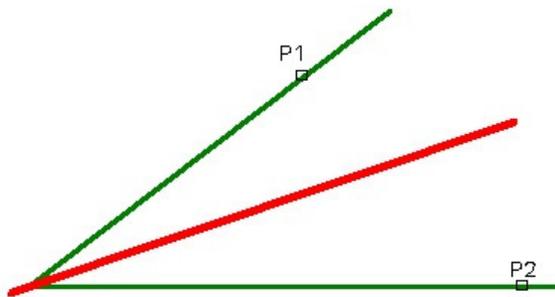
We have added four new commands to quickly draw the axis between the lines, circles axis, center marks and construction lines for bisector.



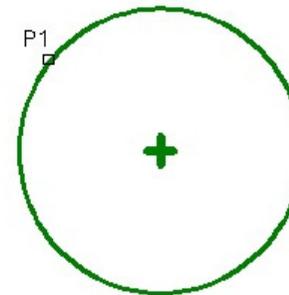
Axis between lines



Circle axis



Bisector



Center mark

## ✓ Additional options in the command „Quick edit”



In the command „Quick edit” we have added additional options allowing to quick copy and rotate the symbols.



Copying – this option allows for quick symbols copying with automatically inserting into lines.



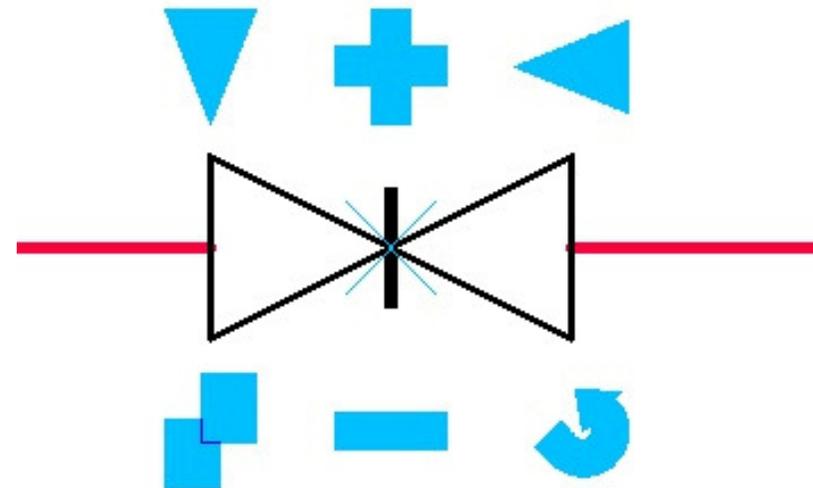
Rotation – quick symbol rotation relating to base points.



Scaling – in new version we have updated symbols scaling with attributes.



Mirror – rapid reversal of symbols relative to the axis X or Y.



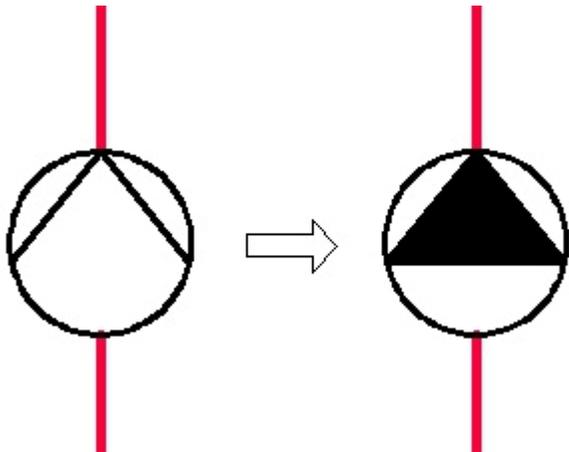
## ✓ New command – „Edit symbols”



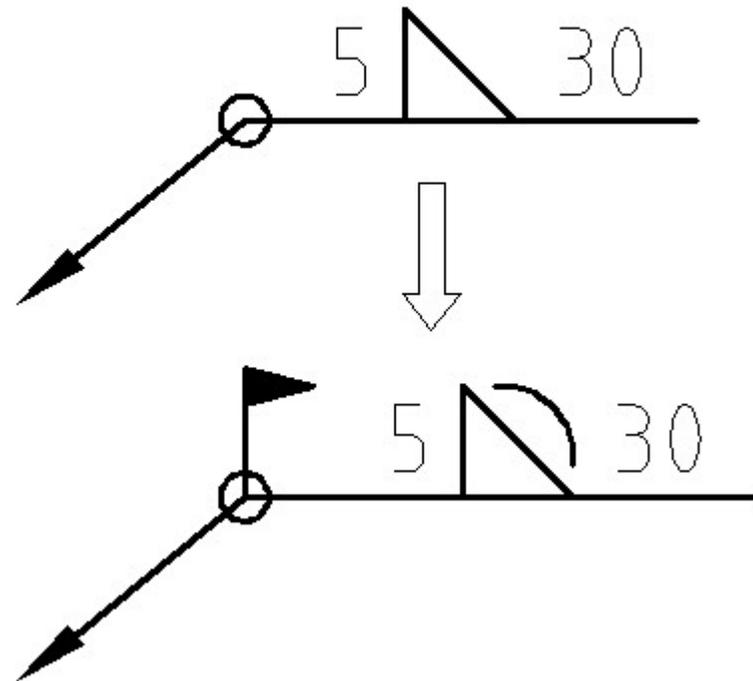
New command „Edit symbols” allows to edit CADprofi symbols in every way.

This command is especially useful when editing symbols weld marks, roughness etc. Until now if you needed to edit such symbols it was necessary to erase the symbol and insert a new one. New program version have made modifying symbols a lot easier.

Command „Edit symbols” is also used to convert a symbol into an alternative one.



*Changing symbols*



*Editing symbols*

## ✓ New command - „Insert similar object”



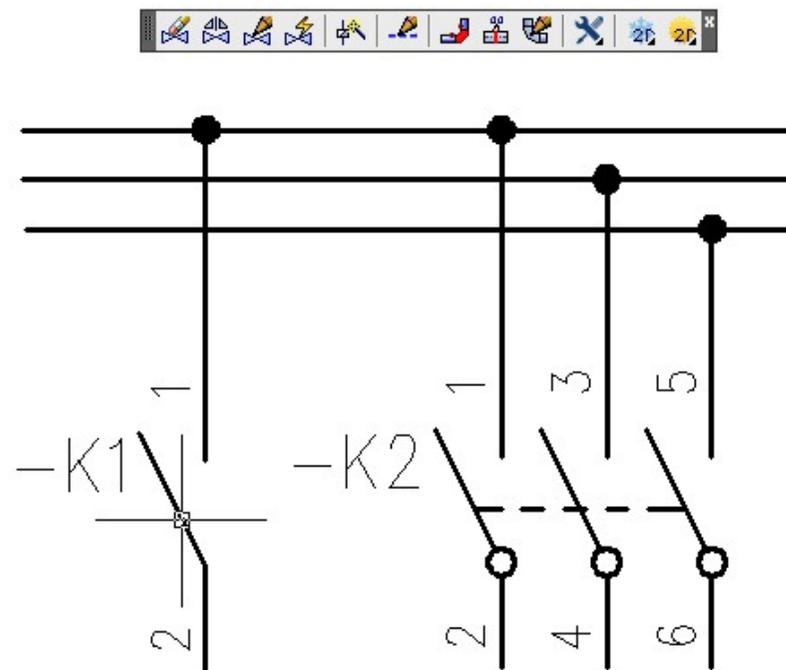
### Insert similar object

When creating projects it is necessary to insert into the drawing symbols from different categories. CADprofi program has got a very large library of symbols and choosing the right symbol may take some time when searching the right library and changing categories. New command simplifies this task.

Command „Insert similar object” rapidly opens the right category in the library which allows you to access the necessary symbols faster. All you need to do is to select the desired symbol in the drawing.

This command will simplify work for example when inserting alternate, one and multipolar symbols while making Electrical schemes. In the HVAC module command „Insert similar object” will be used for example when inserting alternate valve symbols and symbols from many categories.

Notice: The „Insert similar object” works now only on symbols. In next versions it will be possible to use this command on all CADprofi objects.



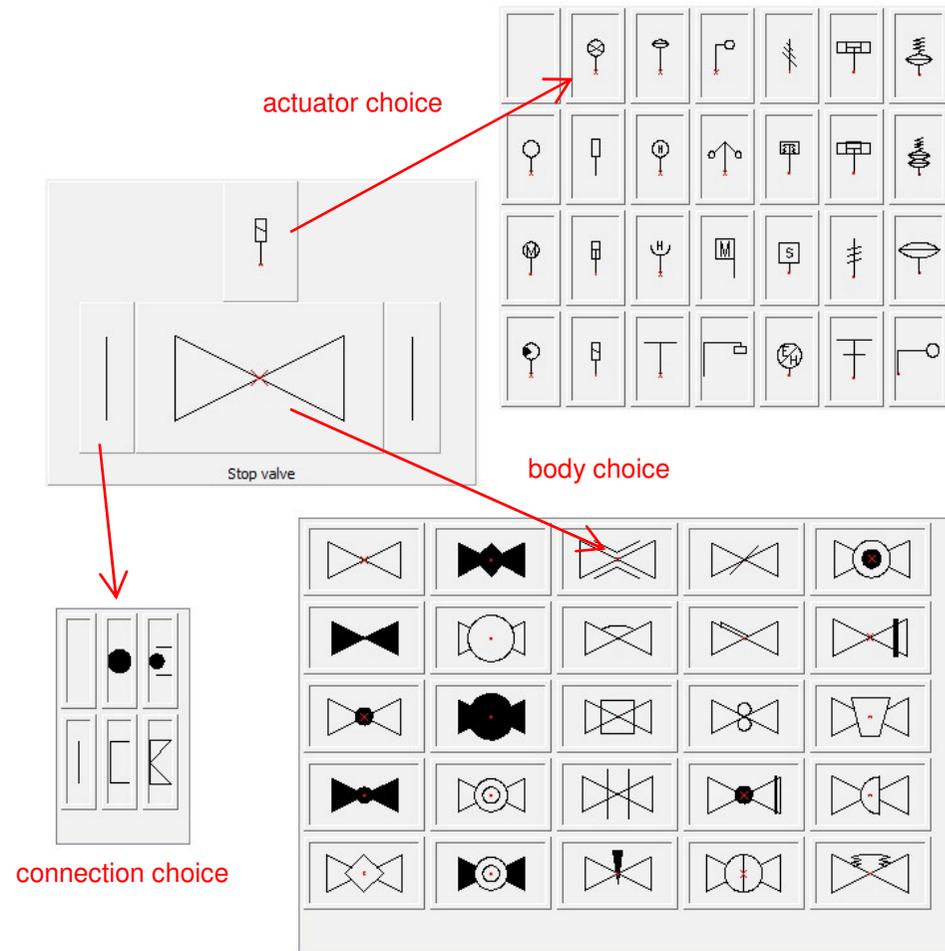
## ✓ Multi-variant symbols in the HVAC & Piping module

In HVAC & Piping module we have added valve symbols for which there is choice of different options of bodies, actuators and connections (for example: flanged, threaded, welded).

Multi-variant symbols can be modified by using the “Edit symbols” button.

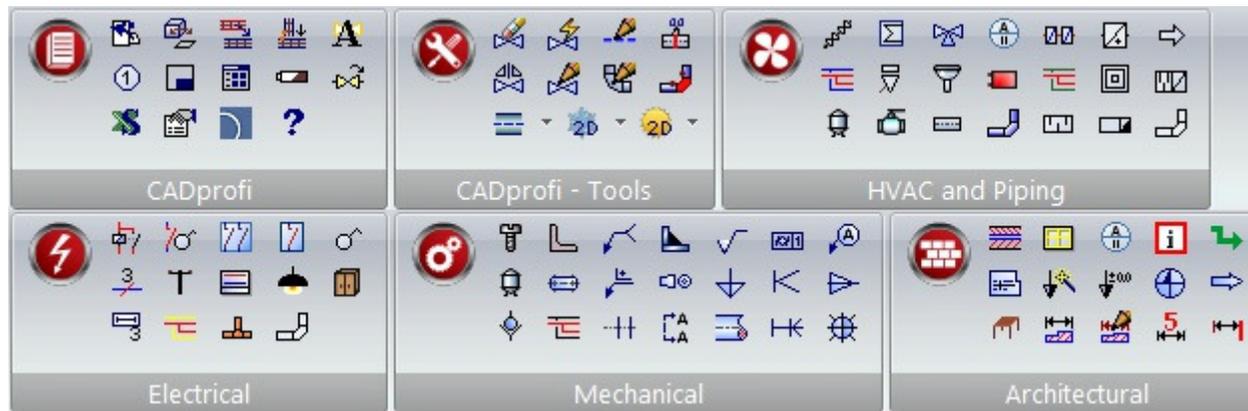
Multi-variant symbols ease the work because one multi-variant symbol can replace many “traditional” symbols. Until now when it was necessary for example to insert a valve with a right actuator into the drawing we had to find the right valve and the right actuator. Now this valve can be inserted in one easy step. In addition to this an easy edition of symbols inserted to drawing is possible (for example changing flanged symbols into threaded symbols).

Multi-variant symbols can be used in usual schemes as well as in isometrics.



## ✓ Ribbons optimization and some minor improvements in many commands

We have optimized buttons layout on CADprofi ribbons so they take up less space. This was especially important for users who are working on low resolution screens. In ribbons and toolbars we have included commands that have appeared in the current program version.



*CADprofi ribbon (in GstarCAD 2011)*

In CADprofi 7.21 we have introduced optimization and adjustments in many procedures, which purpose is to increase the speed and reliability of the program.