Библиотека СОК

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1. Software Installation

1.1 Running Environment

OS:

Windows7/Windows8/Windows10

Minimum configuration:

CPU: Pentium 800MHz or above

RAM: above 128MB

Graphics card: Display mode above SVGA 16 bit color

Hard drive: 83MB for full installation

Recommended configuration:

CPU: Pentium 1Ghz or above

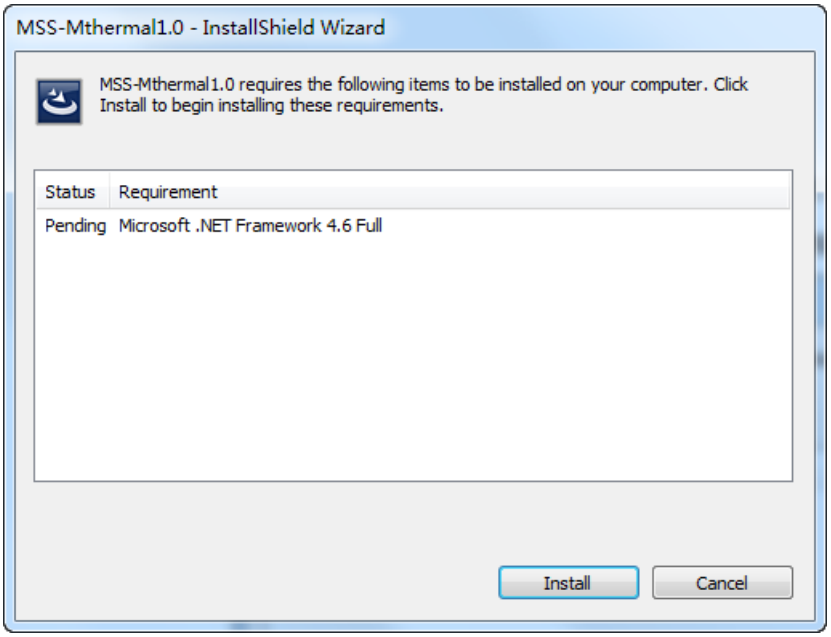
RAM: 1GB

Graphics card: Display mode above SVGA 16 bit color

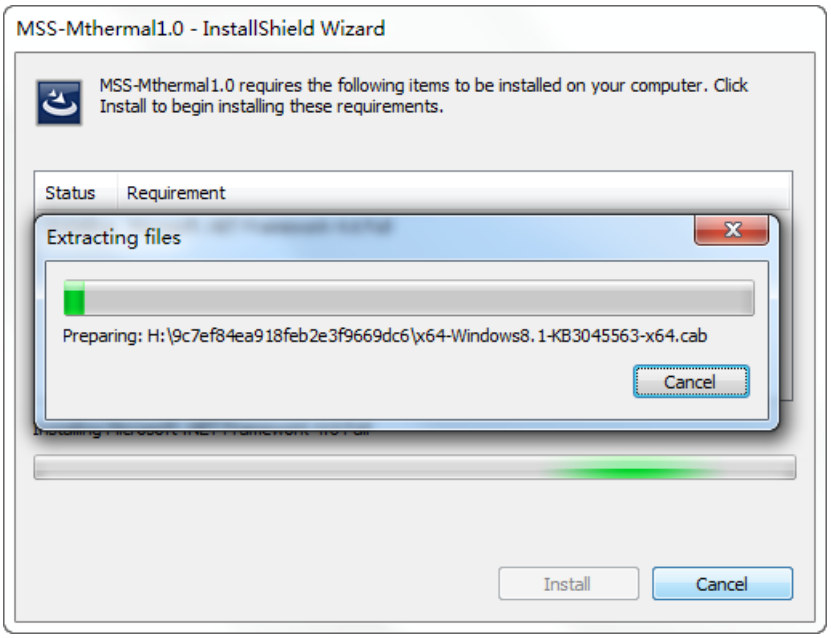
Hard drive: 1GB

1.2 Installing the Software

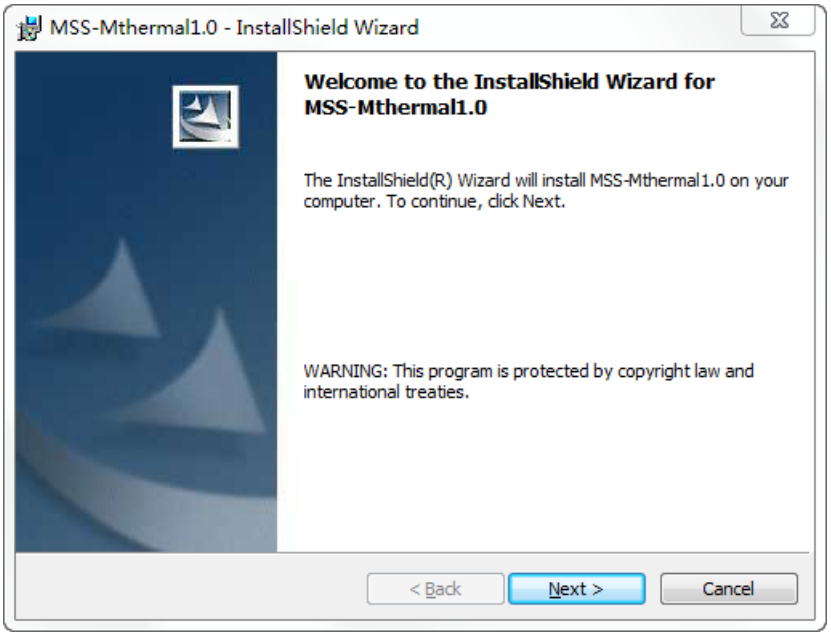
The installer checks whether the OS has the Microsoft.Net Framework 4.6 component required for running software. If not, the system will prompt you to install this component:

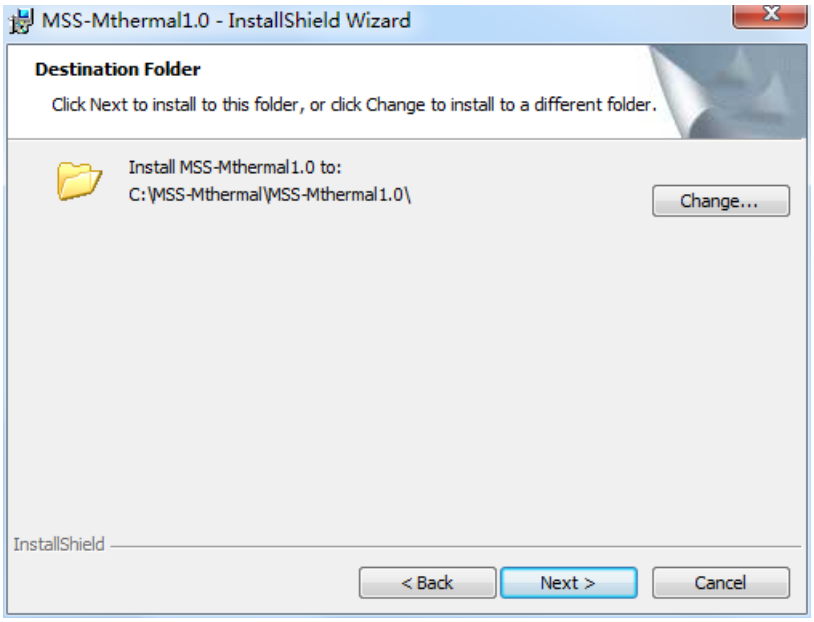


Click "Install" to install the Microsoft.Net Framework 4.6 component:

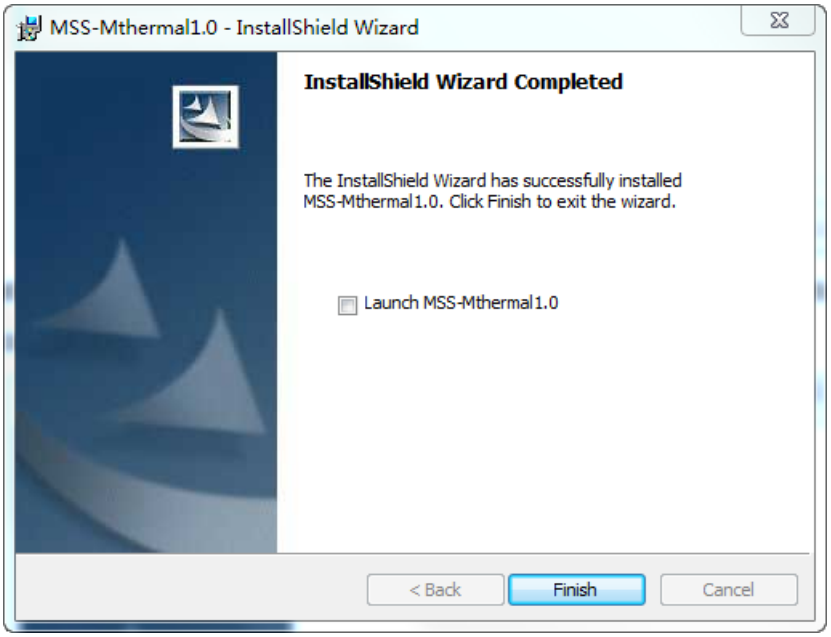


After the installer completes the automatic check and installs the Microsoft.Net Framework 4.6 component, the system enters the installation interface for the Midea Thermal Client. Click "Next" continuously to continue installation.





The installation completion confirmation window is displayed after installation ends. Click "Finish" to confirm and close the window.



1.3 Starting the Software

After the Midea Thermal Client is installed, it can be started as follows:

Click the "Start" menu bar, select the MSS-Mthermal1.0 program group, and then click "MSS-Mthermal1.0" to start the software.

After the program is installed, the system automatically generates the MSS-Mthermal1.0 icon on the desktop. Click the desktop icon to start the software.

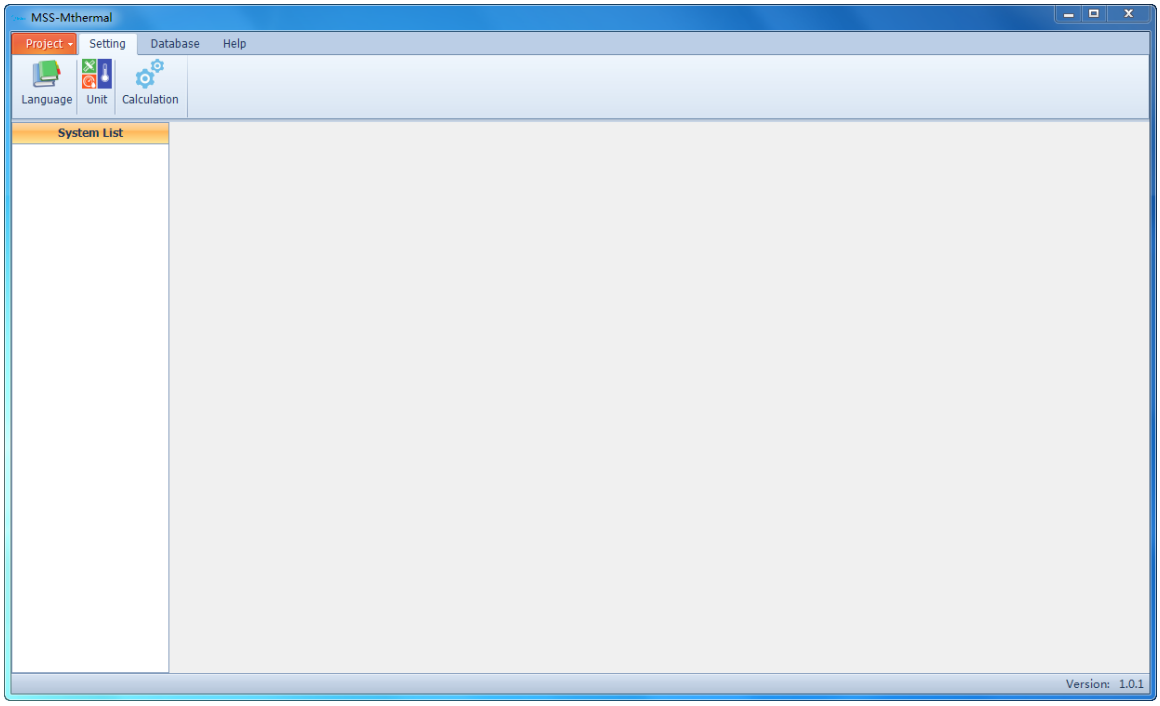
1.4 Uninstall the Software

Select MSS-Mthermal1.0 under Add/Remove Programs in the control panel of the Windows system, and then click "Add/Remove" to uninstall the software.

Click the "Start" menu bar, select the MSS-Mthermal1.0 program group, and then click "Uninstall MSS-Mthermal1.0" to uninstall the software.

2 Software Functions

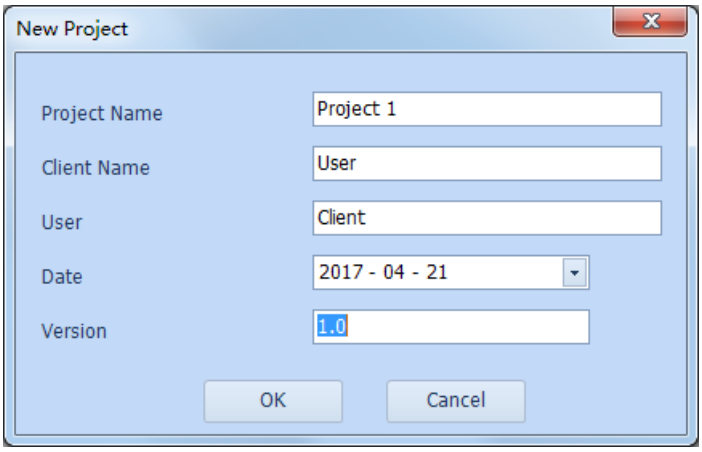
The software consists of the system selection, software settings and database functional modules. The main interface consists of the menu bar, toolbar, data view, and status bar.



2.1 Project Management

2.1.1 Creating a Project

Click the "New File" submenu under the "Project" menu to display the project information editing interface. Set the project information to create a new project.



2.1.2 Opening a Project

Click the "Open File" submenu under the "Project" menu to open a saved project. If the version of the product library used for the project to be opened is earlier than the product library version of current version, the system displays a list of all versions of the backup product libraries for one year. You can select the specific product library version to be used.

2.1.3 Saving a Project

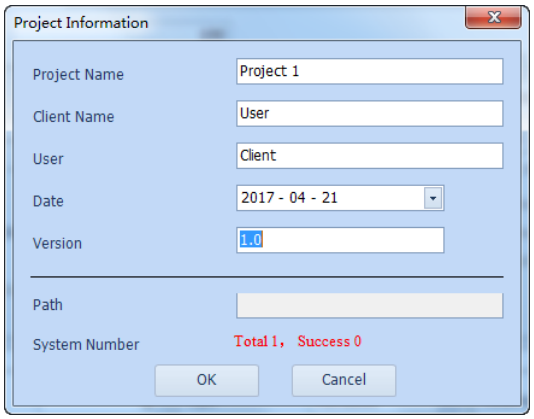
Click the "Save" submenu under the "Project" menu to save the current project.

2.1.4 Saving a Project as

Click the "Save as" submenu under the "Project" menu to save the current project as a new project.

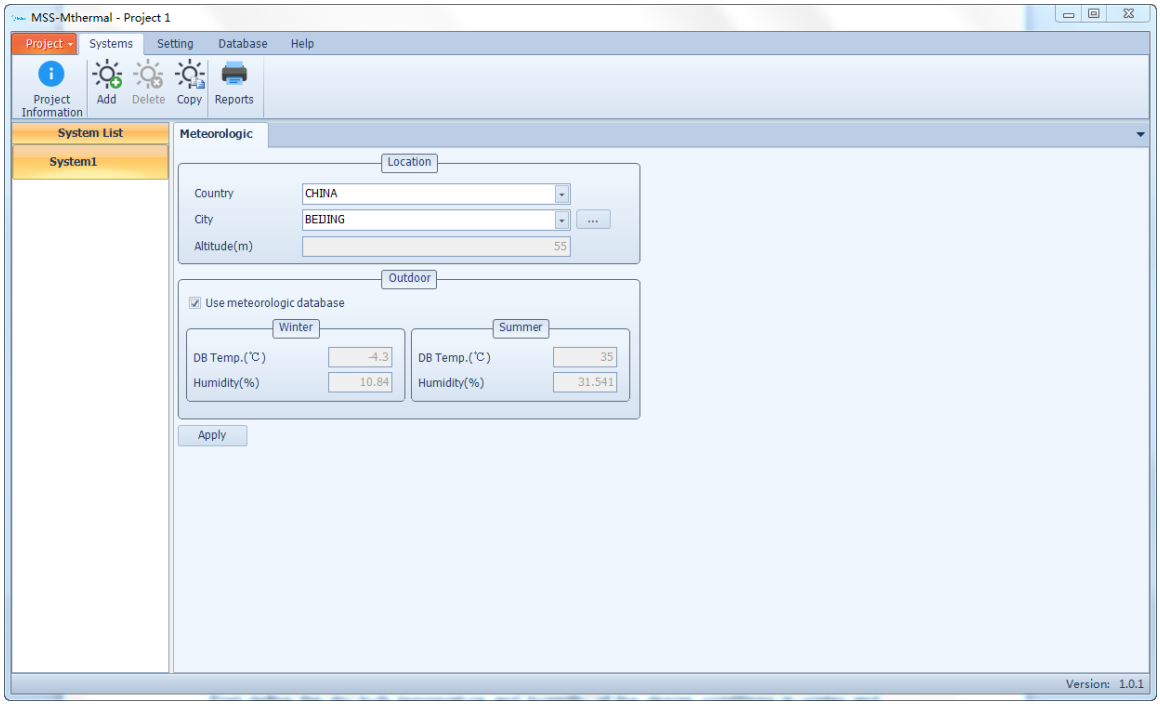
2.1.5 Project Information

Click the "Project Information" submenu under the "Project" menu to display the project information editing interface and modify the project information.



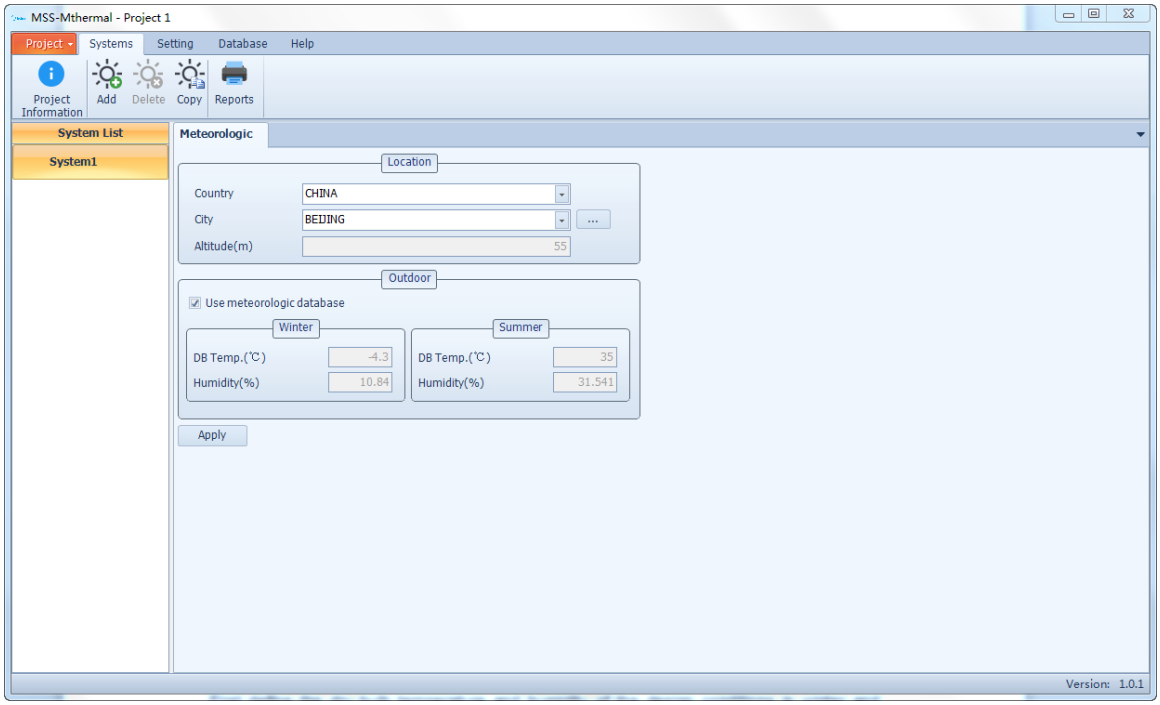
2.2 System Selection

Multiple systems for selection can be added for one project. Success marks will be added to the system list for projects that the system has selected. Systems can be selected through "ADD", "Delete" and "Copy" under the " Systems" menu.

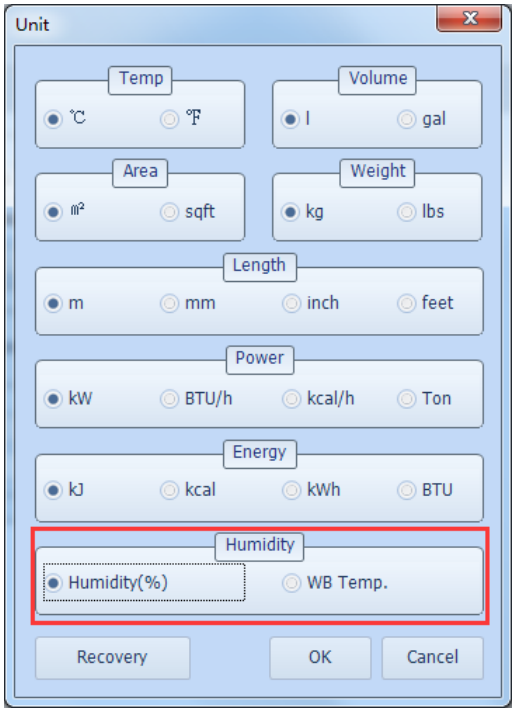


2.2.1 Meteorological Parameters

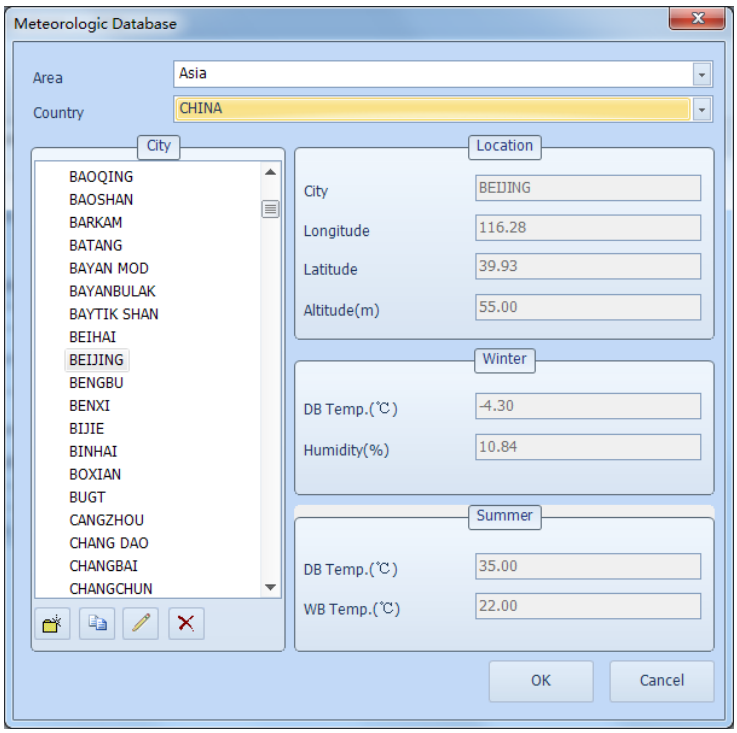
First define the dry bulb temperature and humidity of the design conditions in winter and summer. The humidity can be relative humidity or wet bulb temperature. You can select meteorological data of the project city from the meteorological database or enter custom data.



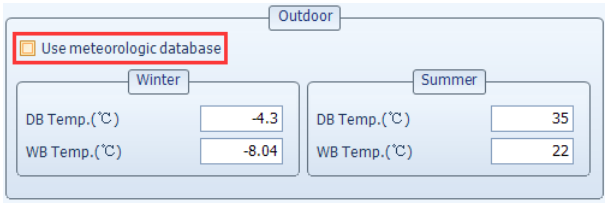
The humidity input mode can be set in "Unit" under the "Setting" menu. Either the dry bulb temperature and humidity can be used to back-calculate the other humidity value.



Click the expand button behind the "City" edit box to enter the meteorological database, and select the city:



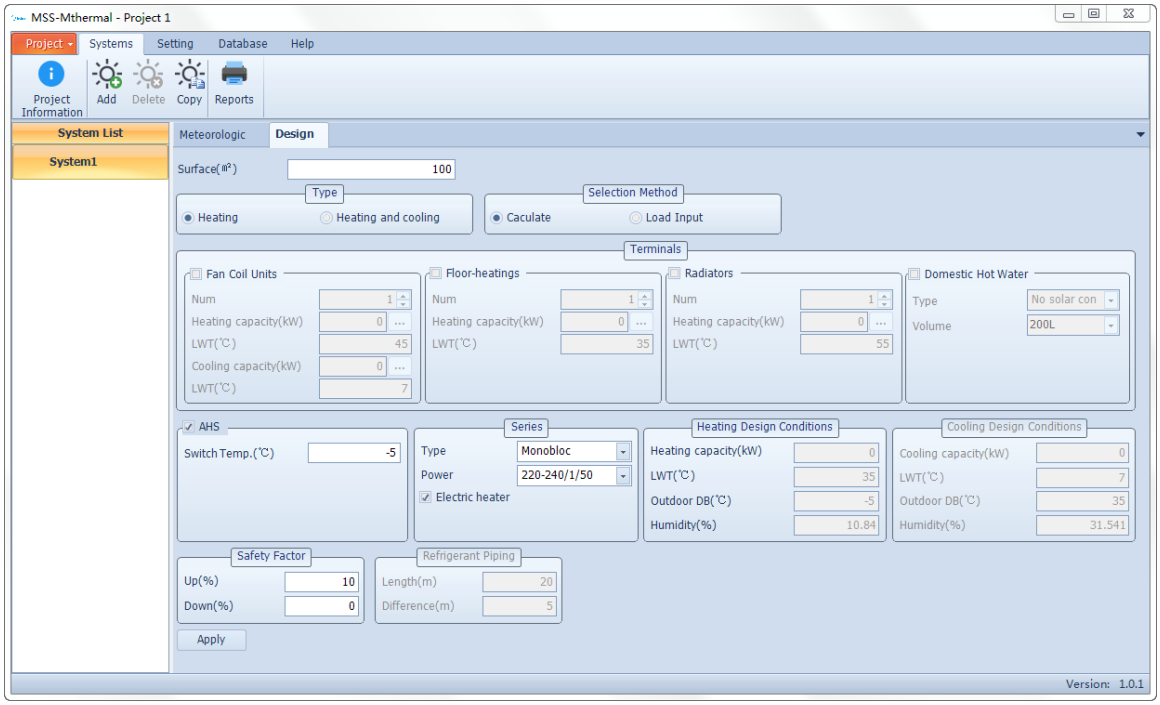
When the meteorological parameters of system selection need to be entered manually, uncheck the "Use meteorological database" box.



After defining the meteorological parameters, click the "Appy" button to save data and enter the "Design" defining page.

2.2.2 Design Conditions

Define the detailed operating parameters such as load and outlet water temperature for the selected system. The parameters can be defined by counting the total load and water temperature after entering the load and water temperature of each terminal one by one or by directly entering the total load and water temperature.



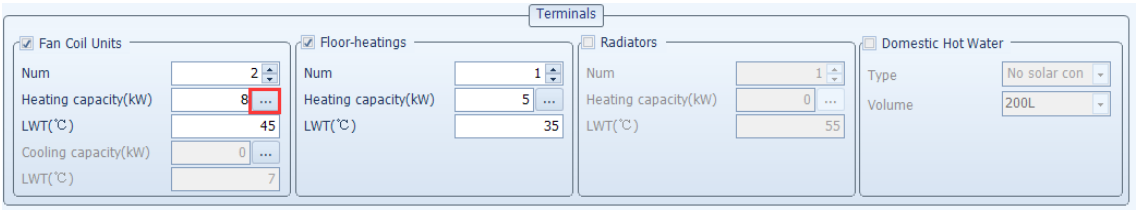
System type

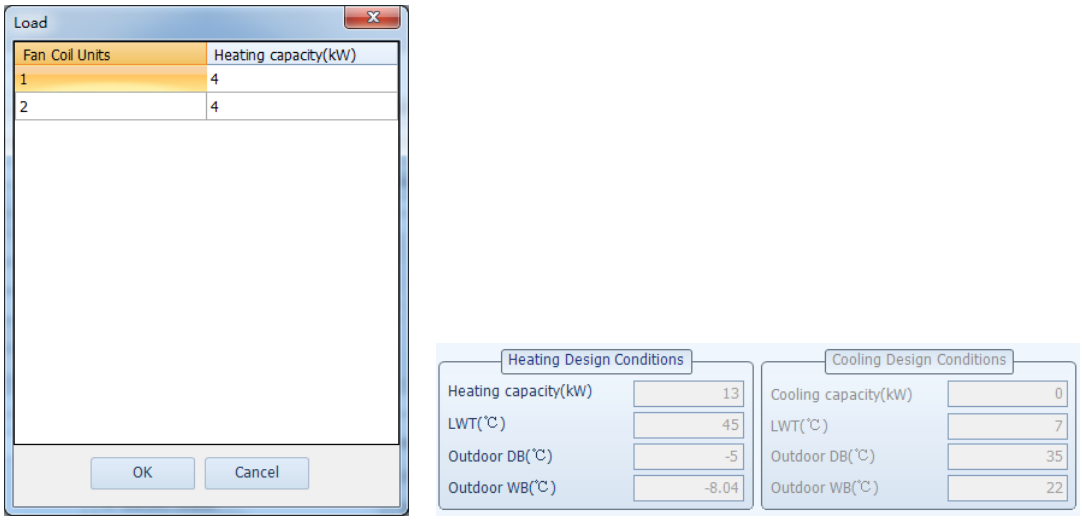
Define heating only or both heating and cooling for the selected product. If both heating and cooling are needed, define the corresponding cold and heat loads and cold and hot water temperatures.

Selection method

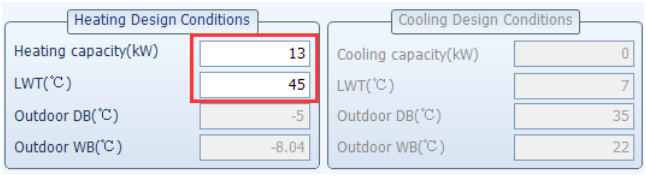
Set the selection method: "Terminals" means that the total load and water temperature are defined by entering the terminal load and water temperature; "Load input" means that the total load and water temperature are entered without being defined through the terminal.

- " Terminals ": Select the system terminal type, and enter the quantity, load and water temperature of each type of terminal. The loads can be entered one by one through the interface displayed by clicking the expand button behind the edit box and then making a summary. After each terminal is defined, the sum of the load of each terminal is adopted as the total load of the design conditions. The maximum value of the hot water temperature of each terminal is used as the hot water temperature, and the minimum value of the cold water temperature of each terminal is used as the cold water temperature.

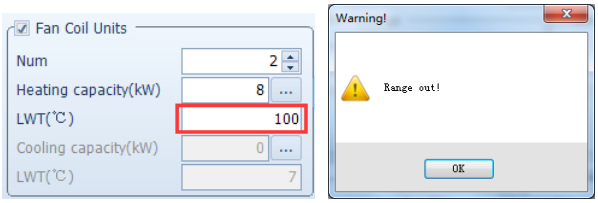




- "Load Input": No terminal can be selected. Enter the load and water temperature of the operating conditions.

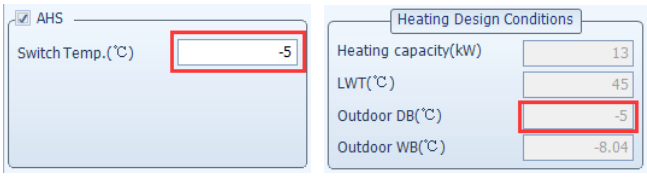


- Water temperature range: When the water temperature of the terminal or operating conditions is defined, the system checks whether the entered water temperature is accurate. The input range of the hot water temperature is 25°C to 60°C, and the input range of the cold water temperature is 5°C to 25°C. If the entered value exceeds the range, the system will report an error:



Auxiliary heat source

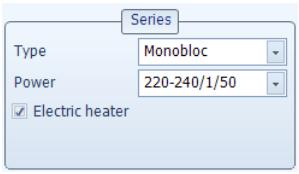
If the system is equipped with auxiliary heat source equipment, the switching temperature when the heat pump is running needs to be defined as the outdoor temperature for selecting the heating conditions:



Model condition

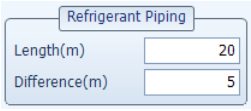
The software supports selection of the monobloc machine and split machine. Under the heating conditions, you can set whether to enable standby electric heating. If enabled, the

actual heating capacity of the machine is its heating capacity pus the standby electric heating capacity:

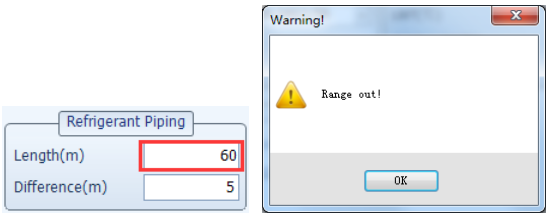


Refrigerant piping length and level difference between outdoor unit and hydronic box

If a split model is selected, the pipe length and IDU and ODU height difference needs to be defined. The machine capacity will be corrected during model selection.

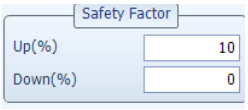


Here, the maximum value of the pipe is 50m. The minimum value and maximum value of height difference are 25m and -30m respectively. A negative value means that the ODU is above the IDU, and a positive value means that the IDU is above the ODU. If the entered value exceeds the range, the system will report an error:



Safety factor

During selection, a safety factor can be selected for the system. The machine can be recommended as long as its capacity is in the load range of the selected system. Select the most appropriate machine. If the system implements both heating and cooling, a safety factor can be selected for the heat load only:



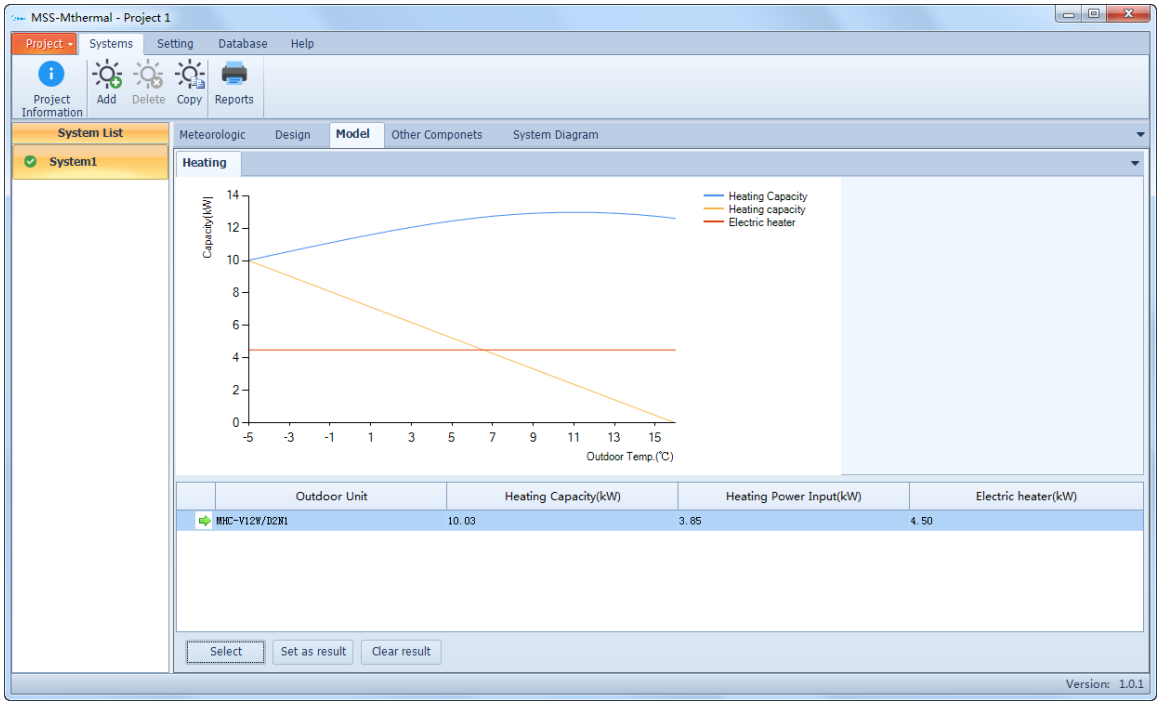
Floating upward means amplifying the load of the selected system, and floating downward means reducing the load of selected system. For example, if the heat load of the selected system is 13kW, the capacity range of the selected machine is 11.7kW to 14.3kW after floating upward by 10% and floating downward by 10%. The machine will be recommended as long as its capacity is in this range.

After defining the operating condition parameters, click "Apply" to save the data and enter the "Model" page.

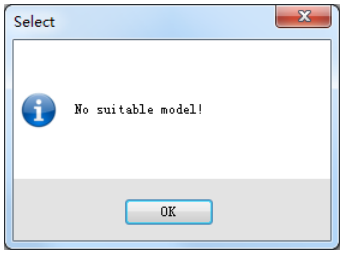
2.2.3 Selection Result

The system recommends the appropriate machine models to select from the product library according to the defined meteorological parameters and operating condition parameters. The machine capacity will be corrected during selection to get the machine capacity under actual operating conditions. The correction parameters include the outdoor dry bulb temperature, outdoor humidity, outlet water temperature, altitude, pipe length (split machine), and height difference (split machine).

Click "Select" to list all the machines meeting requirements. Click "Set as result" to set the machine selected in the list to the selection result. Different machines can be selected to display their heating and cooling capacity curves. In case of a split machine, the interface will list the pipe length and height difference limit value of each model and the matched hydronic box.



If there is no model meeting requirements when "Select" is clicked, the system will prompt a parameter settings error. You need to go back to modify the selection conditions such as meteorological parameters and operating condition parameters.

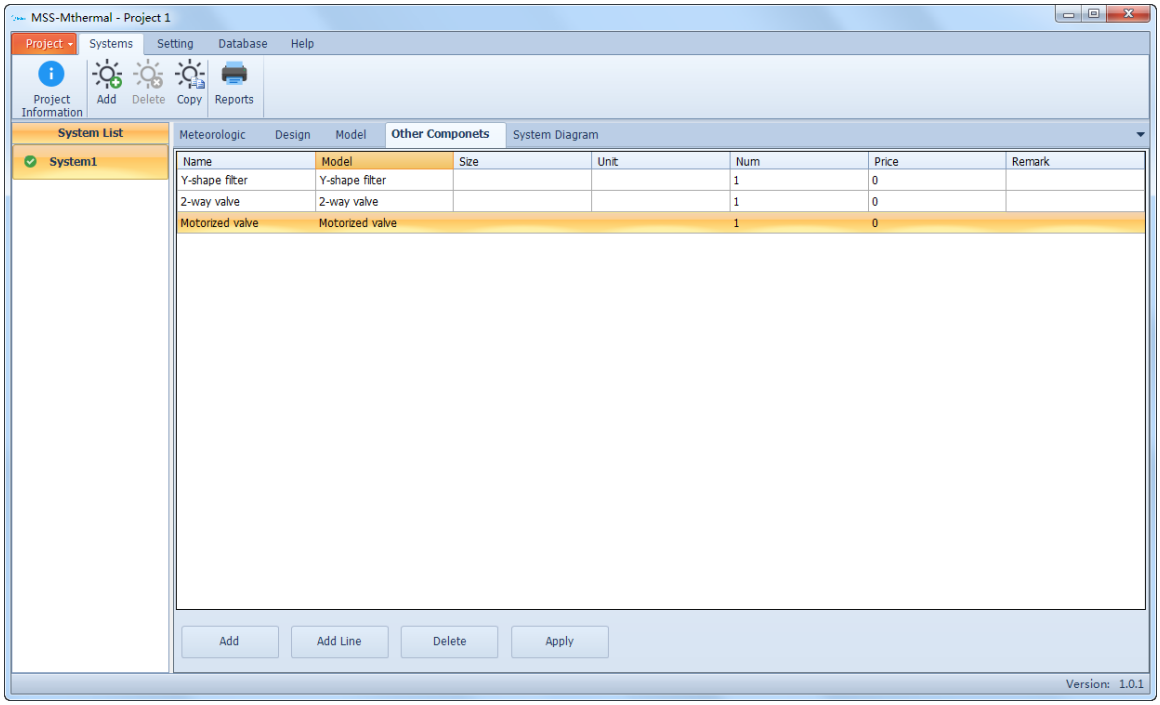


Common errors:

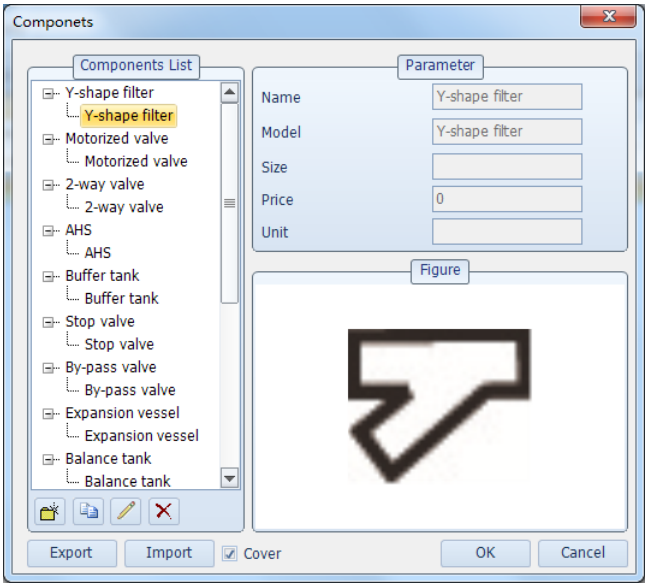
1) *If the selected load is too high or too low and no machine meets requirements in the product library, the selected load size needs to be modified;*
2) *After the floating range is entered, there are no appropriate machines in the range. In this case, adjust the floating range or set the upward/downward floating percentage to 0 (no floating).*

2.2.4 Auxiliary Equipment

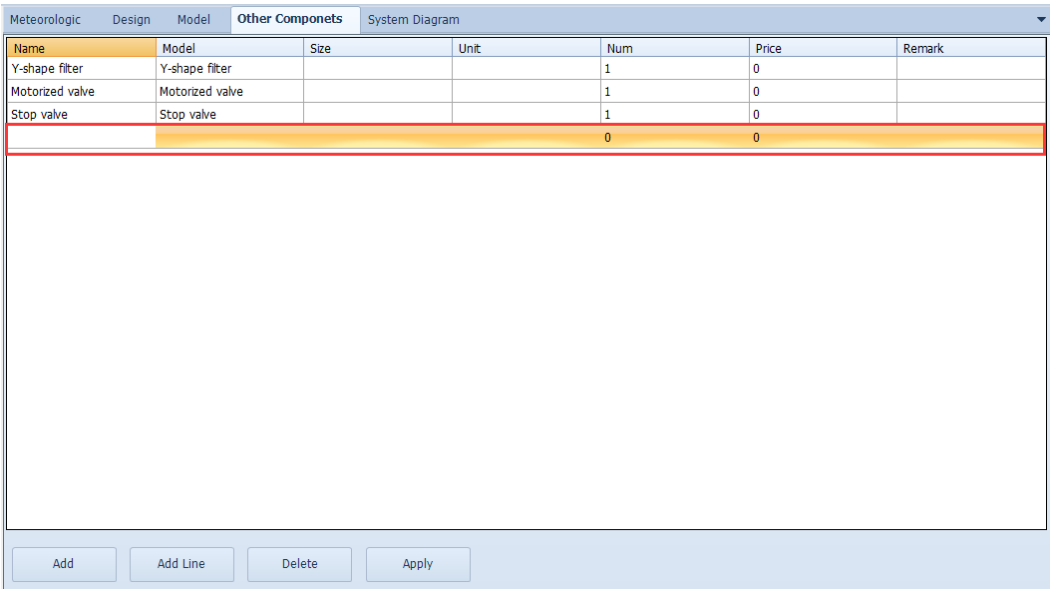
Define the auxiliary materials and parts required during product installation. They can be selected to add from the auxiliary equipment library or freely edited.



Click "Add" to open the auxiliary equipment library. Select the target auxiliary equipment and add it to the system auxiliary equipment list.



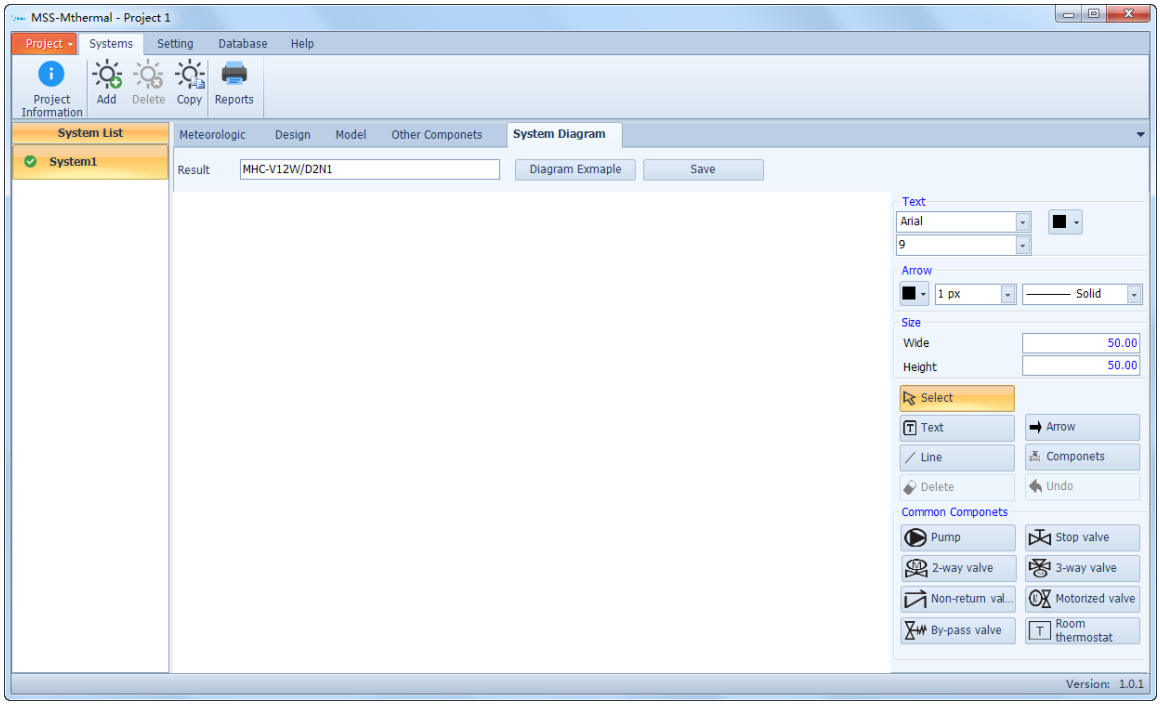
Click "Add Line" to add a line in the auxiliary equipment list. You can define corresponding data such as "Name", "Model", and "Size".



Click "Delete" to delete the auxiliary equipment on the currently selected line.

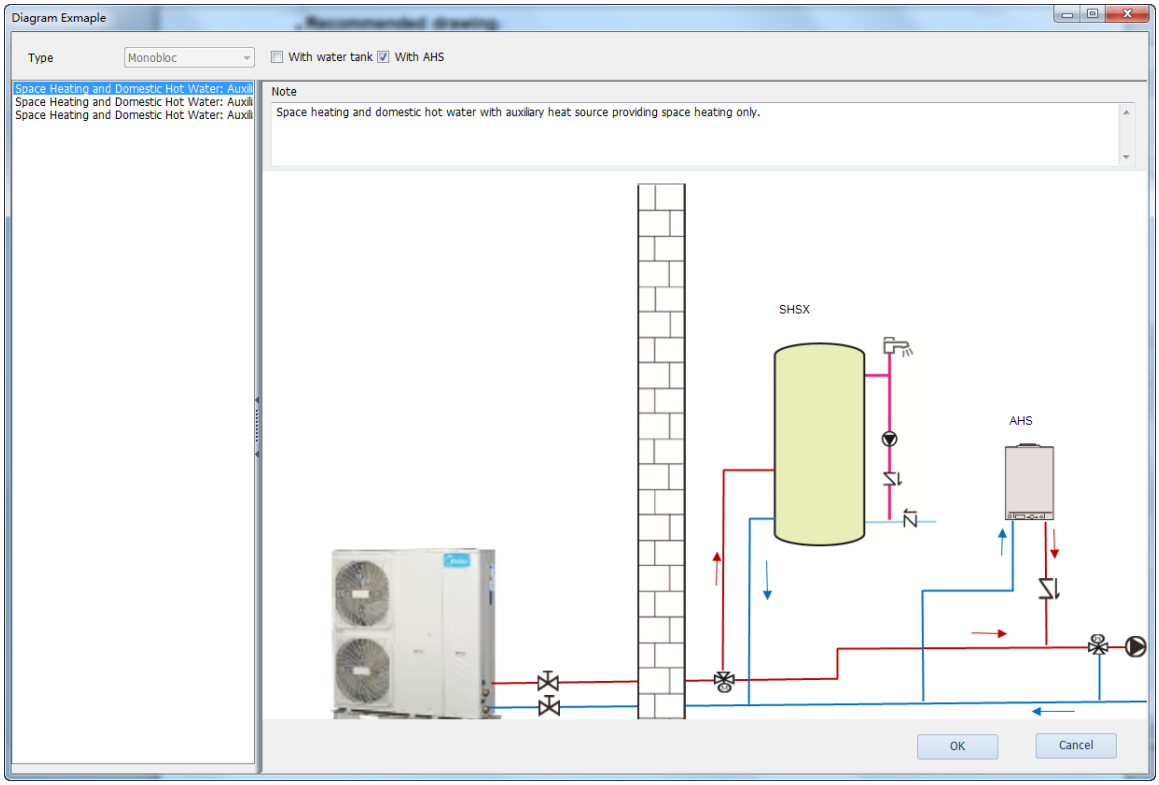
2.2.5 System Diagram

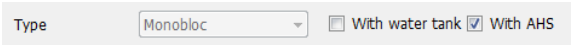
After model selection, the system principle diagram can be drawn on the "System Diagram" page. Select the appropriate typical system pattern for drawing from the diagram example. The drawn system diagram can be saved in picture format.



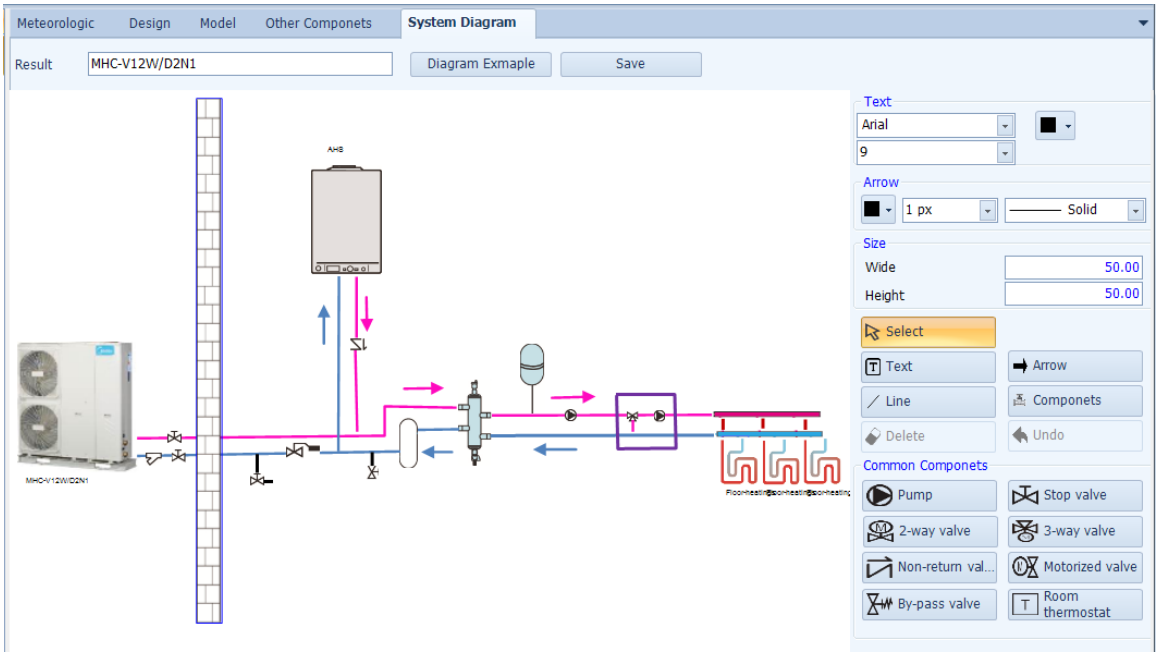
Recommended drawing

Click "Diagram Example" to display the typical diagram example. Select an appropriate application scenario to draw from it. After drawing is completed, the deleting, adding, marking and other operations can be performed on the surface.



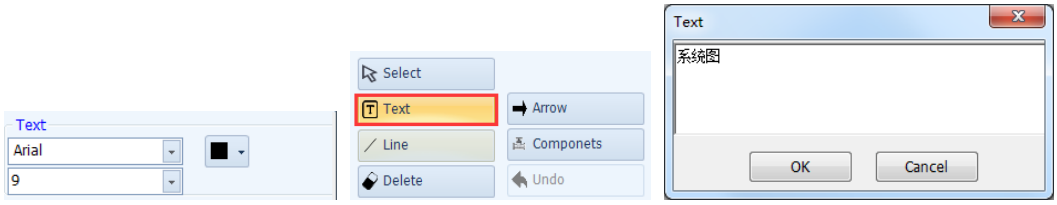


Check "With water tank" to list all the application scenarios with water tanks. Check "With AHS" to list all the application scenarios with AHS. If neither "With water tank " nor "With AHS" is selected, the diagram example list will list all the application scenarios. If there is a living water tank in the design conditions when the diagram example is displayed, "With water tank" will be checked automatically. If there is an auxiliary heat source, "With AHS" will be checked automatically.


Meteorologic
Design
Model
Other Componets
System Diagram
Result
MHC-V12W/D2N1
Diagram Exmaple
Save
AHS
Text
Arial
9
Arrow
1 px
Solid
Size
Wide
50.00
Height
50.00
Select
Text
Arrow
Line
Componets
Delete
Undo
Common Componets
Pump
Stop valve
2-way valve
3-way valve
Non-return val...
Motorized valve
By-pass valve
Room thermostat

Text

Specify the text font, color and size, click "Text", click on the position to write text on the surface, and enter the content in the displayed text input window.

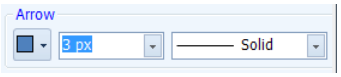


Drawing lines

Specify the line color, line width and line type, click the "Line" button to enter line drawing, and click in the drawing area to select each line node.

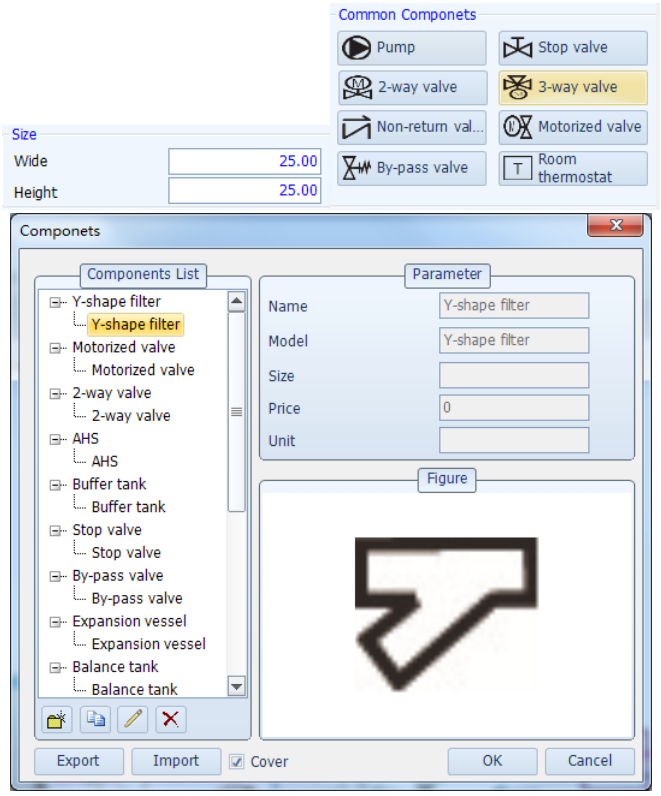
Drawing arrows

Specify the arrow color, line width and line type, click "Arrow" to enter arrow drawing. Click in the drawing area to select the arrow's starting point.



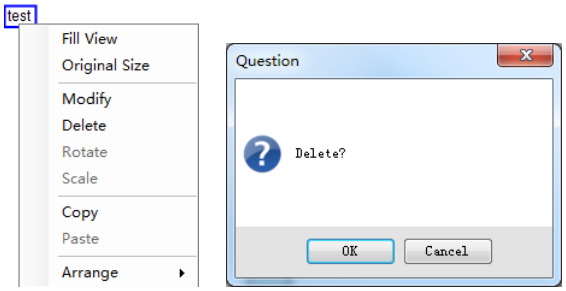
Part drawing

After specifying the size of the part to draw, click the common part button or click "Common components" to select the part to draw from the auxiliary equipment library, and then arrange the part.



Deleting and cancelling

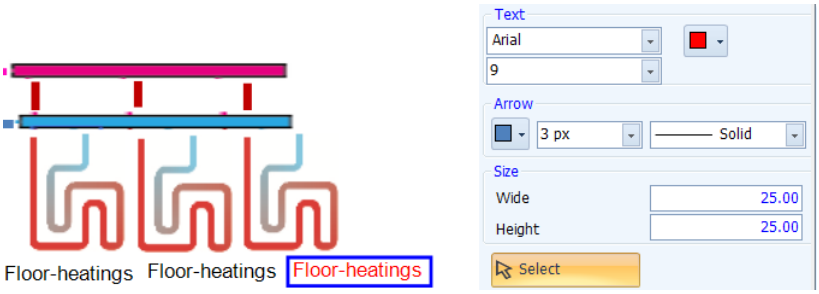
Select the drawn text, line, arrow or part and either click "Delete" or use the right-click menu to delete it. Click "Undo" to restore the deleted content.



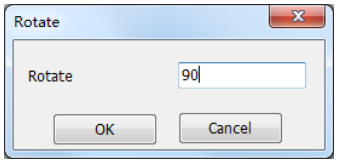
Right-click menu

Select a drawn graph, and edit it through the right-click menu:

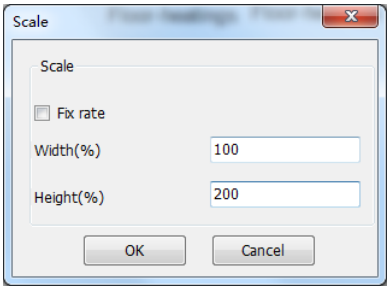
1) Fill View: Zoom in/out to set the entire surface to the proper scale and cover the entire drawing area.
2) Original size: Restore the entire surface to the original drawing size.
3) Modify: Modify the text style, color or size/line color, width or type/color, line width or line type of arrow/part width or height according to the page settings parameters.



4) Delete: Delete the currently selected graph.
5) Rotate: Select a part, right-click on it to display the editing menu, select "Rotate" to display the rotation angle settings interface, and enter the rotation angle.



6) Zoom: Select a part, right-click on it to display the editing menu, select "Scale" to display the scaling settings interface, and enter the width and height scaling.



7) Copy and paste: Select "Copy" to copy the currently selected graph to the clipboard, right-click in the drawing area again, and select "Paste" in the displayed menu to

create a new graph by copying.

8) Arrange: The currently selected graph can be set to the top layer or bottom layer to change the occlusion relationship between graphs.

Mouse operations

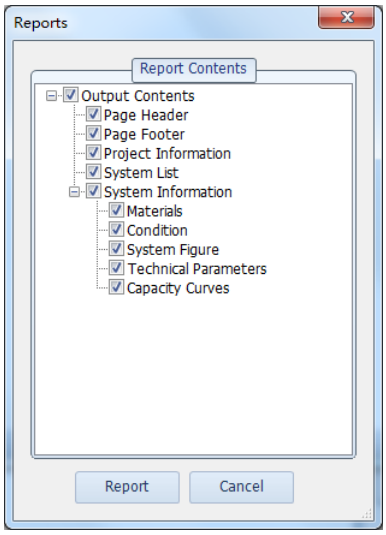
1) Move: Select a graph, and click to drag it and change its position.
2) Stretch: Select a line or arrow, move the cursor to its node (the cursor changes to a cross shape), and press the left mouse button to stretch the target.
3) Edit text: Double-click the text to enter the editing interface.
4) Overall zoom: Scroll the middle mouse button in the drawing area to zoom.
5) Move as a whole: Press the left mouse button in the drawing area to move the target as a whole.

Saving a picture

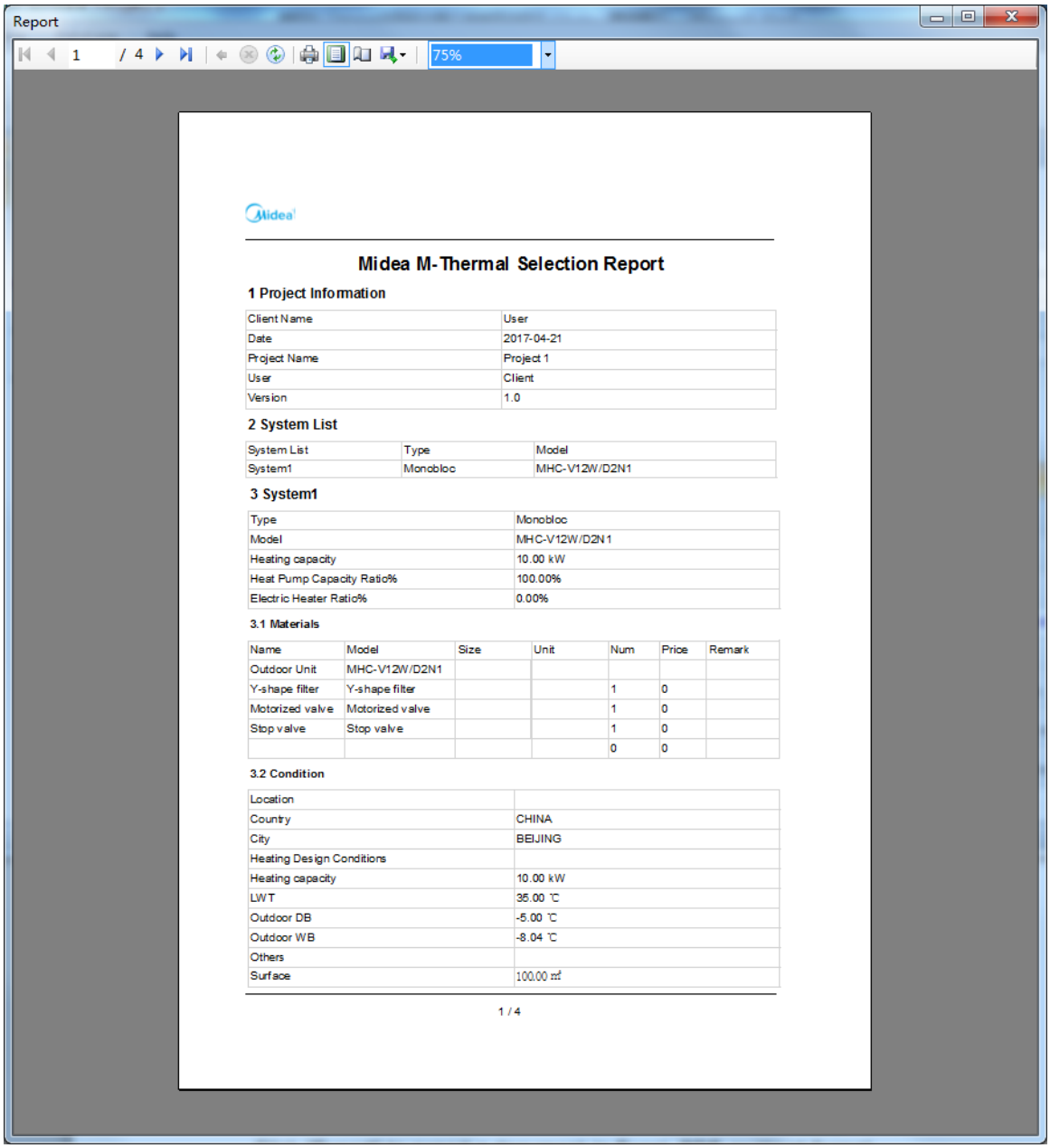
After a system diagram is drawn, click "Save" to save the graph in the current drawing area as a graphics file.

2.2.6 Exporting a Report

Click "Reports" under the "Systems" menu to export the model selection results of all the systems under the current project, and configure the content to export.



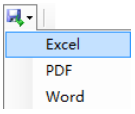
Check the content to export, and click "Report" to enter the report preview interface:



Click the page turning button to turn the page and browse the content on each page.

Click "Page setting" to set the page size and page margin of the exported report.

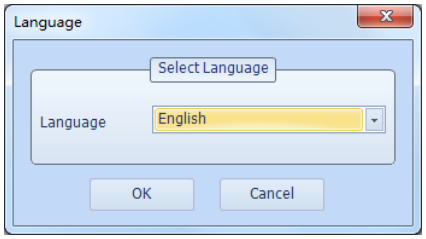
Click "Export" to export a document in Excel, PDF, or Word format.



2.3 Software Settings

2.3.1 Language Settings

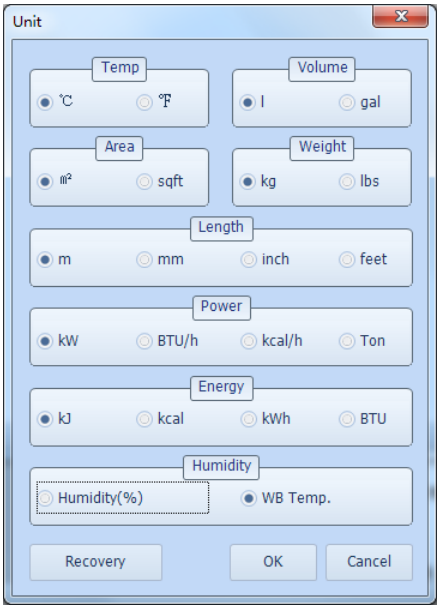
Click "Language" under the "Setting" menu to switch the interface display language.



Select a language from the language list.

2.3.2 Unit Settings

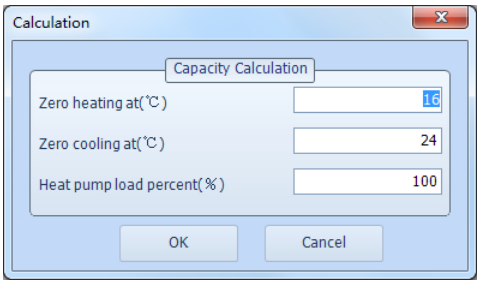
Click "Unit" under the "Setting" menu to switch the interface display unit.



Click "Recovery" to restore the unit settings to the original status.

2.3.3 Calculation Settings

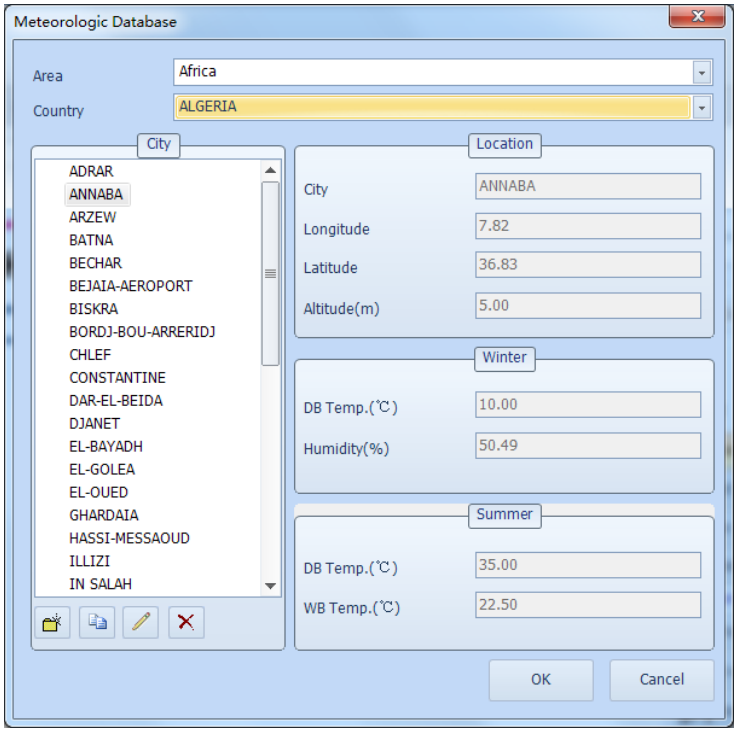
Click "Calculation" under the "Setting" menu to set the critical temperature of heating/cooling. If standby electric heating is enabled, the minimum proportion of the machine capacity to the total heat load can be set.



2.4 Database Maintenance

2.4.1 Meteorologic Parameters

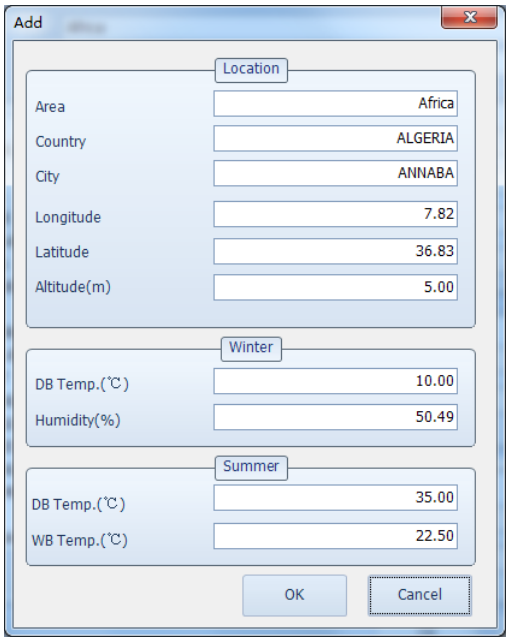
Click "Meteorological" under the "Meteorological Database" menu to enter the meteorological parameter maintenance interface, where you can add, delete, or edit meteorological parameters. The software provides meteorological data of more than 6,000 cities around the world by default.



Switch between the region and country lists to view the meteorological data of cities in that country.

Adding meteorologic parameters

Click under the city list to display the adding interface, and enter the city's location, dry bulb temperature in winter, relative humidity in winter, dry bulb temperature in summer, and relative humidity in summer for adding.

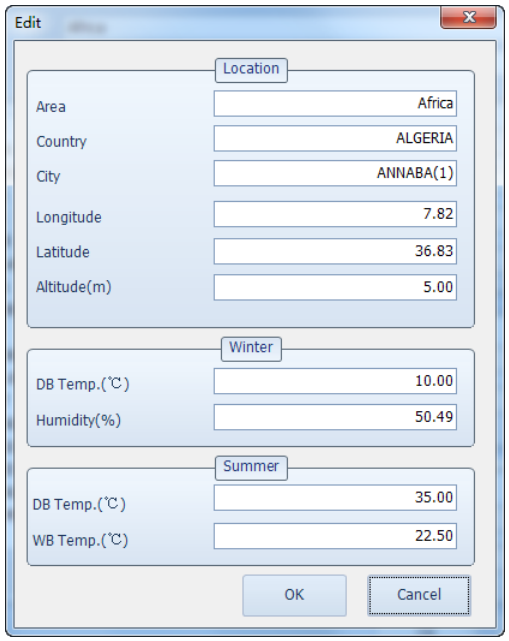


Copying meteorologic parameters

Click under the city list to make a meteorologic parameter copy of the currently selected city.

Modifying meteorologic parameters

Click under the city list to display the editing interface, and edit the city's geographical location, dry bulb temperature in winter, relative humidity in winter, dry bulb temperature in summer, and relative humidity in summer.

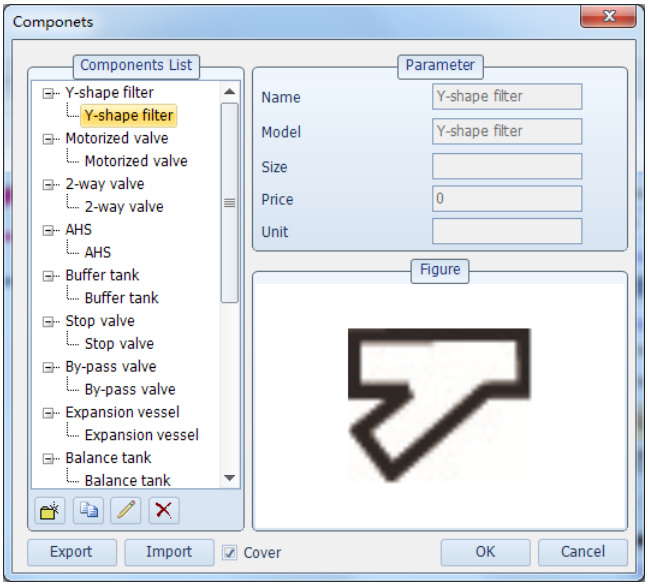


Deleting meteorologic parameters

Click under the city list to delete the meteorological data of the currently selected city.

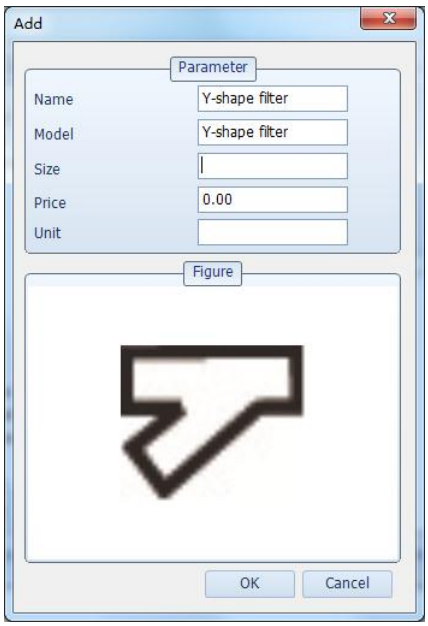
2.4.2 Other Components

Click "Other Components" under the menu to access the "Database" menu to open the auxiliary equipment maintenance interface, where you can add, delete, or edit auxiliary equipment.



Adding auxiliary equipment

Click under the auxiliary equipment list to display the adding interface, and enter the specifications/model, size/dimension, material unit price and statistic unit of the auxiliary equipment to add. Specifications/model is required, but the other fields can be blank. Double-click the graph in "Figure" to select a graphics file of auxiliary equipment from the local computer.

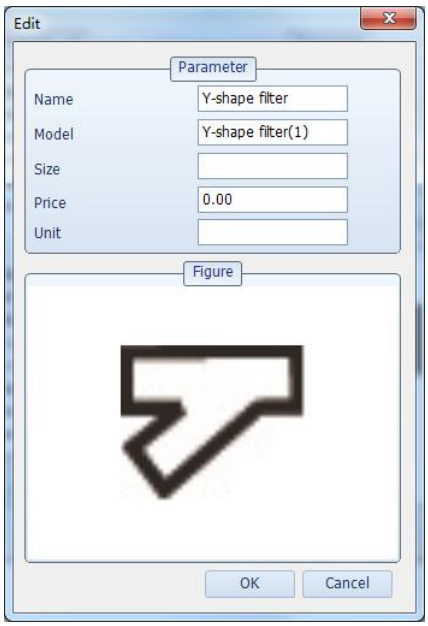


Copying auxiliary equipment

Click under the auxiliary equipment list to make a copy of the current auxiliary equipment.

Editing auxiliary equipment

Click under the auxiliary equipment to display the editing interface. The specification/model, size/dimension, material unit price and statistic unit of the auxiliary equipment can be edited. The specifications/model is required, but the other fields can be blank. Double-click the graph in "Figure" to select a graphics file of auxiliary equipment from the local computer.



Deleting auxiliary equipment

Click under the auxiliary equipment list to delete the currently selected auxiliary equipment.

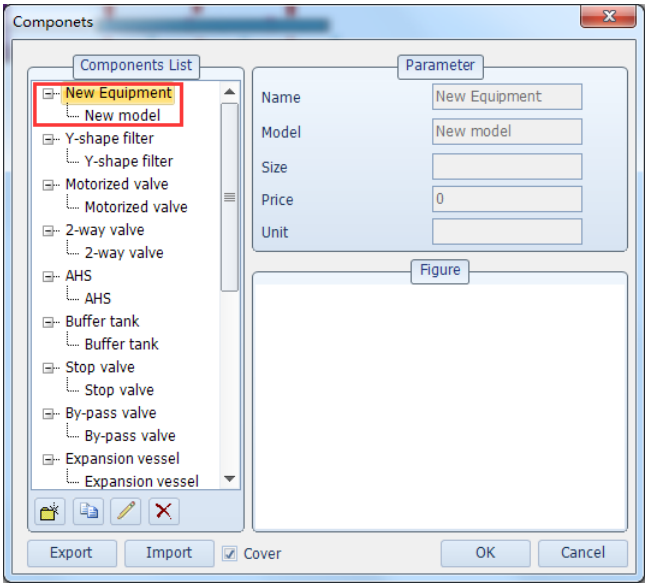
Exporting auxiliary equipment

Auxiliary equipment added by the user can exported to an Excel file for editing, and auxiliary equipment can also be added in Excel.

	A	B	C	D	E
1	Name	Model	Size	Unit	Price
2	Y-shape filter	Y-shape filter			0
3	Y-shape filter 2	Y-shape filter			
4					
5					
6					
7					

Importing auxiliary equipment

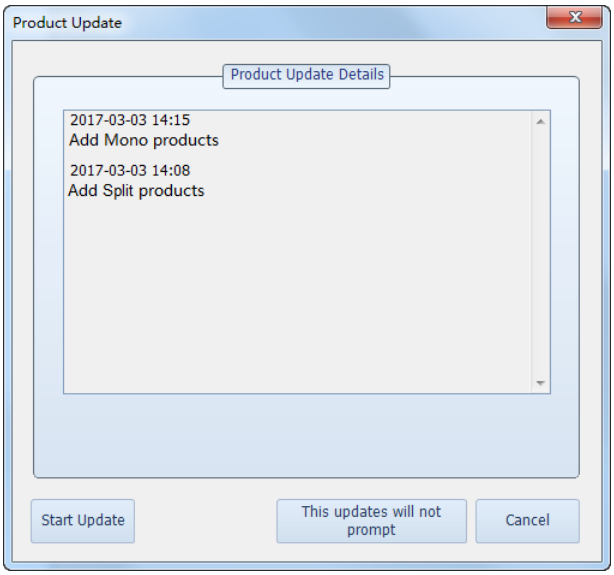
The auxiliary equipment edited by the user in Excel can be imported to the auxiliary equipment library. If the auxiliary equipment of the same type and same name already exits in the auxiliary equipment library, data about the auxiliary equipment of the same type and same name will be modified in the auxiliary equipment library when "Cover" is checked. Otherwise, the auxiliary equipment of the same type and same name in Excel will not be imported.

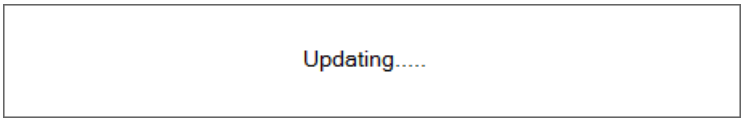


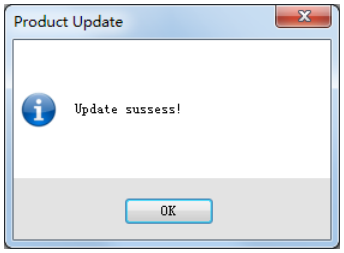
2.4.3 Product Update

Click "Product Update" under the "Database" menu to compare the version of the product library used currently for the local computer with that of the product library in the server, and determine whether an update is needed. If an update is available, the latest product library can be downloaded from the server.

The system also automatically checks whether the product library is updated when the software starts.







2.5 Help

2.5.1 Software Update

Click "Software Update" under the "Help" menu to check whether an updated version is available for the current client software. If yes, the latest client program can be downloaded from the server.

The system also automatically checks whether the software is updated when the software starts.

2.5.2 Help

Click "Help" under the "Help" menu to view the use instructions of the current selection software.

2.5.3 About

Click "About" under the "Help" menu to connect the client software provider's official website and view more product information.