User manual
TITHERMO
Software for the configuration of the item 3550 Temperature Control Unit

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1. General description

The TITHERMO software is a tool that allows the user to easily and intuitively determine or change the configuration to be transferred to the Temperature control Unit item 3550, thereby determining the structure of the system and the profiles of the different programs and scenarios to be performed.

2. Minimum system requirements

Hardware requirements

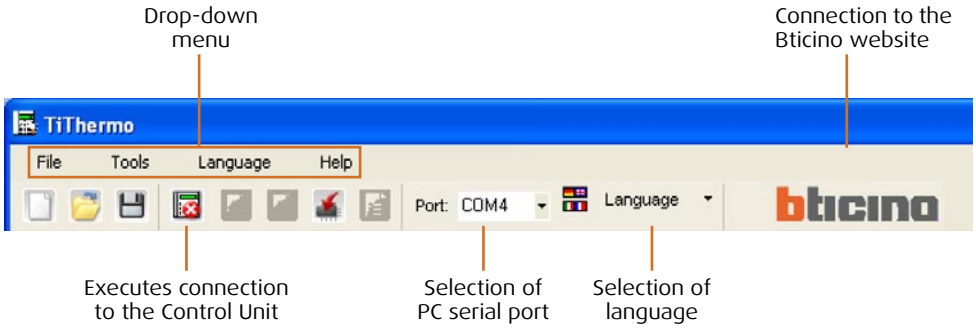
- Personal Computer with Pentium processor 400MHz or higher
- CD-ROM drive
- SVGA graphics card with resolution 800x600
- RAM 128 Mb

Software requirements

- Windows 98 / 2000 / XP
- Internet Explorer ver. 5.5 or higher

3. Selection of functions

The main functions that can be executed with TITHERMO can be selected by using the icons in the toolbar or by opening drop-down menus, thus selecting the various options. Some functions are available only after making a connection between the PC and the Control Unit.



Toolbar

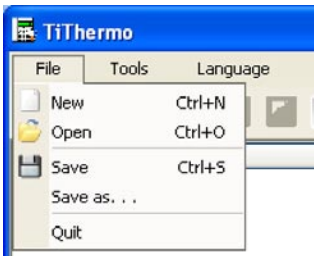
The followings functions are included in the toolbar:

- Creates a new project
- Opens an existing project
- Saves the current project
- Disables connection to Control Unit
- Loads the configuration present in the Control Unit (*)
- Downloads the configuration created in the Control Unit (*)
- Downloads the Firmware update in the Control Unit
- Executes the diagnosis procedure of the Control Unit (*)

(*) Functions enabled only if a connection to the system has been enabled

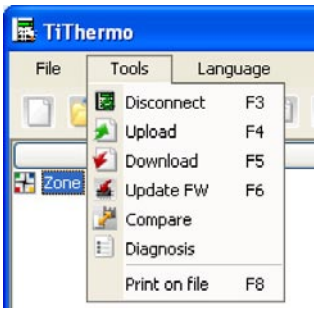
Drop-down menu

The followings functions are included in the drop-down menus:



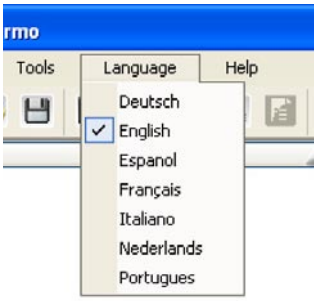
"File" menu

- **New** creates a new project
- **Open** opens an existing project
- **Save** saves the current project
- **Save as...** saves the project after requesting a file name
- **Quit** exits the program



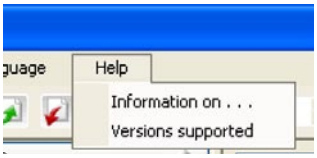
"Tools" menu

- **Disconnect** enables/disables connection to Control Unit
- **Upload** loads the configuration present in the device
- **Download** downloads the configuration created in the device
- **Update FW** downloads the firmware update
- **Compare** loads the configuration present in the system in order to compare it with the project opened
- **Diagnosis** loads the diagnosis information of the Control Unit and probes
- **Print on file** exports the configuration of the Control Unit in an Excel file (if Microsoft Excel is installed on the PC) or csv file (if Microsoft Excel is not installed).



"Language" menu

- **✔** selects the language of the application

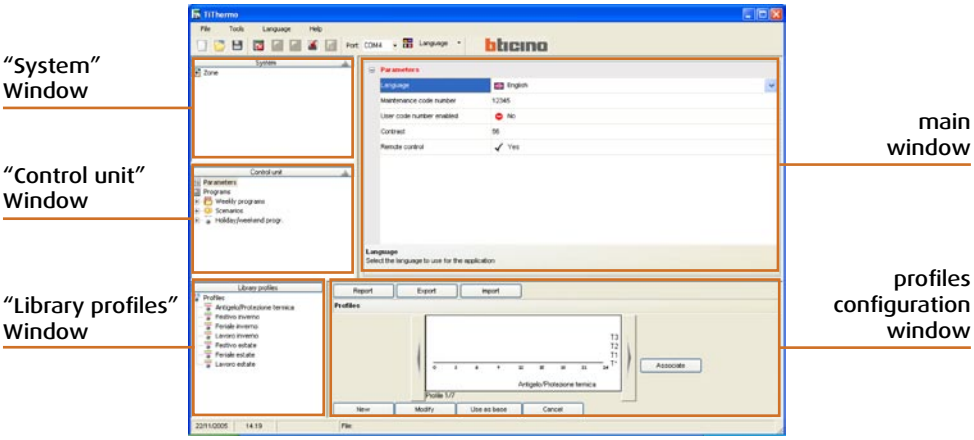


"Help" menu

- **About...** (Information on) displays information on the TITHERMO program
- **Supported versions** displays the Firmware versions of the 3550 Control Unit managed by the TITHERMO program

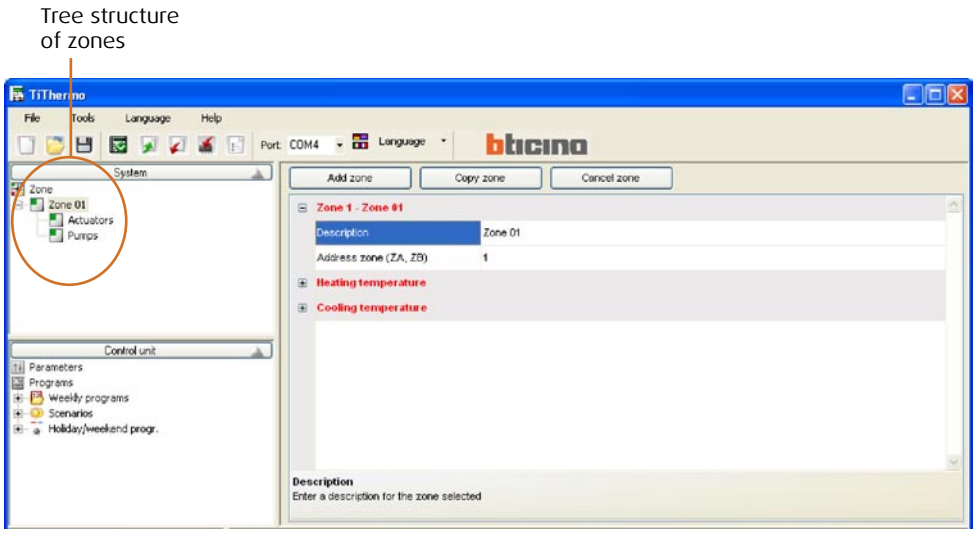
4. Work area

The following windows are included in the TITHERMO interface work area:



4.1 "Window" System

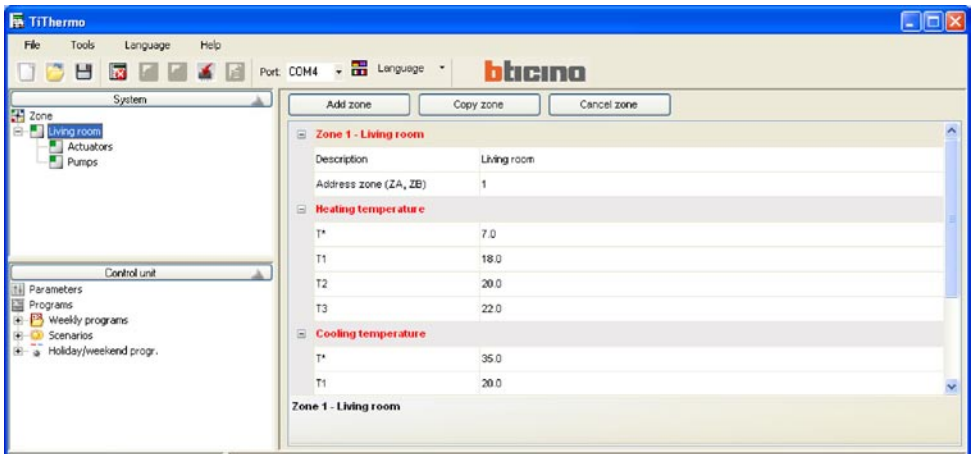
This window shows the tree structure of zones in the system.



In the tree structure of the zones, if you click the right key of the mouse, the following operations will be possible (this is also possible by using the buttons in the main window):

- **Add zone** adds a new address zone having the first available address
- **Copy zone** adds a new address zone having the first available address, thus copying the setup of the zone selected
- **Cancel zone** cancels the zone selected

When a zone is selected (e.g..: Zone 1), the **Zone** and **Temperature** setup section is displayed in the main window:

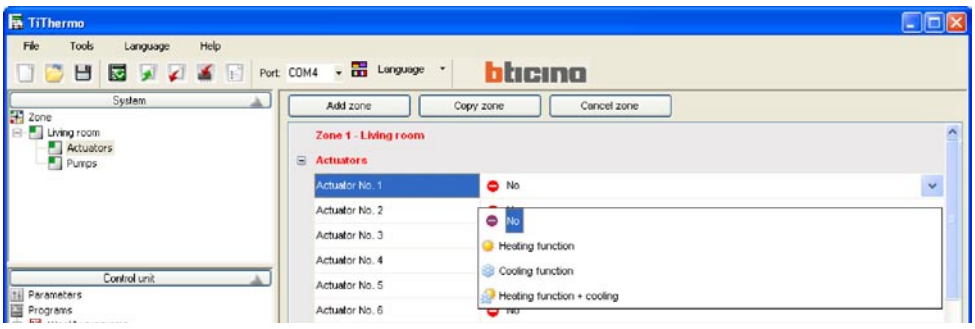


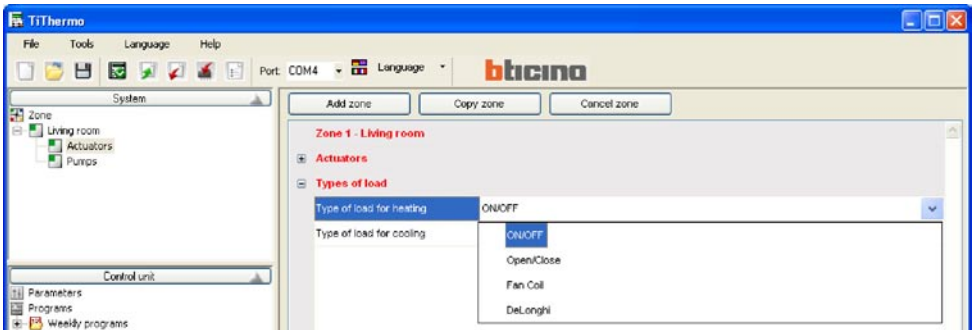
Description	Name of the zone (e.g. Living room)
Zone address	Configurators (ZA,ZB) of the probe
Heating temperature	Setup for four levels of temperature
Cooling temperature	Setup for four levels of temperature

By selecting the single Zones, two options are displayed:

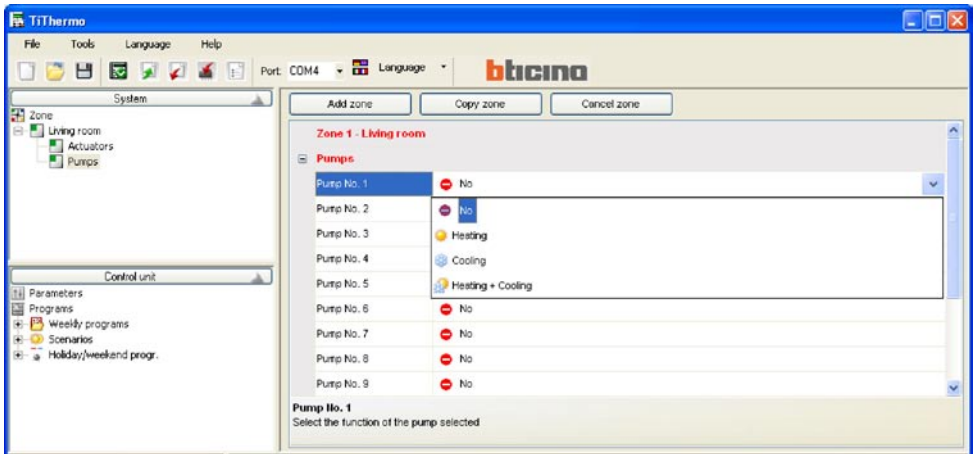
- **Actuators**
- **Pumps**

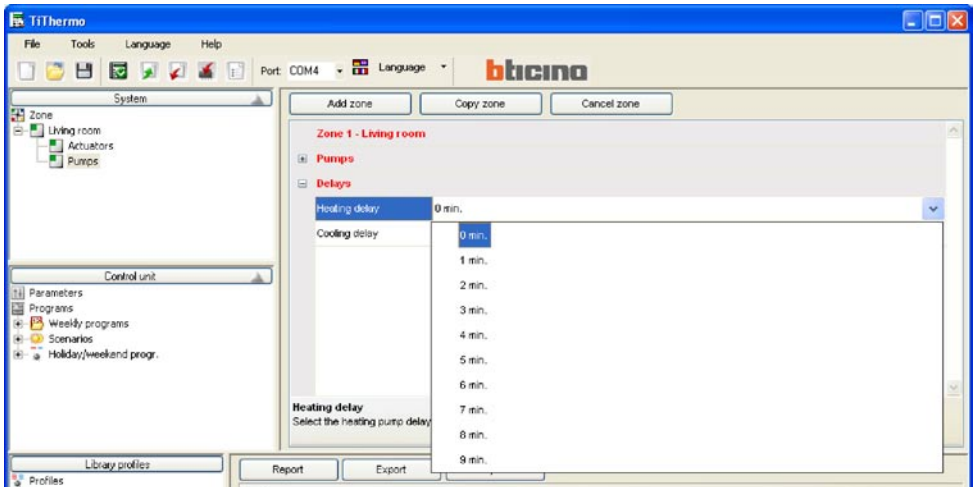
By clicking on each **Actuator** (e.g.: Actuator No. 1), it is possible to select the type of function required (heating, cooling, heating + cooling or no function) and the **Type of load** (e.g.: heating) controlled by the zone (ON/OFF, Open/Close, Fan Coil, DeLonghi).





By clicking on each **Pump** (e.g.: Pump No. 1), it is possible to select the type of function required (heating, cooling, heating + cooling or no function) and the activation **Delays**.



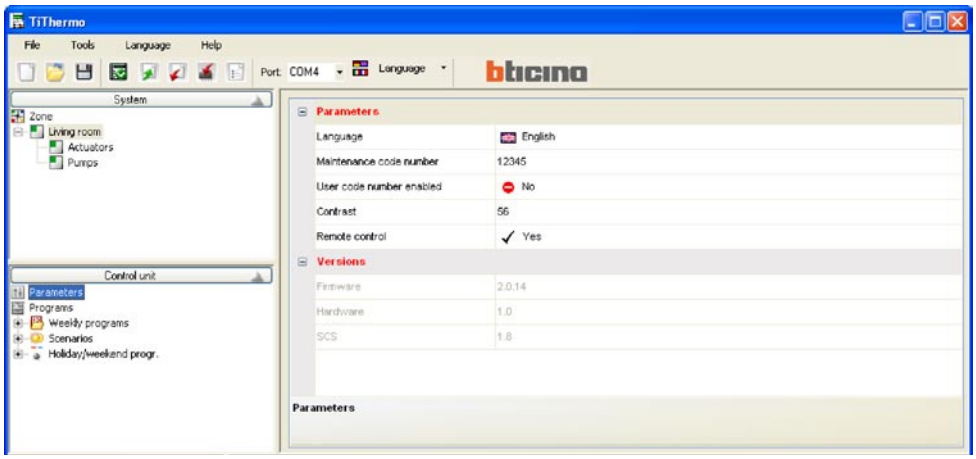


4.2 "Control unit" Window

This window shows the configuration parameters and the operating programs of the Control Unit.

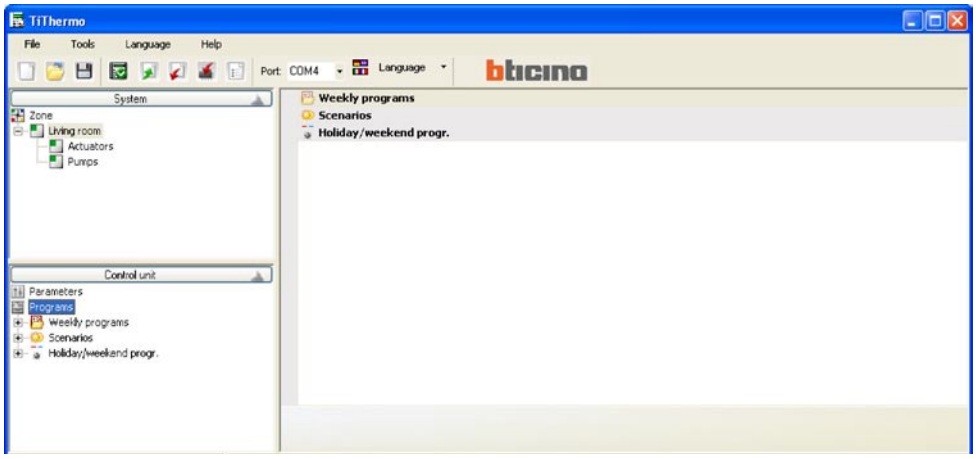
- **Parameters**

Language	language on the display of the Control Unit
Maintenance code	code to enter the **Maintenance menu** of the Control Unit (default 12345)
User code enabled	enables/disables access to the menu of the Control Unit through the user code. By selecting YES, the user code entry field will appear
Contrast	adjusts the display contrast of the Control Unit
Remote control enabled	the Control Unit is controlled by other instruments (Touch screen, Web File server)



- **Programs**

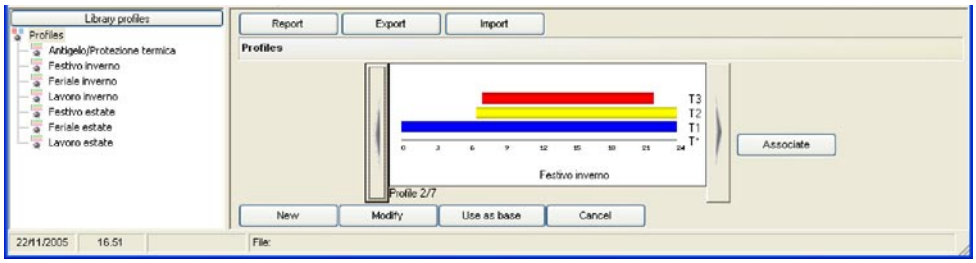
Weekly programs	sets up the weekly heating/cooling programs
Scenarios	sets up a scenario in which a certain temperature is associated with each zone
Holiday/weekend program	sets up the heating/cooling programs for holidays



4.3 "Library profiles" Window

This window displays the profiles included in the software library.

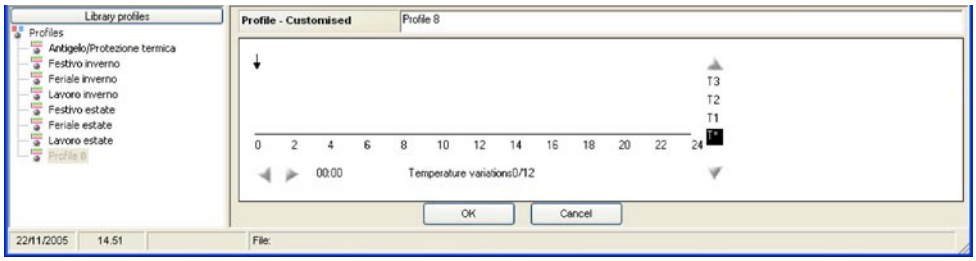
When you select the **Profiles** node, a window on the right will be displayed. This will allow you to select and display all profiles included in the library.



New

- **New**

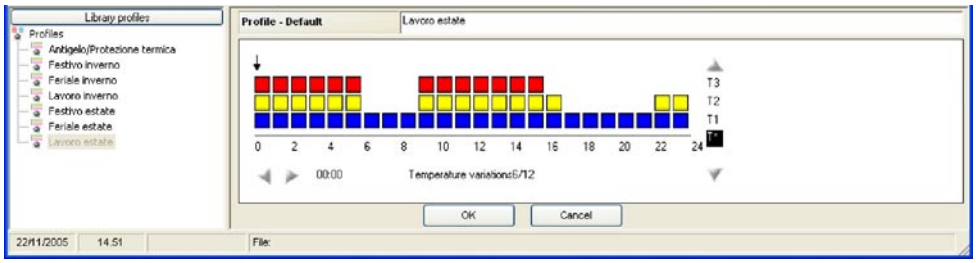
Adds a new profile to the library and starts the editing mode of the newly added profile.



Modify

- **Modify**

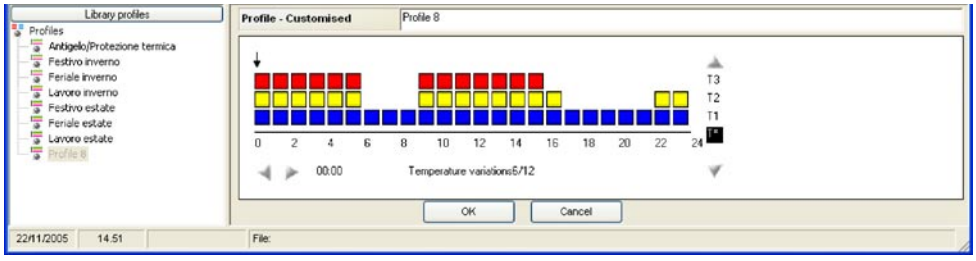
Starts the editing mode of the selected profile.



Use as base

- **Use as base**

Adds a new profile to the library by using the currently selected profile as a base. Starts the editing mode of the newly added profile.



Cancel

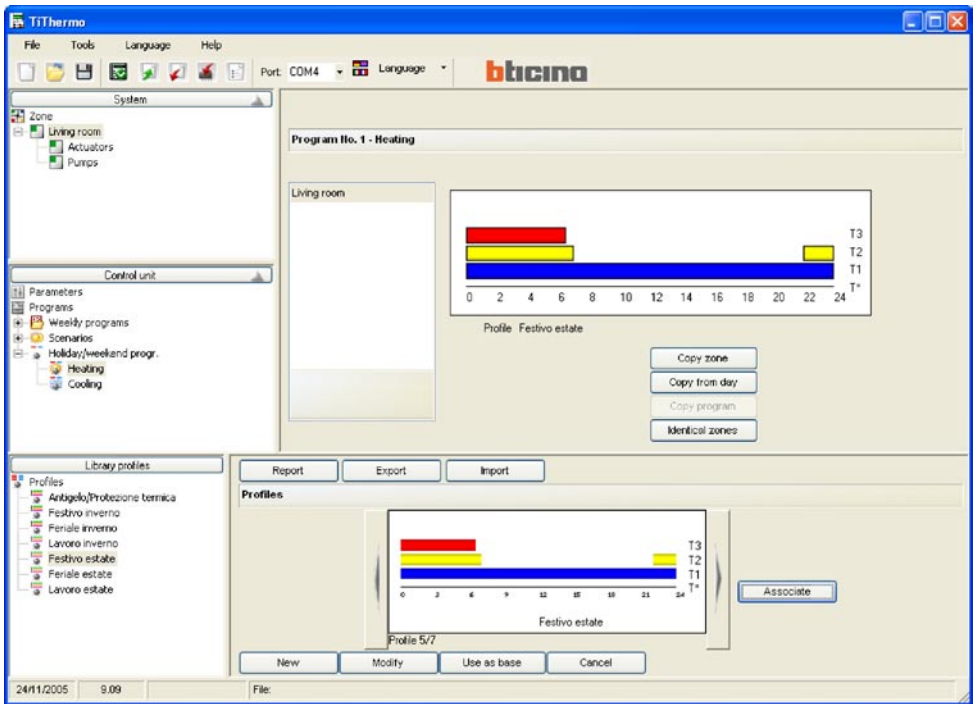
- **Cancel**

Removes the selected profile from the library. The profile will also be automatically eliminated from all the collections that are using it.

Associate

- **Associate**

When the top part of the screen displays the detail of a weekly program or holiday program and when one or more zones are selected, associate the currently selected profile with the zones selected.



Report

- **Report**

This creates an Excel file containing the graphs of all the profiles included in the library (option available only if Excel is installed in the PC). If Excel is not installed, a csv file will be created.

This function is available even if the root node of a collection or a profile within a collection is selected.

Export

- **Export**

This exports the content of the library of the profiles in an XML file. A window will be opened for selecting the elements that you want to export.

This function is available even if the root node of a collection or a profile within a collection is selected.

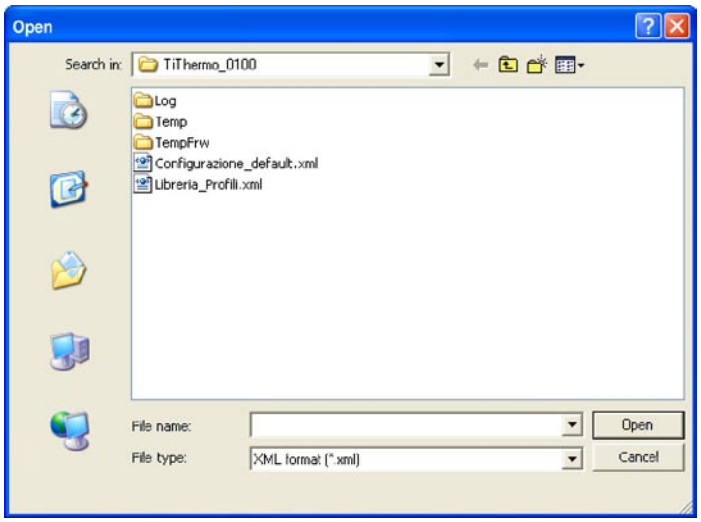
When the selection has been completed, click on “Export” to open the window and to save the file.

- **Import**

This allows you to import the profiles and the collections from an external XML file.

A window will be opened in order to select the file to be imported, thus showing a list of the profiles and collections included in the file selected.

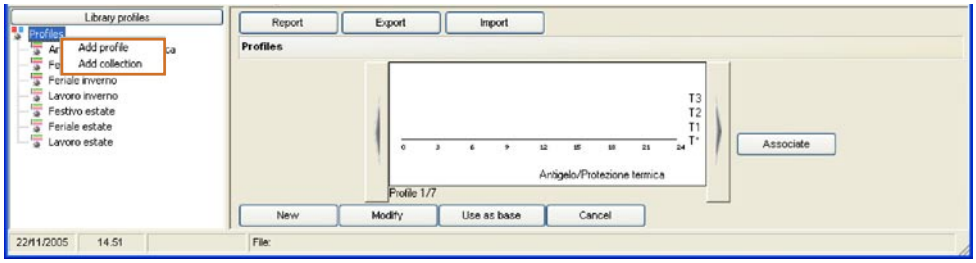
This function is available even if the root node of a collection or a profile within a collection is selected.



It is now possible to select the profiles to be imported.
When the selection has been completed, click on “Import” to start the import process.
The new profiles are added to the TITHERMO profiles library following a verification of the existence of an identical profile.
If a profile identical to the profile being imported is found in the profiles library, you will be asked if the profile shall be imported anyway. If you answer “Yes”, the profile will be added to the library, otherwise the profile will be ignored.

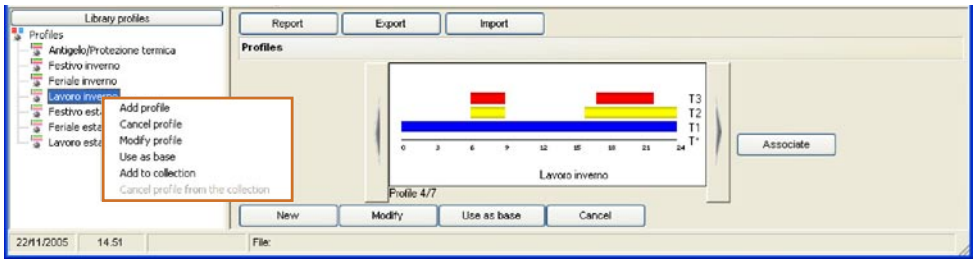
Instead, the following functions will be available in the **Library Profiles** by using the right button of your mouse:

- **Functions available by clicking on "Profile"**

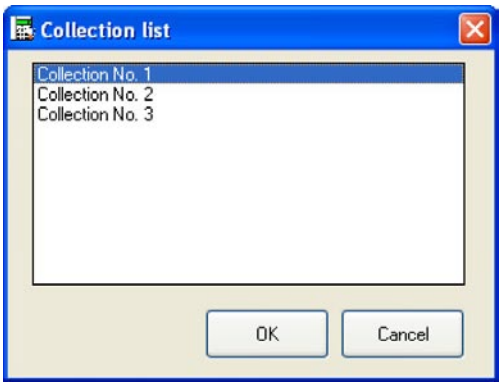


Add profile	adds a new profile to the library and starts the editing mode of the added profile
Add collection	adds a new collection to the library

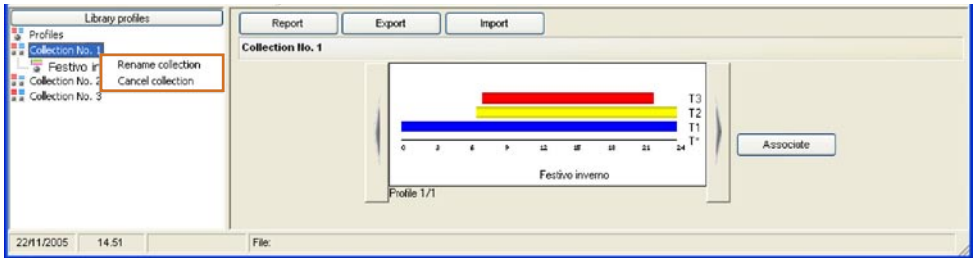
- **Functions available by clicking the "Profiles" node**



Add profile	adds a new profile to the library and starts the editing mode of the added profile
Cancel profile	removes the selected profile from the library
Modify profile	starts the editing mode of the selected profile
Use as base	adds a new profile to the library by using the selected profile as a base and starts the editing mode of the added profile
Add to collection	adds the selected profile to the collection selected through the window shown below

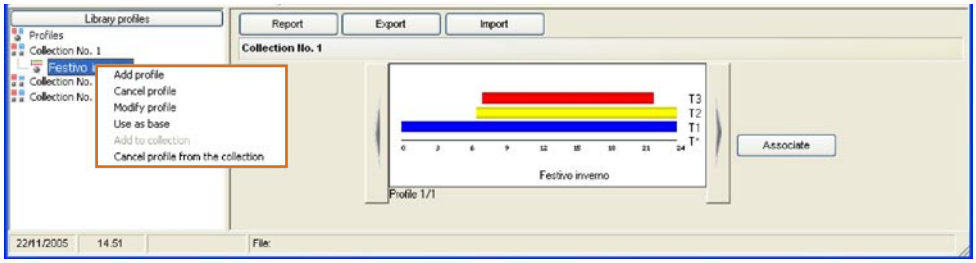


- **Functions available by clicking a Collection**



Rename collection	renames the collection selected
Cancel collection	eliminates the collection selected

- **Functions available by clicking a profile of a Collection**

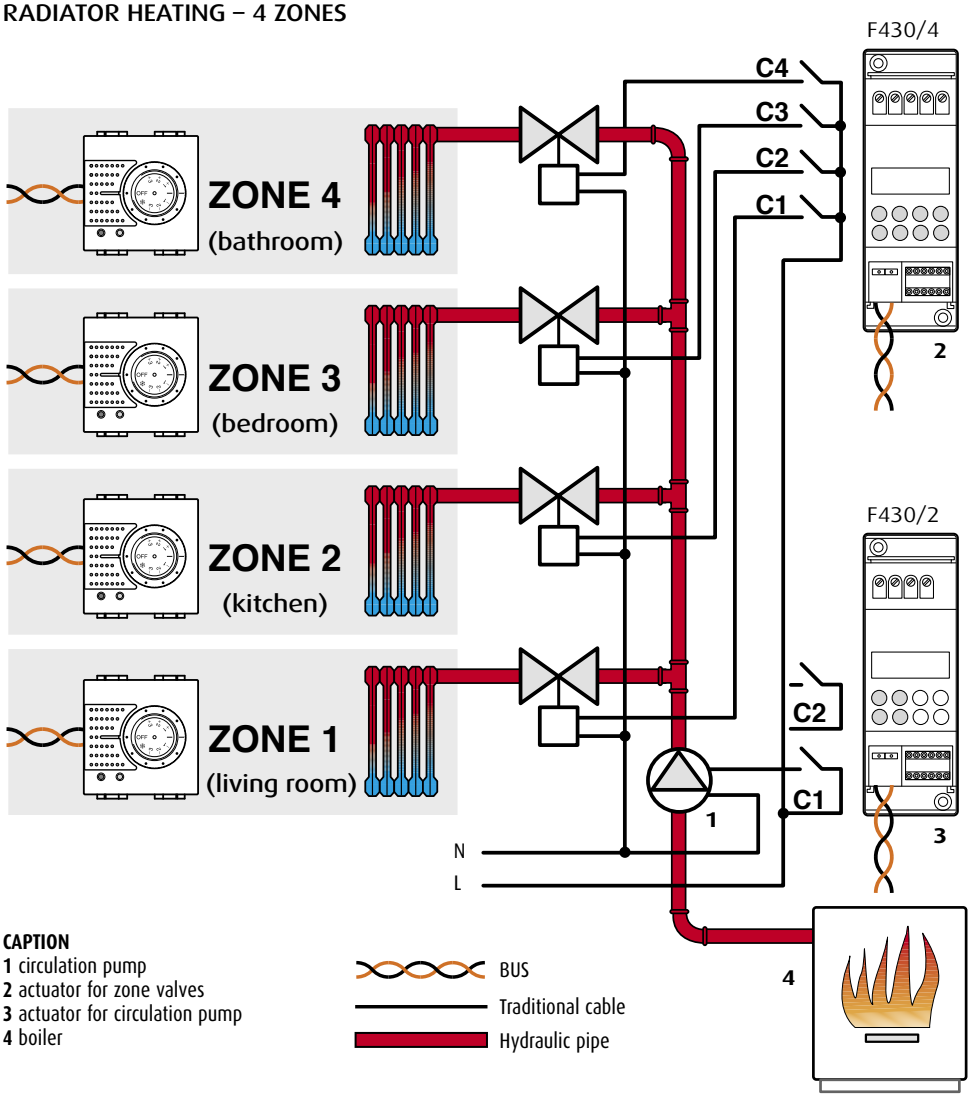


Add profile	adds a new profile to the library and starts the editing mode of the added profile
Cancel profile	removes the selected profile from the library
Modify profile	starts the editing mode of the selected profile
Use as base	adds a new profile to the library by using the selected profile as a base and starts the editing mode of the added profile
Cancel profile from collection	eliminates the profile selected from the collection

5. Example of a project

When the configuration operations described above have been completed, a guided example will be given to create a new project referred to the following system:

RADIATOR HEATING – 4 ZONES



CAPTION
1 circulation pump
2 actuator for zone valves
3 actuator for circulation pump
4 boiler

System configuration:

Probe zone 1

[ZA]	[ZB]	[P]	[MOD]	[SLA]	[DEL]
0	1	CEN	CEN		

Probe zone 2

[ZA]	[ZB]	[P]	[MOD]	[SLA]	[DEL]
0	2	CEN	CEN		

Probe zone 3

[ZA]	[ZB]	[P]	[MOD]	[SLA]	[DEL]
0	3	CEN	CEN		

Probe zone 4

[ZA]	[ZB]	[P]	[MOD]	[SLA]	[DEL]
0	4	CEN	CEN		

Zone actuator

[ZA]	[ZB1]	[ZB2]	[ZB3]	[ZB4]	[N]
0	1	2	3	4	1

[N] = 1: progressive number

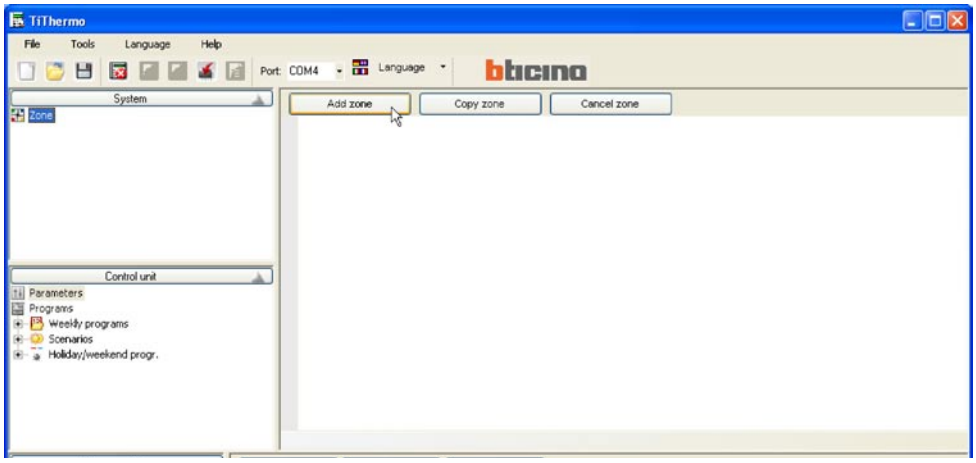
Actuator for circulation pump

[ZA]	[ZB1]	[N1]	[ZB2]	[N2]
0	0	1	OFF	—

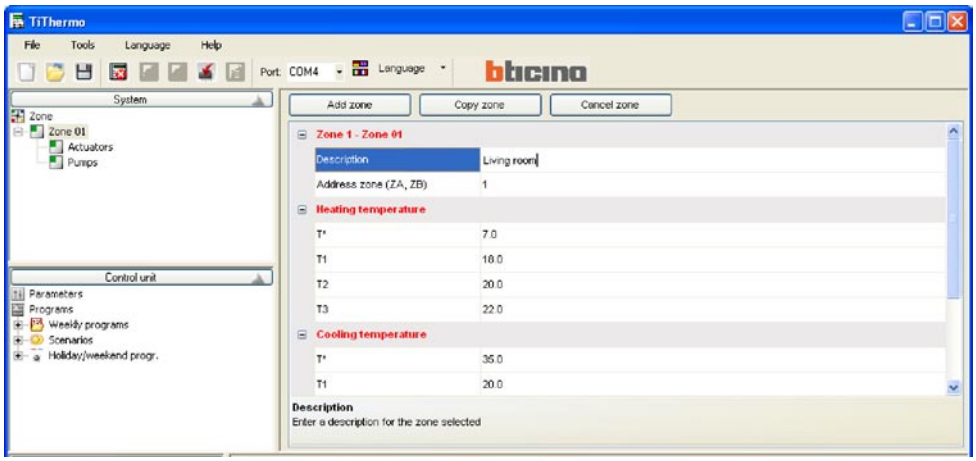
[N1] = 1: progressive number

5.1 System configuration

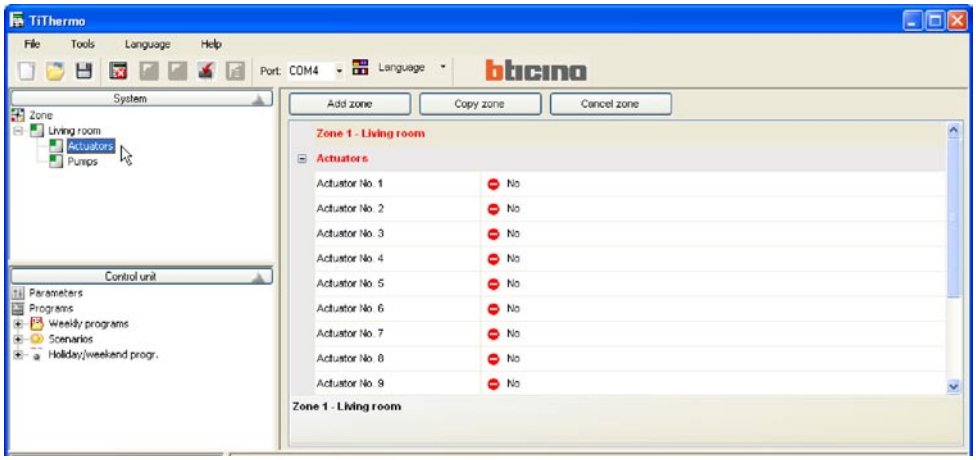
When the program is opened, create a zone by clicking the **Add zone** button.



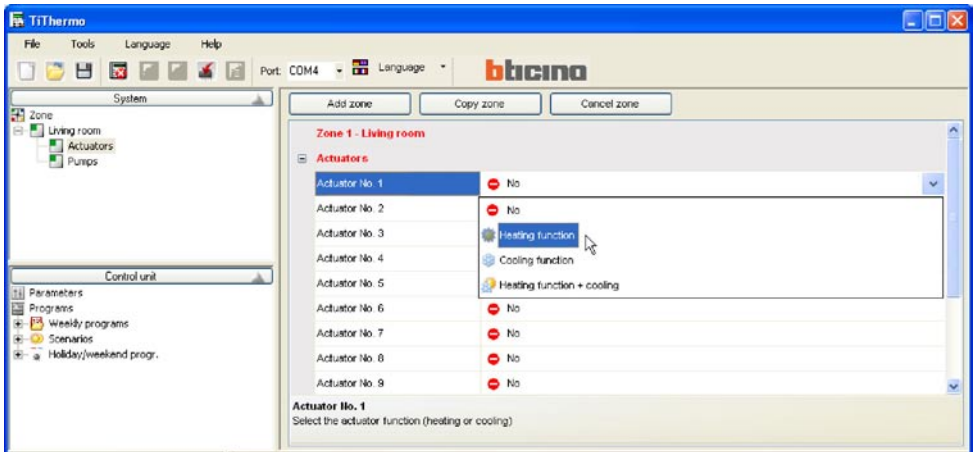
In the main window:
- assign a **Description** to the zone (e.g. Living room)
- enter the **Address zone** data (ZA, ZB)
- set the temperature of the **Heating temperature** ranges.



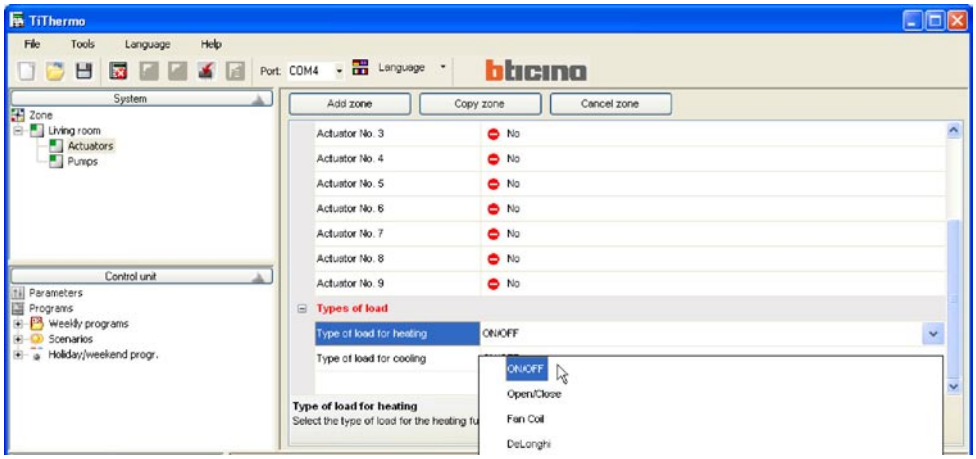
Click Actuators in the tree structure of the Zones.



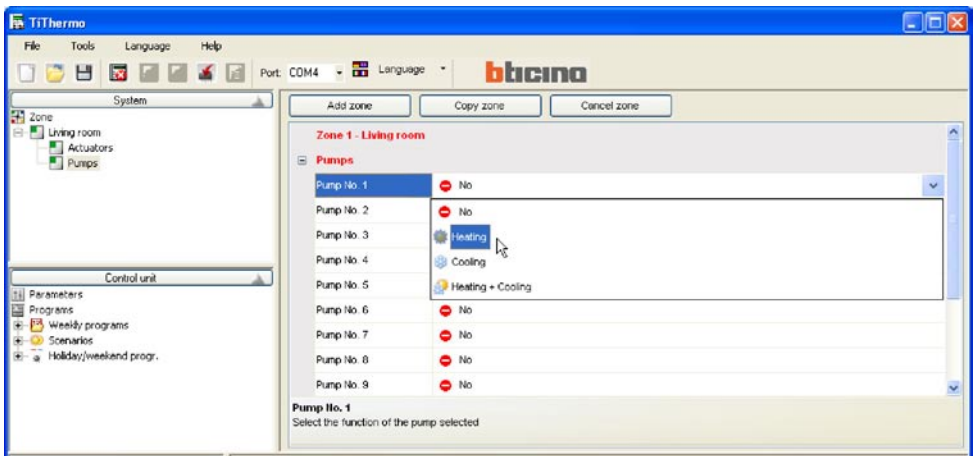
In the main window, click **Actuator No. 1** and select the **Heating function**.



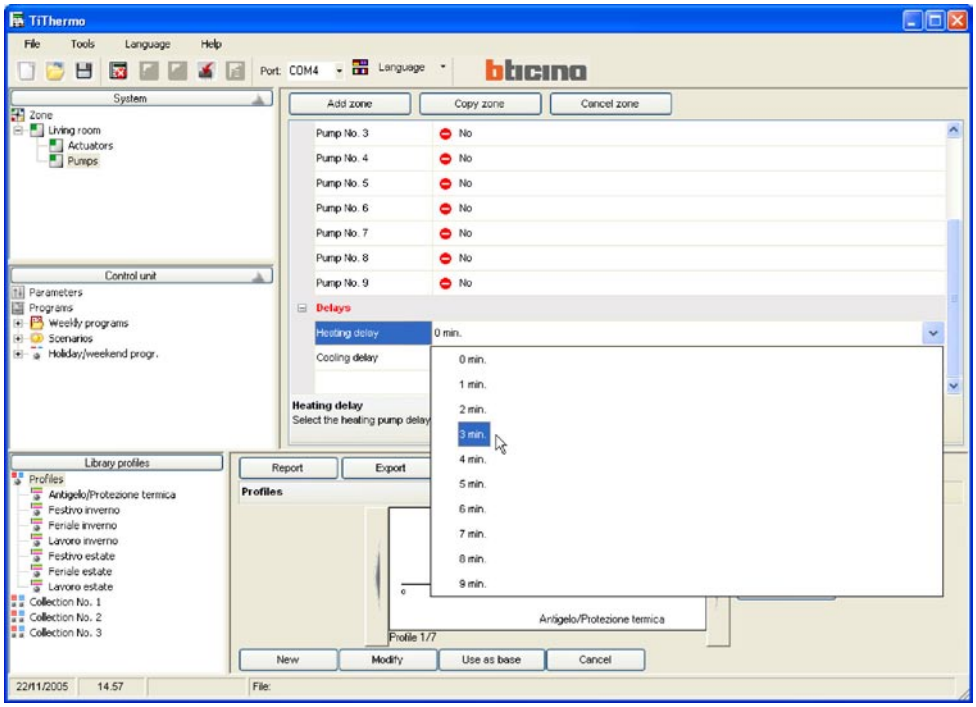
Click on **Type of load for heating** and select **ON/OFF**.



Click **Pumps** in the System window.
In the main window, click **Pump No. 1** and assign the **Heating** function.

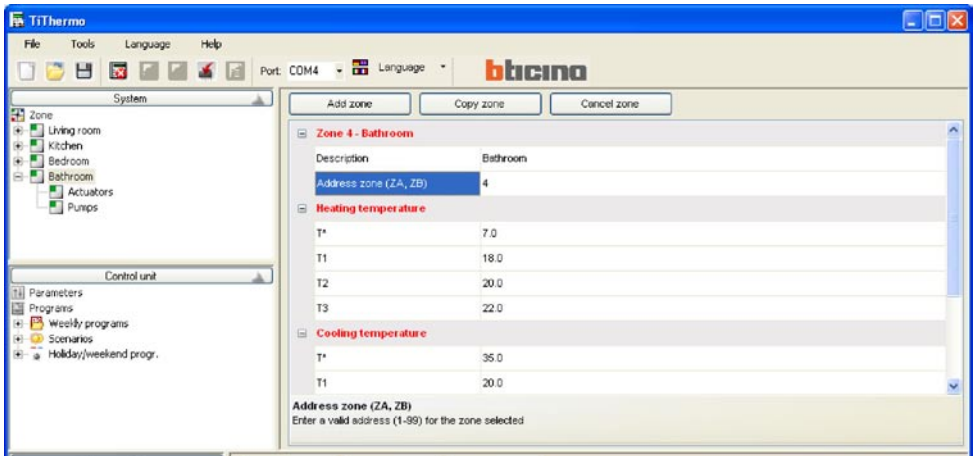


Click on **Heating delay** to assign the activation delay of the pump.



To create a new zone with the same setup, click the **Copy zone** button.
In doing so, a new address zone having the first available address will be created.

After selecting the created zone (Zone 02), it will be possible to customize the description (e.g. Bathroom) and/or change the configuration.



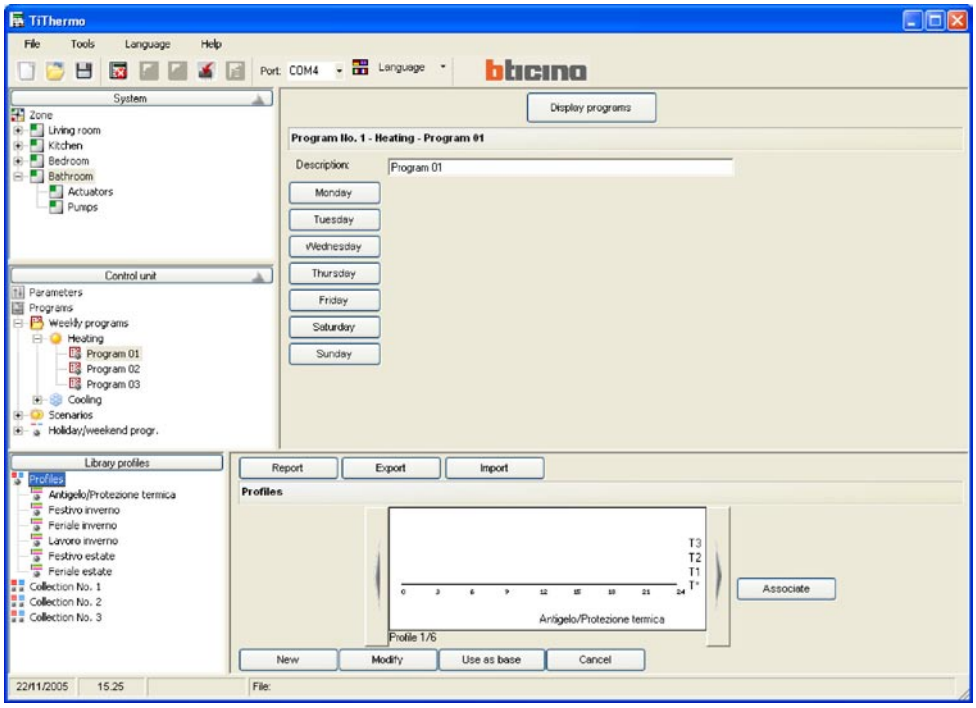
5.2 Configuration of Weekly programs

It is possible to create up to three weekly programs for each operation mode of the system (Heating and Cooling).
For each program it is possible to determine different temperature profiles (0h-24h) for every day and for every zone of the system.

To set up a weekly heating program:

- click **Programs** in the Control Unit window;
- expand the Programs tree structure -> Weekly programs -> Heating;
- select one of the three available programs (e.g.: Program 01).

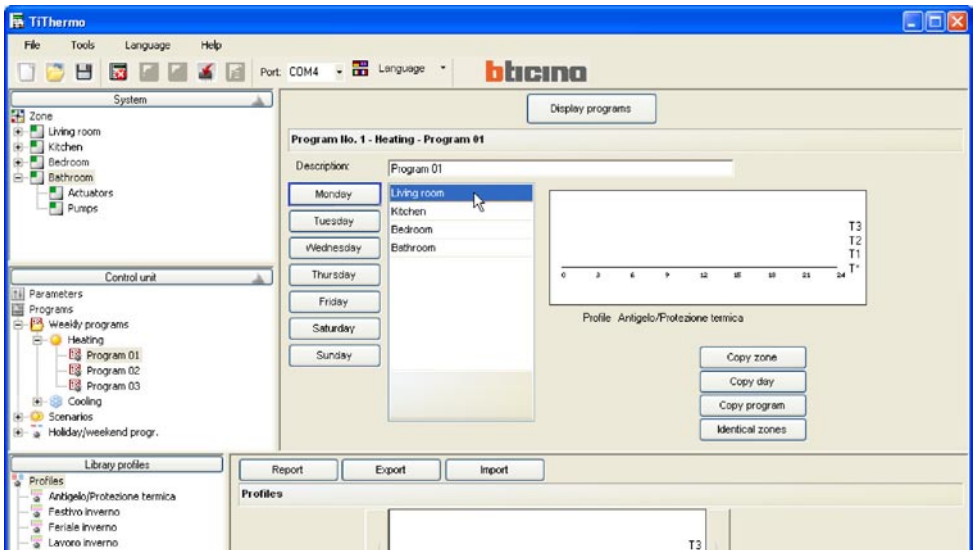
In the main window, the list of the days of the week will be displayed.



- Select the day you want to configure (e.g. Monday);

The list of the configured zones within the project will be displayed.

- Select a zone (e.g. Living room) to display the associated profile.

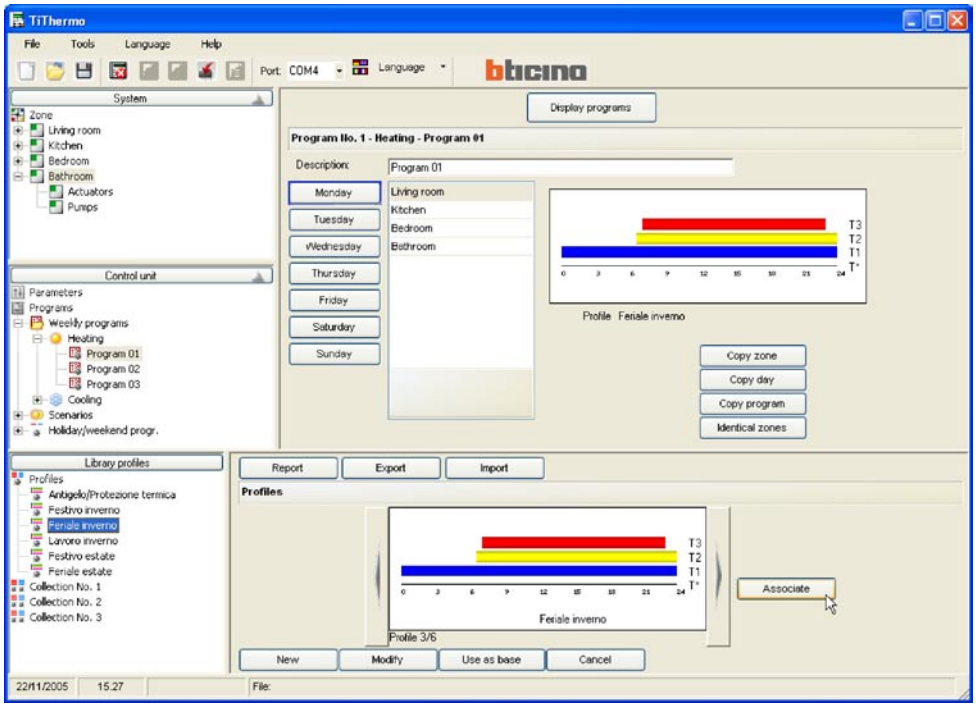


The following actions are now possible:

Associate: associates a new profile with the day and with the zones selected.

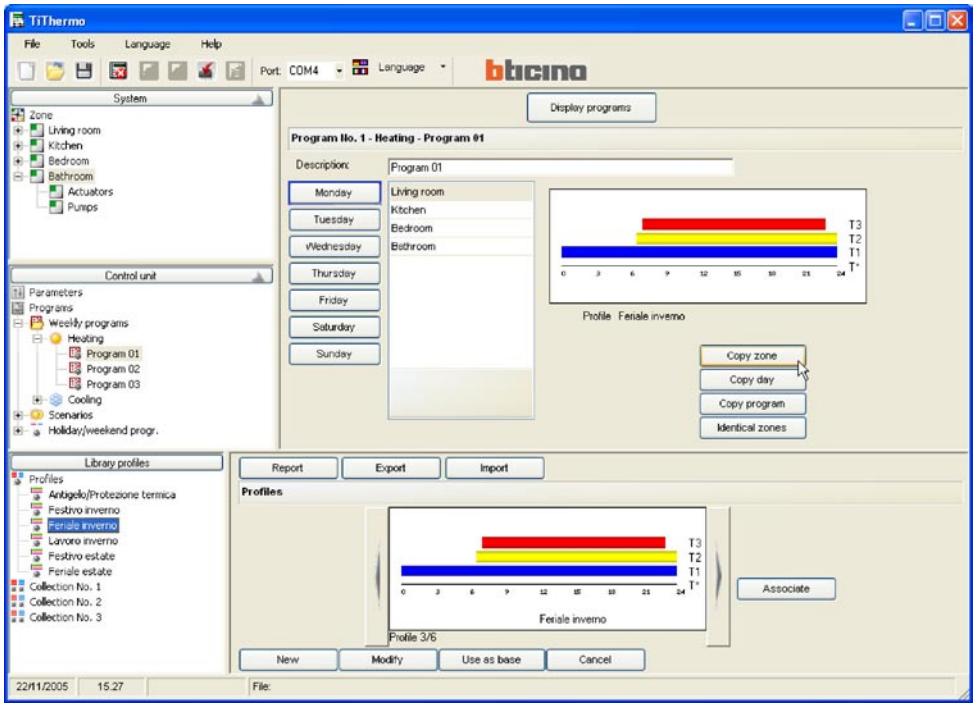
- Select the required profile from among those included in the library profiles and click on the **Associate** button.

It is possible to associate the same profile with other zones by simply making a multiple selection (with the Shift and Control keys) within the list of the zones.

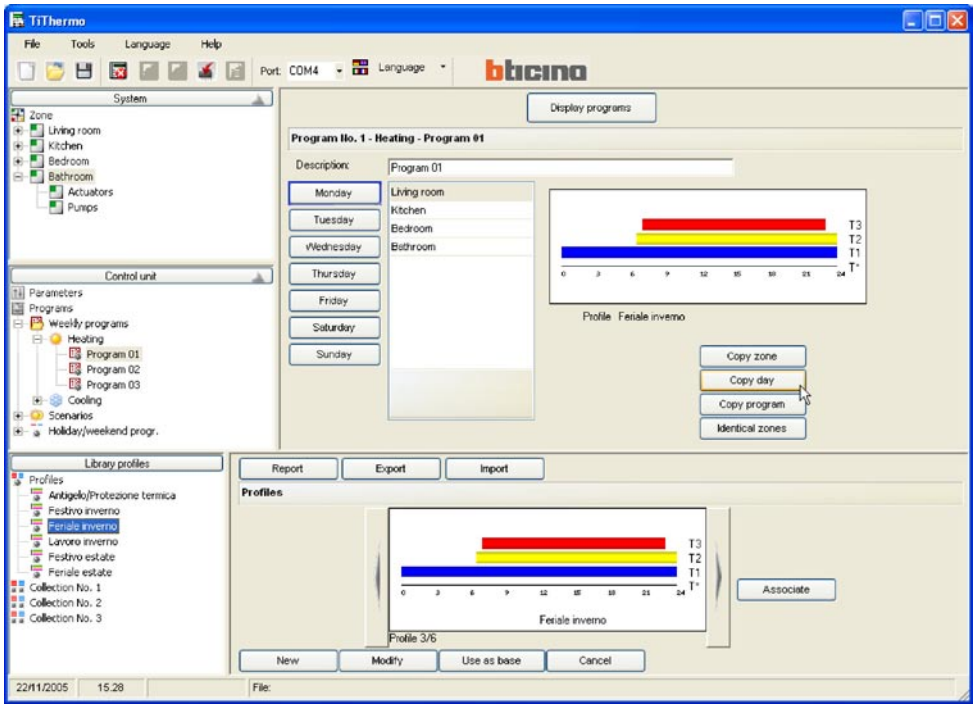


Copy zone: copies the setup of the current zone to one or more zones.

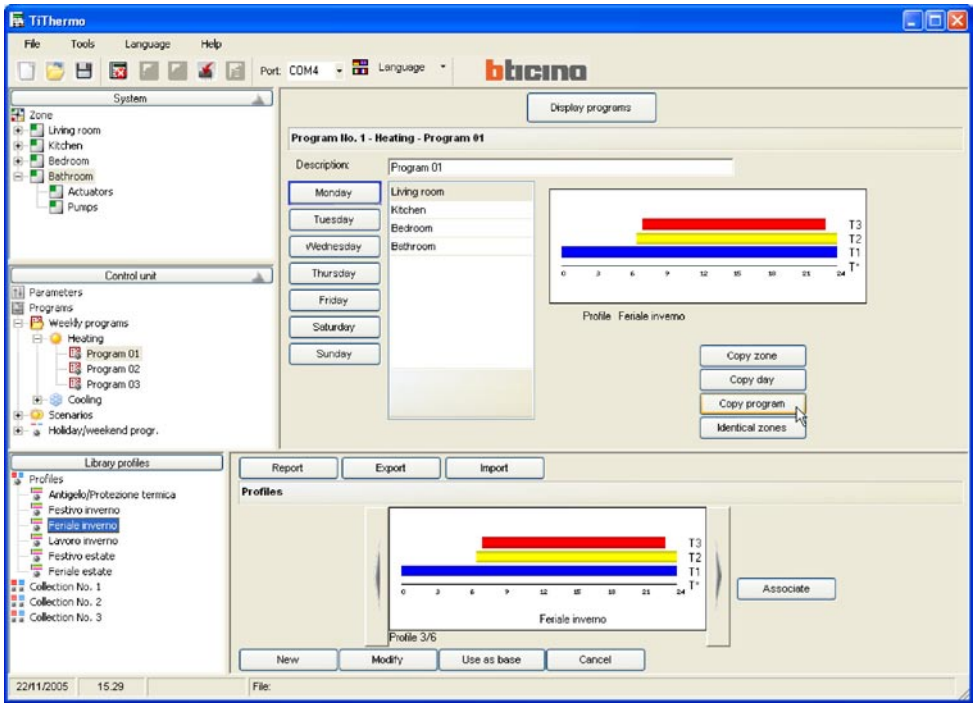
A window will be opened to select the zones to which the setup of the selected zone shall be applied. It is possible to select several zones by using the Shift and Control keys.



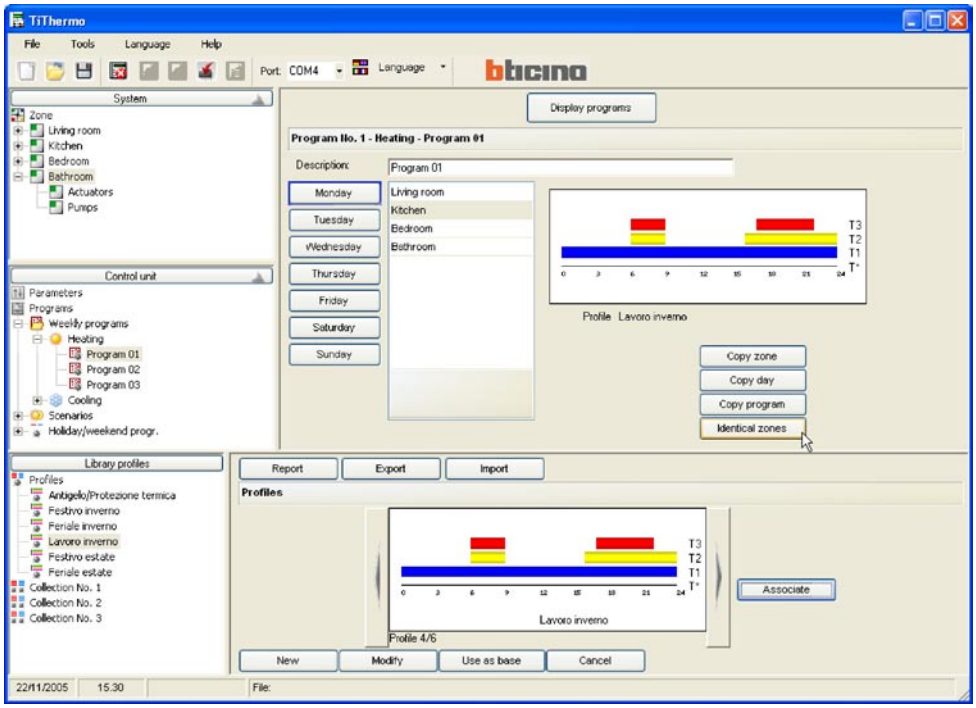
Copy day: copies the setup of the current day to one or more days.
A window will appear for selecting the day.
It is possible to select several days by using the Shift and Control keys.



Copy program: copies the setup of the current program to one or more weekly programs belonging to the same function (heating or cooling).
A window will be opened for selecting the programs.

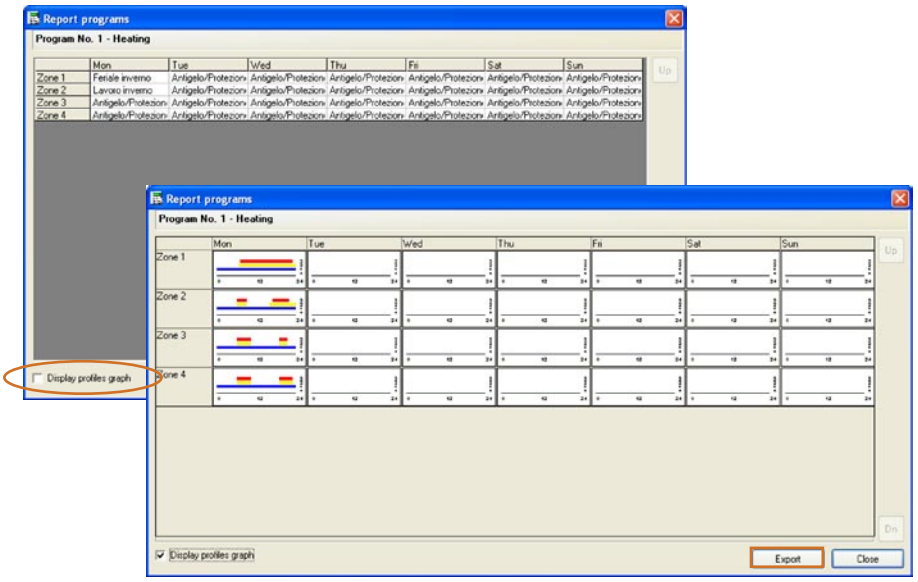


Identical zones: this indicates, in the list of the zones, which zones use the profile of the selected zone.



Display program: shows the synoptic panel of the profiles associated with each zone for each day of the week.

The display may occur in graph mode by enabling “Display profiles graph”.



By clicking on the **Export** button, it will be possible to export the synoptic panel in graph mode into an xls file (if Excel is installed) or in text mode (if Excel is not installed).

5.3 Scenario configuration

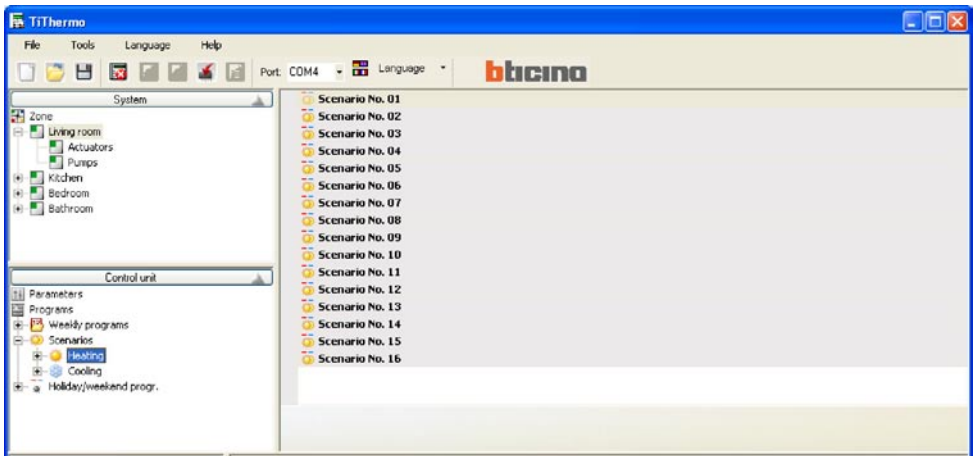
It is possible to create up to 16 scenarios for each operation mode of the system (Heating and Cooling) and, for each scenario, to set up different temperatures for each zone.

To set up a scenario:

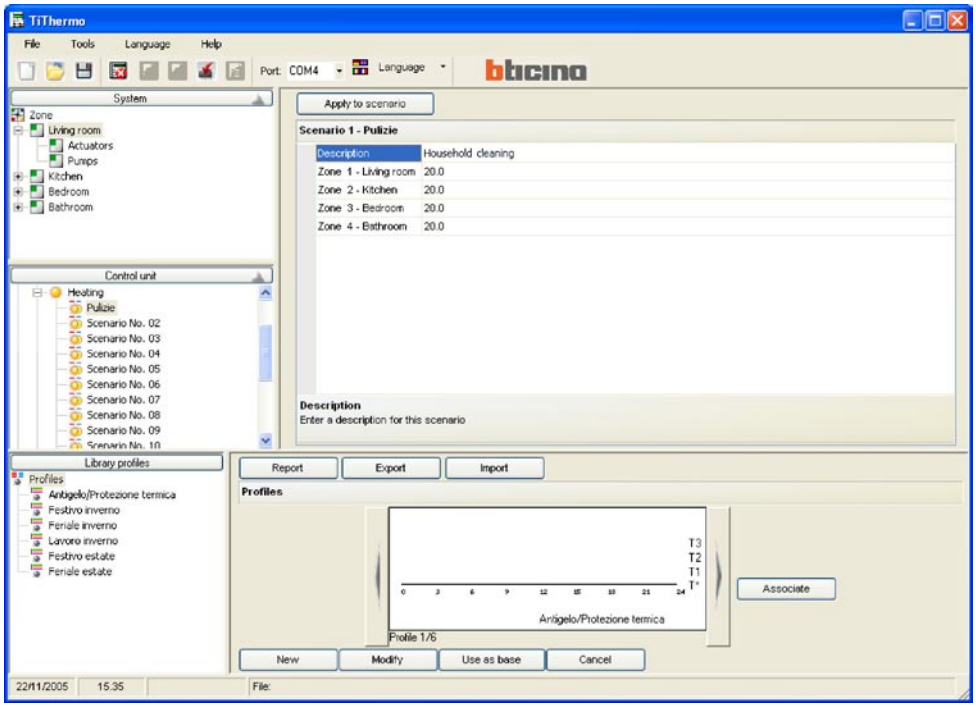
- click **Programs** in the Control Unit window;
- expand the Programs tree structure -> Scenarios -> Heating.

In the main window, the list of the scenarios for the Heating mode will be displayed

- select a scenario (e.g. Scenario n. 01).

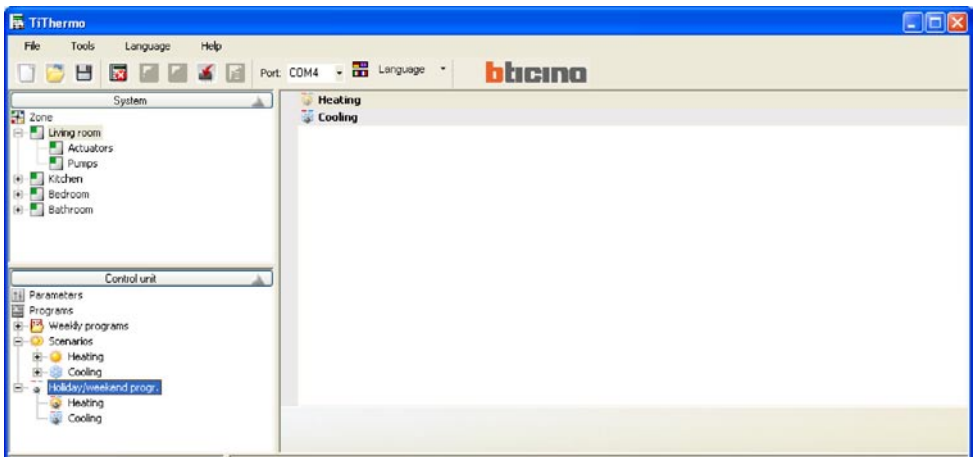


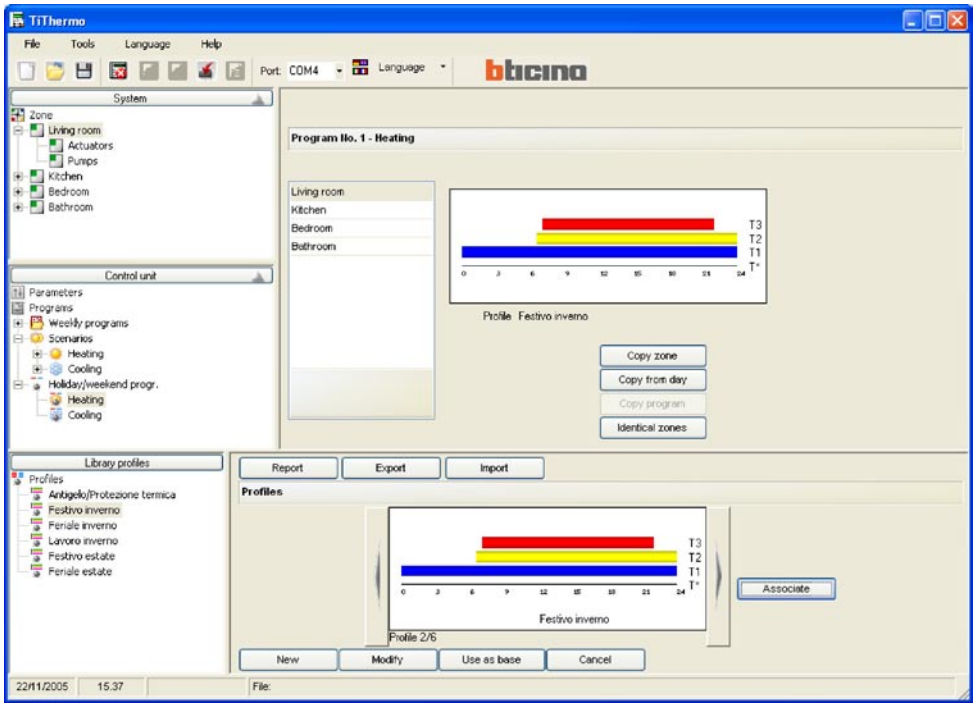
It is possible to enter a description for the selected scenario (e.g.: Household cleaning) and set up, for each single zone of the system, the required temperature value.



5.4 Configuration of Holiday program

Using the same configuration logic described for the weekly Program, it is possible to create, for the selected mode (Heating or Cooling), a daily profile for each zone of the system.





Complete the configuration and save the Project

To transfer the project to the item 3550 Temperature control Unit, proceed as described in the following pages.

6. Connecting to the Control Unit

In order to use specific functions (e.g.: Upload, Download, Diagnosis, etc.), it is necessary to connect the PC in which the TITHERMO software is installed to the temperature control Unit in the system.

To connect:

- From the **Port** drop-down menu, shown in the toolbar, select the serial port address of the PC you want to connect the Control Unit to (COM1, COM2, etc.);
- select **Connect** from the **Tools** menu or from the toolbar

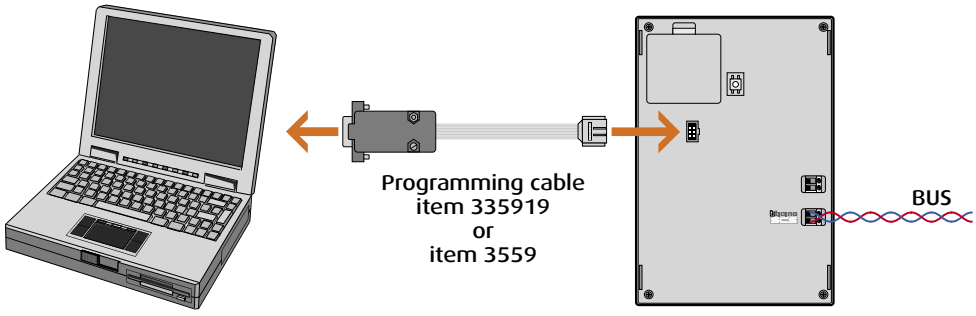
The following window will be given with the instructions on how to connect to the Control Unit.

Run the requested operations:

1) make sure that the Control Unit has acquired the system configuration
- select **MAINTENANCE**
- enter the **Maintenance code** (default 12345)
- select **Configure zones - Learning**

2) set the Control Unit to Maintenance mode
- select **MAINTENANCE**
- enter the **Maintenance code** (default 12345)

3) connect the programming cable to the device



4) press OK to continue.

To disconnect:

- select **Connect** from the **Tools** menu or from the toolbar

Here, too, a window will be given with the instructions on how to disconnect from the Control Unit:

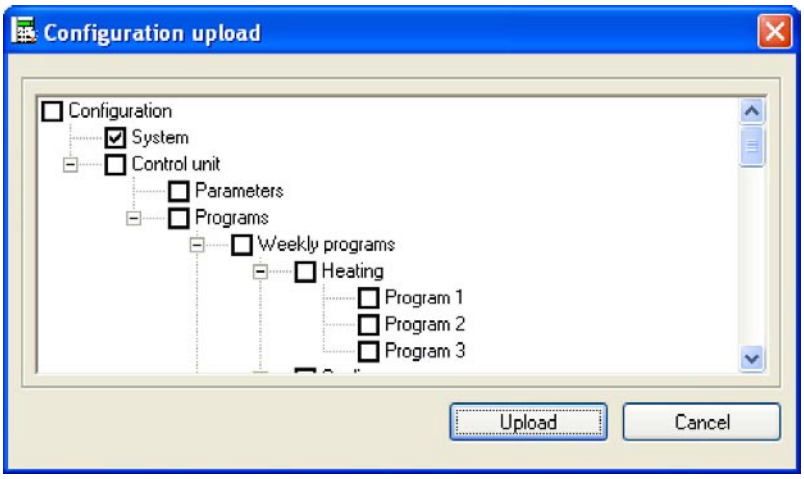
7. Functions enabled while connecting

7.1 Upload

The **Upload** function enables you to transfer all or part of the configuration of the Control Unit to the project opened in TITHERMO.

- Select **Upload** from the **Tools** menu or from the toolbar

A window will appear in which it is possible to select all or part of the configuration you want to transfer. The loaded setup will overwrite the ones corresponding to the current project.

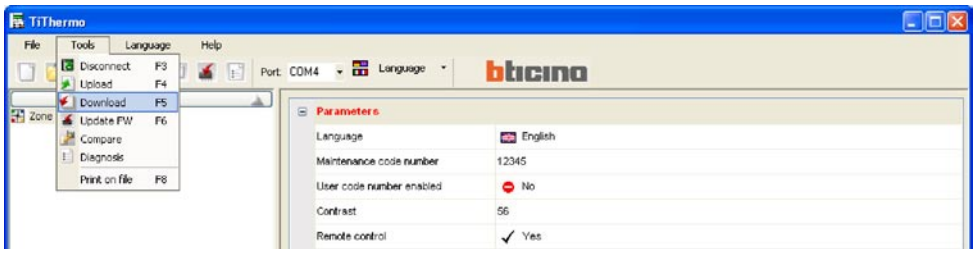


- Click the **Upload** button to start transferring.

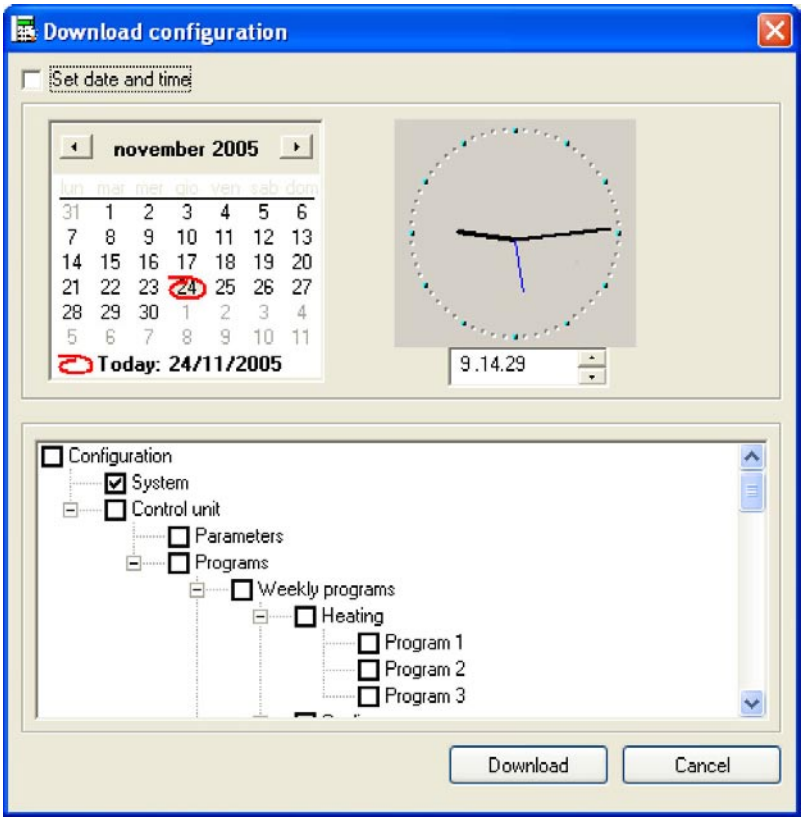
7.2 Download

The **Download** function enables you to transfer all or part of the configuration of the project opened in TITHERMO to the Control Unit.

- Select **Download** from the **Tools** menu or from the toolbar



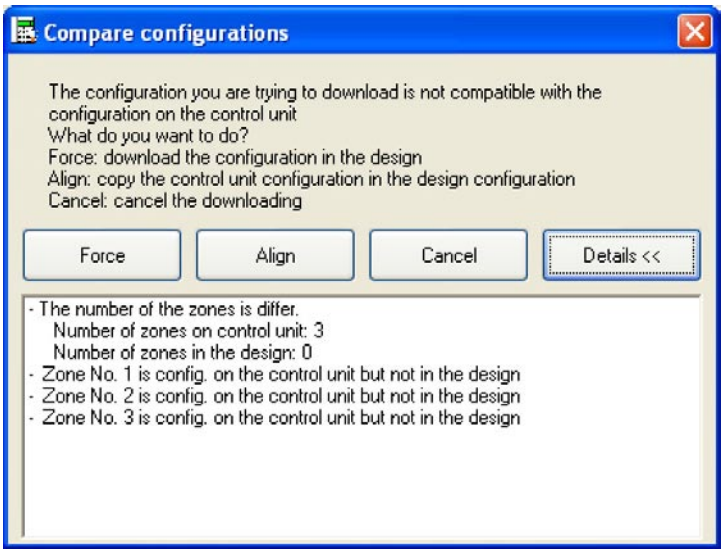
A window will appear in which it is possible to set the date/time and select the parts of the project to be transferred to the Control Unit.



- Click the **Download** button to start transferring.

If the configuration of the project being downloaded does not coincide with the configuration of the system on the Control Unit, the following dialog box will be displayed:

it is possible to get details of the setup which is determining the incompatibility by clicking on **Details;**



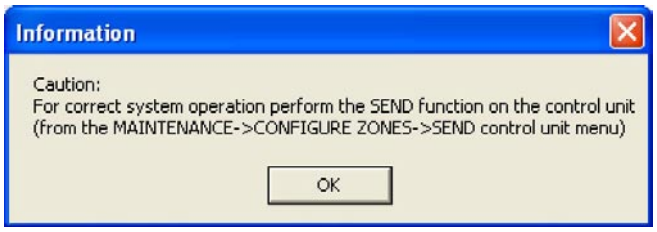
or to use one of the three possible actions:

Force the configuration of the project will be downloaded anyway

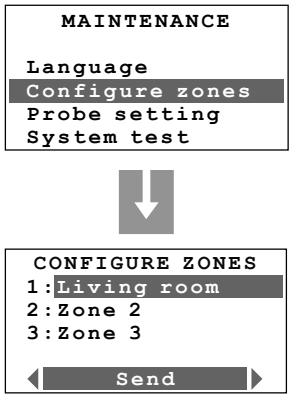
Align the configuration of the project will be aligned to that of the Control Unit

Cancel downloading will not be performed

When the project has been **downloaded**, the following will be displayed CAUTION:



Execute the following procedure to run the system properly.
(see § 5.6.2.7 Temperature control unit - Installation manual item 3550)

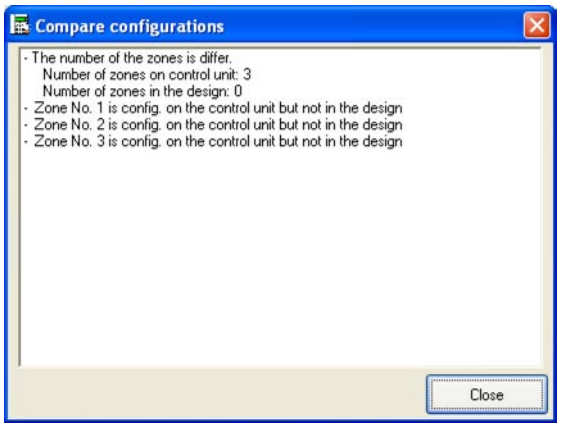


7.3 Compare

The **Compare** function enables you to display the differences between the project configuration and the configuration in the system.

- Select **Compare** from the **Tools** menu.

The following window will appear:

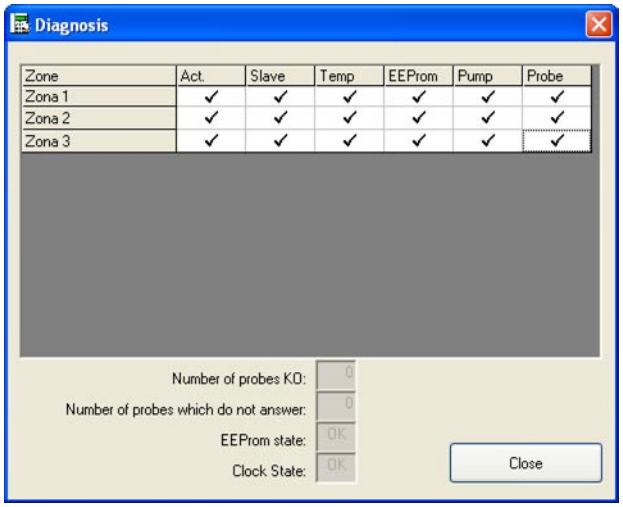


7.4 Diagnosis

The **Diagnosis** function enables you to verify the status of the single components for each zone.

- Select **Diagnosis** from the **Tools** menu or from the toolbar

In the following window, the status (check mark = normal; red circle = error) of the single components will be displayed for each zone of the system:



8. Firmware update

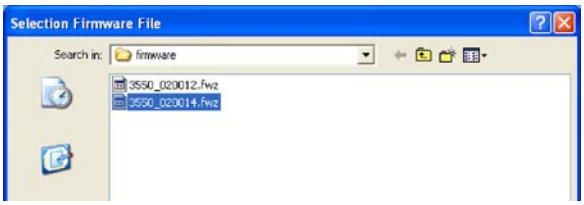
The **Update FW** function enables you to update the Firmware of the Control Unit. The function is always enabled, even if there is no connection with the system.

- Select **Update FW** from the **Tools** menu or from the toolbar

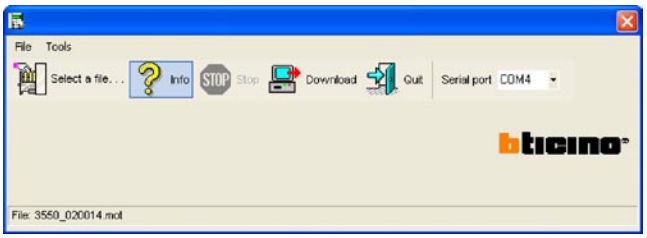
The following window will appear:

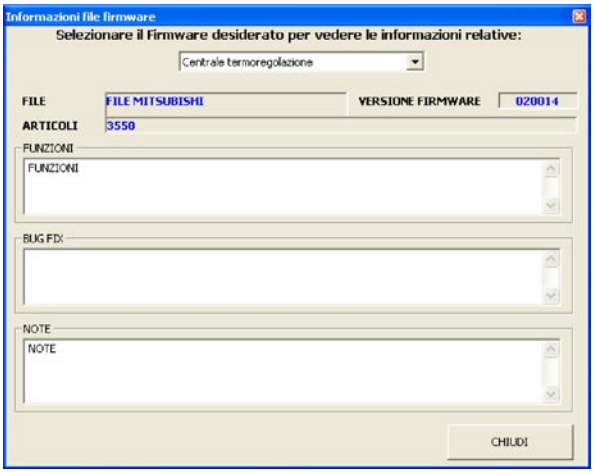
- Click **Select a file**

- Select the **.fwz** file and then click **Open**

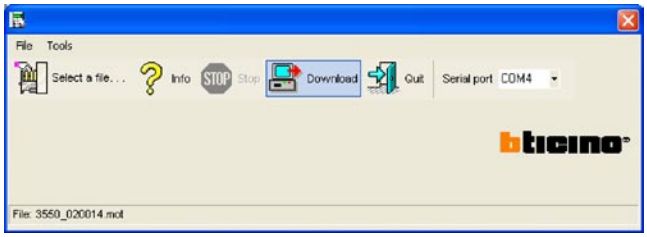


- Click **Info** to get information on the selected file





- Click **Download** to start updating the firmware

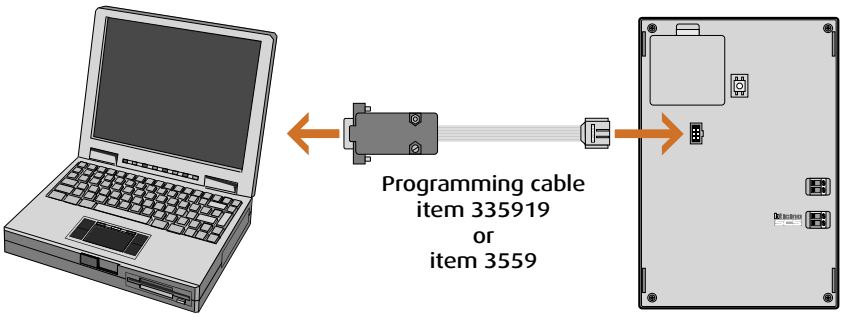


The following window will appear:

Run the requested operations:

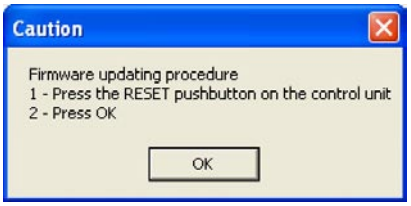
1) set the Control Unit to Maintenance mode
- select **MAINTENANCE**
- enter the **Maintenance code** (default 12345)

2) connect the programming cable to the device



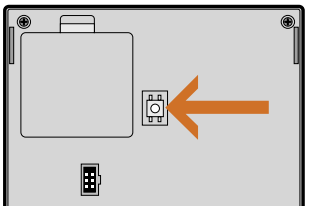
3) press OK to continue.

The following window will appear:



Run the requested operations:

1) press the RESET button on the Control Unit



2) press OK to continue.

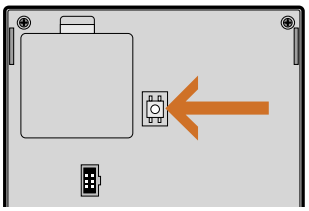
During the data transfer phase, the following window will appear; it is possible to interrupt the operation by selecting **Stop**.

When the updating operation has been completed, the following message will be displayed:

To complete the procedure, follow the requested operations:

1) remove the cable from the device

2) press the RESET button on the Control Unit



3) press OK to continue.

Bticino SpA
Via Messina, 38
20154 Milano - Italia
www.bticino.com

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