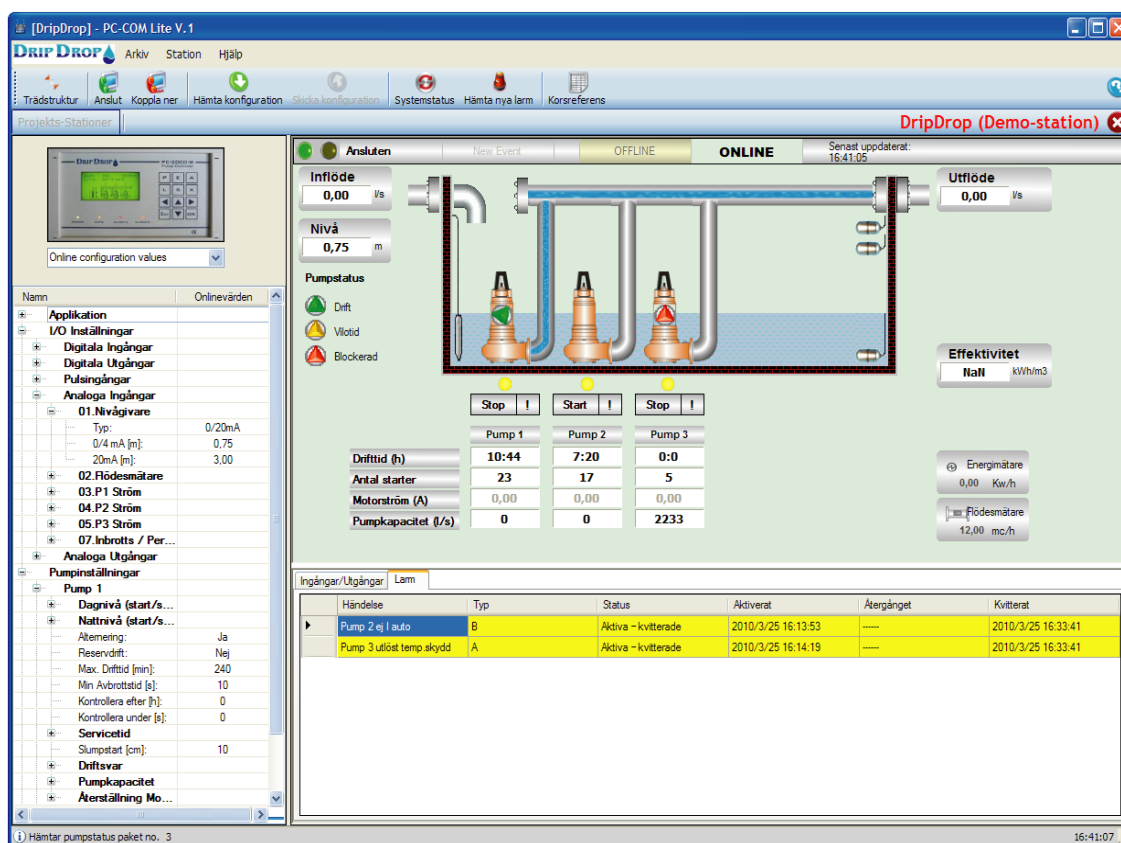




PC-COM

Communication program



User manual

Version 2.0-UK

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1 Description

1.1 General

PC-COM is a Windows based program used to configure DripDrop AB,s pump controller type PC-200 and PC-2000-W

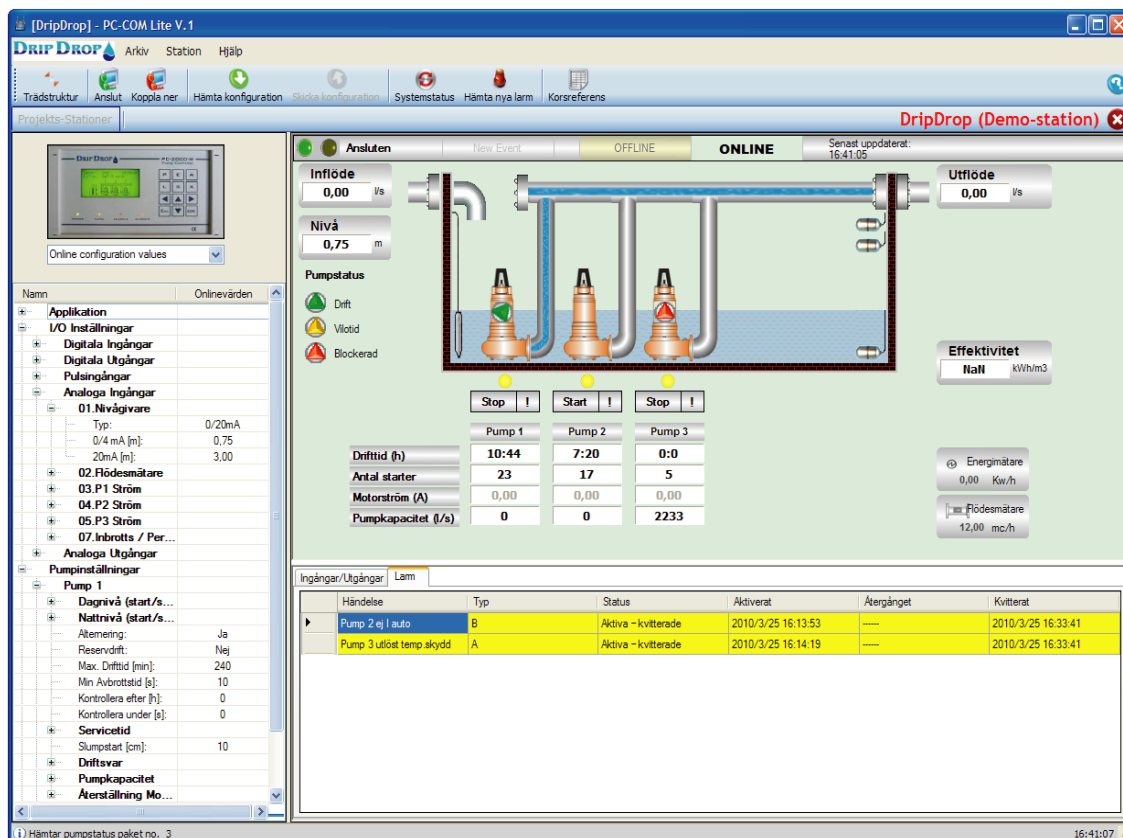
The program can be used for following purposes:

- Configuration of pump controllers.
- Show and confirm alarms.
- Supervision in real-time
- Showing the status of the in and outputs of the pump controllers
- Collect and send the configuration data.

He connection can be made either via a serial cable RS-232 direct connection, via radio or via telephone modem. (PSTN or GSM). PC-COM can only handle 1 pump controller at the time.

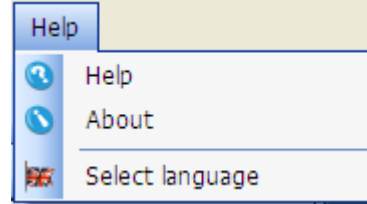
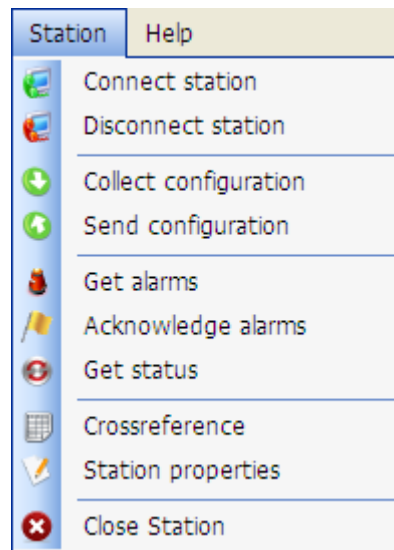
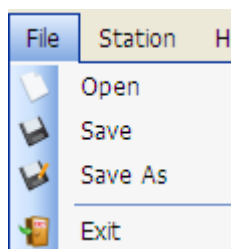
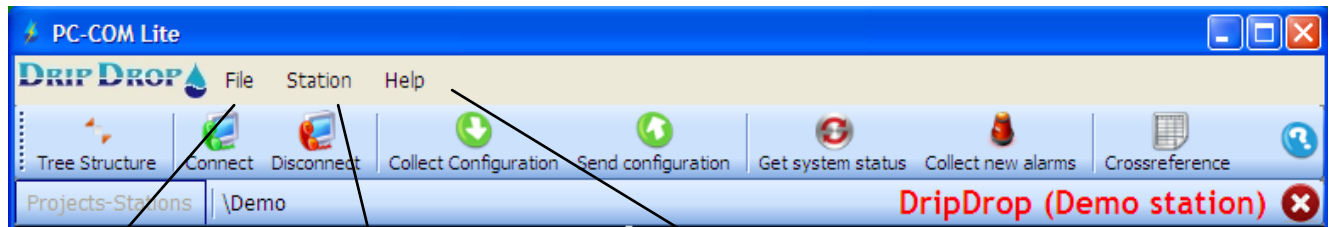
By using this program you can see what happens in the plant, change set values in the controller and collect and send the configuration.

Below a pumping station with three pumps controlled by a PC 2000-W controller



1.2 Toolbar

The program has a number of toolbar buttons and drop down menus in the top.

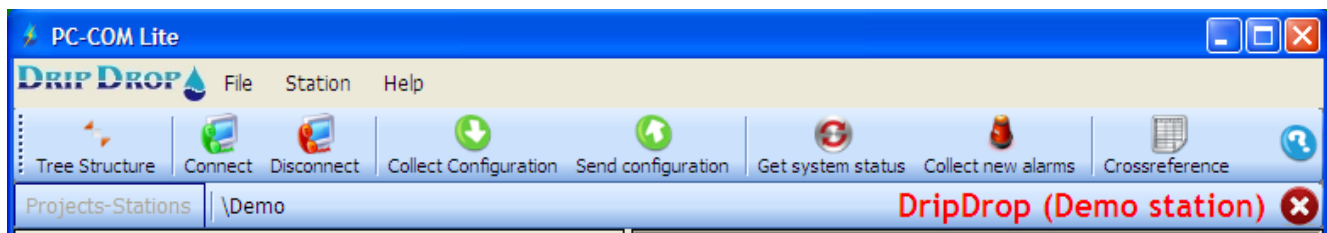


Here you can reach this menu and can change the language.

Under station following choices are available.
Connect station, Disconnect station, Collect/send configuration-
Collect alarms, System status, are also available as toolbar
buttons.
Here you can close down the displayed station.

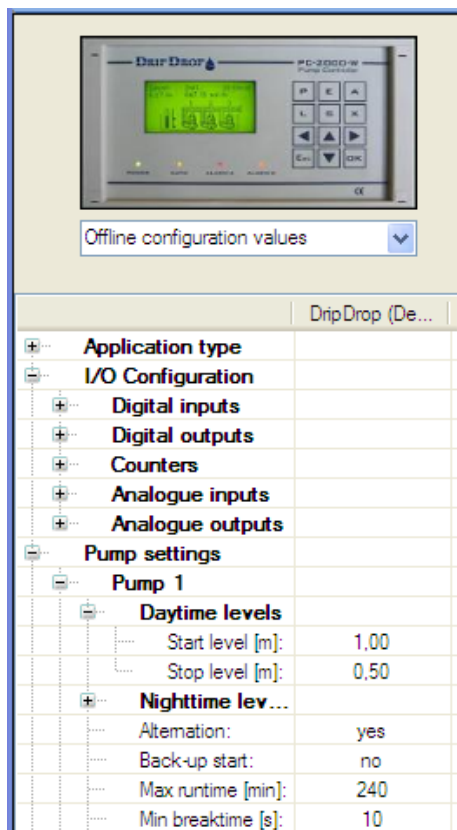
Here you can open and save the configuration or files depending on which function you have selected.

Here you can close down the entire program PC-COM.



In the lower part the project and station name are shown.

The button Tree Structure shows or hides the picture below.

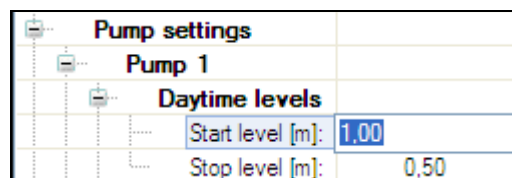


The picture shows the type of controller used, in this case a PC-2000-W

Drop down menu to select which type of configuration you what to show and work with.

Manoeuvring in the Tree Structure is simplest done with the arrow keys, Press **Enter** to edit and to confirm changed values.

See example below.



- The settings of the Pump controllers are done as described in the manuals for the pump controllers.

1.3 Installation

Insert the disc with the PC-COM program in the CD reader and follow the instructions on the screen.

If the installation program does not start automatically you can instead start the installation by open the CD and directly run the file named **SetupWizard.exe**

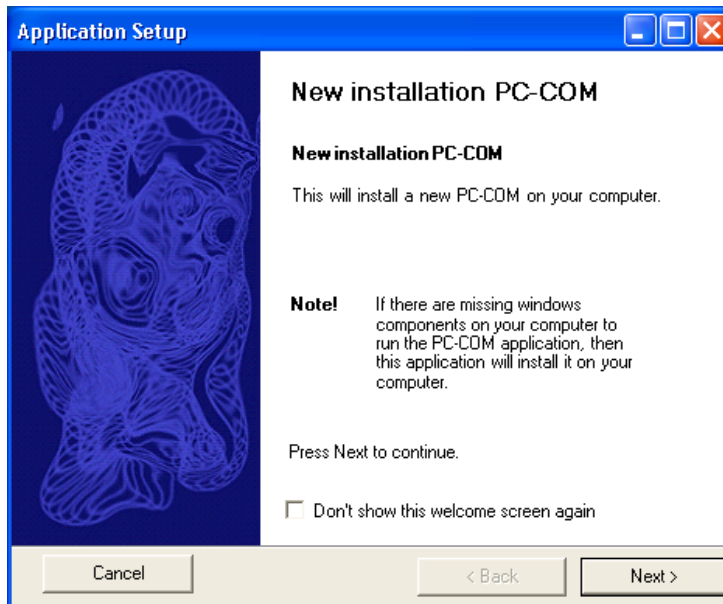
Select - **New installation of PC-COM** if you install the program for the first time.

Select – **Repair PC-COM** if you need to reinstall the program
Saved projects and stations are left untouched.

Select – **Uninstall PC-COM** to delete the program, all saved files must be removed manually.



Follow instructions on the screen.



Now the program can be run in Demo-mode for a number of days.

The program can be activated for unlimited user time but this requires that you have an activation code.

This code can be ordered from DripDrop AB, at a cost.

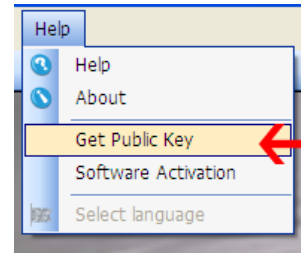
See chapter 4, how you activate the program after receiving the activation code

1.4 Activation of the PC-COM program

In order to activate the program you need to create a licence-file, which has to be sent to DripDrop AB for unlocking.

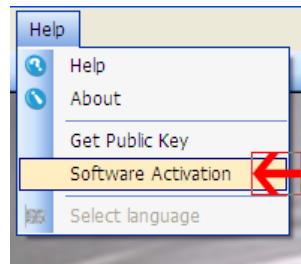
Generate the activation code

- Start the program PC-COM.
- Click on Help in the toolbar.
- Select- Get Public Key.
- Save under file name **PublicKey.cil** in "My documents"
- Attach the file in a mail to info@dripdrop.se



Activate the program

When you get back the activation file from DripDrop, you save the file as file name **ActivationKey.lic** in "My documents"



- Do the same as above, click **HELP**, but select Activate program.
- Find the file you have saved and select OPEN.

If you have done everything correct the PC-COM program is activated and can be used without any time limit.

See even separate installation manual for PC-COM

2 Start the program

2 Icons were created in the start menu. PC-COM which starts the program and Setup which is used for Uninstall or when the program needs to be repaired.

Start program

- Select Windows Start - Program - PC-COM - PC-COM Icon.



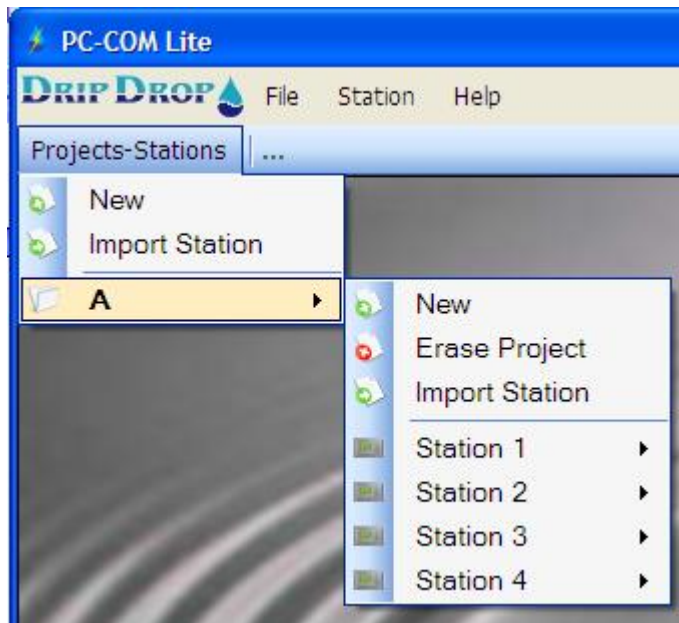
- The program will start and you can create Projects and Stations.

NOTE. Decide how to build Projects and Stations before you start.
You can erase both Projects and Stations if needed.

3 Create projects and stations

- Projects is used to arrange stations, for example geographically or in groups , see Picture 1

Picture 1



Project icon

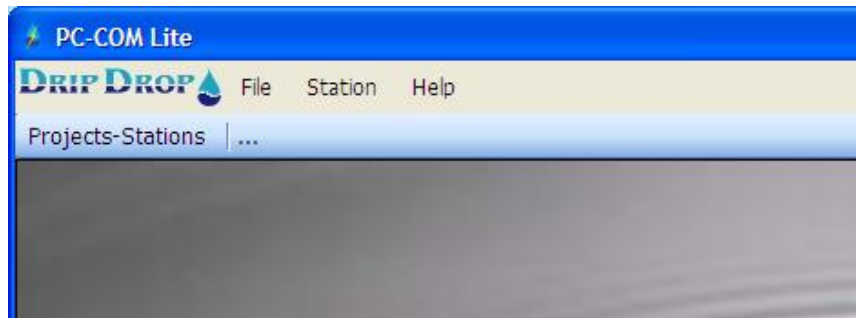


Station icon



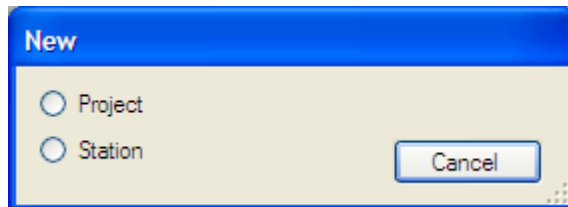
- Click the button Projects –Stations
And select New Project/ New Station.

Projects-Stations



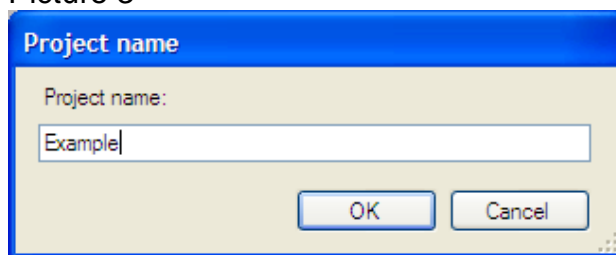
- Click on Project or Station button.

Picture 2



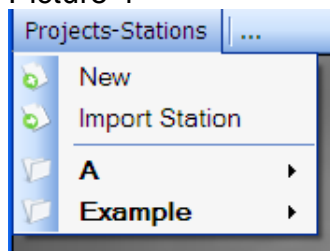
- Enter name of project and press OK

Picture 3



- Create the number of projects desired. See example in picture 4.

Picture 4



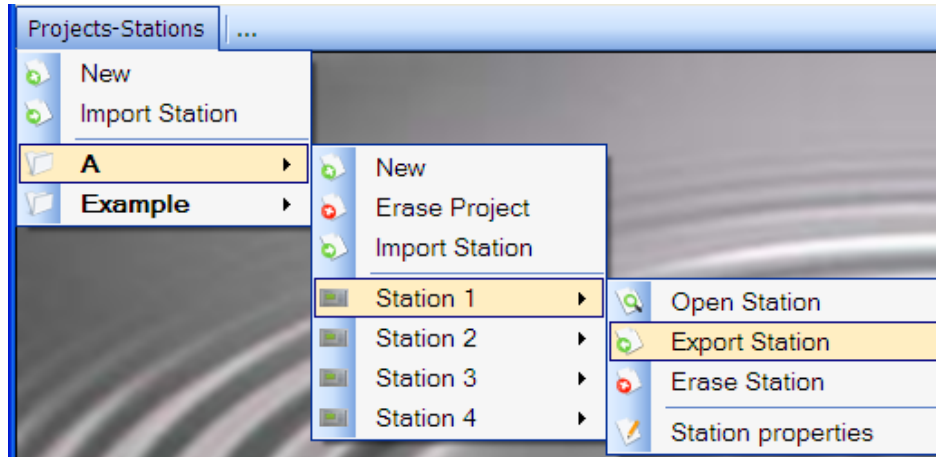
- The stations are created in a similar way, either in the main structure or under projects.

NOTE. When you select to create a station the dialog box Station properties is shown.

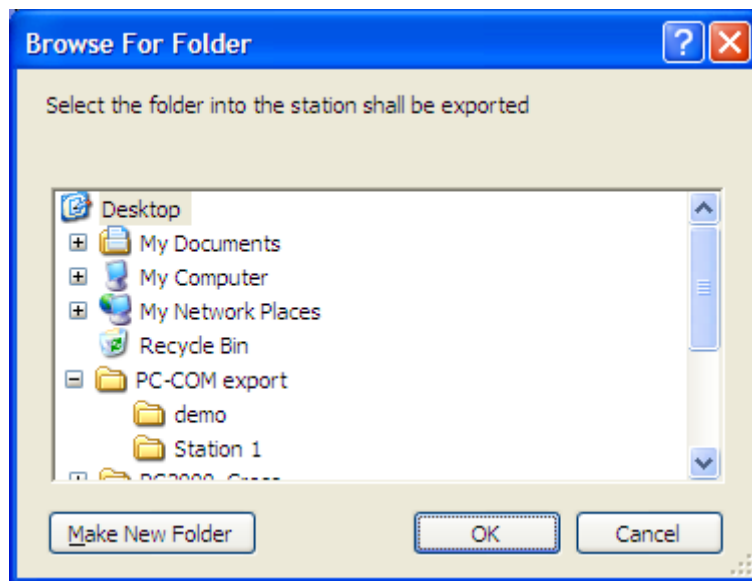
3.1 Export– Import Stations

Export

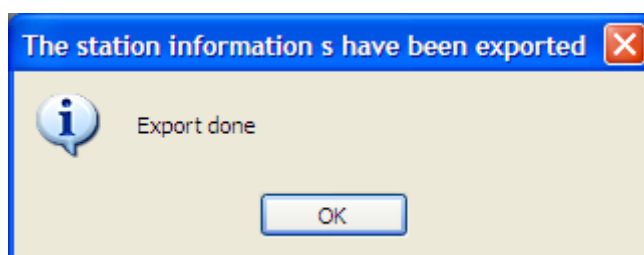
This is a function that allows the station data to be exported to a file. Select the station in the displayed menu and select Export station, as below.



Now you have to indicate a destination and create a folder for the exported station or if not the file will be saved on the desktop.

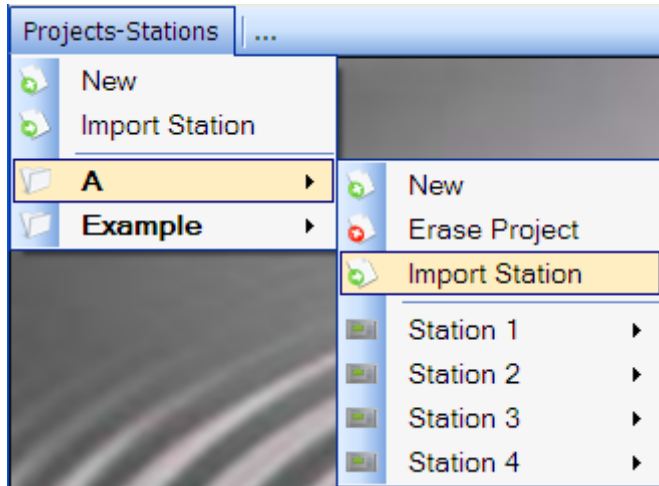


Press OK, the picture below is shown if everything is done correctly.

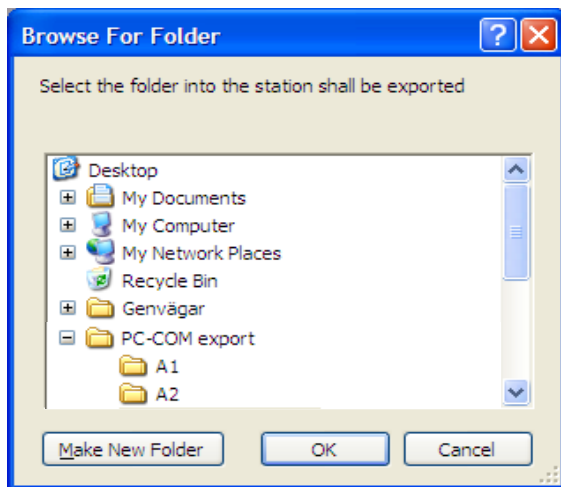


Import

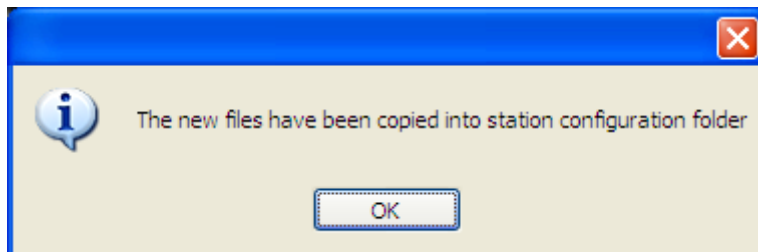
You can only import a station that has previously been exported.
Select destination which can be either direct in Projects-Stations or created projects.



Select Import Station from menu.
Or browse in the earlier created folder, see Export



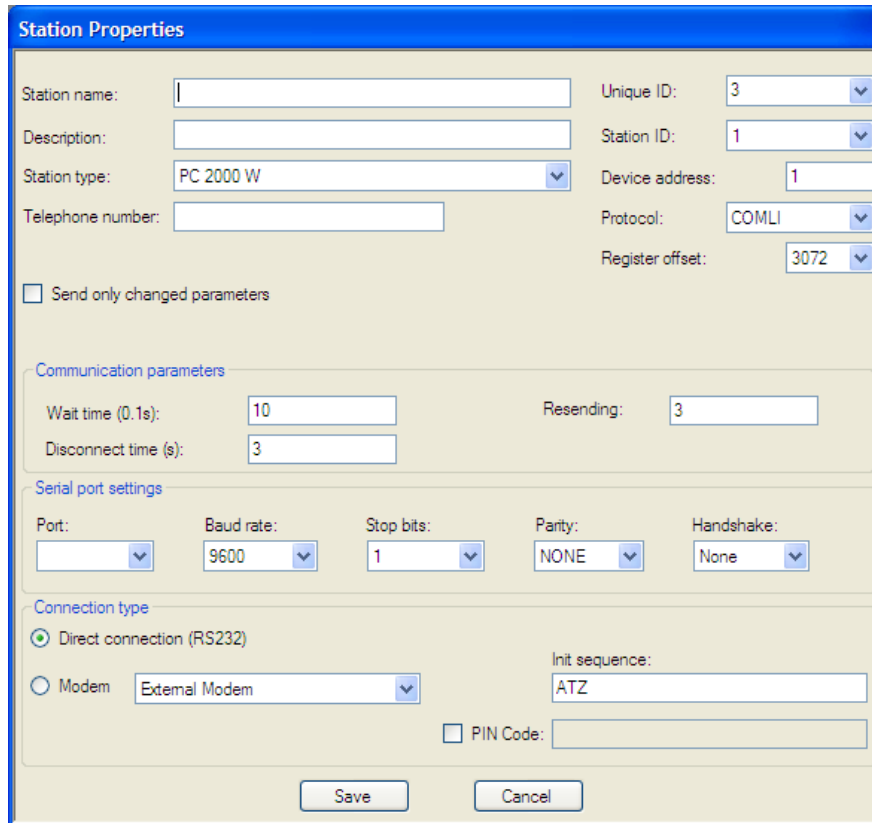
Press OK, if everything is done correctly following picture will be shown



4 Station properties

- Here the station name, communication parameters and connection type set. Below the different fields are described.

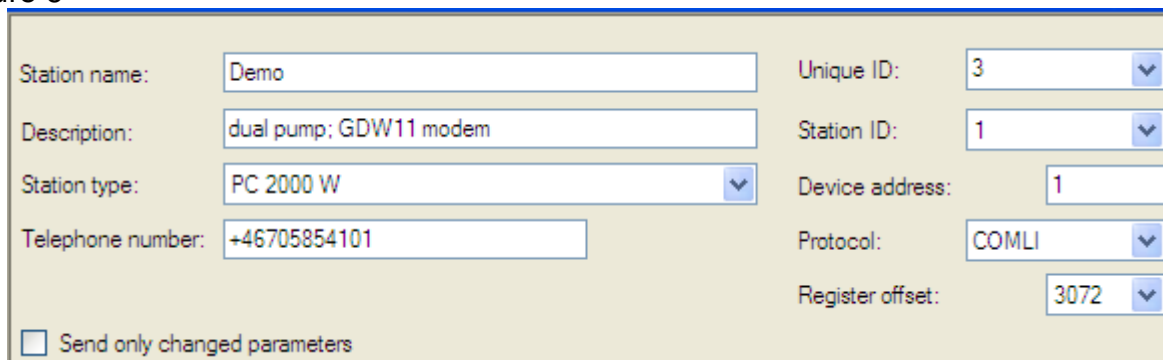
Picture.5



- Indicate name, type of station (PC200,PC-2000-W), description and telephone number if modem is used
- The name is not allowed to have following characters: ?"/*<>

On the right hand side the ID and Stations number are specified if these are unique. The rest of the fields can be left as shown. See picture 6.

Picture 6



- Here the time for dial up and disconnection and number of attempts are set. Picture 7.

Picture 7

Communication parameters

Wait time (0.1s): 10 Resending: 3

Disconnect time (s): 3

- Here the values for the serial port are set for communication with modem or wire connection. Below the normally most used settings are shown. See picture 8.

Picture 8

Serial port settings

Port: COM1 Baud rate: 9600 Stop bits: 1 Parity: NONE Handshake: None

- Select wired connection or select the modem which shall be used, Internal/ external. The values shall only be changed if you know how, otherwise keep the proposed.

The PIN Code box shall only be selected if PIN Code is used. see picture 9

Picture 9

Connection type

☐ Direct connection (RS232)

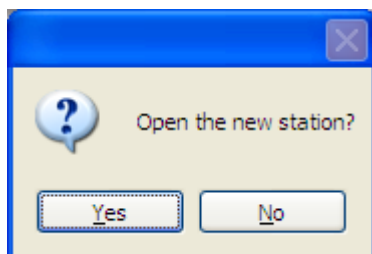
☒ Modem External Modem

Init sequence: ATZ

☐ PIN Code:

Save Cancel

- When finished press OK



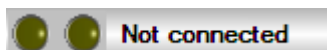
- The station is opening and you can continue to connect.

5 Connection

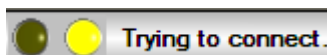
- Now a connection to a pump controller can be made. Use these buttons.



- In the message field the status of the connection is displayed.



No connection.



Connecting.



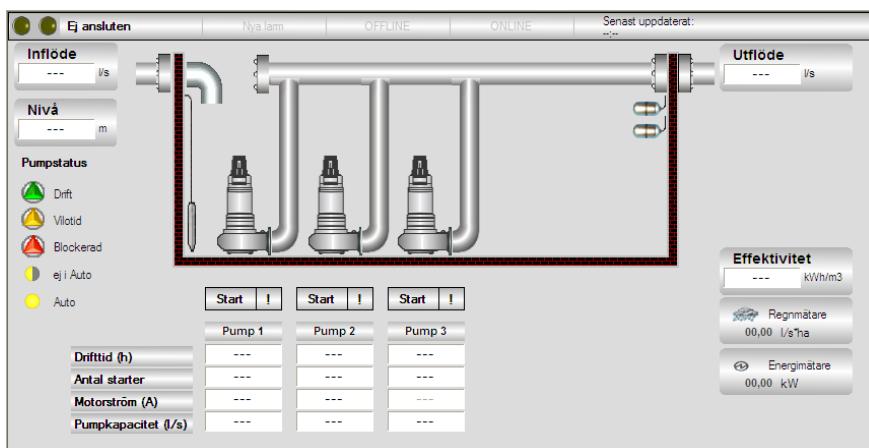
Connected and starts to communicate.



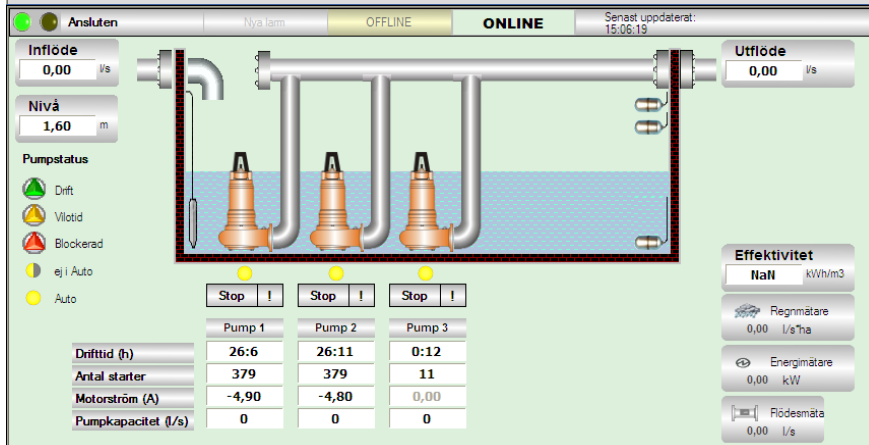
at interruption connection error is shown.

NOTE that background colours changes depending on if you are connected or not and that the buttons are inactivated (change colour to grey). See example below.

Not connected



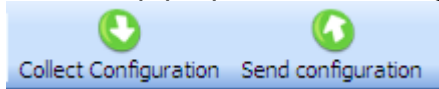
Connected and communicating



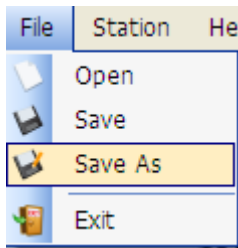
6 Collect and send configuration

6.1 Send configuration.

- With these buttons you can collect and save the settings from a PC2000-W / PC200 for backup purpose or resetting.



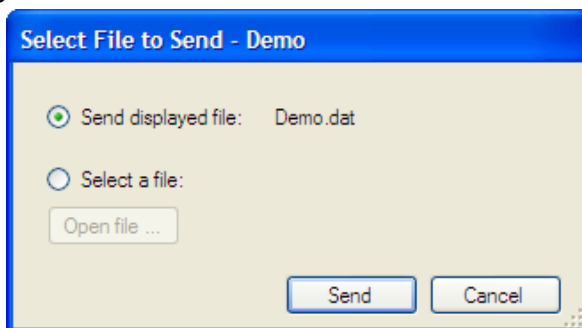
- Have you made the configuration in offline-mode it must first be saved, select Archive – Save as.



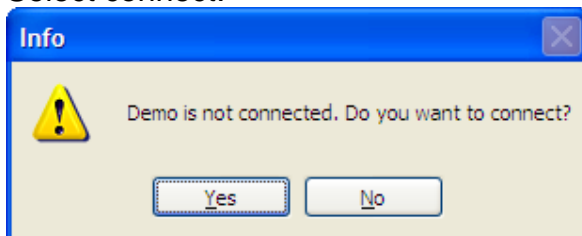
- Then it is sent with the function SEND which also is available in the Station menu. .

The dialog box -Select file will be shown, see picture 10
Here the selected file is displayed or browse to another file.
Select SEND.

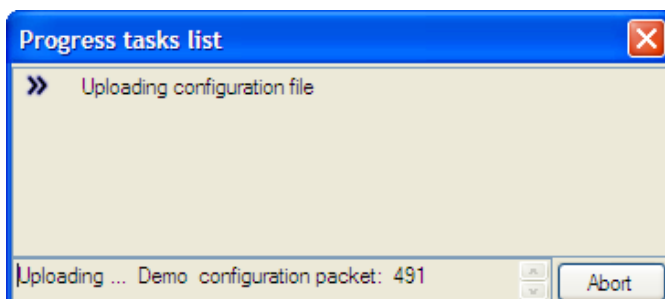
Bild.10



- Select connect.



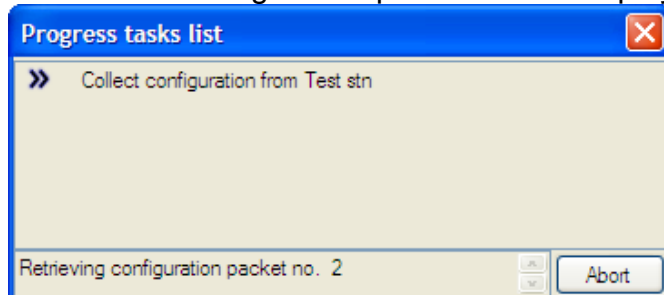
- The configuration is now sent to the pump controller



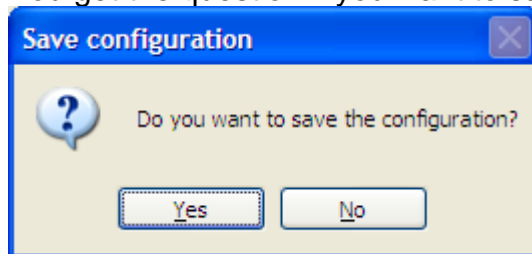
6.2 Collect configuration.

Press the button Collect configuration.

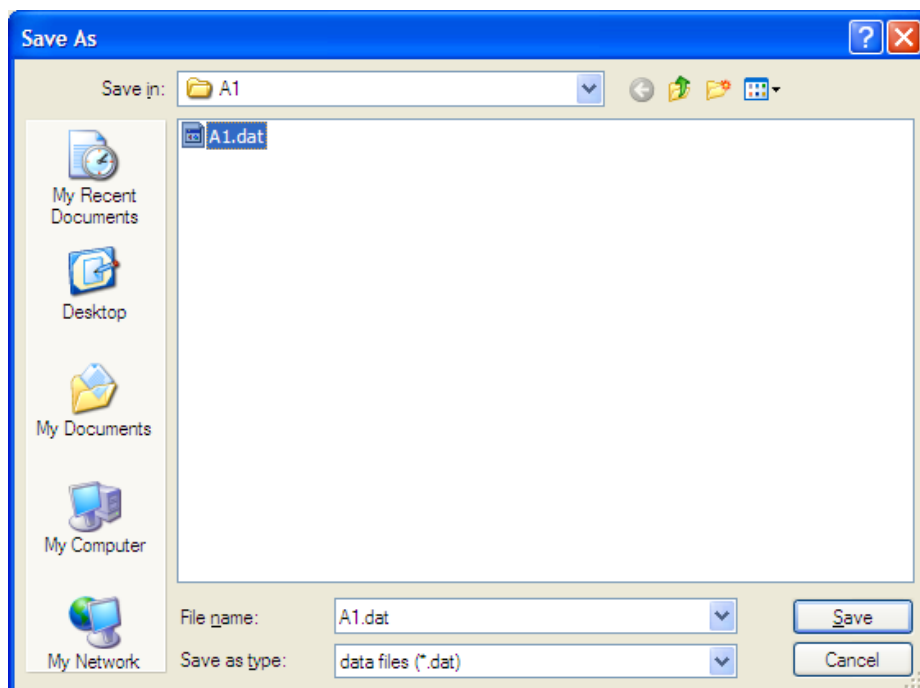
The box showing the sequence will be displayed.



- You get the question if you want to save the configuration



- Select destination and file name



- Press Save

7 Status window

Here the station is graphically displayed with actual configuration. In the example below the actual configuration is three pumps, one level sensor, high- and low float, overflow float and water level.

See picture 15

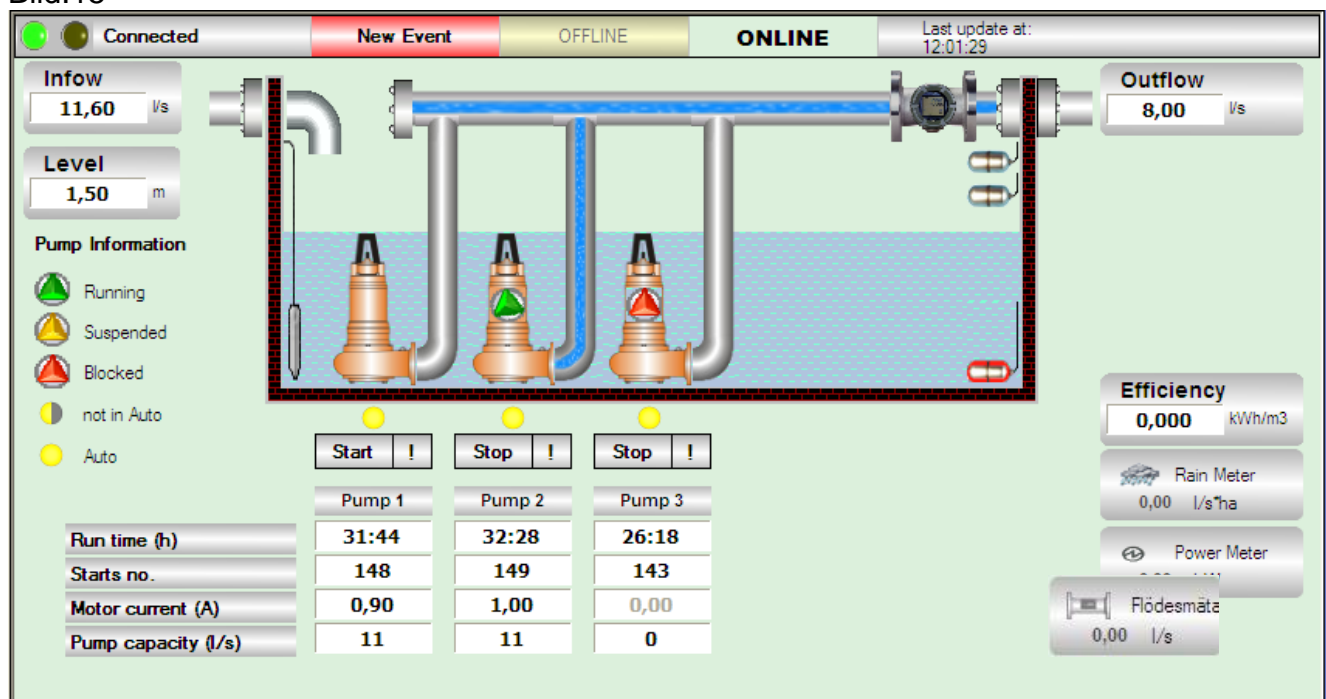
Measurement for calculated in/ -outflow, level, calculated pump efficiency, rain, effect and flow.



Lit if new alarms are available to collect, se point 9

These buttons are used to display new alarms and to switch between Offline and Online display.

Bild.15



Here the pumps can be started and stopped manually:

- Started: if level is higher than stop level
- Stopped: if level is lower than start level

NOTE: Only valid for PC2000-W

Picture16



The pump status is displayed by changing colours: Running, Pause time and Blocked pump and the position of the *manual -0- auto* switch See picture 16

8 I-O/ Alarm tabs

Here the status of in / outputs and alarms are displayed.

8.1 Inputs/Outputs

Here all in-/outputs are displayed even if they are not used in the pump controller.

For example Analogue input 1 is set to show 0-4 meter level and actual level is 1,91 meter.

In the status column the current value for the input is shown.

Grey background on the signal type indicates activated relay – see for example Digital out No.11

Grey text shows that the function is not activated in the controller.

Picture17

Inputs/Outputs Alarms				
No.	Signal Name	Signal Type	Signal/Status	IO Status
11	Digital output	Hom Intr/Pers alarm	NO	OFF
12	Digital output	Alarm not acknowledge	NC	OFF
13	Digital output	Alarm active	NC	OFF
14	Digital output	Not in used	---	---
15	Digital output	Not in used	---	---
16	Digital output	Modem reset	NO	OFF
1	Analog input	Level sensor	0 - 4 m (1,91 m)	9,58 mA
2	Analog input	Flow sensor	---	---
3	Analog input	Pump 1 motor current	---	---
4	Analog input	Pump 2 motor current	---	---
5	Analog input	Pump 3 motor current	---	---
6	Analog input	Pump 4 motor current	---	---
7	Analog input	Intruder/pers alarm	---	---
1	Analog output	Analog output 1	AI0	11,64 mA
2	Analog output	Analog output 2	AI0	4,77 V
1	Counter	Counter 1	0,2 m3/pulse (0 m3/h)	---
2	Counter	Counter 2	1 kWh/pulse (0 kW)	---

8.2 Alarms

The tab alarm shows following information:

Red: Active, not acknowledged alarm

Yellow: Active, acknowledged alarm

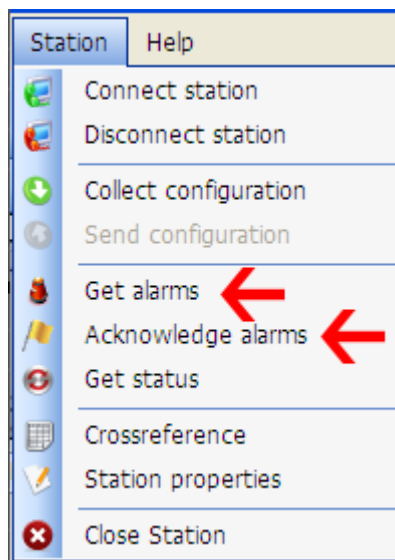
White: Not active –Not acknowledged alarm

Time and date for the event is shown in respective column. See picture.18

Picture .18


Inputs/Outputs		Alarms				
Event	Type	Status	Activation Date	Inactivation Date	Acknowledge Date	
High level float on	A	Active and not acknowle...	2010/10/6 11:24:10	-----	-----	
Overflow level float on	A	Active and not acknowle...	2010/10/6 11:24:11	-----	-----	
Pump 2 over themperature	A	Active and acknowledge	2010/10/6 8:48:16	-----	2010/10/6 9:8:55	
High level float on	A	Inactive and not acknowl...	2010/10/6 11:24:10	2010/10/6 11:25:29	-----	
Overflow level float on	A	Inactive and not acknowl...	2010/10/6 11:24:11	2010/10/6 11:25:30	-----	

- In the menu Station there is a possibility to collect and acknowledge alarms

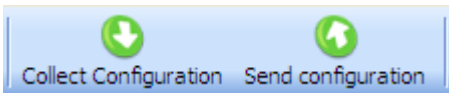


9 Cross reference

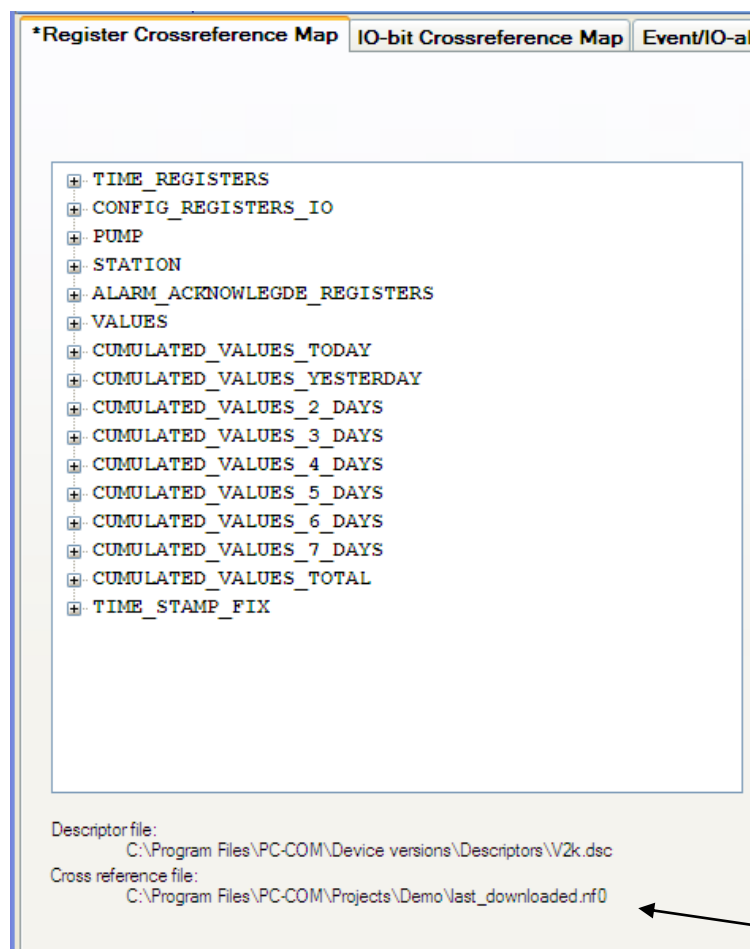
This function is used to change and collect cross reference registers in PC200 and PC-2000-W with program version from 30.56.06 and upwards.

- Press button  to start the function.

Note: If the button is grey the function is not available.

The buttons  is used to collect and send cross references files from and to a pump controller.

There are 3 tabs which have Register, IO- bits and Events



Here the used file is displayed.

The buttons in the middle are used to add and remove Registers.

A dialog box for configuring registers. It has two input fields: 'Address' with the value '501' and 'Scaling factor' with the value '1'. Below these fields are four buttons: 'Add as new', 'Commit changes', 'Remove item', and 'Cancel'.

The sequence when editing is: select row, select Address and scale factor and select Add. See picture below.

The main window titled 'CONFIG_REGISTERS_IO' displays a list of registers. A red box labeled '1' highlights the first row: '[03076] Station Low float Signal type (NO/NC)'. To the right, the configuration dialog box is shown. A red box labeled '2' highlights the 'Address' field with the value '501'. Another red box labeled '3' highlights the 'Add as new' button. Below the list, the descriptor and cross-reference files are specified: 'Descriptor file: C:\Program Files\PC-COM\Device versions\Descriptors\V2k.dsc' and 'Cross reference file: C:\Program Files\PC-COM\Projects\Demo\last_downloaded.nf0'.

Start with Archive- **Save as** and give a name to the file that you create. The file is used to edit and to send to the controller.

If you already have a reference which you want to collect from a controller you select **Collect Cross reference**. Don't forget to save!