CS Basic

Manual

Revision A

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Alterations page

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Dear customer,

Every year thousands of customers buy our high-quality products. And they do this for good reason:

- We offer an excellent price-performance ratio. Reliable quality at a fair price
- With a professional experience of over 20 years, we are able to provide you with the best possible measuring solutions
- Our high demand towards quality
- Of course all of our devices bear the CE Mark which is required by the EU
- · Calibration certificates, workshops and consulting
- We are always happy to help you after your purchase

Our service guarantees a quick assistance.

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1 Introduction

Using the CS Soft Basic software, measured data from the devices of the new device family (from DS500) can be read out, saved, displayed and evaluated.

2 System requirements

Hardware PC	from Win 7x64 / Mac
Main memory requirement	min. 4 GB RAM – recommended 8 GB RAM
Disk space	min. 10 GB – recommended 20 GB

3 Installation

Start the "CSBasic-Setup-x.x.x.exe" to install the software and follow the installation instructions. The software is installed automatically.

4 General

This chapter describes the menu items that have the same functionality in all screen views.

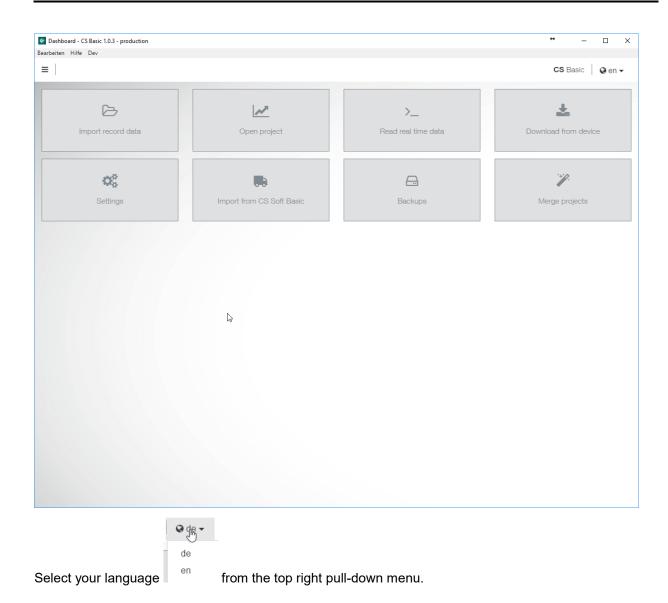
4.1 User interface



After starting via this button

CSBasic the following screen appears:

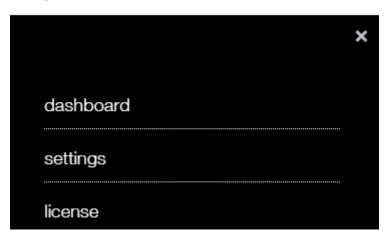
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The buttons on the dashboard can be used to branch to the respective function.

Click on the button on the top left, a sidebar opens:





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4.1.1 General settings

The general settings are defined in the menu item "settings". All changes must always be completed with the "Save" button.

Tab "General":

The company data with logo and the number of data lines for the raw data list.

Tab "Units":

Set the decimal places for a unit in general.

Tab "Recycle bin":

The deleted projects appear here and could be restored.

Tab "Other"

The connection settings to an old CS Soft Basic are defined here. Please only make changes here after consultation with the internal IT, if you have already installed a local MySQL database with a different user / password.

4.1.2 Activate license

Use the menu item "license" to switch to licensing - where you can enter the license number and activate the software.

The mandatory fields are marked with a *.

No Internet?

It is possible to activate via e-mail – button:

To do this, copy-paste the mail text from the software into the mail body and send it to the specified mail address. After a few minutes the answer will be sent – copy-paste the mail body from the mail into the software at the required place and then the software has to be activated via the button.

Note:

If the software is to be used on another PC, you must first transfer the data via a database export (see below). Then the license key should be noted. Subsequently, the license can be deactivated under this menu item.

The software can be used for 30 days without a license and can be activated twice.

4.1.3 Last open project

As soon as a project has been selected in the software and has been loaded several times or has been slightly modified in the settings, a new entry is available in this menu:

last project - click to open this project.

4.2 Dashboard

4.2.1 Import file

If data has been transferred to a USB stick, it can be read via this menu item

Import record data. The folders stored on the USB stick can be stored on any medium. The files in the "Export" folder must always be in a folder. The file names must not be changed.

Click on the menu item and the following dialogue for selecting the data (RECORDS.LOG) is opened:

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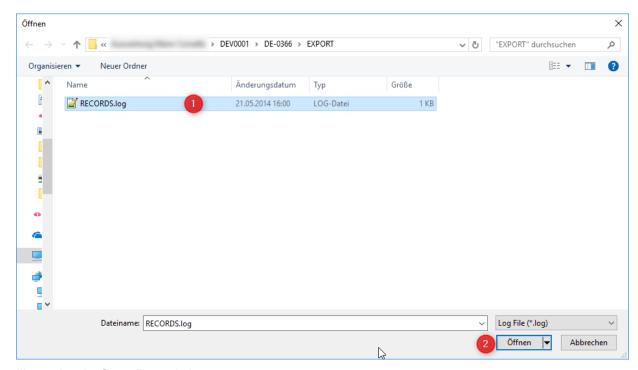


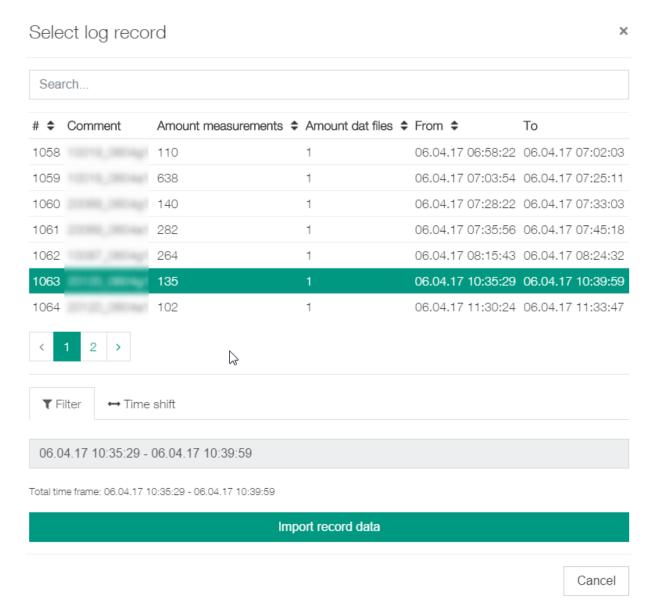
Illustration 1: Open Records.log

Select the desired folder with the RECORDS.LOG file (1) and confirm by clicking the "Open" button (2).

After that, the dialogue appears with the name entered in the datalogger, the number of measurement data, the number of recording days and the time period.

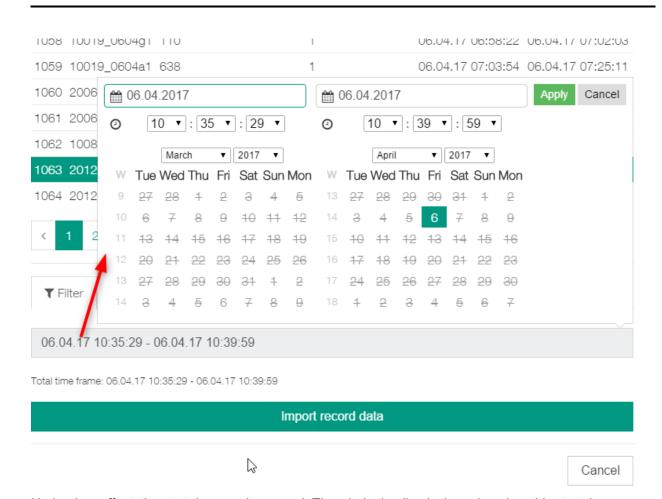
If this line is selected, the following dialogue appears:

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Date and time from – to can be filtered here.

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Under time offset, the start time can be moved. The whole timeline is then placed on this start time.

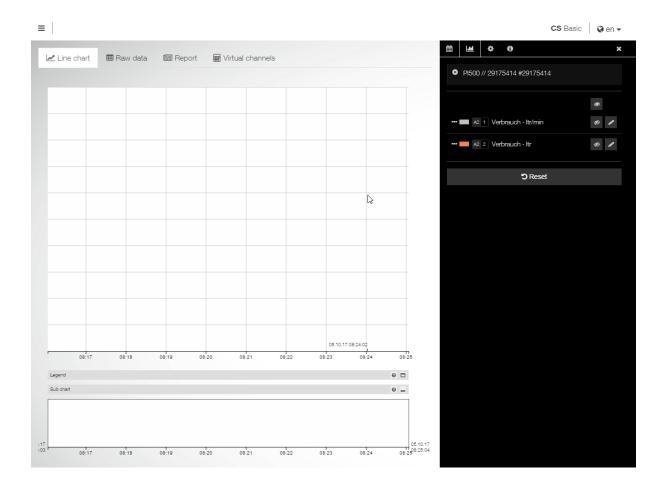
Tip: This is useful if you want to compare a fixed period of a measurement series with another fixed period of time. Serves to determine fluctuations / deviations within a period of time.

The data import is read in with the button Import files.

The progress is shown in the lower right corner. At the top right, a process symbol is shown.

After the import, you switch directly to the diagram view:

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4.2.2 Open project



Projects already created or read in are getting called with this button:

The following screen appears:

Select project

Sea	arch				
# \$	Project	Recordings	From \$	То	Actions
00	Aufnahme vom 31.08.17 08:59:58 _merged	3	31.08.17 09:00:40	31.08.17 09:21:20	× B Ø
01	Recording from 23.04.18 11:27:59 _merged	2	23.04.18 11:28:37	24.04.18 11:55:25	× B Ø
02	Recording from 08.05.18 13:53:02 _merged	2	08.05.18 13:53:52	08.05.18 14:30:18	× B Ø
03	Aufnahme vom 15.05.18 16:33:36 _merged	2	16.02.18 13:29:23	16.05.18 10:03:07	× B Ø
04	bueru	1	16.02.18 13:29:23	16.02.18 13:59:10	× B Ø
05	Aufnahme vom 15.05.18 16:33:36	1	16.05.18 09:58:38	16.05.18 10:03:07	× B &
06	5227 Verbrauch 05.10.17	1	05.10.17 08:16:03	05.10.17 08:25:04	× B Ø
07	Recording from 08.05.18 14:42:16	1	08.05.18 14:43:33	08.05.18 14:51:52	× B Ø
08	Recording from 08.05.18 14:28:06	1	08.05.18 14:28:28	08.05.18 14:30:18	× B Ø
09	Recording from 08.05.18 13:53:02	1	08.05.18 13:53:52	08.05.18 14:28:03	× B Ø
<	1 2 3 4 5 >				
			B		Cancel

The following actions are available here:

- Click on a project name to open the project If several projects are available yo<u>u ca</u>n filter or search above
- Delete the project with this button ___ after a query
- Use the button between to export a project assign any file name
- Use the button to rename a project and to add a comment
- The table can also be sorted see

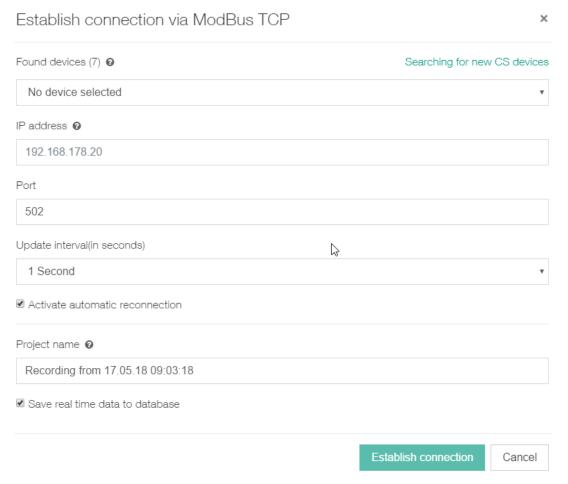
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4.2.3 Read in real-time data

>_

This button Read real time data can be used to establish a real-time connection to an Ethernet-enabled device. Data is then stored in the software and can be viewed simultaneously. The connection is made via ModBus TCP.

Start the button and the following dialogue appears:



Select the devices from the network from the drop-down list.

It is also possible to enter an IP address from this network directly.

The port is normally 502.

Select the update interval from the drop-down list. Initial setting is update per second.

If a connection has been interrupted, you can use a checkbox to activate the automatic reconnection.

The name for the recording can be entered in the field Project name - a default is given.

The data can then also be stored in the local database for later evaluation - the checkbox must then be activated.

When a device is selected or a valid IP address is entered, the available channels are displayed:

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Port

502

Available channels

Kanal Ch-A1 | Subkanal 0 | A1a (-)
Kanal Ch-A2 | Subkanal 0 | A2a (kW)
Kanal Ch-A3 | Subkanal 0 | Flow (-)
Kanal Ch A3 | Subkanal 1 | Consumpt (-)

Illustration available channels

Establish a connection with this button Establish connection. The connection is displayed on the top:

▶ 192.168.172.43 - Real time connection established ▼

Show real time data

■ Pause real time connection

Select the next action from the drop-down list Close real time connection for example:

- Switch to display mode switch to diagram mode
- Pause real-time connection project is paused
- Stop real-time display project is completed

4.2.4 Load from device



Load the log data from a network-enabled device with this button Download from device

As with reading the real-time data, a device can be selected from the network or the IP address entered directly.

Establish the connection with this button Connection of the projects on the SD card of the selected device is displayed. By clicking the project, the dialogue for the selection of the time period and the time offset is displayed, as with the data import.

The loading process is started via the button import record data and switched directly to the diagram view.

4.2.5 Import from CS Soft Basic



With this button Import from CS Soft Basic data from an old version can be transferred to this PC.

A selection shows the existing projects. Click to accept the desired project - a progress history will be displayed. The data transfer can take some time for large amounts of data.

After the transfer, the system switches to the diagram view.

4.2.6 Backups

With the button

Backups

a backup can be created. The path can be selected above and created with the button

Create backup.

It is also possible to switch to a backup previously created.

Attention: All data that has been read / created since this backup time is no longer available!!

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4.2.7 Merge projects

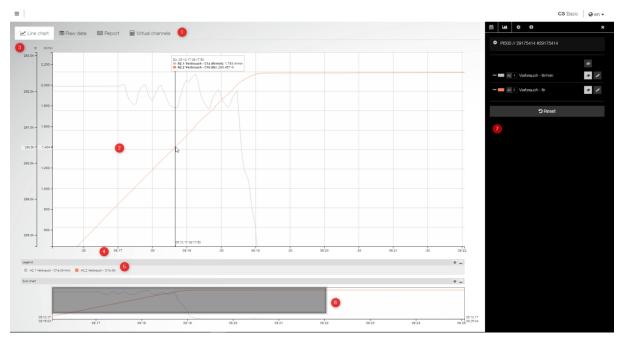
Merge projects The button can be used to merge two or more projects via a selection. It is possible to search projects by name or to use the sort function in the list.

The button Merge projects starts the processing and changes to the diagram view.

This means that several individual records can be merged into one project.

4.3 Diagram view

Several settings can be made in the diagram view. The basic view looks like this:



The individual elements are

- 1. Choice of presentation optional the virtual channels
- 2. Display area of the selected representation here line chart
- 3. x-axis range with the selected unit setting

- y-axis range with the time representation
 Legend representation can be shown or hidden
 Sub-chart for overview and zooming can be shown or hidden
- 7. Settings for display area setting can be shown or hidden.

4.3.1 Representation

Select from the tab

- Line diagram
- Raw data
- Report
- and the virtual channels as an option

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4.3.1.1 Line diagram

The line graph shows the selected channels from the settings. In this area you can zoom in and out with the mouse wheel. You can also click and drag the display area with the mouse. If the mouse pointer is moved in this area, the values of the displayed channels are displayed with the respective



time in a window: Adisplayed with the values.

Likewise, the intersection point on the x and y axes is

Click right on a unit - then the associated channels which belong to the unit are highlighted and the others are displayed paler.

See below an additional legend which is normally hidden. Likewise, a short help can be faded in when

the mouse pointer is moved over this small question mark symbol. You can also click on a unit in the legend area - the effect is the same as clicking the unit in the axis view.

In the sub-chart below, the display area above can also be controlled with either click and drag or by moving the dark area oft he display window area:



As shown in the picture above, the mouse pointer then switches to a move symbol. Again, the mouse wheel can be used for zooming.

4.3.1.2 The settings / representation

After opening a project, the display of values is initially deactivated and the setting page of the line



diagram (diagram tab) is shown:



The following can now

be set on the diagram tab:

The upper part shows the device name and the serial number. If several devices are included in the project, a device can be selected using the radio button on the left in front of it.

The button

channel line.

can be used to show / display all channels or a channel in the respective

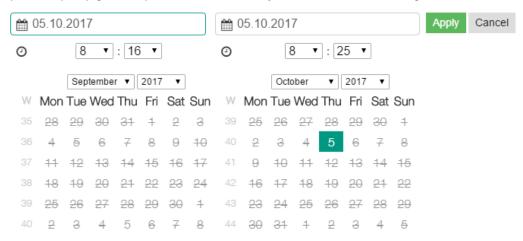
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The button tender can be used to edit the display / setting for this channel. You can define channel name, color of the line, line style, value range and increment for the axis, decimal places and a moving average for the entered number of data points. Click again to exit the settings.

The axis order can be moved in the front area on the button the mouse pointer then becomes a



The period can be set on the period tab . Click on the date to open the selection of the period from (left area) to (right area). It can be set exactly down to the minute range:



The days crossed out in the calendar are not available in the project (there are no dates at this time). The green frame on the field indicates which area is currently selected.

The zoom range can also be fixed here via the button

You can also jump forward / backward through a selectable unit in the diagram:



The display can also be reset - below the complete project run time is displayed as a note:



With the settings tab a unit can be displayed as a stacked area.

You can now switch to the report generation = consumption analysis - more on that later.

It is also possible to print a diagram: With the switch for the template, the diagram interval, with or without statistics sheet, a selection can be made and a comment can be recorded.

With the button Go to print preview the report is created. Here is a sample report:

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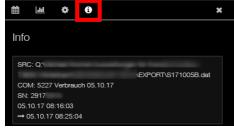


and the corresponding statistics sheet:



With the button Store PDF a pdf document is created (for further processing in the respective program of the pdf display of the client PC).

On the info tab the source data of the reading in and the project period are displayed.

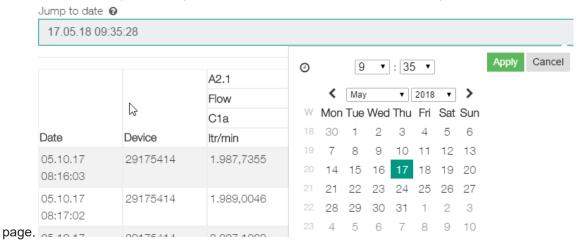


The settings can be hidden with the icon It can be shown again with the icon

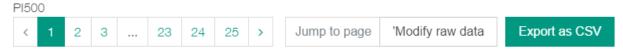
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4.3.1.3 Raw data

On the raw data display Raw data, the values for the project are displayed and can also be edited there. The field Jump to date opens a calendar for the direct switch to this period on the raw data



Below the following functions are available:

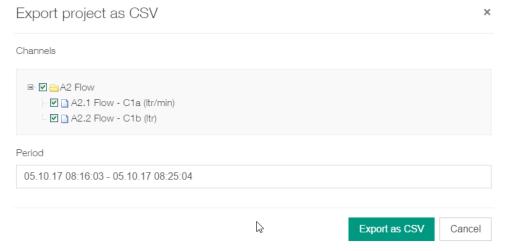


- jump left page by page or to a particular page ...
- Edit raw data with the button the fields are then free for editing the original value is always additionally stored and is also visible here:

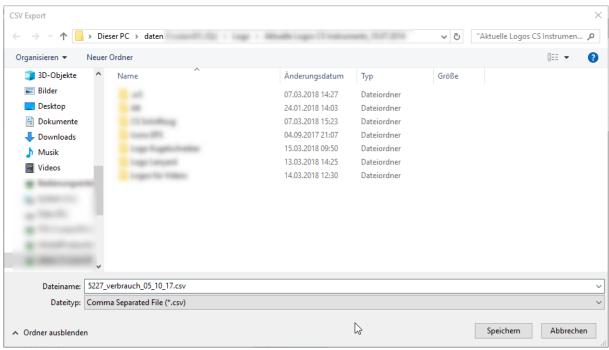


The modified value is displayed in blue color.

- The raw data can be exported as a csv format - query of the period and the desired channels in a subsequent dialogue and then the file name for the export:



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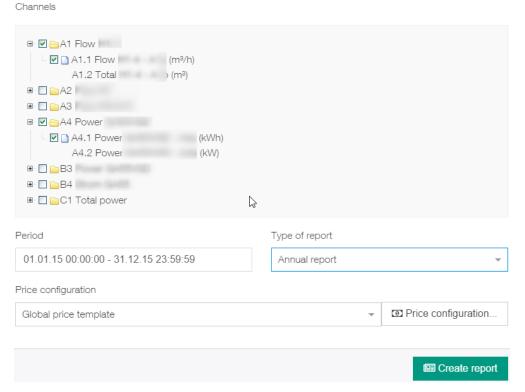
With save the file is created.

4.3.1.4 Report (consumption analysis)

With the report tab Report the report (consumption analysis) can be created.

The prerequisite for the report is either a consumption unit (m³, ltr, ...) of a gas and / or a unit of measure for the output (kWh).

The report is created according to the following criteria:



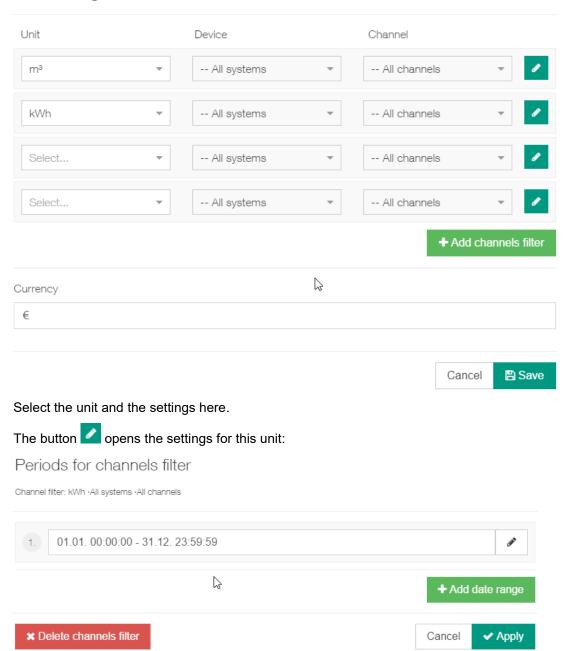
By means of the checkboxes in front of channels, the selection for the report is made.

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The period can be done again with a calendar with settings from - to. Furthermore, the report type year, month and week and a price template (global or project-specific template) can be selected. The price template can also be configured here.

The button Price configuration... opens the settings:

Price configuration for channels



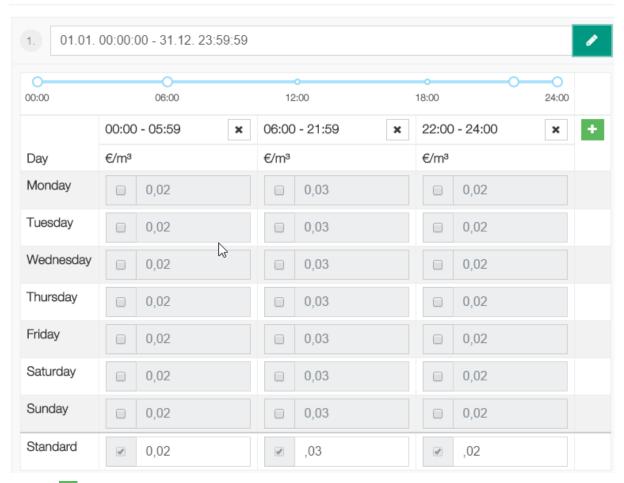
Set a period of time (calendar function with click in the period) and within the period for each minute of the day an exact Euro amount for the selected unit.

Here's an example of different prices for consumptions over three time zones over the entire year:

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Periods for channels filter

Channel filter: m3 ·All systems ·All channels



Use the button to add a time interval to this period.

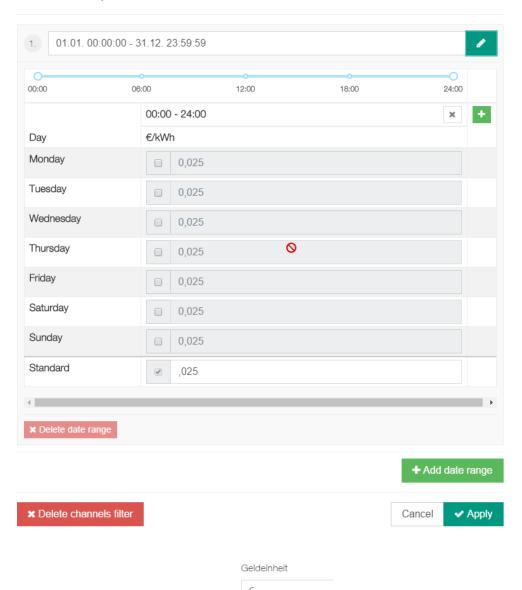
Use the + Add date range button to add another date range for a more detailed time differentiation.

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The same applies for the performance:

Periods for channels filter

Channel filter: kWh ·All systems ·All channels

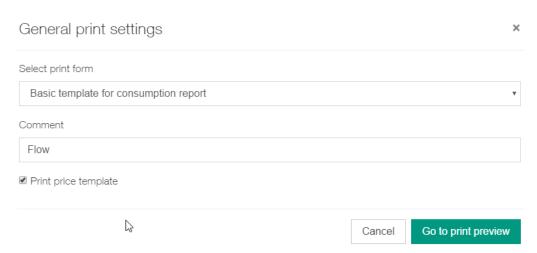


Set the unit / currency for this project

Use the Save button to save the settings for the selected template.

With the button Create report the calculation is triggered and the dialogue for the report creation opens:

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Here the report template, a comment and the print of the price template can be selected or entered and then switched to the print preview.

This is followed by the calculation – which is displayed with a processing note:

Please wait		
Create consumption report		

The report is divided into the following parts:

First, the first channel is shown - in the example, the consumption with the monthly representation. The sums per unit and also the costs are shown. Also, the min / max and average values are displayed per period.

Consumption report: international sales meeting

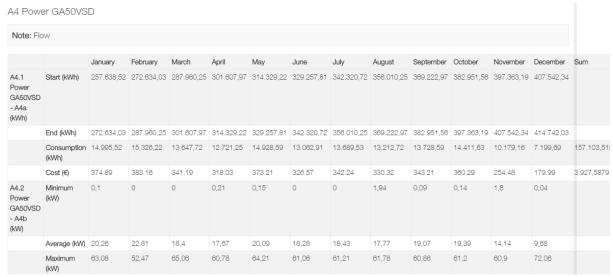
Period: Donnerstag, 01.01.15 00:00:00 - Donnerstag, 31.12.15 23:59:59

A1 Flow H1-4

Note: Flow														
		January	February	March	April	May	June	July	August	September	October	November	December	Sum
A1.2 Total H1-4 - A1b (m³)	Start (m³)	1.958.827	2.076.325	2.215.062	2.368.464	2.514.612	2.666.480	2.826.483	3.002.938	3.169.484	3.318.642	3.491.661	3.659.617	
	End (m³)	2.076.325	2.215.062	2.368.464	2.514.612	2.666.480	2.826.483	3.002.938	3.169.484	3.318.642	3.491.661	3.659.617	3.775.973	
	Consumption (m³)	117.498	138.737	153.402	146.148	151.868	160.003	176.455	166.546	149.158	173.019	167.956	116.356	1.817.14
	Cost (€)	3,135.79	3,706.34	4,104.91	3,895.68	4,056.77	4,266.87	4,749.51	4,445.37	4,033.46	4,618.60	4,496.18	3,111.03	48.620,5
A1.1 Flow H1-4 - A1a (m³/h)	Minimum (m³/h)	0	6,3	0	0	0	1,36	0	0	0	0	0	0	
	Average (m³/h)	157,6	205,98	205,8	202,54	203,52	221,66	236,5	223,25	206,67	232,19	232,67	155,99	
	Maximum (m³/h)	1.060,36	527,02	736,39	1.154	662,43	618,27	617,9	636,36	931,66	642,96	689,77	2.410,71	

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Followed by the second channel - here in the example the performance - representation as mentioned above.



Then a sum sheet is always output over the units (regardless of the channel) for the selected periods.

Sum	um													
		January	February	March	April	May	June	July	August	September	October	November	December	Total
m³	Cost (€)	3,135.79	3,706.34	4,104.91	3,895.68	4,056.77	4,266.87	4,749.51	4,445.37	4,033.46	4,618.60	4,496.18	3,111.03	48,620.51
	Consumption (m³)	117.498	138.737	153.402	146.148	151.868	160.003	176.455	166.546	149.158	173.019	167.956	116.356	1.817.146
kWh	Cost (€)	374.89	383.16	341.19	318.03	373.21	326.57	342.24	330.32	343.21	360.29	254.48	179.99	52,548.10
	Consumption (kWh)	14.995,52	15.326,22	13.647,72	12.721,25	14.928,59	13.062,91	13.689,53	13.212,72	13.728,59	14.411,63	10.179,16	7.199,69	1.974.249,52

If the option "print price template" has been selected, it will be output with the corresponding settings for documentation purposes.

Global price template											
Units: m³ · Devices: All systems · Channels: All channels											
Date	Time	Standard	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday		
01.01.15 00:00:00 - 31.12.15 23:59:59	00:00 - 05:59 (€/m³)	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02		
01.01.15 00:00:00 - 31.12.15 23:59:59	06:00 - 21:59 (€/m³)	0.03	0.03	0.03	0.03	0.03	0.03	0.03	0.03		
01.01.15 00:00:00 - 31.12.15 23:59:59	22:00 - 24:00 (€/m³)	0.02	0.02	0.02	0.02	0.02	0.02	0.02	0.02		
Units: kWh · Devices: All systems · Channels: All channels											
Date	Time	Standard	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday		
01.01.15 00:00:00 - 31.12.15 23:59:59	00:00 - 24:00 (€/kWh)	0.025	0.025	0.025	0.025	0.025	0.025	0.025	0.025		
Units: All units \cdot Devices: All systems \cdot Channels: A	Il channels										
Date	Time	Standard	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday		
01.01.15 00:00:00 - 31.12.15 23:59:59	00:00 - 24:00 (€/)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		
Units: All units · Devices: All systems · Channels: All channels											
Date	Time	Standard	Monday	Tuesday	Wednesday	Thursday	Friday	Saturday	Sunday		
01.01.15 00:00:00 - 31.12.15 23:59:59	00:00 - 24:00 (€/)	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00		

With the button Store PDF a pdf document is created (or further processing in the respective program of the pdf display of the client PC).

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5 Support and Service

If you have any questions about our products, need technical support during installation or use of our software, please contact us by e-mail at:

info@cs-instruments.com

or by phone:

+49 461 8071 50 - 0

Phone support and Teamviewer access (15min - 30 Euro, Minimum 45min)

We will answer all inquiries within 24-48 hours.

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