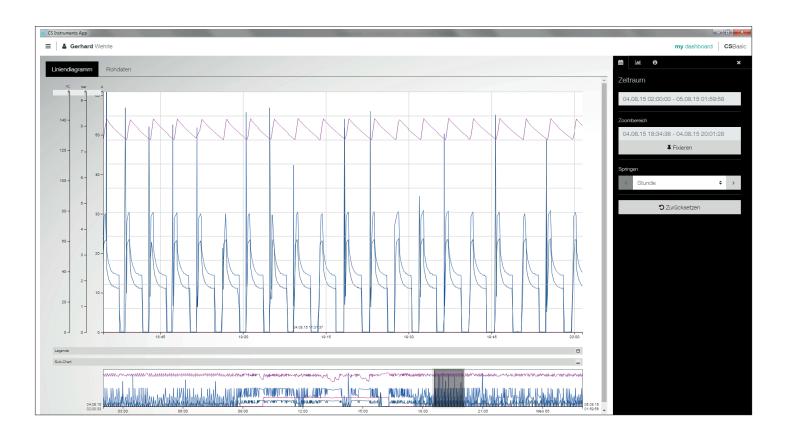
## **CS Basic**

With the CS Basic, the chart recorder DS 500/400 and all mobile devices with data logger can be read out. Depending on the device, data transfer is performed either via USB stick or Ethernet connection.

# **CS Network**

The CS Network is a client-server solution. The server software automatically collects the measured values of all CS chart recorders and CS sensors embedded in the company's computer network and stores them in a database. The evaluation / analysis of the measured data is carried out via the evaluation software (client) at any number of workstations.



|  | CS Basic  | CS Network   |
|--|---|--|
| Installation                                 | Local PC installation   | Server (virtual machine)<br>Client (browser-based)                         |
| Data memory                                  | Database (local)  | Database (server, virtual machine)   |
| Updates to new releases free of charge       | Ja  | Ja   |
| Automatic notification of upgrades           | Yes (only in case of Internet access)   | Ja   |
| Number of workstation licences               | 2   | Unlimited  |
| Number of measured values                    | All measured values that are transferred by a device. (max.1 device at the same time) | up to 20 / 50 / 100 / 200 measured values                                  |
| Data transfer                                | USB stick (manually) or Ethernet  | Ethernet   |
| User management                              | No  | Ja   |
| E-mail in case of threshold value exceedance | No  | Ja   |
| Storage of measured data                     | Logger data must be read-out manually via<br>CS Basic                                 | CS Network automatically stores the measured data of all connected devices |

# **Common functions:**

### **Graphic evaluation**

All measurement curves are indicated in colour. All necessary functions are integrated, such as free zoom, selection/deselection of single

measurement curves, free selection of periods, scaling of the axes, selection of colours and so on. Different data can be combined in a shared file. This view can be saved as a PDF file and sent as an e-mail.

#### Table view

All measuring points are listed with exact time interval. The desired measuring channels with the name of the measuring place can be selected via the diagram explorer.

### **Statistics**

All required statistic data are visible at a glance. So the user can see very quickly which minimal or maximal measured values occurred when and for how long.

#### **Flow evaluation**

The software carries out flow analysis for all connected flow meters, optionally as a daily, weekly or monthly analysis.

#### Data export according to MS-Excel® or csv

The measured data can be exported to Excel or csv.

#### Rates

The price per consumption unit can be can be stored for each energy form. Depending on the time and day, different tariffs can be stored. The validity of the tariffs can be defined via calendar function so that price increases or decreases can be updated.

#### **Multilingualism**

The user interface is included in German, English and further languages in the scope of delivery.

### Alarm history / Alarm log file

The threshold value exceedance is documented with the CS Network.

#### Management of the measuring sites

Each CS sensor or each CS chart recorder can be assigned to a department/hall (or cost centre).

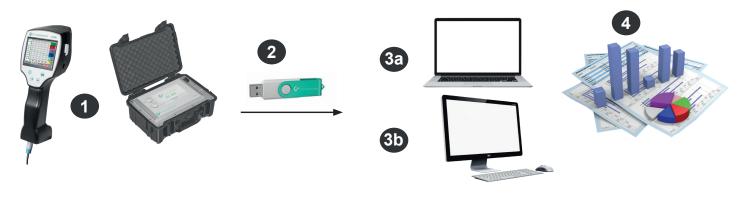
## **Optional add-on modules:**

#### Module "formula editor"

By means of the formula editor, the measured values of 2 sensors can be added or subtracted from each other.

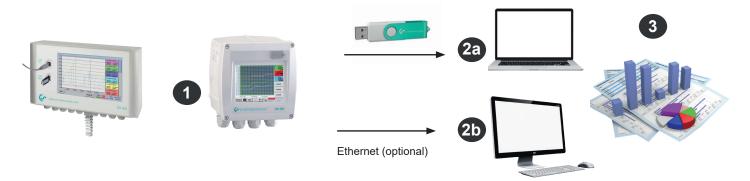
## **CS Basic**

Data evaluation during mobile measurement:



- 1 Mobile measurement at the customer. Measured data are saved in the data logger in the selected measuring cycle
- Export of the data to USB stick
- 3a Import of the measured data to the laptop directly on-site
- 3b Import of the measured data to the computer in the office
- 4 Evaluation and print out of the measured data

Data evaluation for firmly installed chart recorders in the company:



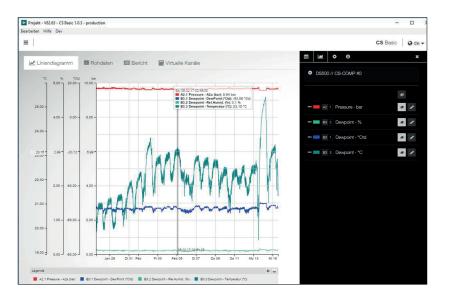
- 1 Chart recorder is firmly installed in the company. Measured data are saved in the data logger in the set measuring cycle.
- 2a Transfer of the data via USB stick to the computer
- 2b Readout of the logger data via the computer network (LAN) by means of CS Basic
  - Evaluation and print out of the measured data

| DESCRIPTION  | ORDER NO. |
|--|-----------|
| CS Basic – data evaluation graphically and in tabular form - reading of the measured data via USB or Ethernet, license for 2 workstations  | 0554 8040 |
| Additional license for 1 further workplace   | Z554 8040 |
| Module "Formula Editor" – by means of the formula editor, the measured values and constants can be calculated with one anoth-<br>er (addition, subtraction, division, multiplication, root function, exponentiation) | Z554 8010 |
| Upgrade CS Soft Basic (0554 7040) to CS Basic (0554 8040). CAA module is no longer available. Please state old licence key when ordering   | Z554 8041 |

3

# **CS Basic**





|                      |       | A2.1     | B3.1     | B3.2       | B3.3       |  |
|----------------------|-------|----------|----------|------------|------------|--|
|                      |       | Pressure | Dewpoint |            |            |  |
|                      |       | A2a      | DewPoint | Rel.Humid. | Temperatur |  |
| Datum                | Gerät | bar      | °Ctd     | %          | °C         |  |
| 27.01.17<br>13:52:18 | 0     | 9,6749   | -50,6462 | 0,1534     | 20,2556    |  |
| 27.01.17<br>13:52:28 | 0     | 9,676    | -51,4187 | 0,1394     | 20,2517    |  |
| 27.01.17<br>13:52:38 | 0     | 9,6769   | -52,0952 | 0,128      | 20,2499    |  |
| 27.01.17<br>13:52:48 | 0     | 9,678    | -52,791  | 0,1173     | 20,2479    |  |

| Kanal                           | Durchschnitt  | Minimum       | Datum von Miniumum | Maximum       | Datum von Maximum |
|---------------------------------|---------------|---------------|--------------------|---------------|-------------------|
| B3.2 Dewpoint - Rel.Humid. (%)  | 0.1094 %      | 0.0549 %      | 15.02.17 13:50:38  | 0.4118 %      | 13.02.17 14:30:08 |
| B3.1 Dewpoint - DewPoint (°Ctd) | -53.2789 °Ctd | -57.9552 °Ctd | 27.01.17 13:54:38  | -41.6251 °Ctd | 13.02.17 14:38:08 |
| B3.3 Dewpoint - Temperatur (°C) | 22.072 °C     | 20.1182 °C    | 27.01.17 13:59:58  | 26.0402 °C    | 14.02.17 08:25:38 |

|   |                        | Januar    | Februar   | März      | April     | Mai       | Juni      | Juli      | August    | September | Oktober   | November  | Dezember  | Summe      |
|---|------------------------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|
| A1.2<br>Verbrauch<br>Halle 1 -<br>A1b (m <sup>a</sup> ) | Von (m <sup>a</sup> )  | 1.958.827 | 2.076.325 | 2.215.082 | 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 |            |
|   | Bis (m³)               | 2.076.325 | 2.215.082 | 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 |            |
|   | Verbrauch<br>(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  |
|   | Kosten (€)             | 2.232,48  | 2.636,00  | 2.914,64  | 2.776,81  | 2.885,49  | 3.040,08  | 3,352,65  | 3.164,37  | 2.834,00  | 3.287,38  | 3.191,16  | 2.210,76  | 34.525,774 |
| A1.1<br>Verbrauch<br>Halle 1 -<br>A1a (m³/h)            | Minimum<br>(m∛h)       | 0         | 6,3       | 0         | 0         | 0         | 1,36      | 0         | 0         | 0         | 0         | 0         | 0         |            |
|   | Durchschnitt<br>(m³/h) | 157,6     | 205,98    | 205,8     | 202,54    | 203,52    | 221,66    | 238,5     | 223,25    | 206,67    | 232,19    | 232,67    | 155,99    |            |
|   | Maximum<br>(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  |            |

#### Intuitive operation

- All important functions can be retrieved via the dashboard.
- Global settings: Adjust units and change decimal places, store company name and logo
- Import real-time data: Establish Ethernet connection to CS logger or sensor. Trace real-time measured values in graphic and in table form
- Import from CS Soft Basic: Data migration from the previous version of CS Soft Basic
- Data backup: Backup of the projects and the database

#### Graphic evaluation

All measurement curves are indicated in colour. All necessary functions like free zoom, selection/deselection of single measurement curves, free selection of periods, scaling of the axes, selection of colours and so on are integrated:

This view can be saved as a PDF file and sent as an e-mail. Different data can be combined in a shared file.

#### Table view

All measuring points are listed with exact time interval. The desired measuring channels with the name of the measuring place can be selected via the diagram explorer.

#### Statistics

All required statistic data are visible at a glance. So the user can see very quickly which minimal or maximal measured values occurred when and for how long.

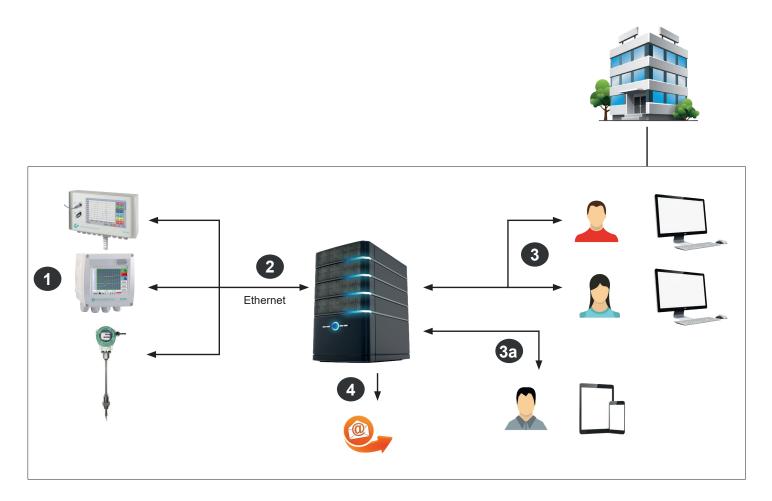
#### Flow evaluation

The software carries out flow analysis for all connected flow meters, optionally as a daily, weekly or monthly analysis.



### **CS Network**

Energy monitoring for compressed air and gases in an enterprise



Single sensors with Ethernet connection or chart recorders with several sensors measure the compressed air and gas consumption of all departments/cost centres in an enterprise.

The CS Network (Server Installation) automatically collects the measured values of all CS chart recorders and CS sensors which are connected to the computer network in an enterprise and stores them in a database.

The evaluation/analysis of the measured data is carried out via the evaluation software (Client) at an unlimited number of workstations.

**3a** The evaluation software (Client) is browser-based and provides the user with quick access to the measured data via tablet or smartphone.

In case of an exceeding of the limit values (freely adjustable), there will be an automatic alarm via e-mail

3

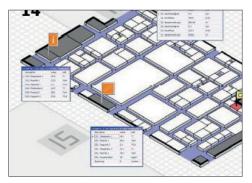
4

C

### **CS Network**

Energy monitoring for compressed air and gases in an enterprise





#### Graphic display with zoom function:

- Selection of the measuring channels to be displayed
- Simple zoom in and zoom out
- Up to 8 y-axes
- Quick access to daily/weekly/monthly view

#### View: Actual measured values

- Load background image
- Place/fix measured values screen
- Red measured values in case of alarm exceedance
- Quick access to measured value history

|  |                        | January | February | 11 |   | November | December | Sum       |
|--|------------------------|---------|----------|----|---|----------|----------|-----------|
| A1.2 Flow<br>Hall 1 –<br>A1b (m <sup>3</sup> ) | From (m <sup>3</sup> ) | 1958827 | 2076325  | )  | ) | 3491661  | 3659617  |           |
|  | To (m³)                | 2076325 | 2215062  |    | / | 3659617  | 3775973  |           |
|  | Flow (m <sup>3</sup> ) | 117.498 | 138.737  | // | ( | 167.956  | 116.356  | 1817146   |
|  | Costs (€)              | 2232.46 | 2636.00  |    |   | 3191.16  | 2210.76  | 34525.774 |

| DESCRIPTION   | ORDER NO.  |
|---|------------|
| CS Network – energy monitoring with client/server solution (max. 20 measured values of different sensors/devices)   | 0554 8041  |
| CS Network – energy monitoring with client/server solution (max. 50 measured values of different sensors/devices)   | 0554 8042  |
| CS Network – energy monitoring with client/server solution (max. 100 measured values of different sensors/devices)  | 0554 8043  |
| CS Network – energy monitoring with client/server solution (max. 200 measured values of different sensors/devices)  | 0554 8044  |
| Module "Formula Editor" – by means of the formula editor, the measured values and constants can be calculated with one another (addition, subtraction, division, multiplication, root function, exponentiation) | Z554 8010  |
| Module "Cockpit Function" – By means of the Cockpit Function, you can create your personal background layout for the online values  | On request |
| Module "Automatic Flow Evaluation" is e-mailed to a distribution list at the end of the month   | On request |
| Module "Bar Chart, Pie Chart" for annual comparisons  | On request |