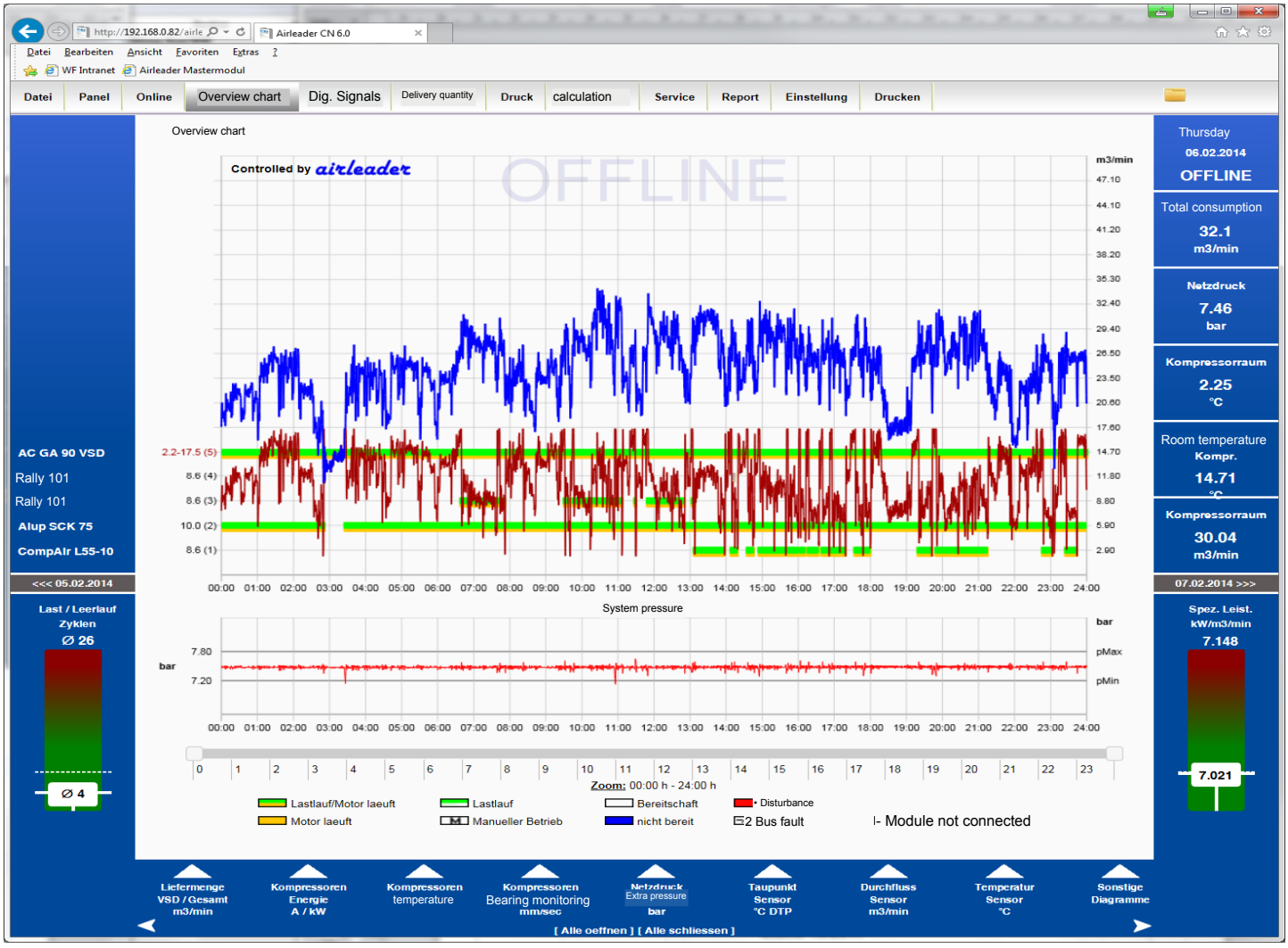
WEB SERVER ONLINE VISUALIZATION
AIRLEADER MASTER II



User Manual Version 4.000

As of 10/2017

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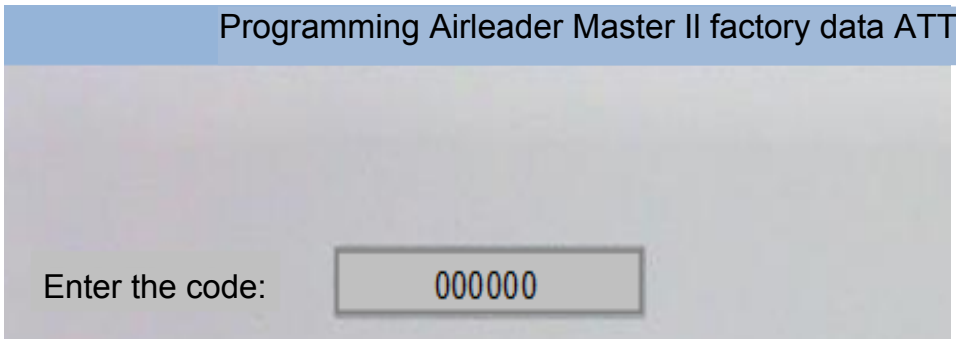
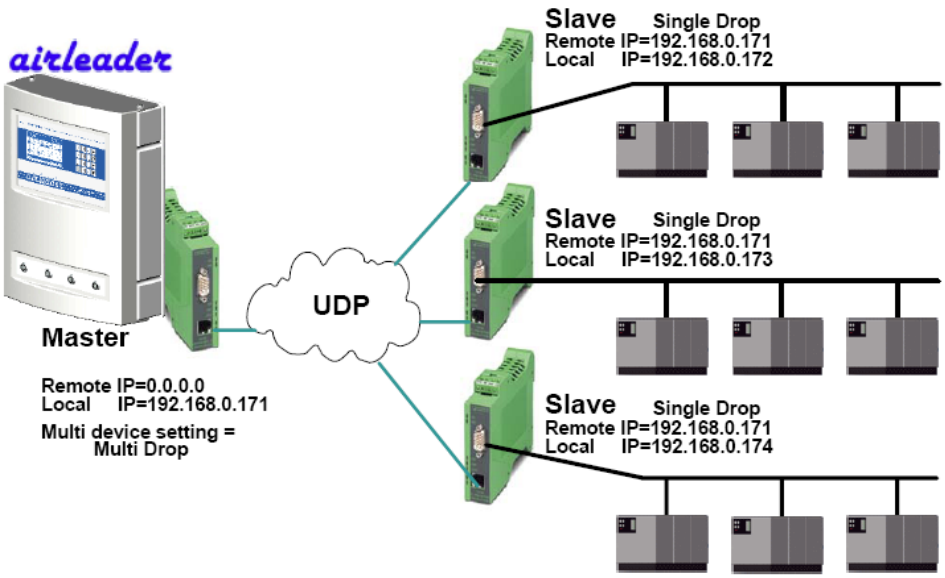
IP address, network and factory settings

IP address settings: Touch: > Program > Network > Enter IP address > Enter Subnet Mask > Enter standard gateway If compressor modules are connected via COM servers, the COM servers each receive a separate IP address. The communication speed needs to be adjusted Touch > Program > Factory data



ATTENTION: Before putting the web server into operation, check the date on the AIRLEADER control and set it to the current time. Step 1 Activate the programming bridge Touch > Program > Factory data > Enter -IP address, subnet mask

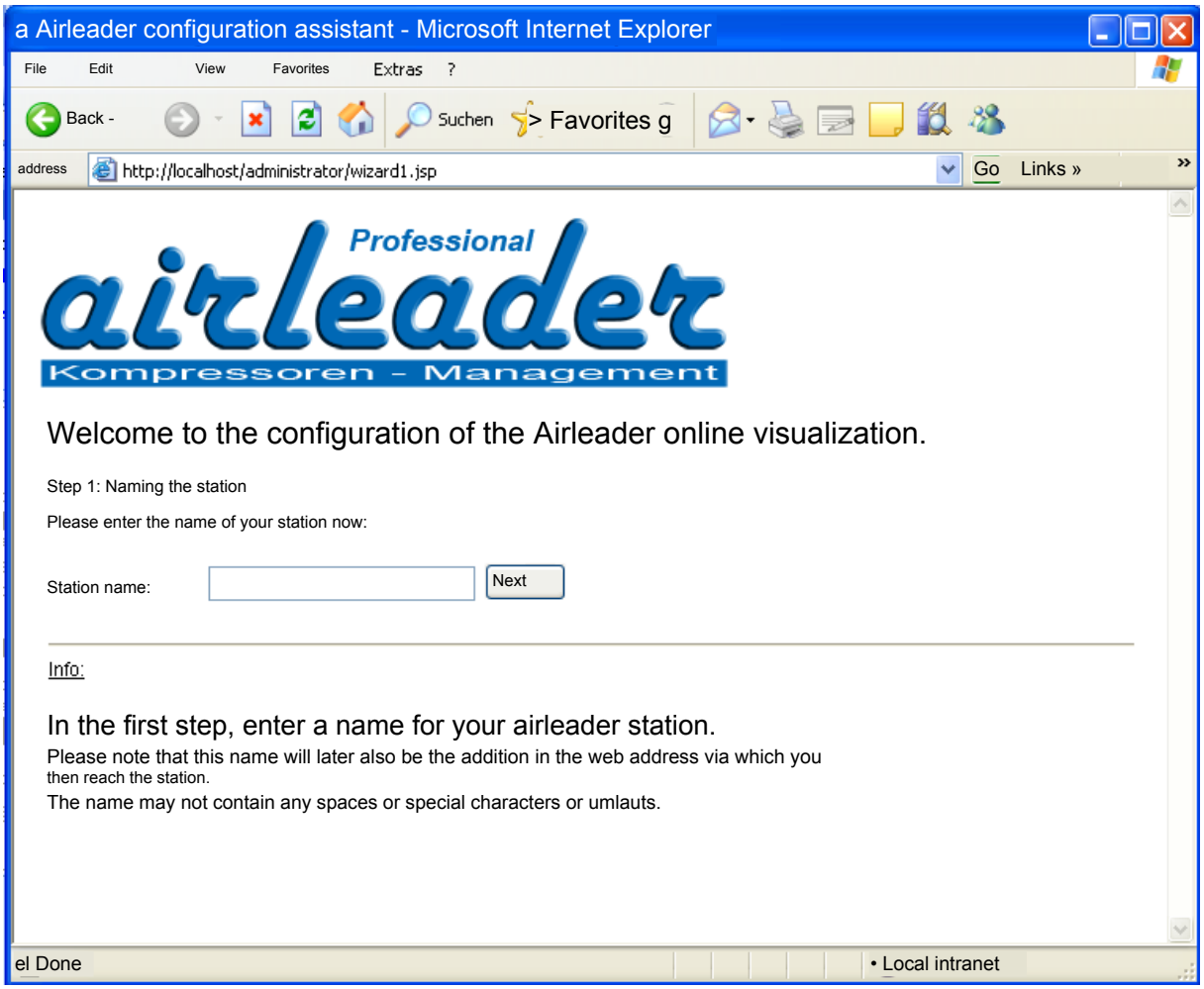


<u>Communication via Ethernet</u> between AIRLEADER and the connection modules via Ethernet. The connection between AIRLEADER and the connection modules for the compressors and other components can be made via Ethernet using the COM server. The AIRLEADER RS-485 interface is connected to a COM server. The COM server receives an IP address that fits into the IP address range. Additional COM servers can be connected to the Ethernet with their own IP address. Program waiting time for slave response ENTER CODE Enter “111111” confirm with key “E” Program waiting time “200 ms” Can also be changed from 150-250 ms if necessary

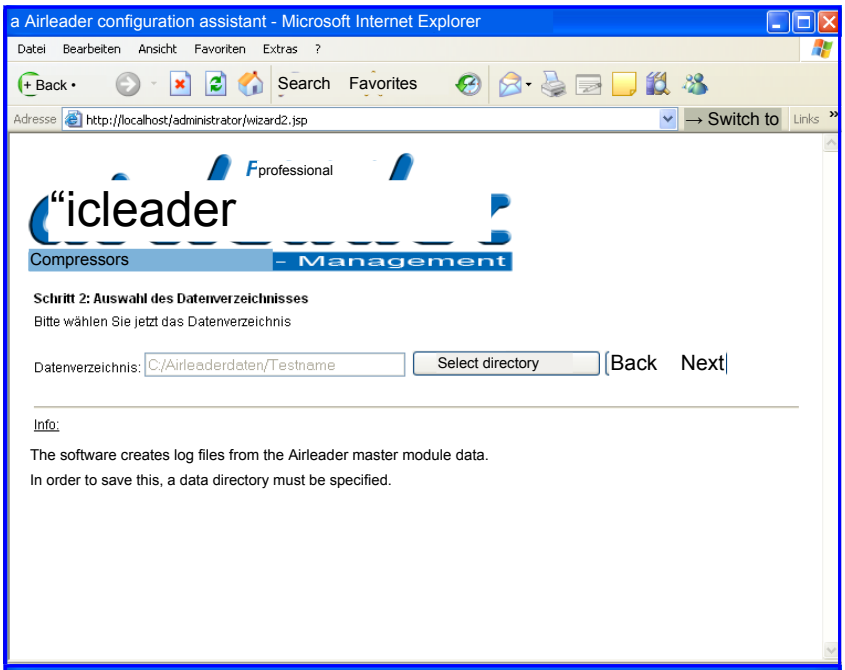
INSTALLING WEB SERVERS

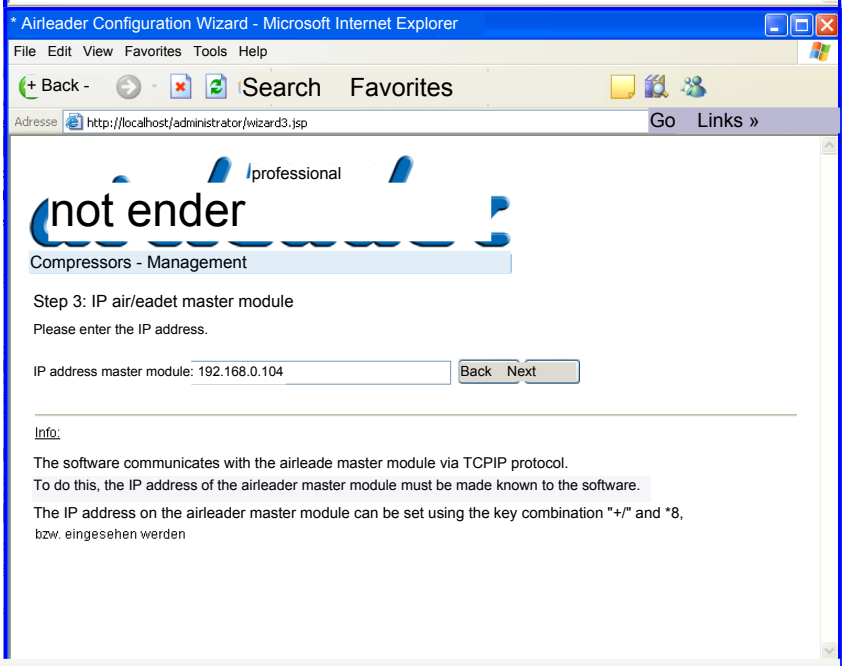
Requirements:

Server: Intel Pentium from 2.2 Ghz at least 512 MB RAM. Operating system Windows 2000, 2003, NT, XP, Linux with X-Server Library Client: Microsoft Internet Explorer from 5.5 Installation: Run the setup program and follow the instructions. At the end of the installation, determine whether the WebServer service should be installed and started immediately. We recommend installing and starting the service immediately. Once the service is started, the web server is automatically activated when Windows starts and records the AIRLEADER data in the background. After successful installation and start of the service, Internet Explorer opens as a window with the configuration instructions for the online visualization. Previous versions of the Airleader online visualization must be uninstalled. To do this, deactivate the installed service via the start group ("Remove service") and remove the Airleader Online Visualization software in the control panel / software. Attention: When starting for the first time, an error message may be displayed in Internet Explorer. This is usually because setting up and starting the service takes longer than the request for the Airleader online visualization homepage. In this case, wait a few seconds and click the Refresh button in Internet Explorer. Step 1: After the first start you will be guided through the initial configuration of your station. First, determine a name for your station, which will also be the addition of the web address through which you can later reach the station. The name may not contain any spaces or special characters or umlauts.



SET DATA DIRECTORY





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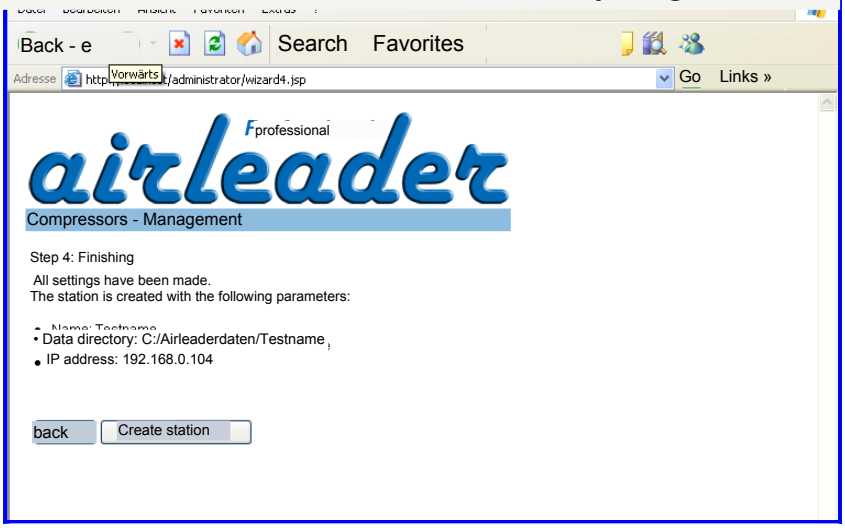
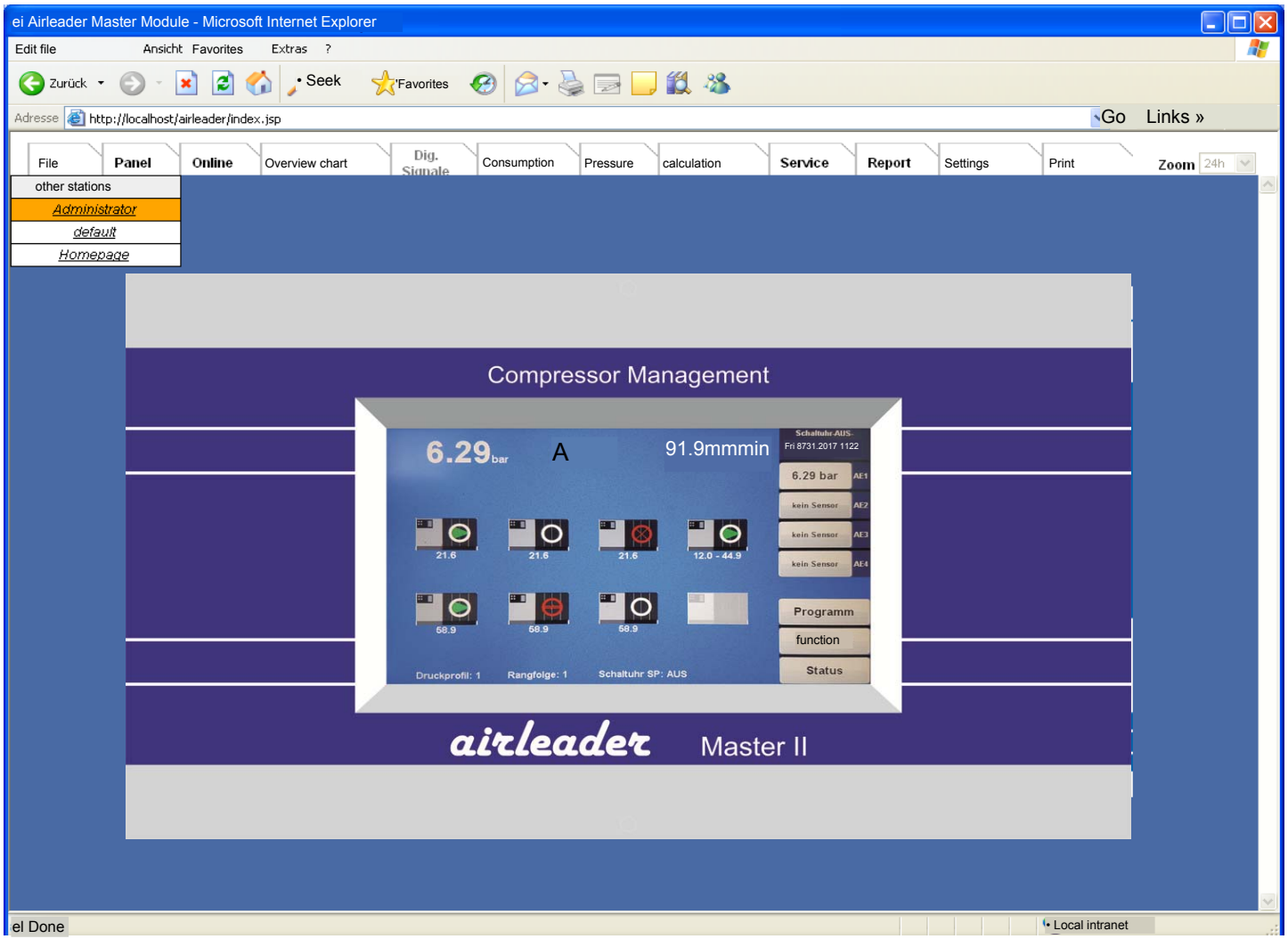


Step 2: - Set data directory. - Using the "Select directory" button - select an existing directory. Step 3: - Program the IP address on the Airleader. - (key combination "+/-" and "8") see page 2 - Enter the IP address of the AIRLEADER master module - Click on "Create station" The station will now be created. This process may take a few minutes. Your station will then be available. After the basic configuration

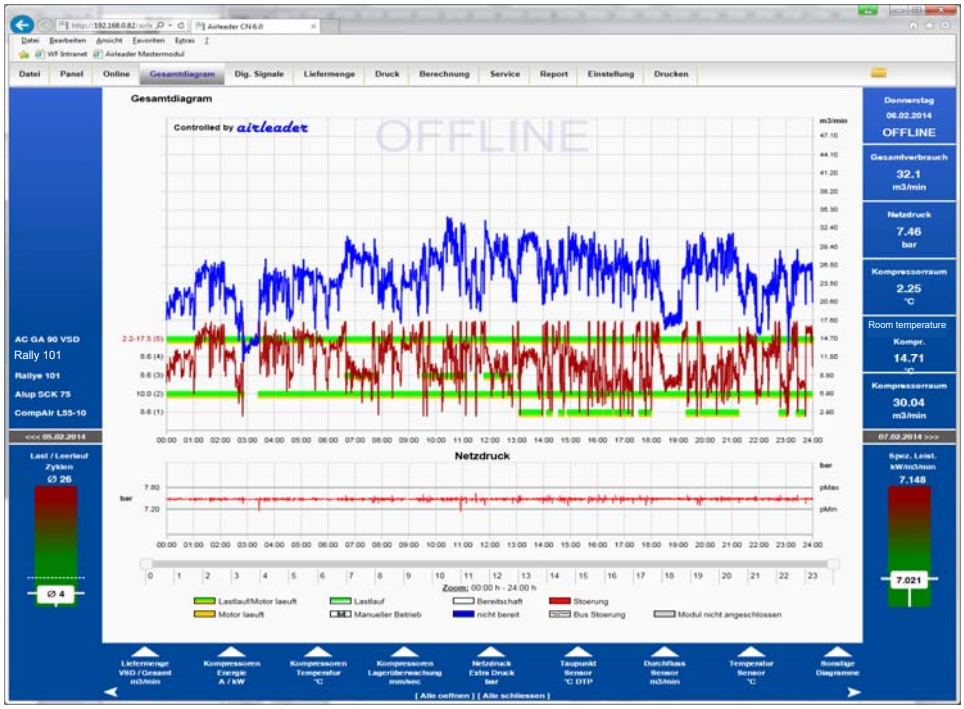
After basic configuration, the visualisation downloads the previously recorded daily LOG files in the background. When this is complete, the Online tab becomes available.

If the Airleader was already operating before the software was installed, load the configuration manually from the master module via Settings > Remote control. This synchronises the software with the controller.

USER INTERFACE

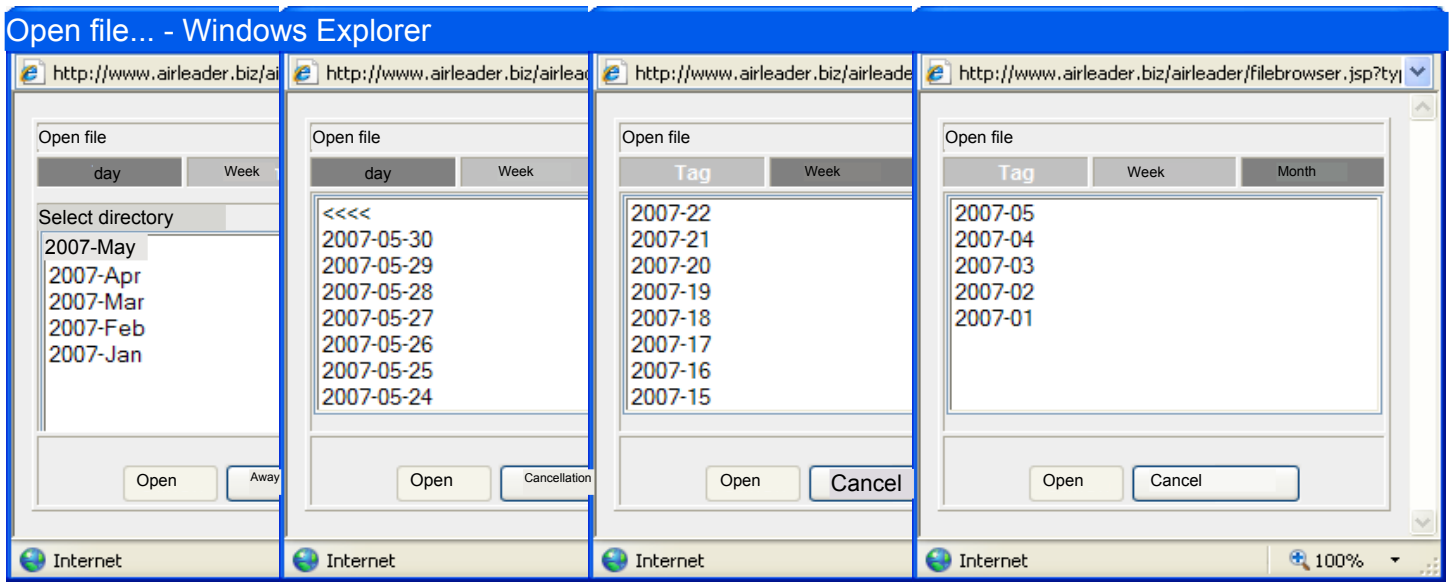


The AIRLEADER web server visualization has a tab system for the core functions. The currently possible options are active (can be selected in black), the inactive ones are gray and cannot be selected. The current status of AIRLEADER is displayed down to the second. Fault messages are output directly here.

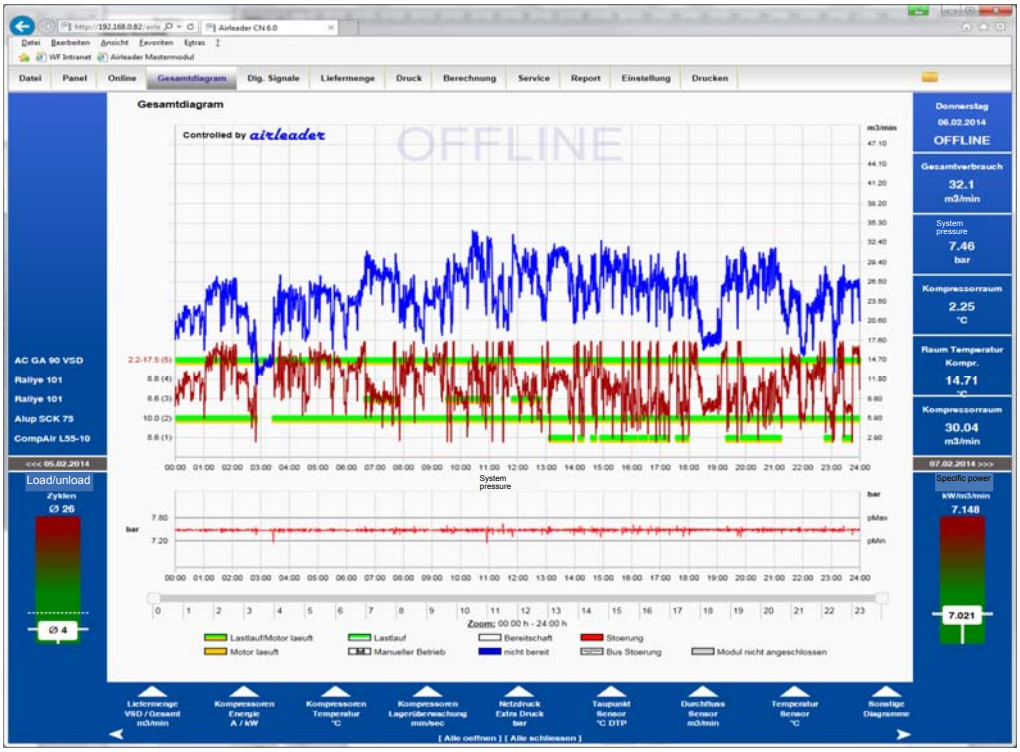


OFFLINE EVALUATIONS

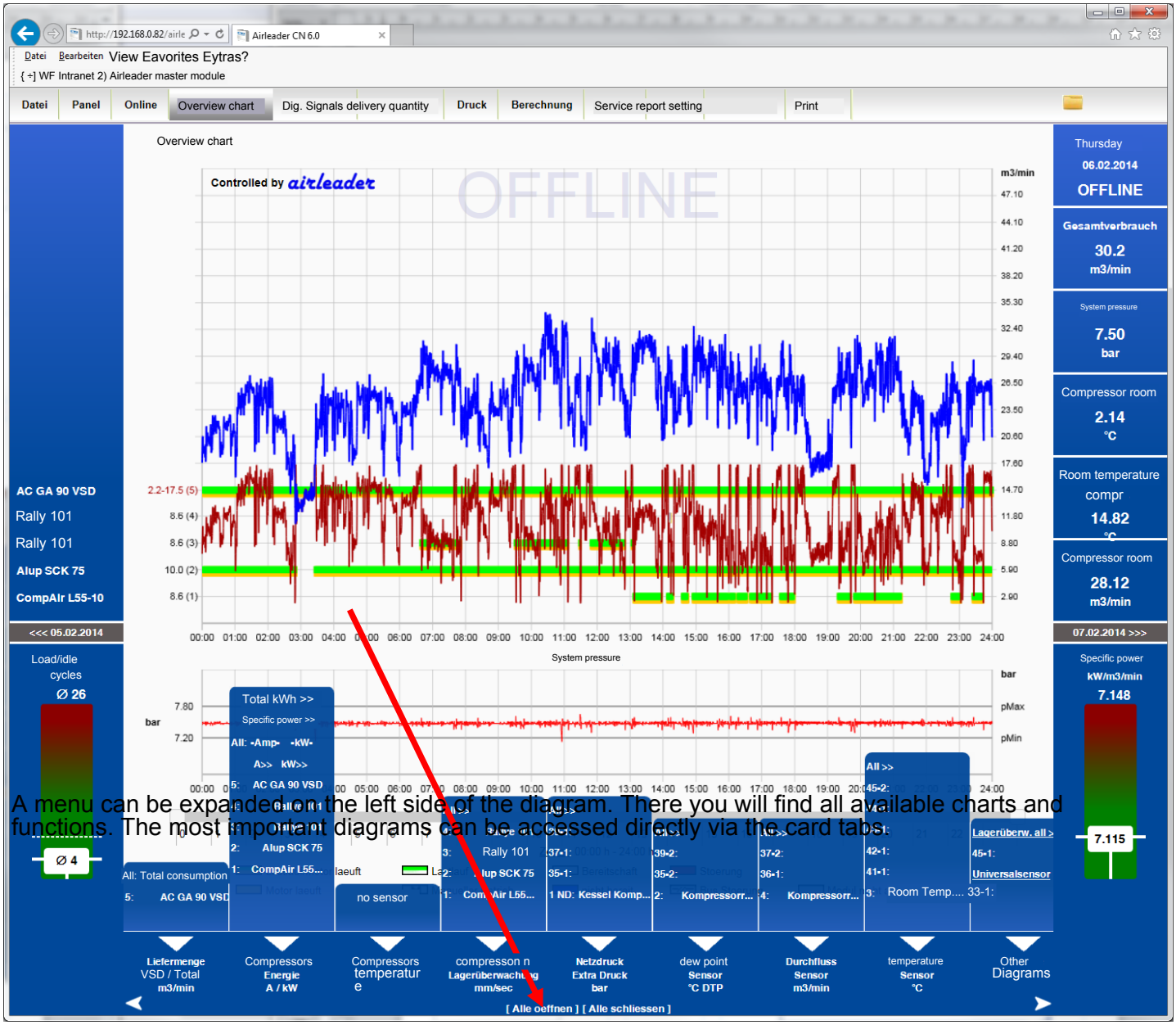
Click on “FILE”: You will receive an overview of the saved data from the past few months. Select month: Individual days of this month are available for selection. Click on week: The weekly reports are summarized with consumption diagram and calculation/evaluation. Click on month: The monthly reports are summarized with consumption diagram and calculation/evaluation. Close: This will close the selected file or online monitoring. If you select several LOG files, opening the diagrams may take a few seconds because the data is transported over the network.



Displays the compressor states, system pressure and compressed air consumption over the selected period



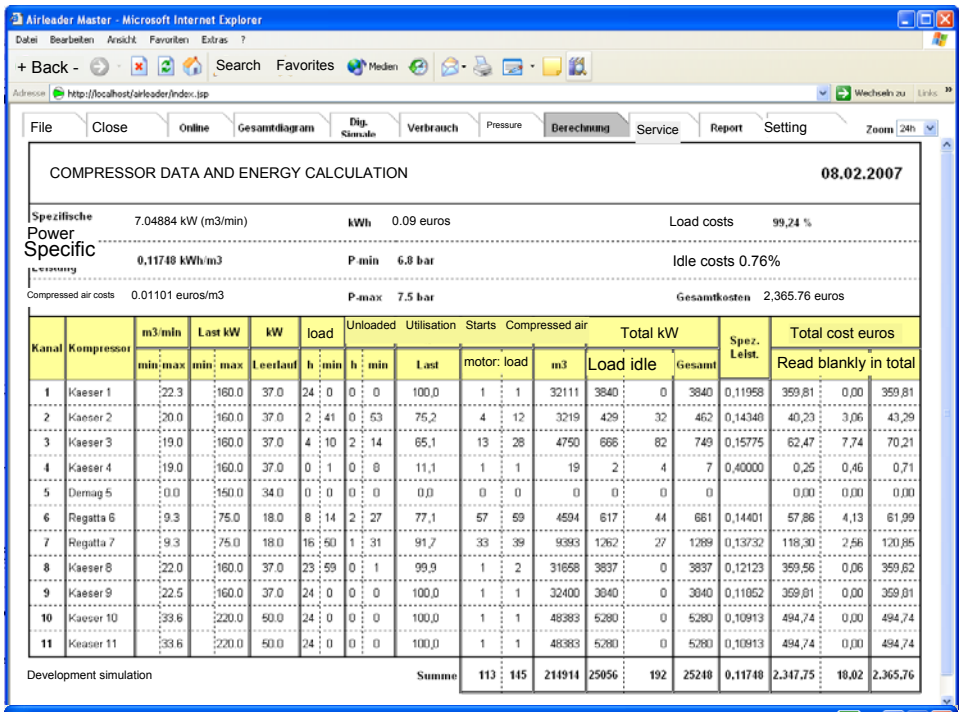
SELECTION OF VARIOUS DIAGRAMS

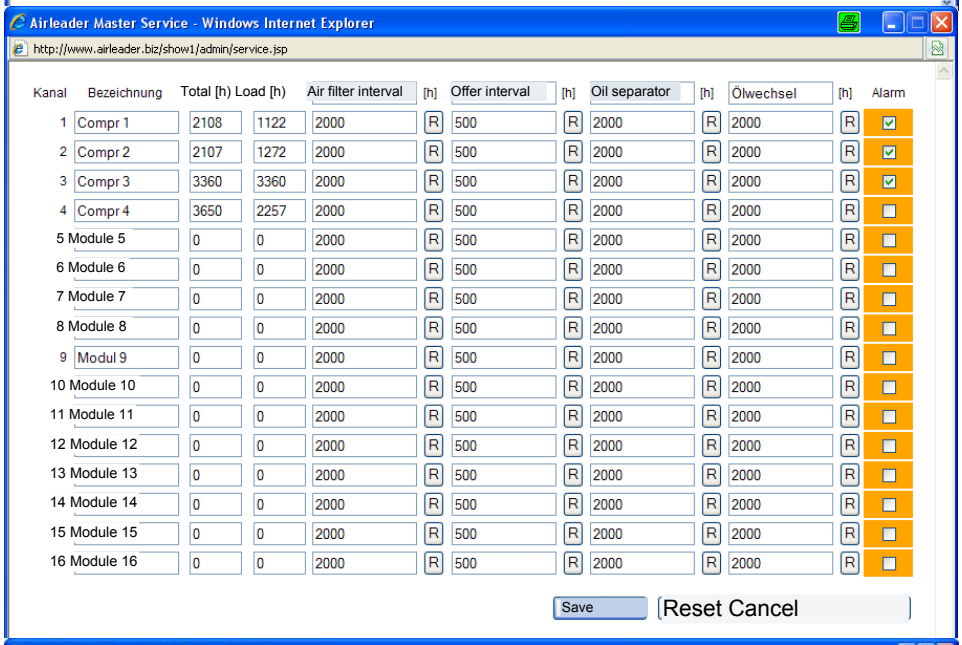


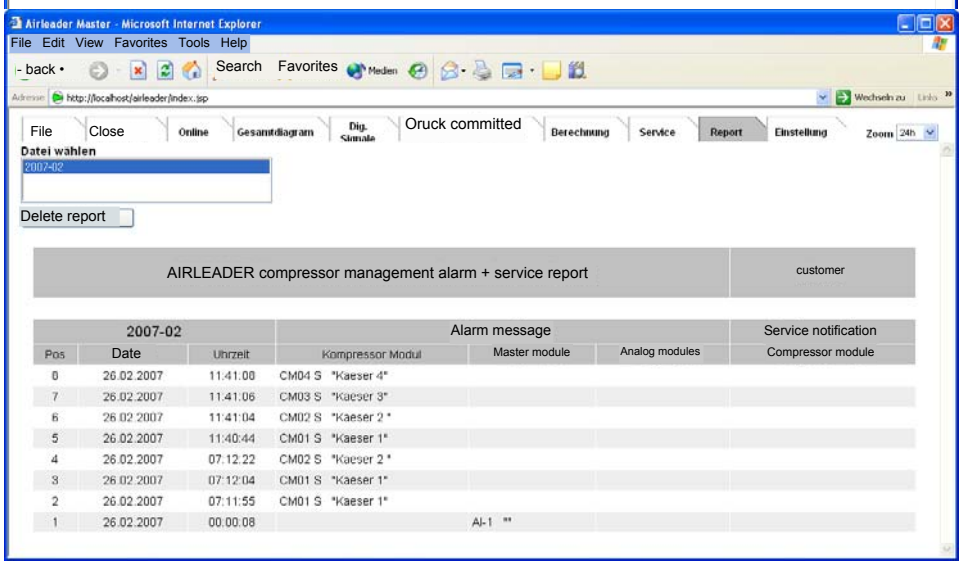
A menu can be expanded on the left side of the diagram. There you will find all available charts and functions. The most important diagrams can be accessed directly via the card tabs.

Click on “Open all” All additionally installed sensors are displayed in the form of opened sliders. The currently measured value of the sensors is displayed. Clicking on “All” for the individual sensors switches the display to the diagrams of the selected sensors. Each diagram of the individual sensors can be accessed by clicking on the displayed value.

ENERGY CALCULATION





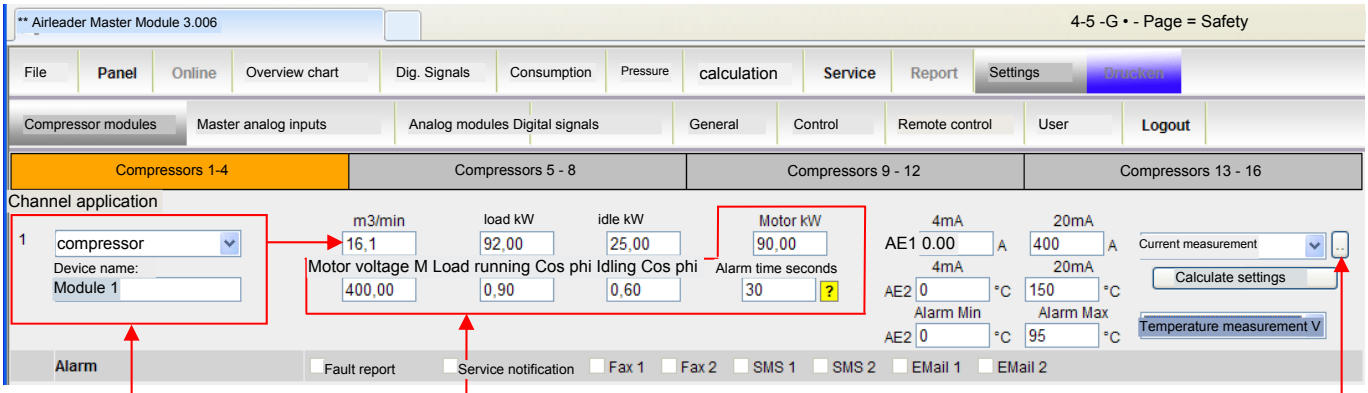


The energy calculation shows a tabular list for the energy calculation of the entire station over the selected period. Service The total running times of the compressors are saved after commissioning. The operating hours of the compressors are then clearly displayed. Maintenance intervals

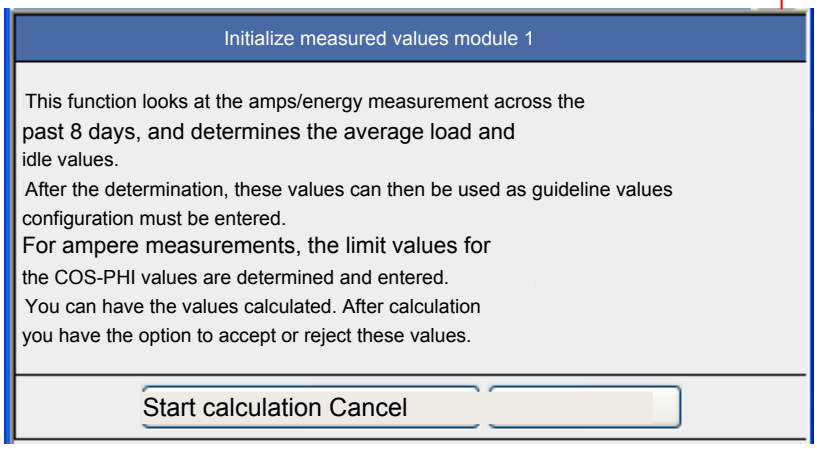
for the compressors and other devices can be freely stored. 4 maintenance intervals can be monitored per compressor. These can be freely named. The maintenance interval can be reset to the previous value using the “R” button. By activation

If the service interval alarm is activated, a message will be displayed on the screen in a pop-up window if the specified time is exceeded. Changes only become active after saving. Alarm and service report Clearly displays all faults and service messages that have occurred

BASIC SETTINGS

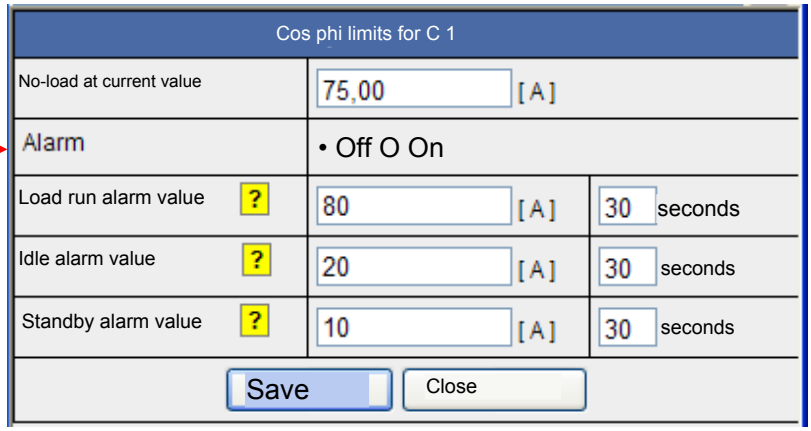


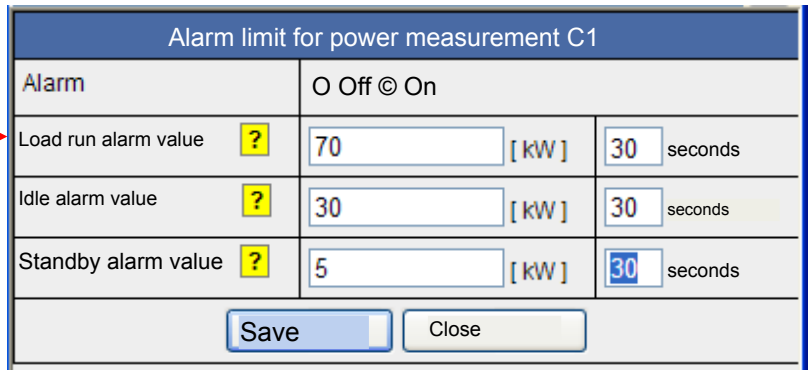
Compressor data management The compressor output m3/min is automatically taken over by the control. Even if there is a change. The compressor type can be entered manually in the web server. Compressor performance data: load kW, - idle kW, must be entered manually for energy calculation



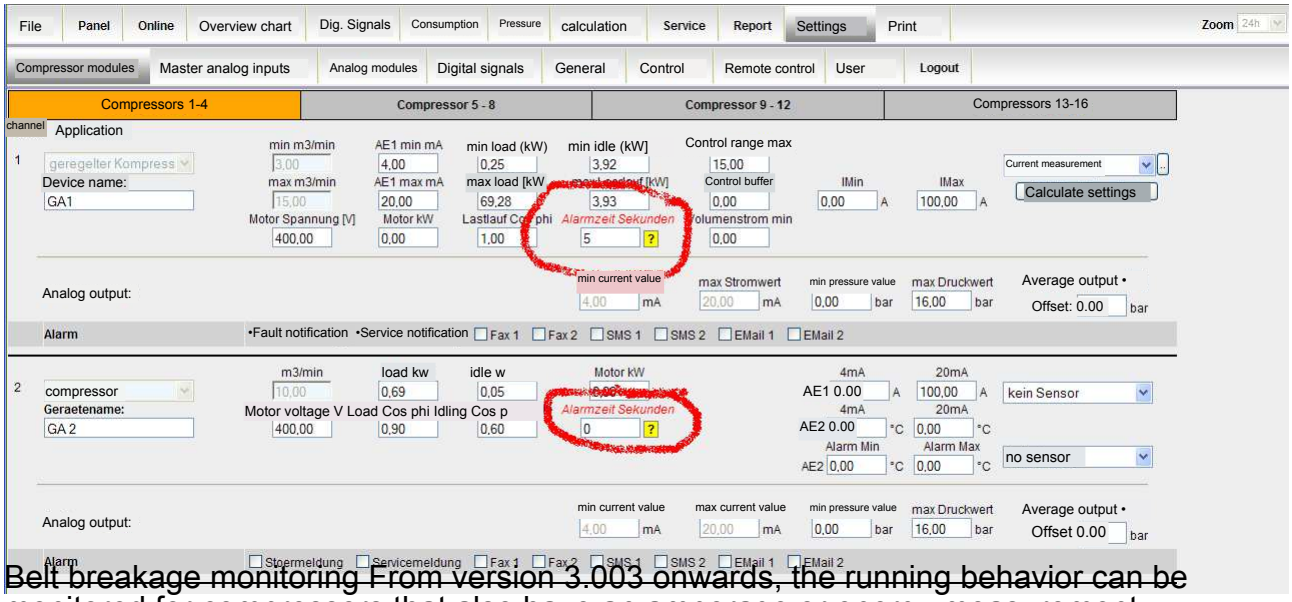
Load and idle values are automatically calculated by clicking on the "Calculate setting values" button

If a current measurement (A) is connected, - Motor kW, -Motor voltage, - Load running Cos phi, - Idle running Cos phi must also be entered for the energy calculation. The delay time for alarm messages is set manually. If a kW measurement is connected, the values are calculated automatically. The delay time for alarm messages is set manually.

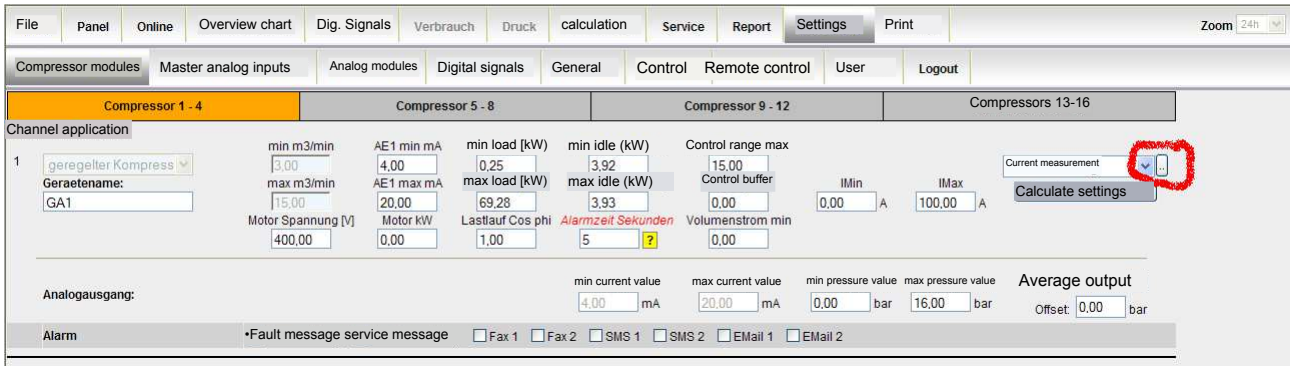




The program code can also be requested via email or telephone. Email: info@airleader.de Telephone: 07044 911100 motor running monitoring From version 3.003, motor running can be monitored according to load requirements for compressors. You specify a maximum period of time in seconds that may pass until a motor running signal must be reported back after the control has requested a load. If this does not happen within this time window, a malfunction will be triggered. If a value of 0 is entered here, the function is deactivated.



Belt breakage monitoring From version 3.003 onwards, the running behavior can be monitored for compressors that also have an amperage or energy measurement.



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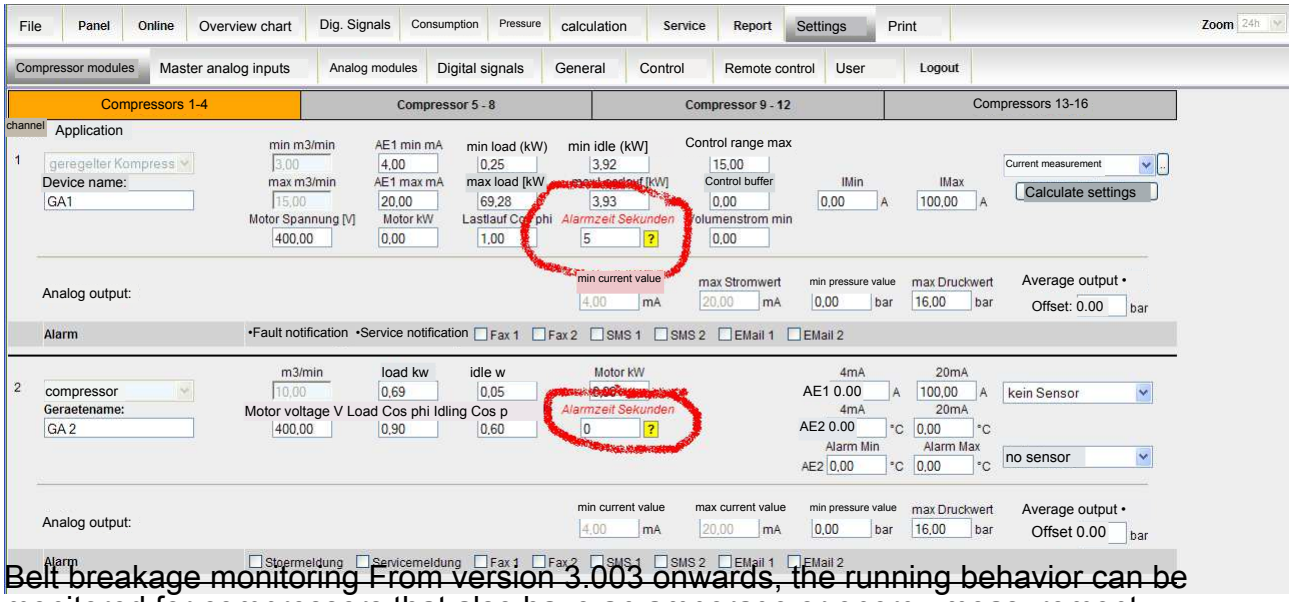

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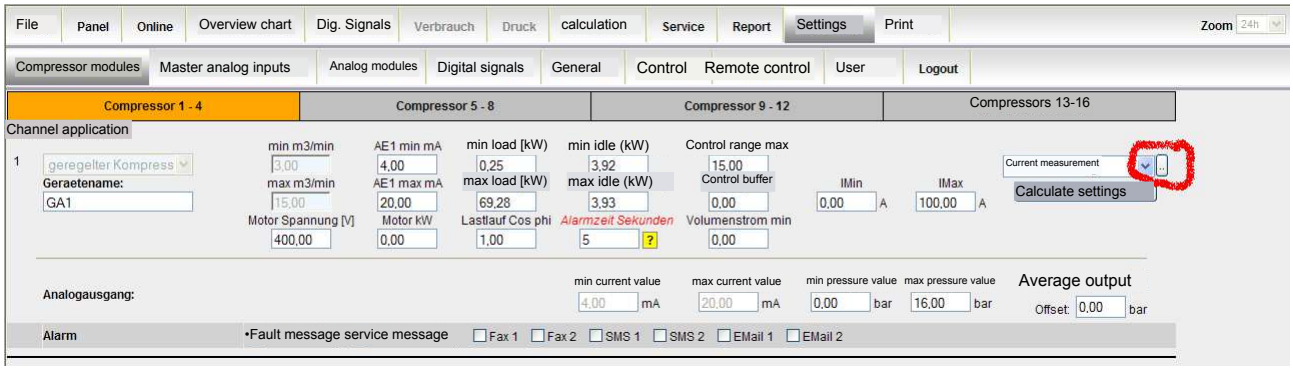
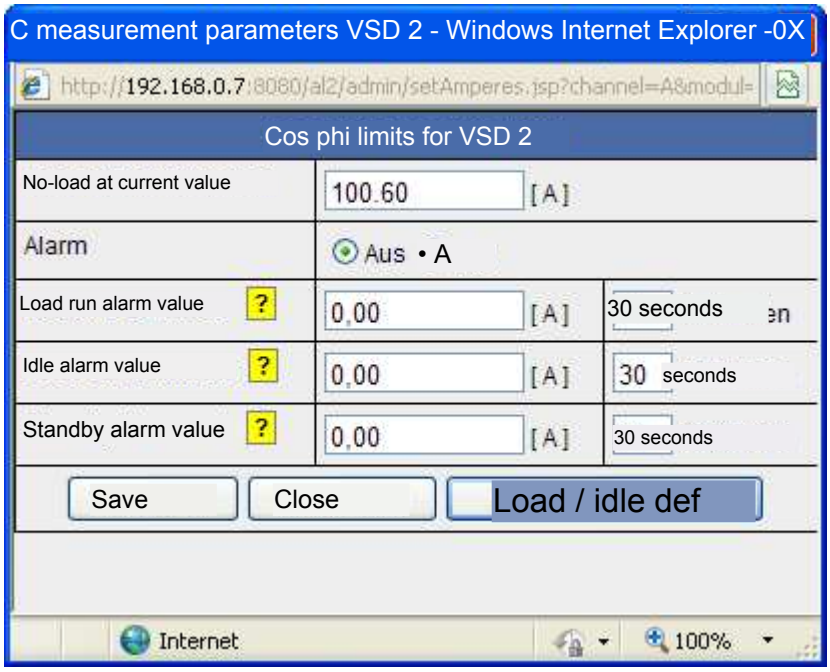
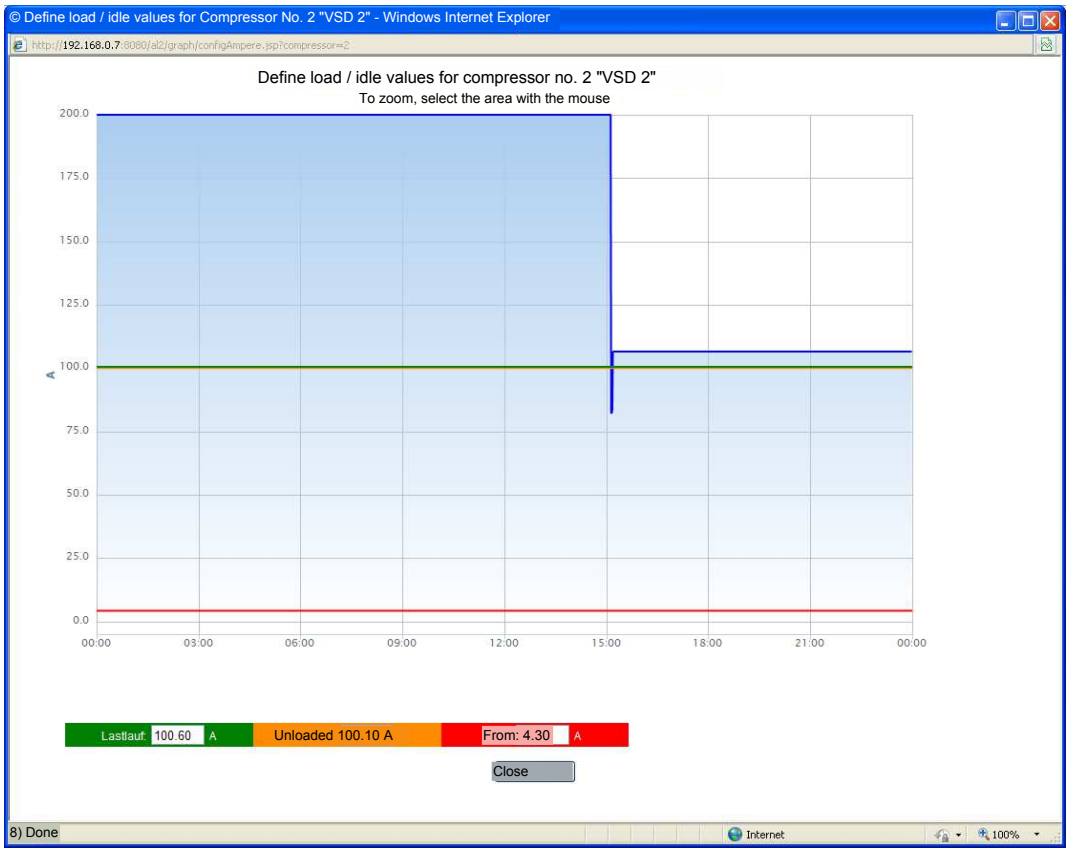


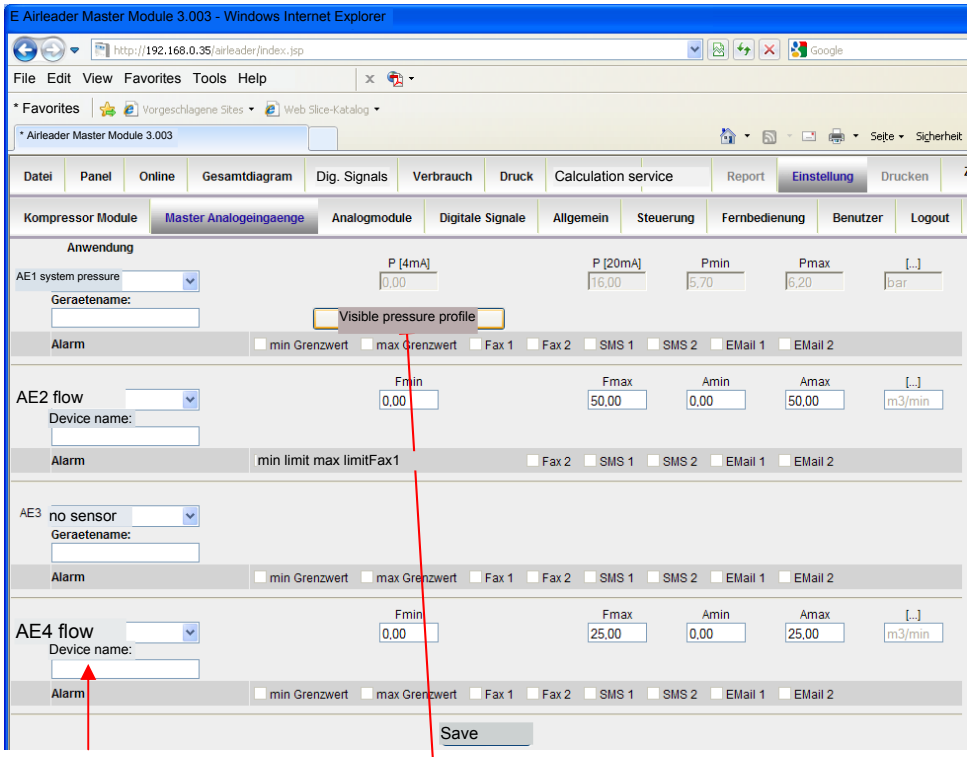
- Current limit selection graphically

The selection of the COS phi limits for ampere measurement can now be done graphically. The limit values for load/idle and standstill are also set at this point when the control is working in measurement mode.





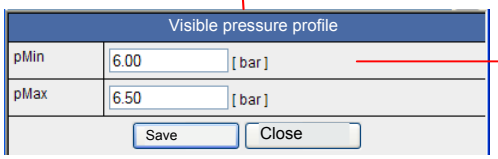
Analogue inputs on the control unit



Analog inputs on the master with 4-20mA signal: - AE1 - control pressure - AE2 + AE3 + AE4 can be assigned the following sensors: - Pressure dew point - Extra pressure - Temperature - Flow - Current measurement - Energy measurement The front display

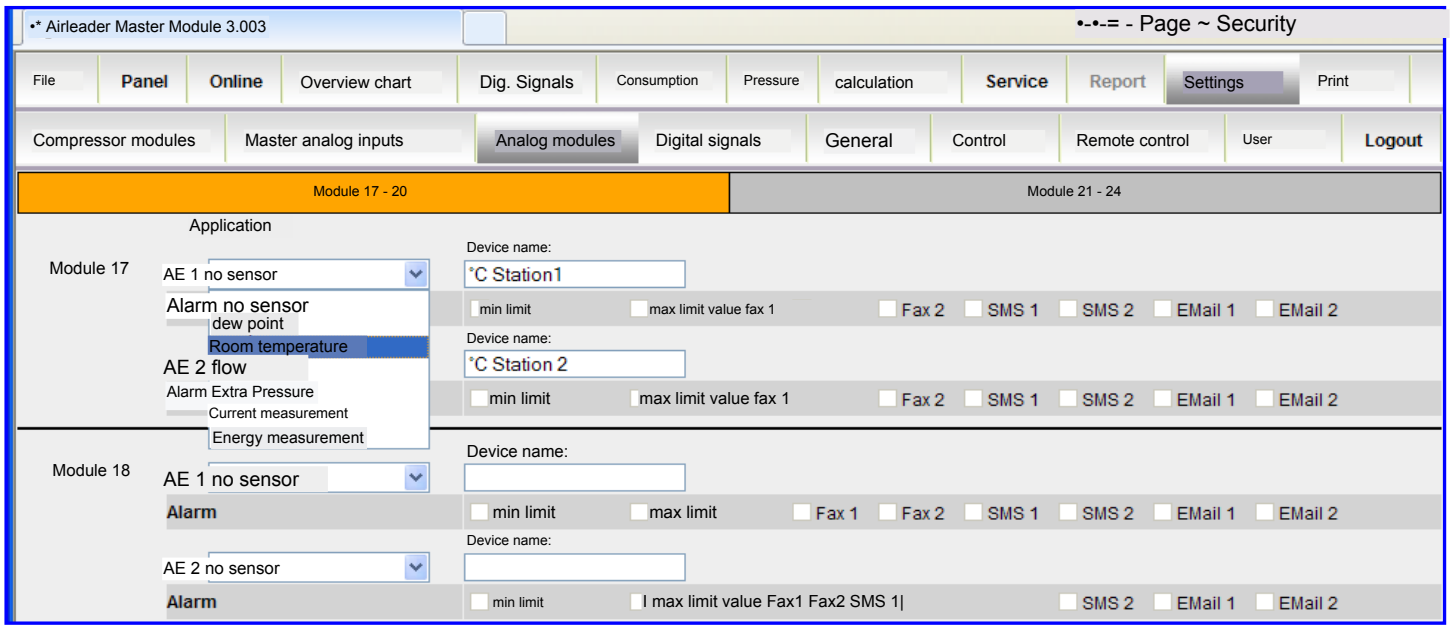
clearly displays the measured values of the connected sensors.

Enter device name manually



This function zooms the pressure profile

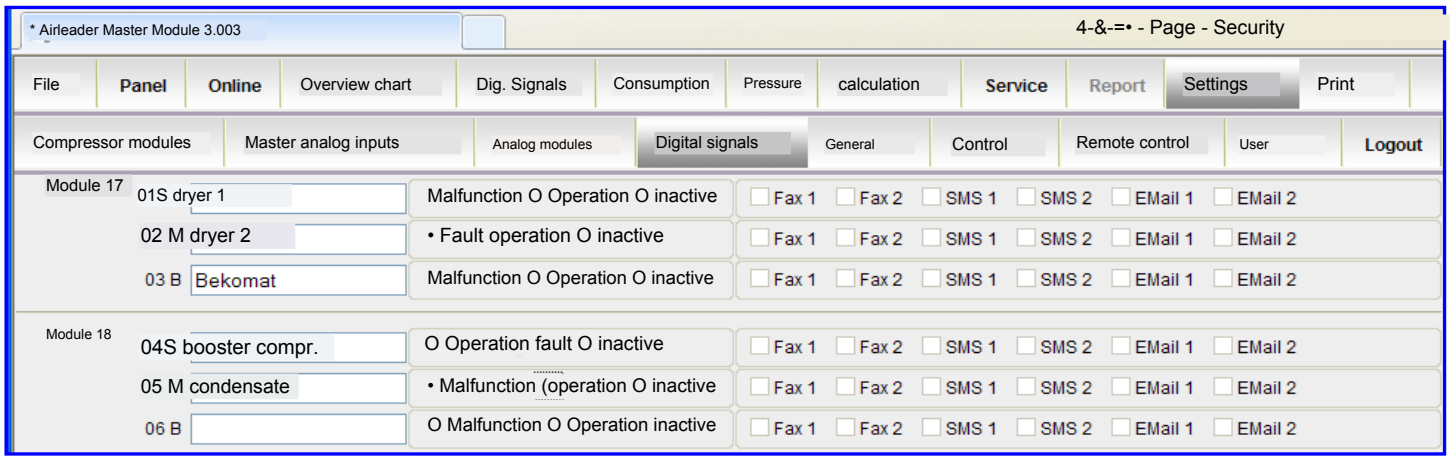
Devices connected to connection module 17-24



The connection module (17-24) has the following input and output. Outputs: - 2 analog inputs 4-20 mA - 3 digital inputs - 2 digital outputs - 1 analog output 4-20 mA The analog inputs are for external analog sensors and can be freely assigned as on the AIRLEADER Master.

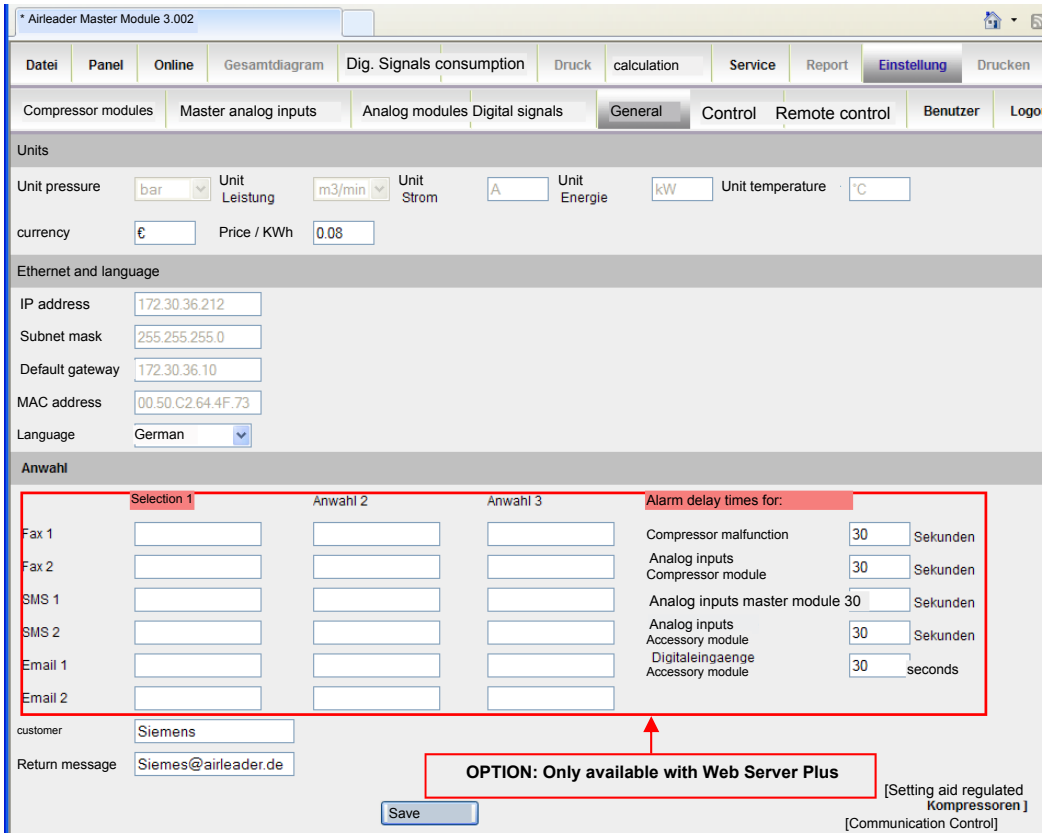
To all analog inputs: various analog sensors can be connected as desired. Each measuring point can be freely named. Alarm limits can be freely set within the sensor values and activated if necessary.

Alarm and service management (Web Server Plus option) sends fault and service messages such as: - E-mail - SMS - Fax Alarm limit values can be freely defined



Digital inputs: Are for fault or operating messages from dryers, filters, condensate drains, etc. Each input can be freely named. Alarm messages: can be assigned and configured individually for each input. The digital outputs synchronously provide an output for external fault messages for each analog input.

GENERAL - SETTINGS

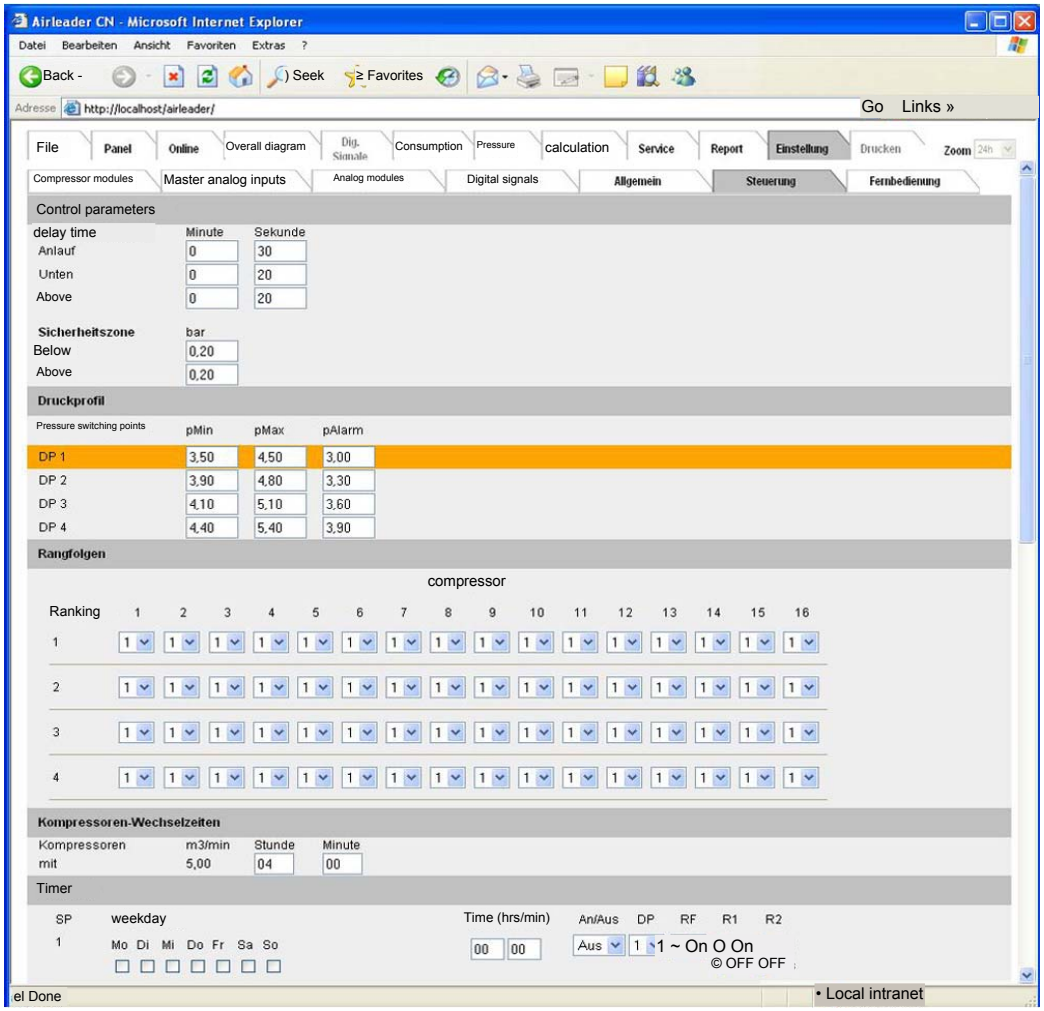


Unit settings:
- **Pressure = bar**
- **Flow rate = m³/min**
- **Current = A**
- **Power = kW**
- **Temperature = °C**
- **Currency = EUR**
- **Price/kWh = 0.11**
- **Language = German (example)**

Communication settings

For service and alarm messages are only active with the option: Web server plus feedback

If an email address is entered in this field, the data from the previous day will be sent. (SMTP server setting)

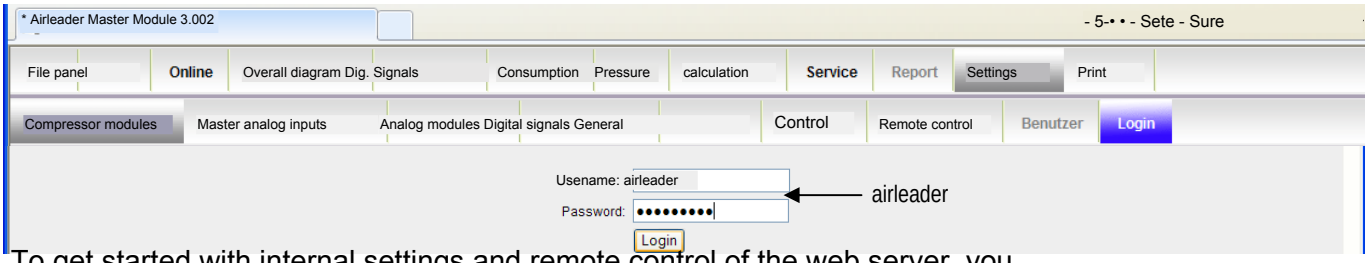


"Control" setting

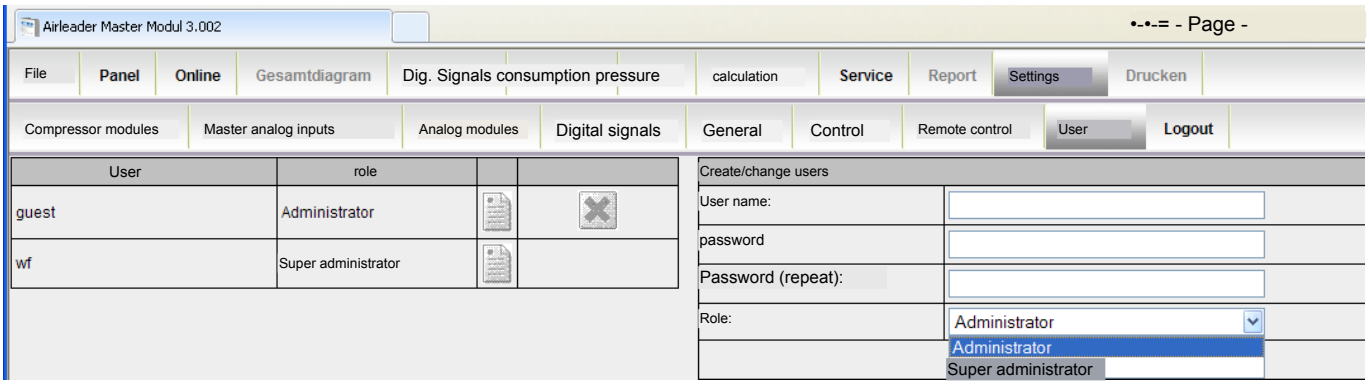
The following data is displayed in this menu: - Delay times - Safety zone - Pressure profiles - Rankings - Compr. Changing times - Time switch settings Remote programming

for the setting values mentioned are only active with the option: Web Server Plus

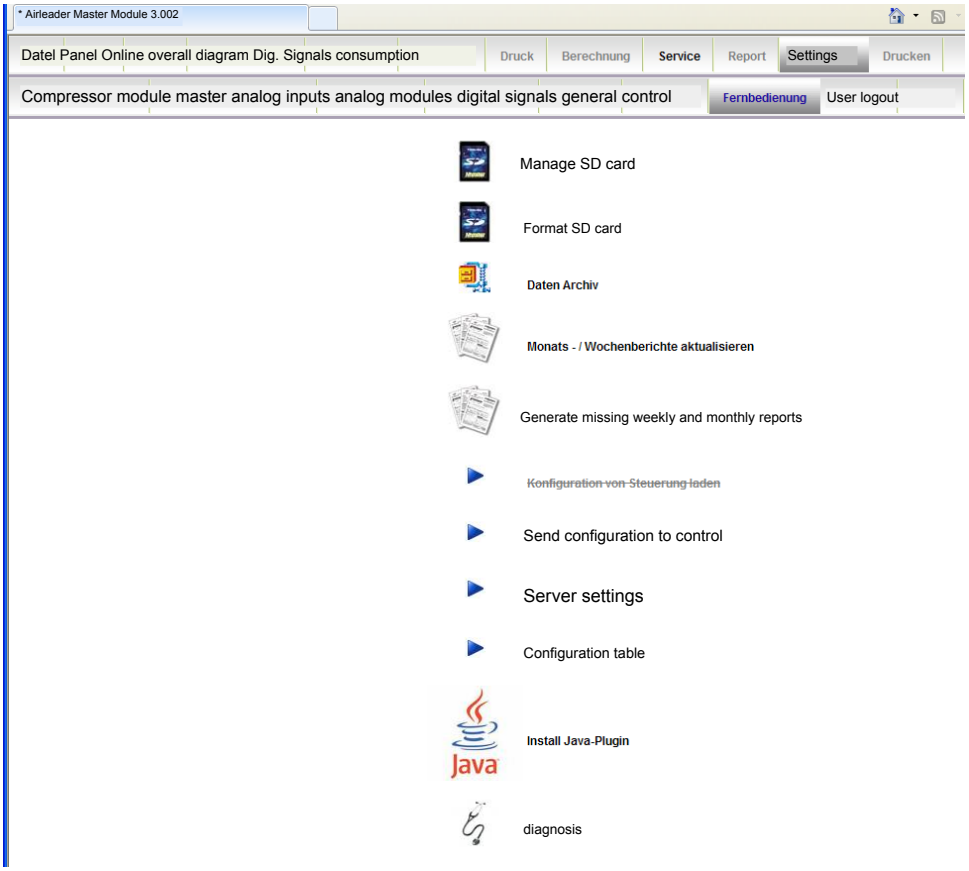
Setting login and remote control



To get started with internal settings and remote control of the web server, you must log in. Via “Settings” - “Login” with the default password “airleader” for username and password



Create different passwords for administrator and super administrator.
Attention: The super administrator can also make network settings



In the remote control menu

you can carry out the following actions - Manage SD card - Format SD card - Update reports - Generate reports - Load configuration - Send configuration - Server settings - Configuration table - Install Java plugin - Carry out diagnostics

Server setting

** Airleader Master Module 3.003 •- 5 -•• - Site - Security - Extras -

File | Panel | Online | Overview chart | Dig. Signals | Consumption | Pressure | calculation | Service | Report | Settings | Print

Compressor modules | Master analog inputs | Analog modules | Digital signals general | Control | Remote control | User | Logout

Parameter	Value
Station	E:/online/daten/glaeser
Data directory	E:/online/daten/glaeser Select directory
Control IP	
	[Delete historical configurations] [Delete temporary files] [Restore configuration]
Note: Determine/change IP on the control using the membrane keyboard by pressing '+-' and '8' at the same time. Confirm next dialog with 'E'.	
Control port	10050
Download	© On O Off
Reports with Average consumption	O On © Off
Code:	Activate WEB SERVER Plus
Start time Report generation	02:00 server time Change.
compressor Ampere measurement	This function can be used to initialize the ampere measurement on the compressors. The function checks compressor current in loaded and unloaded operation and automatically sets the corresponding cos phi thresholds used to calculate power consumption. Values that were entered manually will not be overwritten. If a value is to be overwritten, set this manually to 0 beforehand. Run this function only after each compressor has operated at least once in both loaded and unloaded operation. For compressors that have not completed at least one load/unload cycle, these values cannot be calculated. Initialize compressor ampere measurement
Mailing settings	
Mail host	
Mail user	
Mail password	
Mail sender	[MailConfig test]
	Save Application
Software MM Version 3.003 22.07.2009	

In the remote control server settings menu

You can carry out the following actions: - Delete historical configurations - Delete temporary files - Restore configuration - Activate WEB-SERVER Plus - Change start time of report generation - Initialize compressor ampere measurement - Mail settings for SMTP server

* Airleader Master Module 3.003 Seite Sicherheit Extras

Datei | Panel | Online | Overall diagram Dig. Signals | Consumption | Pressure | calculation | Service | Report | Settings

Kompressor Module | Master analog inputs | Analogmodule | Digital signals | General | Control | Fernbedienung

Benutzer | Logout

diagnosis

Auf dieser Seite kann bei auftretenden Problemen die Ursache ermittelt werden.
From here you can test the accessibility of the control, check the SD card in the control, test the mail server configuration,
Datumssynchronität zwischen Server und Steuerung ermitteln,
as well as view and delete the web server log file.

Run ping
By pinging the controller you check the general
Erreichbarkeit der Steueurng über das Netzwerk.

In the Diagnostics menu

you can carry out the following actions - Execute ping - Communication control - Check SD card - Date synchronization - Mail server configuration - Log file viewer

Configuration table 1

Station MM E:/online/daten/glaeser

Seite Sicherheit Extras

Control configuration

Customer:	E:/online/daten/glaeser
Type:	MM
Control number:	
Software Version:	2.603
WebServer:	3.003 (22.07.2009)
IP address:	192.168.0.100
MAC address:	00.50.C2.72.AB.CB
Date:	16.01.2010

compressor	1	2	3	4	5	6
Designation:	Module 1	Module 2	Module 3	Module 4	Module 5	Module 8
VSD:	No	No	No	No	No	No
m3/min:	16.1 m3/min	16.1 m3/min	7.1 m3/min	7.1 m3/min	16.1 m3/min	11.6 m3/min
Imin / Imax:	-	-	-	-	-	-
Control range **max:**	-	-	-	-	-	-
Control buffer:	-	-	-	-	-	-
Volume flow minutes:	-	-	-	-	-	-
AE1 sensor type **min/max :**	Current measurement 0.0 - 500.0 (A | kW)	Current measurement 0.0 - 500.0 (A | kW)	Current measurement 0.0 - 100.0 (A | kW)	Current measurement 0.0 - 100.0 (A | kW)	Current measurement 0.0 - 200.0 (A | kW)	-
AE2 sensor type **min/max :**	temperature 0.0 - 150.0 (°C | mA)	temperature 0.0 - 150.0 (°C | mA)	temperature 0.0 - 150.0 (°C | mA)	temperature 0.0 - 150.0 (°C | mA)	temperature 0.0 - 150.0 (°C | mA)	-
AE2 Alarm min/max :	0.0 - 120.0 (°C | A | kW)	0.0 - 120.0 (°C | A | kW)	0.0 - 120.0 (°C | A | kW)	0.0 - 120.0 (°C | A | kW)	0.0 - 120.0 (°C | A | kW)	-
Analogue output current value **min / max:**	0.0 - 0.0 mA	0.0 - 0.0 mA	0.0 - 0.0 mA	0.0 - 0.0 mA	0.0 - 0.0 mA	0.0 - 0.0 mA
Analogue output pressure value **min / max:**	0.0 - 0.0 bar	0.0 - 0.0 bar	0.0 - 0.0 bar	0.0 - 0.0 bar	0.0 - 0.0 bar	0.0 - 0.0 bar
Load kW:	92.0 kW	92.0 kW	47.0 kW	47.0 kW	92.0 kW	83.0 kW
Idle KW:	25.0 kW	25.0 kW	10.0 kW	10.0 kW	21.0 kW	46.0 kW
Motor kW:	0.0 kW	0.0 kW	0.0 kW	0.0 kW	0.0 kW	0.0 kW
Motor V:	400.0 V	400.0 V	400.0 V	400.0 V	400.0 V	400.0 V
Last Cos phi:	0.9	0.9	0.95	0.9	-0.9	-0.9
Idle Cos **phi:**	0.6	0.6	0.7	0.6	0.6	0.6

Pressure switching points	Pmin	Pmax	PAlarm
DP 01	5.7 bar	6.2 bar	5.4 bar
DP 02	3.8 bar	4.8 bar	3.3 bar
DP 03	4.1 bar	5.1 bar	3.6 bar
DP 04	4.1 bar	5.1 bar	3.6 bar

Configuration table 2

Rankings	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
RF 01	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
RF 02	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
RF 03	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1
RF 04	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1	1

Compressor change times				
Compressors	m3/min	Hour	Minute	
with	7.1	04	00	
Compressors	m3/min	Hour	Minute	
with	16.1	04	00	

Control parameters			
delay time	Minute	second	
Start-up	0	40	
Below	0	20	
Above	0	20	
Safety margin	bar		
Below	0.15 bar		
Above	0.1 bar		

Master analog inputs	Sensor type	Min	Max	Alarm Min	Alarm Max
AE 1	System pressure	0.0	16.0		
AE 2	flow	0.0	50.0	0.0	50.0
AE 3	-	0.0	0.0	0.0	0.0
AE 4	flow	0.0	25.0	0.0	25.0

Accessory modules

Timer						
SP	weekday	Time (hrs/min)	On/Off DP	RF	R1	R2
No switching points programmed						

Network settings	
IP address	192.168.0.100
Subnet mask	255.255.255.0
Default gateway	192.168.0.1
MAC address	00.50.C2.72.AB.CB

Miscellaneous	
Language	German
VSD Extend	2 (default)
Alarm delay times for	
Compressor malfunction	30 seconds
Analog inputs compressor module	30 seconds
Analog inputs master module	30 seconds
Analog inputs accessory module	30 seconds
Digital inputs accessory module	30 seconds

Ready Internet 100%

Creating a data archive

Prepare a ZIP file of operating data for a functional check or a support enquiry.

Settings > Remote control > Data archive

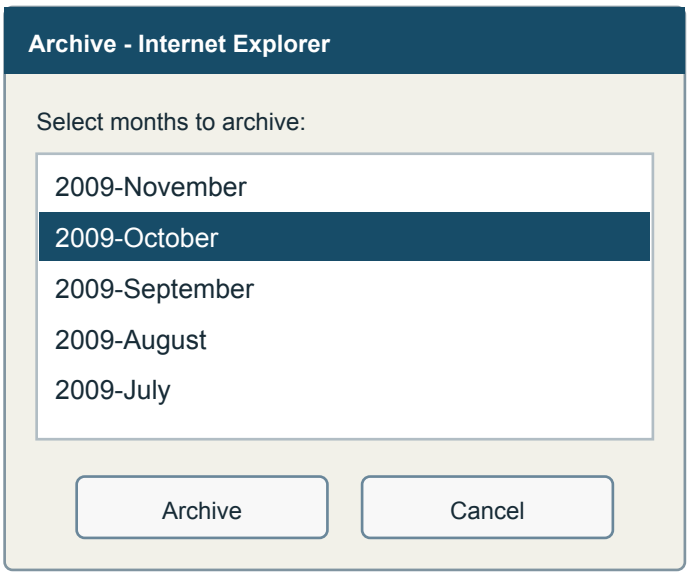
1 Choose what to archive

Archive all data: include the complete data set.
Create partial archive: include only the selected months.

2 Select the months and create the archive

For a partial archive, select one or more months and click **Archive**.

Creating the ZIP file may take some time. When complete, it appears automatically in the archive list.



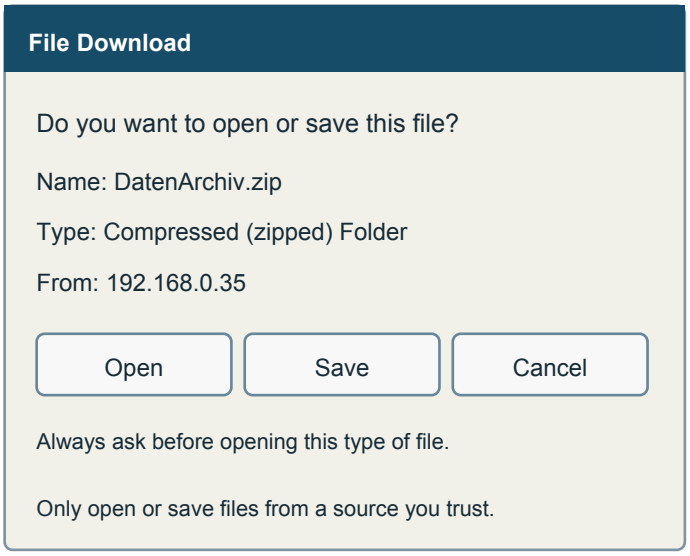
3 Open or save the ZIP file

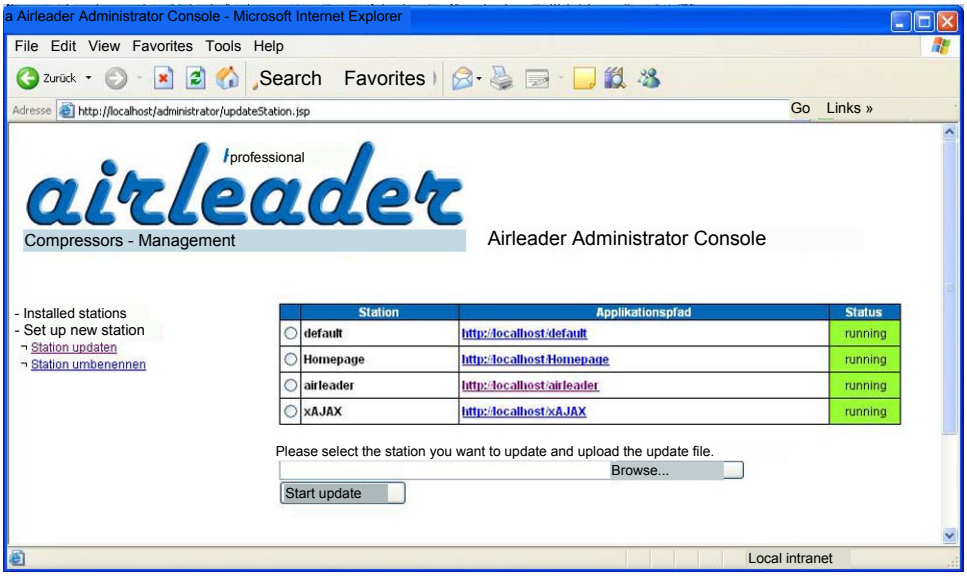
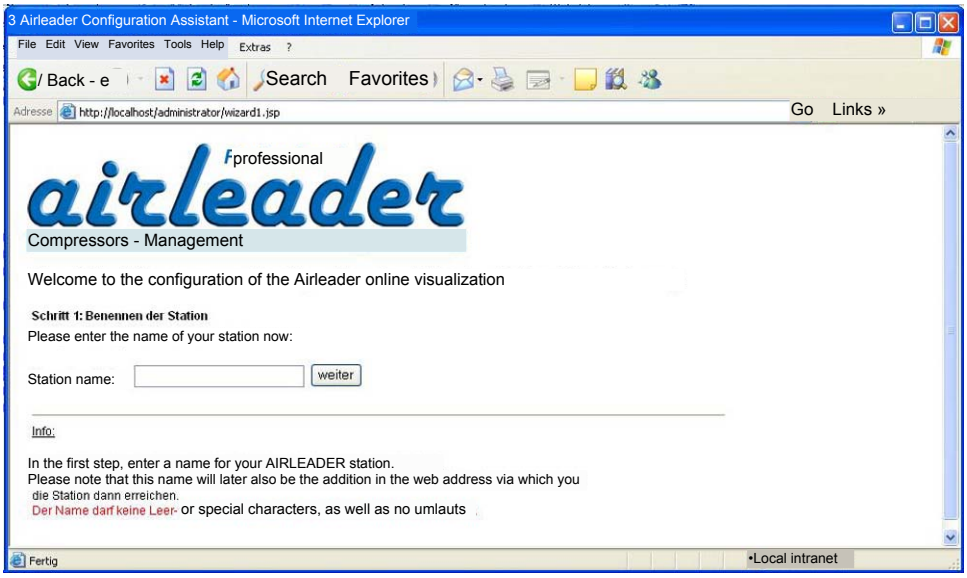
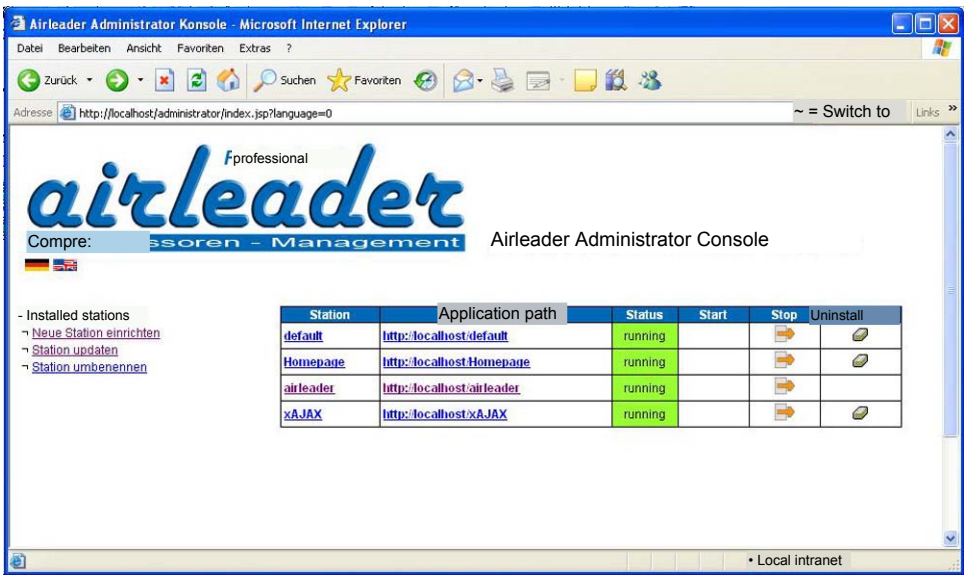
Click the completed archive in the archive list.

Open displays the contents of the ZIP file.

Save saves the ZIP file to a folder on your computer.

Attach the saved **ZIP file** to your support email.



UPDATE with integrated ADMIN TOOL

You can find the ADMIN TOOL at http://<server>/administrator. This allows you to update the web server and visualize several AIRLEADER Master modules. Password like for the Airleader online visualization. The overview provides a list of all installed stations. "Update station" You can download the current software archive for updating the web server at www.airleader.de. Once this is finished, click on the station you want to update in the list. Use "Browse" to select the software archive on your local hard drive. With "Start update" the archive is loaded onto the web server and the update procedure begins. This process takes a few minutes. The overview will then appear again. The updated station has now stopped. It can be started again by clicking on the icon in the "Start" column. The update is now finished. Multiple stations If you operate multiple compressor stations, this procedure must be carried out separately for each station. Set up new station: you can set up new stations with the AdminTool. - call up the AdminTool - click on "Set up new station" - enter a new path.