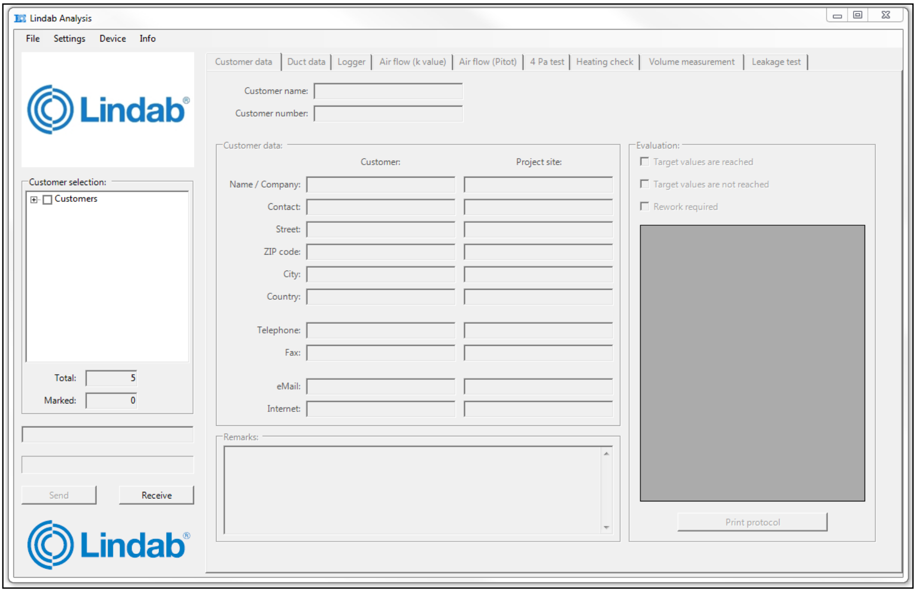
Manual
Lindab Analysis

PC-Software Lindab PC 410 and LT 600

for data management and online measurement
with logger function



Art. n°. 23110 –2016-05-17

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1 Application

The Lindab Analysis Software supports the analysis of the measurement data of the Lindab PC 410 and LT 600.

2 System requirements

A state-of-art-PC with one of the following operating systems is needed:

- Microsoft Windows 2000
- Microsoft Windows XP
- Microsoft Windows Vista
- Microsoft Windows 7
- Microsoft Windows 8
- Microsoft Windows 10

Additionally the Microsoft .net Framework Version 2.0 must be installed. Normally this is part of the Windows operating system or it can be downloaded from the Micorsoft homepage free of charge.

Before activating the update function (see chapter. 6.2) connect the PC to the Internet.

3 Installing and Starting the Analysis Software

- Start the installation by running the installation file.

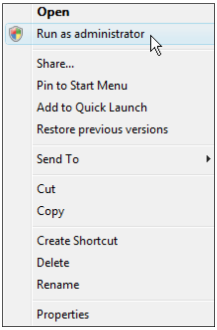


Fig. 1: Installation Microsoft Windows 7

NOTE!
If you work with Windows 7 or higher, an error message concerning your administrator rights may appear when you open the Exe-File. In this case click the right mouse button on the file icon and select "Run as administrator".

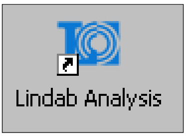


Fig. 2: Icon Lindab Analysis

After the software has been installed, the Icon "Lindab Analysis" will appear on the desktop.

4 Software Functions

- The Software helps to prepare the measurement: Create customer files with the software and transfer them to the instrument (see chapter 7 (send))
- After the measurement you can transfer the records from the instrument to the software (see chapter 7 (receive))
- With the software you can store, comment, document and print the measurement records.

5 Create a new customer file and describe measurement points

After starting the Lindab Analysis Software, the following main screen will appear:

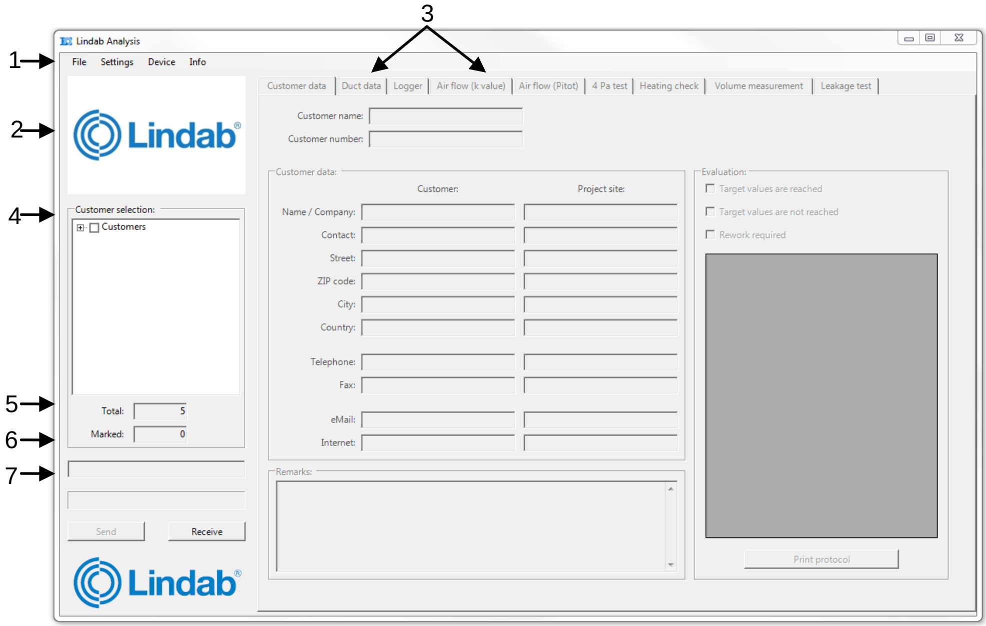


Fig. 3: Main screen

	Function
1	Menu bar
2	Company logo (see chapter 6.2)
3	Types of measurement: Analysis of the measured data
4	Customer Overview (Administration and creation of customer files, see next page)
5	Number of customers
6	Number of selected customers
7	Progress bar
Buttons Send/Receive	Datatransfer from and to the Lindab PC 410 or LT 600 (The button “send” will only be activ, if at least one customer has been selected.

Create a new customer file and describe measurement points

New Customer

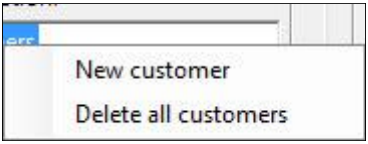


Fig. 4: Customer menu

- In the main view, click on "customers" with the right mouse button to create a new customer file (see fig. 3, part 4).

A window will open with the options "New customer" and "Delete all customers".

New customer

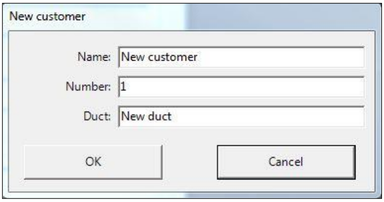


Fig. 5: Creating a new customer file

- Select "New customer" and enter the customer name, a customer number (if requested) and the name of the first duct.
- In the field “Duct” enter the duct section or the point, where the measurement has been done. It is possible to make various entries to describe the duct section or measurement point.

> *NOTE!*
> *If you want to change the name or the number of the customer, click with the right mouse button on a customer file. A window will open with the option "Rename customer".*

New Duct / measurement point

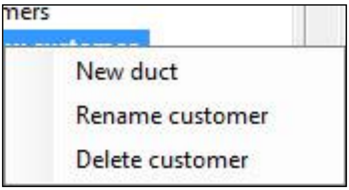


Fig. 6: Creating a new duct

- With the right mouse key, click on the customer. A window will open with the options "New duct", "Rename customer" and "Delete customer".
- Select "New Duct".

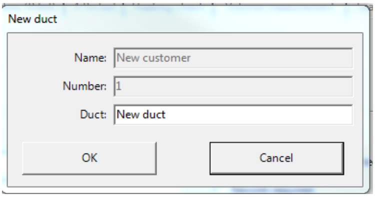


Fig. 7: Enter the text or number to describe the duct

The duct window will be active then.

- In the field “duct” enter the number or text to describe the duct section or measurement point.

NOTE!
Before starting the working day, you can create customer files on your PC and transfer them to your measurement device. After the working day you can transfer the customer files with the new records back to your PC, where they can be analyzed.

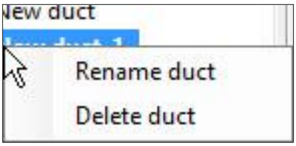


Fig. 8: Rename duct

NOTE!
It is possible to rename or delete the duct with a right mouse click on the duct. A window will open with the options “Rename duct” or delete duct”.

Delete all customers

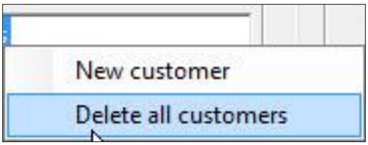


Fig. 9: Delete all customer files

- To delete all customer files proceed as follows: right click with the mouse button on “Customers”.

A window will open with the options “New customer” and “Delete all customers”

- Select "Delete all customers" if you want to delete all existing customer files with all records.

6 Menu navigation

6.1 File Menu

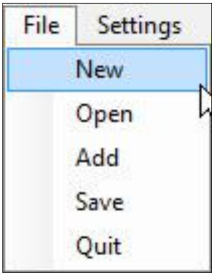


Fig. 10: File menu

The file menu has the following options: New, open, add, save and quit.

Option „New“

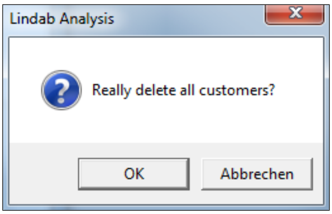
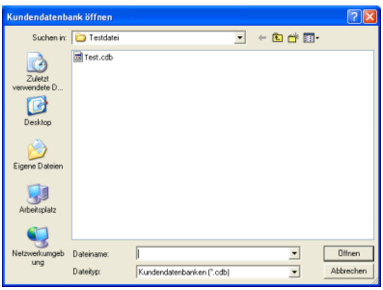


Fig. 11: Delete all customers

If you click on **File > New**, a window will open with the question “Really delete all customers?”

- Confirm with OK, if you want to delete all the records.
- After that, create new customer files as described in chapter 5.

Option "Open"



- Open a file (.cdb) with measuring records, that has been stored on the PC.

Option "Add"

- Add new data to the open file.

Note!
Make sure that you never use a file name twice!

Option "Save"

- Save the current records as a file on your computer.
- Name the file.

Option "Quit"

- Close the program.

6.2 Settings Menu

Option "Company logo"

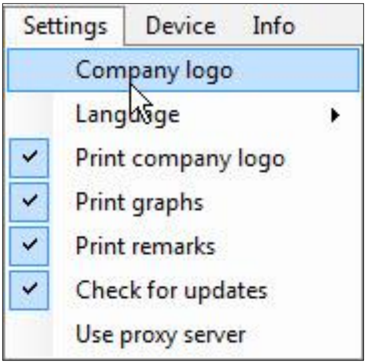


Fig. 12: Settings Menu

- Select Settings>Company logo

You can insert your own company logo, if it is stored as a graphic file on your PC. The logo will appear in the upper left corner of the screen and on the right top of each printout. Appropriate file formats are bmp, jpg and gif.

The logo will be saved, even when the program is closed and opened again.

Option "Language"

- The following languages can be selected: English, German, Swedish and French.

Option "Check for updates"

- If you activate this option with a check mark, the program will update automatically, when there is a new software version.

Option "Use proxy server"

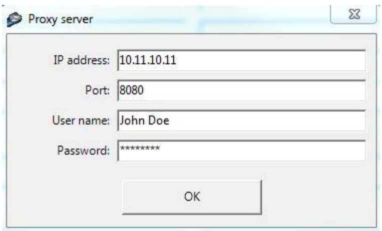


Fig. 13: Entering proxy server data

- Activate this option, if you want to access Internet via a proxy server. The "Proxy server" window will open where you can enter the access data.
- If you do not know the correct data, please ask your IT department.
- Enter the correct data and confirm with OK.

6.3 Device Menu

6.3.1 Option "Online measurement"

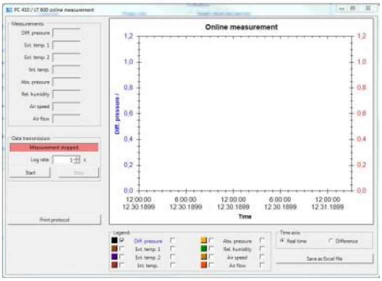


Fig. 14: "Online measurement" Screen

When you start the online measurement, the values will be transmitted directly to the PC.

- In the field "Log rate" enter the sampling interval.
- Connect the Measurement Device to the computer with the USB cable.
- Click on "Start" to start the online measurement; click on "Stop" to stop the online measurement.

For the graphic, see chapter 9.4, graphic.

6.3.2 Option "Firmware Update"

With the Lindab Analysis Software, it is possible to load the latest firmware version to your device. Proceed as follows:

- Connect the Lindab PC 410 or LT 600 to your PC via the USB cable and switch it on.
- In the menu bar of the software select Device>Firmware-Update PC 410/LT 600.
- Follow the instructions on the screen.

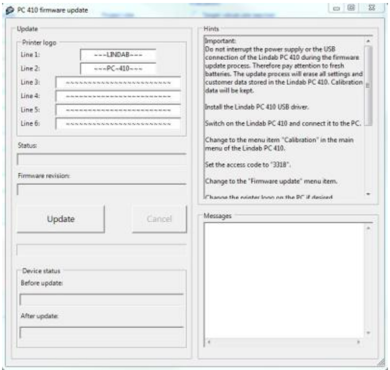


Fig. 15: Option "Firmware Update"

6.4 Info Menu

If you select Info > Update, the software version and the date of the last update will be shown. Press "Download" to download the latest software version.

> *NOTE!*
> ***For the Update the PC must be connected to the internet. It will not be necessary to download the update, if the automatic update function is activated (see. 6.2).***

7 Preparing the data transfer

7.1 Updating the device firmware

- Connect the Lindab PC 410 or LT 600 to your PC via the USB cable and switch it on.

NOTE!
The firmware version of your Lindab PC 410 is shown in the diagnosis menu of the device. (Press "Diag" during the first 10 seconds after the start).

The Lindab LT 600 shows the firmware version directly after the start.

7.2 Device settings

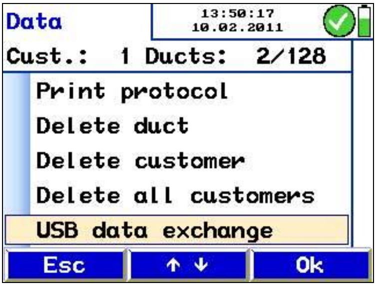


Fig. 16: "Data management" display of the Lindab PC 410

- Lindab PC 410: Select Data management > USB Data exchange.

The message "Ready" will appear in the Display.

- Lindab LT 600: This point does not apply for the LT 600

8 Data Transmission

- Click on "Send" to send the selected data from the computer to the device.

NOTE!
If you transfer data from the PC to the device, all the records stored on the device will be deleted.

- Click on "Receive" to start the data transfer from the device to the PC.

NOTE!
If the Program receives data, all customer data in the program will be replaced by the records stored in the instrument. To avoid this, save the existing data under a different file name.

After the data transfer the text "Transmission succeeded" will appear and the number of transfered ducts will be indicated.

9 Analysis of the measurement results

After the data transfer the measurement results can be analyzed with the PC and printed out on a printer.

Select a customer and a duct (see chapter 5).

The menu of a certain measurement type will only be activated, if measurement records have been stored.

NOTE!
Those sub menus where no records are stored are not active.

9.1 Printing the protocol

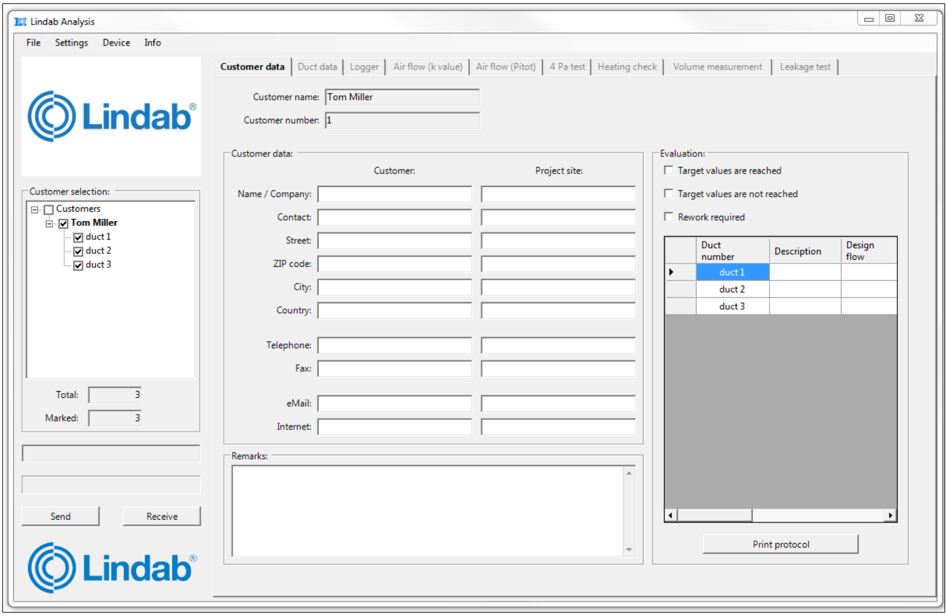


Fig. 17: Customer data menu

The protocol gives a clear overview of the PC 410 records concerning the duct of a certain customer.

The selected ducts appear on the right in the field "Evaluation". The user can evaluate the results and his evaluation will appear on the printout.

The report specifies the measurement results, the customer- and project names as well as the measurement instrument.

It is possible to preview the results before printing. Press "print records" to start the printout.

NOTE!

If a pdf printer is installed on the PC, press "print records" and select the pdf printer to generate a pdf.

Where required, the pdf file can be pasted into a report.

9.2 Example Air flow (k value)

Fig. 18: Measurement mode "Air flow (k value)"

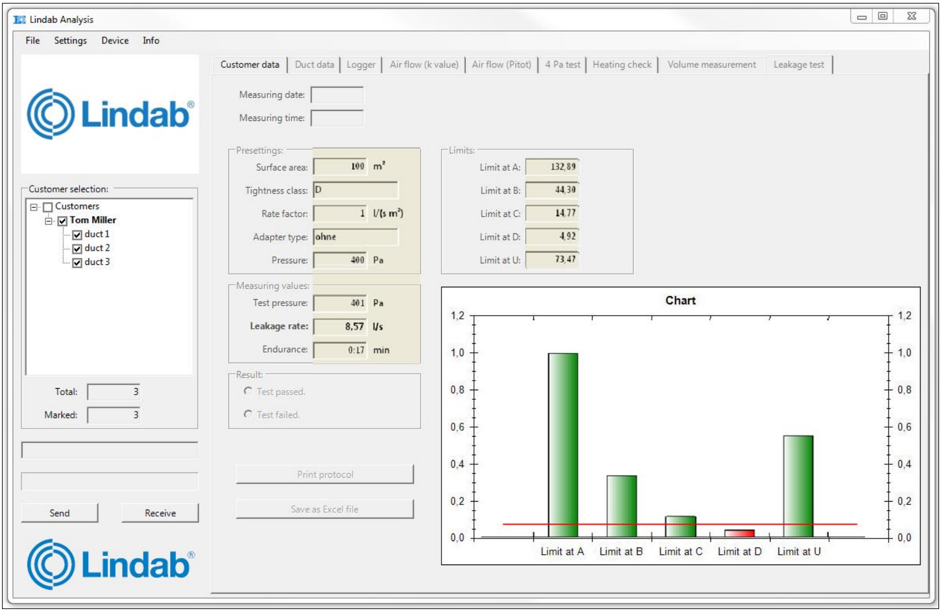
Measurement date and time	Select a customer and a measurement mode. The date and time of the measurement will be indicated. (Only if you have stored measuring records under this customer before).
Presettings	Your presettings are listed here.
Measuring values	The measurement results are listed here
Print protocol	Click on "Print protocol" to start the printout.

NOTE!

If a pdf printer is installed on the PC, press "print protocol" and select a pdf printer to generate a pdf. If a pdf printer is installed on the PC, press "print protocol" and select a pdf printer to generate a pdf.

Where required, the pdf can later be inserted in a report.

9.3 Example Leakage test



The measurement report can only be printed for a single measurement. The report contains the same information as the printout of the printer TD 100.

9.4 Explications concerning the data analysis

Measuring date and time

Select a customer and a measurement mode.

The date and time of the measurement will be indicated. (Only if you have stored measuring records under this customer before).

Presettings

Here the presettings are listed.

Measuring values

Here the measurement results are listed.

Result

Here the user can evaluate the measurement. The evaluation will appear on the printout.

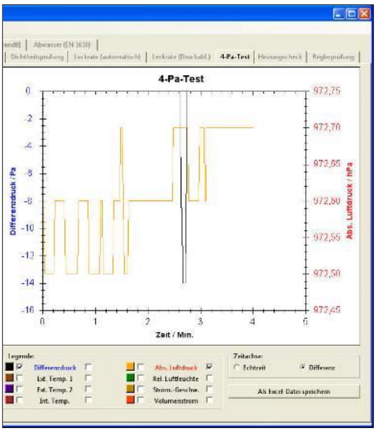
Print protocol

Click on "Print protocol" to start the printout.

NOTE!
If a pdf printer is installed on the PC, press "print protocol" and select a pdf printer to generate a pdf. If a pdf printer is installed on the PC, press "print protocol" and select a pdf printer to generate a pdf.

Where required, the pdf can be pasted in a report.

Graph



The user can select, which value shall be indicated in the graphic. The graph will appear in the color which is shown in the explanation next to the selected value.

By setting a check mark in front of or behind the value, the user can also select on which axis the values will be shown.

NOTE!
In the figure on the left the differential pressure is shown on the left axis and the barometric pressure is shown on the right axis.

It will be useful to show the values on different axis, when there is a big difference between the amount of the values. If the differential pressure and the barometric pressure where shown on the same axis, it would not be possible to recognize oscillations.

Time axis

Here the user can select between 2 options:

1. Clock time (Real time)

	2. Time that has passed since the beginning of the measurement (Difference).
Save as Excel file	Click on "Save as Excel file" to save the records in an Excel file. In the open dialog field, specify the path and file name where the file should be stored.

10 Lindab local

Contact your local Lindab distributor or find our representatives on www.lindab.com