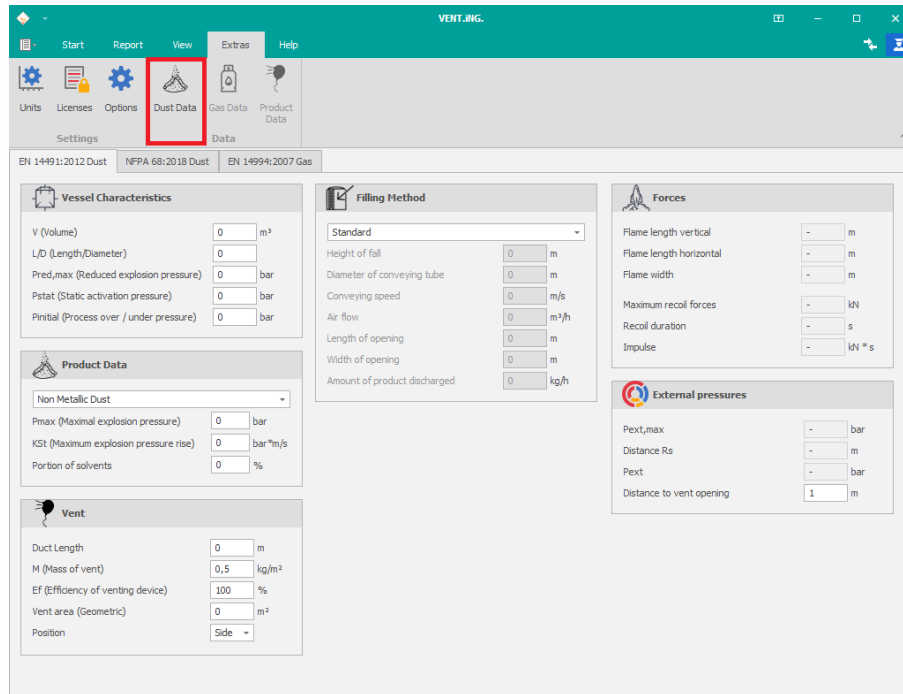


How to use VENT.ING Dust Data

It is possible to store different dust data in a data source and to select them via a selection table. The Data Source can be created, extended and used in a team.

Under the tab called "Extras" there is a grouping called "Data". Here you can click on the button "Dust Data" to open the main input mask.



The screenshot shows the VENT.ING software interface. The 'Extras' menu is open, and the 'Dust Data' button is highlighted. The main window displays various input fields for vessel characteristics, filling method, forces, product data, and vent parameters.

Vessel Characteristics

- V (Volume): 0 m³
- L/D (Length/Diameter): 0
- Pred,max (Reduced explosion pressure): 0 bar
- Pstat (Static activation pressure): 0 bar
- Pinitial (Process over / under pressure): 0 bar

Product Data

- Non Metallic Dust (selected)
- Pmax (Maximal explosion pressure): 0 bar
- KSt (Maximum explosion pressure rise): 0 bar*m/s
- Portion of solvents: 0 %

Vent

- Duct Length: 0 m
- M (Mass of vent): 0,5 kg/m²
- Ef (Efficiency of venting device): 100 %
- Vent area (Geometric): 0 m²
- Position: Side

Filling Method

- Standard (selected)
- Height of fall: 0 m
- Diameter of conveying tube: 0 m
- Conveying speed: 0 m/s
- Air flow: 0 m³/h
- Length of opening: 0 m
- Width of opening: 0 m
- Amount of product discharged: 0 kg/h

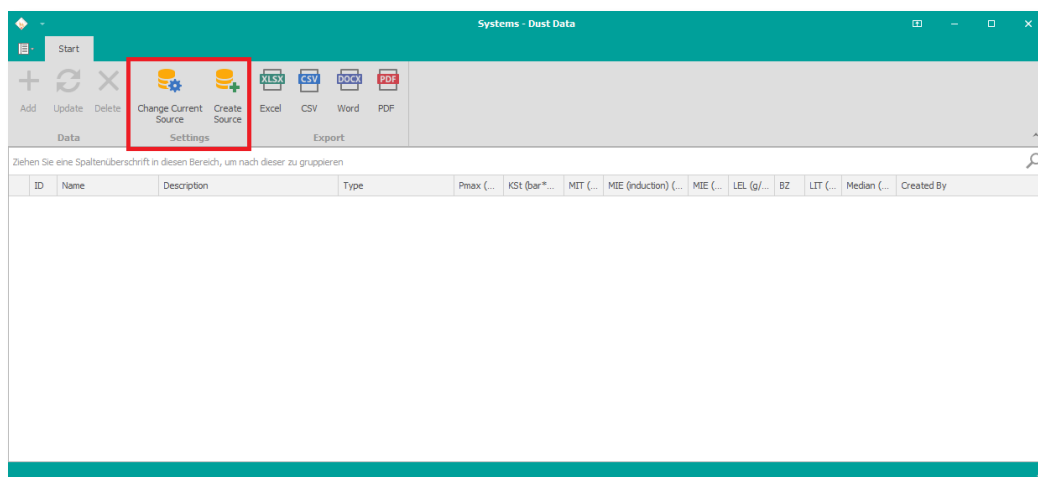
Forces

- Flame length vertical: - m
- Flame length horizontal: - m
- Flame width: - m
- Maximum recoil forces: - kN
- Recoil duration: - s
- Impulse: - kN * s

External pressures

- Pext,max: - bar
- Distance Rs: -
- Pext: - bar
- Distance to vent opening: 1 m

To include an already existing data source, you can click on the "Change Current Source" button. If you want to create a data source yourself, you have to click on the "Create Source" button.



The screenshot shows the 'Systems - Dust Data' window. The 'Data' section contains buttons for 'Add', 'Update', 'Delete', 'Change Current Source', and 'Create Source'. The 'Change Current Source' and 'Create Source' buttons are highlighted. Below the buttons is a table with columns for ID, Name, Description, Type, and various explosion parameters.

ID	Name	Description	Type	Pmax (...)	KSt (bar*...)	MIT (...)	MIE (induction) (...)	MIE (...)	LEL (g/...)	BZ	LTT (...)	Median (...)	Created By
Ziehen Sie eine Spaltenüberschrift in diesen Bereich, um nach dieser zu gruppieren													

In the "Create Source" mask, there are six fields. The Path field (1) and the Your Name field (2) are required fields, all others are optional.

The default password (3) is used to encrypt the data source. If no default password (3) is entered, the data source is not encrypted and anyone can manipulate the data with certain tools.

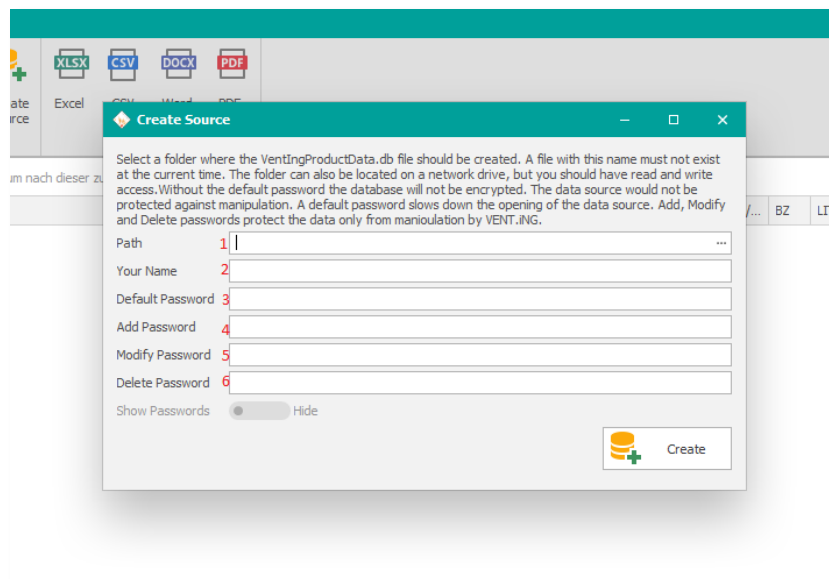
If you enter the add password (4) only people with this password can add data.

If you enter the modify password (5) only people with this password can edit data.

If you enter the delete password (6) only people with this password can delete data.

Without the default password (3) the data can be manipulated from outside no matter if the add (4), modify (5) or delete (6) password is known.

Without the default password (3) the data is only protected against manipulation by VENT.iNG.



Select a folder where the VentingProductData.db file should be created. A file with this name must not exist at the current time. The folder can also be located on a network drive, but you should have read and write access. Without the default password the database will not be encrypted. The data source would not be protected against manipulation. A default password slows down the opening of the data source. Add, Modify and Delete passwords protect the data only from manipulation by VENT.iNG.

Path 1

Your Name 2

Default Password 3

Add Password 4

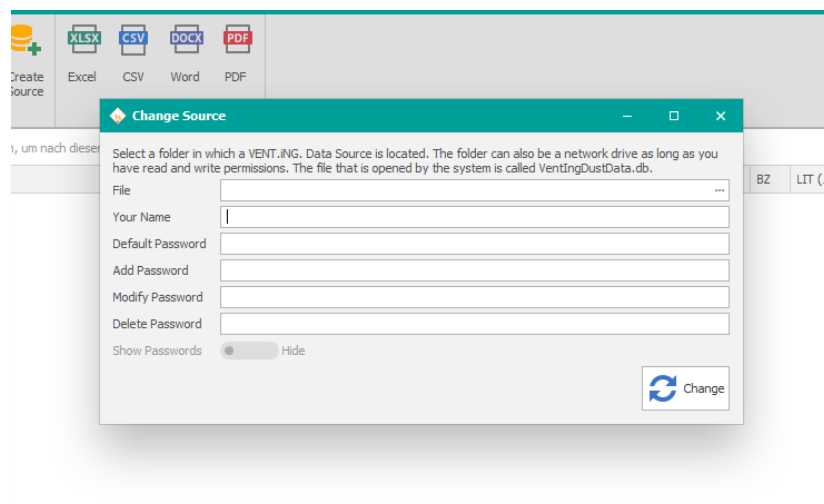
Modify Password 5

Delete Password 6

Show Passwords ☐ Hide

Create

The "Change Source" mask looks exactly like the "Create Source" mask. Here you need the passwords that were entered when creating the data source. If a default password was entered, this is mandatory. The other passwords are optional.



Select a folder in which a VENT.iNG. Data Source is located. The folder can also be a network drive as long as you have read and write permissions. The file that is opened by the system is called VentingDustData.db.

File

Your Name

Default Password

Add Password

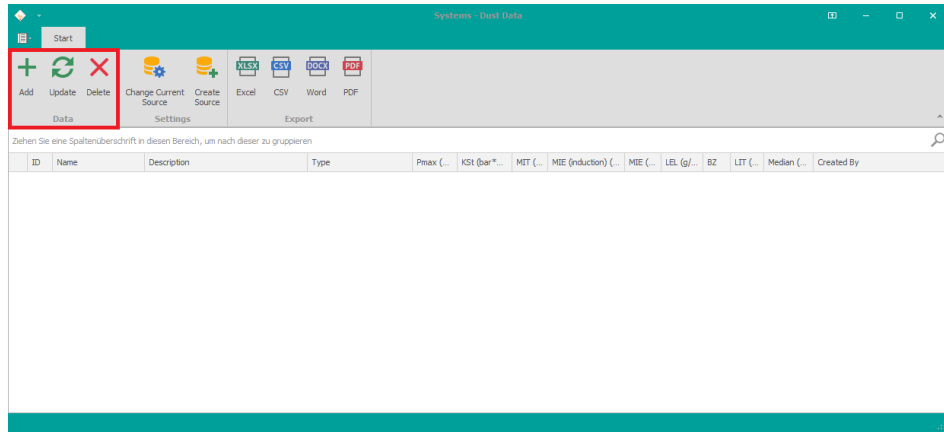
Modify Password

Delete Password

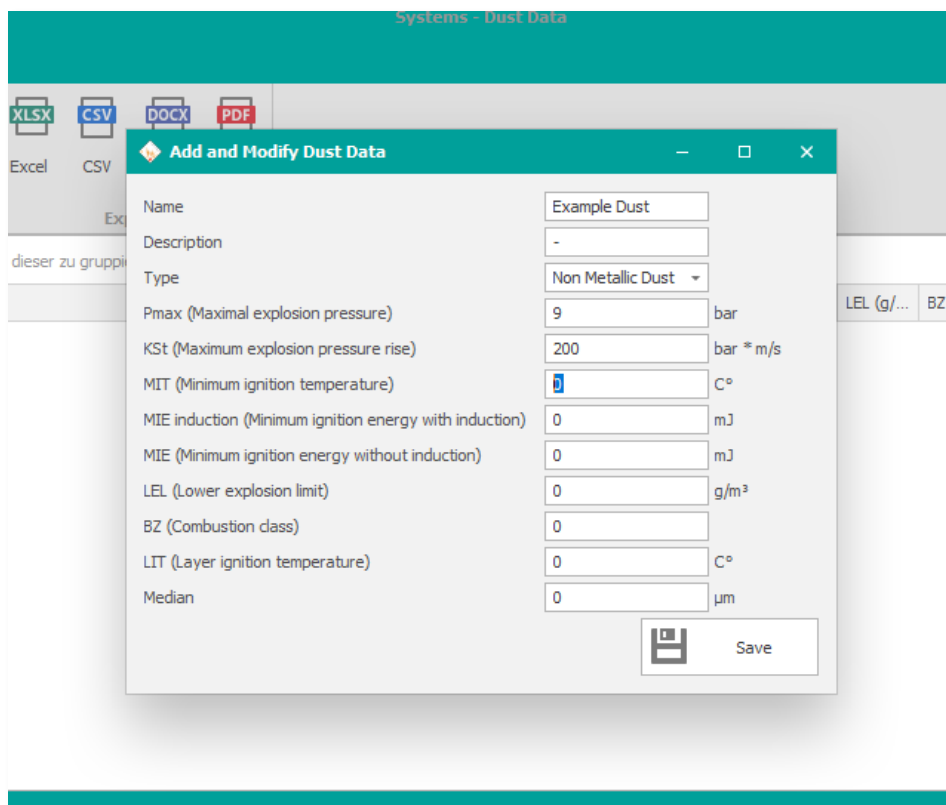
Show Passwords ☐ Hide

Change

Once you have integrated an existing data source or created a new one, it is possible to press three more buttons on the main input screen.



When you click on the Add or Update button, another screen appears for entering or changing data. with the Delete button, you can delete the entry you are standing on.

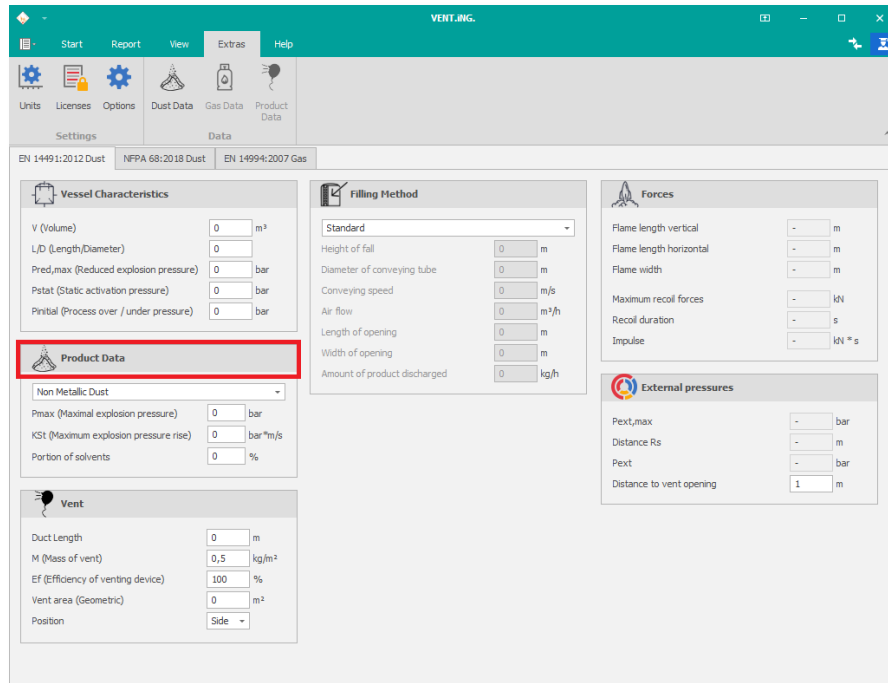


Add and Modify Dust Data

Name	Example Dust
Description	-
Type	Non Metallic Dust
Pmax (Maximal explosion pressure)	9 bar
KSt (Maximum explosion pressure rise)	200 bar * m/s
MIT (Minimum ignition temperature)	0 C°
MIE induction (Minimum ignition energy with induction)	0 mJ
MIE (Minimum ignition energy without induction)	0 mJ
LEL (Lower explosion limit)	0 g/m³
BZ (Combustion class)	0
LIT (Layer ignition temperature)	0 C°
Median	0 µm

Save

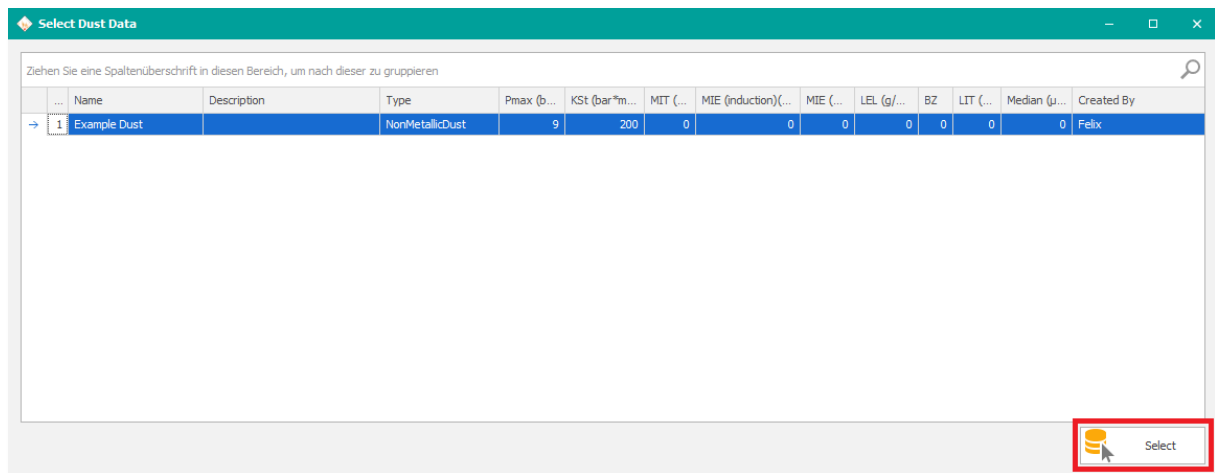
After you have created data, you can click on the group box with the name "Product Data". A selection table will appear.



The screenshot shows the VENT.iNG. software interface with the 'Product Data' group box highlighted. The interface includes a menu bar (Start, Report, View, Extras, Help) and a toolbar with icons for Units, Licenses, Options, Dust Data, Gas Data, and Product Data. The main area is divided into several sections: Vessel Characteristics, Filling Method, Forces, External pressures, and Vent. The 'Product Data' section is highlighted with a red rectangle and contains the following fields:

- Non Metallic Dust (dropdown menu)
- Pmax (Maximal explosion pressure) 0 bar
- KSt (Maximum explosion pressure rise) 0 bar*m/s
- Portion of solvents 0 %

Park on a record and click on the Select button.



The screenshot shows the 'Select Dust Data' dialog box. It contains a table with the following data:

...	Name	Description	Type	Pmax (b...	KSt (bar*m...	MIT (...)	MIE (induction)(...	MIE (...)	LEL (g/...	BZ	LIT (...)	Median (μ...	Created By
→ 1	Example Dust		NonMetallicDust	9	200	0	0	0	0	0	0	0	Felix

A red rectangle highlights the 'Select' button at the bottom right of the dialog box.