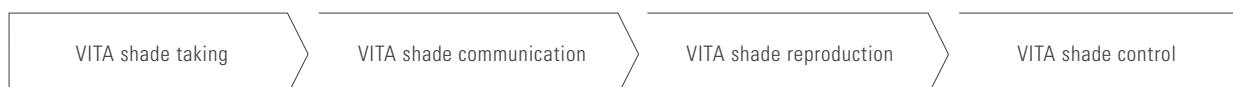
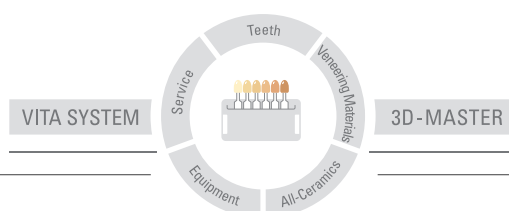


VITA FDS – Firing Data System

Operating manual



Date of issue: 04.11



VITA

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1 Preface

Dear Customer,

Thank you for purchasing a copy FDS (Firing Data System) software – the firing data administration program for the VITA device series: VITA VACUMAT 6000 M / MP / VITA ZYRCOMAT 6000 MS.

The FDS program enables you to archive and manage the firing process data according to quality assurance requirements.

Please read the Operating Manual before installing the software.

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2 Scope of delivery

- 1 CD containing FDS software and operating instructions as PDF file

3 Installation

3.1 PC system requirements:

- Windows XP (Service Pack 2 or higher)

3.2 Installation

- Insert the CD into the CD drive and follow the instructions on the screen.
- The FDS application will be installed in 2 separate subdirectories. One application directory and one data directory.
- Important! Administrator rights are required to install the software.
- Installation directory of the application:
Once the installation is completed the FDS program is located in the directory **<program files>\VITA\VITA-FDS**.

Depending on what Windows version is used **<program files>** may refer to different paths, e.g. in the English version of Windows XP **<program files>** stands for **C:\program files**.

- Installation directory of the data:
By default FDS searches for data in the directory **C:\VITA\VITA-FDS**.
The individual databases are saved in this directory.

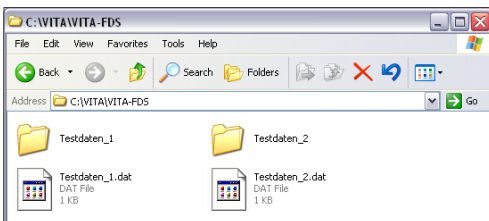
4 Databases

Very many process data files of individual firings accumulate over time. It is recommended to use FDS to merge these individual files into one or more databases in order not to lose track of them.

The databases are used to easily manage and edit all process data logged in the firing device.

Using the databases the process data of individual firings can be viewed, edited, searched by certain criteria, printed, archived, and new process data can be imported.

In FDS a database consists of an index file **<filename.dat>** and a corresponding subdirectory **<filename>** with individual data record files (logged process data).



The following figure shows two databases:

Testdaten_1 and **Testdaten_2**

By default FDS creates the databases in the directory **C:\VITA\VITA-FDS**.

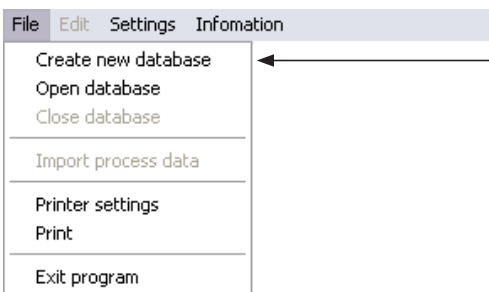
4.1 Create new database

File > Create new database

This menu option creates a new database in **C:\VITA\VITA-FDS**.

The name of the database can be chosen freely according to the rules for Windows file names, i.e. only letters and numbers may be used.

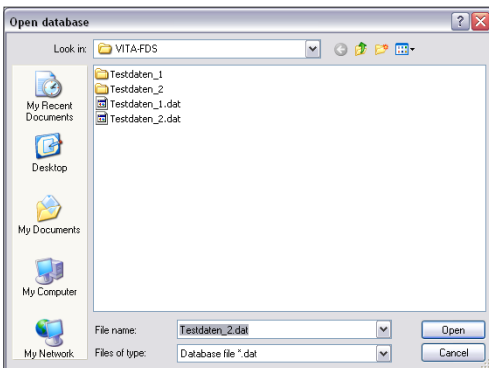
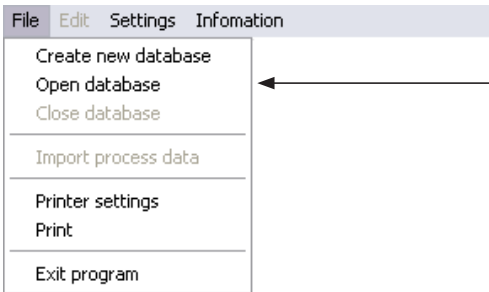
A USB stick is required to import the process data from the firing device into the database, see Section 4.4.



4.2 Open database

File > Open database

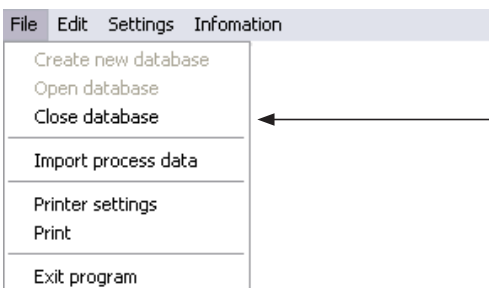
The menu option **Open database** opens a range of databases in the directory **C:\VITA\VITA-FDS**. After the appropriate database is selected it will be opened for editing by pressing the **Open** button.



4.3 Close database

File > Close database

The menu item **Close database** quits the editing of the previously created or opened database and writes back all unsaved data to the volume.



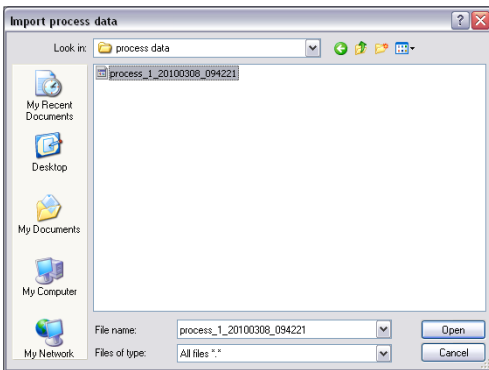
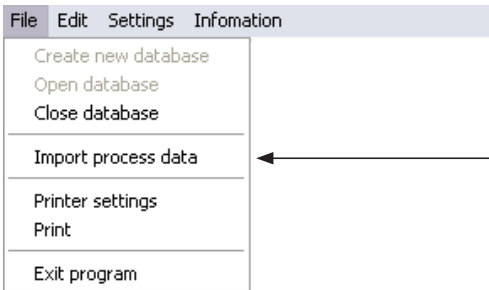
4.4 Import process data

File > Import process data

This menu item imports a process data file from a volume (e.g. USB stick) into an open database.

Select the desired process data file and click the **Open** button.

The content of the imported process data file will instantly be displayed in the program.

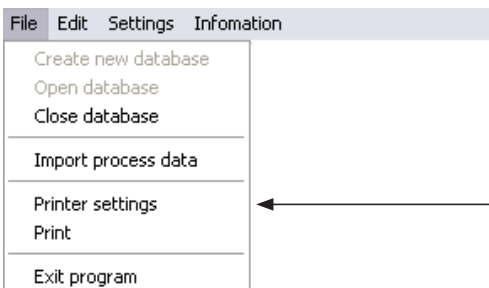


If more than one process data files are imported at a time, the content of the last process data file will be displayed.

4.5 Printer settings

File > Printer settings

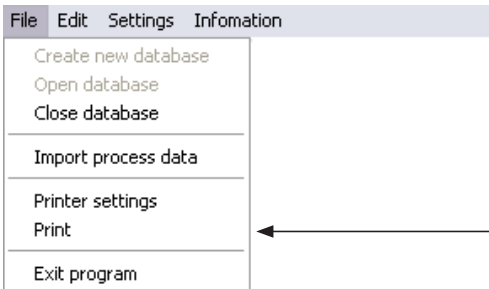
Here the default Windows printer settings can be specified, e.g. select printer, set properties, orientation, etc.



4.6 Print

File > Print

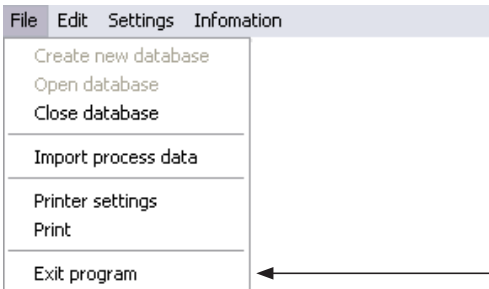
Here the number of copies and the printer can be selected. The current process data record is printed by pressing the **OK** button.



4.7 Exit program

File > Exit program

The FDS program is closed by selecting the menu item **Exit program**.



5 Graphic display

The graphic display shows the chronological sequence (in min) of the firing curve.

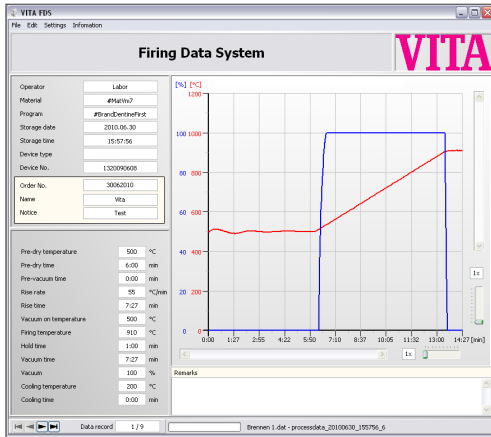
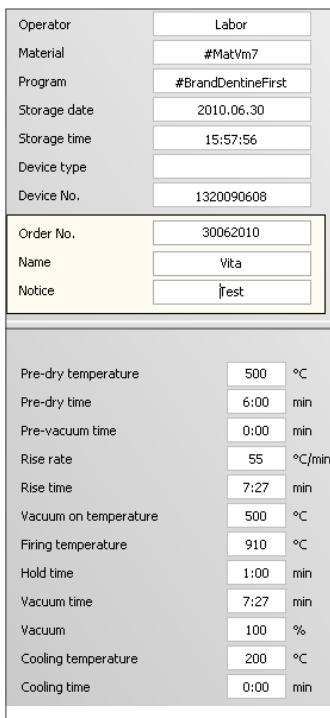


Figure 1 shows a 1-step firing program



On the left side the following parameters are displayed:

- Operator
- Material
- Program
- Storage date
- Storage time
- Device type
- Device number
- Device number
- Order number*
- Name*
- Notice*
- Pre-dry temperature
- Pre-dry time
- Pre-vacuum time
- Rise rate**
- Rise time**
- Vacuum on temperature** (initial temperature for vacuum)
- Firing temperature**
- Hold time**
- Vacuum time**
- Vacuum**
- Cooling temperature
- Cooling time

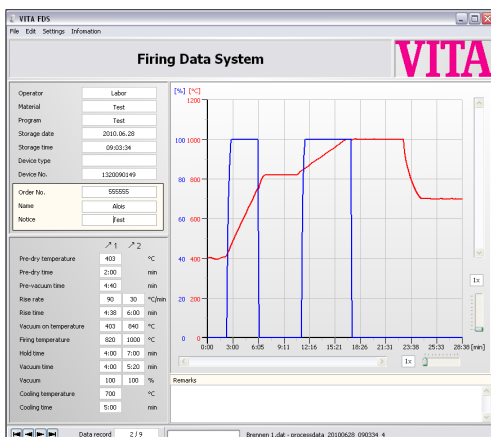


Figure 2 shows a 2-step firing program

All process data listed above will automatically be saved in the furnace and cannot be changed afterwards due to quality assurance. (excepting the data marked with *)

- * The boxes with the light yellow background (Order number, Name, Notice, and Remarks) can be filled in or changed by the user subsequently.
- ** The process data for 2-step firing programs (2 rises and 2 holding steps) are displayed in 2 columns accordingly.

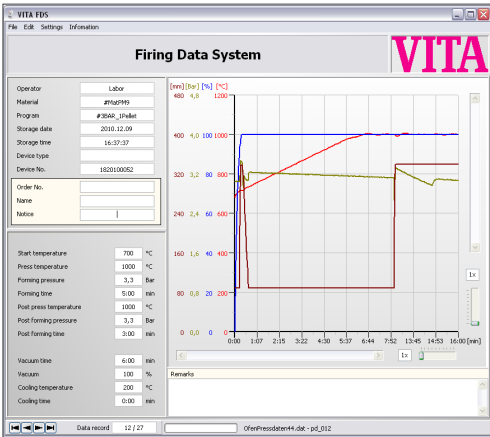


Figure 3 shows a pressing program

The following parameters are displayed for process data of pressing programs:

Start temperature	700	°C
Press temperature	1000	°C
Forming pressure	3,3	Bar
Forming time	5:00	min
Post press temperature	1000	°C
Post forming pressure	3,3	Bar
Post forming time	3:00	min
Vacuum time	6:00	min
Vacuum	100	%
Cooling temperature	200	°C
Cooling time	0:00	min



On the left side the following parameters are displayed:

- Start temperature
- Press temperature
- Forming pressure (1)
- Forming time (1)
- Post press temperature
- Post forming pressure (Press pressure 2)
- Post forming time (Pressing time 2)
- Vacuum time
- Vacuum
- Cooling temperature
- Cooling time

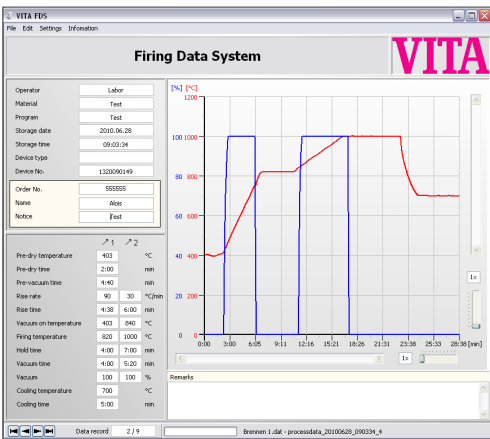


Figure 4 shows a 2-step firing program

5.1 Zoom in / zoom out

The desired zoom factor can be specified using two separate

sliders for width and



height (see figure on the right).
(See page 9, Figure 2)



The specified zoom factor will be displayed in the adjacent box, e.g. 2x (means zoom factor x 2). The maximum zoom factor is 10x.

5.2 Move section

Move the **scroll bar** in the desired direction to move the firing curve sections up or down.

Move the **scroll bar** below in the desired direction to move the firing curve sections to the right or to the left. (see page 9, figure 1)

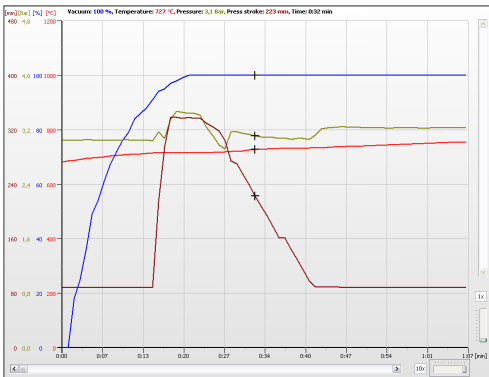
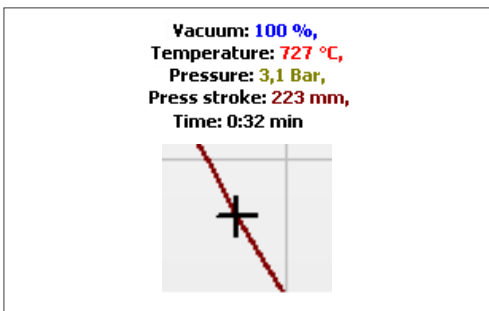


Figure 5 shows a pressing program

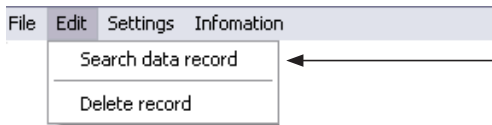
5.3 Firing curve view and evaluation of parameters

Scaling:

The temperature values (in °C or °F) and the vacuum values (in %) can be read off the vertical x-axis. The horizontal y-axis shows the time in minutes. The red curve indicates the temperature progress, the blue curve shows the vacuum progress. When evaluating the pressing program the brown curve indicates the press stroke, the green curve shows the press pressure.

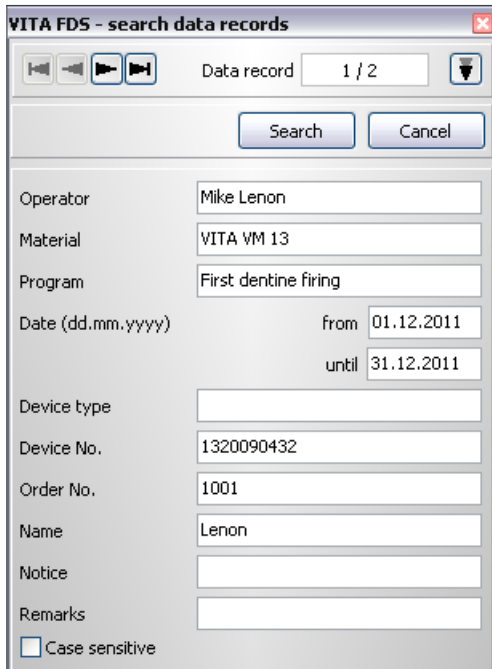


Using the **cursor „+“**, specific program sections can be viewed as well. The line above the figure displays the values of the selected section.



6 Edit

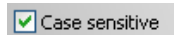
6.1 Search data record



The following criteria can be used to search for process data sets:


Operator
Material
Program
Date (from)
Date (until)
Device type
Device number
Order number
Name
Notice
Remarks

If the search should be **case-sensitive**, the corresponding option must be selected by clicking it.



The **Data record** box shows the number of search hits.

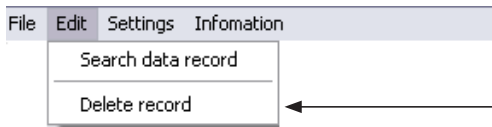


The **buttons**  can be used to browse through the data records.

The search mask can be hidden using the  **button** .

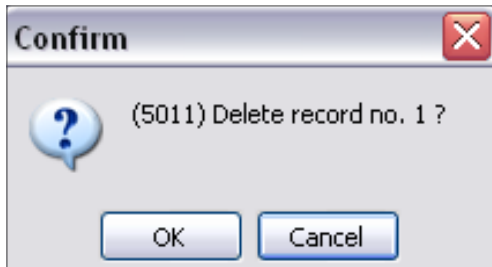
Use the  **button** to display the search mask again.



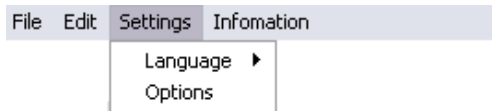


6.2 Delete record

After selecting the menu item Delete record you are prompted to confirm the deletion of the record displayed.



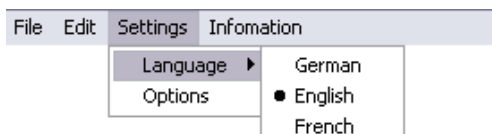
The current record will be permanently deleted by pressing the **OK** button.



7 Settings

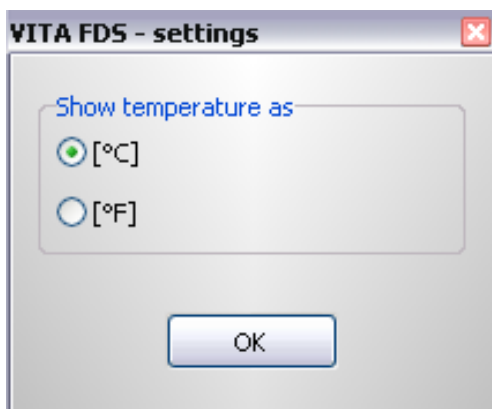
7.1 Language

Here one of the following languages can be selected: **German, English, and French**. After selecting the desired language the program must be restarted.



7.2 Options

Here the temperature display can be set to **°C** or **°F**.



8 Information

8.1 Help

When the menu item **Help** is selected a PDF document will be opened in a separate window. Enter the desired term in the search window and start the search.

The 'Acrobat Reader' software by Adobe is required to view and print the PDF document. A free download of the software is available at <http://get.adobe.com/de/reader/>.

8.2 About VITA FDS

Here you find general information on the software.

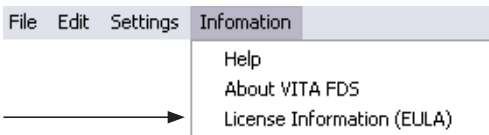
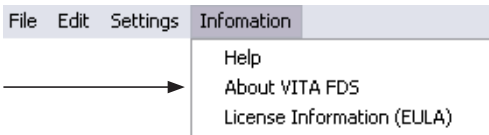
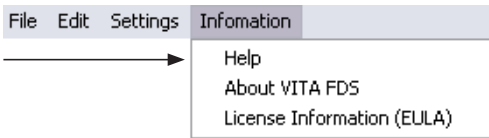
8.3 License information (EULA)

Here you find the software license agreement. Please observe this information.

9 Warranty and liability

Warranty and liability are based on the contractual conditions.

It is prohibited to change or copy the software in any way. Unauthorized software changes lead to expiration of the liability and warranty claim and constitute a violation of the software license agreement.



10 Service

Further information about the device is available on the homepage:
www.vita-zahnfabrik.com/update-messenger/en

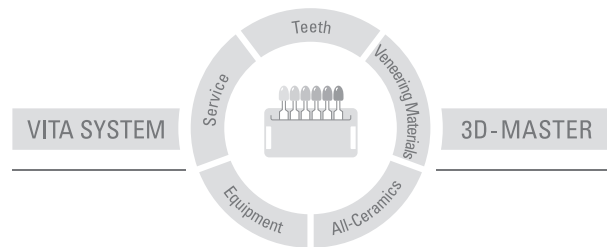
Software updates can be downloaded under Services / Equipment Servicing. Moreover there is also a registration possibility for the **VITA Update Messenger** to be automatically informed by email about new information on the device and software.

www.vita-zahnfabrik.com/update-messenger/en

Technical questions and questions concerning repair and warranty can be sent to the following email address:

instruments-service@vita-zahnfabrik.com

With the unique VITA SYSTEM 3D-MASTER all natural tooth shades are systematically determined and completely reproduced.



Please note: Our products should be used according to the working instructions. We cannot be held liable for damages resulting from incorrect handling or usage. The user is furthermore obliged to check the product before use with regard to its suitability for the intended area of applications. We cannot accept any liability if the product is used in conjunction with materials and equipment from other manufacturers which are not compatible or not authorized for use with our product. Furthermore, our liability for the correctness of this information is independent of the legal ground and, in as far as legally permissible, is limited to the invoiced value of the goods supplied excluding turnover tax. In particular, as far as legally permissible, we do not assume any liability for profit loss, for indirect damages, for consequential damages or for claims of third parties against the purchaser. Claims for damages based on fault liability (culpa in contrahendo, breach of contract, unlawful acts, etc.) can only be made in the case of intent or gross negligence.

Date of issue of these directions for use: 04.11



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