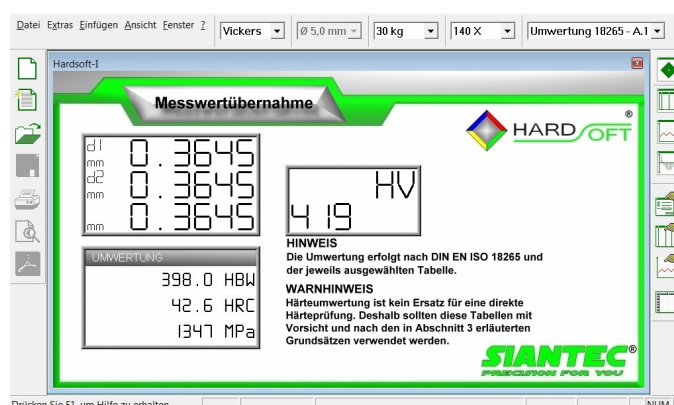
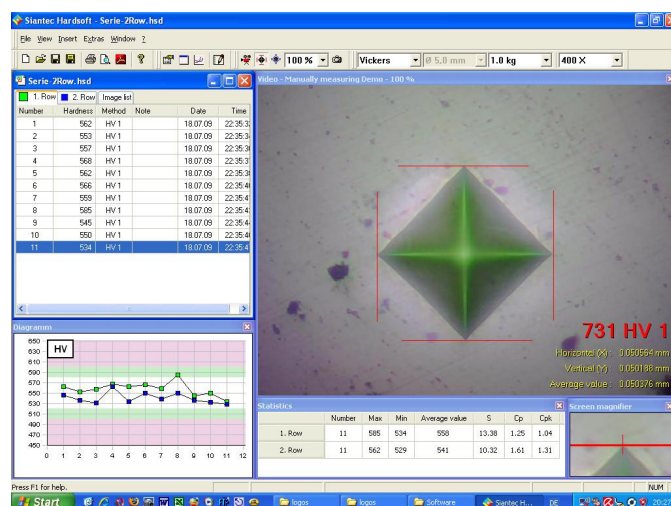




# User Manual



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## 1. Introduction

### General information

This manual describes the use of the Hardsoft system.

The installation of the software is described in the chapter "Installation", it is admittedly done by the Siantec-specialist staff before the delivery.

Please read the manual before you work with the equipment, to get familiar with the use of the system.

If you want to know more details of the possibilities of the system, please read the other chapters of the manual.

The chapter "Installation" describes the complete installation of the soft- and hardware, video-drivers for different hard-ware configurations, installation of the hardness-testing-software and the adaptation for the needs of the user.

The chapter "Calibration" describes the assembly and calibration of the Measurement-equipment.

This is normally done by the Siantec-technicians on-site after the installation of the system.

### **IMPORTANT:**

The accuracy of the tester highly depends of the calibration of the supervisor and the measurement-use of the operator. Therefore Siantec is not responsible for wrong or inexactly measurements.

The operator is responsible to set up the equipment as written in this manual and to understand all measurement-operations including all of them selected by the testing-program.

The accuracy should be checked frequently by test-calibrations, should be done by the quality-guidelines of the user.

Hardsoft-Users manual

Version: 2.5

Date: 2012-04-26

Author: Siantec

This manual is valid for all Hardsoft-versions from V 2.5

I am thankful for all suggestions for improvement and the note of possible mistakes.

Siantec

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## 2. Scope of delivery

The scope of delivery of the acquired system consists of:

- USB-camera or USB Frame-Grabber
- Camera adaptor for USB-camera
- Hardsoft 1.0 CD-ROM
- Digital micrometer for detection of the edge distance (option)
- Data-lead for digital micrometer (option)

## 3. Installation

Please note that when you install the software none of the hardware-components should be attached to the PC.

After inserting the CD-Rom the dialog "automatic-restitution" opens.  
Here you choose the common option "opening folder display files"  
Now the Explorer opens and you can see the contents of the CD-ROM.  
If the function AUTORUN is deactivated, choose the CD-ROM-drive in your explorer.

The setup menu can be started by double clicking on "cdmenu.exe".  
Follow the instructions on screen and choose according to your options.

The USB-converter on the CD-ROM is only required if USB-DMX is used. In this case the driver has to be installed according "DMX-USB Driver Installation .pdf"

In the folder "FreePDF" is the FreePDF Printer. This is necessary if you have not installed a PDF printer on your system, but want to create PDF files.  
This interface can be used by all programs, since this is a virtual printer.

Now connect the USB cable to the camera with a free USB2 - port of your PC.

**WIN-XP:** It appears the Found New Hardware Wizard. When asked "Do you want to connect to Windows Update to be made?" Select "No, not this time" and click [Next]. In the next window, select "Install the software automatically". It now displays a confirmation prompt is given in that the publisher of this driver software could not be verified. Here you can select "install driver anyway". In some cases the hardware installation is performed 2 times.  
Proceed at 2nd Same time.

**Win 7:** I get the error message "driver is not installed or not found"



























Open the Control Panel and then Device Manager! Here the camera is detected as an error.  
Double-click the icon, it opens the Properties dialog.

























Under the Driver tab, you need to update the driver. Select "Browse my computer for drivers"  
Now enter the path to your CD-ROM drive and the "Include subfolders" check the check mark. It appears that the driver is not verified. You choose to install anyway.

The camera is mounted via an adapter on the hardness tester, as well as the digital - micrometer (option) on the XY table.

## 4. Toolbars

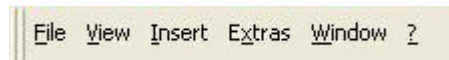
They have under the menu item "Tools - Customize" to choose between the small and large icons.

- |   |   |  |
|---|---|--|
|    |    | Open a new document with the standard sample.  |
|    |    | Opens the template directory with head data preview.   |
|    |    | Open a stored document.  |
|    |    | Opens the Import function of CSV files.  |
|    |    | Store a document.  |
|  |  | Store a document as...File.  |
|  |  | Print the chosen document in the normal report if in the options the selection before printing is not activated.                 |
|  |  | Page view of the chosen document in the normal report if in the options the selection before printing is not activated.          |
|  |  | PDF-edition of the chosen document in the normal report if in the options the selection before printing is not activated.        |
|  |  | Information about Hardsoft.. . Opens a information-window. Here you get information about the software version and the licenser. |
|  |  | Open the dialog "base setting".  |
|  |  | Open the dialog "chart setting".   |
|  |  | Open the dialog "diagram setting".   |
|  |  | Open the dialog "Head Data".   |

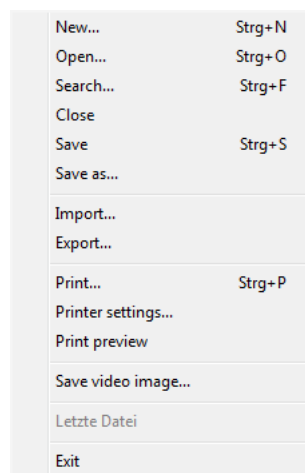
-   Change between live picture and frozen picture.
-   Switch between measuring with 1 diagonal and 2 diagonal.
-   In 45 degree modus here could shown auxiliary lines.
- 100 %  The video picture can be sized to 75%, 100%, 125%, 150%, 200%, 250%
-   Save the actual video picture.
- Vickers  Option of the wanted measuring method (Vickers, Brinell, Knoop)
- Ø 2,5 mm  Selection of the ball diameter at Brinell. Disabled when HV and HK.
- 3.0 kg  Option of the wanted test load. **Not active by machine control!**
- 200 X  Range of magnification.
- Umwertung 18265 - A.1  Conversion table in accordance with DIN EN ISO 18265.
-   Switch to full screen and window view.
-   Changes the view of the measured or video window.
-   Changes the view to the active document (table).
-   Changes the view of the diagram.
-   Changes the view of the statistics.
- RA (X)  
mm Displaying the X-distance, when a digital micrometer sends data.
- RA (Y)  
mm Displaying the Y-distance, when a digital micrometer sends data.

## 5. Menus

In this chapter all menu-functions are described in the order of their design on the monitor.



### 5.1 Menu "File"

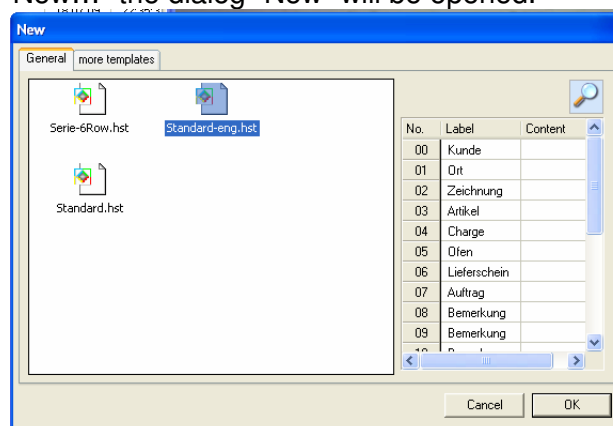


The "File"-menu contains instructions for saving and loading measuring data and test templates. The import from older versions, export to Excel and printing can be controlled here.

Also this menu contains the standard "End"-function, you can end the program also with [ALT]+[F4] or if you click on the [X] in the right upper corner of the window.

#### 5.1.1 File "New..."

If you click on the line "New..." the dialog "New" will be opened.



Your saved test templates including possible existing specifications appear. Choose one of your templates and load this with a click on OK.



### 5.1.2 File “Open...”

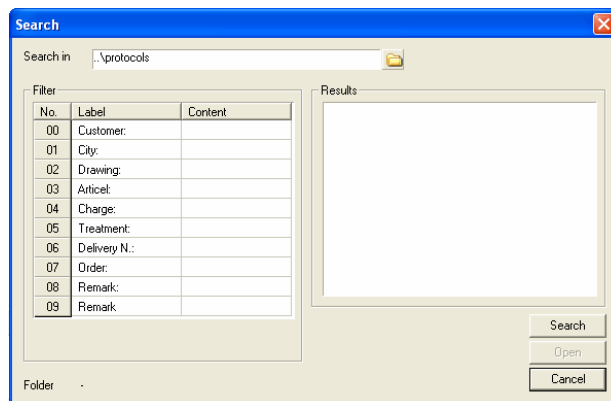


Saved test-documents can be opened by click on “Open File”

### 5.1.3 File “Search...”



Here you have the possibility to search for an already saved test-documents with the input of particular criteria.



Simply choose the place where you expect the file and enter the sought-after criteria. Then click on search and the consensususes are shown in the results. You choose one of the files and confirm with a click on “Open”.

### 5.1.4 File “Close“

Close the opened protocol-file. If the file is not saved yet you will be asked by a dialog if you want to close it without saving.

### 5.1.5 File “Save”

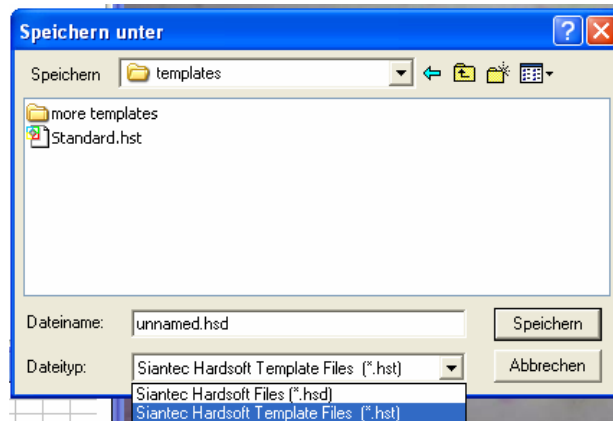


If you have given your protocol-file already a name you can save changes easy here.

### 5.1.6 File “Save as...”



This item is for saving your test-protocols and test-templates. If you want to save an template, you change the file-format in “.hst” and save this in your templates-directory.



Give the new sample a clear name and save it here. From now on the sample appears when you go to “File new...” in the window.

You also have the possibility in the sample-directory to create sub-folder. These are shown in the window as an index-card-rider.

### 5.1.7 File “Import...”

Here you can import older Test-protocoles with the ending “.csv”

### 5.1.8 File “Export...”

The export to Excel is controlled via an export template. Enter only one name, and Excel will open your file using the template set. Systemrequirements is, of course, that Excel installed on your PC.

### 5.1.9 File „Printing“ „Page view“ „Printer adjustment“



The output of the test-protocol is controlled her and a page view is generated..

### 5.1.10 File „Save Video image...”

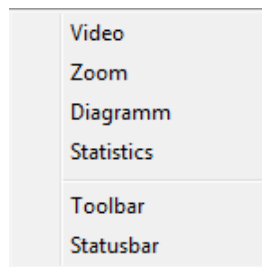


Here you can save the shown video picture as JPG-, BMP-, TGA- or TIF-Bitmap.

### 5.1.11 File „Last File“

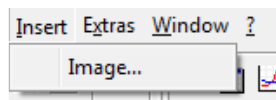
At this place the last 4 saved files are shown. You can choose and open them here directly.

## 5.2 Menu "View"



In this menu you see which windows are open and can make a accidentally closed window viewable.

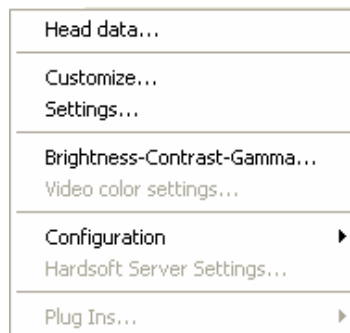
## 5.3 Menu "Insert"



The menu "Insertion allows you to put in graphic-files in your test-protocol. JPG, BMP, TGA and TIF formats are assisted.

These picture-files are inserted in the test-protocol when it will be saved. Therefore it is not necessary to save the origin-file.

## 5.4 Menu "Extras"



The menu "Extras" is including all for the configurations of the program needed settings as well as user-settings, the video-settings and the master data of the test-file.

### 5.4.1 Extras “Head data...”

Field-Id	Label	Content
00	Customer:	
01	City:	
02	Drawing:	
03	Article:	
04	Charge:	
05	Treatment:	
06	Delivery N°:	
07	Order:	
08	Remark:	
09	Remark	
10	Remark	
11	Remark	
12	Remark	
13	Remark	
14	HV surface:	
15	Auditor:	
16	Result:	
17		
18		
19		
20	Label	Hardness - Test - Protocol
21	Company 1	Siantec
22	Company 2	Schwarzbachstr. 13
23	Company 3	D-35708 Haiger
24	Company 4	Fon +49 (0)2773 9178395 Fax +49 (0)3212 1148817
25	Company 5	info@siantec.de www.siantec.de

The here opening window offers all possibilities to cover your for the documentation needed data.

- You have the possibility to label every field. You can just click on it and overwrite it.
- You also have the possibility to put in or remove fields. Please regard the field-ID, this will be in the report, as later described, defined.

Caution: These changes regard to the actually opened document. If you want to use these data permanent in your programme, it is necessary that you save it as standard exemplar.

### 5.4.2 Extras “Customize...”

In this menu you can adjust your tool-bars.

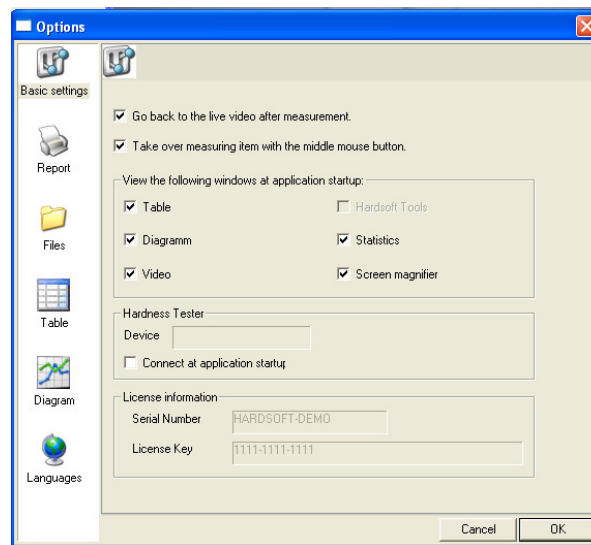
- In the first register you switch on the wanted tool-bar.
- In the second register you choose a category, click on a command to see the description. Then you drag the symbol to any tool-bar to fix it there.


### 5.4.3 Extras “Options...”



In this dialog all user-settings are made.

#### 5.4.3.1 Basic settings



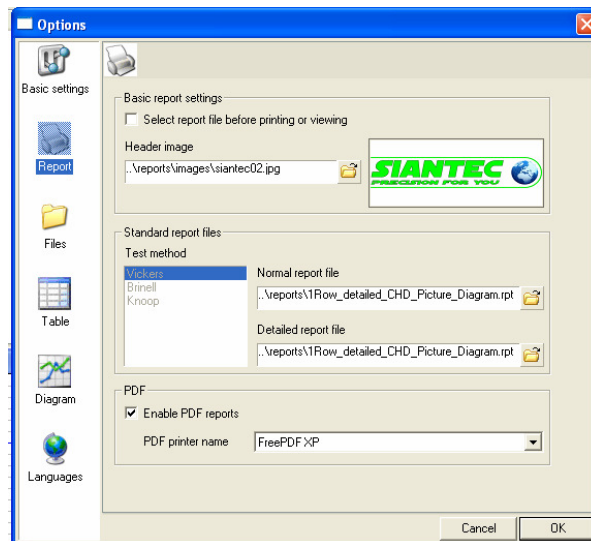
- After measurement-takeover back to live picture.
  - Means that after activating the middle mouse button or the enter-button the video picture changes from the frozen condition to the live picture. Is this function turned off you only can switch with  and the context menu of the video picture between live picture and frozen picture
- Take over of measurements with the middle mouse button.
  - Is this function not active you can only take over the data with the enter button.

Furthermore you choose here the windows that you want to be shown when the program starts, also the licence.

- Hardness tester
  - The connection to the hardness tester is only allowed to be switched on if an equipment of the series from Everone is used. In this case there are different functions selectable with the software.

If no equipment from Everone is in use the communication has to be switched off. Here are different parameters which are controlled by the tester. Thus the handling is not possible for the user!

### 5.4.3.2 Printing

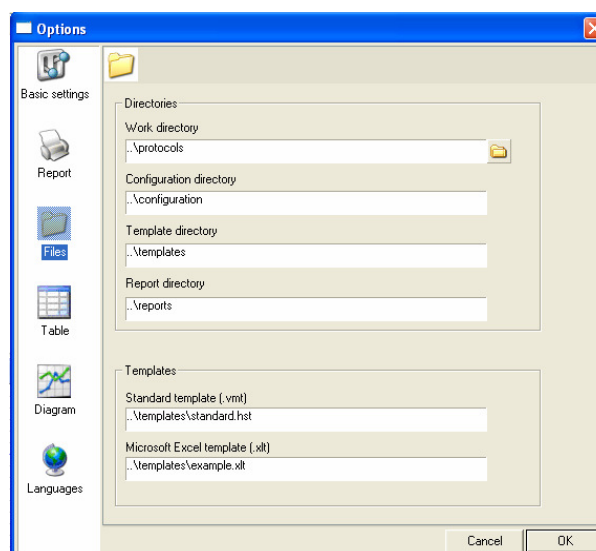


In the Printer-basic setting you choose your logo (JPG or BMP) and the standard report-file for the design of the protocol.

Furthermore you have the possibility, to choose the wanted report before printing and side-view. For this you just have to set a checkmark.

In the PDF-output you can choose any printer which response through via or through the context menu of the chosen test series.

### 5.4.3.3 Directory



Here the program-directories and the user-directories are configured. For changing you simply click on the according line, there appears a folder-symbol. After clicking this symbol you have the possibility to configure new paths.

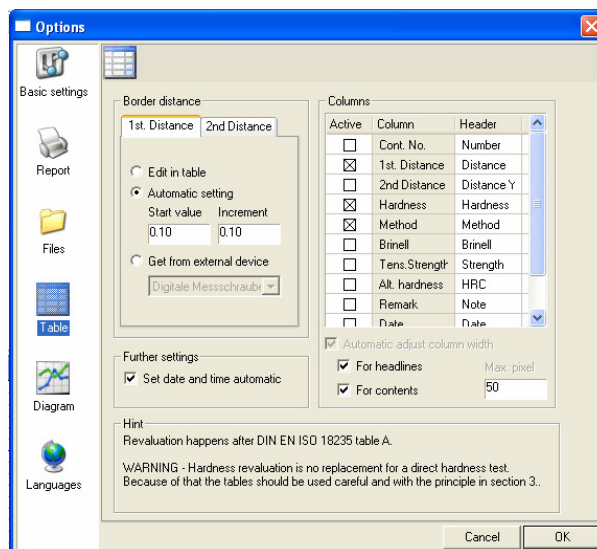
- The working-directory is the path where you want to file your test-protocols.
- The configuration-directory is only allowed to be changed if the configuration-files of the software are in there. Otherwise the program will not work anymore.

- The sample-directory is the path where you want to file your samples
- The report-directory is the path where you file your reports.

It should not be changed after saving the first protocols because otherwise the printing of old protocols could be faulty.

- Standard-sample is the sample-file with which the program starts when it is switched on. Is the path empty, the program starts like in the dialog "File new...".
- The export-sample is needed for the export to Excel. You can use your own sample, but it has to be in XLT-format.

#### 5.4.3.4 Table



The table-adjustment is for the design of the document responsible.

Here you can choose which data should be shown in the table. You have the possibility to reassess the measurements according to DIN EN ISO 18265.

- The setting for the 1. and 2. edge distance is done here. You have the possibility to give in the edge distance directly, to apply it automatically or to take it over from the digital micrometer.

All here changed settings have to be saved as a templates otherwise they are not loaded when the program starts! For the general setting you save the data as a standard template.

For the basic setting for the interface for the digital micrometer it is necessary to close all documents. Is the digital micrometer existing and is sometimes in use you have to choose her "read from external device ". This setting has no influence to your samples. It is used only for the COMFORT-approval when the program starts.

### 5.4.3.5 Diagram



Diagramm	Anfangswert	Schrittweite	Endwert	Text	Passend
Abstände X-Achse	0	0.1	1.6	2	<input type="checkbox"/>
Härtewerte Y-Achse	0	50	800	2	<input type="checkbox"/>

In this dialog you can put in the upper part “limits”, tolerances and intervention limits for the design. If you put in all fields the same value the diagram is shown in white. Otherwise the tolerance-limits are shown red and the intervention-limits green. The space between it stays white.

In the part “Diagram” you configure the scaling for the diagram. The field “Text” means if every or if every 2. 3. 4. and so on value is shown. In the upper example only the 2. value is shown. If you not have to measure a hardness spreading you only have to switch to the serial-no.

In the case hardening You have the option between CHD, NHT and DS to choose. If all you can limit the hardness - Enter the nominal value directly.

The calculation is carried out automatically and is shown in the diagram.

NHT In addition, you have the ability to specify the core hardness, then the hardness limit - set value is calculated (core hardness + 50HV).

With DS you have the opportunity to enter the surface hardness. In this case, the hardness limit is - Set value (80% of the surface hardness) is calculated.

Here at the core hardness (NHT) and surface hardness (DS) values are not included in the protocol. Taken, only the hardness limit - set point!

All this changed settings must be saved as a template because they are not otherwise charged at the next startup! For the general setting, save the data as a standard template.

### 5.4.3.6 Languages

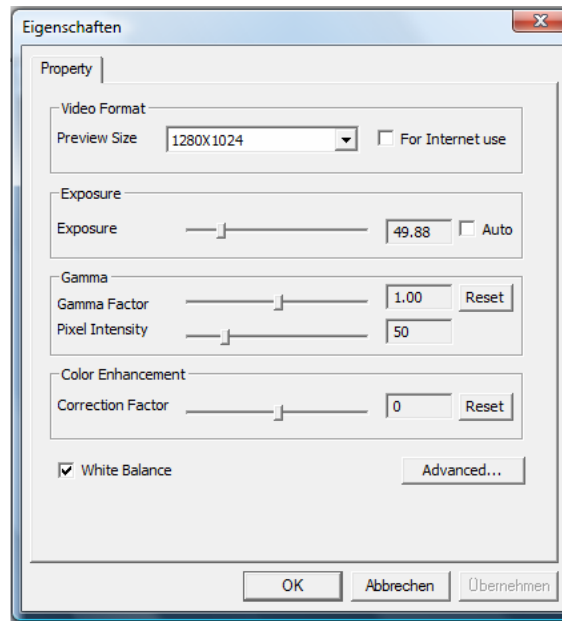


Here you choose the wanted language. The program is delivered with the standard-setting “System” (English). This setting is related to the program and not to the operating system. If you want a different language setting you have to remove the checkmark and choose the language. You have to restart the programme!!!



#### 5.4.4 Extras “ Brightness-Contrast-Gamma...”

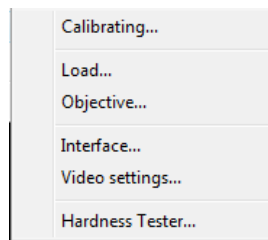
Here you can make the desired settings. Be disabled for preview size must check the box for the Internet. The resolution must match the resolution of the calibration (usually the largest) otherwise, the program displays a warning message when measuring.



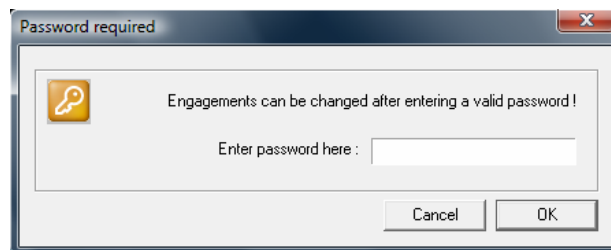
When using a Moticam settings you have under the button "Advanced" more. It should be noted that optimum settings are selected.

- Exposure - Exposure time was for a liquid live image max. Be adjusted 50th
- Gain - Gain can be adjusted to one's own feelings to Max.
- Gamma - Gamma value must be set to 1.0.
- White balance switch on - switch to an alternative color adjustment, the color correction and to regulate minus10.

### 5.4.5 Extras “Configuration”



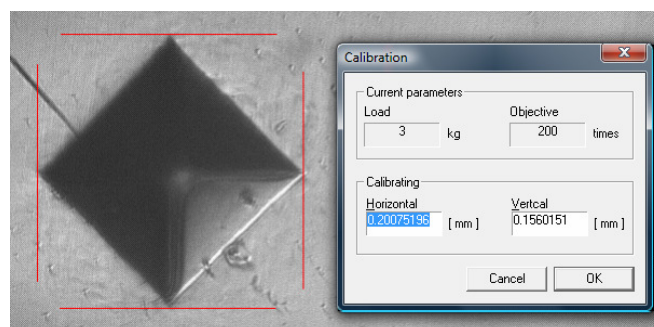
In the following the base-parameter are adjusted. The most functions are protected with a password and therefore they cannot be changed by the user. They are already done by the service-technician when the system is installed.



You can make a request for the password. A declaration for the disclaimer of the guaranty has to be done in advance.

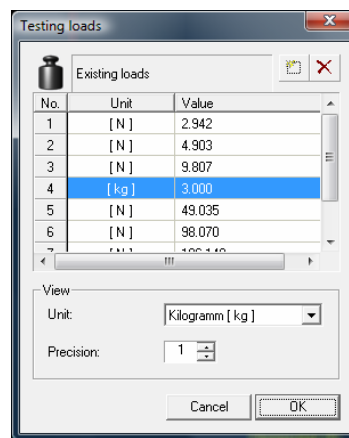
#### 5.4.5.1 Calibration...

You choose the desired objective of the calibration. The setting you measure a known reference. After put in the password and you click on OK this dialog appears. Now the real value of the reference for the distances X and Y enter into the fields provided and click OK to confirm. The calibration is complete. This procedure must be done of course for all existing objectives.



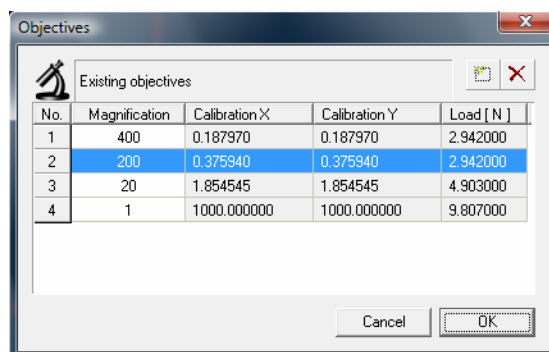
- In the upper sample was used a known hardness-testing-indentation on a hardness-reference-master for calibrating. It is more precise to use an object micrometer.

### 5.4.5.2 Test loads...



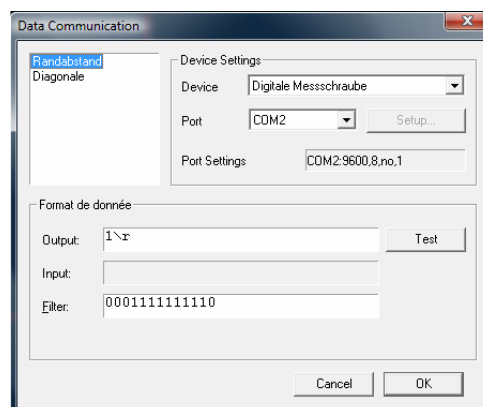
In this dialog the wanted test loads are adjusted. The input takes place in gram, KG, N or KN. Also the design can be formatted.

### 5.4.5.3 Objective...



Objectives can be put in or removed, calibration is here not possible. The design of the X, Y and the load is simply used for the information of the calibration.

### 5.4.5.4 Interface...



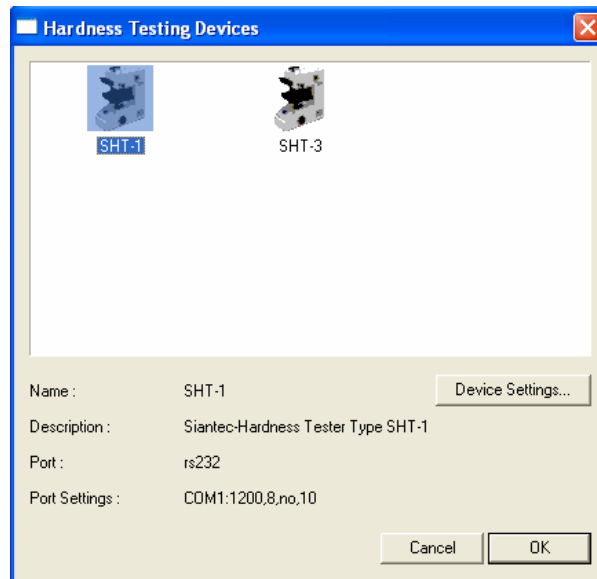
Here the communication for the digital micrometer is adjusted.

#### 5.4.5.5 Video settings...

These adjustments are used for the choice of the wanted camera and configuration-file..

#### 5.4.5.6 Hardness testers...

The adjustments are only necessary if an equipment of the Everone-series is connected. In this case you choose your machine and confirm with OK.

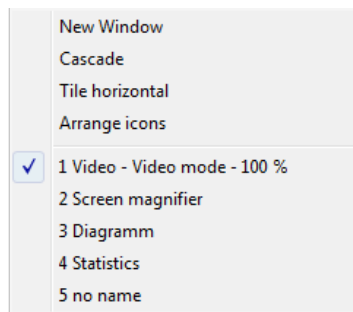


If you want to make changes bon the test-loads or objectives you open the instrument settings or the connected instrument.

Here you have the possibility to put in the used objectives and test loads.

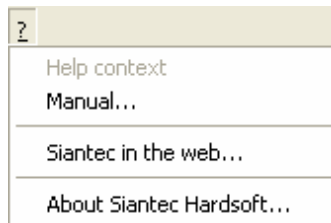
**Caution: All here made changes affect directly on the function of your hardness tester. Adjustment only should take place with extreme caution.**

## 5.5 Menu “Window”

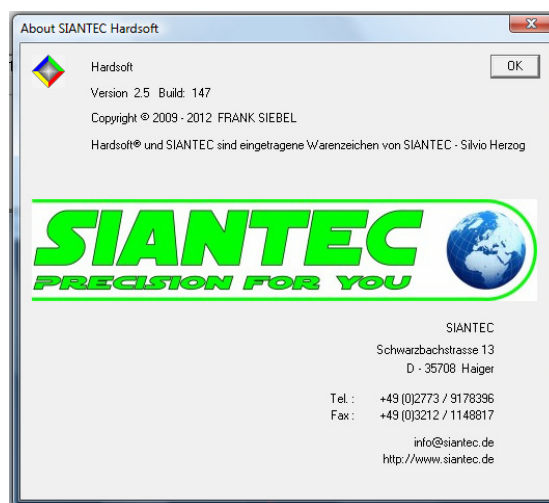


Here you see which window is active and you have the possibility to arrange the windows.

## 5.6 Menu “?” (Help and information)



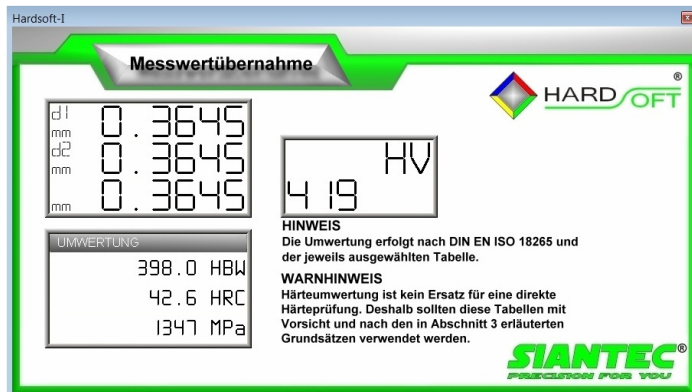
- The manual opens in the PDF-reader
- Support open Netviewer for remote support
- Siantec in the web... brings you with your WWW-browser to our homepage.
- Info about Siantec Hardsoft... opens an information-window. There are information about your software and the licenser.



## 6. Presentment (Windows)

All windows can be changed using the mouse in their size and position. These settings are saved when you exit the program.

### 6.1 Measurements capture (Hardsoft – i)



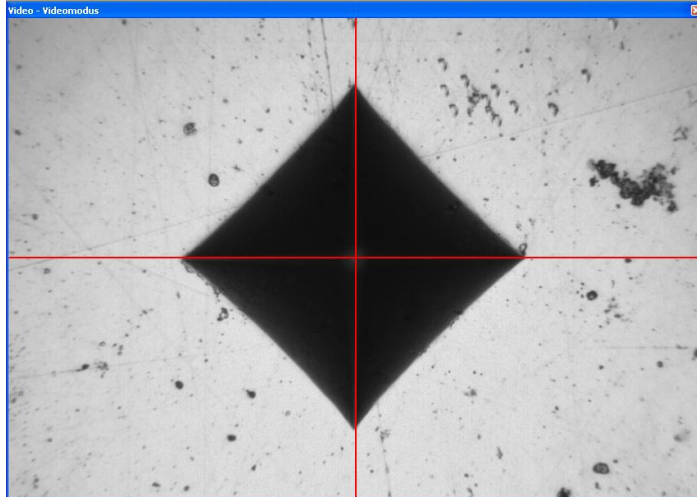
The transmission of the measured value in the table is by clicking on the "measurement transfer."

In the data acquisition of the Hard Soft - i are transmitted via the DATA button on the calipers, the diagonals of X and Y. The value shown here already corresponds to the actual value of bias and therefore does not match the displayed value of the caliper. It is calculated from the projected diagonals of the calibrated magnification.

Informative conversions in accordance with DIN EN ISO 18265 and the currently selected table are displayed.

## 6.2 Video window (Hardsoft – v)

- Live picture

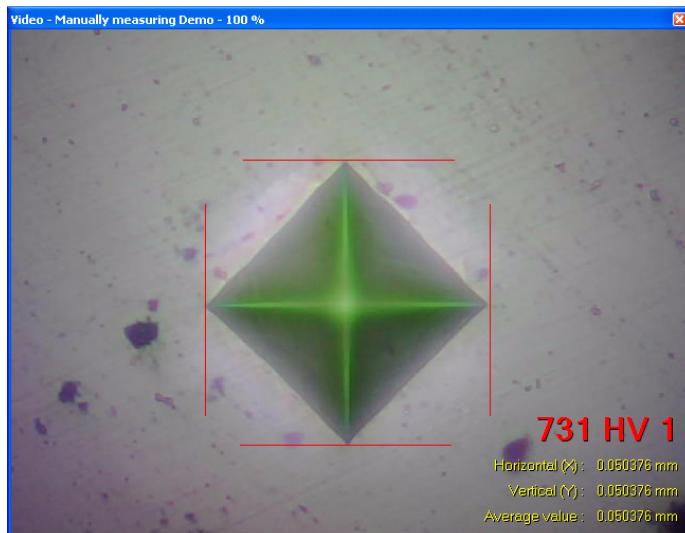


Context menu:

Show centering cross
Manually measuring
Brightness-Contrast-Gamma
Color settings...
Strong edge enhancement

In the live picture you have the possibility with the right mouse button to show a centering cross and/or help lines. Also you can choose between live and frozen picture. Brightness, contrast and gamma can be adjusted here. See 5.4.4.

- Frozen picture



Context menu:

Show auxiliary lines
<input checked="" type="checkbox"/> Horizontal lines
Reset line positions
Mouse snap
Color settings...
Live video

The measurement is done with the mouse or keyboard.

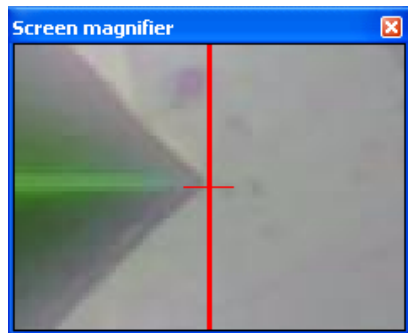
Mouse: move the mouse to the indentation corner and press the left mouse button, as long as you keep it pressed you can slide the measurement lines.

Keyboard: via the arrow key the left and the upper line is navigated. By pressing the shift key and apply the arrow key the right and the lower line is navigated.

The measurement takeover is done via the middle mouse button or the enter key.

Through the right mouse button you get a context menu while choosing the functions directly.

## 6.3 Loupe



By the zoom window you have the possibility to set your measurement lines more precisely.

## 6.4 Table

Example of a measurement series:

Serie-1Row.hsd					
1. Row		Image list			
Number	Hardness	Method	Note	Date	Ti
6	550	HV 1		18.07.09	21:5
7	538	HV 1		18.07.09	21:5
8	548	HV 1		18.07.09	21:5
9	559	HV 1		18.07.09	21:5
10	559	HV 1		18.07.09	21:5
11	546	HV 1		18.07.09	21:5
12	562	HV 1		18.07.09	21:5
13	562	HV 1		18.07.09	21:5
14	562	HV 1		18.07.09	21:5
15	557	HV 1		18.07.09	21:5
16	553	HV 1		18.07.09	21:5
17	553	HV 1		18.07.09	21:5
18	541	HV 1		18.07.09	21:5
19	538	HV 1		18.07.09	21:5
20	534	HV 1		18.07.09	21:5

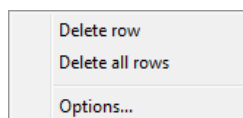
Example of a hardness spreading:

CHD-4Row.hsd

1. Row	2. Row	3. Row	4. Row	Image list
Distance	Hardness	Method		
0.50	736	HV 1		
0.60	723	HV 1		
0.70	699	HV 1		
0.80	672	HV 1		
0.90	644	HV 1		
1.00	614	HV 1		
1.10	585	HV 1		
1.20	534	HV 1		
1.30	497	HV 1		
1.40	485	HV 1		

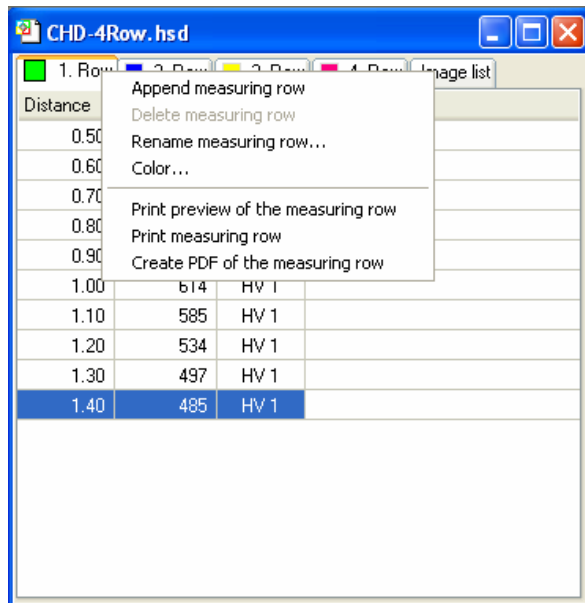
The table is your actual document. The here taken adjustments directly affects the display of the protocol.

The possibilities of the display are already described in the menu "Extras-options-table". By a right click in the table window you get a context menu also.



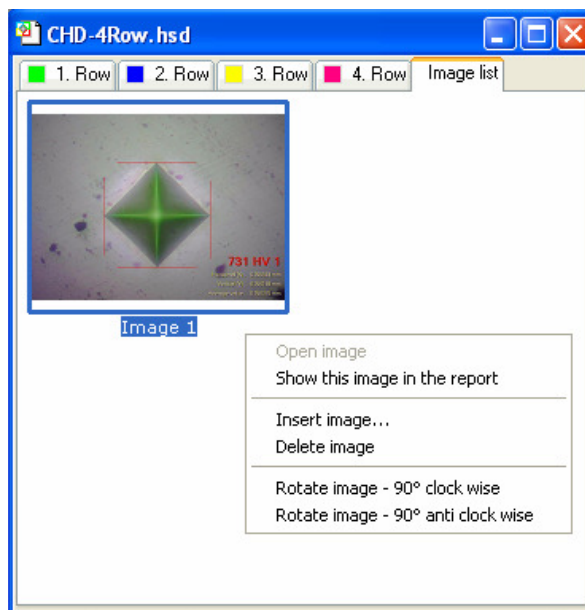
You can remove lines and alter direct to the options.





Via right click on one of the headlines you can access more functions.

- Here the detailed print out of the chosen measurement series can be started.
- You can add, remove or rename measurement series.



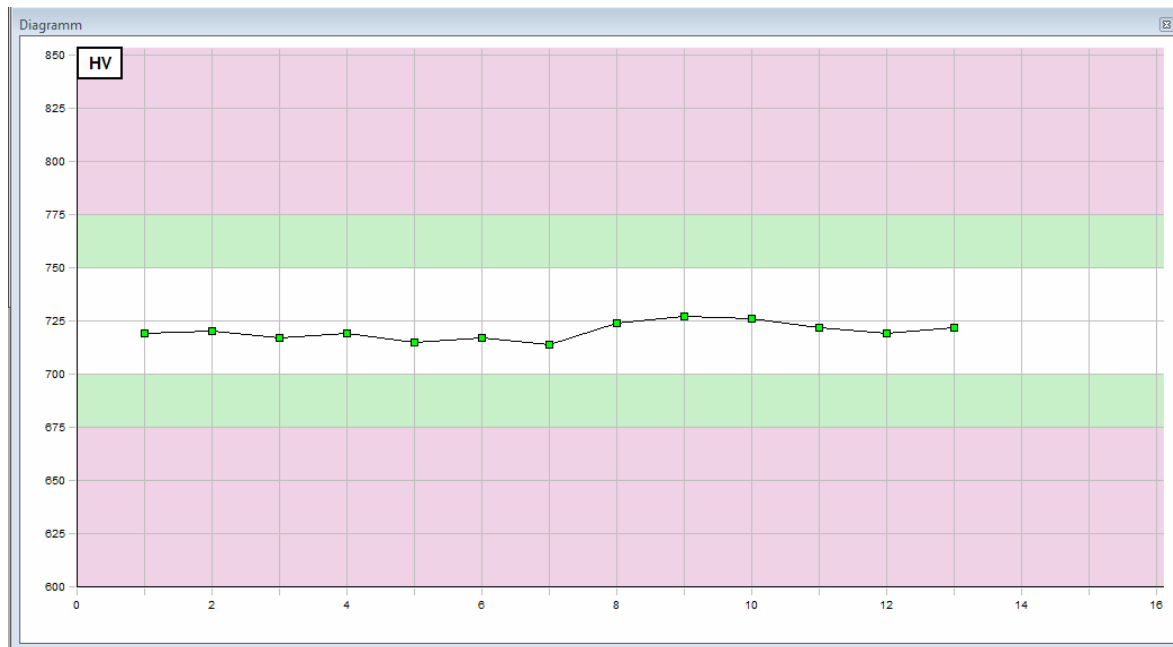
By choosing the picture bar you can see your pictures which are already included in your document.

Here discarded pictures could be removed after saving the document from your PC, because they are integrated in the document.

- By choosing a picture with a right click you get a context menu
- You can put in, remove or turning the picture.
- Here you choose a picture for the report.

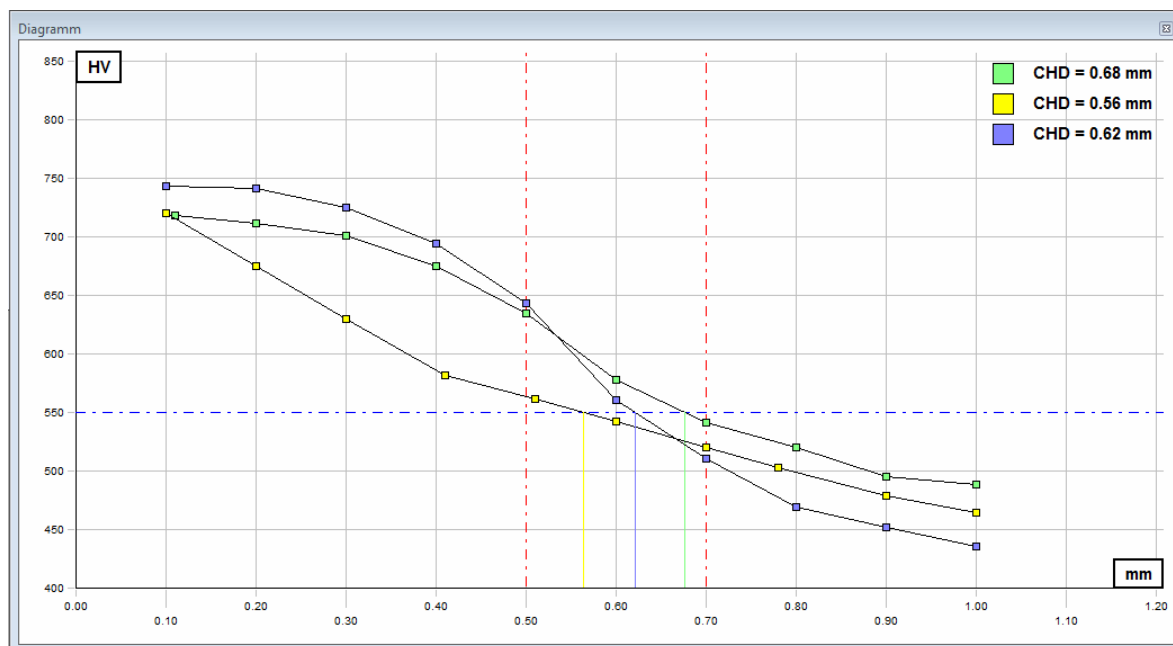
## 6.5 Diagram

Example of a serial measurement:



This could be the view in the protocol of a measurement series. Also here you can get direct with a right click on the diagram to the “options”.


Example of a case hardness depth:



The diagram represents in this example measurement series with the parameter of 0,5 + 0,2mm. The results are shown in the upper right corner of the window.

Also here you can get direct with a right click on the diagram to the “options” to define your specifications.

## 6.6 Statistics

Statistics 							
	Number	Max	Min	Average value	S	Cp	Cpk
1. Row	11	585	534	558	13.38	1.25	1.04
2. Row	11	562	529	541	10.32	1.61	1.31
3. Row	11	561	509	537	16.10	1.04	0.78
4. Row	11	561	534	547	7.46	2.23	2.12
5. Row	11	559	534	548	7.38	2.26	2.18
6. Row	11	529	508	518	7.96	2.09	0.76

The statistics window shows you the values of your measurement series.

- Number of measurements of each measurement series.
- Maximum value of the according measurement series.
- Minimum value of the according measurement series.
- Average value of the according measurement series.
- Standard variation of the according measurement series.

Following values needs for calculation in thr diagram options your tolerance designations.

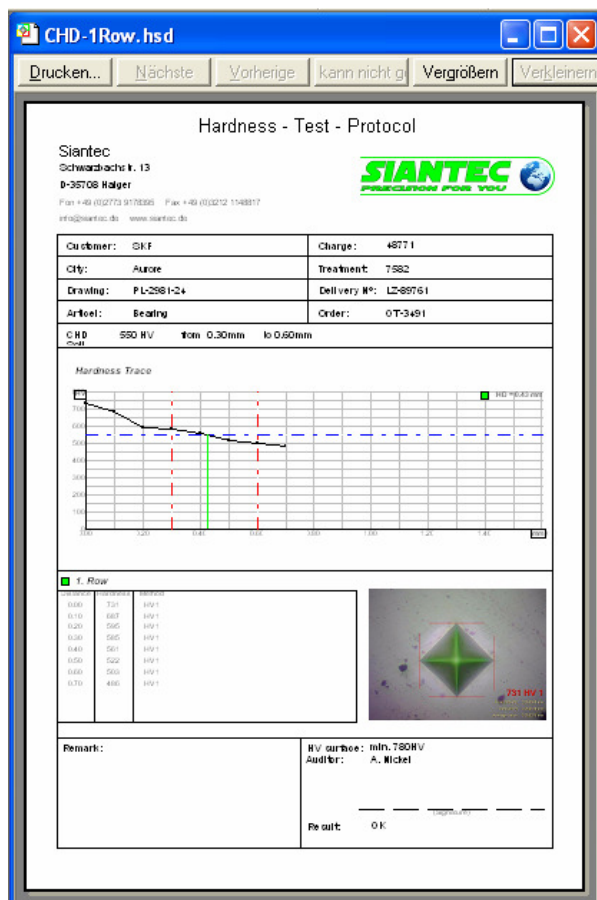
- Cp-value of the according measurement series.
- Cpk-value of the according measurement series.

## 6.7 Page view

The page view shows you the preview of the document. This is shown in the table window of the current document. You have a zoom function and you can change via click to the full screen picture.

Note on the full screen mode:

After completion of the side view, the table also be presented in full screen mode and needs to click on "Zoom Out" brought back to its original position.



Note for the full screen picture:

After closing the side view the table is shown in as a full screen modus and has to be brought back in the origin via a click on "downsize".

In this example there were chosen a print out with 3 measurement series.

For the normal report 3 splitting of the document for each measurement series are shown. If there are wanted more information for the according measurement series, a detailed print out is needed. In this case all the data of the measurement series is printed.

There are different reports for choosing available.

Also you have the possibility to create own reports via the Siantec-Report-Creator.

## 7. Report creator

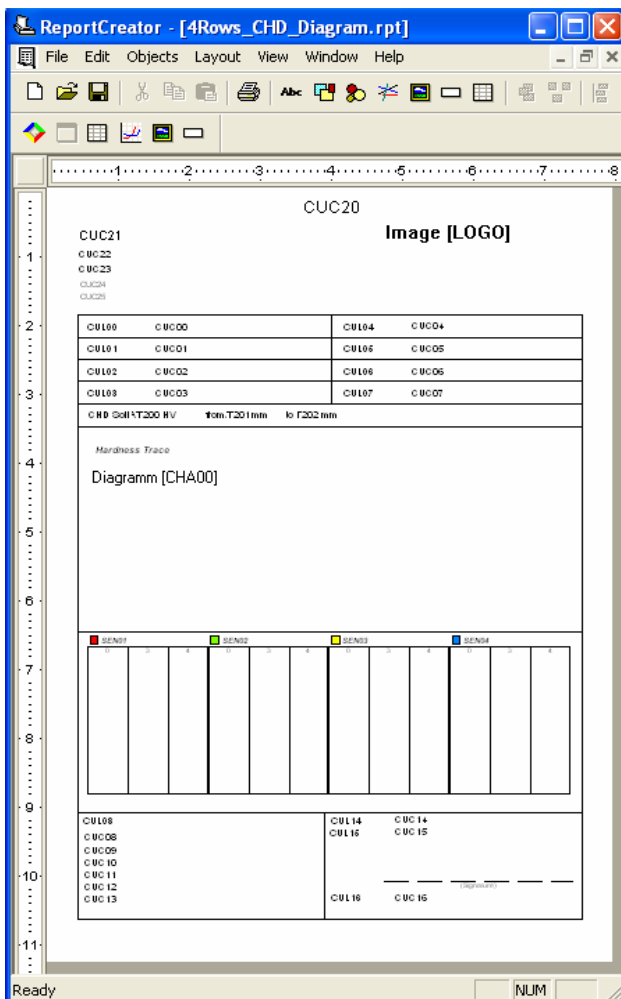
You find the report creator in the start menu among programme Siantec-Hardsoft.

It is basically recommendable to open an existing report and to modify it.

The creation of a complete new report requires a lot of time and in most cases it is not necessary.

In the most cases it is enough to make some changes.

After opening you will see different connections which are described here.



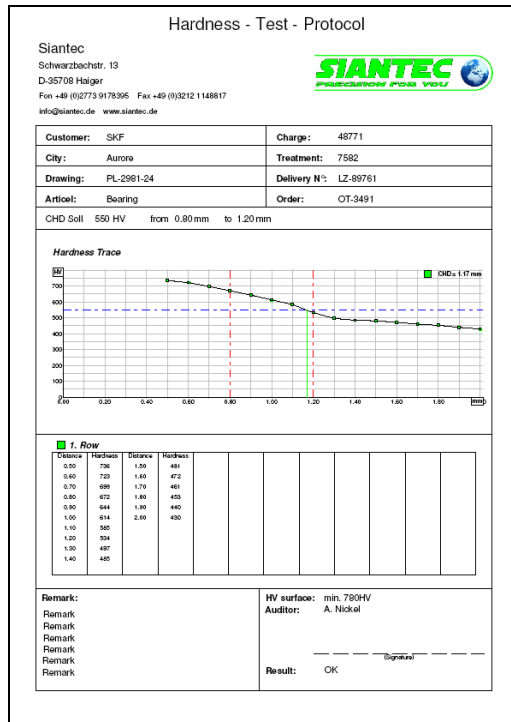
- 1.) **Logo:** object-type "Logo"  
Object name „LOGO“
- 2.) **Basic data:** object type „Field“  
Field discription: object name „CULnn“  
Field contents: object name „CUCnn“  
nn is the field-Id of basic data
- 3.) **Measuring data:** object type „Field“  
object name „DATnnn“  
nnn = 200 for limit hardness value  
„DAT200“  
nnn = 201 for CHD/NHT/RHT of  
„DAT201“  
nnn = 202 for CHD/NHT/RHT till  
„DAT202“  
nnn = 203 for lowest tolerance limit  
„DAT203“  
nnn = 204 for head tolerance limit  
„DAT204“  
nnn = 205 for lowest action limit  
„DAT205“  
nnn = 206 for head action limit  
„DAT206“
- 4.) **Table of measuring values:** object type „Grid“  
Standard-Tables: object name „SEQnn“  
nn = \*\* for the chosen readings  
nn = 01 for the 1. reading  
nn = 02 for the 2. reading  
Tables according to document: object name  
„TABnn“  
nn = \*\* A table like in the document will be created  
by the chosen reading.  
nn = 00 A table like in the document will be created  
by the chosen reading, but only for the visible  
columns.  
Table for serial measuring: object name „SER00“
- 5.) **Name of one reading:** object type „Field“ ; object name „SENnn“  
nn = \*\* for the chosen reading; nn = 01 for the 1<sup>st</sup> reading; nn = 02 for the 2<sup>nd</sup> reading...
- 6.) **Symbol of colour of one reading:** object type „Box“ ; object name „SECnn“  
nn = \*\* for the chosen reading; nn = 01 for the 1<sup>st</sup> reading; nn = 02 for the 2<sup>nd</sup> reading...
- 7.) **Table statistics:** object type „Grid“ ; object name „STAnn“  
nn = \*\* for the chosen reading, nn = 00 for all readings; nn = 01 for the 1<sup>st</sup> reading; nn = 02 for the 2<sup>nd</sup> reading...
- 8.) **Diagram:** object type „Diagram“ ; object name „CHAnn“  
nn = \*\* for the chosen reading; nn = 00 for all readings
- 9.) **Pictures:** object type „Image“ ; object name „IMGnn“  
nn = \*\* for the reading which is chosen to be printed; nn = 01 for the 1<sup>st</sup> picture; nn = 02 for the 2<sup>nd</sup> picture...

Naturally you can charge us to create a report. It would be sent to you by mail and has entirely to be copied in your index and be chosen.

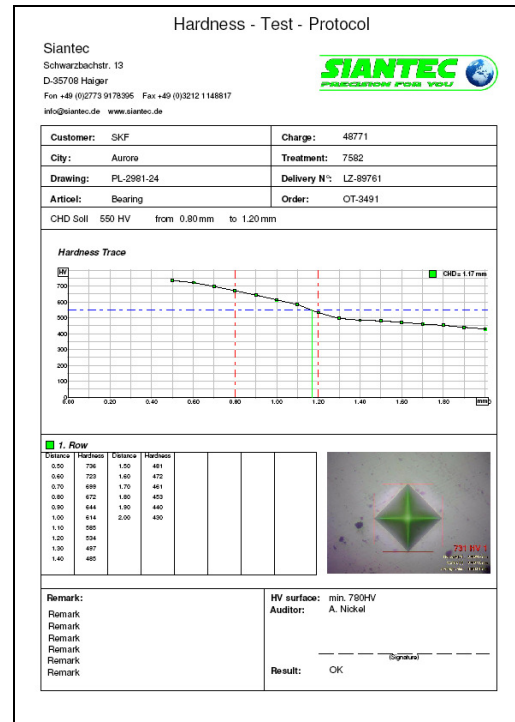
Of course we would place an offer with you after arranging your wishes.

## 8. Reports

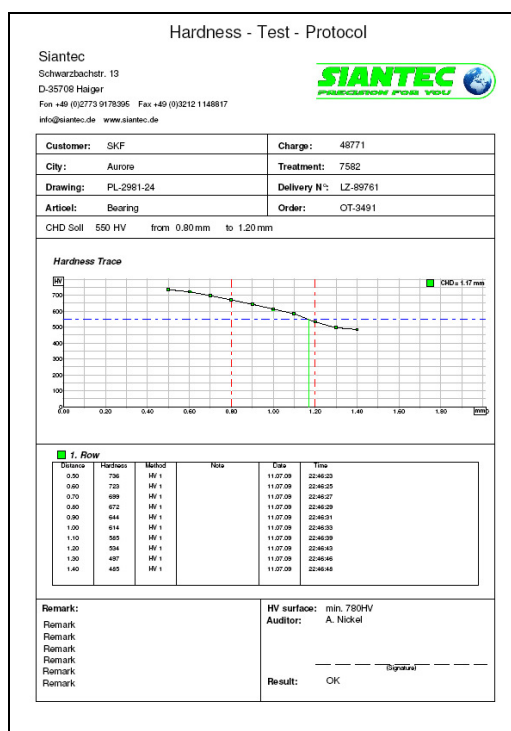
In the following you will find examples of the delivered report files.



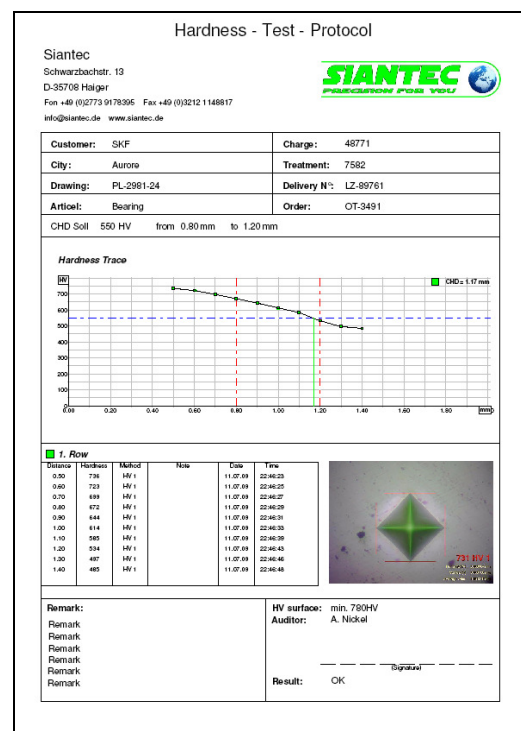
Report: 1Row\_CHD\_Diagram.rpt



Report: 1Row\_CHD\_Picture\_Diagram.rpt



Report: 1Row\_detailed\_CHD\_Diagram.rpt



Rep: 1Row\_detailed\_CHD\_Picture\_Diagram.rpt

Hardness - Test - Protocol

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info@siantec.de www.siantec.de

**SIANTEC**  
PRECISION FOR YOU

Customer: SKF	Charge: 48771
City: Aurore	Treatment: 7582
Drawing: PL-2981-24	Delivery N°: LZ-89761
Article: Bearing	Order: OT-3491

Hardness Trace

1. Row

Number	Hardness	Number	Hardness	Number	Hardness	Number	Hardness
1	558	18	541	35	570		
2	572	19	538	36	568		
3	546	20	534	37	562		
4	532	21	534	38	559		
5	562	22	550	39	555		
6	550	23	550	40	557		
7	538	24	552	41	579		
8	548	25	546	42	536		
9	558	26	542	43	558		
10	559	27	541	44	550		
11	548	28	543	45	552		
12	562	29	546	46	557		
13	562	30	548	47	545		
14	562	31	548	48	541		
15	557	32	548	49	527		
16	553	33	546	50	562		
17	553	34	548				

Remark:  
Remark:  
Remark:  
Remark:  
Remark:

HV surface: min. 500HV  
Auditor: A. Nickel

Result: OK

Report: 1Row\_SER\_Diagram.rpt

Hardness - Test - Protocol

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**SIANTEC**  
PRECISION FOR YOU

Customer: SKF	Charge: 48771
City: Aurore	Treatment: 7582
Drawing: PL-2981-24	Delivery N°: LZ-89761
Article: Bearing	Order: OT-3491

Hardness Trace

Upper tolerance limit: 600  
Lower tolerance limit: 500  
Upper intervention limit: 580  
Lower intervention limit: 520

1. Row

Number	Hardness	Number	Hardness	Number	Hardness	Number	Hardness
1	558	18	541	35	570		
2	572	19	538	36	568		
3	546	20	534	37	562		
4	532	21	534	38	559		
5	562	22	550	39	555		
6	550	23	550	40	557		
7	538	24	552	41	579		
8	548	25	546	42	536		
9	558	26	542	43	558		
10	559	27	541	44	550		
11	548	28	543	45	552		
12	562	29	546	46	557		
13	562	30	548	47	545		
14	562	31	548	48	541		
15	557	32	548	49	527		
16	553	33	546	50	562		
17	553	34	548				

Remark:  
Remark:  
Remark:  
Remark:  
Remark:

HV surface: min. 500HV  
Auditor: A. Nickel

Result: OK

Report: 1Row\_SER\_Diagram\_Limits.rpt

Hardness - Test - Protocol

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**SIANTEC**  
PRECISION FOR YOU

Customer: SKF	Charge: 48771
City: Aurore	Treatment: 7582
Drawing: PL-2981-24	Delivery N°: LZ-89761
Article: Bearing	Order: OT-3491

Hardness Trace

1. Row

Number	Hardness	Number	Hardness	Number	Hardness	Number	Hardness
1	558	15	557	29	546	43	559
2	572	16	553	30	548	44	555
3	546	17	553	31	546	45	552
4	532	18	541	32	548	46	557
5	562	19	538	33	566	47	545
6	550	20	534	34	548	48	541
7	538	21	534	35	570	49	527
8	548	22	550	36	568	50	562
9	559	23	550	37	562		
10	559	24	552	38	559		
11	546	25	546	39	555		
12	562	26	545	40	557		
13	562	27	541	41	579		
14	562	28	542	42	536		

Upper tolerance limit: 600  
Lower tolerance limit: 500  
Upper intervention limit: 580  
Lower intervention limit: 520

Number Min. Max. Average value S Gb Cb  
30 576.4 527.4 552.0 11.30 1.48 1.42

Remark:  
Remark:  
Remark:  
Remark:  
Remark:

HV surface: min. 500HV  
Auditor: A. Nickel

Result: OK

Report: 1Row\_SER\_Diagram\_Limits\_Picture\_Stat.rpt

Hardness - Test - Protocol

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**SIANTEC**  
PRECISION FOR YOU

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City: Aurore	Treatment: 7582
Drawing: PL-2981-24	Delivery N°: LZ-89761
Article: Bearing	Order: OT-3491

Hardness Trace

Upper tolerance limit: 600  
Lower tolerance limit: 500  
Upper intervention limit: 580  
Lower intervention limit: 520

1. Row

Number	Hardness	Number	Hardness	Number	Hardness	Number	Hardness
1	558	15	557	29	546	43	559
2	572	16	553	30	548	44	555
3	546	17	553	31	546	45	552
4	532	18	541	32	548	46	557
5	562	19	538	33	566	47	545
6	550	20	534	34	548	48	541
7	538	21	534	35	570	49	527
8	548	22	550	36	568	50	562
9	559	23	550	37	562		
10	559	24	552	38	559		
11	546	25	546	39	555		
12	562	26	545	40	557		
13	562	27	541	41	579		
14	562	28	542	42	536		

Number Min. Max. Average value S Gb Cb  
30 576.4 527.4 552.0 11.30 1.48 1.42

Remark:  
Remark:  
Remark:  
Remark:  
Remark:

HV surface: min. 500HV  
Auditor: A. Nickel

Result: OK

Report: 1Row\_SER\_Diagram\_Limits\_Stat.rpt

Hardness - Test - Protocol

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PRECISION FOR YOU

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City: Aurore	Treatment: 7582
Drawing: PL-2981-24	Delivery N°: LZ-99761
Article: Bearing	Order: OT-3491

Hardness Trace

1. Row

Number	Hardness	Number	Hardness	Number	Hardness	Number	Hardness
1	509	15	507	29	546	43	509
2	572	16	559	30	548	44	550
3	546	17	553	31	546	45	552
4	532	18	541	32	548	46	557
5	562	19	538	33	555	47	545
6	550	20	534	34	548	48	541
7	538	21	534	35	570	49	527
8	548	22	550	36	548	50	562
9	559	23	550	37	562		
10	559	24	552	38	559		
11	548	25	548	39	555		
12	562	26	545	40	557		
13	562	27	541	41	579		
14	562	28	542	42	536		

Number	Min	Max	Average Value	S	CS	CSR
50	576.4	527.4	552.0	11.30	1.48	1.42

Remark:  
Remark:  
Remark:  
Remark:  
Remark:

HV surface: min. 500HV  
Auditor: A. Nickel

Result: OK

Report: 1Row\_SER\_Diagram\_Stat.rpt

Hardness - Test - Protocol

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PRECISION FOR YOU

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City: Aurore	Treatment: 7582
Drawing: PL-2981-24	Delivery N°: LZ-99761
Article: Bearing	Order: OT-3491

1. Row

Number	Hardness	Number	Hardness	Number	Hardness	Number	Hardness
1	509	32	548				
2	572	33	546				
3	546	34	548				
4	532	35	570				
5	562	36	548				
6	550	37	562				
7	538	38	555				
8	548	39	555				
9	559	40	557				
10	559	41	579				
11	548	42	536				
12	562	43	559				
13	562	44	550				
14	562	45	552				
15	557	46	557				
16	553	47	545				
17	553	48	541				
18	541	49	557				
19	538	50	562				
20	534						
21	534						
22	550						
23	550						
24	552						
25	546						
26	545						
27	541						
28	542						
29	548						
30	548						
31	546						

Number	Min	Max	Average Value	S	CS	CSR
50	576.4	527.4	552.0	11.30	1.48	1.42

Remark:  
Remark:  
Remark:  
Remark:  
Remark:

HV surface: min. 500HV  
Auditor: A. Nickel

Result: OK

Report: 1Row\_SER\_Stat.rpt

Hardness - Test - Protocol

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**SIANTEC**  
PRECISION FOR YOU

Customer: SKF	Charge: 48771
City: Aurore	Treatment: 7582
Drawing: PL-2981-24	Delivery N°: LZ-99761
Article: Bearing	Order: OT-3491

CHD Soll 550 HV from 0.80 mm to 1.20 mm

Hardness Trace

1. Row

Distance	Hardness	Method
0.80	736	HV 1
0.80	723	HV 1
0.90	689	HV 1
0.80	672	HV 1
0.80	444	HV 1
1.00	614	HV 1
1.10	585	HV 1
1.20	554	HV 1
1.30	497	HV 1
1.40	485	HV 1

2. Row

Distance	Hardness	Method
0.90	742	HV 1
0.80	710	HV 1
0.90	687	HV 1
0.80	653	HV 1
0.90	595	HV 1
1.00	561	HV 1
1.10	535	HV 1
1.20	511	HV 1
1.30	503	HV 1
1.40	499	HV 1

Remark:  
Remark:  
Remark:  
Remark:  
Remark:

HV surface: min. 780HV  
Auditor: A. Nickel

Result: OK

Report: 2Rows\_CHD\_Diagram.rpt

Hardness - Test - Protocol

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**SIANTEC**  
PRECISION FOR YOU

Customer: SKF	Charge: 48771
City: Aurore	Treatment: 7582
Drawing: PL-2981-24	Delivery N°: LZ-99761
Article: Bearing	Order: OT-3491

Upper tolerance limit: 600  
Lower tolerance limit: 500

Upper intervention limit: 580  
Lower intervention limit: 520

Hardness Trace

1. Row

Number	Hardness	Method
1	562	HV 1
2	555	HV 1
3	557	HV 1
4	569	HV 1
5	562	HV 1
6	564	HV 1
7	559	HV 1
8	585	HV 1
9	545	HV 1
10	556	HV 1
11	534	HV 1

2. Row

Number	Hardness	Method
1	546	HV 1
2	536	HV 1
3	531	HV 1
4	562	HV 1
5	534	HV 1
6	550	HV 1
7	539	HV 1
8	552	HV 1
9	536	HV 1
10	532	HV 1
11	528	HV 1

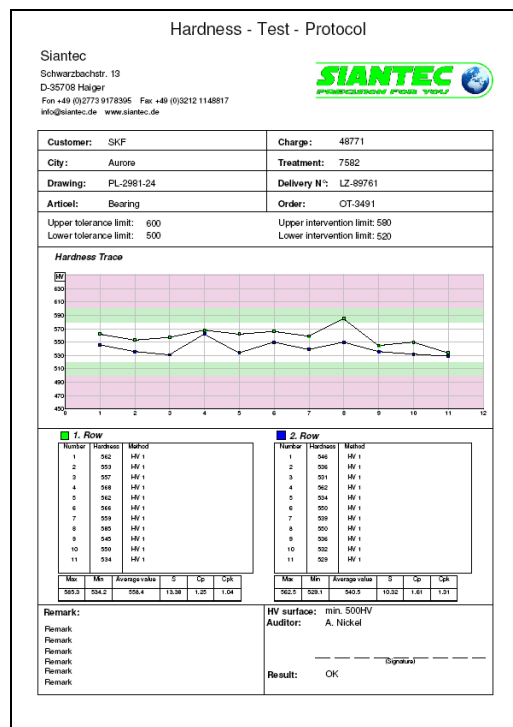
Remark:  
Remark:  
Remark:  
Remark:  
Remark:

HV surface: min. 500HV  
Auditor: A. Nickel

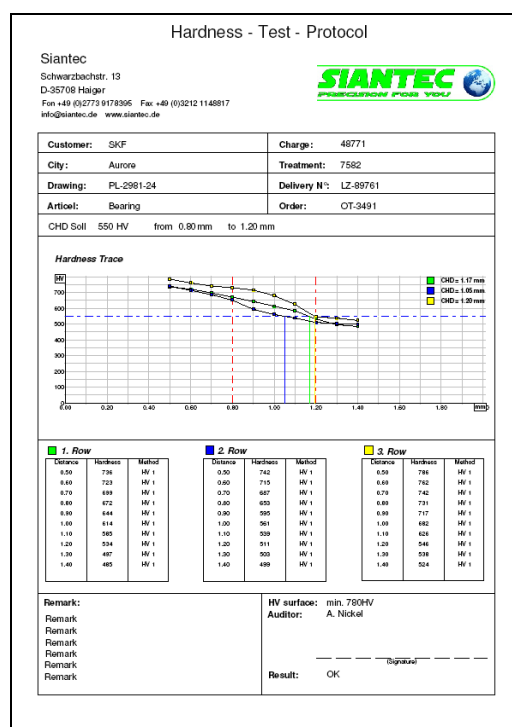
Result: OK

Report: 2Rows\_Ser\_Diagram\_Limits.rpt

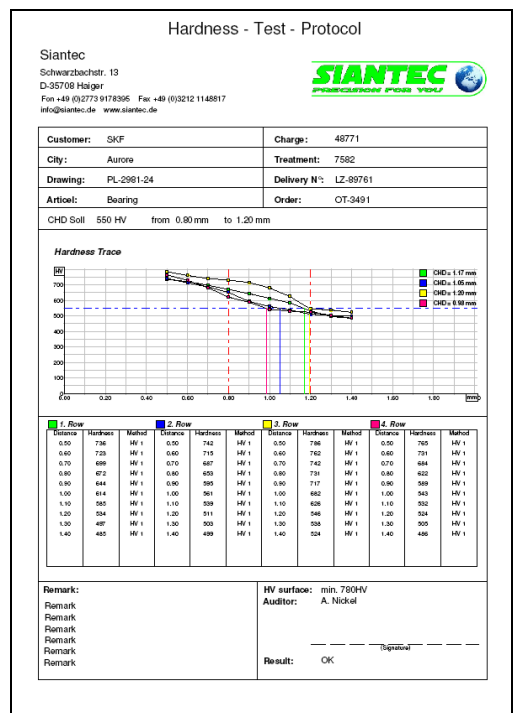




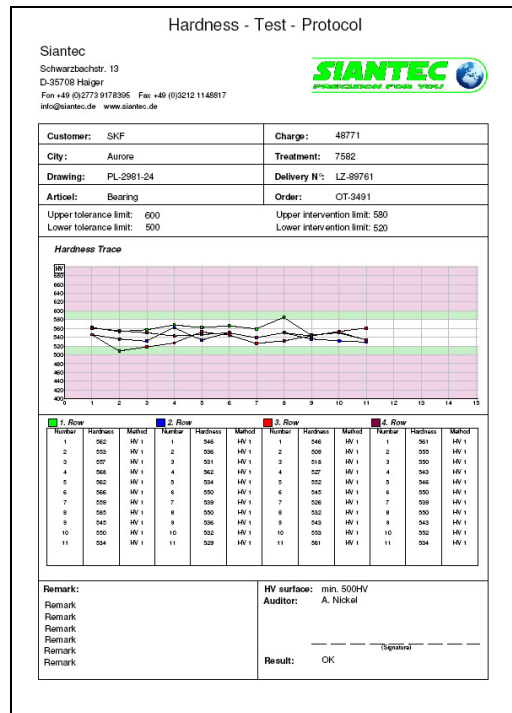
Report: 2Rows\_Ser\_Diagram\_Limits\_Stat.rpt



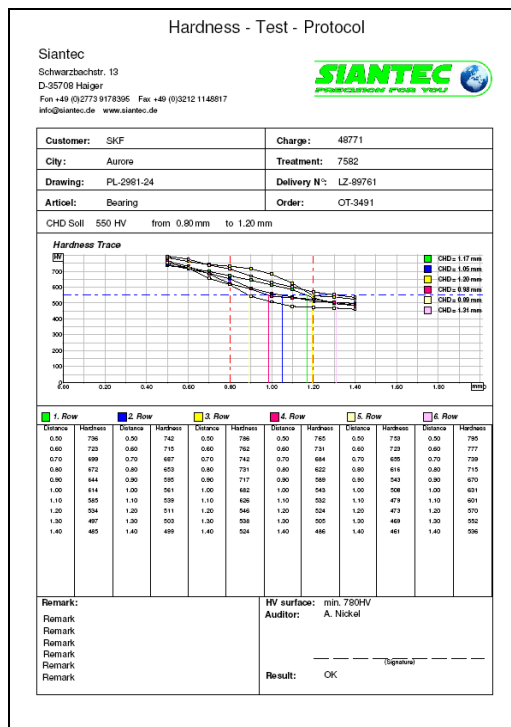
Report: 3Rows\_CHD\_Diagram.rpt



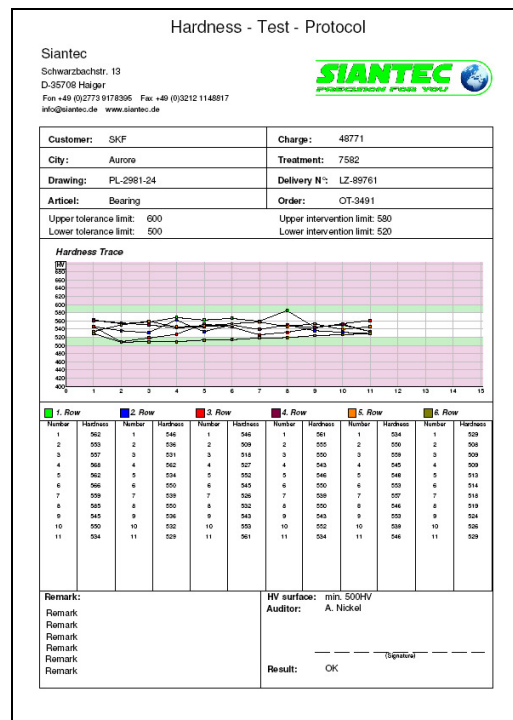
Report: 4Rows\_CHD\_Diagram.rpt



Report: 4Rows\_SER\_Diagram\_Limits.rpt



Report: 6Rows\_CHD\_Diagram.rpt



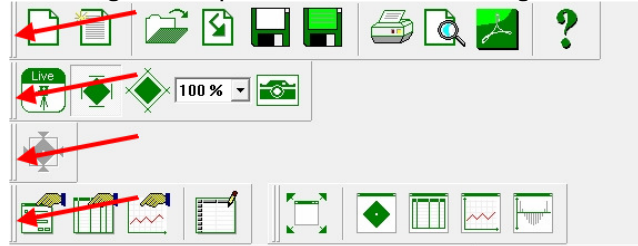
Report: 6Rows\_SER\_Diagram\_Limits.rpt

## 9. FAQ - first start / New Windows - User

Every new Windows - User has the option of his own view of the Hard Soft - create measurement system. All window settings (size, location) are stored user dependent.

The first START:

The first thing you should customize the toolbars to fit your needs. You make the toolbar at the respective two lines through each point indicated and drag it to the desired position.



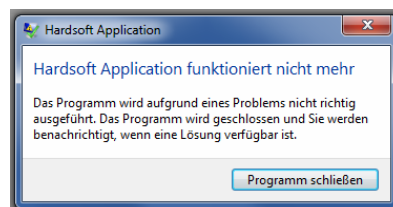
The show and hide individual toolbars and icons are described in Chapter

- 5.4.2 Menu - Extras "Customize..".

The video settings are set when you first start a new user to the factory settings. This must in accordance with chapter 5.4.4 Menu - Tools "Brightness-Contrast-Gamma ..." menu. After restarting the program, these are then stored.

ADMINISTRATOR:

It should happen that the necessary parts were accidentally deleted the toolbar, the program responds with a program crash. Now it may happen that a reboot is no longer possible and the Windows error message appears: HARD SOFT does not work anymore.....



You can then reset the settings by deleting the registry keys.

"Start - Programs – Siantec - HARDSOFT - Tools" located "regclean" program. Run regclean. After the restart now, the toolbar can be repositioned.

## 10. Online support

The amount of 50,- € per session is a investment which can save much money.  
The inset of a technical is clearly more expensive.

After activating the online support, you have the possibility to receive an online support by  
“Start – programme – Siantec-Hardsoft – Support”.

The condition is that your system is connected with the internet!

It is necessary and useful to speak with you parallel for reaching onto your system.  
Please call us: +49(0)2773 9169261.

For your notes: