



HEXAGON

USER MANUAL

PC-DMIS – Toleranztabelle **VERSION 2.XXXX.Y.Z**

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1. General

1.1. User Manual

The aim of this manual is to support you in dealing with the software “PC-DMIS Toleranztabelle” (referred to below as “Toleranztabelle”).

We have tried to describe all options of this software as best as possible and in a way that is understandable. However, we ask for your understanding that all features may possibly not be described. This may be due among other things to technical innovations, new options or similar influences.

We point out by way of precaution that this manual cannot replace training. Should you be interested in a course in this respect, we look forward to hearing from you. You can find the corresponding data at the end of this text. For this reason we reserve the right to make typographical errors and mistakes.

Irrespective of this, we are thankful for suggestions, tips and proposals for improvements resulting from daily dealings with the software “Toleranztabelle”.

Please contact us on:
Tel.: +49 6441 201-0

E-mail: DESoftwareWETZLAR@hexagon.com

1.2. Software warranty and support

This product is freeware and is not covered under any software warranty. There is no liability for any damage to the used computer or other installed hardware or software. There is no warranty regarding the correct function of the software. Furthermore, there is no claim to the elimination of errors and defects, as well as to further development of the software and to the accuracy and timeliness of the documentation and tolerance tables provided.

There is no claim to the software support on the part of the manufacturer. Suggestions for improvement can be sent to the following email address:

pcdmis.de.mi@hexagon.com

By installing the software, you automatically accept this agreement. All deviating agreements must be defined in writing with the manufacturer.

2. Installation Instructions

2.1. Software licence agreement

The use of the software is subject to acceptance of all provisions contained in the software license agreement. For details, refer to the document "EN_EULA.pdf", which you will find in the same folder in which the user manual is located.

2.2. Scope of delivery

The software is available to download on the ftp server under the following URL:

ftp://ftp.hexmet.de/PC-DMIS/PC-DMIS_Uutilities/x64/PC-DMIS%20Toleranz%20Tabelle/

2.3. Installation

The software may only be installed on a **64-bit computer** with **Windows 10 or higher** and a **compatible version of PC-DMIS** (Notes on compatibility: [see below](#)). No software tests have been performed under other operating systems. If this software is installed under other operating systems, no guarantee can be given for the full functionality of the software. In addition, the **.NET Framework version 4.7.2** or higher is required on the PC.

Start the file "Setup.exe" with administrator rights. Follow the instructions of the installation routine.

Then start PC-DMIS and the software "Toleranztabelle" with administrator rights.

Then PC-DMIS and the software "Toleranztabelle" can be closed and used with user rights.

2.4. Compatibility of PC-DMIS with PC-DMIS Tolernaztabelle

The version number of the Toleranztabelle informs about the compatibility to PC-DMIS:

- **X.YYYY.y.Z:**
X, Z: Version number of Toleranztabelle
Y: Version number PC-DMIS
y: Release of PC DMIS
- **1.20202.2.3:**
version number of Toleranztabelle: 1.3
version number of PC-DMIS: 2020 R2

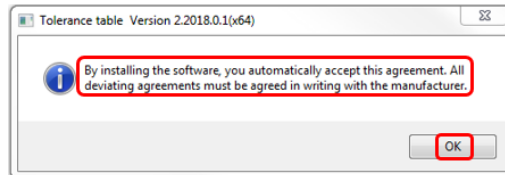
This version is compatible with PC-DMIS 2020 R2 and higher.

3. Operation

3.1. Start the software “Toleranztabelle”

To start the software "Toleranztabelle", PC-DMIS must first be started.

If PC-DMIS is not started, the following message appears:

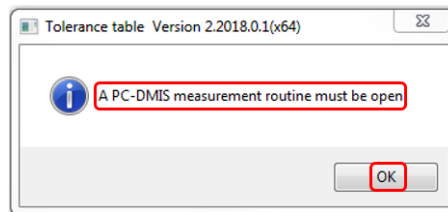


After confirming this message by clicking with the left mouse button on the "OK" button, the window is closed and PC-DMIS can be started.

In PC-DMIS, a measurement routine must be opened.

Then you can double-click with the left mouse button on the shortcut on the desktop to start the tolerance table.

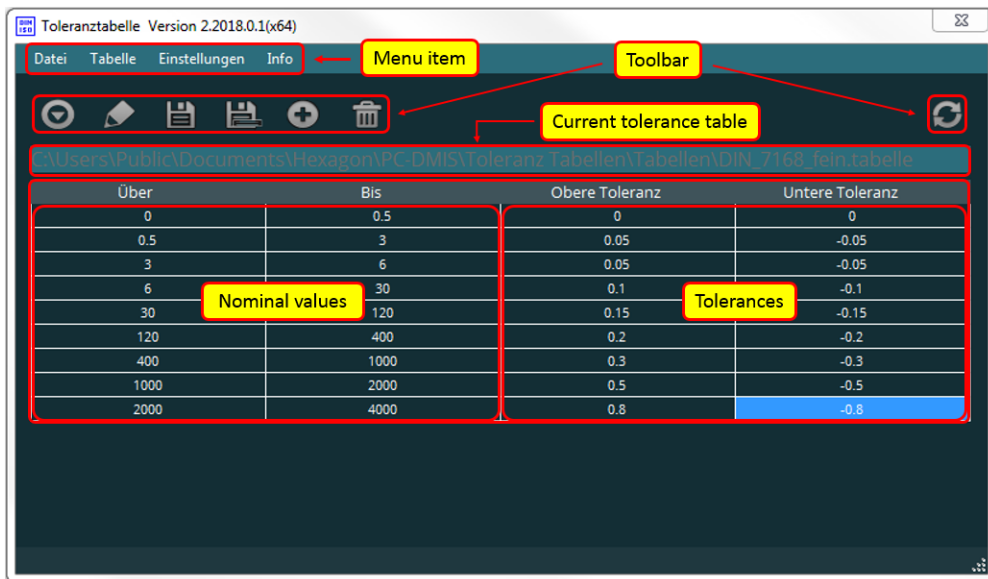
If no measuring routine is opened in PC-DMIS, the following message appears.



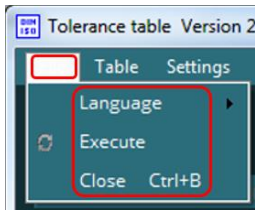
After confirming this message by clicking with the left mouse button on the "OK" button, the window is closed and in PC-DMIS a measuring routine can be opened. The Toleranztabelle can then be started as described above.

Both PC-DMIS and the tolerance table must have identical authorizations (see also chapter: [Installation Instructions](#), section: [Installation](#)).

3.2. User interface



4. Menu item "File"



4.1. Language

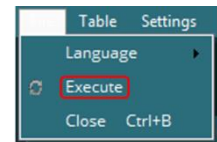
The desired language can be set with "File → Language". The selected language is active immediately and will continue to be used after closing and starting the tolerance table.



4.2. Execute

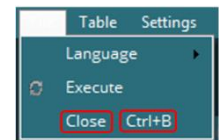
The tolerances are taken over into the opened PC-DMIS measuring routine.

Alternatively, you can do this by left-clicking on the corresponding icon. The further procedure is described in detail in Chapter: [The Toolbar](#) section: [Icon "Set Tolerances"](#).

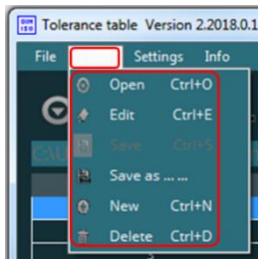


4.3. Close

The software can be closed via the menu item "Close". Alternatively, the key combination "Ctrl" and "B" can be used.

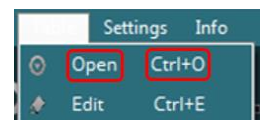


5. Menu item "Table"



5.1. Open

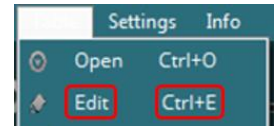
By clicking with the left mouse button on "Open" an existing tolerance table can be opened. Alternatively, this can be done with the key combination "Ctrl" and "O" or by clicking with the left mouse button on the corresponding icon in the toolbar (see chapter: [The Toolbar](#), Section: [Icon "Open"](#)).



5.2. Edit

By clicking with the left mouse button on "Edit" an opened tolerance table (see: [Open](#) above) can be changed. While the table is being edited, this function cannot be selected (currently active).

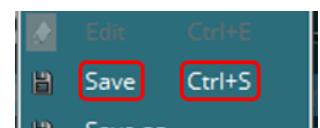
Alternatively, this can be done with the key combination "Ctrl" and "E" or by clicking with the left mouse button on the corresponding icon in the toolbar. The further procedure is described in detail in chapter: [The Toolbar](#), section: [Icon "Edit"](#).



5.3. Save

By clicking with the left mouse button on "Save" an opened tolerance table (see: [Open](#) above) can be overwrite.

Alternatively, this can be done with key combination "Ctrl" and "S" or by clicking with the left mouse button on the corresponding icon in the toolbar. The further procedure is described in detail in chapter: [The Toolbar](#), section: [Icon "Save"](#).



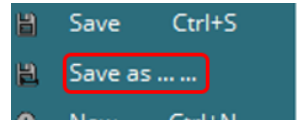
After saving the table, the function "Edit" (see above) is available again.

This function is only available when a tolerance table has been edited (see: [Edit](#) above).

5.4. Save as

By clicking with the left mouse button on "Save as ..." an opened tolerance table (see: [Open](#) above) can be saved under a different name.

Alternatively, this can be done by clicking with the left mouse button on the corresponding icon in the toolbar. The further procedure is described in detail in chapter: [The Toolbar](#), Section: [Icon "Save as ..."](#).



After saving the table, the function "Edit" (see above) is available again.

5.5. New

Clicking with the left mouse button on "New" creates an empty tolerance table.

Alternatively, this can be done with the key combination "Ctrl" and "N" or by clicking with the left mouse button on the corresponding icon in the toolbar. The further procedure is described in detail in chapter: [The Toolbar](#), section: [Icon "New"](#).

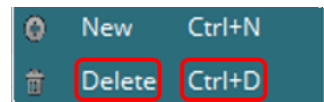


If a table has been modified using "Edit" (see above) and not saved by "Save" or "Save as ..." (see above), the changes are discarded.

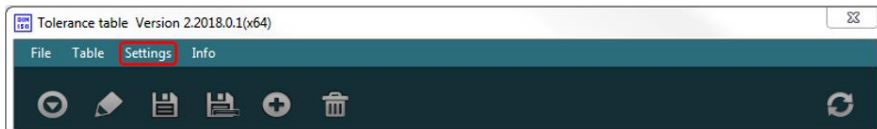
5.6. Delete

By clicking with the left mouse button on "Delete" a tolerance table can be deleted.

Alternatively, this can be done with the key combination "Ctrl" and "D" or by clicking with the left mouse button on the corresponding icon in the toolbar. The further procedure is described in detail in chapter: [The Toolbar](#), section: [Icon "Delete"](#).



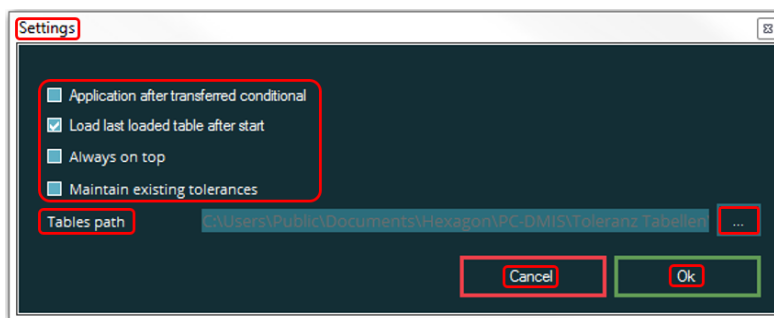
6. Menu item "Settings"



Clicking with the left mouse button on the "Settings" menu item minimizes the user interface and opens the "Settings" window.

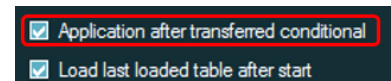
The checkboxes can be activated or deactivated by clicking with the left mouse button.

Changes made are accepted with the "OK" button or rejected with "Cancel".



6.1. Stop application after transfer

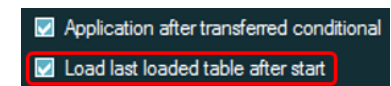
If the checkbox is activated, the software "Toleranztabelle" will be closed after the tolerances have been transferred to a PC-DMIS measuring routine. If the checkbox is deactivated, the user interface remains open after the transfer.



The transfer of the tolerances is described in detail in chapter: "The Toolbar", section: [Icon "Set Tolerances"](#).

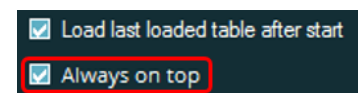
6.2. Load last loaded table after start

If the checkbox is activated, the last tolerance table opened with "Open" (see chapter: [The Toolbar](#), Section: [Icon "Open"](#)) is loaded after the software "Toleranztabelle" has been started. If the checkbox is deactivated, an empty table will be loaded (see also chapter: [The Toolbar](#), Section: [Icon "New"](#)).



6.3. Always on top

If the checkbox is activated, both the user interface and the "Settings" window always remain in the foreground.



6.4. Maintain existing tolerances

If the checkbox is activated, the tolerances in the measuring routine are retained. Only evaluations whose upper and lower tolerance has the value "0" will be changed.


If the checkbox is deactivated, all tolerances are transmitted.

The transfer of the tolerances is described in detail in chapter: [The Toolbar](#), section: [Icon "Set Tolerances"](#).



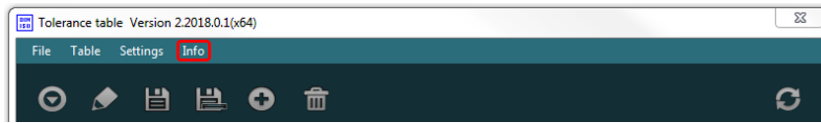
6.5. Tables path

The default path is defined, which is displayed under "Open", "Save As ..." and "Delete" (see chapter: [The Toolbar](#), section: [Icon "Open"](#), section: [Icon "Save As ..."](#) and section: [Icon "Delete"](#)) is proposed.

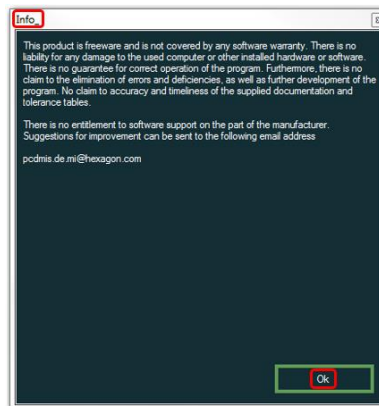
By clicking with the left mouse button on the icon:  the path can be changed.



7. Menu item "Info"



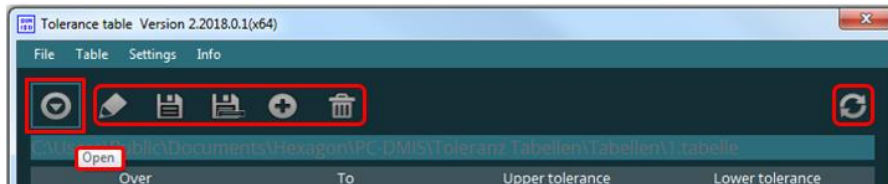
Clicking with the left mouse button on the menu item "Info" minimizes the user interface and opens the "Info" window. Here you can find general information about the software "Toleranztabelle". The window can be closed by clicking on the "OK" button with the left mouse button.



Then the user interface appears.

8. The Toolbar

The toolbar provides quick access to the most important functions. When the function is available and the mouse is moved over an icon, a tooltip appears with the corresponding function. In addition, the icon is provided with a frame.



8.1. Icon "Open"

After clicking with the left mouse button on the icon, the desired tolerance table can be opened. The default path is the path defined under chapter: [Menu item "Settings"](#), section: [Tables Path](#).

Alternatively, this function can be called up via the menu item "Table" (see chapter: [Menu item "Table"](#), section: [Open](#)).

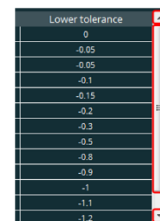
8.2. Icon "Edit"

This function is only available if a table is opened by means of the icon "Open" (see above). If an empty table was created by means of the icon "New" (see below), the function is automatically active and the symbol can not be clicked on.

After clicking with the left mouse button on the icon an empty line is created. If a column is marked by clicking with the left mouse button, the nominal dimension range ("over" and "to") and the upper and lower tolerance ("upper tolerance" and "lower tolerance") can be defined. When the last line is reached, a new empty line is automatically generated.

If the number of columns is greater than can be displayed, a scroll bar appears on the left side of the screen. Use scroll wheel of the mouse to search for the desired entry.

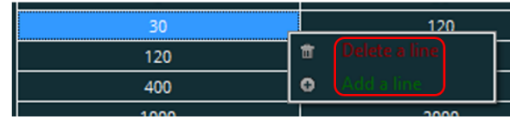
Alternatively, one line at a time can be scrolled up or down with the symbols "▲" and "▼".



Alternatively, the size of the user interface can be changed. To do this, the mouse pointer is moved to the top or bottom of the user interface. The appearance of the mouse pointer changes from "☞" to "↔". By clicking and holding the left mouse button, the user interface can now be enlarged or reduced.

Fields already filled with values can also be changed. By clicking with the left mouse button in the corresponding field the complete value can be overwritten. If the field is marked, a single number (cursor jumps to the position of the mouse pointer) can be changed by double-clicking.

Clicking with the right mouse button opens a dropdown list in which the following functions can be selected:



- Delete a line:

The line on which the mouse pointer is located is deleted.

- Add a line:

At the position of the mouse pointer a new, empty line is inserted.

Then the edited table can be saved using the icon "Save" or "Save as ..." (see below).

Alternatively, this function can be called up via the menu item "Table" (see chapter: [Menu item "Table"](#), section: [Edit](#)).

If the function is active, the symbol can not be clicked. This is also the case if an empty table was created using the icon "New" (see below).

8.3. Icon "Save"

This function is only available if a table has been created using the icon "Edit" (see above) or "New" (see below).

If an existing table has been edited, it is overwritten by clicking the left mouse button on the icon.

If a new table has been created, the name and path must be defined after clicking the left mouse button on the icon. The default path is the path defined under chapter: [Menu item "Settings"](#), section: [Tables path](#). Then the table is saved in the selected path and with the defined name.

Alternatively, this function can be called up via the menu item "Table" (see chapter: [Menu item "Table"](#), section: [Save](#)).

8.4. Icon "Save as ..."

After clicking with the left mouse button on the icon, the name and path of the table must be defined. The default path is the path defined under chapter: [Menu item "Settings"](#), section: [Tables path](#). Then the table is saved in the selected path and with the defined name.

Alternatively, this function can be called up via the menu item "Table" (see chapter: [Menu item "Table"](#), section: [Save as ...](#)).

8.5. Icon "New"

Click on the icon with the left mouse button to create an empty table. This can be edited using the icon "Edit" (see above).

Alternatively, this function can be called up via the menu item "Table" (see chapter: [Menu item "Table"](#), section: [New](#)).

If the function is active, the icon can not be clicked.

8.6. Icon "Delete"

After clicking with the left mouse button on the icon, the name and path of the table to be deleted must be selected. The default path is the path defined under chapter: [Menu item "Settings"](#), section: [Tables path](#). The table is then deleted and can no longer be opened using the icon "Open" (see above).

Alternatively, this function can be called up via the menu item "Table" (see chapter: [Menu item "Table"](#), section: [Delete](#)).

8.7. Icon "Set Tolerances"

After clicking with the left mouse button on the icon, the tolerances are transferred to the measuring routine opened in PC-DMIS.

Depending on the settings made under chapter: [Menu item "Settings"](#), section: [Maintain existing tolerances](#), all tolerances are transferred or existing ones are retained.

The tolerances are transferred to the following evaluations:

Location: X,Y,Z,D,R,L,H,PR

Position: D

Distance: 2D, 3D

Coaxiality: Diameter

Angularity: Diameter

Dimension: Upper and lower tolerance

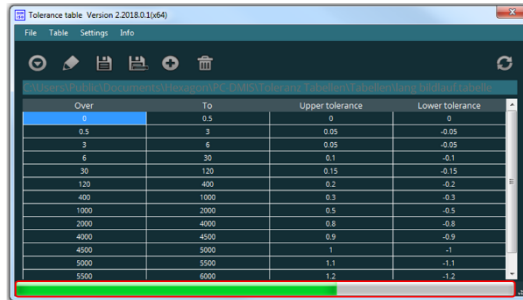
V37:

Location: X,Y,Z,D,R,L,H,PR

Distance: 2D, 3D

Dimension: Upper and lower tolerance

While the tolerances are being transmitted, a green bar at the bottom of the screen indicates the progress.



Over	To	Upper tolerance	Lower tolerance
0	0.5	0	0
0.5	3	0.05	-0.05
3	6	0.05	-0.05
6	30	0.1	-0.1
30	120	0.15	-0.15
120	400	0.2	-0.2
400	1000	0.3	-0.3
1000	2000	0.5	-0.5
2000	4000	0.8	-0.8
4000	4500	0.9	-0.9
4500	5000	1	-1
5000	5500	1.1	-1.1
5500	6000	1.2	-1.2

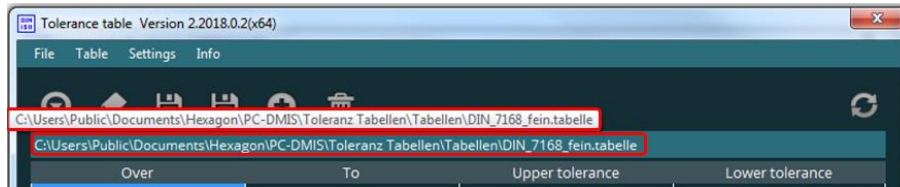
Depending on the settings made in Chapter: [Menu item "Settings"](#), section: [Stop application after transfer](#), the software is closed after the transfer or remains in the user interface.

Alternatively, this function can be called up via the menu item "File" (see chapter: [Menu item "File"](#), section: [Execute](#)).

9. Current tolerance table

9.1. Path and name

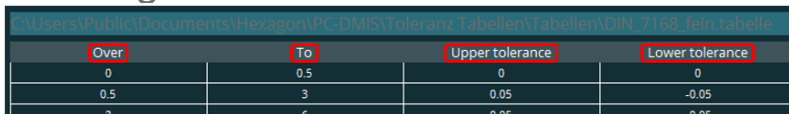
Under the toolbar, the path and name of the currently used tolerance table is displayed.



If the path and name are not completely visible, the size of the user interface can be adjusted. To do this, the mouse pointer is moved to the right or left edge of the user interface. The appearance of the mouse pointer changes from "↖" to "↔". By clicking and holding the left mouse button, the user interface can now be enlarged or reduced.

If the mouse pointer is moved over the field, a tooltip appears with the complete path.

9.2. Meaning of the columns



Over	To	Upper tolerance	Lower tolerance
0	0.5	0	0
0.5	3	0.05	-0.05
3	6	0.05	0.05

In the respective columns, the displayed values have the following meaning:

- **Over:**
If the value is exceeded, the tolerance entered in this row in the "**Upper tolerance**" and "**Lower tolerance**" columns (see below) is transferred.
- **To:**
If the value is undershot or reached, the tolerance entered in this row in the "**Upper tolerance**" and "**Lower tolerance**" columns (see below) is transferred.
- **Upper tolerance:**
Depending on the "**Over**" and "**To**" columns, this value is transmitted as the upper tolerance.
- **Lower tolerance:**
Depending on the "**Over**" and "**To**" columns, this value is transmitted as the lower tolerance.

10. About Hexagon

Hexagon is a global leader in sensor, software and autonomous solutions. We are putting data to work to boost efficiency, productivity, and quality across industrial, manufacturing, infrastructure, safety, and mobility applications.

Our technologies are shaping urban and production ecosystems to become increasingly connected and autonomous – ensuring a scalable, sustainable future.

Hexagon's Manufacturing Intelligence division provides solutions that utilise data from design and engineering, production and metrology to make manufacturing smarter. For more information, visit hexagonmi.com.

Learn more about Hexagon (Nasdaq Stockholm: HEXA B) at hexagon.com and follow us [@HexagonAB](https://twitter.com/HexagonAB).