

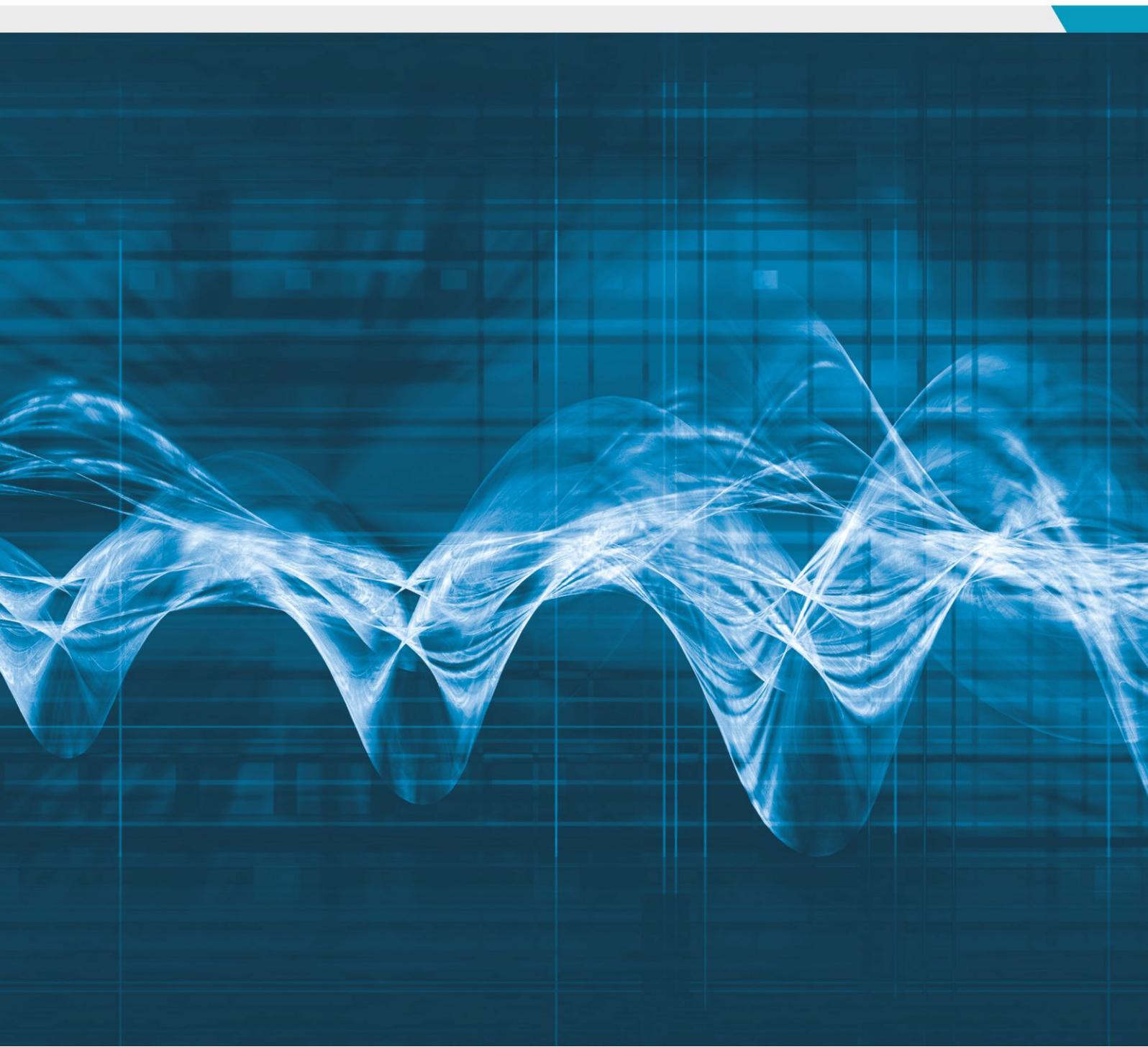
NEWSLETTER



HEXAGON
METROLOGY

PC-DMIS NEWSLETTER

EUROPE – Q1/2015 – EN/EE



INTRODUCTION

Dear PCDMIS User,

We are glad to announce the first issue this year of the **PC-DMIS European News**.

I just wanted to remind you that you're receiving this Newsletter because your company has signed an SMA, i.e. a Software Maintenance Agreement. As a result of this, you are entitled to telephone or via mail support, in case of malfunctions, and to periodic downloads of new PC-DMIS releases throughout the contract duration. Furthermore you can purchase new PC-DMIS options working with the ultimate PC-DMIS release. The SMA is intended to be renewed upon request on a yearly basis.

The present NL issue (2015-Q1) includes following articles.

PC-DMIS Service Packs

- What are PC-DMIS Service Packs? What they can do? When and how to check for them? We answer to these and other questions in a dedicated article.

Evaluation of positional tolerances: run-out

- in this issue we continue our speech about geometrical tolerancing. This time we deal with the run-out. How to get it right in PC-DMIS.

Programming language-independent YES/NO queries

- Last but not least, a useful hint about how make your program prompts to be language-independent. We develop a working sample using a YES/NO query.

Enjoy your reading!

Sincerely,

Sergio Vaina

After Market Sales Manager – South Africa – CIS – Central / Eastern Europe & Mediterranean Countries

Comments and suggestions can be sent to:
<mailto:sergio.vaina@hexagonmetrology.com>

PC-DMIS SERVICE PACKS EXPLAINED

What is a PC-DMIS Service Pack?

A service pack (SP) is a PC-DMIS update, often combining previously released updates, that helps make PC-DMIS more reliable. Service packs, which are now provided free of charge for PC-DMIS 2013 MR1 and newer, can include bug fixes and performance improvements. Make sure you install the latest service pack to help keep PC-DMIS up to date. Service packs take about 10 minutes to download and install, and you'll need to restart PC-DMIS to complete the installation.

What is the Difference between a Service Pack and a Release?

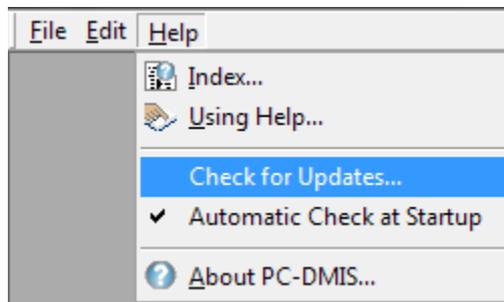
A PC-DMIS Released Product has a new version name, example: PC-DMIS 2013 MR1 and contains new features and toolsets, enhanced capabilities, bug fixes and support for new types of hardware.

A PC-DMIS Service Pack (SP) is planned update to a current and/or previous software released product and includes only bug fixes and performance improvements.

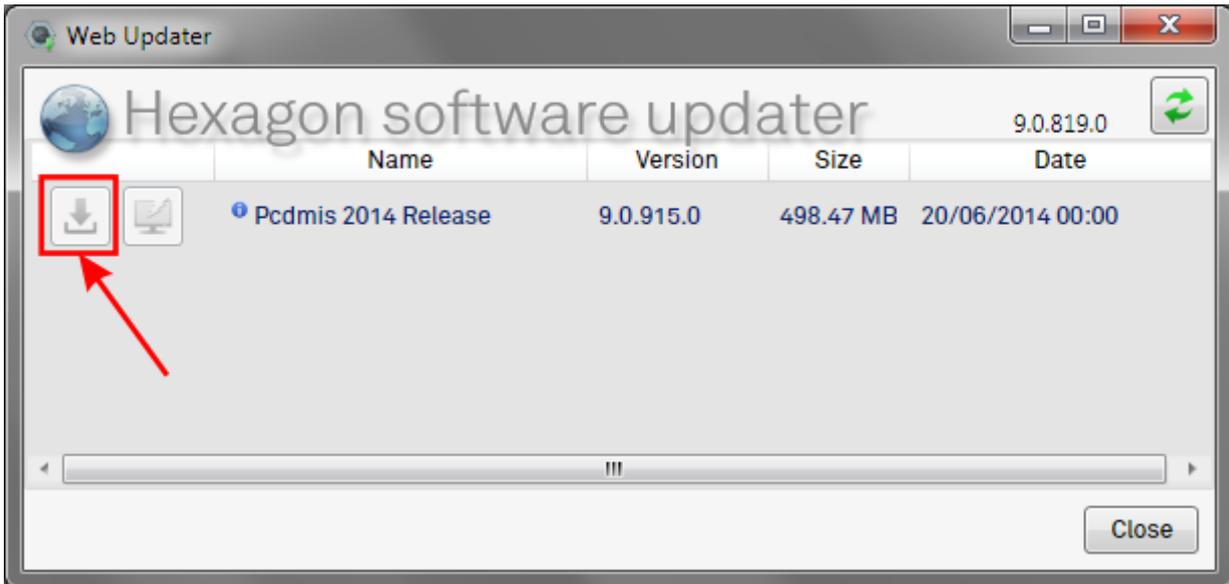
How do I apply a service pack?

The recommended (and easiest) way to get service pack updates is to turn on “Automatic Check at Startup” in the Help menu (drop down), and let PC-DMIS notify you when the updates you need are ready to install.

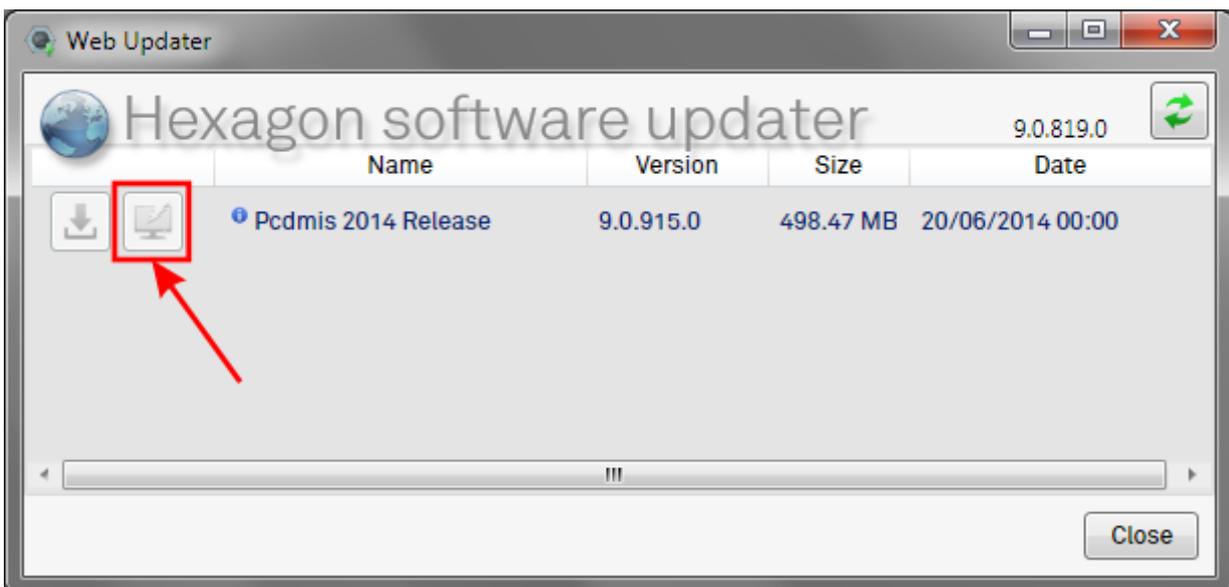
Otherwise you may click “Help” in the PC-DMIS menu bar, then select “Check for Updates...”



If there is an available update a “Web Updater” window will open, click on the download button to download the available update.



When the download is complete click on the “Install now” button to apply the update.



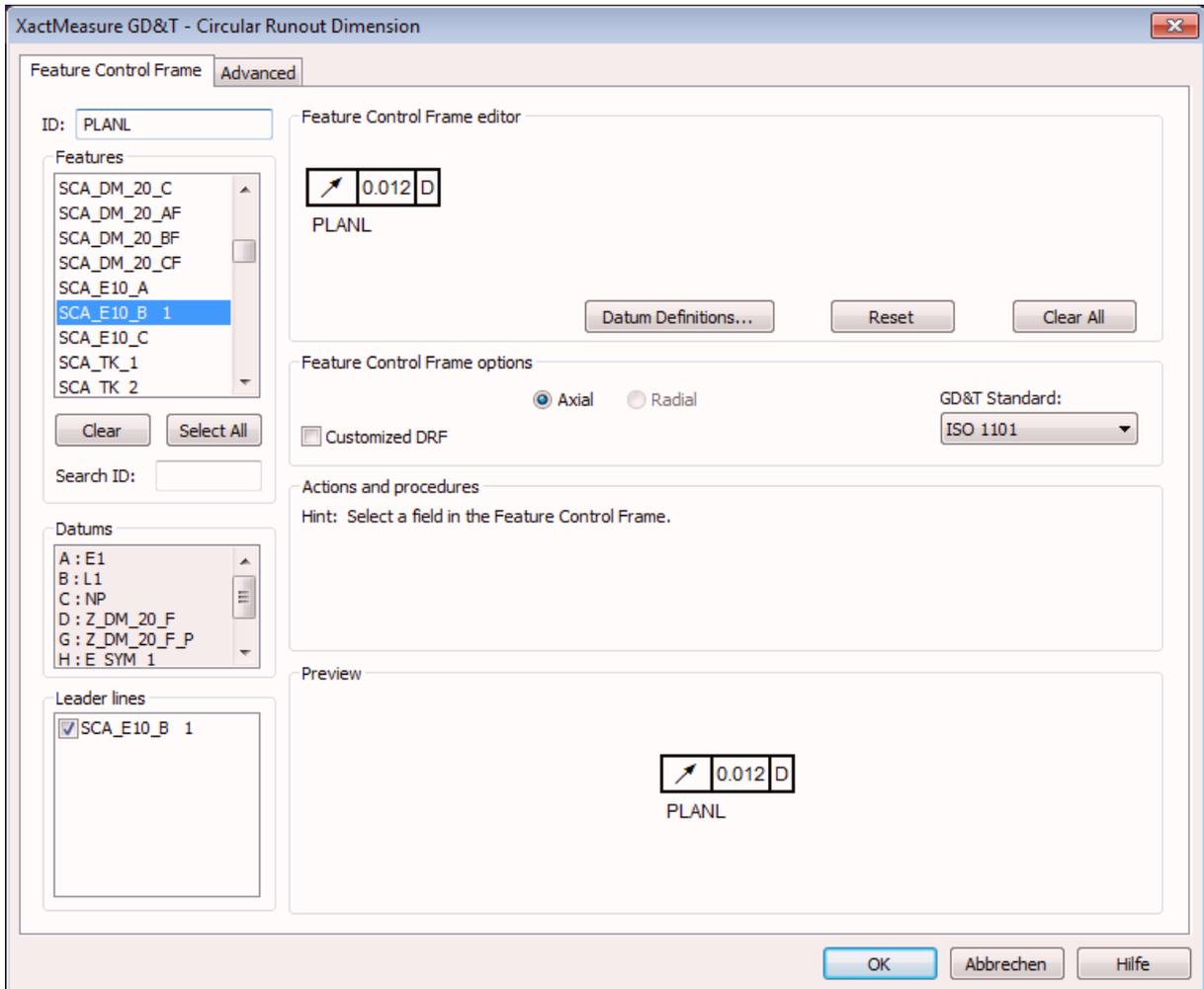
Now your PC-DMIS installation is up to date to the latest PC-DMIS version available.

EVALUATING POSITION TOLERANCES – RUNOUT

Evaluation of a single run is called up using the following symbol in the evaluation menu:

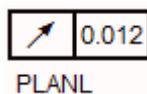


A single, circular section is to be observed for evaluation of the single run. For this purpose, either a circle or a single, circular layer is to be measured, depending on whether the test is to be carried out radially or axially.



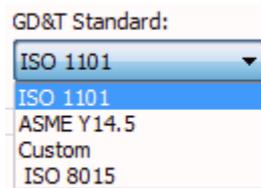
Tolerance:

For single-run evaluation, the drawing tolerance to be tested is to be entered as a positive tolerance in the corresponding field of the dialog box.



Standard:

The standard that forms the basis for the evaluation is selected via the corresponding drop-down menu.

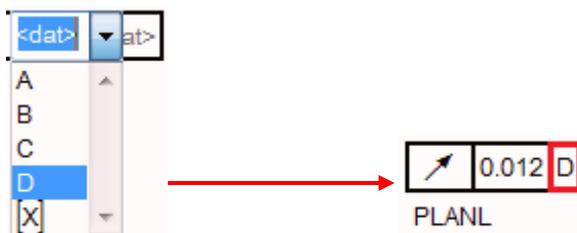


Datum definition:

In the case of position tolerances, various additional input may be possible or required in the tolerance range editor. The data elements that form the basis for evaluating the position must be specified. First of all, a suitable letter determined by the drawing specifications will be assigned to the element used as the datum.

Specifying the data elements:

The data elements are specified by selecting the corresponding, previously allocated datum letter. When analysing runout tolerances, the datum element is ALWAYS one axis.



Single data elements:

At least one datum is required for concentric runs (axial and radial). If only one datum is specified, and it is the "radial" runout type, the datum must be an axial element (cylinder, cone, straight line).

If only one datum is specified, and it is the "axial" runout type, the datum can be an axial element or a layer.

Two data elements:

Two data elements can be entered for the "radial" runout type. The primary datum is usually a layer which theoretically lies vertically to the axis of the element being considered (in this case, an axial element). The secondary datum is an axial element.

Combined data elements:

A combined datum which refers to two cylinders (e.g. A-B) is also possible.

Direction selection:

The selection of whether runout is to be evaluated in the axial direction (axial runout) or radial direction (concentric runout) is made using the following check box.



If the element being tested is a layer or layer group, only the "Axial" option is permissible. In this case, both buttons are automatically inactive and the "Axial" type is selected.

If the element to be tested is an axial element, "Radial" is selected by default. An exception to this is if a single layer datum was specified. In this case, the "Axial" type is selected automatically and both buttons are inactive.

Contact strategy:

In addition to correct selection of the direction being observed, you must make sure to use the correct contact strategy for recording the measuring points.

Axial runout:

This runout type is measured at the flat end surface of a cylindrical workpiece. The flat end surface of the cylinder is contacted as a circular layer here.

In this case, each circle section is observed individually. This requires circle groups and circle scan groups, not layer or point groups. The program calculates the axial runout tolerance for each circle section based on the minimum distance between two parallel layers vertical to the datum axis, which contains all the points of this circle section. The reported axial concentric runout tolerance represents the most unfavourable case of individual circle sections.

The following element types can be observed as elements:
scans, circles, scan groups and circle groups.

Radial runout:

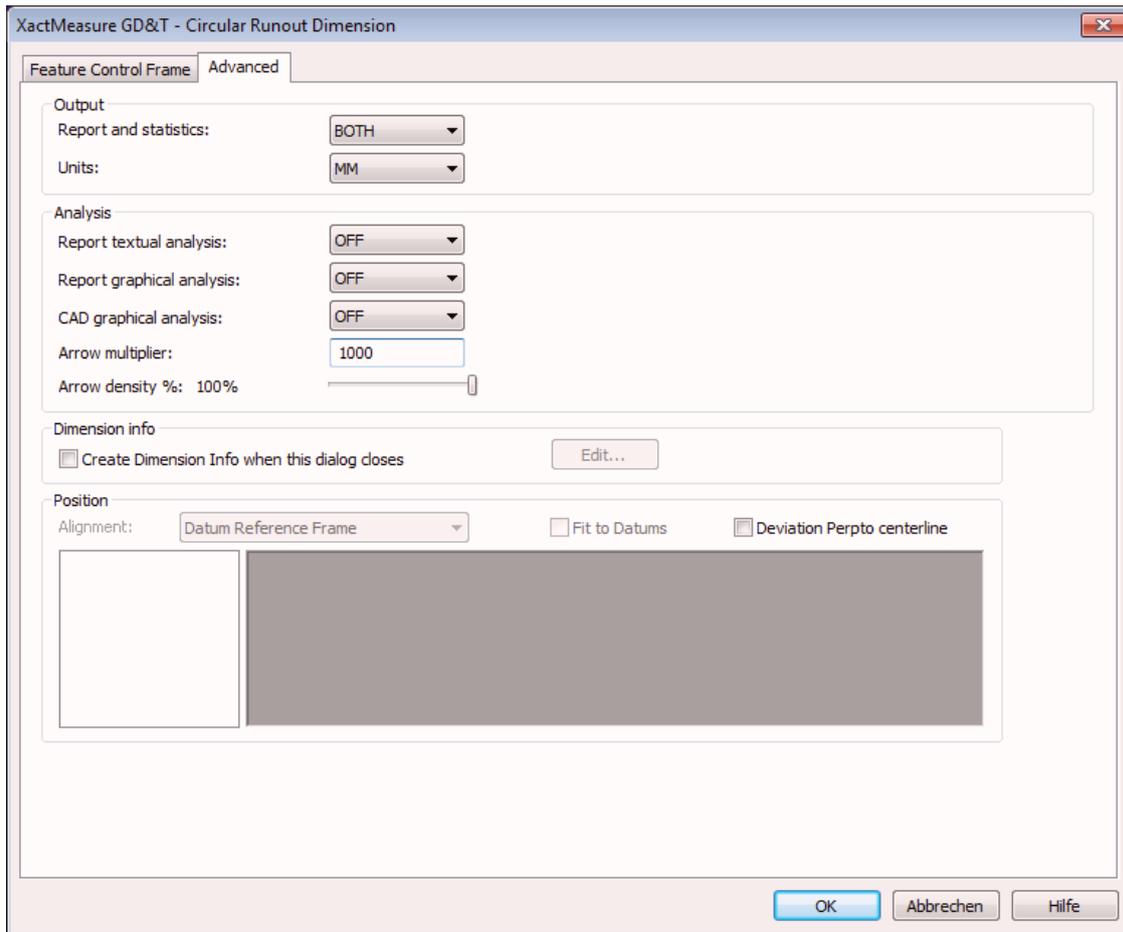
This runout type is measured at the cylindrical surface of a hole or shaft. The cylindrical surface is contacted in a circular section here.

In this case, each circle section is observed individually. This requires circle groups, circle scan groups or a cylinder with several circle sections, not level or point groups. The program calculates the radial runout tolerance for each circle section based on the minimum distance between two concentric circles located centrally on the datum axis, which contain all the points of this circle section. The distribution of these two concentric circles is represented by the radial concentric runout tolerance for this circle section. The logged radial concentric runout tolerance represents the most unfavourable case of these single circle sections.

The following element types can be observed as elements:
scans, circles, cylinders, cones, balls, scan groups, circle groups, cylinder groups, cone groups and ball groups.

Additional tab page:

On the additional tab page, there are additional check and input fields for controlling the desired evaluation.



Report and statistics:

It is possible to choose whether the output should be in the form of statistics or a report, both or neither.

Units:

It is possible to choose whether the output should be in millimetres or inches.

Text analysis report:

If this option is activated, point data will also be included in the text report.

Graphic analysis report:

If this option is activated, a small diagram will also be shown in the text report.

Graphic CAD analysis:

If this option is activated, a small diagram will be displayed in the diagram window.

Arrow multiplier and arrow thickness:

Control to increase the size and number of the arrows on the diagram.

PROGRAMMING LANGUAGE-INDEPENDENT YES/NO QUERIES

Working with language-dependent comments, such as YES/NO queries, is problematic in that the answers to posed questions are also language dependent. The language in which answers are returned via PC-DMIS depends on the language which has been set in the software interface. Independence from the set language is achieved by accessing "LanguageStrings" in the form of a variable. In the subsequent conditional branch, the comparison is made with the corresponding "LanguageString", rather than the actual answer.

Step 1:

Definition of a variable which contains the corresponding "LanguageString" of the answer "YES". The name YES_STRING is selected arbitrarily here.

```
ASSIGN/YES_STRING=GETSETTING("LangStr(YES)")
```

Step 2:

Formulation of the desired query in the form of a YES/NO comment.

```
C1      =COMMENT/YESNO,NO,FULLSCREEN=NO,AUTO. CONTINUE=NO,  
        Align workpiece manually?
```

Step 3:

Conditional branch, comparison of the comment contents (C1.INPUT) to the contents of the previously defined variable for "LanguageString".

```
IF/C1.INPUT==YES_STRING
```

```
...
```

```
END_IF/
```

Note:

Contents of "LanguageStrings" must always be entered in the English language.

EVENTS



Products will be demonstrated on the Hexagon Metrology booth.

FORMA TOOL

Location: Celje Showground, Celje, Slovenia

Date: 21 April 2015 - 24 April 2015

Contact: info.si@hexagonmetrology.com

Reference review of innovations, new trends, achievements, technologies, materials and challenges

Why attend

Largest specialized trade show in the wider region

An excellent platform to feature new trends, new technologies and most innovative products

Meet buyers and business partners face-to-face

Why you shouldn't miss it

It features a complete range of products and services of the most innovative and development-driven companies and individuals

It is an opportunity to obtain information and see new trends in one place

You can attend lectures, roundtables and business meetings

Expo Control 2015

Location: Expocentre, 5th Pavilion, Moscow, Russia

Date: 22 April 2015 - 24 April 2015

Products will be demonstrated on the booth of "IMS Center" (Nr.2-214), which is the Master Distributor Partner of Hexagon Metrology for portable products in the Russian Federation.

Link: <http://expo-control.com/>

59th International Fair of Technique and Technical Achievements UFI

Location: Belgrade Fair, Belgrade, Serbia

Date: 11 May 2015 - 15 May 2015

Products will be demonstrated on the Hexagon Metrology booth.

Contact: vladimir.ivanovic@hexagonmetrology.com

Metalloobrabotka 2015

Location: Expocenter, Fairgrounds, Moscow, Russia

Date: 25 May 2015 - 29 May 2015

Link: <http://www.metobr-expo.ru/en/>

22nd International Caspian Oil and Gas Exhibition

Location: Baku Expo Exhibition and Convention Center, Baku, Azerbaijan

Date: 2 June 2015 - 5 June 2015

Link: <http://caspianoilgas.az/2015/?p=index>

Contact: info.turkey@hexagonmetrology.com

YOUR CONTACTS AT HEXAGON METROLOGY EASTERN EUROPE

Central/Eastern Europe & Mediterranean Countries

Africa, Middle East, CIS, Central and Eastern Europe



Hexagon Metrology S.p.A.

Commercial Operation Central & Eastern Europe, Middle East and Africa
Strada del Portone, 113
10095 Grugliasco (TO) - Italy

Telephone: +39 011 4025 111
Fax: +39 011 7803 254

www.hexagonmetrology.com/export
hmspaexport@it.dea.it

NOTES

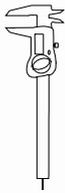
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NOTES

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NOTES

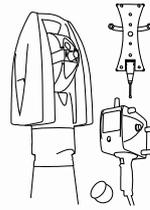
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PRECISION MEASURING INSTRUMENTS



PORTABLE MEASURING ARMS



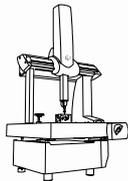
LASER TRACKERS & STATIONS



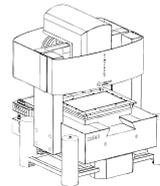
WHITE LIGHT SCANNERS



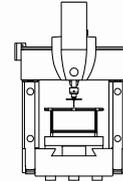
SENSORS



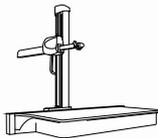
BRIDGE CMMs



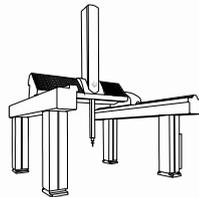
MULTISENSOR & OPTICAL SYSTEMS



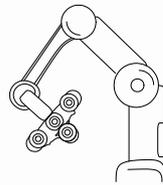
ULTRA HIGH ACCURACY CMMs



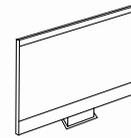
HORIZONTAL ARM CMMs



GANTRY CMMs



AUTOMATED APPLICATIONS



SOFTWARE SOLUTIONS



Hexagon Metrology offers a comprehensive range of products and services for all industrial metrology applications in sectors such as automotive, aerospace, energy and medical. We support our customers with actionable measurement information along the complete life cycle of a product – from development and design to production, assembly and final inspection.

With more than 20 production facilities and 70 Precision Centres for service and demonstrations, and a network of over 100 distribution partners on five continents, we empower our customers to fully control their manufacturing processes, enhancing the quality of products and increasing efficiency in manufacturing plants around the world.

For more information, visit www.hexagonmetrology.com

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Hexagon (Nasdaq Stockholm: HEXA B) has more than 15,000 employees in 46 countries and net sales of approximately 2.6bn EUR. Learn more at hexagon.com

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