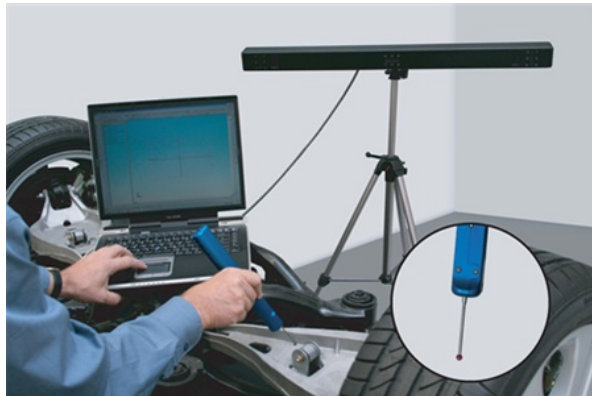


The 3D Creator and Aberlink 3D software offer intuitive and efficient 3D measurement technique

Modern Quality control requires mobile and efficient measurement technique which can easily be adapted within the production line in order to achieve short feedback loops in case of failure recognition. With the 3D Creator and Aberlink 3D all kinds of 2D and 3D measurement tasks can be realised easily and fastly without any mechanical restrictions. The results can be documented either in table format or graphical reports.



Measuring at a car



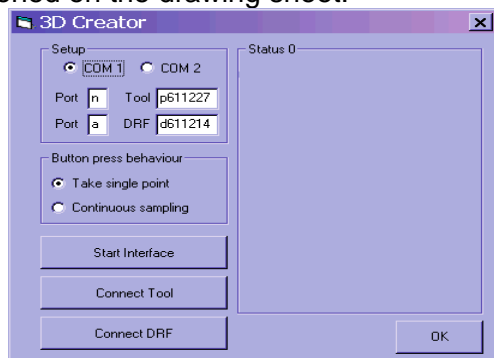
Inspection at a pump

System concept

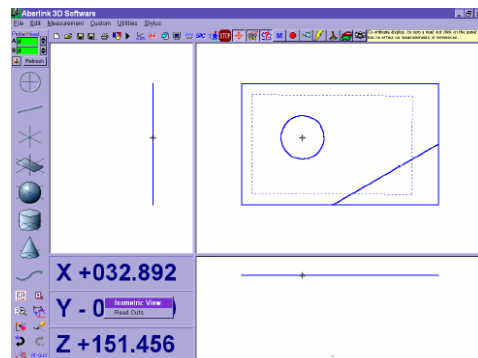
The 3D Creator is an optical measuring and tracking system which transfers the position values of the freely movable probe to the sensor unit via infrared transfer. Therefore the handheld probe is incorporated with active infrared emitters which are visible to the sensor even at a distance up to five meters. The exact positions of these emitters are recorded with the highly sensitive cameras and are transferred with modern image calculation algorithms into XYZ coordinates and the orientation vectors. This modular and compact system can be used with different individual or connected sensor units in order to increase the measuring volume. The positioning of the sensor units decides the measuring volume as well as the accuracy. This allows a high degree of freedom in defining dedicated customised solutions.

Software description

Aberlink 3D software is designed with a graphical interface and builds up with a picture of the component as the object being measured. Dimensions can be picked off the picture and can be visualised in a way that corresponds directly to the way the component has been dimensioned on the drawing sheet.

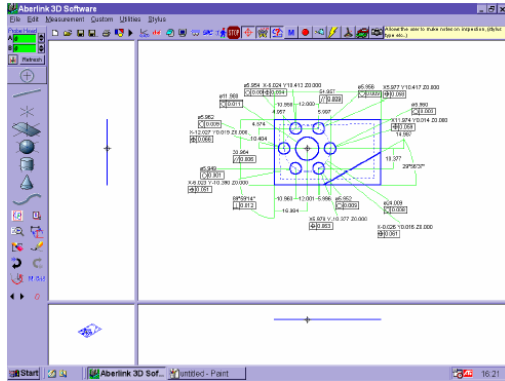


Parameter field for the 3D Creator

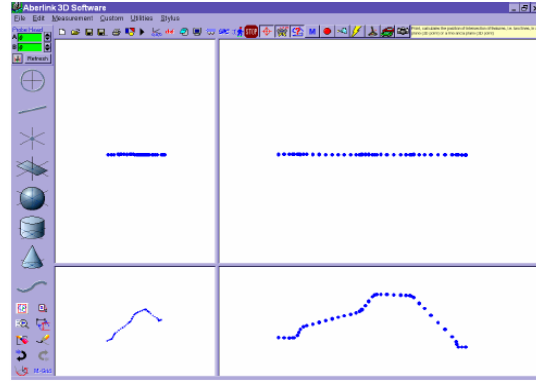


3D presentation of measurement values

Additionally the software can be configured for use in either 2-dimensions or 3-dimensions and is usable on different kinds of measurement systems. Inspection reports can be in the form of fully dimensioned graphical representations as created on the screen or tabulated reports in various formats that can show nominal tolerances, errors, pass/fails, geometric tolerances, etc. These reports can also be saved as an Excel spreadsheet.



Alignment of measure numbers

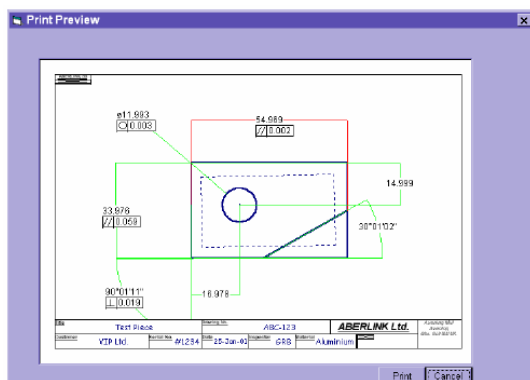


Presentation of the scan data

The software has been designed to be extremely intuitive. The Feature Select option will automatically detect the type of feature being measured. The Array function allows a program to be created by copying features into a ring or grid array. Erase, Undo and Redo functions make the usage easier.

As well as being able to measure all common geometric features, the Aberlink 3D software also offers a digitising function, allowing the 3D Creator to take point information over a complex surface.

The Aberlink 3D software allows import and export of data to CAD in DXF format, either for fast off-line programming or Reverse Engineering purposes. Measured data can be automatically aligned with and compared against a DXF file and deviation from the nominal reported as a profile or a surface. With the new add-on module also models from 3D CAD systems can be imported via IGES or Step format and the compare towards the values of the real object.



Graphical report

Drawing No.	ABC-123	Order No.	41234	Date	25-Jan-01
Title	Test Piece	Material	Aluminium	Inspector	GRE
Feature	Dim	Value	Tolerance	Pass/Fail	Notes
1	Ø	11.993	±0.005	Pass	
2	Length	54.978	±0.010	Pass	
3	Length	33.978	±0.010	Pass	
4	Length	14.999	±0.010	Pass	
5	Angle	90°±11"	±1.000	Pass	
6	Length	16.978	±0.010	Pass	

Report in table form



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