

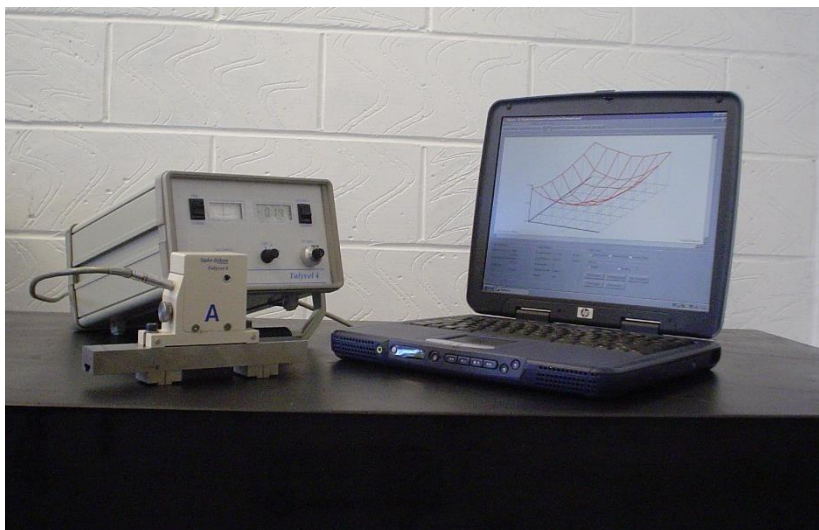


# C. D. Measurements Ltd

SPECIALISTS IN ENGINEERING METROLOGY

## Surfsure

### Professional Flatness Calibration Software



#### Features of Surfsure

The latest version of the SURFSURE software is compatible with current versions of Windows, offering the user a powerful professional data acquisition and analysis package, for assessing the flatness of engineering surfaces such as Surface Tables; Machine bed-plates; Guideways etc. Incorporating many advanced features, the software can be optimised to satisfy the specific needs of individual users.

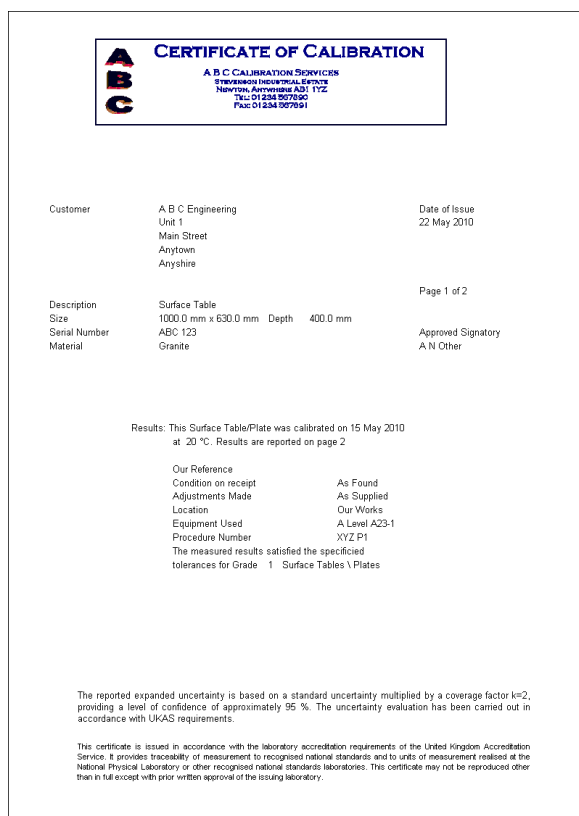
Minimum zone, least squares and gravity reference planes; customised certification and a range of generator configurations such as Union Jack, Linear and Rectangular Grids are provided. The ability to specify the flatness results in terms of any known standard and grade is also a valuable feature when servicing the requirements of international customers.

Compatibility with the earlier Windows versions of SURFSURE is maintained, whereby data files generated with the older systems can be read and analysed. Extensive data management features are also included. A data base of customer details can be established and information recalled for certification purposes. Previously calibrated table details can also be recalled, thereby eliminating time in inputting information when repeat calibrations are being undertaken.

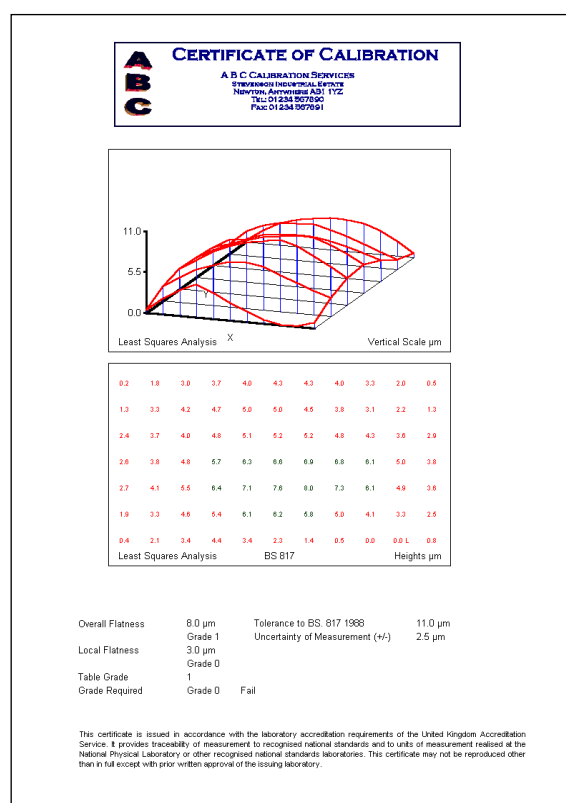
The software will operate on any PC compatible computer having a Windows operating system. Laptops and notebook being particularly convenient for on-site applications. An RS232 / USB port or equivalent is also required when data is to be input directly from an angular instrument such as a Talyvel 4, Talyvel 6. The CDM Serialiser for interfacing analogue instrument from older versions is also compatible.

#### Test Certificates

An important feature of the software is that it incorporates its own unique certificate designer providing comprehensive facilities for users wishing to customise output results in terms of UKAS or in-house style certificates. The example overleaf shows a two page UKAS style certificate which can be printed from the program directly onto plain paper if required, saving cost and alignment problems associated with pre-printed stationery. UKAS and Company Logos, Approved Signatures, positioning of headings and comments, size



**Sample Certificate Front Page**



**Sample Certificate Continuation Page**

and fonts used for text can all be controlled and set-up by the user. On the second page, the orientation and colour of the graphical output can also be controlled by the user consequently the resulting certificate style appears unique to an individual calibration laboratory. For customers wishing to receive electronic calibration results, an option to save certificate as a PDF file can be provided. .

## Measurement Method

The Incremental Angular Technique is used as a basis for flatness calibration. Angular data is obtained along prescribed generators using angular instruments such as Electronic Levels, Autocollimators or Laser Interferometers. Various patterns of generators can be selected depending upon requirements. The well known "Union Jack" or Diagonal Configuration in addition to the Linear and Rectangular Grid are available.

Angular data input to the program is via the computer keyboard or alternatively if the angular instrument has a suitable interface may be input on-line.

## Flatness Analysis and Specification to any Known Standard

Flatness data can be analysed with respect to a Gravity, Least Squares or Minimum Zone reference plane. A gravity datum is particularly appropriate for applications relating to the accuracy of Machine Tools and Guideways, whereas the Minimum Zone criterion is required by most of the current test Standards.

The results of a flatness calibration can be specified and graded with reference to National or International test standards such as BS 817 2008; DIN 876; ISO 8512-2. Other standards can be set-up by the user as and when required.

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