



Venture Plus  
600 x 600 x 250  
Vision / Touch probe

## Baty International

Baty will be launching their all new range of 3 axis Multi-sensing vision systems and profile projectors at the CONTROL Exhibition this year.

For vision systems, there are two measuring systems available: The simple QC3 controller from Quadra-Chek is ideal for the shop floor with its colour touch screen and easy to use menus.

For more advanced measurement requirements, Baty's Fusion software fits the bill perfectly! Advanced features like CAD import, scanning and best fitting are combined with easy to use graphical interface and reporting.

The newly designed range includes VuMaster, ShadoMaster, Venture, and Venture Plus models all of which are available in manual with the new Motorised Autofocus option, as well as full CNC.

The following measuring ranges are available:

Part number	Model	X axis	Y axis	Z axis	Autofocus
VM-4030	VuMaster	400mm	300mm	N/A	YES
SM-P300	ShadoMaster	300mm	150mm	80mm??	YES
VI-2510	Venture	250mm	120mm	165mm	YES
VI-3030	Venture	300mm	300mm	165mm	YES
VP-6460	Venture Plus	600mm	600mm	250mm	YES
VP-6490	Venture Plus	600mm	900mm	250mm	YES

## Venture CNC with Fusion Software



The all new 2009 Venture sets new standards for price vs performance.

Two stage sizes are available in Manual, Manual + Auto-focus and full CNC options.

All models are touch probe compatible.

New features included as standard this year include collimated profile and TTL lighting together with Baty's long established 64 led programmable light head.

Also included are new advanced Video edge detection tools which allow the user to 'teach' the system virtually any edge type so that unique settings can be used for every measurement if required. Advanced profile scanning options allow multi-section scans to be best fit to the CAD model in seconds.

### Standard Venture / Venture Plus system features include:

- 0.5 micron resolution for increased accuracy
- 6.5:1 optical zoom lens combined with digital zooming allows the operator to see images at over 1000x magnification.
- High res. USB2 camera with high definition colour image and image capture for slick reporting.
- Baty's fully programmable segmented LED ring lighting system.
- Z axis dovetail slide mount for increased Z capacity.
- Auto Video edge detection with circle, arc, line and point tools as well as free form scanning tool. Take thousands of data point in seconds!
- Two stage auto-focus first find the part, then measure it - fast
- Best fit comparison to DXF file, immediate pass fail for complex shapes
- Produce fully dimensioned drawings of your measured part
- SPC
- Auto Excel link

### **White LED lighting**

Lighting is critical to ensure that the correct edge is measured. Baty's programmable LED lighting head allows the user to define any segment pattern to be switched on. This means that oblique lighting conditions can be achieved to illuminate more difficult edges. Segments can then be rotated and intensity varied to suit the radial position of the edge. Once set, the lighting condition for each measured feature is now automatically programmed and will be reproduced by the software each time a new part is measured. Through the lens (TTL) lighting is offered for applications such as blind bore measurement and understage profile illumination is collimated. 64 white LED's are used to ensure Venture's high quality colour image is achieved.



### **Touch probe compatibility**



### **TOUCH PROBE**

The optional touch probe can be used in conjunction with VED techniques to take data points in any direction. This is particularly useful when measuring features that are out of the camera's sight, or when features on the XZ or YZ plane must be related to features in the XY plane. Now the whole part can be measured in 3D without the need for repositioning. Other 3D geometric features like spheres, cones and cylinders can sometimes be constructed more easily using the touch probe option. For multi probe CNC applications an auto-change probe rack is used to change stylus configurations mid program.

## Dimensioned part view

Measured results are displayed in the form of a fully dimensioned drawing. Dimensions within the specified tolerance are shown in green whilst dimensions out of tolerance are shown in red for immediate visual status of the measured part.

Geometric tolerances can also be displayed using standard drawing practice. The final dimensioned part view can then be printed as an engineering drawing with a traditional drawing frame containing Company details, customer and part details, date and inspectors name.

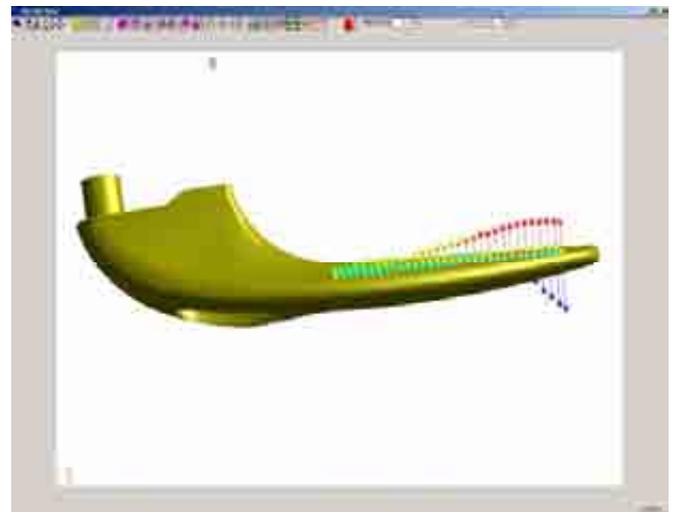
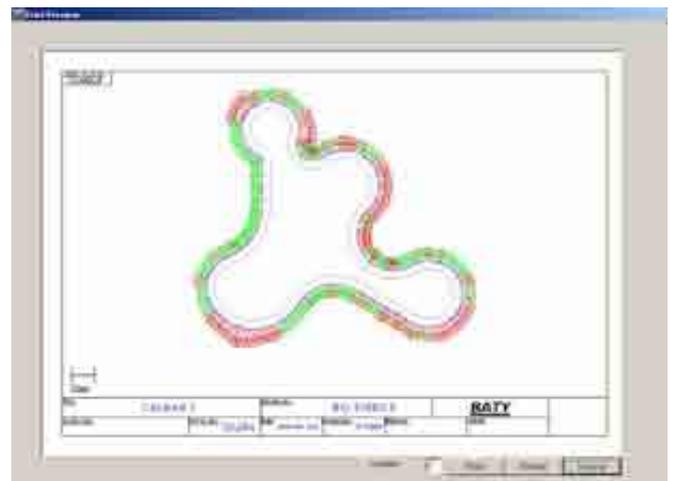
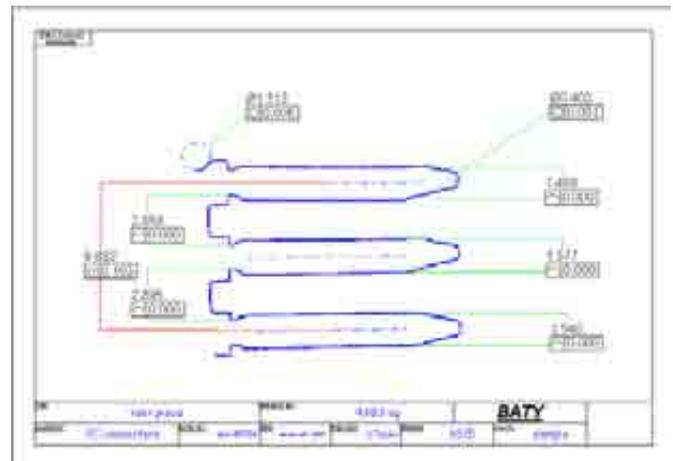
Venture's new curve tool automatically traces the profile of an undefined part. The resulting data-point curve can then be compared to a toleranced DXF master for best fit analysis.

Once 'fitted' the data points appear red or green to indicate whether in tolerance. In addition to best fit, conventional dimensions can also be applied to the scan.

## COMPARE TO 3D CAD MODEL

Baty's new CAD comparison module allows the import of 3D 'step' and 'Iges' CAD files. Once a simple 6 point or 3-2-1 alignment is made to the part, random points can be taken anywhere on the surface of the part using either touch probe, vision tools or laser. The points are then overlaid onto the rendered 3D model and profile errors are displayed.

The graphical report is colour coded to classify each of the data points and show their position relative to the surface.

A screenshot of a graphical report showing a table of data points. The table has multiple columns, including 'X', 'Y', 'Z', 'R', 'G', and 'B'. The data points are color-coded to show their position relative to the surface. The report includes a title block with the company name 'BATY'.

## Venture QC3



Venture QC3 with manual 300mm x 300mm stage and 165mm motorised Z with Autofocus.

Features colour touch screen and LED Quadrant lighting with collimated profile light, 6.5:1 zoom optics. Auto Edge Detection and programmable lighting.

### The all new Venture QC3

Baty's newly designed Venture shown here with the neat QC3 controller option combines functionality with practicality. This cost effective solution has no additional boxes, computers or controllers. There is even no need for a mouse or keyboard! The colour touch screen QC300 controller from Quadra-Chek takes care of everything making the Venture QC3 the ideal solution for both shop floor and the quality department.

Video edge detection tools ensure measurements are repeatable and there is even a motorised autofocus function to ensure there is no operator influence on the measured results.

Data is able to be transferred to a PC directly or via USB port and Image archive and annotation features are included as standard so reporting is extremely slick.



Live video image is displayed within the QC3's standard screen.

Choice of edge detection tools or manual crosshair measurement method.

Measured features are automatically saved in the features list.

## ShadoMASTER VI-3015H



The ShadoMASTER is a horizontal Camera Based Video Inspection System that is particularly suited to shaft measurement.

The cast iron stage has tooling slots aligned with the optical path to facilitate the mounting of work holding fixtures such as vee-blocks and centres.

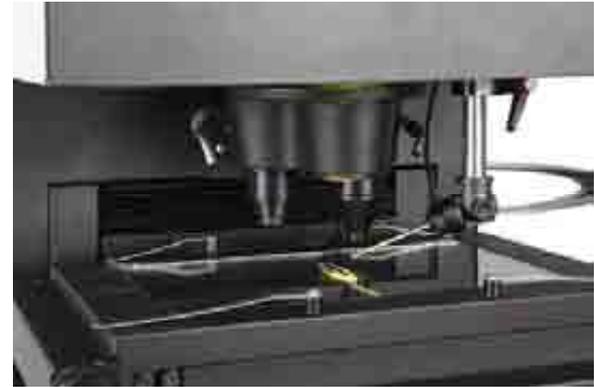
A shaft scanning tool quickly scans the profile of the shaft and Baty's Fusion software converts this scanned data into a dimensioned drawing of the measured part – AUTOMATICALLY!

Interchangeable fixed objective lenses are used to determine the field of view and pixel size which can be sub-micron for close tolerance requirements.

The VI-3015H can measure shafts up to 300mm in length with a maximum diameter of 150mm providing the overall weight does not exceed 25KG

The PC based controller runs on a Windows XP operating system and is completely integrated within the chassis so the installation is both quick and easy with no trailing cables. The system is also supplied with LED surface illumination which is ideal for illuminating the various facets of form cutting tools. The LED lighting consists of 16 high intensity white LEDs which can be switched on in clusters to form a segment which is also radially adjustable. This means that the light can be positioned exactly where it needs to be in order for the edge detection tools to measure the edges that you are interested in. Once programmed, the lighting conditions are reproduced by the software for every inspection to ensure optimum repeatability.

## ShadoMASTER SM350



NEW! Optional three lens turret and touch trigger probe from Renishaw.

Baty's new flagship bench top Vertical Profile Projector – The ShadoMaster SM350 has a class leading X Y measurement range of 250mm x 125mm. The innovative design gives rise to an optional third Axis of measurement in the Z axis. A manually indexable Renishaw touch trigger probe allows the user to measure heights as well as the standard 2D geometric features measured with the traditional screen cross-hair or optical edge detector.

Another new feature is the optional three lens turret which provides a quick and easy method of changing projection magnifications without having to remove / replace optics.

Fusion software allows CAD information to be imported. Data points can be taken around non-geometric profiles and best fit to the CAD file, providing empirical profile error data rather than relying on overlay charts.