BOWERS GROUP

Baty R14 - Profile Projector

The Baty R14 bench mount profile projector with its 340mm screen combines high accuracy non-contact measurement and inspection with a large 175mm x 100mm measuring range.

Choice of digital readouts and optional automatic profile edge detection. The horizontal light path configuration is ideally suited to machined parts that can be secured to the workstage using a range of optional accessories from the Baty fixture family. The compact and robust lightweight chassis makes the R14 ideal for workshop environments.

Features

- 340mm (14") screen with 90° crosslines and chart clips
- Profile illumination with halogen lamp and green filter
- Lens magnification choice: x10, x20, x25, x50 and x100
- Surface illumination (fibre optic)
- Helix adjustment of light source ± 7° for accurate thread form projection
- Workstage with machined slot for holding accessories
- Workstage measuring range of 175mm (7") x 100mm (4")
- Digital angle measurement to 1 minute

Available Options

- Internally fitted automatic edge sensor (illustrated)
- Swing over lamphouse to allow clear access to the workstage
- Various electronic measuring systems to suit individual requirements
- Cabinet stand ensures a solid base and provides storage
- Other options include foot switch control and printer
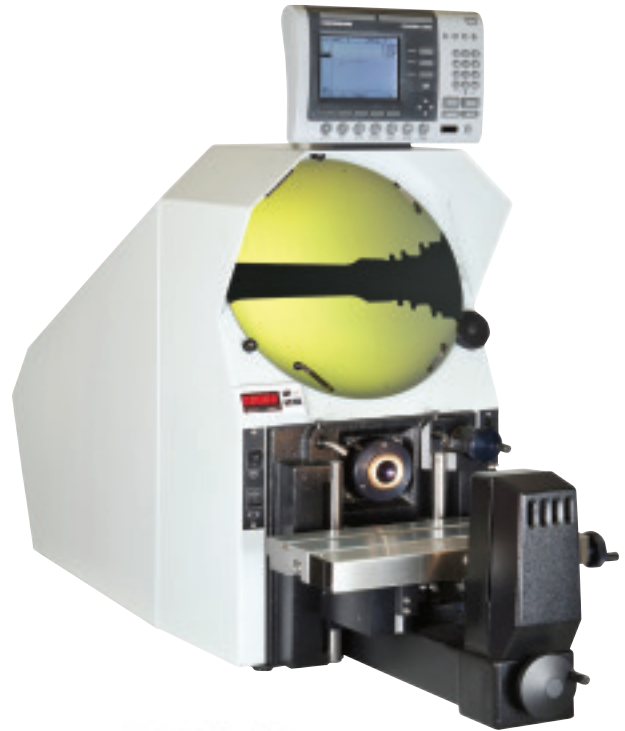
Projector Type		R14				
Magnification		10x	20x	25x	50x	100x
Field of view		35	18	14	7	4
Working Distance		82	38	24	15	31
Maximum	half field	103	103	80	45	96
Working Diameter	full field	120	109	56	31	77

LENS SYSTEMS

Code No	Description
122-600	Lens system - magnification 10x
122-601	Lens system - magnification 20x
122-602	Lens system - magnification 25x
122-603	Lens system - magnification 50x
122-604	Lens system - magnification 100x

Horizontal Stage Systems
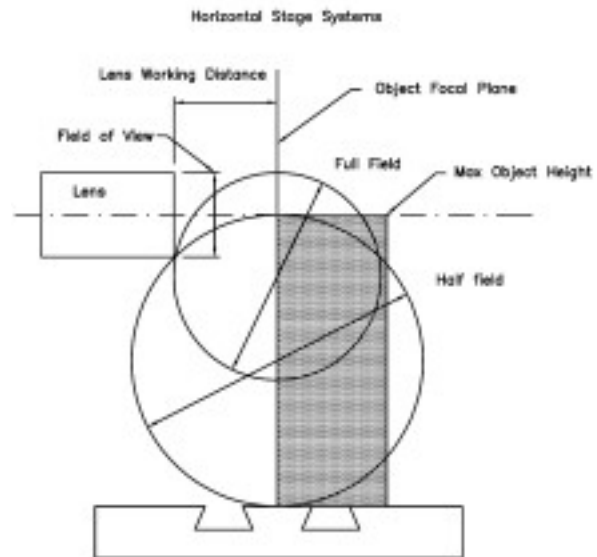
BATY R14

Code No	Description	Magnification	Functions
R14-XLS	Horizontal projector with QC100 two axis digital readout	10x lens	Basic X Y readout with inch / mm conversion
R14-GXL	Horizontal projector with QC200 geometric readout	10x lens	As XLS with Geometric Measurement functions and tolerancing
R14-FT2	Horizontal projector with Fusion 2D Touchscreen DRO	10x lens	Windows Touch Screen SW with full reporting
R14-FT2-E	Horizontal projector with Fusion 2D Touchscreen DRO & optical edge detection	10x lens	As FT2 with optical edge detection

For more information contact sales@baty.co.uk or visit www.baty.co.uk

Baty R400 - Profile Projector

The Baty R400 bench mount profile projector with its 400mm screen combines high accuracy non-contact measurement and inspection with a large 300mm x 150mm measuring range.

Choice of digital readouts and automatic profile edge detection. The horizontal light path configuration is ideal for checking machined components that can be secured to the workstage using a range of optional accessories from the Baty fixture family. The robust design of the R400 makes it suitable for both the shop floor and standards room.

Features

- 400mm (16") screen with 90° crosslines and chart clips
- Profile illumination with halogen lamp and green filter
- Lens magnification choice: x10, x20, x25, x50 and x100
- Surface illumination (fibre optic)
- Helix adjustment of light source for accurate thread form projection
- Workstage with two machined slots for holding accessories
- Workstage measuring range of 300mm (12") x 150mm (6")
- Digital angle measurement

Available Options

- Internally fitted automatic edge sensor (FT2-E model only)
- Swing over lamphouse to allow clear access to the workstage
- Various electronic measuring systems to suit individual requirements
- Cabinet stand ensures a solid base and provides storage
- Computer numerical control (CNC) for automated measuring
- Other options include foot switch control
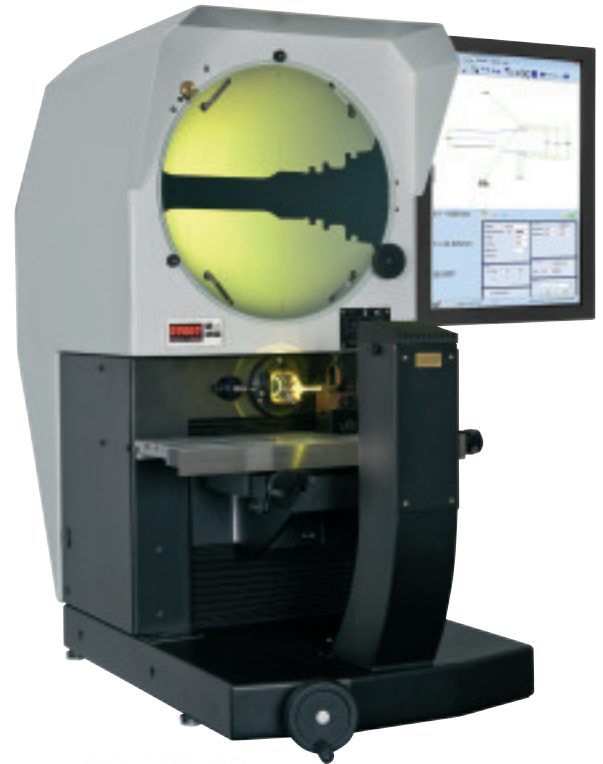
Horizontal Stage Systems
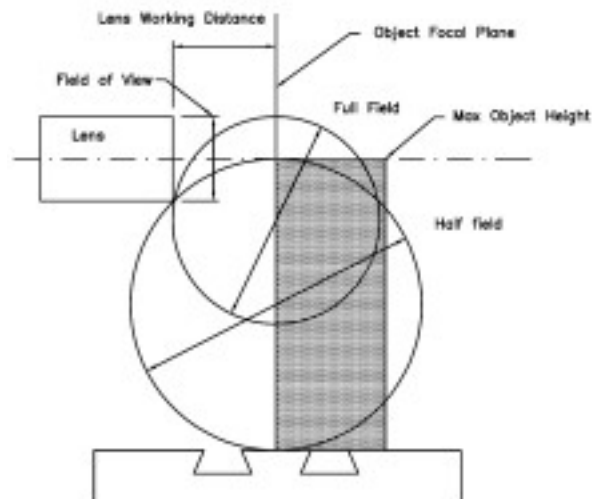
Projector Type	R400				
Magnification	10x	20x	25x	50x	100x
Field of view	40	20	16	8	4
Working Distance	80	82	70	53	43
Maximum	184	185	185	185	143
Working Diameter	179	176	181	147	122

all dimensions in mm

LENS SYSTEMS

Code No	Description
RH400-087	Lens system - magnification 10x
RH400-088	Lens system - magnification 20x
RH400-089	Lens system - magnification 25x
RH400-090	Lens system - magnification 50x
RH400-091	Lens system - magnification 100x

BATY R400

Code No	Description	Magnification	Functions
R400-XLS	Horizontal projector with QC100 two axis digital readout	10x lens	Basic X Y readout with inch / mm conversion
R400-GXL	Horizontal projector with QC200 geometric readout	10x lens	As XLS with Geometric Measurement functions and tolerancing
R400-FT2	Horizontal projector with Fusion 2D Touchscreen DRO	10x lens	Windows Touch Screen SW with full reporting
R400-FT2-E	Horizontal projector with Fusion 2D Touchscreen DRO & optical edge detection	10x lens	As FT2 with optical edge detection

For more information contact sales@baty.co.uk or visit www.baty.co.uk

Baty R600 - Profile Projector

The Baty R600 with its 600mm (24") screen and high specification, presents the capability to make simple comparative non-contact measurement through to complex CNC programmed measuring sequences with SPC capability.

The horizontal light beam configuration is ideally suited to large machined or turned workpieces for mounting in vee blocks and centres, or customised features.

Features

- 600mm (24") screen with 90° cross lines and chart clips
- Heavy duty workstage with 450mm x 200mm (18" x 8") measuring range and 2 machine slots for workpiece holders
- Angular rotation of ± 15° on workstage for measuring threadforms or cutting tools
- Vertical 200mm (8") Y axis power driven with joystick control
- Lens magnification choice - x5, x10, x20, x25, x50, x100
- 4 position rotating lens turret for ease of lens changing
- Profile illumination with halogen lamp and green filter
- Screen hood and curtains for use in bright ambient light conditions
- Digital angle measurement

Available Options

- Horizontal axis motorisation via joystick control
- CNC workstage for automatic measuring
- Internally fitted automatic edge sensor to allow the use of overlay charts on an unobstructed screen (FT2-E model only)
- Various electronic measuring systems to suit your individual requirements
- SPC to add to your quality control without the purchase of a separate system

| Projector Type	R600					
Magnification	5x	10x	20x	25x	50x	100x
Field of view	120 (4.72)	60 (2.36)	30 (1.18)	24 (.94)	12 (.47)	6 (1.72)
Working Distance	245 (9.64)	135 (5.31)	132 (5.19)	106 (4.17)	93 (3.15)	50 (1.96)
Maximum	292 (9.64)	343 (13.50)	343 (13.50)	343 (13.50)	343 (13.50)	195 (7.75)
Working Diameter	406 (18.98)	343 (13.50)	343 (13.50)	343 (13.50)	343 (13.50)	235 (9.25)

all dimensions in mm / (inches)

LENS SYSTEMS

Code No	Description
S4-650	Lens system - magnification 10x
202-1852	Lens system - magnification 20x
202-1853	Lens system - magnification 25x
202-1854	Lens system - magnification 50x
202-1855	Lens system - magnification 100x

BATY R600

Code No	Description	Magnification	Functions
R600-XLS	Horizontal projector with QC100 two axis digital readout	10x lens	Basic X Y readout with inch / mm conversion
R600-GXL	Horizontal projector with QC200 geometric readout	10x lens	As XLS with Geometric Measurement functions and tolerancing
R600-FT2	Horizontal projector with Fusion 2D Touchscreen DRO	10x lens	Windows Touch Screen SW with full reporting
R600-FT2-E	Horizontal projector with Fusion 2D Touchscreen DRO & optical edge detection	10x lens	As FT2 with optical edge detection

For more information contact sales@baty.co.uk or visit www.baty.co.uk
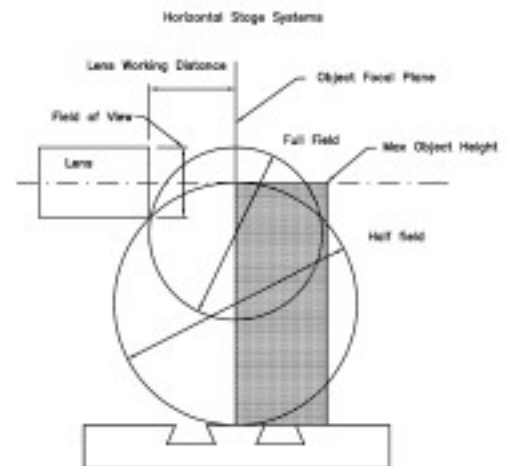
Baty SM300 - Profile Projector

300mm screen vertical light path projector with multi-function readout unit, printer and data output.

Robust design with full geometric measuring functionality ideal for the shop floor.

Features

- Top quality profile projector highly versatile and easy to operate
- Large travel range 150mm x 50mm (6"x 2") as standard
- Linear scale stage with 0.001mm resolution
- Fine ground glass screen for clear image with cross hairs
- Screen complete with cross hair lines and chart clips
- Built-in profile and surface illumination
- 10x, 20x, 50x, 100x projection lenses available
- Data output via RS-232 interface
- Display-readout unit DC300 included in standard delivery

Available Options

- Projection lens 10x with half reflecting mirror
- Projection lens 20x with half reflecting mirror
- Projection lens 50x with half reflecting mirror
- Projection lens 100x with half reflecting mirror
- Rotary table 360°
- Swivel centre support
- Holder with clamp
- V-block with clamp
- Overlay charts

Projection capacity (unit mm)				
Magnification	10x	20x	50x	100x
View field diameter	30	15	6	3
Working distance W	77.7	44.3	24.5	25.3
Max workpiece height H	80	80	80	80
Max workpiece diameter, edge line can be focused on screen centre D	160	130	55	60

LENS SYSTEMS

Code No	Description
SM300-10X	Lens system - magnification 10x
SM300-20X	Lens system - magnification 20x
SM300-50X	Lens system - magnification 50x
SM300-100X	Lens system - magnification 100x

BATY SM300

Code No	Description
SM300	Vertical projector with Geometric Readout

For more information contact sales@baty.co.uk or visit www.baty.co.uk
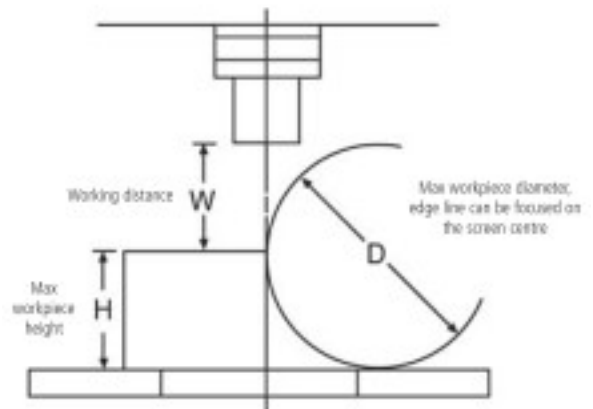
Baty SM350 - Profile Projector

The SM350 is an all new design. This vertical 14" / 350mm screen bench projector features an option where the focus axis can also be used as a 3rd measurement axis. This enables Z axis height measurements to be taken using a touch trigger probe. Another new feature is the option of a three lens turret for instant lens changes without re-calibration.

Features

- Fully usable 340mm screen
- Digital screen protractor
- Built in helix adjustment
- Sturdy all-steel design
- Cross roller bearings
- Quick release 'X' and 'Y' travel
- Erect image
- Easy-view vertical screen
- Large stage travel 10"(250mm) x 5"(125mm)
- Rotating chart clips
- Fibre optic illumination for surface measurement

Available Options

- Automated measurement system with joystick control
- Automatic edge sensing (FT2-E model only)
- Motorised focus axis
- Heavy duty cabinet
- Touch trigger probe for fast Z axis measurement
- 3-Position turret

Vertical Stage Systems

Projector Type		SM350				
Magnification		10x	20x	25x	50x	100x
Field of view		35	17	14	7	3
Working Distance		84	37	29	17	41
Maximum	half field	220	162	52	51	140
Working Diameter	full field	171	130	75	37	97
Maximum Height Object		114	113	106	111	103

all dimensions in mm

LENS SYSTEMS

Code No	Description
122-600	Lens system - magnification 10x
122-601	Lens system - magnification 20x
122-602	Lens system - magnification 25x
122-603	Lens system - magnification 50x
122-604	Lens system - magnification 100x
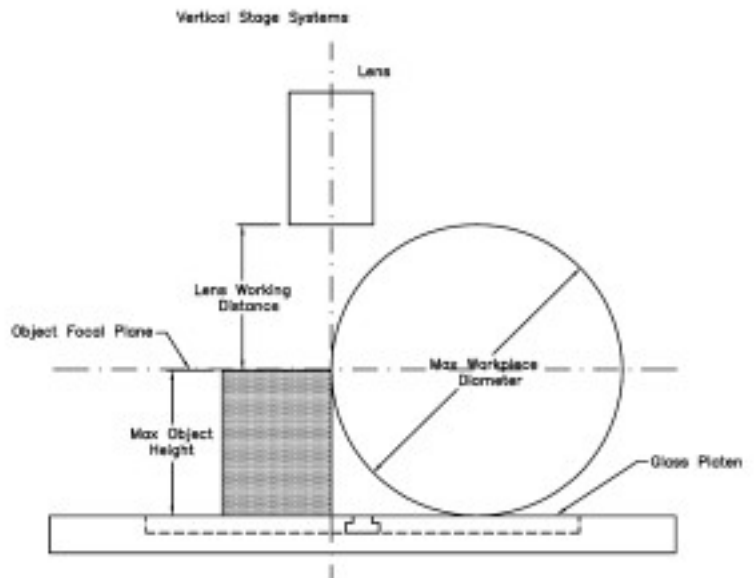
BATY SM350

Code No	Description	Magnification	Functions
SM350-XLS	Vertical projector with QC100 two axis digital readout	10x lens	Basic X Y readout with inch / mm conversion
SM350-GXL	Vertical projector with QC200 Geometric Readout	10x lens	As XLS with Geometric Measurement functions and tolerancing
SM350-FT2	Vertical projector with Fusion 2D Touchscreen DRO	10x lens	Windows Touch Screen SW with full reporting
SM350-FT2-E	Vertical projector with Fusion 2D Touchscreen DRO & optical edge detection	10x lens	As FT2 with optical edge detection

For more information contact sales@baty.co.uk or visit www.baty.co.uk

BOWERS GROUP

Baty SM20 - Profile Projector

The Baty Shadomaster SM20 with its 500mm screen and high specification presents the capability to make simple comparative measurements through to complex results storage and tolerancing with SPC capability.

The vertical light beam configuration is ideally suited for workpieces which are more readily mounted flat or horizontally.

Features

- 500mm screen with 90 degree crosslines and chart clips
- Angled screen for easy viewing
- Profile illumination with halogen lamp and green filter
- Single lens mounting
- Lens magnification choice: x5, x10, x20, x25, x50 and x100
- Helix adjustment of light source for accurate thread form projection
- Large stage travel 10"(250mm) x 5"(125mm)
- Digital angle measurement

Available Options

- Screen hood and curtains with generous proportions for use in bright ambient light conditions
- Automatic edge sensing
- Surface illumination through twin fibre optics for bright full colour surface inspection
- 3 position lens turret for easy lens changing
- Various electronic measurement systems to suit your individual requirements
- SPC to add to your quality control without the purchase of a separate system

Projector Type	SM20					
Magnification	x10	x20	x25X	x25	x50	x100
Condenser	L	L	L	S	S	S
Field of view	50	25	20	20	10	5
Max diameter	200	200	200	200	180	85
Max focal pane height (profile lighting)	205	203	218	254	240	195
Max end mill height (surface lighting)	150	153	153	155	150	150

LENS SYSTEMS

Code No	Description
S4-650	Lens system - magnification 10x
202-1852	Lens system - magnification 20x
202-1853	Lens system - magnification 25x
202-1854	Lens system - magnification 50x
202-1855	Lens system - magnification 100x

Vertical Stage Systems
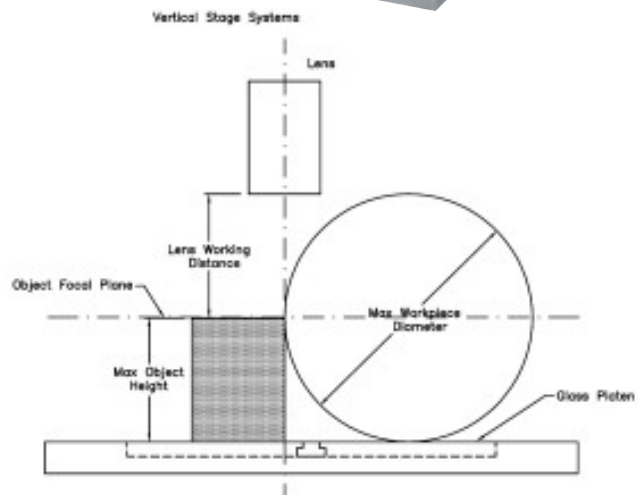
BATY SM20

Code No	Description	Magnification	Functions
SM20-XLS	Vertical projector with QC100 two axis digital readout	10x lens	Basic X Y readout with inch / mm conversion
SM20-GXL	Vertical projector with QC200 Geometric Readout	10x lens	As XLS with Geometric Measurement functions and tolerancing
SM20-FT2	Vertical projector with Fusion 2D Touchscreen DRO	10x lens	Windows Touch Screen SW with full reporting
SM20-FT2-E	Vertical projector with Fusion 2D Touchscreen DRO & optical edge detection	10x lens	As FT2 with optical edge detection

For more information contact sales@baty.co.uk or visit www.baty.co.uk

BOWERS GROUP

Baty Readout Options

The readout options from Baty include a fully programmable unit with geometrical functions and a software module allowing direct connection to a PC. All units are fully compatible allowing upgrades as required.

XLS Readout

- A simple two axis digital readout for point to point X,Y or R,A measurements
- Absolute or incremental mode with Inch / metric conversion, Zero, preset and print functions. RS-232C serial and parallel ports. Footswitch compatible

GXL Readout

- Graphical display of measured feature
- Radius, angle, line, point, skew
- Inch, metric, polar, cart
- Data output to PC/printer
- Store inspection routines to prompt operator
- Tolerancing
- Multi-language menu
- On-screen help

Fusion Touch Readout

FT2: Complete TOUCH SCREEN DRO with 2D Fusion Touch software for projectors with full geometric functionality. Graphical view of measured part can be printed as a fully dimensioned drawing with geometric tolerances. Other graphics include form error and SPC charts. Full reporting capability includes tabulated details with pass / fail analysis, auto link to Excel and auto sequence programming feature. SPC and best fitting to dxf (overlay). Windows O/S and built in 19" portrait touch screen monitor in a rugged all steel housing.

FT2-E: Complete TOUCH SCREEN DRO with 2D Fusion Touch software as above. Built-in optical edge detection allows data points to be taken 'on the fly' as the projected image is passed under the screen-mounted fibre optic sensor. An internally mounted edge sensor is available as an option on all 'R' series projectors.

Note: FT2 and FT2-E DROs are available to retrofit to customers' projectors, of any make.
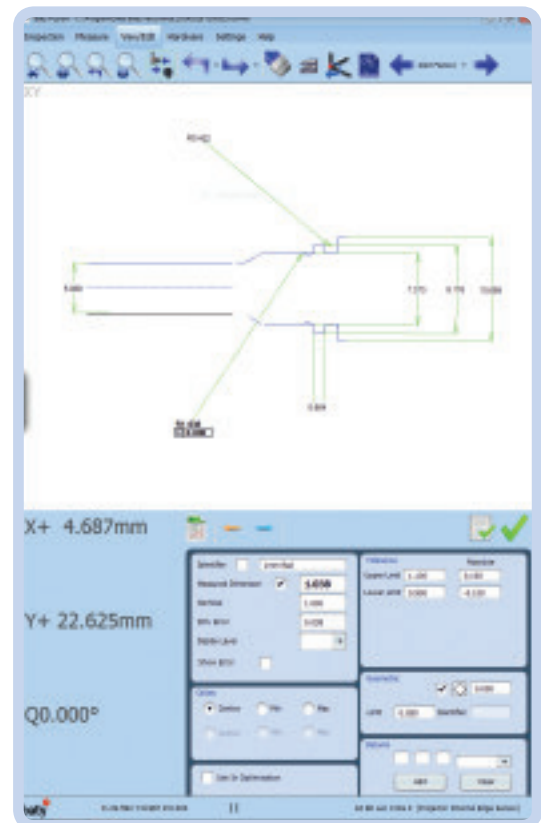
Baty Options & Accessories - Profile Projector
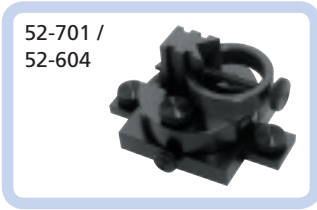
SA-527

SA-250

52-602

SA-256 / SA-258

52-701 / 52-604

SA-152

52-600 / 52-603

SA-260

52-605

SA-542 Large Vee Blocks and Centres

SA-543 Riser Blocks
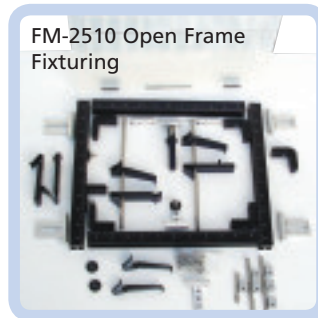
Rotary Glass Stage SA-245-2

SA-370 Back Stop

SA-371 Side Stop

SA-196-EXT Dual Vee Blocks and Centres

FM-2510 Open Frame Fixturing

R14 / R400 ACCESSORIES

Code No	Description
202-1327-1	Footswitch for GXL
ABFS-001	Footswitch for AB2 Fusion Systems
52-371	Protective cover - R14
350-035	Protective cover
SA-328	Cabinet stand
SA-250	Iris diaphragm
SA-256	Vee blocks
SA-258	Spring loaded centres
SA-259	Riser blocks 38mm (1/2") for SA-256
SA-152	Vice stage and vice
SA-260	Swivel vice
SA-276	Single vee and clamp (Vee parallel to optic axis)
SA-153	Fixture base
SA-527	Glass plate work holder

FIXTURE FAMILY ACCESSORIES

Code No	Description
52-600	Self centering vice
52-601	Dual axis vee block and clamp to Ø 15mm
52-602	Dual axis vee block and clamp to Ø 30mm
52-603	Precision rotary base
52-604	Universal base
52-605	Precision ground steel alignment feature
52-606	Magnetic vee block
52-701	Dual axis vee block fitted with side base

SM350 ACCESSORIES

Code No	Description
SA-245-2	Rotary glass stage
SA-370	Back stop
SA-371	Side stop
SA-196-EXT	Dual vee block and centres
FM-2510	Open frame fixturing for 2510 stage
SA-551	Iris diaphragm for SM350
350-035	Protective cover

Baty Vision Systems - VuMaster 2D Manual / 2D CNC

VuMaster is a manual 2D vision system with a massive difference.

Due to its innovative absolute 2D scale system, the newly designed VuMaster does not have a conventional moving stage or encoders - just a floating measuring camera that moves anywhere in the measuring range. The result is fast, accurate, 'non contact' measurement over a much larger measuring range - 400mm x 300mm to be exact!

Because the camera moves and the part stays still, there is often no need for expensive and time consuming work holding devices.

VuMaster is either operated manually or inspection routines can be recorded and stored. When played back, these 'programs' guide the operator through a pre-defined inspection procedure recreating the same lighting conditions and using 'Video Edge Detection' to automatically 'capture' feature data. The CNC model is fully motorised for automated inspection.

Finally, a report is generated in the form of a fully dimensioned drawing of the measured part.

Features

- Large 400mm x 300mm measuring range
- Sturdy construction with a granite base
- Supplied with Fusion Touch 2D vision software
- Patented measuring technology
- Programmable collimated profile lighting
- Teach and repeat part programming
- Advanced video edge detection
- Digital zoom
- Supplied with stand, rack mount PC and touch screen monitor
- Programmable segmented LED surface ring light
- Motorised autofocus
- Image grab
- Auto inspection playback

VM2-4030-2D-M
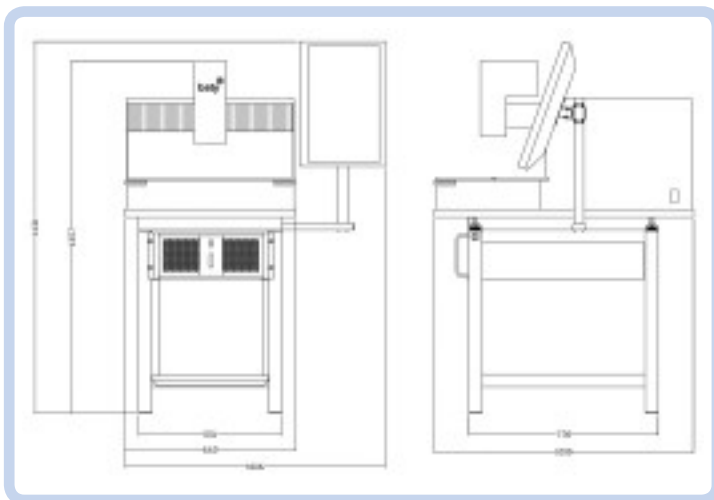
VUMASTER

Code No	Description
VM2-4030-2D-M	VuMaster Manual including 19" LCD monitor
VM2-4030-2D-C	VuMaster CNC including 19" LCD monitor
CAL-MAG-2	Glass calibration artefact

For more information contact sales@baty.co.uk or visit www.baty.co.uk

Baty Vision Systems - Venture Touch

The highly successful Venture range includes both manual and full CNC systems that cover two standard measuring ranges:

The VI-2510 has a 250mm x 125mm x 165mm X,Y,Z measuring capacity and the VI-3030 has 300mm x 300mm x 165mm.

Venture Touch 3D

This advanced Vision system combines a manually operated X-Y measuring stage with a motorised Z axis. The advantage of this is that the servo motor driven Z axis can provide the all-important autofocus function for Z axis measurement without operator influence.

Suitable for the shop floor, the rugged design features a steel / granite stand with fully integrated PC controller running Baty's all new 3 axis touch screen software - Fusion Touch. The full HD touch screen is mounted on an adjustable arm and the software is arranged in a portrait layout for ease of use.

Fusion Touch software features full geometric functionality so circles, lines arcs and points can be measured using dedicated tools. Data points are automatically taken along the edge of the feature using video edge detection, then all measurements are automatically saved, should the inspection need to be replayed for a batch of parts.

All measured features appear in the part view where they can be selected for dimensioning resulting in a dimensioned part view that can be printed or exported to CAD Tolerances are set for each dimension so that the final inspection reports can classify each dimension as a pass or fail.

Inspection playback

During this process the operator is guided through the inspection routine via the graphical part view. Once the stage has been positioned so that the feature appears in the camera's view, the Video edge detection tools take over and measure the feature automatically. If features are on different planes, the Z axis drives under CNC control to the correct position as defined by the original inspection. All lighting and magnification conditions are also recorded and re-created as each feature is visited. The end result is a highly repeatable process with no operator influence.

Lighting

The programmable LED lighting is also controlled using the touch screen. Segmented surface illumination, through the lens and profile lighting conditions can be adjusted to ensure that the feature edge is perfectly illuminated.

Features

- High resolution 0.5um scales for increased accuracy
- 6.5:1 Zoom optics (with optional CNC control)
- Programmable segmented LED lighting system
- Z axis dovetail slide mount for increased Z axis capacity
- High precision cross-roller stage
- Auto video edge detection tools
- Auto programming
- Motorised Autofocus
- Full HD touch screen display
- Motorised Z axis

Venture Touch options

- Motorised CNC zoom optics
- Steel / granite machine stand

VENTURE TOUCH

Code No	Description
Venture-Touch-3030	Venture Manual with motorised Z and autofocus, Fusion Touch software, 300 x 300 x 165 X, Y, Z measuring range
CAL-MAG-2	Glass calibration artefact
VI-Vision-Stand	All steel machine stand with granite top

For more information contact sales@baty.co.uk or visit www.baty.co.uk

Baty Vision Systems - Venture 3D CNC

Venture CNC models take the power of fusion software one stage further by completely automating the inspection process.

Automatic Inspection

Advanced features like scanning and best fitting can be done quickly without taking up the time of skilled operators.

CNC programming is a simple teach and repeat process. Just measure the part once and a full CNC program is created automatically. The zoom lens can also be controlled so that magnification changes are all recorded into the program.

Programmable Segmented Light

Lighting is critical to ensure that the correct edge is measured. Baty's new 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 included for applications like blind bore measurement. 64 white LEDs are used to ensure Venture's high quality colour image is achieved.

Only now can this functionality be combined with traditional touch probe technology to offer the ultimate in multi-sensing Vision systems - Venture.

Baty's programmable segmented LED lighting

Standard CNC system features include:

- Teach and Repeat programming
- Programmable segmented LED lighting
- High resolution 0.5µm scales for increased accuracy
- CAD import / export
- Scanning & best fitting
- Fully dimensioned part view
- SPC included
- One click output to Excel™
- Autofocus
- 165mm Z axis measuring range on adjustable dovetail slide
- 250mm x 125mm and 300mm x 300mm XY stages available
- Auto program from CAD

VENTURE AB3-V-CNC

Code No	Description
AB3-V-CNC	Venture CNC with Fusion 3D software, 250mm x 125mm stage, incl. PC and 2 x 19" Monitors
3030-X-Y	Stage upgrade to 300mm x 300mm
CAL-MAG-2	Glass calibration artefact
TP-20 Kit	Touch probe kit incl ref ball, module and stylus

For more information contact sales@baty.co.uk or visit www.baty.co.uk

Baty Vision Systems - Venture Plus

The Venture Plus range includes all of the standard Venture features with a little more... measuring range, that is.

Large Measurement Volume

The Venture Plus is available in four models:

VP-6460 with 640mm x 600mm x 250mm measuring range

VP-6490 with 640mm x 900mm x 250mm measuring range

VP-101040 with 1000mm x 1000mm x 400mm measuring range

VP-101540 with 1000mm x 1500mm x 400mm measuring range

The bridge type construction is all aluminium resulting in low inertia and low thermal mass. Air bearings are used on all axes and a granite Y beam is used for increased accuracy. This ensures that the machine will expand and contract uniformly with temperature changes ensuring minimal distortion and subsequent errors. Ambient temperature can be compensated for within the Fusion software making Venture Plus ideal for use on the shop floor.

Venture Plus additional features include:

- Rigid, low mass bridge construction
- Integral zoom optics
- 0.5µm resolution scales
- Collimated profile illumination
- Coaxial TTL lighting
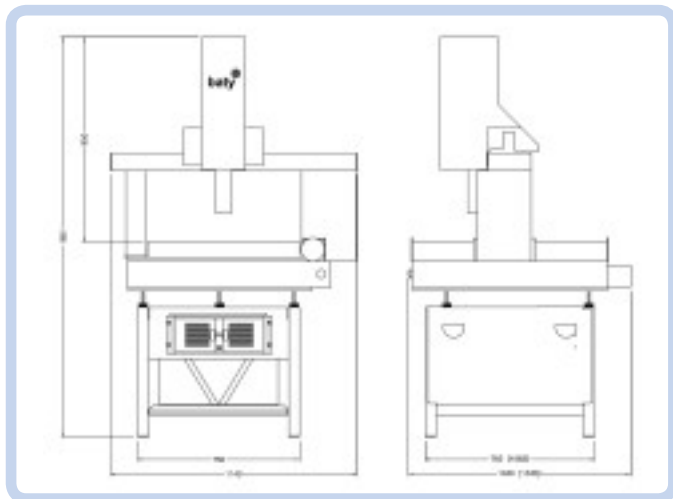- Renishaw touch probe
- Easy to use Fusion software

Complete with our standard zoom optics and programmable, segmented LED surface lighting, Venture Plus offers the same level of camera based functionality as every other Venture.

The use of a touch probe is optimised on a CNC system. Measurements from data points taken using the touch probe can be combined with those taken using Video Edge Detection for optimum speed and reduced inspection times.

A probe changer rack can be installed so that probe modules fitted with a variety of pre-calibrated styli can also be used in the same inspection. When a change of stylus is required, the system automatically puts the current probe module back in the rack and picks up the next to continue the inspection process. Only now can this functionality be combined with traditional touch probe technology to offer the ultimate in large format multi-sensing Vision systems - Venture Plus.

VENTURE PLUS

Code No	Description
VP-6460	Venture Plus CNC with Fusion software and Touch probe - includes PC and 2x19"monitors (640 x 600 x 250mm)
VP-6490	Venture Plus CNC with Fusion software and Touch probe - includes PC and 2x19"monitors (640 x 900 x 250mm)
VP-101040	Venture Plus CNC with Fusion software and Touch probe - includes PC and 2x19"monitors (1000 x 1000 x 400mm)
VP-101540	Venture Plus CNC with Fusion software and Touch probe - includes PC and 2x19"monitors (1000 x 1500 x 400mm)
CAL-MAG-2	Glass calibration artefact

For more information contact sales@baty.co.uk or visit www.baty.co.uk

Venture Options

CAD

3D CAD models (STEP or IGES) can be imported and are shown in a floating window. After alignment to the CAD model, points are taken anywhere on the part surface and displayed on the CAD model. The points appear colour coded so as to indicate their distance from the nominal surface.

Rotary Axis

A CNC rotary axis is used to rotate the part to a pre-determined angle for the next set of measurements to be taken.

Rotations are automatically recorded into the inspection program. 6 jaw keyless chuck to suit O/D range of 2-44mm can be mounted horizontally (as shown) or vertically.
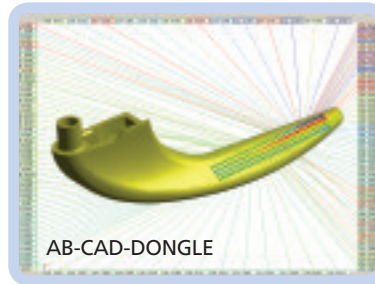
AB-CAD-DONGLE

SB-A-1371-0163

SA-196

Cast vee blocks and extended centres for the 2510 Venture model

UFB3030

Universal fixture base provides fixture mounting slots compatible with all projector accessories.
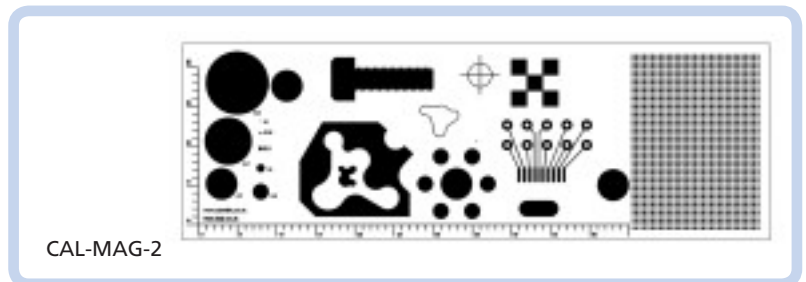
SA-196-EXT

VI-3030-UFB

Venture Stand

Rigid steel stand with granite top and integral PC / controller shelf for Venture 2510 and 3030 models

VI-Vision-Stand

Glass Reference Standard

Calibration standard with nominal diameters for field of view measurement verification and pixel calibration.

CAL-MAG-2

VENTURE OPTIONS

Code No	Description
AB-CAD-DONGLE	CAD comparison software
SB-A-1371-0163	Probe module change rack - 6 port
SA-196-EXT	Dual vee block and centres
VI-3030-UFB	Universal fixture base
VI-Vision-Stand	All steel machine stand with granite top
CAL-MAG-2	Glass calibration artefact

For more information visit **www.bowers.co.uk**

Flexmaster Fixtures

Flexmaster components introduce new technology. Our selfwedging clamps offer near zero clamping force. Sliding t-nut tooling blocks provide an infinite variety of fixture solutions.

Even the corner joiners for our frame are dual purpose, providing ridges that allow backlighting to illuminate edges for inspection.

Fixture frame assembly, includes the following:
- 4 off linear slide-frames with t-slots, and laser marked reference scales
- 4 off ridged two-way T-nuts for corner joining and part location
- 4 off sliding hold-down brackets with slots for 2 axis adjustment to mount t-slot frames to venture stage frame

Fasteners
- 30 off stainless grub screws
- 3 off long T-nuts
- 6 off short T-nuts
- 2 off T-nuts with machined vee in end
- 12 off locknut with threaded ID.
  (For use with clamp rods, thumbscrew, and spherical locator pin)

Clamps and Rods
- 2 off narrow 'soft-touch' self-wedging tail-spring clamp
- 2 off wide 'soft-touch' self-wedging tail-spring clamp
- 2 off self-wedging V-clamp
- 2 off ridged corner locator clamp
- 3 off stainless clamp rod.
  (Use with locknut to attach rods to slideframe, for self-wedging clamps)
- 3 off stainless clamp rod
- 2 off stainless clamp rod

Locators
- 3 off sliding tool blocks with threaded holes for vertical clamp and adjustment
- 4 off adjustable rest button, stainless, spherical top
- 2 off additional ridged two-way t-nuts for part location
- 1 off case