baty

10

20

30

40

0 1 2 3 4 5 6 7 8 9

Profile
Projectors

Baty International has been in business since 1932. Originally, a manufacturer of high precision dial indicators and other associated instruments such as cylinder bore gauges.

Baty soon diversified into non-contact measurement with Optical Profile Projectors and the Baty 'Shadograph' series has since become an industry standard in profile projectors. These products are still manufactured in Sussex in accordance with ISO 9001:2000.

For decades Baty has employed a team of Field Based Service Engineers. Today, our service department is the largest ISO 9001:2000 accredited Projector Service Organisation in the UK offering on-site Service, Training, Retrofits, and Repair for all makes of Profile Projectors and Vision Systems.

In keeping with its gauging roots, Baty acquired John Bull and British Indicators, extending its gauging range to include calipers and flexible fixturing.

The range was then completed in the eighties when our first camera based Video Inspectors were developed. Video Edge Detection (VED) was soon added giving rise to increased accuracy, repeatability and measuring speed.

Now all our Vision Systems offer the best of both worlds with the combination of non-contact (VED) and contact measurement using Renishaw's extensive touch probe range.

Today, Baty is an ISO 9001:2000 accredited company that offers a range of Metrology Instruments from Hand Tools to Vision Systems, offering measuring solutions for almost every measurement application in modern manufacturing and now, we've put them together into one catalogue for your convenience.

So, whether you need a digital caliper or a full CNC multi-sensing Vision System...

...it's here.
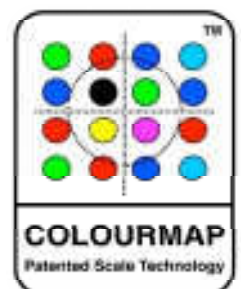
We look forward to talking to you.

Geoff Jackson
Managing Director

Tel +44 (0) 1444 235621

Fax +44 (0) 1444 246985

Email: sales@baty.co.uk

Website: www.baty.co.uk

CONTENTS

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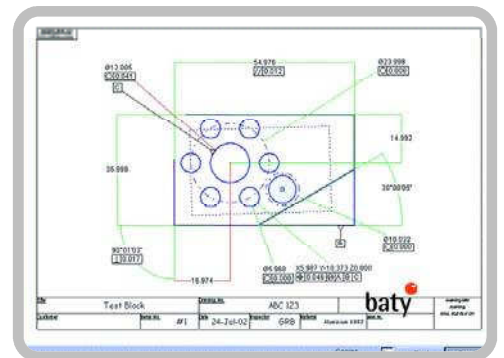
Choice of digital readouts and optional automatic profile edge detection. The horizontal light path configuration is ideally suited to machined parts that can be secured to the workstage using a range of optional accessories from the Baty fixture family. The compact and robust lightweight chassis makes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

Standard 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")
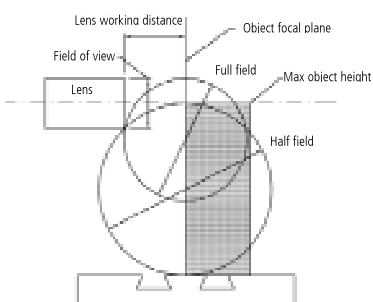- Digital angle measurement to 1 minute

Optional features

- 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

Horizontal stage systems

Lens working distance
Object focal plane
Field of view
Full field
Lens
Max object height
Half field

Fusion-2: PC software option shows measured part as a dimensional drawing

Measuring Option Fusion 2

R14 Lens Working Capacity mm / (inches)

Magnification	x10	x20	x25	x50	x100
Field of view	34 (1.4)	17 (0.7)	13.5 (0.53)	6.8 (0.27)	3.4 (0.13)
Working distance	80.5 (3.2)	38.5 (1.5)	28 (1.1)	15.5 (0.64)	30 (1.2)
Max work diameter (Full field)	119 (4.7)	108 (4.3)	56 (2.2)	31 (1.2)	77 (3.0)
Max work diameter (Half field)	100 (3.9)	100 (3.9)	79 (3.1)	44 (1.7)	96 (3.7)
Maximum work piece height	100mm				

T: **01444 235621**

Basic Machine

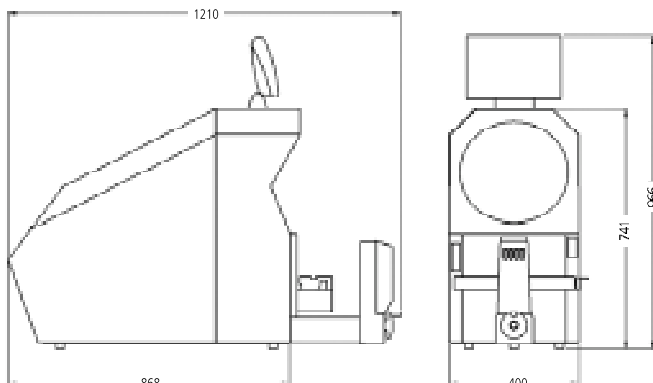|	
Type	Bench standing with horizontal light path
Screen	Rotating 340mm diameter, inclined 75° to horizontal, with hood
Image	Inverted and reversed
Power supply	220 / 240 volt 50Hz or 110 volt 60Hz
Weight	60kg (132lb)

The basic R14 model consists of

- 340mm diameter translucent screen with chart clips
- Digital angle measurement, with 1 minute of arc resolution
- Profile illumination with fan cooled lamphouse
- Surface illumination
- Focussing single lens mount
- x10 magnification lens
- Collimation lens
- Helix adjustment
- Machine slotted, chrome plated, cast iron workstage
- Green filter

Workstage

Measuring range	Horizontal (X) axis travel 175mm (7") Vertical (Y) axis travel 100mm (4")
Surface area	325mm (12.8") x 100 (4") with slot for mounting accessories
Scale resolution	0.0005mm
Movement	Manual with fine screw adjustment, quick release on X axis

Optical System

Lens mount	Single, screw clamping
Lens magnification	x10, x20, x25, x50, x100,
Focussing	By hand wheel
Magnification accuracy	Profile 0.05%, Surface 0.1%
Helix adjustment	± 7° by light source alignment
Light source	Profile illumination 12v 100w lamp (tungsten halogen) Surface illumination 12v 100w lamp (tungsten halogen)
Option	Internally mounted edge sensor

Measuring options

XLS: A simple 2 axis digital readout for X&Y measurement

GXL: Incorporates geometric functions for skew alignment, angle radii measurement, pitch circle diameter and construction of intersect points etc

GXL-E: As GXL with screen mounted automatic profile edge sensor. As an option the sensor can be fitted internally

Fusion 2: Fusion PC based measuring system produces dimensioned part drawing, includes geometric tolerancing, SPC, full reporting with pass / fail analysis, auto Excel™ link and auto sequence program

Fusion 2-E: As Fusion 2 with screen mounted automatic profile edge sensor. As an option the sensor can be mounted externally.

QC3-CNC: 2 axis touch screen display with external edge detection. Full CNC control allows automatic part inspection. Integral joystick for manual (motorised control).

R14 QC3 with motorised joystick control

Accessories

See page 14.

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, corrected image optics 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.

Standard 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
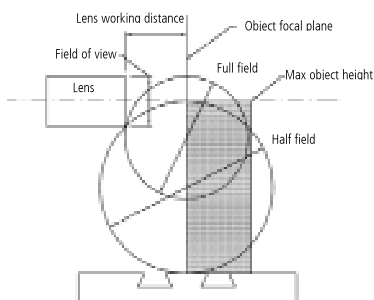
Optional features

- Internally fitted automatic edge sensor
- 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

Lens working distance
Field of view
Lens
Object focal plane
Full field
Max object height
Half field

R400

R400 Lens Working Capacity mm / (inches)

Magnification	x10	x20	x25	x50	x100
Field of view	40 (1.5)	20 (0.78)	16 (0.63)	8 (0.31)	4 (0.15)
Working distance	80 (3.15)	82 (3.23)	70 (2.76)	53 (2.09)	43 (1.69)
Max work diameter (Full field)	184 (7.24)	184 (7.24)	184 (7.24)	184 (7.24)	184 (7.24)
Max work diameter (Half field)	178.5 (7.03)	176.1 (6.93)	181 (7.13)	147 (5.79)	122.5 (4.82)
Maximum work piece height			185 (7.28)		

6

T: **01444 235621**

Basic Machine

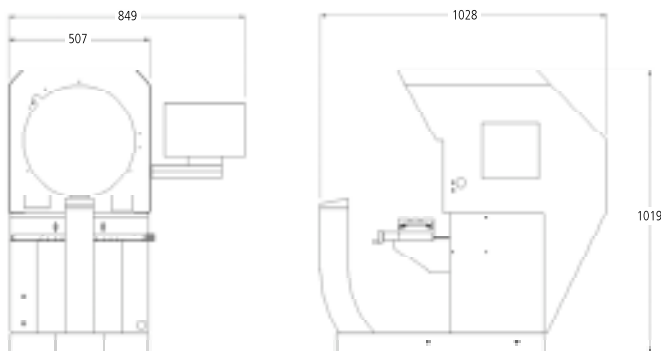|	
Type	Bench standing with horizontal light path
Screen	Rotating 400mm diameter, vertically mounted, with hood
Image	Erect, reversed left to right
Power supply	220 / 240 volt 50Hz or 110 volt 60Hz
Weight	120kg (264lb)

The basic R400 model consists of

- 400mm diameter translucent screen with chart clips
- Digital angle measurement, with 1 minute of arc resolution
- Profile illumination with fan cooled lamphouse
- High intensity fibre optic surface illumination
- x10 magnification lens
- Collimation lens
- Helix adjustment
- Machine slotted, chrome plated, cast iron workstage
- Green filter

Workstage

Measuring range	Horizontal (X) axis travel 300mm (12") Vertical (Y) axis travel 150mm (6")
Surface area	480mm (19") x 127 (5") with 2 slots for mounting accessories
Scale resolution	0.0005mm
Movement	Manual with ultra smooth plain rod drive and quick release on X axis 400MX motorised X and Y axes with joystick control (optional) 400CNC automatic position control and measurement (optional)

Optical System

Lens mount	Single, quick change snap-fit mounting
Lens magnification	x10, x20, x25, x50, x100,
Focussing	By hand wheel
Magnification accuracy	Profile 0.05%, Surface 0.1%
Helix adjustment	± 7° by light source alignment
Light source	Profile illumination 12v 100w lamp (tungsten halogen) Surface illumination 12v 100w lamp (tungsten halogen)
Surface illumination	Twin adjustable fibre optic light guides

Measuring options

XLS: A simple 2 axis digital readout for X&Y measurement

GXL: Incorporates geometric functions for skew alignment, angle radii measurement, pitch circle diameter and construction of intersect points etc

GXL-E: As GXL with screen mounted automatic profile edge sensor. As an option the sensor can be fitted internally

Fusion 2: Fusion PC based measuring system produces dimensioned part drawing, includes geometric tolerancing, SPC, full reporting with pass / fail analysis, auto Excel™ link and auto sequence program

Fusion 2-E: As Fusion 2 with screen mounted automatic profile edge sensor. As an option the sensor can be mounted externally.

Fusion-2-CNC: Fusion PC based measuring system, motorised X & Y axis with joystick control and CNC position programming for automatic measuring, produces dimensioned part drawing, Includes geometric functions and tolerancing, SPC, full reporting with pass/fail analysis, auto Excel link & auto sequence program, includes external edge sensor.

Accessories

See page 14.

R400 GXL

**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.

Standard 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

R600 GXL

Horizontal stage systems

Lens working distance
Object focal plane
Field of view
Full field
Max object height
Lens
Half field

Optional features
- 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
- Various electronic measuring systems
  to suit your individual requirements
- SPC to add to your quality control
  without the purchase of a separate
  system
- Reduced workstage X axis travel to
  300mm (12")
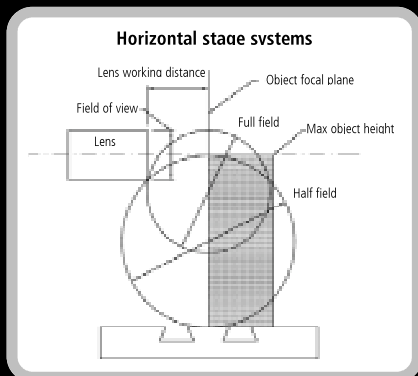
R600 Lens Working Capacity mm / (inches)

Magnification	x5	x10	x20	x25	x50	x100
Field of view	120 (4.72)	60 (2.36)	30 (1.18)	24 (.94)	12 (.47)	6 (1.72)
Workpiece distance	245 (9.64)	135 (5.31)	132 (5.19)	106 (4.17)	93 (3.15)	50 (1.96)
Max work diameter (Full field)	292 (9.64)	343 (13.50)	343 (13.50)	343 (13.50)	343 (13.50)	195 (7.75)
Max work diameter (Half field)	406 (18.98)	343 (13.50)	343 (13.50)	343 (13.50)	343 (13.50)	235 (9.25)

8

T: **01444 235621**

Basic Machine

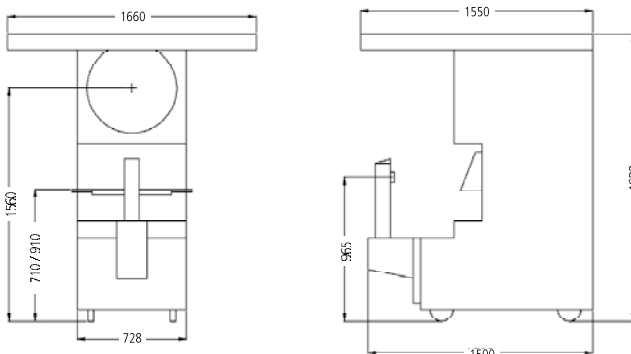| Type	Floor standing with horizontal light path
Screen	Rotating 600mm (24") diameter, vertical
Image	Erect, reversed left to right
Power supply	220 / 240 volt 50Hz or 110 volt 60Hz
Weight	550kg (1200lb)

The basic R600 model consists of

- 600mm (24") diameter translucent screen with chart clips
- Digital angle measurement, with 1 minute of arc resolution
- Profile illumination with fan cooled lamphouse
- Lens turret with 4 lenses
- Standard and high magnification collimation lenses
- Workstage with 450 x 200mm (18" x 8") travel
- Motorised Y axis (vertical) with joystick control
- Green filter
- Fibre optic surface illumination
- Screen hood and curtains

Workstage

Measuring range	Horizontal (X) axis 450mm (18") x Vertical (Y) axis 200mm (8") Optional X axis travel 300mm (12")
Surface area	900mm (36") x 200 (8")
Movement	Horizontal manual (option: motorised), Vertical motorised by joystick control
Scale resolution	0.0005mm
Max load	50kg (110lb)

Optical System

Lens mount	Rotary lens turret for 4 lenses with screw fitting
Lens magnification	x5 (single lens mount) x10, x20, x25, x50, x100
Focusing	By hand wheel
Helix adjustment	± 15° rotation of workstage
Light source	Profile illumination 24v 150w Surface illumination 24v 250w
Options	Internally mounted edge sensor Footswitch control

Measuring options

XLS: A simple 2 axis digital readout for X&Y measurement

GXL: Incorporates geometric functions for skew alignment, angle radii measurement, pitch circle diameter and construction of intersect points etc

GXL-E: As GXL with screen mounted automatic profile edge sensor. As an option the sensor can be fitted internally

Fusion 2: Fusion PC based measuring system produces dimensioned part drawing, includes geometric tolerancing, SPC, full reporting with pass / fail analysis, auto Excel™ link and auto sequence program

Fusion 2-E: As Fusion 2 with screen mounted automatic profile edge sensor. As an option the sensor can be mounted externally.

Fusion-2-CNC: Fusion PC based measuring system, motorised X & Y axis with joystick control and CNC position programming for automatic measuring, produces dimensioned part drawing. Includes geometric functions and tolerancing, SPC, full reporting with pass/fail analysis, auto Excel link & auto sequence program, includes external edge sensor.

Accessories

See page 14.

Standard and high magnification collimation lenses are included in a rotary mounting.

E: **sales@baty.co.uk   www.baty.co.uk**

The 2010 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.
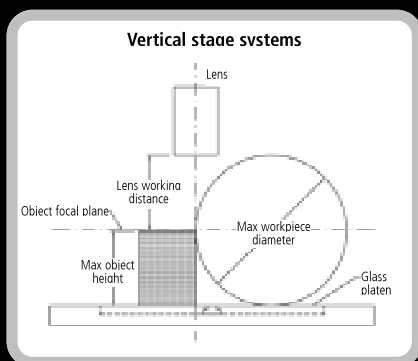
This enables Z axis height measurements to be taken using a touch trigger probe. Another new feature is the option of a three lens turret for instant lens changes without re-calibration.

Standard 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
- Includes 10x lens

Optional Features

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

SM350

Vertical stage systems

Lens
Lens working distance
Object focal plane
Max object height
Max workpiece diameter
Glass platen

SM350 Lens Working Capacity mm / (inches)

Magnification	x10	x20	x25	x50	x100
Field of view	34 (1.33)	17 (0.66)	13.5 (0.53)	6.8 (0.26)	3.4 (0.13)
Workpiece distance	83.98 (3.30)	37.05 (1.45)	29.42 (1.15)	16.58 (0.65)	41.18 (1.62)
Max work diameter (Full field)	170.67 (6.71)	129.9 (5.11)	74.82 (2.94)	37.43 (1.47)	90.94 (3.58)
Max work diameter (Half field)	220 (8.66)	162.27 (6.38)	52.62 (2.07)	51.51 (2.02)	139.94 (5.50)
Max workpiece height	114 (4.48)	113 (4.44)	106 (4.17)	111 (4.37)	103 (4.05)

T: **01444 235621**

Basic Machine

Type	Bench standing with vertical light path
Screen	Rotating 340mm (14") diameter, vertically mounted with hood
Image	Erect and reversed
Power supply	220 / 240 volt 50Hz or 110 volt 60Hz
Weight	133kg

The basic SM350 model consists of

- 340mm (14") screen with 90 degree crosslines and chart clips
- Profile illumination with halogen lamp and green filter
- Lens magnification choice: x10, x20, x25, x50, x100
- Surface illumination (fibre optic)
- Helix adjustment of light source for accurate thread form projection
- SA-2510 precision workstage with 250 x 125mm measuring range, 0.0005mm
- Digital angle measurement

Optical System

Lens mount	Single, quick change with lock nut, optional 3 lens turret
Lens magnification	x10, x20, x25, x50, x100
Focusing	By hand wheel
Magnification accuracy	Profile 0.05%, Surface 0.1%
Helix adjustment	± 7° by light source alignment
Light source	Profile illumination 12v 100w lamp Surface illumination 12v 100w lamp
Surface Illumination	Twin adjustable fibre optic light guides

Measuring options

XLS: A simple 2 axis digital readout for X&Y measurement

GXL: Incorporates geometric functions for skew alignment, angle radii measurement, pitch circle diameter and construction of intersect points etc

GXL-E: As GXL with screen mounted automatic profile edge sensor. As an option the sensor can be fitted internally

Fusion 2: Fusion PC based measuring system produces dimensioned part drawing, includes geometric tolerancing, SPC, full reporting with pass / fail analysis, auto Excel™ link and auto sequence program

Fusion 2-E: As Fusion 2 with screen mounted automatic profile edge sensor. As an option the sensor can be mounted externally.

Fusion-2E-CNC: Fusion PC based measuring system, motorised X & Y axis with joystick control and CNC position programming for automatic measuring.

Accessories

See page 15.
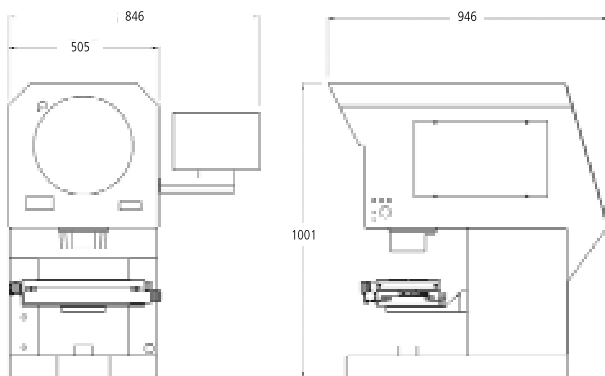
SM350-GXL

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.

- 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
- 250mm x 125mm stage measuring range
- Digital angle measurement

Optional features
- Screen hood and curtains with generous proportions for use in bright ambient light conditions
- 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

SM20

GXL-GXL-E:
Shopfloor DRO
with feature view and full reporting

Vertical stage systems
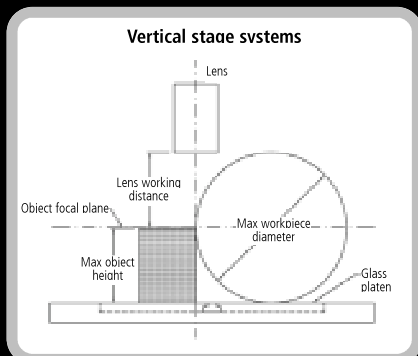
SM20 Lens Working Capacity mm / (inches)

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

12

T: **01444 235621**

Basic Machine
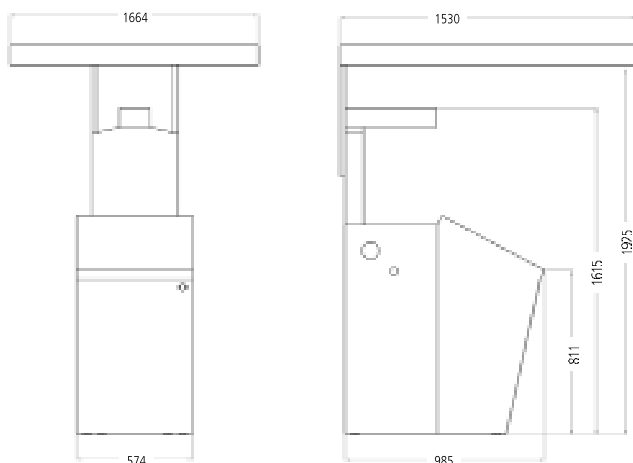
Type	Floor standing with vertical light path
Screen	Rotating 500mm diameter, inclined at 30° to the horizontal
Image	Inverted and reversed
Power supply	220 / 240 volt 50Hz or 110 volt 60Hz
Weight	150kg

The basic SM20 model consists of

- 500mm (20") diameter screen
- Digital angle measurement
- Profile illumination with fan cooled lamphouse
- Single lens mount
- Collimation lens for x10, x20, x25 magnification with swivel mount for x50, x100
- Manual focus system
- Green filter
- SA-2510 precision workstage with 250mm x 125mm measuring range, 0.0005mm

Optical System

Lens mount	Single lens mount, rotating turret to accommodate three lenses – optional
Lens magnification	x5 (not turret mounted) x10, x20, x25, x50, x100.
Magnification accuracy	Profile 0.05%, Surface 0.1%
Helix adjustment	± 7°
Light source	Profile illumination 12v 100w lamp (tungsten halogen) Surface illumination 12v 100w lamp (tungsten halogen)
Surface illumination	Twin adjustable fibre optic light guides

Measuring options

XLS: A simple 2 axis digital readout for X&Y measurement

GXL: Incorporates geometric functions for skew alignment, angle radii measurement, pitch circle diameter and construction of intersect points etc

GXL-E: As GXL with screen mounted automatic profile edge sensor. As an option the sensor can be fitted internally

Fusion 2: Fusion PC based measuring system produces dimensioned part drawing, includes geometric tolerancing, SPC, full reporting with pass / fail analysis, auto Excel™ link and auto sequence program

Fusion 2-E: As Fusion 2 with screen mounted automatic profile edge sensor. As an option the sensor can be mounted externally.

Accessories

See page 15.

Accessories for R14/R400

Part No.	Description
202-1327-1	Footswitch for GXL
ABFS-001	Footswitch for AB2 Fusion Systems
52-371	Protective cover – R14
350-035	Protective cover – R400 / SM350
SA-328	Cabinet stand
SA-250	Iris diaphragm
SA-256	Vee blocks
SA-258	Spring loaded centres
SA-259	Riser blocks 38mm ($\frac{1}{2}$") 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

Part 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

Accessories for R600

Part No.	Description
SA-551	Iris diaphragm
SA-542	Large vee blocks & centres
SA-543	Riser blocks
SA-614	Large vice stage & vice
SA-527	Glass plate work holder
SA-617	Heavy duty rotating vice
SA-733	Swing over lamphouse
SA-606	Screen chart rest bar

SA-527

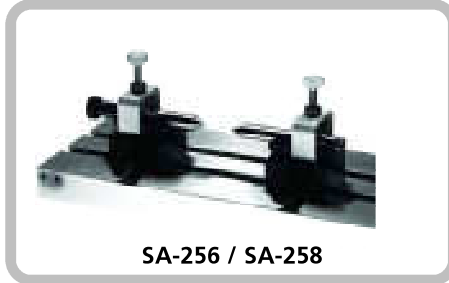Rotary Axis

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

T: **01444 235621**

**Rotary Glass Stage
SA-245-2**

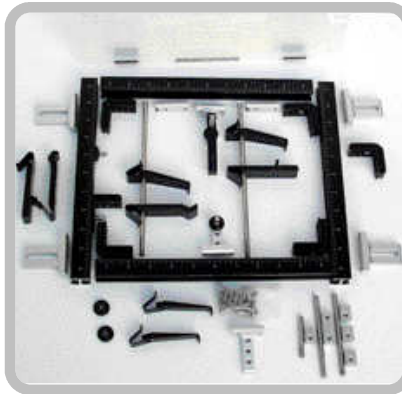**SA-370 Back Stop**

SA-371 Side Stop

**SA-196-EXT
Dual Vee Block and Centres**

Accessories for SM350/SM20

Model	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 SM20 / SM350 / R600
350-035	Protective cover SM350 / R400

WORKSTAGES

SA-179

SA-119-A

SA-2510

SA-179
- Fixed glass work platen

SA-119-A
- 50mm x 50mm workstage incorporating Digital Micrometers with 0.5 micron resolution

SA-2510
- Heavy duty precision workstage with large 250mm x 125mm, X-Y measuring range, ultra smooth plain rod drives and rapid traverse on BOTH axis, complete with 0.5 micron resolution scales

Baty screen charts, thread form diagrams and scales are specially manufactured on stable plastic. They are translucent and must be used as an overlay on either a clear or translucent glass screen.

Standard rulings include crossline, grid and concentric circles, whilst special charts can be supplied to your requirements. Replacement glass screens can also be supplied with either standard or special rulings on application.

Ruling Type

Crossline
- Chain crossline at 90° with 30°, 45° and 60° intermediate chain lines in two quadrants

Grid
- Grid squares in 2mm increments (metric) or 0.1" increments (imperial) with every 5th and 10th line in bold

Concentric Circles
- Concentric circles in 2mm or 0.1" incremental radii and 90° crosslines with 30°, 45° and 60° intermediate chain lines in two quadrants

Measuring Scales
- Used for making direct measurements at the screen. The graduations and numbering relate to the magnification being used and therefore give a direct reading of work size

- Thread form diagrams are available on request.
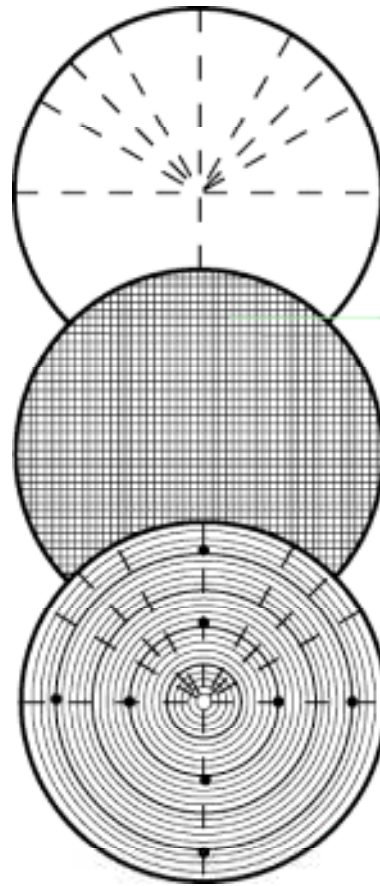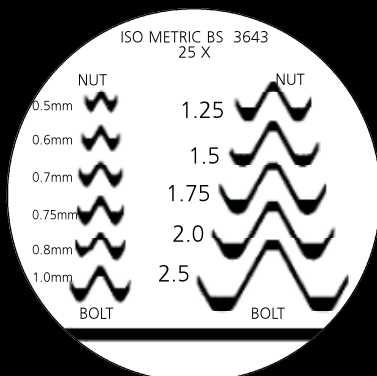
	254mm (10")	305mm (12")	500mm (20")
Crossline		SC12-5	SC20-5
Grid Metric	GM275-1	SC12-8	SC20-8
Grid Imperial	GC275-1	SC12-6	SC20-6
Concentric Circles Metric	RM275-1	Sc12-11	SC20-11
Concentric Circles Imperial	RC275-1	SC12-10	SC20-10
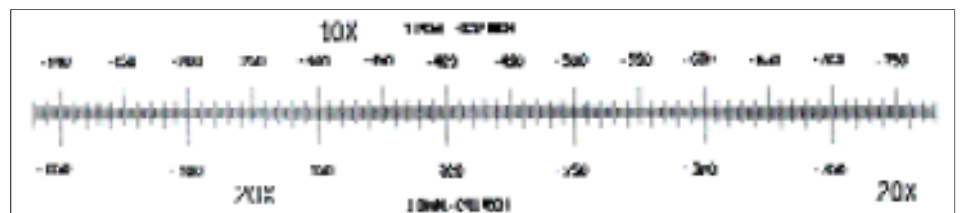
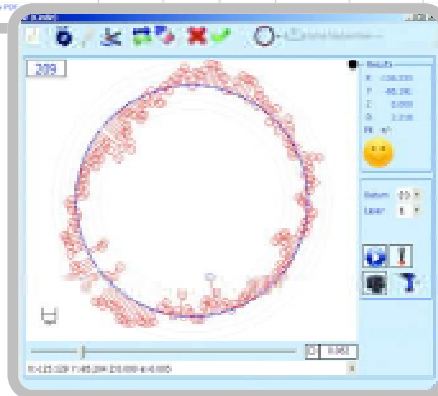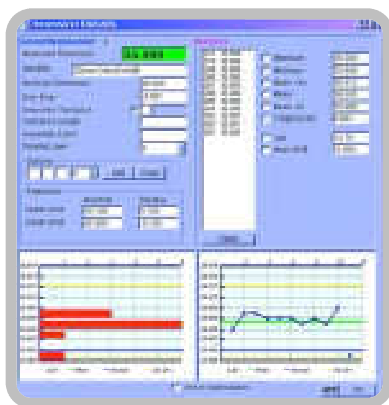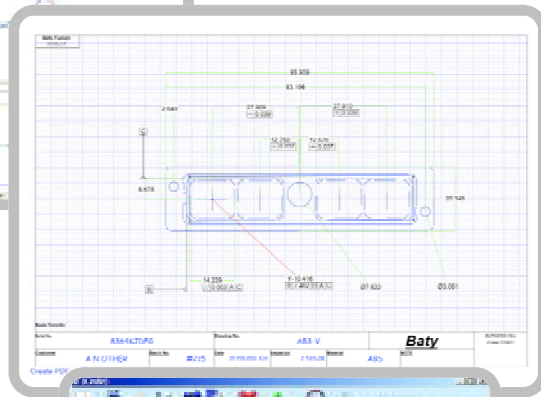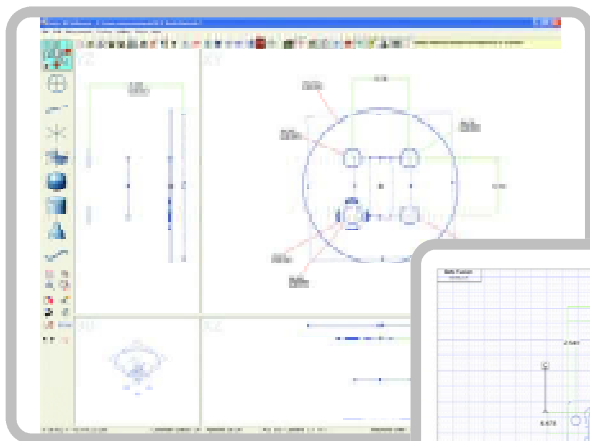| Part Number	Length	Resolution	Magnification
E2/1020	10"	0.002" / 0.001"	x10 / x20
E2/2550	10"	0.001" / 0.0005"	x10 / x20
M2 / 1020	250mm	0.05 / 0.025mm	x10 / x20
M2 / 2550	250mm	0.02 / 0.01mm	x25 / x50
E5/1020	20"	0.002" / 0.001"	x10 / x20
E5/2550	20"	0.001" / 0.0005"	x25 / x50
M5/1020	500mm	0.05 / 0.025mm	x10 / x20
M5/2550	500mm	0.02 / 0.01mm	x25 / x50

T: **01444 235621**

XLS

GXL/GXLE

XLS: 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. RS232C serial and parallel ports. Footswitch compatible.

GXL: As XLS with geometric functions for skew alignment, angle, radius, point, line, circle. Automatic feature list and graphical view. Macro programming facility guides the operator through the measurement process. Feature tolerancing and standard report printout. Footswitch compatible.

GXL-E: As GXL with profile edge sensor to take data points automatically. Eliminates operator error and speeds up inspection times.

Fusion-2: PC based measuring system with full geometric functionality. Graphical view of measured part can be printed as 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. Can be supplied as software only for self-installation or as a complete system.

Fusion 2-E: As Fusion but supplied with screen mounted automatic edge detector. As an option the sensor can be fitted internally.

FUSION2-E CNC: Fusion software with full CNC control for automatic part inspection. Auto program from CAD, Manual joystick control, multiple part reports and SPC.

Original Reprorubber® Thin Pour

Final Colour: LIGHT GREEN

For internal-shape applications where a thin pour will completely fill the cavity without voids. A complete replica casting is quickly formed.

- Manipulation time is approx 2 minutes and cure time is approximately 10 minutes
- Start to finish: approximately 12 minutes
- Kits include graduated mixing cups, wooden spatulas and instructions

Original Reprorubber® Quick Setting Putty

Final Colour: LIGHT BLUE

Roll two equal-sized balls of catalyst putty and base putty and simply knead them together like dough. Excellent for external shapes. Simply spread over master pushing down with fingers and wait for cure 8-10 minutes. You have 1 or 2 minutes of manipulation time. Therefore 12 minutes start to finish. You can also cast internal shapes and cavities but some pressure should be applied such as a weighted object on top.

Metrology grade casting material

Reprorubber offers numerous advantages over other hard-copy replicating materials:

- Quick casting – zero shrinkage
- No release agent required – will not stick to part
- Surface finish replication is exact with excellent optical properties easily checked on an optical comparator or video inspection machine
- Copies can be re-copied from original mould
- Replicas are permanent – will not leach out, ooze out, or gas out
- No more 16 hour cure time as with RTV silicones
- More accurate than all other RTV compounds

New Reprorubber® Orange – Medium Body Pre-filled Cartridges

Final Colour: ORANGE

New Medium Body (Medium Viscosity – Medium Durometer) casting material ideal for both internal and external applications. Disposable pre-filled dual barrel 50ml cartridges can quickly dispense casting material utilizing the REPRO-MIX II Gun System.

- Mix time: 15-30 seconds and cure time is 5 - 6 minutes
- Start to finish: 6 - 8 minutes
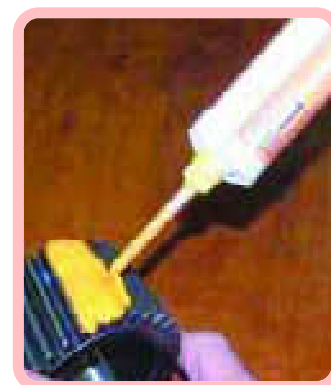
	REPRORUBBER THIN POUR 15-30 seconds	REPRORUBBER MEDIUM BODY ORANGE 15-30 seconds	REPRORUBBER QUICK SETTING PUTTY Approximately 1 minute
Working Time (Manipulation Time)	2 minutes	2.5 minutes	1 - 2 minutes (from beginning of mix)
Setting Time (at room temperature)	10 - 15 minutes	5 - 6 minutes	8 - 10 minutes
Permanent Deformation	0.2%	0.3%	0.3%
Dimensional Stability	less than 0.50%	less than 0.40%	less than -0.25%
Tear Strength	44 pounds per sq. inch	300 pounds per sq. inch	105 pounds per sq. inch
Elongation	60% at break	70% at break	6.3% at break
Durometer (Shore A-2)	30 (at 15 minutes)	40 (at 10 minutes)	50 (at 7 minutes)
Temperature Stability	1 week @ 23°C (72°F)	1 week @ 23°C (72°F)	1 week @ 23°C (72°F)
Detail Reproduction	EXCELLENT	EXCELLENT	EXCELLENT

T: **01444 235621**

Quick Dispense Cartridge System Kit

Reprorubber Quick Dispense Cartridge System Kits contain everything you need to easily create Highly Accurate, Zero Shrinkage replicas. Each kit includes 1 each Repro-Mix II Reusable Dispensing Gun, 6 each 50ml Pre-filled Reprorubber Disposable Cartridges, 15 Disposable Mixing Nozzles, 2 Micro Injector Snap-On Nozzles, and a Deluxe Fitted Carrying Case.

Kit No. 16305
Reprorubber Orange
Also Available: Thin Pour (Green) and Combo Kits.

Nozzle (optional) for small holes and cavities

Low cost, disposable mixing nozzle tops allow multiple applications

Ordering Complete Kits:

No. 16300	Reprorubber Thin Pour (Green) Quick Dispense Cartridge System Kit Complete
No. 16305	Reprorubber Orange (Medium Body) Quick Dispense Cartridge System Kit Complete
No. 16309	Reprorubber Combo Kit Quick Dispense Cartridge System Kit. Includes 3 each Thin Pour & 3 each Orange

Ordering Original Mix Your Own Kits:
Original Reprorubber® Thin Pour – Final Colour: LIGHT GREEN

Trial Size Kit:	Order No. 16116	Thin Pour 130ml Trial Kit
Standard Size Kits:	Order No. 16135	Thin Pour 380ml Kit
	Order No. 16137	Case of 10 each 380ml Kits

Original Reprorubber® Quick Setting Putty – Final Colour: LIGHT BLUE

Trial Size Kit:	Order No. 16129	220ml Trial Quick Setting Putty Kit
Other Kits:	Order No. 16130	1¾ lb (520ml) Introductory Kit
	Order No. 16131	7lb (2150ml) Economy Kit

System Refills:

No. 16301	Reprorubber Thin Pour (Green) 50ml Cartridge, 1 each
No. 16302	Reprorubber Thin Pour (Green) 50ml Cartridges, 6 pack
No. 16306	Reprorubber Orange (Medium Body) 50ml Cartridge,1 each
No. 16307	Reprorubber Orange (Medium Body) 50ml Cartridges, 6 pack
No. 16311	Repro-Mix II Dispensing Gun (reusable)
No. 16313	Repro-Mix II Helix Mixing Nozzles, 15 Pack
No. 16316	Repro-Mix II Helix Mixing Nozzles, 100 Pack
No. 16315	Quick Dispense Cartridge System Fitted Case (without contents)
No. 16314	Micro Injector Snap-On Nozzle, Pack of 15

Applications
You can take impressions of:
- All metals
- Non metals
- Paper or cardboard items
- Wood, marble etc
- All plastics
- Non metals
- Rubber
- Ceramic and glass items

Other Uses Include:
- Prototypes of rubber type components such as gaskets, washers, etc
- Making joints where flexibility is required
- As a mask for high temperature plasma spray of metallic coatings
- Fixturing where semi-rigid structure is desired

Physical advantages over the hard-copy replicas
- Replica is easy to remove – even if they are under cuts or grooves
- Cross-sectioning of replica is easily accomplished with a knife or razor
- It can then be checked on an optical comparator or microscope
- Surface finish replication is exact with excellent optical properties
- Reprorubber copies can be re-copied (copy from a 'female mould' yields a male-shaped replica).
- Replicas are permanent – will not leach or ooze out nor outgas
- No more 16 hour cure time as with RTV silicones
- More accurate than all other RTV compounds
- Reprorubber putty will withstand up to 600°F (or more)
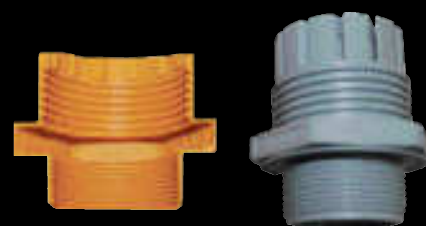
Distributed by:

Baty International

Victoria Road, Burgess Hill,

West Sussex RH15 9LR

Tel +44 (0) 1444 235621

Fax +44 (0) 1444 246985

Email: sales@baty.co.uk

Website: www.baty.co.uk

Official sponsors of **HAWK Kawasaki** British Superbike Team