

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

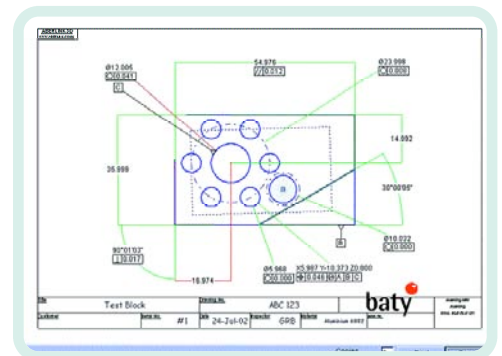
- 340mm (14") screen with 90° crosslines and chart clips
- Profile illumination with halogen lamp and green filter
- Lens magnification choice: x10, x20, x25, x50 and x100
- Surface illumination (fibre optic)
- Helix adjustment of light source $\pm 7^\circ$ for accurate thread form projection
- Workstage 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

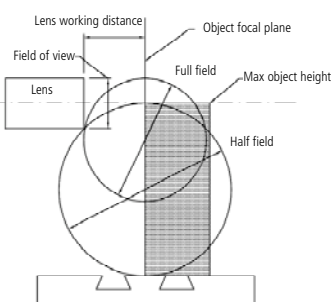


Fusion-2: PC software option shows measured part as a dimensional drawing



Measuring Option Fusion 2

Horizontal stage systems



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				



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

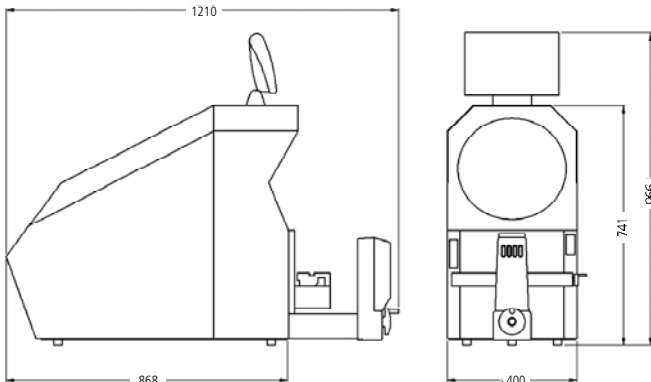
- 340mm diameter translucent screen with chart clips
- Digital angle measurement, with 1 minute of arc resolution
- Profile illumination with fan cooled lamphouse
- Surface illumination
- Focussing single lens mount
- x10 magnification lens
- Collimation lens
- Helix adjustment
- Machine slotted, chrome 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 80.