

Quick Vision ULTRA

Series 363

Ultra-high Accuracy CNC Vision Measuring System

- Axial translation straightness is maximised through the use of a precision air-bearing linear guide system.
- High resolution (0,01 μm) scales, manufactured at an ultra-precision facility located 11 m underground, are used on all axes.
- The scales are made from glass that has a virtually zero thermal expansion coefficient so as to minimise accuracy variation with changing temperature.
- Finite Element Method analysis was used to design the base structure to achieve an optimal stiffness/weight ratio combined with excellent geometrical stability, in terms of axial straightness/perpendicularity, with changing temperature.



QV Ultra 404 PRO

Type	QV ULTRA 404 PRO
No.	363-511-1EU
No. UK only	363-511-1E
Range (X-, Y-, Z-axis)	400 x 400 x 200 mm
Resolution	0,01 μm
CCD camera	High-sensitivity CCD B&W 380,000 pixels
Accuracy ⁽¹⁾	- Accuracy $E_{1(x,y)} = (0,25+0,1L/100) \mu\text{m}$ - Accuracy $E_{1(z)} = (1,5+0,2L/100) \mu\text{m}$ - Accuracy $E_{2(xy)} = (0,5+0,2L/100) \mu\text{m}$ L = measured length (mm)
Max. drive speed (X-, Y-, Z-axis)	150 mm/s
Illumination	Halogen (Cold light via optical fibre) - Contour - Coaxial - 4-quadrant PRL (PRL : refer to the QV-ELF page)
Magnification change system	Programmable Power Turret (PPT) 1X ; 2X ; 6X
Stage glass size	493 x 551 mm
Max stage loading	40 kg
Dimensions (W x D x H) ⁽²⁾	1200 x 1735 x 1910 mm
Mass ⁽²⁾	2025 kg

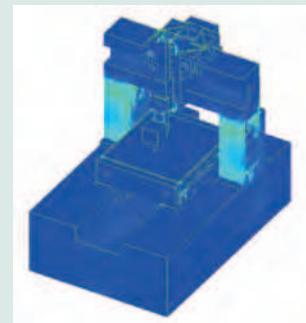
⁽¹⁾ According to Mitutoyo inspection method

⁽²⁾ Including machine stand

Additional Specifications

Factory option - Laser Auto Focus (LAF)
Refer to Quick Vision Accessories page

Additional objective lenses Refer to Objective page for Quick Scope / Quick Vision



By using FEM (Finite Element Method) analysis of the base design, the placement of stiffening ribs and beams has been determined for the Ultra Quick Vision to provide optimal structural rigidity.



Ultra-precision scale manufacturing facility 11 metres underground



Ultra-high accuracy crystallized glass scale with virtually zero thermal expansion.

The Ultra Quick Vision is equipped with a crystallized glass scale having a resolution of 0.01 μm and linear expansion coefficient of $0.08 \times 10^{-6}/\text{K}$. This virtually zero thermal expansion means the Ultra Quick Vision can minimise accuracy fluctuation due to thermal changes.



Quick Vision brochure on request