

Ultra-high Accuracy CNC Coordinate Measuring Machine

LEGEX 
Takumi



The breakthrough CMM created through integration of cutting-edge technology and Takumi's* skills.

*Takumi is a Japanese word meaning "artisan" with superb craftsmanship.



$$E_{0,MPE} = (0.23 + 0.7L/1000) \mu\text{m}$$

The ultimate in 3D machine measurements capable of incredibly high accuracy and precision

The LEGEX [Takumi Model] not only analyses and eliminates the error factors found in conventional CMM models, but also utilizes the outstanding Takumi's skills.

Maximum permissible error of length measurement $E_{0, MPE} = (0.23+0.7L/1000) \mu\text{m}$

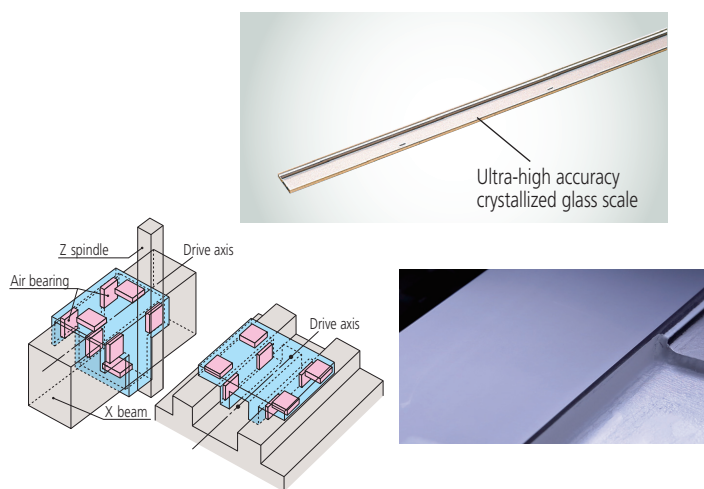
Even when measuring a 500 mm length, the error is less than 0.58 μm .

Ideal Construction of Main Unit

- Ideal Structural Design
- Superior structural rigidity
- Effective Countermeasures for Vibration Isolation.
- Ultra-high Accuracy Scale System
- Advanced Control Technology

Surface Finishing Technology Cultivated by Takumi

- Ultra-precise Lapping Technology
- Ultra-precise Finishing of Straightness
- Ultra-precise Finishing of Perpendicularity



Mitutoyo introduces the Takumi Meister System, or Master Craftsman System, to pass along the outstanding skills of master artisans.

Specifications

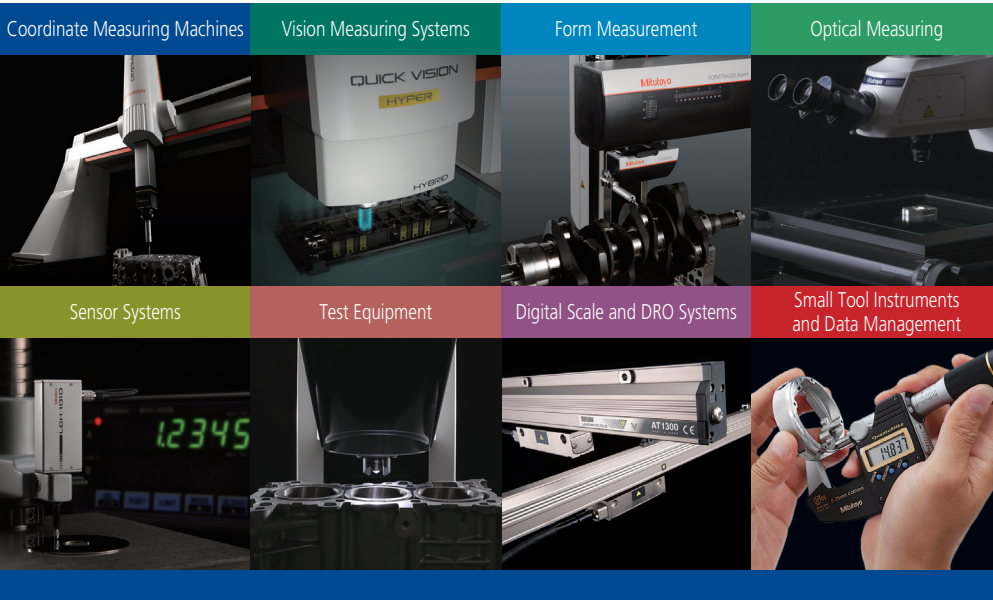
Items		Model	LEGEX574	LEGEX774	LEGEX776	LEGEX9106
Measuring range	X axis		500 mm	700 mm		900 mm
	Y axis		700 mm			1000 mm
	Z axis		450 mm		600 mm	
Maximum measuring speed (3D)			200 mm/s			
Maximum acceleration (3D)			980 mm/s ²			
Resolution			0.00001 mm (0.01 μm)			
Guide method			Air bearing			

Main unit accuracy

Probe	Maximum permissible error of length measurement $E_{0, MPE}$
MPP-310Q ($\phi 4 \times 18$)	$(0.23 + 0.7L/1000) \mu\text{m}$

Installation temperature environment

Temperature range	19 to 21 °C	
Temperature change	Per hour	0.5 °C
	Per day	1.0 °C
Temperature gradient	Vertical	1.0 °C/m
	Horizontal	1.0 °C/m



Whatever your challenges are, Mitutoyo supports you from start to finish.

Mitutoyo is not only a manufacturer of top quality measuring products but one that also offers qualified support for the lifetime of the equipment, backed up by comprehensive services that ensure your staff can make the very best use of the investment.

Apart from the basics of calibration and repair, Mitutoyo offers product and metrology training, as well as IT support for the sophisticated software used in modern measuring technology. We can also design, build, test and deliver measuring solutions and even, if deemed cost-effective, take your critical measurement challenges in-house on a sub-contract basis.



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