

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.



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

Serves as the reference machine capable of highly accurate measurements

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

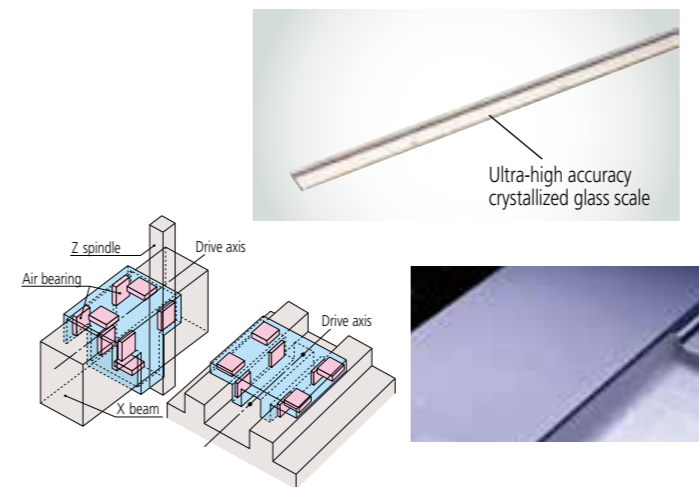
Even when measuring a 500 mm length, the error is less than 0.58 μm .

Ideal Construction of Main Unit

- Ideal Body Structure
- High Rigidity
- Effective Countermeasures for Vibration Isolation.
- Ultra-high Accuracy Scale Unit
- High Control Technology

Surface Finishing Technology Cultivated by Takumi

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



Mitutoyo has introduced the Takumi Meister System to pass on outstanding skills of artisans.

Specifications

Model		LEGEX574	LEGEX774	LEGEX776	LEGEX9106
Measuring range	X axis	500 mm	700 mm	700 mm	900 mm
	Y axis		700 mm		1000 mm
	Z axis		450 mm		600 mm
Maximum measuring speed		200 mm/s			
Maximum acceleration		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.



Find additional product literature
and our product catalogue

<https://www.mitutoyo.co.jp/global.html>

Our products are classified as regulated items under Japanese Foreign Exchange and Foreign Trade Law. Please consult us in advance if you wish to export our products to any other country. If the purchased product is exported, even though it is not a regulated item (Catch-All controls item), the customer service available for that product may be affected. If you have any questions, please consult your local Mitutoyo sales office.

Note: Product illustrations are without obligation. Product descriptions, in particular any and all technical specifications, are only binding when explicitly agreed upon.
MITUTOYO and MICAT are either registered trademarks or trademarks of Mitutoyo Corp. in Japan and/or other countries/regions.
Other product, company and brand names mentioned herein are for identification purposes only and may be the trademarks of their respective holders.
All product information contained in this brochure is current as of October 2023.

Mitutoyo

Mitutoyo Corporation

20-1, Sakado 1-Chome,
Takatsu-ku, Kawasaki-shi,
Kanagawa 213-8533, Japan
T +81 (0) 44 813-8230
F +81 (0) 44 813-8231
<https://www.mitutoyo.co.jp>