

# LEGEX Series

## Series 356 - Ultra-high accuracy CNC CMM

- The most accurate CNC CMM family with unsurpassed accuracy of 0.35 µm made possible by rigorous analysis of all possible error-producing factors and elimination or minimizing their effects.
- Ultra-high accuracy crystallized-glass scale with the ultra-low expansion coefficient of  $0.01 \times 10^{-6}/K$  is used on each axis.
- The fixed bridge structure and precision air bearings running on highly rigid guideways ensure superior motion stability and ultra-high geometrical accuracy.
- Many types of optional probe systems are available, including touch-trigger probes, laser scanning probes, and a vision measuring probe.



LEGEX 774

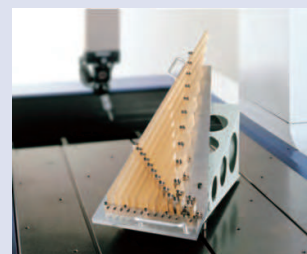
| Model No.                                    | LEGEX 574<br>356-373-5                      | LEGEX 774<br>356-253D                       | LEGEX 776<br>356-257D                       | LEGEX 9106<br>356-263D                     |
|--|---|---|---|--|
| Range X x Y x Z axis                         | 510x710x455mm                               | 710x710x455mm                               | 710x710x605mm                               | 910x1010x605mm                             |
| Accuracy <sup>(1)</sup> E <sub>0,MPE</sub>   | (0,35+0,1L/1000)µm                          | (0,35+0,1L/1000)µm                          | (0,35+0,1L/1000)µm                          | (0,35+0,1L/1000)µm                         |
| Accuracy <sup>(1)</sup> P <sub>FTU,MPE</sub> | 0,45µm                                      | 0,45µm                                      | 0,45µm                                      | 0,45µm                                     |
| Accuracy <sup>(1)</sup> MP <sub>Ethp</sub>   | 1,4µm                                       | 1,4µm                                       | 1,4µm                                       | 1,4µm                                      |
| Work table size                              | 550x750mm                                   | 750x750mm                                   | 750x750mm                                   | 950x1050mm                                 |
| Workpiece                                    | Max. height : 706mm<br>Max. loading : 200kg | Max. height : 696mm<br>Max. loading : 500kg | Max. height : 862mm<br>Max. loading : 500kg | Max height : 856mm<br>Max. loading : 800kg |
| Mass (main unit)                             | 3900kg                                      | 5000kg                                      | 5100kg                                      | 6500kg                                     |

<sup>(1)</sup> The machine is equipped with the temperature compensation system.  
According to ISO 10360-2 (2010) methods when using the MPP-310Q probe system.  
L= measuring length (mm).

| Model No.                                    | LEGEX 12128<br>356-243D                       |
|--|---|
| Range X x Y x Z axis                         | 1210x1210x810mm                               |
| Accuracy <sup>(1)</sup> E <sub>0,MPE</sub>   | (0,6+0,15L/1000)µm                            |
| Accuracy <sup>(1)</sup> P <sub>FTU,MPE</sub> | 0,6µm   |
| Accuracy <sup>(1)</sup> MP <sub>Ethp</sub>   | 1,8µm   |
| Work table size                              | 1250x1250mm                                   |
| Workpiece                                    | Max. height : 1056mm<br>Max. loading : 1000kg |
| Mass (main unit)                             | 10500kg                                       |

### Specifications

|                          |  |
|--------------------------|--|
| Digital step             | 0,01 µm  |
| Work table material      | Cast iron  |
| Work table tapped insert | M8 x 1.25 mm   |
| Scales                   | Ultra high accuracy linear encoder (glass scale with virtually zero thermal expansion coefficient) |
| Guide system             | Air bearing  |
| Max. drive speed         | 200 mm/sec   |
| Max. acceleration        | 0,1G   |



CMM calibration using a virtually zero thermal expansion glass gauge

**Accuracy is specified for the following environmental conditions for the CMM\***

|                      |              |         |
|----------------------|--------------|---------|
| Temperature range    |              | 20±2°C  |
| Temperature change   | Per hour     | 0.5 K   |
|                      | Per 24 hours | 1.0 K/m |
| Temperature gradient | Vertical     | 1.0 K/m |
|                      | Horizontal   | 1.0 K/m |

\*When using temperature compensation system