

Micrometer

Indicating Micrometers SERIES 510

- Suitable for pass/fail judgement of mass-produced components.
- Easy to use when operating one-handed due to retractable anvil.
- In the 25 mm measuring range, the model lineup offers a choice of left or right positioning of the anvil-retraction button.
- Greatly improved accuracy: indication error and graduation of 1 μm .
- IP protection level: 54, coolant-splash resistant during grinding process.



SPECIFICATIONS

| Metric | | | | | | | | | | | | |
|-----------|------------|--------------------------------------|----------------------------|-------------------------------|--|--|-----------------------|-----------------|----------------------|---------------------|-------------------------|----------|
| Order No. | Range (mm) | Spindle feed error (μm) | Flatness (μm) | Parallelism (μm) | Dispersion of indication (μm) | Dial indication accuracy (μm) | Indicating range (mm) | Graduation (mm) | Dial graduation (mm) | Measuring force (N) | Anvil retraction button | Mass (g) |
| 510-121 | 0 - 25 | 3 | 0.3 | 0.6 | 0.4 | 1 | ± 0.06 | 0.001 | 0.001 | 5 - 10 | Right side | 520 |

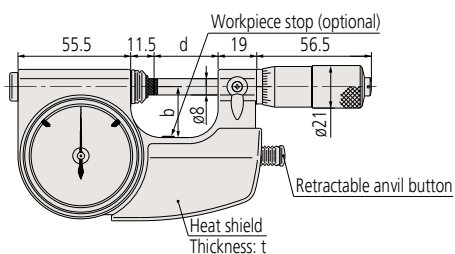
| Inch | | | | | | | | | | | | |
|-----------|------------|-------------------------|---------------|------------------|-------------------------------|-------------------------------|-----------------------|-----------------|----------------------|---------------------|-------------------------|----------|
| Order No. | Range (in) | Spindle feed error (in) | Flatness (in) | Parallelism (in) | Dispersion of indication (in) | Dial indication accuracy (in) | Indicating range (in) | Graduation (in) | Dial graduation (in) | Measuring force (N) | Anvil retraction button | Mass (g) |
| 510-131 | 0 - 1 | 0.00015 | 0.000012 | 0.000024 | 0.00002 | 0.00005 | ± 0.0023 | 0.0001 | 0.00005 | 5 - 10 | Right side | 520 |

• Standard Accessories: Spanner (200154), 1 pc.

DIMENSIONS

Up to 25 mm measuring range (anvil-retraction button on the right side)

Unit: mm



| Range (mm) | b | d | t |
|------------|----|------|------|
| 0 - 25 | 25 | 31.5 | 16.4 |



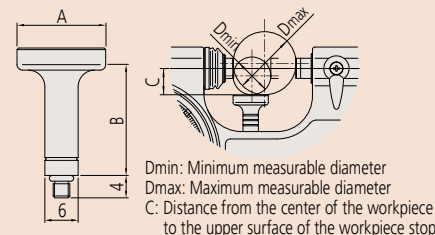
Measurement example



Workpiece Stop (optional)

- Produces more stable measurement.
- Three types are available to suit workpieces of different sizes.

| Range | Unit: mm | |
|------------------------------|-----------|------|
| | A | B |
| Workpiece stop A 04AZA124 | $\phi 16$ | 23 |
| Workpiece stop B 04AZA125 | $\phi 14$ | 20.5 |
| Workpiece stop C 04AZA126 | $\phi 14$ | 15 |



• Order No. 510-121, 510-141, 510-131, 510-151 Unit: mm

| | Dmin | Dmax | C |
|------------------|------|------|------|
| Workpiece stop A | N/A | N/A | N/A |
| Workpiece stop B | 4 | 16 | 5.0 |
| Workpiece stop C | 15 | 25 | 10.5 |

• 510-122 and 510-132

| | Dmin | Dmax | C |
|------------------|------|------|------|
| Workpiece stop A | 25 | 37 | 15.5 |
| Workpiece stop B | 30 | 42 | 18.0 |
| Workpiece stop C | 41 | 50 | 23.5 |

• 510-123 and 510-133

| | Dmin | Dmax | C |
|------------------|------|------|------|
| Workpiece stop A | 50 | 61 | 27.5 |
| Workpiece stop B | 54 | 66 | 30.0 |
| Workpiece stop C | 65 | 75 | 35.5 |

• 510-124 and 510-134

| | Dmin | Dmax | C |
|------------------|------|------|------|
| Workpiece stop A | 75 | 87 | 40.5 |
| Workpiece stop B | 80 | 92 | 43.0 |
| Workpiece stop C | 91 | 100 | 48.2 |

Measurement example



510-141

SPECIFICATIONS

Metric

| Order No. | Range (mm) | Spindle feed error (μm) | Flatness (μm) | Parallelism (μm) | Dispersion of indication (μm) | Dial indication accuracy (μm) | Indicating range (mm) | Graduation (mm) | Dial graduation (mm) | Measuring force (N) | Anvil retraction button | Mass (g) |
|-----------|------------|-------------------------|---------------|------------------|-------------------------------|-------------------------------|-----------------------|-----------------|----------------------|---------------------|-------------------------|----------|
| 510-141 | 0 - 25 | 3 | 0.3 | 0.6 | 0.4 | 1 | ±0.06 | 0.001 | 0.001 | 5 - 10 | Left side | 530 |
| 510-122 | 25 - 50 | | | 670 | | | | | | | | |
| 510-123 | 50 - 75 | | | 820 | | | | | | | | |
| 510-124 | 75 - 100 | | | 970 | | | | | | | | |

Inch

| Order No. | Range (in) | Spindle feed error (in) | Flatness (in) | Parallelism (in) | Dispersion of indication (in) | Dial indication accuracy (in) | Indicating range (in) | Graduation (in) | Dial graduation (in) | Measuring force (N) | Anvil retraction button | Mass (g) |
|-----------|------------|-------------------------|---------------|------------------|-------------------------------|-------------------------------|-----------------------|-----------------|----------------------|---------------------|-------------------------|----------|
| 510-151 | 0 - 1 | 0.00015 | 0.00012 | 0.00024 | 0.00002 | 0.00005 | ±0.0023 | 0.0001 | 0.00005 | 5 - 10 | Left side | 530 |
| 510-132 | 1 - 2 | | | 670 | | | | | | | | |
| 510-133 | 2 - 3 | | | 820 | | | | | | | | |
| 510-134 | 3 - 4 | | | 970 | | | | | | | | |

- Standard Accessories: Setting standard, 1 pc. (except for measuring range 0 to 25 mm (0 to 1 in) models)
Spanner (200154), 1 pc.

DIMENSIONS

Up to 25 mm measuring range
(anvil-retraction button on the left side)

Over 25 mm measuring range
(anvil-retraction button on the left side)

Unit: mm

| Range (mm) | b | d | t |
|------------|----|-------|------|
| 0 - 25 | 25 | 31.5 | 16.4 |
| 25 - 50 | 38 | 56.5 | 16 |
| 50 - 75 | 50 | 81.5 | |
| 75 - 100 | 63 | 106.5 | |