

Inside Micrometers

Tubular Inside Micrometers SERIES 133 — Single-Rod Type

- Standard Single-Rod Type inside micrometer.
- Carbide measuring faces.
- The sleeve is rotated to adjust the reference point adjustment when setting to a length standard.
- Optional Setting Rings (nominal size below 300 mm), CERA Inside Micro Checker and Gauge Block Accessory Sets are available as reference gages datum adjustment. (Refer to pages C-28, C-52, and E-17 to E-20 for details)



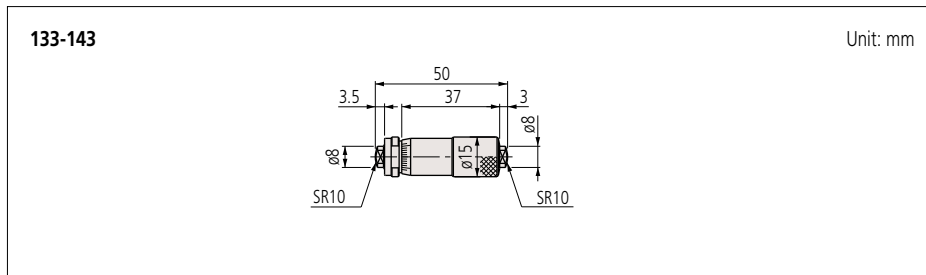
133-143

SPECIFICATIONS

| Metric | | Individual | |
|-----------|------------|-----------------|---|
| Order No. | Range (mm) | Graduation (mm) | Maximum permissible error J_{MPE} (μm) |
| 133-143 | 50 - 75 | 0.01 | ± 3 |

| Inch | | Individual | |
|-----------|------------|-----------------|--|
| Order No. | Range (in) | Graduation (in) | Maximum permissible error J_{MPE} (in) |
| 133-223 | 2 - 3 | 0.001 | ± 0.00015 |

DIMENSIONS



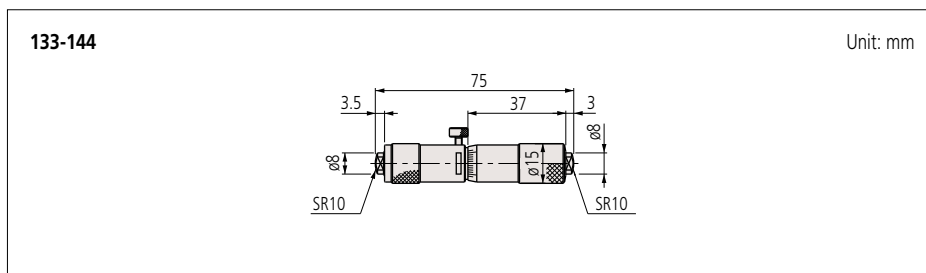
133-144

SPECIFICATIONS

| Metric | | Individual | |
|-----------|------------|-----------------|---|
| Order No. | Range (mm) | Graduation (mm) | Maximum permissible error J_{MPE} (μm) |
| 133-144 | 75 - 100 | 0.01 | ± 4 |

| Inch | | Individual | |
|-----------|------------|-----------------|--|
| Order No. | Range (in) | Graduation (in) | Maximum permissible error J_{MPE} (in) |
| 133-224 | 3 - 4 | 0.001 | ± 0.0002 |

DIMENSIONS



Measurement example



Micrometer Set



133-902

133-901 (Metric)

- Range: 50 - 150 mm (4 heads/set)
- Models included:
133-143 133-144
133-145 133-146
 with fitted case

133-902 (Metric)

- Range: 50 - 300 mm (10 heads/set)
- Models included:
133-143 133-144
133-145 133-146
133-147 133-148
133-149 133-150
133-151 133-152
 with fitted case

133-903 (Inch)

- Range: 2 - 6 in (4 heads/set)
- Models included:
133-223 133-224
133-225 133-226
 with fitted case

133-904 (Inch)

- Range: 2 - 12 in (10 heads/set)
- Models included:
133-223 133-224
133-225 133-226
133-227 133-228
133-229 133-230
133-231 133-232
 with fitted case



133-152

SPECIFICATIONS

| Metric | | Individual | |
|-----------|------------|-----------------|---|
| Order No. | Range (mm) | Graduation (mm) | Maximum permissible error J_{MPE} (μm) |
| 133-145 | 100 - 125 | 0.01 | ± 5 |
| 133-146 | 125 - 150 | | |
| 133-147 | 150 - 175 | | |
| 133-148 | 175 - 200 | | |
| 133-149 | 200 - 225 | | ± 6 |
| 133-150 | 225 - 250 | | |
| 133-151 | 250 - 275 | | |
| 133-152 | 275 - 300 | | |
| 133-153 | 300 - 325 | | ± 7 |
| 133-154 | 325 - 350 | | |
| 133-155 | 350 - 375 | | |
| 133-156 | 375 - 400 | | |
| 133-157 | 400 - 425 | | ± 8 |
| 133-158 | 425 - 450 | | |
| 133-159 | 450 - 475 | | |
| 133-160 | 475 - 500 | | |
| 133-161 | 500 - 525 | ± 9 | |
| 133-162 | 525 - 550 | | |
| 133-163 | 550 - 575 | | |
| 133-164 | 575 - 600 | | |
| 133-165 | 600 - 625 | ± 10 | |
| 133-166 | 625 - 650 | | |
| 133-167 | 650 - 675 | | |
| 133-168 | 675 - 700 | | |
| 133-169 | 700 - 725 | ± 11 | |
| 133-170 | 725 - 750 | | |
| 133-171 | 750 - 775 | | |
| 133-172 | 775 - 800 | | |
| 133-173 | 800 - 825 | ± 12 | |
| 133-174 | 825 - 850 | | |
| 133-175 | 850 - 875 | | |
| 133-176 | 875 - 900 | | |
| 133-177 | 900 - 925 | ± 13 | |
| 133-178 | 925 - 950 | | |
| 133-179 | 950 - 975 | | |
| 133-180 | 975 - 1000 | | |

| Inch | | Individual | |
|-----------|------------|-----------------|--|
| Order No. | Range (in) | Graduation (in) | Maximum permissible error J_{MPE} (in) |
| 133-225 | 4 - 5 | 0.001 | ± 0.00025 |
| 133-226 | 5 - 6 | | |
| 133-227 | 6 - 7 | | |
| 133-228 | 7 - 8 | | |
| 133-229 | 8 - 9 | | ± 0.0003 |
| 133-230 | 9 - 10 | | |
| 133-231 | 10 - 11 | | |
| 133-232 | 11 - 12 | | |

DIMENSIONS

133-145 to 133-180

Unit: mm

| Order No. | L ₁ | L ₆ | L ₇ |
|-----------|----------------|----------------|----------------|
| 133-145 | 100 | 5 | 3 |
| 133-146 | 125 | 5 | 3 |
| 133-147 | 150 | 18 | 15 |
| 133-148 | 175 | 18 | 15 |
| 133-149 | 200 | 18 | 15 |
| ⋮ | ⋮ | ⋮ | ⋮ |
| 133-180 | 975 | 18 | 15 |