

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)



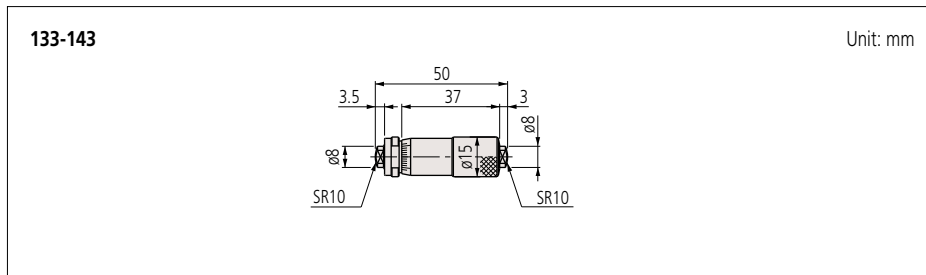
133-143

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



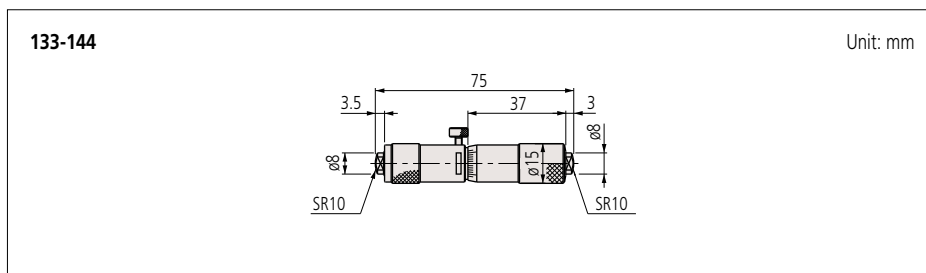
133-144

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		
		± 14	
		± 15	
		± 16	

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