

Feather Probe™

Feather Probes provide access to small features that are inaccessible to video measurement or conventional touch probes, or too sensitive to withstand traditional probing forces. Proprietary technology determines when the probe has contacted a surface. Additional capabilities include:

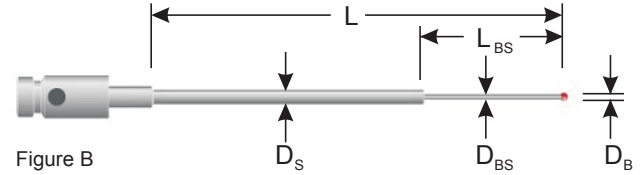
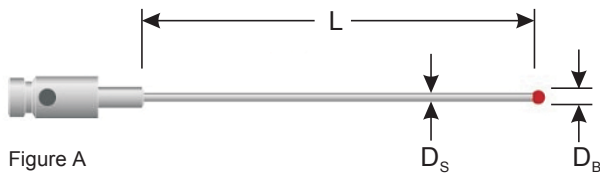
- **Measure Delicate or Easily Deformed Part Components –**
This sensor can acquire a data point with only milligrams of force. Its small size makes it perfect for measuring micro-miniature or fragile components.
- **Configure to Meet Specific Measurement Requirements –**
Feather Probe is available in a range of stylus styles and lengths, including a styli with tip diameters as small as 0.100 mm.
- **Automatic Use –**
Mounted on a motorized deployment mechanism, the stylus is automatically deployed and retracted to a safe location when not in use.

Micro-Touch Probing to Measure Delicate or Miniature Features



Machine shown with Feather Probe deployed.





P/N	D _B (mm)	Ball Material	Figure	D _s (mm)	L (mm)	D _{BS} (mm)	L _{BS} (mm)	EWL (mm)
531141	No Ball	n/a	Cylinder	0.91	31.5	0.36	1.5	1.5
543049	1.6	Delrin	B	1.04	30.7	0.69	7.4	30.0
534046	1.5	Ruby	A	0.79	41.0	n/a	n/a	40.0
531139	1.0	Ruby	A	0.61	30.3	n/a	n/a	30.0
534045	1.0	Ruby	A	0.66	42.4	n/a	n/a	43.0
531140	0.6	Ruby	B	1.12	28.8	0.43	10.2	10.0
531142	0.30	Ruby	B	0.58	38.0	0.20	10.0	10.0
542022	0.150	Ruby	B	0.43	18.6	0.102	2.4	2.0
534040	0.127	Ruby	B	0.43	18.6	0.102	2.4	2.0
531143	0.125	Tungsten	B	0.58	40.0	0.076	10.0	10.0
534048	0.125	Tungsten	B	0.43	19.4	0.076	3.0	1.5
534049	0.100	Tungsten	B	0.43	19.4	0.076	3.0	0.4

EWL: Effective Working Length is measured from the center of the ball to a point at which the shank will contact the feature (when measuring normal to the part). Touch trigger force considered to be 10 mg, or less, for all styli.

Technical Specifications

Measurement System	Compatible with SmartScope Flash™ CNC ¹ , Vantage™, and ZIP® systems
Metrology Software	Requires ZONE3® metrology software
Standard Configuration	Includes Feather Probe; Probe Interface (PN: 062579); 1.0 mm ruby-tipped stylus with 30 mm effective working length (EWL) and less than 10 mg trigger force (PN: 531139); motorized deployment/retraction mechanism
Resonance Optimization	Probe Interface automatically optimizes probe resonance to minimize susceptibility to environmental changes
Deployability	Deployable under system control (not for use with change rack)
Deployment Mechanism Repeatability	± 2 μm
XYZ Frame of Reference	Freely interchange Feather Probe data with other sensor data within same measurement routine

¹Feather Probe not available on CNC 15XX models.



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