

M4 threaded stylus range



© 2012 Renishaw plc. All rights reserved.

This document may not be copied or reproduced in whole or in part, or transferred to any other media or language, by any means, without the prior written permission of Renishaw plc.

The publication of material within this document does not imply freedom from the patent rights of Renishaw plc.

Disclaimer

RENISHAW HAS MADE CONSIDERABLE EFFORTS TO ENSURE THE CONTENT OF THIS DOCUMENT IS CORRECT AT THE DATE OF PUBLICATION BUT MAKES NO WARRANTIES OR REPRESENTATIONS REGARDING THE CONTENT. RENISHAW EXCLUDES LIABILITY, HOWSOEVER ARISING, FOR ANY INACCURACIES IN THIS DOCUMENT.

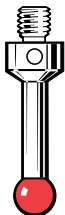
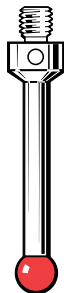
Trademarks

RENISHAW and the probe symbol used in the RENISHAW logo are registered trademarks of Renishaw plc in the United Kingdom and other countries. apply innovation and names and designations of other Renishaw products and technologies are trademarks of Renishaw plc or its subsidiaries.

All other brand names and product names used in this document are trade names, service marks, trademarks, or registered trademarks of their respective owners.

Ruby ball styli (stainless steel stems)

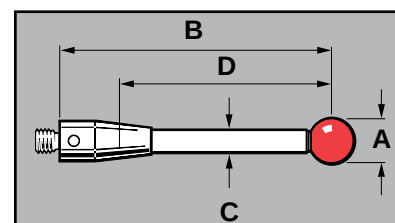
Ball material		Part number				
Ruby		A-5000-6350	A-5000-7545	A-5000-7547	A-5000-7549	A-5000-7551
Silicon nitride				A-5003-5728		A-5003-5729
Zirconia				A-5003-5742		A-5003-5743
A	Ball dia. mm (in.)	5.0 (0.20)	1.0 (0.04)	2.0 (0.08)	3.0 (0.12)	4.0 (0.16)
B	Length mm (in.)	10.0 (0.40)	19.5 (0.77)	19.0 (0.75)	18.5 (0.73)	18.0 (0.71)
C	Stem dia. mm (in.)	3.0 (0.12)	0.7 (0.028)	1.4 (0.05)	2.0 (0.08)	3.0 (0.12)
D	EWL* mm (in.)	5.0 (0.20)	4.5 (0.18)	9.2 (0.36)	13.0 (0.52)	13.7 (0.54)
	Mass grammes	1.9	2.5	2.3	2.0	2.1
						

Part number		A-5000-7553	A-5000-6731	A-5000-6352	A-5000-7555	A-5000-7557
A	Ball dia. mm (in.)	5.0 (0.20)	5.0 (0.20)	5.0 (0.20)	6.0 (0.24)	8.0 (0.32)
B	Length mm (in.)	17.5 (0.69)	20.0 (0.79)	30.0 (1.19)	17.0 (0.67)	16.0 (0.63)
C	Stem dia. mm (in.)	3.5 (0.14)	3.0 (0.12)	3.0 (0.12)	4.5 (0.18)	6.0 (0.24)
D	EWL* mm (in.)	13.6 (0.55)	15.89 (0.63)	26.0 (1.03)	13.3 (0.53)	16.0 (0.63)
	Mass grammes	2.3	2.4	3.0	3.0	3.9
						

10 mm – 30 mm range

Ruby ball styli (Tungsten carbide stems)

Part number		A-5003-4792	A-5003-2932	A-5003-4793	A-5003-4794	A-5003-4795	A-5003-4796
A	Ball dia. mm (in.)	1.0 (0.04)	2.0 (0.08)	3.0 (0.12)	4.0 (0.16)	5.0 (0.20)	6.0 (0.24)
B	Length mm (in.)	20.0 (0.79)	20.0 (0.79)	20.0 (0.79)	20.0 (0.79)	20.0 (0.79)	20.0 (0.79)
C	Stem dia. mm (in.)	0.7 (0.028)	1.5 (0.06)	2.0 (0.08)	2.0 (0.08)	2.5 (0.10)	2.5 (0.10)
D	EWL* mm (in.)	10.0 (0.40)	10.0 (0.40)	8.5 (0.33)	8.5 (0.33)	7.9 (0.31)	10.7 (0.42)
	Mass grammes	2.39	3.01	3.53	3.53	4.52	4.66
20 mm range							



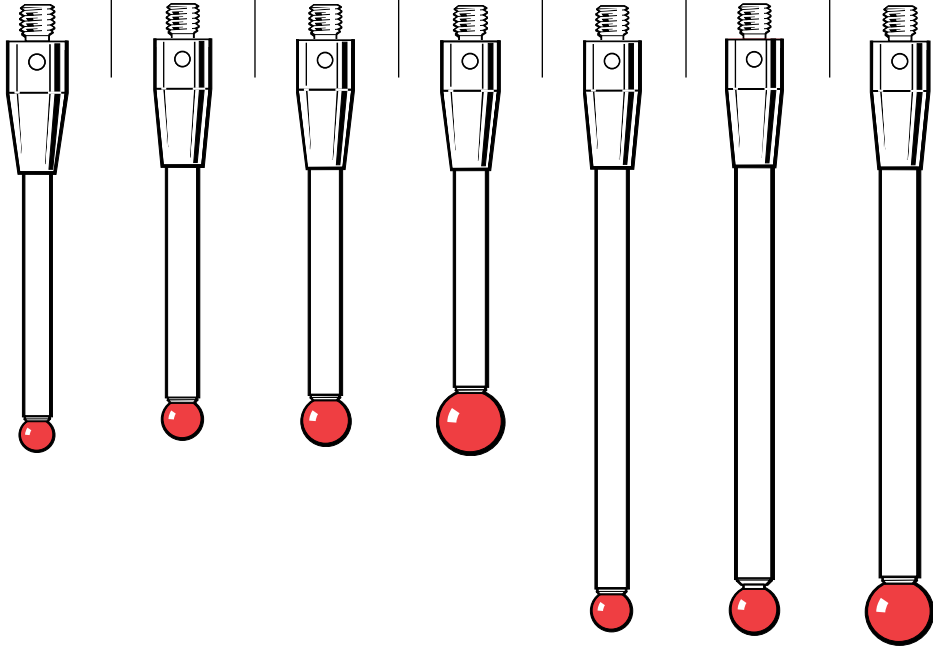
*Effective working length

Ruby ball styli

Ceramic stems

Part number		A-5003-0233	A-5003-0235	A-5000-3709	A-5000-7795	A-5003-0236	A-5003-2764	A-5003-4802
		Ceramic	Ceramic	Ceramic	Ceramic	Ceramic	Ceramic	Ceramic
A	Ball dia. mm (in.)	4.0 (0.16)	5.0 (0.20)	6.0 (0.24)	8.0 (0.32)	5.0 (0.20)	6.0 (0.24)	8.0 (0.32)
B	Length mm (in.)	50.0 (1.97)	50.0 (1.97)	50.0 (1.97)	50.0 (1.97)	75.0 (2.96)	75.0 (2.96)	75.0 (2.96)
C	Stem dia. mm (in.)	3.0 (0.12)	3.8 (0.15)	4.5 (0.18)	4.5 (0.18)	3.8 (0.15)	4.5 (0.18)	4.5 (0.18)
D	EWL* mm (in.)	33.5 (1.32)	33.5 (1.32)	38.5 (1.50)	50.0 (1.97)	58.5 (2.30)	63.5 (2.51)	75.0 (2.96)
	Mass grammes	3.9	5.0	4.8	5.4	5.63	5.64	6.20

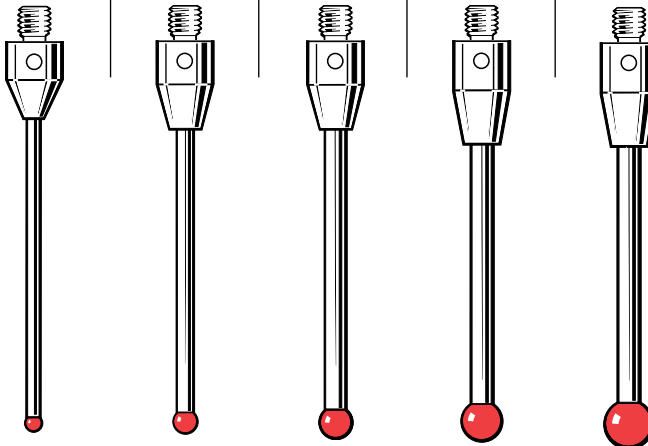
50 mm – 75 mm
range



Tungsten carbide stems

Part number		A-5003-4797	A-5003-3680	A-5003-4799	A-5003-4800	A-5003-4801
		Tungsten carbide	Tungsten carbide	Tungsten carbide	Tungsten carbide	Tungsten carbide
A	Ball dia. mm (in.)	2.0 (0.08)	3.0 (0.12)	4.0 (0.16)	5.0 (0.20)	6.0 (0.24)
B	Length mm (in.)	50.0 (1.97)	50.0 (1.97)	50.0 (1.97)	50.0 (1.97)	50.0 (1.97)
C	Stem dia. mm (in.)	1.5 (0.06)	2.0 (0.08)	2.0 (0.08)	2.5 (0.10)	2.5 (0.10)
D	EWL* mm (in.)	40.0 (1.58)	38.5 (1.51)	38.5 (1.51)	37.9 (1.49)	40.7 (1.60)
	Mass grammes	3.80	4.94	4.99	6.72	6.86

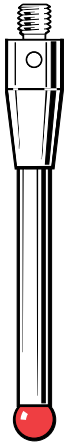
50 mm range



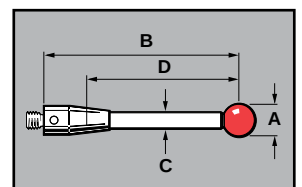
Stainless steel stems

Part number		A-5000-7521
		Stainless steel
A	Ball dia. mm (in.)	5.0 (0.20)
B	Length mm (in.)	50.0 (1.97)
C	Stem dia. mm (in.)	4.5 (0.18)
D	EWL* mm (in.)	33.5 (1.32)
	Mass grammes	5.8

50 mm range

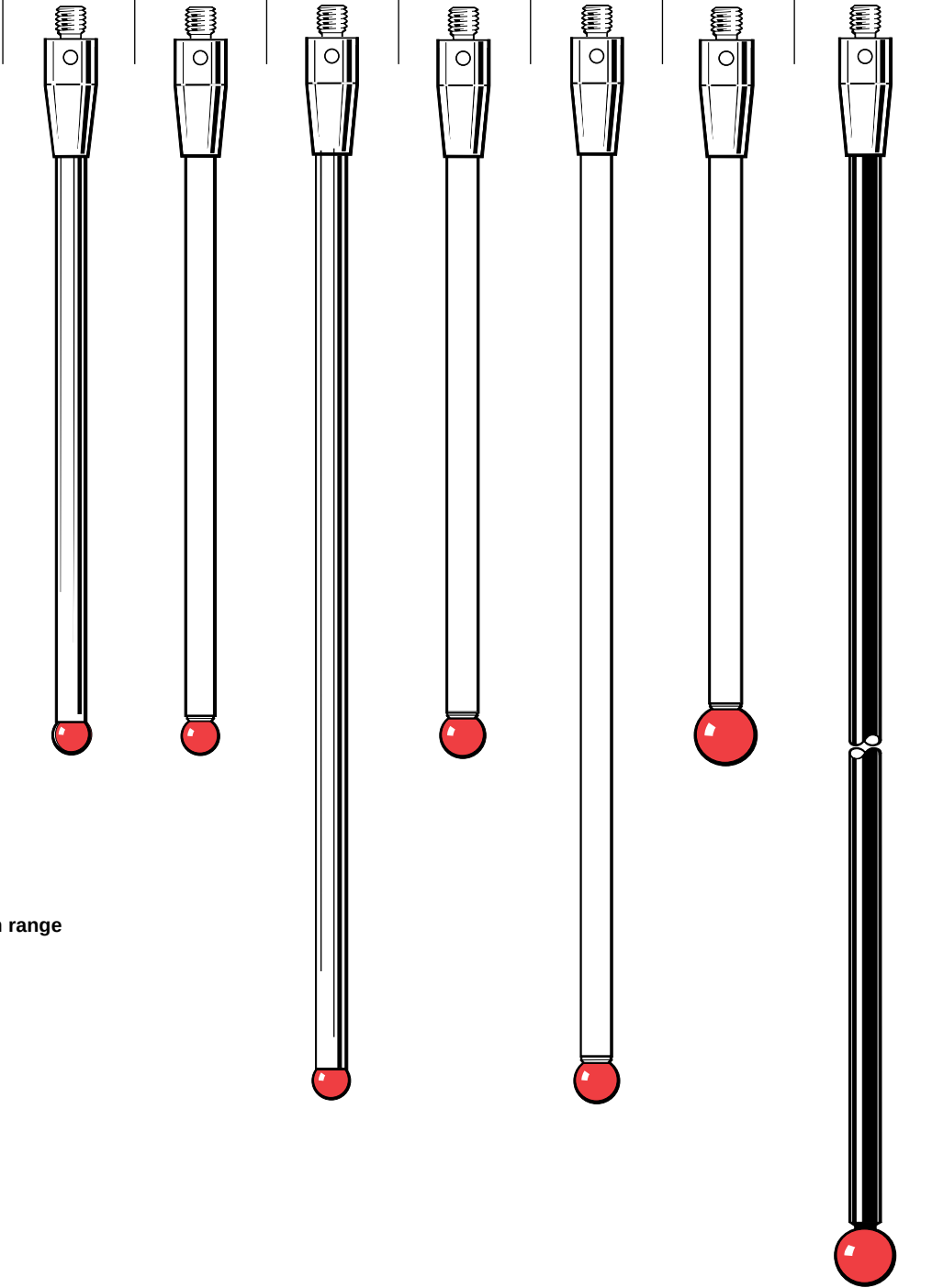


*Effective working length



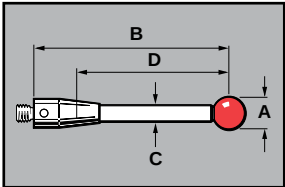
Ruby ball styli

Part number		A-5000-7522	A-5000-9761	A-5000-7523	A-5000-3712	A-5000-8156	A-5000-7796	A-5003-3461
		Stainless steel	Ceramic	Stainless steel	Ceramic	Ceramic	Ceramic	Carbon fibre
A	Ball dia. mm (in.)	5.0 (0.20)	5.0 (0.20)	5.0 (0.20)	6.0 (0.24)	6.0 (0.24)	8.0 (0.32)	8.0 (0.32)
B	Length mm (in.)	100.0 (3.94)	100.0 (3.94)	150.0 (5.91)	100.0 (3.94)	150.0 (5.91)	100.0 (3.94)	300.0 (11.82)
C	Stem dia. mm (in.)	4.5 (0.18)	3.8 (0.15)	4.4 (0.17)	4.5 (0.18)	4.5 (0.18)	4.5 (0.18)	4.5 (0.18)
D	EWL* mm (in.)	83.2 (3.28)	83.5 (3.29)	133.0 (5.24)	88.5 (3.48)	135.0 (5.31)	100.0 (3.94)	300.0 (11.82)
	Mass grammes	11.3	6.3	17.4	6.3	7.9	7.5	10.4



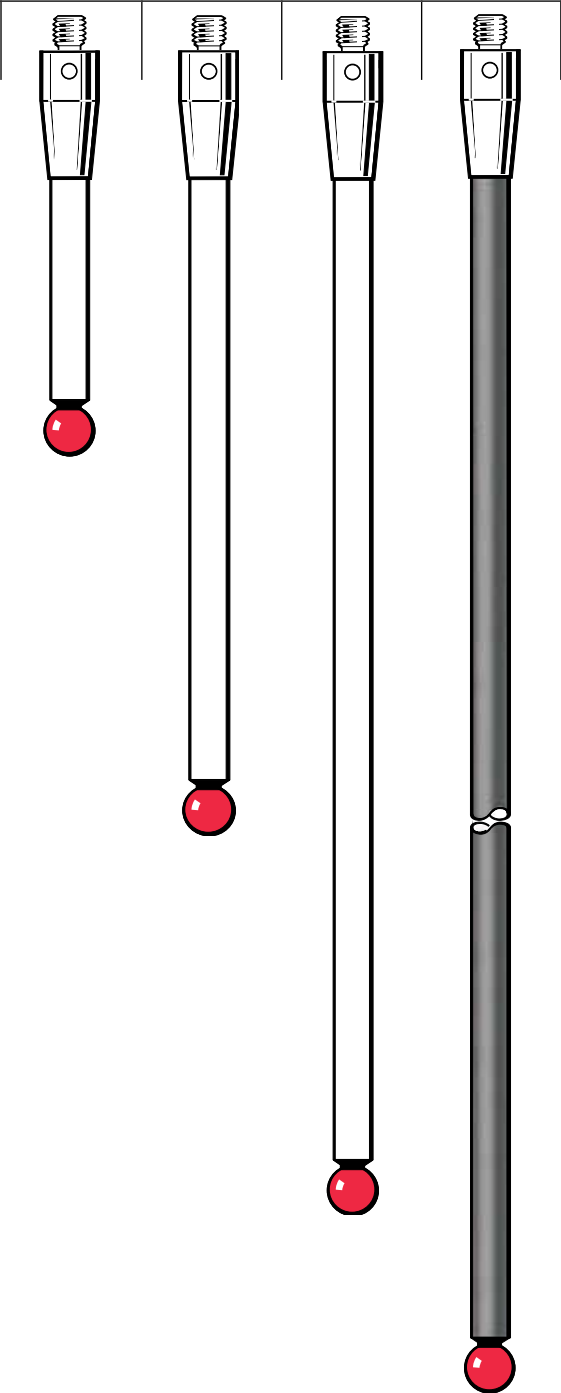
100 mm – 300 mm range

*Effective working length



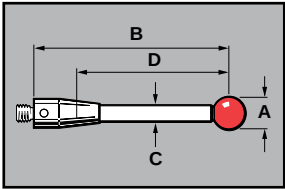
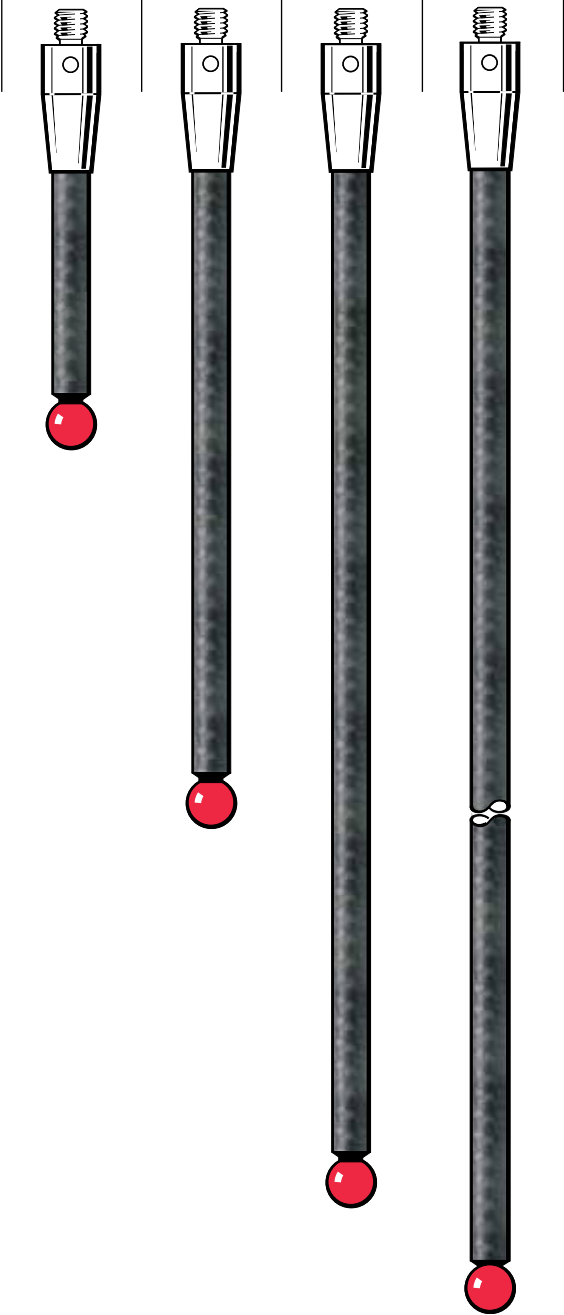
Ruby ball styli
(recommended for use with OMP400 and RMP600)

Ball material		Part number			
Ruby Silicon nitride Zirconia		A-5003-7306	A-5003-6510	A-5003-6511	A-5003-6512
		A-5003-5730	A-5003-5731		
		A-5003-5744	A-5003-5745		
		Carbon fibre	Carbon fibre	Carbon fibre	Carbon fibre
A	Ball dia. mm (in.)	6.0 (0.24)	6.0 (0.24)	6.0 (0.24)	6.0 (0.24)
B	Length mm (in.)	50.0 (1.97)	100.0 (3.94)	150.0 (5.91)	200.0 (7.88)
C	Stem dia. mm (in.)	4.5 (0.18)	4.5 (0.18)	4.5 (0.18)	4.5 (0.18)
D	EWL* mm (in.)	38.5 (1.52)	88.5 (3.48)	138.5 (5.45)	188.5 (7.42)
	Mass grammes	4.1	6.2	7.5	8.7



Ruby ball styli
(recommended for use with MP700)

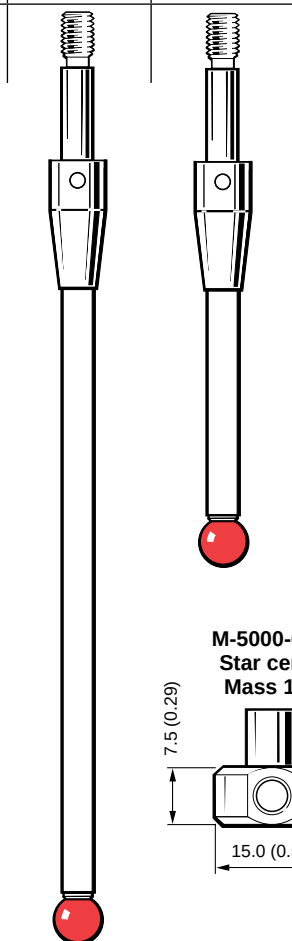
A-5003-1436	A-5003-1358	A-5003-1255	A-5003-1075
Carbon fibre	Carbon fibre	Carbon fibre	Carbon fibre
6.0 (0.24)	6.0 (0.24)	6.0 (0.24)	6.0 (0.24)
50.0 (1.97)	100.0 (3.94)	150.0 (5.91)	200.0 (7.88)
4.5 (0.18)	4.5 (0.18)	4.5 (0.18)	4.5 (0.18)
38.5 (1.52)	88.5 (3.48)	138.5 (5.46)	188.5 (7.42)
4.1	6.2	7.5	8.7



*Effective working length

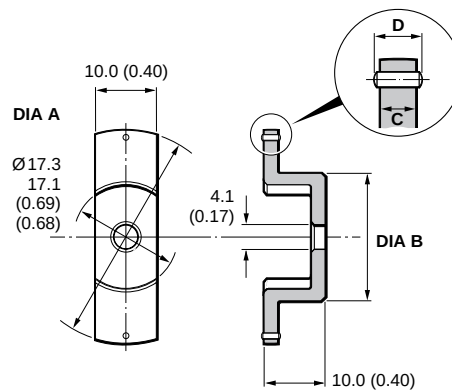
M4 star styli

Part number	A-5000-6462 Ceramic	A-5000-7098 Ceramic
Ball dia. mm (in.)	6.0 (0.24)	6.0 (0.24)
Length mm (in.)	100.0 (3.94)	50.0 (1.97)
Stem dia. mm (in.)	4.5 (0.18)	4.5 (0.18)
EWL* mm (in.)	88.5 (3.48)	38.5 (1.52)
Mass grammes	7.5	6.0

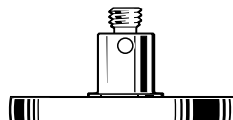


Disc styli

Part number	A-5000-7596	A-5000-7597	A-5000-7598
Diameter A mm (in.)	Ø30.0 (1.19)	Ø35.0 (1.38)	Ø50.0 (1.97)
Diameter B mm (in.)	Ø21.0 (0.83)	Ø21.0 (0.83)	Ø23.0 (0.91)
C mm (in.)	2.2 (0.09)	2.2 (0.09)	3.0 (0.12)
D mm (in.)	3.0 (0.12)	3.0 (0.12)	4.0 (0.16)
Mass grammes	8.01	9.57	13.55

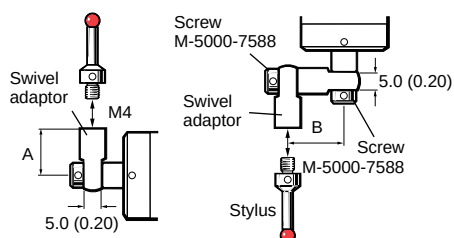


Part number	A-5000-6351 Silver steel
Disc dia. mm (in.)	Ø30.0 (1.19)
Disc depth mm (in.)	3.0 (0.12)
Length mm (in.)	10.0 (0.40)
Rollers	N/A
Mass grammes	7.9



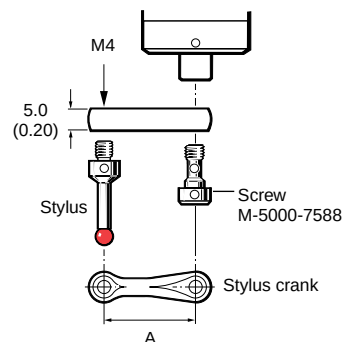
Swivel adaptor

Part number	M-5000-7591	M-5000-7592
Length A mm (in.)	10.0 (0.40)	13.5 (0.54)
Length B mm (in.)	12.5 (0.50)	16.0 (0.63)
Mass grammes	2.76	3.70



Styli crank

Part number	M-5000-7589	M-5000-7590
Length A mm (in.)	21.9 (0.86)	27.6 (1.09)
Mass grammes	6.07	6.94



*Effective working length

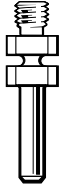
**Special

Crash protection devices

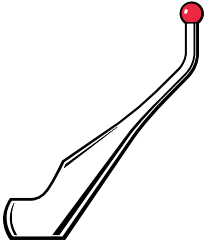
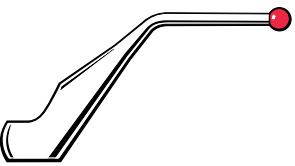
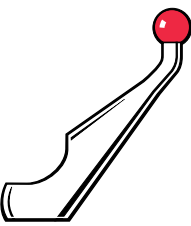
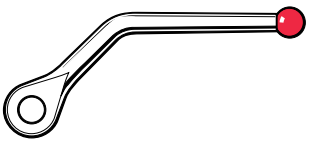
Part number	M-5000-7582	M-5000-7587	M-5000-7588	M-2085-0069	A-5003-0661*	M-2197-0156	M-2197-0150
For pack of ten					A-5004-1865	A-5004-1867	A-5004-1869
	Stainless steel	Stainless steel	Stainless steel	Silver steel	Silver steel	Silver steel	Silver steel
Length mm (in.)	8.0 (0.32)	8.0 (0.32)	10.0 (0.40)	12.0 (0.48)	15.2 (0.60)	9.0 (0.36)	16.0 (0.63)
Mass grammes	1.8	1.4	1.5	2.7	4.6	1.5	2.1
For use on	LP2	LP2	LP2	MP10	TS27R	HPMA	HPMA
				MP12		HPRA	HPRA
				RMP60		HPPA	HPPA
				OMP60			
				MP3			
				MP11			
							

Use **P-TL09-0003**
to tighten.

* Please note: If you require the full TS27R break stem kit, please order A-5003-5171.

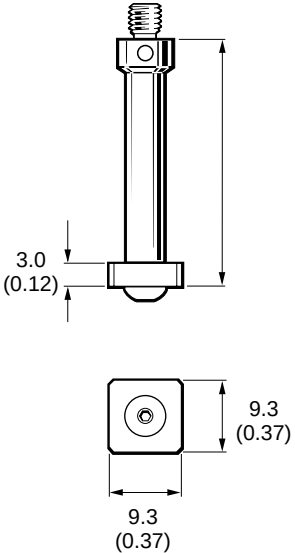
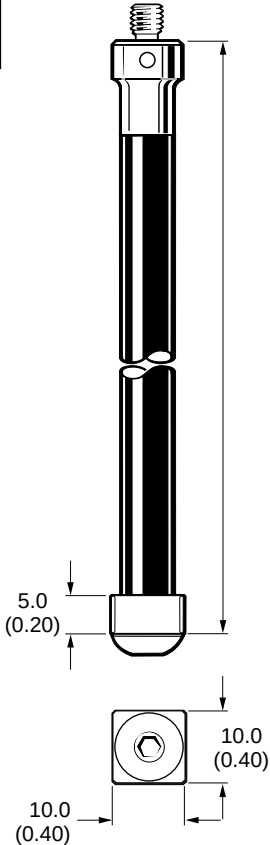
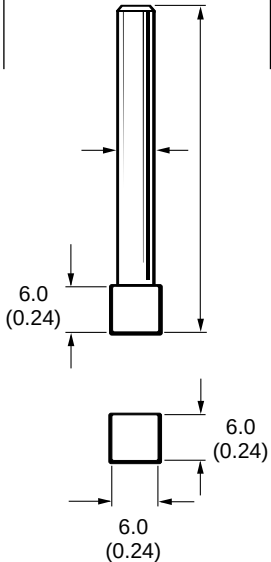
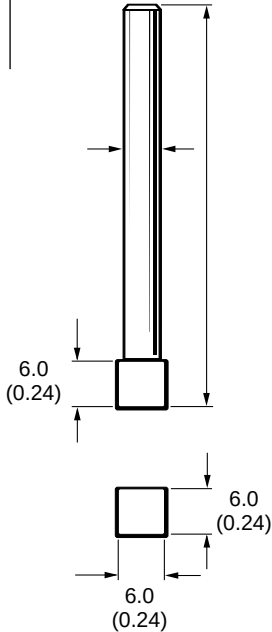
Part number	M-2008-0333	M-2008-0604	M-2008-0605	M-2048-2093	M-2116-0127
	M3	M3	M3	M4	M4
	Silver steel	Silver steel	Silver steel	Silver steel	Silver steel
Length mm (in.)	13.3 (0.52)	22.3 (0.88)	30.3 (1.19)	13.5 (0.53)	19.0 (0.75)
Mass grammes	2.43	3.6	4.5	1.37	2.2
For use on	TS20	TS20	TS20	RP1/2	TSA
					

Cranked styli

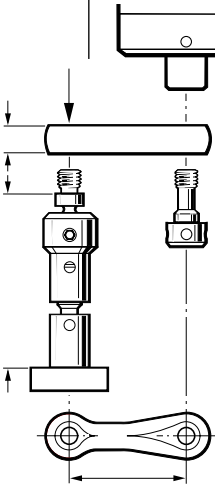
Part number	A-5000-5302	A-5000-5307	A-5000-6620	A-5000-7580
	M4	M4	M4	M4
	Tungsten steel	Tungsten steel	Tungsten steel	Tungsten steel
Length mm (in.)	32.0 (1.26)	21.6 (0.85)	27.4 (1.08)	38.8 (1.53)
Mass grammes	3.8	3.85	4.7	2.5
For use on	LP2	LP2	LP2	LP2
				

Tool datuming styli

Part number	A-5000-3212 Stainless steel	A-5000-6701 Stainless steel	A-5000-6713 Aluminium	A-5000-6403 Stainless steel
Overall length mm (in.)	53.0 (2.09)	43.0 (1.70)	96.5 (3.80)	32.5 (1.28)
Stem dia. mm (in.)	4.5 (0.18)	4.5 (0.18)	7.5 (0.30)	5.4 (0.22)
Mass grammes	4.5	4.3	21.9	11.0

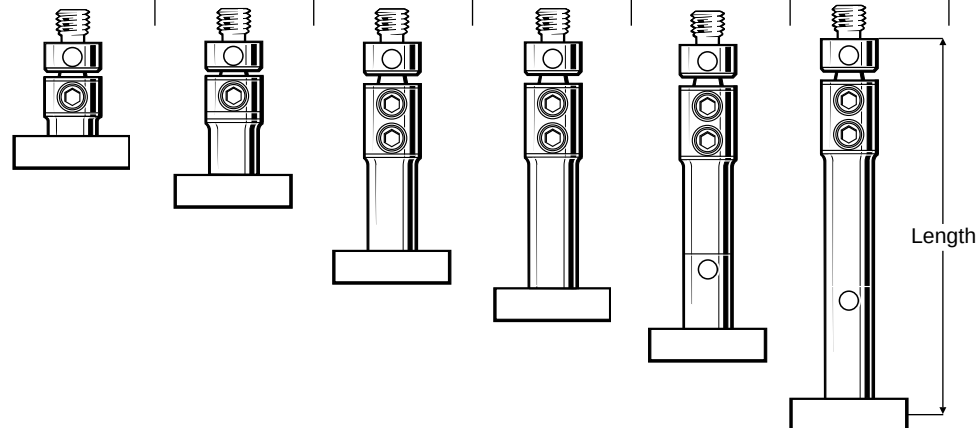


Part number	A-2116-0142
Length mm (inch)	30.3 (0.40)
Mass grammes	22.6
For use on	TSA

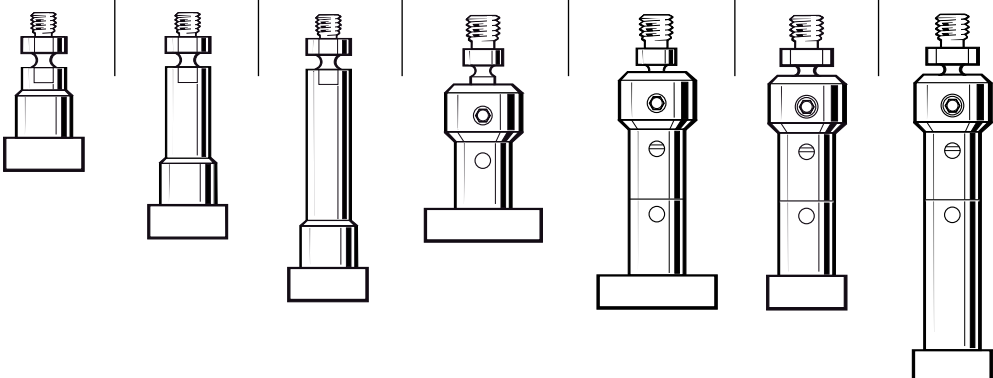


Tool datuming styli (continued)

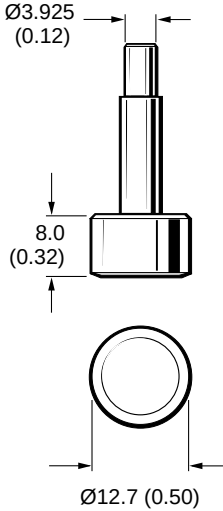
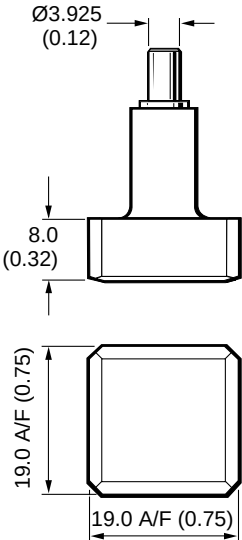
Part number	A-2197-0157 Tungsten steel	A-2197-0158 Tungsten steel	A-2197-0159 Tungsten steel	A-2197-0160 Tungsten steel	A-2197-0161 Tungsten steel	A-2197-0162 Tungsten steel
Length mm (in.)	14.2 (0.56)	19.57 (0.77)	29.5 (1.16)	34.5 (1.36)	39.5 (1.55)	49.5 (1.95)
Mass grammes	14.86	16.0	20.0	20.7	21.8	23.5
For use on	HPPA	HPPA	HPPA	HPPA	HPPA	HPPA
	HPMA	HPMA	HPMA	HPMA	HPMA	HPMA
	HPRA	HPRA	HPRA	HPRA	HPRA	HPRA
	RP3	RP3	RP3	RP3	RP3	RP3



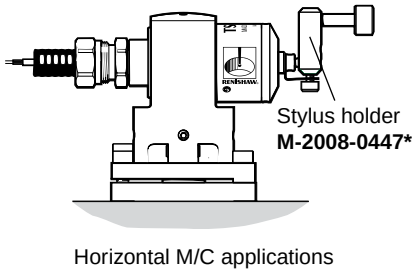
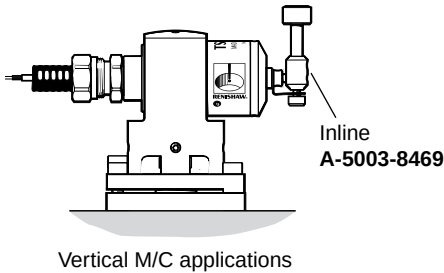
Part number	A-2008-0601 M3 Tungsten steel	A-2008-0602 M3 Tungsten steel	A-2008-0603 M3 Tungsten steel	A-2048-2050 M4 Tungsten steel	A-2048-2051 M4 Tungsten steel	A-2116-0140 M4 Tungsten steel	A-2116-0141 M4 Tungsten steel
Length mm (in.)	15.4 (0.61)	24.0 (0.96)	32.4 (1.27)	23.2 (0.91)	32.0 (1.26)	32.0 (1.26)	42.0 (1.65)
Mass grammes	9.1	8.0	8.95	18.14	20.64	13.56	16.05
For use on	TS20	TS20	TS20	HPA (M6 MTG)	HPA (M6 MTG)	TSA	TSA



TS27R styli – parallel shafted (not M4) – Not compatible with TS27 probes

Part number	A-2008-0382 Tungsten carbide	A-2008-0384 Ceramic
Overall length mm (in.)	23.0 (0.91)	22.0 (0.87)
Mass grammes	12.1	7.1
		

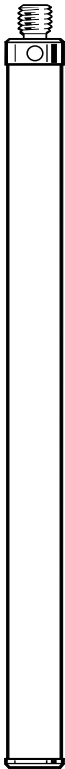
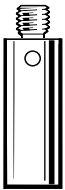
Stylus conversion kit for TS27R to allow Horizontal M/C applications (A-2008-0448)



*Order also requires 2 × P-SC11-0404

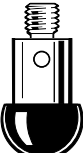
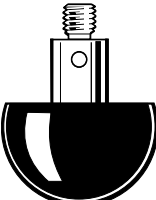
Stylus extensions

Part number	M-5000-7583	M-5000-7584	M-5000-7585	M-5000-7586	A-5000-7754	A-5000-7755	A-5000-7727	A-5003-0587
	Stainless steel	Stainless steel	Stainless steel	Stainless steel	Ceramic	Ceramic	Ceramic	Ceramic
Length mm (in.)	10.0 (0.40)	15.0 (0.60)	20.0 (0.79)	30.0 (1.19)	30.0 (1.19)	50.0 (1.97)	100.0 (3.94)	200.0 (7.87)
Stem dia. mm (in.)	7.0 (0.28)	7.0 (0.28)	7.0 (0.28)	7.0 (0.28)	7.4 (0.30)	7.4 (0.30)	7.4 (0.30)	7.4 (0.30)
Mass grammes	2.4	3.7	4.8	7.4	5.1	6.7	10.6	18.4

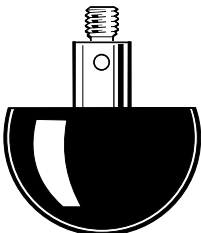
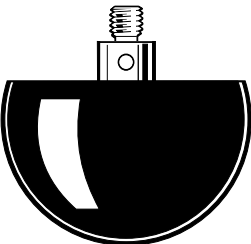
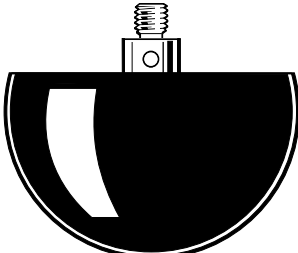


M4 digitising styli

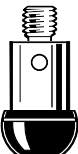
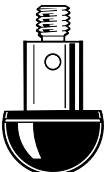
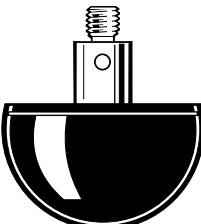
Hemispherical anodised aluminium ball styli (metric)

Part number	A-5000-7718	A-5000-7719	A-5000-7720	A-5000-7721	A-5000-7722
Ball dia. mm (in.)	8.0 (0.32)	10.0 (0.40)	12.0 (0.48)	16.0 (0.63)	20.0 (0.79)
Length mm (in.)	10.5 (0.42)	10.5 (0.42)	10.5 (0.42)	11.5 (0.46)	11.5 (0.46)
Mass grammes	3.4	3.9	4.6	7.2	10.9
					

Complete stylus kit available – Part number A-5000-7676

Part number	A-5000-7723	A-5000-7724	A-5000-7725
Ball dia. mm (in.)	25.0 (0.99)	32.0 (1.26)	38.0 (1.50)
Length mm (in.)	12.5 (0.50)	9.5 (0.38)	9.5 (0.38)
Mass grammes	18.7	19.6	28.5
			

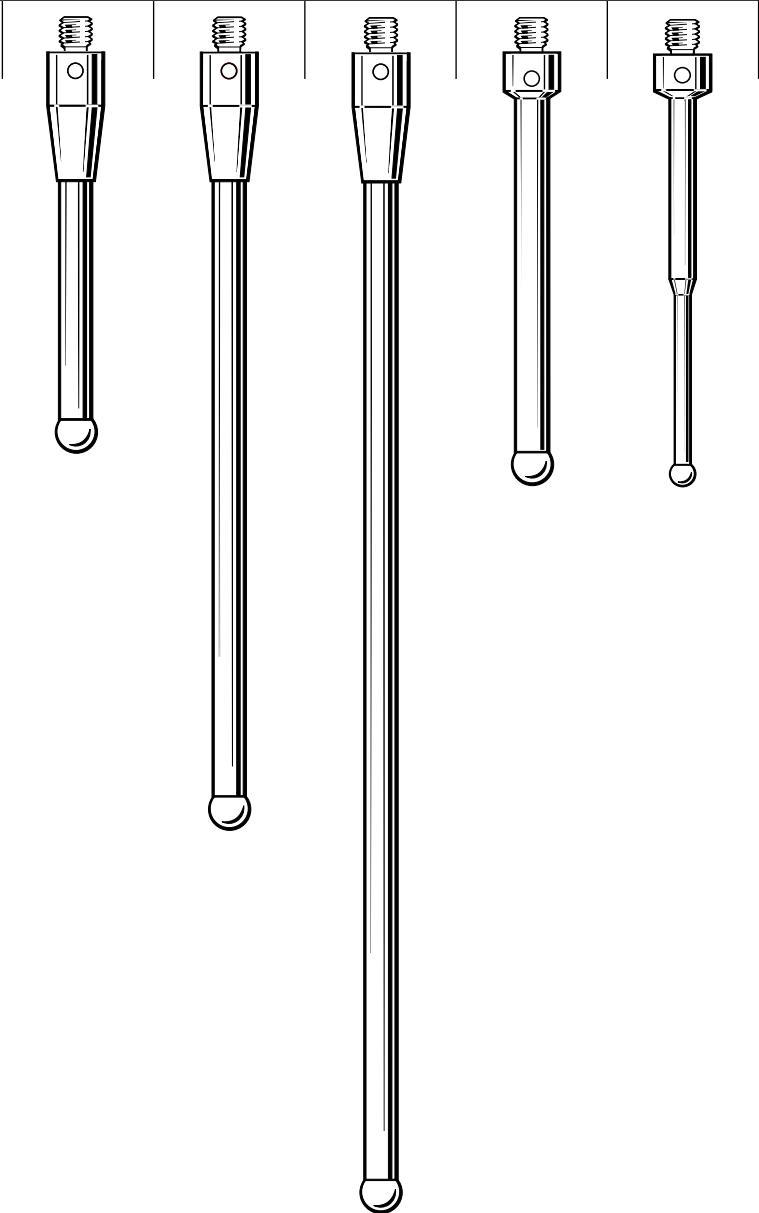
Hemispherical anodised aluminium ball styli (imperial)

Part number	A-5000-7710	A-5000-7711	A-5000-7712	A-5000-7713	A-5000-7714	A-5000-7715
Ball dia. inch (mm)	5/16 (8.0)	3/8 (9.6)	1/2 (12.7)	5/8 (15.9)	3/4 (19.1)	1 (25.4)
Length mm (in.)	10.5 (0.42)	10.5 (0.42)	10.5 (0.42)	11.5 (0.46)	11.5 (0.46)	12.5 (0.50)
Mass grammes	3.4	3.8	4.9	7.1	9.9	19.6
						

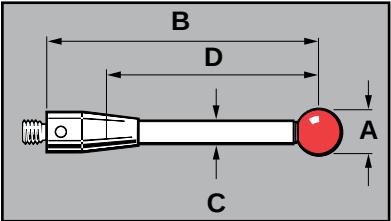
Complete stylus kit available – Part number A-5000-7677

Tungsten carbide styli (stainless steel stems)

Part number		A-5000-7670	A-5000-7671	A-5000-7672	A-5000-9685	A-5000-9697
A	Ball dia. mm (in.)	5.0 (0.20)	5.0 (0.20)	5.0 (0.20)	5.0 (0.20)	3.0 (0.12)
B	Length mm (in.)	50.0 (1.97)	100.0 (3.94)	150.0 (5.91)	54.0 (2.12)	55.0 (2.17)
C	Stem dia. mm (in.)	4.5 (0.18)	4.5 (0.18)	4.5 (0.18)	3.9 (0.15)	1.9 (0.07)
D	EWL* mm (in.)	35.0 (1.38)	85.0 (3.35)	135.0 (5.31)	50.0 (1.97)	25.0 (0.99)
	Mass grammes	6.2	11.9	18.2	6.9	3.8



*Effective working length



Walter styli

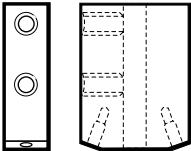
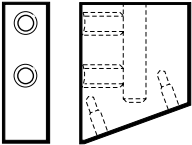
M1.4 thread styli

Part number		A-5003-3814 M1.4	A-5003-3045 M1.4	A-5003-3042 M1.4	A-5000-9860 M1.4	A-5003-1699 M1.4
Stem material		Tungsten carbide	Stainless steel	Tungsten carbide	Tungsten carbide	Stainless steel
Ball material		Tungsten carbide	Tungsten carbide	Ruby	Tungsten carbide	Tungsten carbide
A	Ball dia. mm (in.)	0.5 (0.020)	1.0 (0.04)	0.5 (0.020)	1.0 (0.04)	0.6 (0.024)
B	Length mm (in.)	12.5 (0.49)	25.0 (0.98)	12.5 (0.49)	13.0 (0.51)	12.75 (0.50)
D	EWL* mm (in.)	1.5 (0.059)	1.5 (0.059)	3.0 (0.12)	1.0 (0.04)	1.0 (0.04)
Mass grammes		0.2	1.1	0.19	0.22	0.41
						

M4 threaded
stylus range

1.13

Adaptors

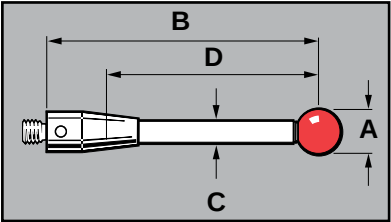
Part number	A-5003-1448	A-5000-9724
D3 MTG	2 × M1.4 adaptor 20°	M1.4 adaptor 20°
Mass grammes	9.73	8.31
		

Break stem

Part number	M-5000-9712 M4 stylus break stem
Mass grammes	2.0
	

*Effective working length

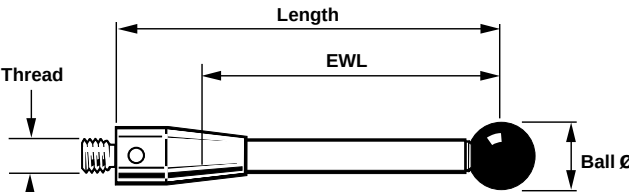
**Special



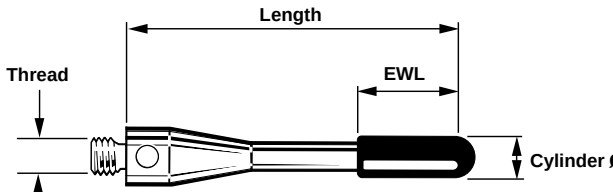
Custom stylus fax back form

Fax to: +44 (0)1453 523201

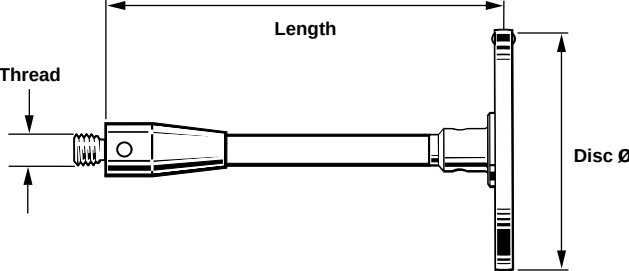
Please fill in your stylus requirements in the space provided and fax back to us. Our design team will carry out a feasibility study and present you with a solution to your application problem.



Thread size	Length	EWL	Ball diameter	Ball material	Stem material	Quantity required



Thread size	Length	EWL	Cylinder diameter	Cylinder material	Quantity required



Thread size	Length	Disc diameter	Disc thickness	Disc material	Disc roller Y or N	Quantity required

Notes

Probe head:

Probing orientation:

Application (what are you measuring?)

Company name:

Date:

Address:

Telephone:

Contact name:

Fax:

Department:

Email:

About Renishaw

Renishaw is an established world leader in engineering technologies, with a strong history of innovation in product development and manufacturing. Since its formation in 1973, the company has supplied leading-edge products that increase process productivity, improve product quality and deliver cost-effective automation solutions.

A worldwide network of subsidiary companies and distributors provides exceptional service and support for its customers.

Products include:

- Additive manufacturing technologies encompassing selective laser melting, vacuum casting and injection moulding techniques.
- Advanced material technologies with a variety of applications in multiple fields.
- Dental CAD/CAM scanning and milling systems.
- Encoder systems for high accuracy linear, angle and rotary position feedback.
- Gauging systems for comparative measurement of machined parts.
- Laser and ballbar systems for performance measurement and calibration of machines.
- Medical devices for neurosurgical applications.
- Probe systems and software for job set-up, tool setting and inspection on CNC machine tools.
- Raman spectroscopy systems for non-destructive material analysis.
- Sensor systems and software for measurement on CMMs (co-ordinate measuring machines).
- Styli for CMM and machine tool probe applications.

For worldwide contact details, please visit our main website at www.renishaw.com/contact



H - 1000 - 7549 - 01