

# Styli and accessories

When precision counts insist on genuine Renishaw styli. Don't settle for less!



# Contents



## Section 1

### Technical specifications quick reference guides

Quick selection from our extensive range.



## Section 2

### Accuracy at the point of contact

An explanation of why it is important to choose the right stylus for your application and an overview of the entire range of stylus types.



## Section 3

### M2 threaded stylus range

Styli for use with the industry standard CMM probes TP2, TP20 and TP200.



## Section 4

### M3 threaded stylus range

Styli for use with our manual CMM probes TP1 and TP6 and our most flexible scanning probe SP25M.



## Section 5

### M4 threaded stylus range

Optimised for stiffness and weight, styli purposefully designed for the high accuracy TP7M and our comprehensive range of probing for machine tools.



## Section 6

### M5 threaded stylus range

A premium range specifically designed for highest accuracy scanning probes from Renishaw and other manufacturers.



## Section 7

### Specialist ball materials

Heavy duty scanning applications may need a specialist solution. Renishaw has a range of options to suit your need.



## Section 8

### Accessories

All of the 'bits and pieces' that you need to assemble anything from the most complex stylus clusters to a simple star.



## Section 9

### Product listing by part number

The complete catalogue presented in part number order.

# Technical specifications

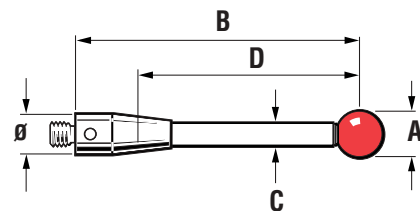
## Ball material properties

Stylus type	Material	Grade	Deviation from spherical form	Structure	Composition	Purity	Density	Hardness	Compression strength	Bending strength	Fracture toughness K1c
			( $\mu\text{m}$ )	–	(wt%)	(%)	( $\text{g}/\text{cm}^3$ )	HV	(MPa)	(MPa)	( $\text{MN}/\text{m}^{3/2}$ )
AL <sub>2</sub> O <sub>3</sub> Ruby balls	Synthetic ruby monocrystalline	Grade 5*	0.13	mono	99% AL <sub>2</sub> O <sub>3</sub>	99.90	3.90	1800	2100	390	1
Silicon nitride balls	Hard pressed Si <sub>3</sub> N <sub>4</sub>	Grade 5*	0.13	poly	Si <sub>3</sub> N <sub>4</sub>	90	3.0-3.2	1600	3000	1000	6
Zirconia oxide balls	Sintered ZrO <sub>2</sub>	Grade 5*	0.13	poly	ZrO <sub>2</sub>	90-95	6.05	1200	2000	700-1100	10
Alumina hollow balls	White ceramic sintered alumina AL <sub>2</sub> O <sub>3</sub>	–	1	poly	AL <sub>2</sub> O <sub>3</sub>	99.80	3.8-3.9	1570	–	–	–
Silver steel discs	Silver steel	–	1	–	–	–	8	450	–	–	–
Silver steel simple cylinder	Silver steel	–	Roundness 4 $\mu\text{m}$	–	–	–	8	200	–	–	–
Ruby ball ended cylinder	Synthetic ruby	Ball: Grade 5*	Ball deviation from spherical form : 0.13 Concentricity: Ball/cylinder 4 $\mu\text{m}$	mono	99% AL <sub>2</sub> O <sub>3</sub>	99.90	3.90	1800	2100	390	1
Tungsten carbide ball ended cylinder	Tungsten carbide	–	+ 20 $\mu\text{m}$ end radius	–	92-93.5% WC 6.5-8% CO	14.8	14.95	1550	6000	–	–
Silver steel simple pointer	Silver steel	–	Cone angle 30°	–	–	–	8	300	–	–	–
Tungsten carbide radius end pointer	Tungsten carbide	–	Cone angle 30°	–	92-93.5% WC 6.5-8% CO	99.90	15	1550	6000	–	–

\* Refers to DIN-5401, ISO 3290 and AFBMA 3290 ball grade standards

## Extension material properties

Material	surface finish	Coeff. of expansion @25°C
Stainless steel	0.4 $\mu\text{m}$ Ra	16x10 <sup>-6</sup> /°C
Tungsten carbide	0.4 $\mu\text{m}$ Ra	5x10 <sup>-6</sup> /°C
White ceramic sintered alumina	0.4 $\mu\text{m}$ Ra	8.1x10 <sup>-6</sup> /°C
Carbon fibre	0.8 $\mu\text{m}$ Ra	-0.4x10 <sup>-6</sup> /°C
Titanium	0.4 $\mu\text{m}$ Ra	9.2x10 <sup>-6</sup> /°C



- A** Ball diameter
- B** Overall length
- C** Stem diameter
- D** Effective working length
- Ø** M2 = 3 mm
- Ø** M3 = 4 mm
- Ø** M4 = 7 mm
- Ø** M5 = 10 mm

# M2 styli and extensions quick reference guide\*

## Ruby ball / stainless steel stem

Ball diameter	1.0 (0.04)	1.5 (0.06)	2.0 (0.08)	2.5 (0.10)	3.0 (0.12)	4.0 (0.16)	5.0 (0.20)	6.0 (0.24)	8.0 (0.32)
Length 10 mm	A-5000-7806	A-5000-7802	A-5000-7807	A-5000-7803	A-5000-3604	A-5000-4154	A-5000-4155	A-5000-4156	A-5000-4158
20 mm	–	–	A-5000-3603	A-5000-7804	A-5000-4160	A-5000-4161	–	–	–

## Ruby ball / tungsten carbide stem

Ball diameter	0.3 (0.012)	0.5 (0.02)	0.7 (0.03)	1.0 (0.04)	1.5 (0.06)	2.0 (0.08)	2.5 (0.10)	3.0 (0.12)	4.0 (0.16)	5.0 (0.20)
Length 10 mm	A-5000-7800	A-5000-7805	A-5000-7801	A-5003-1325	–	–	–	–	–	–
20 mm	–	A-5003-1345	A-5003-0577	SEE DRAWING	A-5003-0034	A-5003-3822	A-5003-1896	A-5003-0938	A-5003-1029	A-5003-0046
30 mm	–	–	–	A-5000-8663	A-5003-0035	A-5003-0036	A-5003-0038	A-5003-0040	A-5003-0043	A-5003-0047
40 mm	–	–	–	–	–	A-5003-0037	A-5003-0039	A-5003-0041	A-5003-0044	A-5003-0048
50 mm	–	–	–	–	–	–	–	A-5003-0042	A-5003-0045	A-5003-0049

## Ruby ball / ceramic stem

Ball diameter	3.0 (0.12)	4.0 (0.16)	5.0 (0.20)	6.0 (0.24)
Length 30 mm	A-5003-4177	A-5003-1370	A-5003-4779	A-5003-4780
50 mm	A-5003-0064	A-5003-0065	A-5003-0066	A-5003-0470

## Ruby ball / carbon fibre stem

Ball diameter	4.0 (0.16)	5.0 (0.20)	6.0 (0.24)
Length 30 mm	A-5003-4241	A-5003-4781	A-5003-4782
50 mm	A-5003-2285	A-5003-2286	A-5003-2287
75 mm	A-5003-4784	A-5003-4785	A-5003-4786
100 mm	A-5003-2289	A-5003-2290	A-5003-2291

## Stylus extensions

Length	5.0 (0.20)	10.0 (0.40)	20.0 (0.80)	30.0 (1.19)	40.0 (1.58)	50.0 (1.97)	70.0 (2.76)	90.0 (3.55)
Stainless steel	M-5000-7634	M-5000-3647	M-5000-3648	M-5000-4162	M-5000-7779	–	–	–
Ceramic	–	–	–	A-5003-0070	A-5003-0071	A-5003-0072	–	–
Carbon fibre	–	–	–	–	A-5003-2280	A-5003-2281	A-5003-2282	A-5003-2283

\* These are a selection of the most popular styli

# M3 styli and extensions quick reference guide\*

## Ruby ball / stainless steel stem

Ball diameter		1.0 (0.04)	2.0 (0.08)	3.0 (0.12)	4.0 (0.16)	5.0 (0.20)
Length	21 mm	A-5000-3551	A-5000-3552	A-5000-3553	A-5000-7606	A-5000-7630
	31 mm	–	–	–	A-5000-3554	A-5000-7648

## Ruby ball / tungsten carbide stem

Ball diameter		0.5 (0.02)	1.5 (0.06)	2.0 (0.08)	2.5 (0.10)	3.0 (0.12)	4.0 (0.16)	5.0 (0.20)
Length	21 mm	A-5000-7632	A-5003-0050	–	A-5003-0054	–	–	–
	30 mm	–	A-5003-0051	A-5003-0052	A-5003-0055	A-5003-0057	–	–
	40 mm	–	–	A-5003-0053	A-5003-0056	A-5003-0058	A-5003-0060	A-5003-0062
	50 mm	–	–	–	–	A-5003-0059	A-5003-0061	A-5003-0063

## Ruby ball / ceramic stem

Ball diameter		3.0 (0.12)	4.0 (0.16)	5.0 (0.20)
Length	50 mm	A-5003-0067	A-5003-0068	A-5003-0069

## Ruby ball / carbon fibre stem

Ball diameter		6.0 (0.24)	8.0 (0.32)
Length	75 mm	A-5003-4860	A-5003-4861
	100 mm	A-5003-4862	A-5003-4863

## Stylus extensions

Length	10.0 (0.40)	20.0 (0.80)	35.0 (1.38)	50.0 (1.97)	70.0 (2.76)
Stainless steel	M-5000-7633	M-5000-3592	M-5000-3593	–	–
Ceramic	–	–	–	A-5003-0075	–
Carbon fibre	–	–	–	A-5003-4864	A-5003-4865

These styli are also available with specialist ball materials – see Section 7

\*These are a selection of the most popular styli

# M4 styli and extensions quick reference guide\*

## Ruby ball / stainless steel stem

Ball diameter		1.0 (0.04)	2.0 (0.08)	3.0 (0.012)	4.0 (0.16)	5.0 (0.20)	6.0 (0.24)	8.0 (0.32)
Length	10 mm	–	–	–	–	A-5003-3550	–	–
	20 mm	A-5000-7545	A-5000-7547	A-5000-7549	A-5000-7551	SEE DRAWING	A-5000-7555	A-5000-7557
	30 mm	–	–	–	–	A-5000-6352	–	–
	50 mm	–	–	–	–	A-5000-7521	–	–
	100 mm	–	–	–	–	A-5000-7522	–	–

## Ruby ball / tungsten carbide stem

Ball diameter		1.0 (0.04)	2.0 (0.08)	3.0 (0.12)	4.0 (0.16)	5.0 (0.20)	6.0 (0.24)
Length	20 mm	A-5003-4792	A-5003-2932	A-5003-4793	A-5003-4794	A-5003-4795	A-5003-4796
	50 mm	–	A-5003-4797	A-5003-3680	A-5003-4799	A-5003-4800	A-5003-4801

## Ruby ball / ceramic stem

Ball diameter		5.0 (0.20)	6.0 (0.24)	8.0 (0.32)
Length	50 mm	A-5003-0235	A-5000-3709	A-5000-7795
	75 mm	A-5003-0236	A-5003-2764	A-5003-4802
	100 mm	A-5000-9761	A-5000-3712	A-5000-7796

## Ruby ball / carbon fibre stem

Ball diameter		6.0 (0.24)	8.0 (0.32)
Length	50 mm	A-5003-1436	–
	100 mm	A-5003-1358	–
	150 mm	A-5003-1255	–
	200 mm	A-5003-1075	–
	300 mm	–	A-5003-3461

## Stylus extensions

Length	10.0 (0.41)	15.0 (0.60)	20.0 (0.79)	30.0 (1.19)	50.0 (1.97)	100.0 (3.94)
Stainless steel	M-5000-7583	M-5000-7584	M-5000-7585	M-5000-7586	–	–
Ceramic	–	–	–	A-5000-7754	A-5000-7755	A-5000-7727

These styli are also available with specialist ball materials – see Section 7

\*These are a selection of the most popular styli

# M5 styli and extensions quick reference guide\*

## Ruby ball / tungsten carbide stem

Ball diameter	0.3 (0.012)	0.5 (0.02)	0.7 (0.03)	1.0 (0.04)	1.5 (0.06)	2.0 (0.08)	2.5 (0.10)	3.0 (0.12)	4.0 (0.16)	5.0 (0.20)
Length 20 mm	A-5003-5201	A-5003-5202	A-5003-5203	A-5003-5204	A-5003-5205	A-5003-5206	A-5003-5207	A-5003-5208	A-5003-5209	A-5003-5210
30 mm	A-5003-5211	A-5003-5212	A-5003-5213	A-5003-5214	A-5003-5215	A-5003-5216	A-5003-5217	A-5003-5218	A-5003-5219	A-5003-5220
40 mm	–	–	–	–	A-5003-5221	A-5003-5222	A-5003-5223	A-5003-5224		
50 mm	A-5003-5225	A-5003-5226	A-5003-5227	A-5003-5228	A-5003-5229	SEE DRAWING	A-5003-5232	A-5003-5234	A-5003-5235	A-5003-5236
75 mm	A-5003-5240	A-5003-5241	A-5003-5242	A-5003-5243	A-5003-5244	–	–	A-5003-5253	SEE DRAWING	SEE DRAWING
100 mm	–	–	–	–	–	–	A-5003-5254			

## Ruby ball / carbon fibre stem

Ball diameter	2.5 (0.10)	6.0 (0.24)	8.0 (0.32)	10.0 (0.40)
Length 20 mm	–	–	–	–
30 mm	–	–	–	–
40 mm	–	–	–	–
50 mm	–	A-5003-5237	A-5003-5238	A-5003-5239
75 mm	–	A-5003-5250	A-5003-5251	A-5003-5252
100 mm	–	SEE DRAWING	SEE DRAWING	SEE DRAWING
150 mm	–	A-5003-5265	A-5003-5266	A-5003-5267
200 mm	–	A-5003-5268	A-5003-5269	A-5003-5270
300 mm	–	A-5003-5271	A-5003-5272	A-5003-5273

## Stylus extensions

Length	10.0 (0.41)	20.0 (0.79)	30.0 (1.19)	40.0 (1.58)	50.0 (1.97)	60.0 (2.37)	70.0 (2.76)	80.0 (3.15)	90.0 (3.55)	100.0 (3.94)
CF/Titanium (Ø11 mm)	–	–	–	A-5003-4953	A-5003-4954	A-5003-4955	A-5003-4956	A-5003-4957	A-5003-4958	A-5003-4959
CF/Titanium (Ø20 mm)	–	–	–	A-5003-4993	A-5003-4994	A-5003-4995	–	A-5003-4996	–	A-5003-4997
Stainless steel	A-5003-0839	A-5003-0840	A-5003-5282	–	A-5003-5283	–	–	–	–	A-5003-0844
Aluminium tube	–	–	–	–	A-5003-5285	–	–	–	–	A-5003-0831

Length	120.0 (4.76)	150.0 (5.91)	180.0 (7.09)	200.0 (7.88)	250.0 (9.85)	300.0 (11.82)	400.0 (15.76)	500.0 (19.70)	600.0 (23.64)
CF/Titanium (Ø11 mm)	A-5003-4960	A-5003-4961	A-5003-4962	A-5003-4963	A-5003-4964	A-5003-4965	A-5003-4966	–	–
CF/Titanium (Ø20 mm)	A-5003-4998	A-5003-4999	A-5003-5000	A-5003-5001	A-5003-5002	A-5003-5003	A-5003-5004	A-5003-5005	A-5003-5006
Stainless steel	–	–	–	–	–	–	–	–	–
Aluminium tube	–	–	–	A-5003-0833	–	–	–	–	–

These styli are also available with specialist ball materials – see Section 7

\*These are a selection of the most popular styli

## Accuracy at the point of contact

As industry has developed its requirement for increasingly diverse and complex manufactured parts, inspection systems have had to work hard to keep up. The use of co-ordinate measuring machines (CMMs) with probing systems and in-process inspection on machine tools are two of the solutions offered by Renishaw to help you maximise your productivity and maintain the highest possible standards of quality.

Successful gauging depends very much on the ability of the probe's stylus to access a feature and then maintain accuracy at the point of contact. At Renishaw, we have used our expertise in probe and stylus design to develop a comprehensive range of both CMM and machine tool styli to offer you the greatest possible precision.

These notes explain the critical features of each stylus type, helping you to choose the right design for each inspection need.

## What is a stylus?

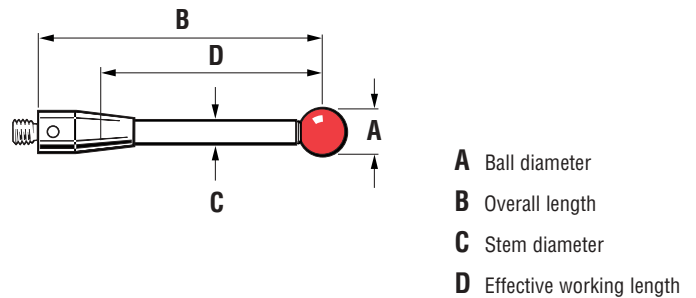
A stylus is that part of the measuring system which makes contact with the component, causing the probe mechanism to displace. The generated signal enables a measurement to be taken. The feature to be inspected dictates the type and size of stylus used. In all cases, however, maximum rigidity of the stylus and perfect sphericity of the tip are vital.

To achieve this, Renishaw's stylus stems are produced on CNC machine tools to exacting standards. Great care is taken to ensure that location faces give maximum stiffness whilst stylus mass is optimised to suit Renishaw's range of probes.

Genuine Renishaw stylus balls are produced to the highest standards and are bonded to the stems in such a way as to ensure maximum joint integrity.

The performance of your gauging can easily be degraded if you use a stylus with poor ball roundness, poor ball location, bad thread fit or a compromised design that allows excessive bending during measurement. To ensure the integrity of the data you gather, make certain that you specify and use a stylus from the comprehensive range of genuine Renishaw styli.

## Terminology



- A** Ball diameter
- B** Overall length
- C** Stem diameter
- D** Effective working length

### Overall length

Renishaw uses a standard description of overall length, measuring from the rear mounting face of the stylus to the centre of the ball.

### Effective working length (EWL)

This is measured from the centre of the ball to the point at which the stem will foul against the feature when measuring 'normal' to the part.

## Choosing a stylus

In order to maintain accuracy at the point of contact we recommend that you:-

### Keep styli short

The more that a stylus bends or deflects, the lower the accuracy. Probing with the minimum stylus length for your application is the best option.

### Minimise joints

Every time you join styli and extensions together you introduce potential bending and deflection points. Try wherever possible to keep the minimum number of pieces for your application.

### Keep the ball as large as possible

There are two reasons for this,

- first is that it maximises your ball/stem clearance thereby reducing the chances for false triggers caused by 'shanking out' on the stylus stem;
- second the larger ball reduces the effect of the surface finish of the component being inspected.



## The range of genuine Renishaw styli

### Ball material

#### Ruby

The industry standard and the optimum stylus ball material for a vast majority of measurement applications, ruby is one of the hardest known materials. Synthetic ruby is 99% pure aluminium oxide which is grown into crystals (or “boules”) at 2000 degrees C using the Verneuil process.

The boules are then cut and gradually machined into a highly spherical form. Ruby balls are exceptionally smooth on the surface, have great compressive strength and a high resistance to mechanical corrosion.

Very few applications exist where ruby is not the best ball material, however there are two such applications where balls manufactured from other materials are recommended.

The first is for heavy duty scanning applications on aluminium. Because the materials attract, a phenomenon known as ‘adhesive wear’ can occur which involves build up of aluminium from the surface onto the ball. A better ball material for such applications is silicon nitride.

The second circumstance where ruby may be problematic is once again in heavy duty scanning applications on cast iron. Interaction between the two materials can result in ‘abrasive wear’ of the ruby ball surface. For such applications, Zirconia balls are recommended.

#### Silicon nitride

Silicon nitride possesses many similar properties to ruby. It is a very hard and wear resistant ceramic which can be machined into very high precision spheres. It can also be polished to an extremely smooth surface finish. Silicon nitride does not have the attraction to aluminium and so does not exhibit the adhesive wear seen with ruby in similar applications. Silicon nitride does, however, show significant abrasive wear characteristics when scanning on steel surfaces, so its applications are best confined to aluminium.

#### Zirconia

Zirconia is a particularly tough ceramic material with hardness and wear characteristics approaching those of ruby. Its surface properties, however, make it an ideal material for aggressive scanning applications on cast iron components.

### Stem material

#### Steel

Stylus stems manufactured from non-magnetic stainless steel are used widely for styli with ball/tip diameters of 2 mm or greater and with lengths up to 30 mm. Within this range, one-piece steel stems offer the optimum stiffness to weight ratio, giving adequate ball/stem clearance without compromising stiffness with a joint between the stem and threaded body.

#### Tungsten carbide

Tungsten carbide stems are best used for maximising stiffness with either small stem diameters required for ball diameters of 1 mm and below or over longer lengths up to 50 mm. Beyond this, weight can become a problem or stiffness is lost due to deflection at the stem to body joint.

#### Ceramic

For ball diameters greater than 3 mm, and lengths over 30 mm, ceramic stems offer stiffness comparable to steel, but are significantly lighter in weight than tungsten carbide. Ceramic stemmed styli can also offer additional crash protection to your probe as the stem will shatter in a collision.

#### Carbon fibre (Renishaw GF)

There are many grades of carbon fibre materials, however Renishaw GF combines optimum stiffness characteristics, both longitudinally and in torsion (important in star constructions) with extremely low weight. Carbon fibre is inert, and this combined with a special resin matrix provides excellent protection in the most hostile machine tool environments.

Renishaw GF is ideal for maximising stiffness while giving very low mass for styli above 50 mm in length. It is the optimum stem material for high accuracy strain gauge technology probes with excellent vibration damping characteristics and negligible co-efficient of thermal expansion.

The genuine Renishaw stylus range comprises several types:

#### Straight styli



These are the simplest form of stylus, incorporating highly spherical industrial ruby balls and a choice of stem material.

Ruby is an extremely hard material and hence stylus wear is minimised. It is also of low density, keeping tip mass to a minimum, which avoids unwanted probe triggers caused by machine motion or vibration.

Mounted on stems made from a range of materials – stainless steel, tungsten carbide, ceramic and a specialised carbon fibre material, “Renishaw GF” – these simple ruby ball styli are suitable for most inspection applications.

Each stylus has an effective working length (EWL) which is the penetration that can be achieved by the ball before its stem fouls against the feature.

The size of the ball and the EWL of the stylus chosen are dictated by the size of the feature to be inspected. However, keeping the stylus ball as large as possible and the stem as short as possible will ensure maximum ball/stem clearance, whilst providing a greater yet still rigid EWL. Using larger ruby balls also reduces the effect of surface finish of the component being inspected.

Probing with very long stylus / extension combinations is not recommended with standard kinematic touch trigger probes as the rigidity is reduced and accuracy is lost due to stylus bending. This is not the case with other types of probe such as those with strain gauge technology, as their very low trigger forces permit the use of long stylus / extension combinations without a significant loss of accuracy.

### Star styli



These stylus clusters provide you with multiple-tip probing of complex features and bores. Four or five ruby ball systems are mounted rigidly on a stainless steel centre. Three standard sizes are offered – alternatively, you can create custom-made star styli using a 5-way stylus centre and any of the genuine Renishaw stylus range.

Star styli can be used to inspect a variety of different features. Their use can reduce inspection cycle times by allowing multi-tip probing, minimising the need to move the probe to extreme points of internal features such as the sides or grooves in a bore. Using star styli also allows effective probing in the –Z (upwards) direction when using a 5-way probe, provided that the stylus tips extend beyond the diameter of the probe body. Each tip on a star stylus requires datuming (sometimes referred to as ‘qualifying’ or ‘calibrating’) in the same manner as a single-ball stylus.

### Disc styli



These styli are used to probe undercuts and grooves within bores, which may be inaccessible to star styli. They are ‘sections’ of highly spherical balls and are available in various diameters and thicknesses. Full rotational adjustment and the ability to add a centre stylus are features of the Renishaw range of disc styli that make them particularly flexible and easy to use.

Probing with the ‘spherical edge’ of a simple disc is effectively the same as probing on or about the equator of a large stylus ball. However, only a small area of this ball surface is available for contact and hence thinner discs require careful angular alignment in order to ensure correct contact with the feature being probed.

A simple disc requires datuming for only one diameter (usually in a ring gauge), but limits effective probing to only X and Y directions.

Adding a ‘radius end roller’ allows you to datum and hence probe in the Z direction, provided that the centre of the ‘radius end roller’ extends beyond the diameter of the probe. The ‘radius end roller’ can be datumed on a sphere or a slip gauge. Rotating and locking the disc about its centre axis allows the ‘radius end roller’ to be positioned to suit the application.

Discs may also have a threaded centre to allow the fixing of a centre stylus, giving the additional flexibility of probing the bottom of deep bores (where access for the disc may be limited).

### Styli for specialist applications

A range of specialist styli is available to enable probing of features such as thread form, thin sectioned material, tool setting and other specialist applications.

#### Cylinder styli



are used for probing holes in thin sheet material. In addition, various threaded features can be probed and the centres of tapped holes located. Ball-ended cylinder styli allow full datuming and probing in X, Y and Z directions, thus allowing surface inspection to be performed.

#### Pointer and ceramic hollow ball styli



Pointer styli are designed for the inspection of thread forms, specific points and scribed lines (to lower accuracy). The use of a radius end pointer stylus allows more accurate datuming and probing of features as detailed above and can also be used to inspect the location of very small holes.

Ceramic hollow ball styli are ideal for probing deep features and bores in X, Y and Z directions, with the need to datum only one ball. There are two versions in the range, 18 and 30 mm diameter, specially designed for the TP2 / TP20 / TP200 and TP6 probes respectively. Probing with such a large diameter ball can average out the effects of very rough surfaces.

### Tool setting styli



are typically fitted with a square tip and can have threaded or plain shaft attachments. The tip faces are ground to ensure high squareness and parallelism. The TS27R tool setting probe for machining centres can also be fitted with a tungsten carbide disc stylus.

### Crash protection



Renishaw's stylus crash protection devices are designed to break in the event of impact and protect the probe from damage.

### Accessories and tools

A wide range of accessories including extensions, 4 and 5-way centres and stylus knuckles complement the genuine Renishaw stylus range to achieve fully flexible inspection.

#### A stylus centre



provides maximum probing flexibility with a single probe. Taking up to 5 styli of the same mounting thread, this accessory allows you to build stylus configurations to your own specification.

#### A stylus knuckle



gives full adjustment about two axes, allowing the stylus to be orientated to probe angled features. This adjustment is especially useful when the probe cannot be correctly orientated by the probe head, or when access for the head is limited.

### Stylus extensions



provide added probing penetration by extending the stylus away from the probe. However, using stylus extensions can reduce probe accuracy due to loss of rigidity. This is not the case with the electronic probes, whose extremely low trigger forces render them less sensitive to this type of inaccuracy.

### Stylus thread adaptors



These allow M2, M3, M4 and M5 threaded styli to be interchanged on the majority of touch trigger probes. They are particularly useful for adapting the extensive range of specialised application M2 styli to be used on larger probes.

### Stylus tools

Specifically designed for mounting styli correctly onto probes and for the construction of specialised stylus combinations, Renishaw's stylus tools protect your investment.

#### The S7 stylus tool



The stylus tool is used for tightening styli and accessories to one another or directly into the probe. It is specifically designed to yield when excessive tightening force is applied, avoiding damage to the threads of stylus and probe.

#### A stylus crank



A stylus crank can allow access to features that are otherwise difficult to reach, and are often used in lathe inspection applications.

### Renishaw stylus kits

Renishaw styli and accessories are available in a wide selection of kits, ranging from a small precision set of the most frequently used styli, to a fully comprehensive set to meet virtually every inspection need.

Some sets are housed in a quality wooden case for maximum protection and superb presentation. The styli are held in a wood insert, individually located in a nylon sleeve providing protection for the mounting threads. This type of box features a removable module which houses up to 12 ruby ball styli and contains a tray for discs, tools and accessories. This allows the stylus selection for a particular inspection task to be brought to the CMM table. The sloping lid design of this kit provides easy access to styli, minimising handling of ruby balls and contact surfaces, thus aiding cleanliness.

Probing kits are also available to include a probe, probe head, extension bars and styli.

### Custom design service

If you cannot achieve your objectives using our extensive range of standard products Renishaw's Styli and Custom Products Division offers a unique service by providing customers with a total solution for their probing needs for CMM, machine tool or scanning applications.

The division includes expertise in applications, design, engineering and manufacturing with extensive experience in providing tailor-made product solutions to specific customer requirements.

In many application problems, the solution lies in the choice of the stylus which influences access of the workpiece features, inspection times and probe performance. All of these aspects are considered within the design of a custom stylus, ensuring that the solution provided incorporates the ideal choice of materials and optimises probe performance for your particular application.

Renishaw's Styli and Custom Products Division has supplied over 5,000 different custom styli into probing applications worldwide, so the solution to your application problem may already exist.

For advice and further details, please contact your nearest Renishaw distributor.

Always use genuine Renishaw styli or your probe performance will be compromised!

# M2 threaded stylus range



TP200 with a SCR200 stylus changing rack

Renishaw's probing systems are designed to give optimum performance using styli from Renishaw's comprehensive range. The following probes all use M2 threaded styli, however with suitable adaptors, other thread sizes may be used.

- TP2
- TP20
- TP200

### Ruby ball styli (stainless steel stems)

Part number	A-5000-7806	A-5000-7802	A-5000-7807	A-5000-7803	A-5000-3604	A-5000-4154	A-5000-4155	A-5000-4156	A-5000-4158
<b>A</b> Ball dia. mm (inch)	1.0 (0.04)	1.5 (0.06)	2.0 (0.08)	2.5 (0.10)	3.0 (0.12)	4.0 (0.16)	5.0 (0.20)	6.0 (0.24)	8.0 (0.32)
<b>B</b> Length mm (inch)	10.0 (0.40)	10.0 (0.40)	10.0 (0.40)	10.0 (0.40)	10.0 (0.40)	10.0 (0.40)	10.0 (0.40)	10.0 (0.40)	11.0 (0.44)
<b>C</b> Stem dia. mm (in.)	0.7 (0.03)	0.7 (0.03)	1.0 (0.04)	1.0 (0.04)	1.5 (0.06)	1.5 (0.06)	2.5 (0.10)	2.5 (0.10)	2.5 (0.10)
<b>D</b> EWL* mm (inch)	4.5 (0.18)	4.5 (0.18)	6.0 (0.24)	6.0 (0.24)	7.5 (0.30)	10.0 (0.40)	10.0 (0.40)	10.0 (0.40)	11.0 (0.44)
Mass grammes	0.3	0.3	0.3	0.3	0.4	0.4	0.7	0.9	1.5

**10 mm range**

Part number	A-5000-3603	A-5000-7804	A-5000-4160	A-5000-4161
<b>A</b> Ball dia. mm (inch)	2.0 (0.08)	2.5 (0.10)	3.0 (0.12)	4.0 (0.16)
<b>B</b> Length mm (inch)	20.0 (0.79)	20.0 (0.79)	20.0 (0.79)	20.0 (0.79)
<b>C</b> Stem dia. mm (in.)	1.4 (0.06)	1.4 (0.06)	1.5 (0.06)	1.5 (0.06)
<b>D</b> EWL* mm (inch)	14.0 (0.56)	14.0 (0.56)	17.5 (0.69)	20.0 (0.79)
Mass grammes	0.4	0.4	0.5	0.6

**20 mm range**

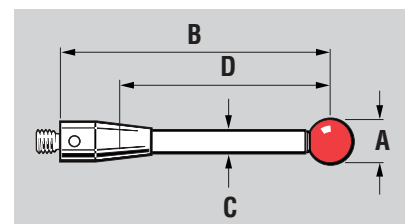
### Ruby ball styli (tungsten carbide stems)

Part number	A-5000-7800	A-5000-7805	A-5000-7801	A-5003-1325
<b>A</b> Ball dia. mm (inch)	0.3 (0.012)	0.5 (0.02)	0.7 (0.03)	1.0 (0.04)
<b>B</b> Length mm (inch)	10.0 (0.40)	10.0 (0.40)	10.0 (0.40)	10.0 (0.40)
<b>C</b> Stem dia. mm (in.)	0.2 (0.01)	0.4 (0.02)	0.5 (0.02)	0.7 (0.03)
<b>D</b> EWL* mm (inch)	2.0 (0.08)	3.0 (0.12)	4.0 (0.16)	4.0 (0.16)
Mass grammes	0.3	0.3	0.3	0.3

**10 mm range**

Part number	A-5003-1345	A-5003-0577	A-5000-7808	A-5003-0033	A-5003-0034
<b>A</b> Ball dia. mm (inch)	0.5 (0.02)	0.7 (0.03)	1.0 (0.04)	1.0 (0.04)	1.5 (0.06)
<b>B</b> Length mm (inch)	20.0 (0.79)	20.0 (0.79)	20.0 (0.79)	20.0 (0.79)	20.0 (0.79)
<b>C</b> Stem dia. mm (in.)	0.3 (0.012)	0.5 (0.02)	0.7 (0.03)	0.8 (0.04)	1.0 (0.04)
<b>D</b> EWL* mm (inch)	7.0 (0.28)	12.0 (0.48)	7.0 (0.28)	12.5 (0.50)	12.5 (0.50)
Mass grammes	0.48	0.32	0.50	0.41	0.50

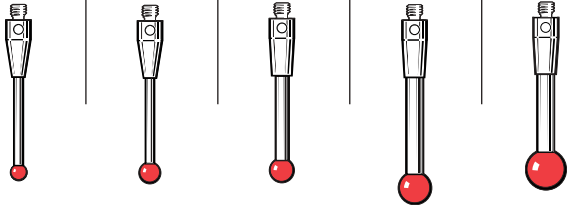
**20 mm range**



## Ruby ball styli (tungsten carbide stems) – continued

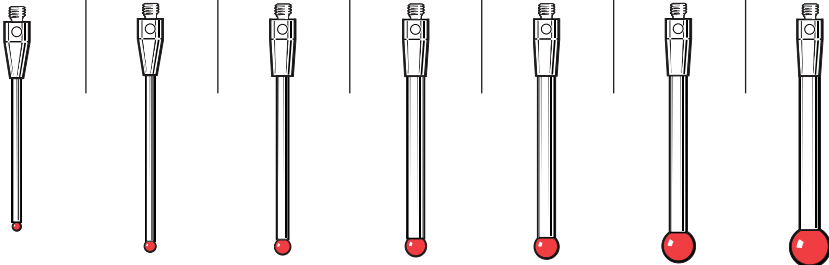
Part number	A-5003-3822	A-5003-1896	A-5003-0938	A-5003-1029	A-5003-0046
<b>A</b> Ball dia. mm (inch)	2.0 (0.08)	2.5 (0.10)	3.0 (0.12)	4.0 (0.16)	5.0 (0.20)
<b>B</b> Length mm (inch)	20.0 (0.79)	20.0 (0.79)	20.0 (0.79)	22.0 (0.87)	20.0 (0.79)
<b>C</b> Stem dia. mm (in.)	1.0 (0.04)	1.0 (0.04)	1.5 (0.06)	2.0 (0.08)	2.5 (0.10)
<b>D</b> EWL* mm (inch)	12.0 (0.48)	15.5 (0.62)	20.0 (0.79)	22.0 (0.87)	20.0 (0.79)
Mass grammes	0.48	0.50	0.77	1.24	1.98

**20 mm range**



Part number	A-5000-8663	A-5003-0035	A-5003-0036	A-5003-0038	A-5003-0040	A-5003-0043	A-5003-0047
<b>A</b> Ball dia. mm (inch)	1.0 (0.04)	1.5 (0.06)	2.0 (0.08)	2.5 (0.10)	3.0 (0.12)	4.0 (0.16)	5.0 (0.20)
<b>B</b> Length mm (inch)	27.0 (1.07)	30.0 (1.19)	30.0 (1.19)	30.0 (1.19)	30.0 (1.19)	30.0 (1.19)	30.0 (1.19)
<b>C</b> Stem dia. mm (in.)	0.7 (0.03)	1.0 (0.04)	1.5 (0.06)	2.0 (0.08)	2.0 (0.08)	2.0 (0.08)	2.5 (0.10)
<b>D</b> EWL* mm (inch)	20.5 (0.81)	25.0 (0.99)	25.0 (0.99)	25.0 (0.99)	25.0 (0.99)	30.0 (1.19)	30.0 (1.19)
Mass grammes	0.40	0.58	0.99	1.48	1.49	1.57	2.57

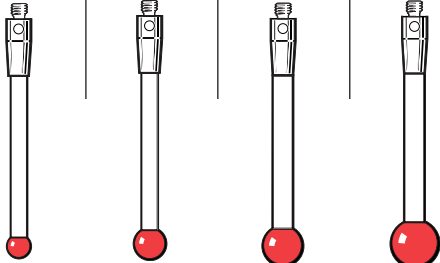
**30 mm range**



## Ruby ball styli (ceramic stems)

Part number	A-5003-4177	A-5003-1370	A-5003-4779	A-5003-4780
<b>A</b> Ball dia. mm (inch)	3.0 (0.12)	4.0 (0.16)	5.0 (0.20)	6.0 (0.24)
<b>B</b> Length mm (inch)	30.0 (1.19)	30.0 (1.19)	30.0 (1.19)	30.0 (1.19)
<b>C</b> Stem dia. mm (in.)	2.0 (0.08)	2.0 (0.08)	2.5 (0.10)	2.5 (0.10)
<b>D</b> EWL* mm (inch)	27.5 (1.09)	30.0 (1.19)	30.0 (1.19)	30.0 (1.19)
Mass grammes	0.44	0.68	0.93	1.11

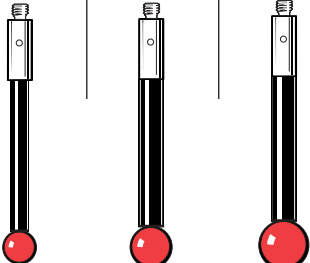
**30 mm range**



## Ruby ball styli (carbon fibre stems)

Part number	A-5003-4241	A-5003-4781	A-5003-4782
<b>A</b> Ball dia. mm (inch)	4.0 (0.16)	5.0 (0.20)	6.0 (0.24)
<b>B</b> Length mm (inch)	30.0 (1.19)	30.0 (1.19)	30.0 (1.19)
<b>C</b> Stem dia. mm (in.)	2.0 (0.08)	3.0 (0.12)	3.0 (0.12)
<b>D</b> EWL* mm (inch)	30.0 (1.19)	30.0 (1.19)	30.0 (1.19)
Mass grammes	0.57	0.79	0.96

**30 mm range**

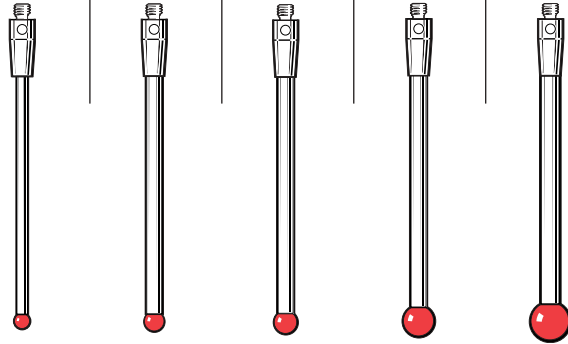


\*Effective working length

Ruby ball styli (tungsten carbide stems)

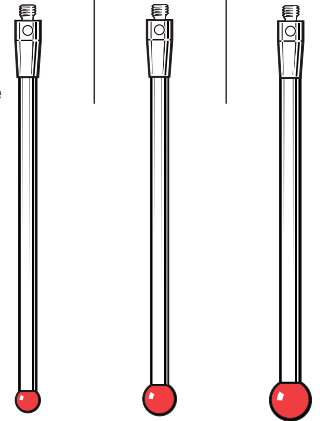
Part number	A-5003-0037	A-5003-0039	A-5003-0041	A-5003-0044	A-5003-0048
<b>A</b> Ball dia. mm (inch)	2.0 (0.08)	2.5 (0.10)	3.0 (0.12)	4.0 (0.16)	5.0 (0.20)
<b>B</b> Length mm (inch)	40.0 (1.58)	40.0 (1.58)	40.0 (1.58)	40.0 (1.58)	40.0 (1.58)
<b>C</b> Stem dia. mm (in.)	1.5 (0.06)	2.0 (0.08)	2.0 (0.08)	2.0 (0.08)	2.5 (0.10)
<b>D</b> EWL* mm (inch)	35.0 (1.38)	35.0 (1.38)	35.0 (1.38)	40.0 (1.58)	40.0 (1.58)
Mass grammes	1.29	1.95	1.97	2.04	3.17

40 mm range



Part number	A-5003-0042	A-5003-0045	A-5003-0049
Ball dia. mm (inch)	3.0 (0.12)	4.0 (0.16)	5.0 (0.20)
Length mm (inch)	50.0 (1.97)	50.0 (1.97)	50.0 (1.97)
Stem dia. mm (in.)	2.0 (0.08)	2.0 (0.08)	2.5 (0.10)
EWL* mm (inch)	42.5 (1.68)	50.0 (1.97)	50.0 (1.97)
Mass grammes	2.44	2.52	3.75

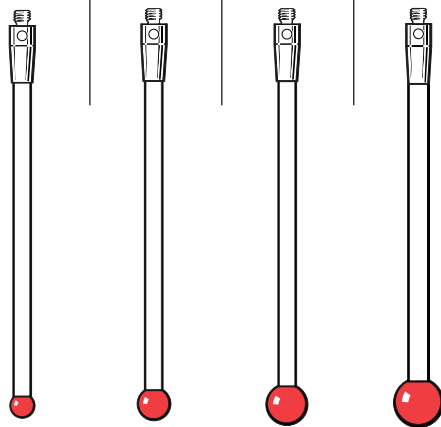
50 mm range



Ruby ball styli (ceramic stems)

Part number	A-5003-0064	A-5003-0065	A-5003-0066	A-5003-0470
<b>A</b> Ball dia. mm (inch)	3.0 (0.12)	4.0 (0.16)	5.0 (0.20)	6.0 (0.24)
<b>B</b> Length mm (inch)	50.0 (1.97)	50.0 (1.97)	50.0 (1.97)	50.0 (1.97)
<b>C</b> Stem dia. mm (in.)	2.0 (0.08)	2.0 (0.08)	2.5 (0.10)	2.5 (0.10)
<b>D</b> EWL* mm (inch)	42.5 (1.68)	50.0 (1.97)	50.0 (1.97)	50.0 (1.97)
Mass grammes	0.83	0.91	1.31	1.49

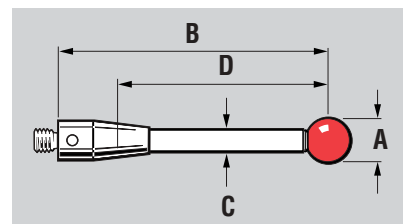
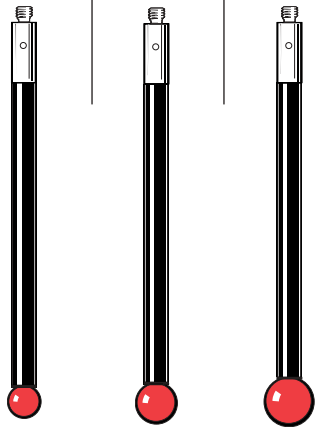
50 mm range



Ruby ball styli (carbon fibre stems)

Part number	A-5003-2285	A-5003-2286	A-5003-2287
<b>A</b> Ball dia. mm (inch)	4.0 (0.16)	5.0 (0.20)	6.0 (0.24)
<b>B</b> Length mm (inch)	50.0 (1.97)	50.0 (1.97)	50.0 (1.97)
<b>C</b> Stem dia. mm (in.)	3.0 (0.12)	3.0 (0.12)	3.0 (0.12)
<b>D</b> EWL* mm (inch)	50.0 (1.97)	50.0 (1.97)	50.0 (1.97)
Mass grammes	1.00	1.10	1.20

50 mm range

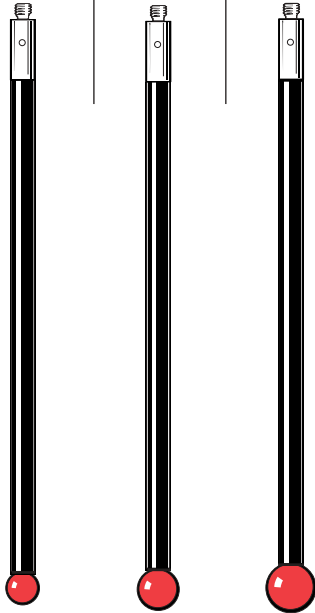




## Ruby ball styli (carbon fibre stems)

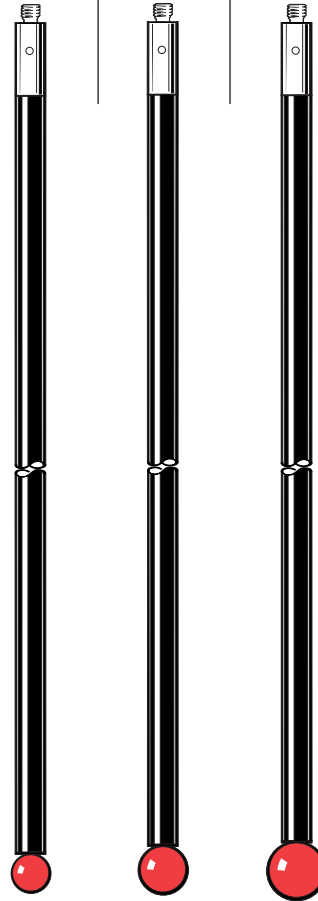
Part number	A-5003-4784	A-5003-4785	A-5003-4786
<b>A</b> Ball dia. mm (inch)	4.0 (0.16)	5.0 (0.20)	6.0 (0.24)
<b>B</b> Length mm (inch)	75.0 (2.96)	75.0 (2.96)	75.0 (2.96)
<b>C</b> Stem dia. mm (in.)	3.0 (0.12)	3.0 (0.12)	3.0 (0.12)
<b>D</b> EWL* mm (inch)	75.0 (2.96)	75.0 (2.96)	75.0 (2.96)
Mass grammes	0.78	1.27	1.45

75 mm range



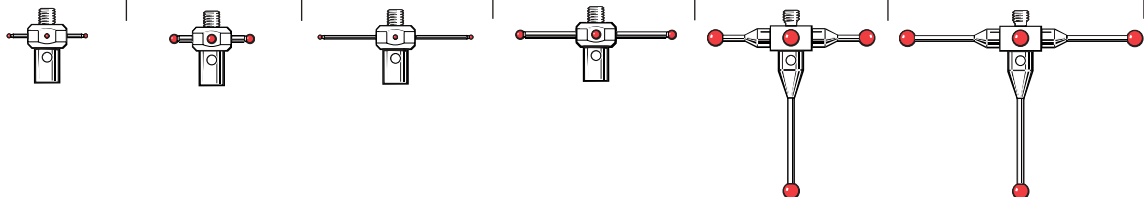
100 mm range

Part number	A-5003-2289	A-5003-2290	A-5003-2291
Ball dia. mm (inch)	4.0 (0.16)	5.0 (0.20)	6.0 (0.24)
Length mm (inch)	100.0 (3.94)	100.0 (3.94)	100.0 (3.94)
Stem dia. mm (in.)	3.0 (0.12)	3.0 (0.12)	3.0 (0.12)
EWL* mm (inch)	100.0 (3.94)	100.0 (3.94)	100.0 (3.94)
Mass grammes	1.50	1.59	1.78



## Star styli (fixed)

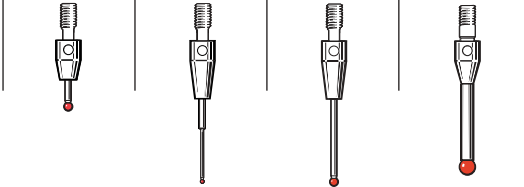
Part number	A-5003-4011	A-5000-7811	A-5003-4787	A-5003-4788	A-5000-7629	A-5000-3626
Span mm (inch)	10.0 (0.40)	10.0 (0.40)	20.0 (0.79)	20.0 (0.79)	20.0 (0.79)	30.0 (1.19)
Ball mm (inch)	0.5 (0.02)	1.0 (0.04)	0.5 (0.02)	1.0 (0.04)	2.0 (0.08)	2.0 (0.08)
Stem dia. mm (in.)	0.3 (0.012)	0.7 (0.03)	0.3 (0.012)	0.7 (0.03)	1.4 (0.06)	1.4 (0.06)
EWL* mm (inch)	NA	NA	NA	NA	12.0 (0.48)	12.0 (0.48)
Mass grammes	0.7	0.5	0.7	0.9	1.3	1.8



\*Effective working length

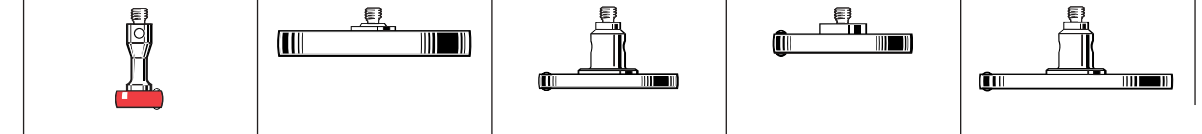
### Star styli centres

Part number	A-5003-4789	A-5003-4790	A-5003-4791	A-5000-3609
Ball dia. mm (inch)	1.0 (0.04)	0.5 (0.02)	1.0 (0.04)	2.0 (0.08)
Stem dia. mm (inch)	0.7 (0.03)	0.4 (0.02)	0.7 (0.03)	1.4 (0.06)
EWL* mm (inch)	4.0 (0.16)	7.0 (0.28)	11.0 (0.44)	12.0 (0.48)
Mass grammes	0.31	0.43	0.45	0.44



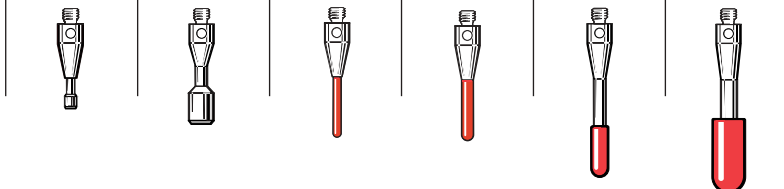
### Disc styli

Part number	A-5000-3611 Ruby	A-5000-4187 Silver steel	A-5000-7809 Silver steel	A-5000-3613 Silver steel	A-5000-7810 Silver steel
Disc dia mm (inch)	6.0 (0.24)	25.0 (0.99)	18.0 (0.71)	18.0 (0.71)	25.0 (0.99)
Disc depth mm (inch)	1.2 (0.05)	3.0 (0.12)	1.5 (0.06)	2.2 (0.09)	1.5 (0.06)
Roller depth mm (inch)	2.0 (0.08)	NA	2.5 (0.10)	3.0 (0.12)	2.5 (0.10)
Stem dia. mm (inch)	2.0 (0.08)	NA	3.0 (0.12)	NA	3.0 (0.12)
Mass grammes	0.6	3.8	3.0	2.7	4.0



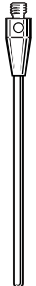






### Cylinder styli






Part number	M-5000-4152 Silver steel	M-5000-4153 Silver steel	A-5000-8876 Ruby	A-5000-8877 Ruby	A-5000-7812 Ruby	A-5003-0073 Ruby
Cylinder dia mm (inch)	1.5 (0.06)	3.0 (0.12)	1.0 (0.04)	1.5 (0.06)	2.0 (0.08)	4.0 (0.16)
Overall length mm (in.)	11.0 (0.44)	13.0 (0.52)	15.0 (0.60)	15.0 (0.60)	20.0 (0.79)	20.0 (0.79)
Stem dia. mm (inch)	1.0 (0.04)	1.5 (0.06)	NA	NA	1.6 (0.07)	2.0 (0.08)
EWL* mm (inch)	1.5 (0.06)	3.8 (0.15)	8.0 (0.32)	8.0 (0.32)	7.2 (0.29)	10.0 (0.40)
Mass grammes	0.3	0.6	0.3	0.3	0.5	0.9






## Parallel hemispherical ended styli (tungsten carbide)

Part number	A-5003-1208	A-5003-1210	A-5003-1218	A-5003-1219	A-5003-1228	A-5003-0074	A-5003-1258
Cylinder dia. mm (inch)	0.3 (0.012)	0.5 (0.02)	1.0 (0.04)	1.5 (0.06)	2.0 (0.08)	2.0 (0.08)	3.0 (0.12)
Overall length mm (in.)	10.2 (0.41)	15.3 (0.61)	35.5 (1.40)	15.8 (0.63)	16.0 (0.63)	40.0 (1.58)	22.5 (0.89)
EWL* mm (inch)	2.7 (0.11)	7.8 (0.31)	29.8 (1.18)	8.3 (0.33)	8.5 (0.34)	32.0 (1.26)	22.5 (0.89)
Mass grammes	0.3	0.3	0.7	0.6	0.8	2.0	2.0
							

## Stylus extensions (stainless steel)

Part number	M-5000-7634	M-5000-3647	M-5000-3648	M-5000-4162	M-5000-7779
Length mm (inch)	5.0 (0.20)	10.0 (0.40)	20.0 (0.79)	30.0 (1.19)	40.0 (1.58)
Stem dia. mm (inch)	3.0 (0.12)	3.0 (0.12)	3.0 (0.12)	3.0 (0.12)	3.0 (0.12)
Mass grammes	0.2	0.4	0.9	1.4	1.8
					

## Stylus extensions (ceramic)

Part number	A-5003-0070	A-5003-0071	A-5003-0072
Length mm (inch)	30.0 (1.19)	40.0 (1.58)	50.0 (1.97)
Stem dia. mm (inch)	3.0 (0.12)	3.0 (0.12)	3.0 (0.12)
Mass grammes	0.97	1.22	1.51
			

\*Effective working length

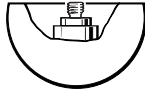
### Stylus extensions (carbon fibre)

Part number	A-5003-2280	A-5003-2281	A-5003-2282	A-5003-2283
Length mm (inch)	40.0 (1.58)	50.0 (1.97)	70.0 (2.76)	90.0 (3.55)
Stem dia. mm (in.)	3.0 (0.12)	3.0 (0.12)	3.0 (0.12)	3.0 (0.12)
Outer dia. mm (in.)	3.5 (0.14)	3.5 (0.14)	3.5 (0.14)	3.5 (0.14)
Mass grammes	0.9	1.0	1.3	1.5

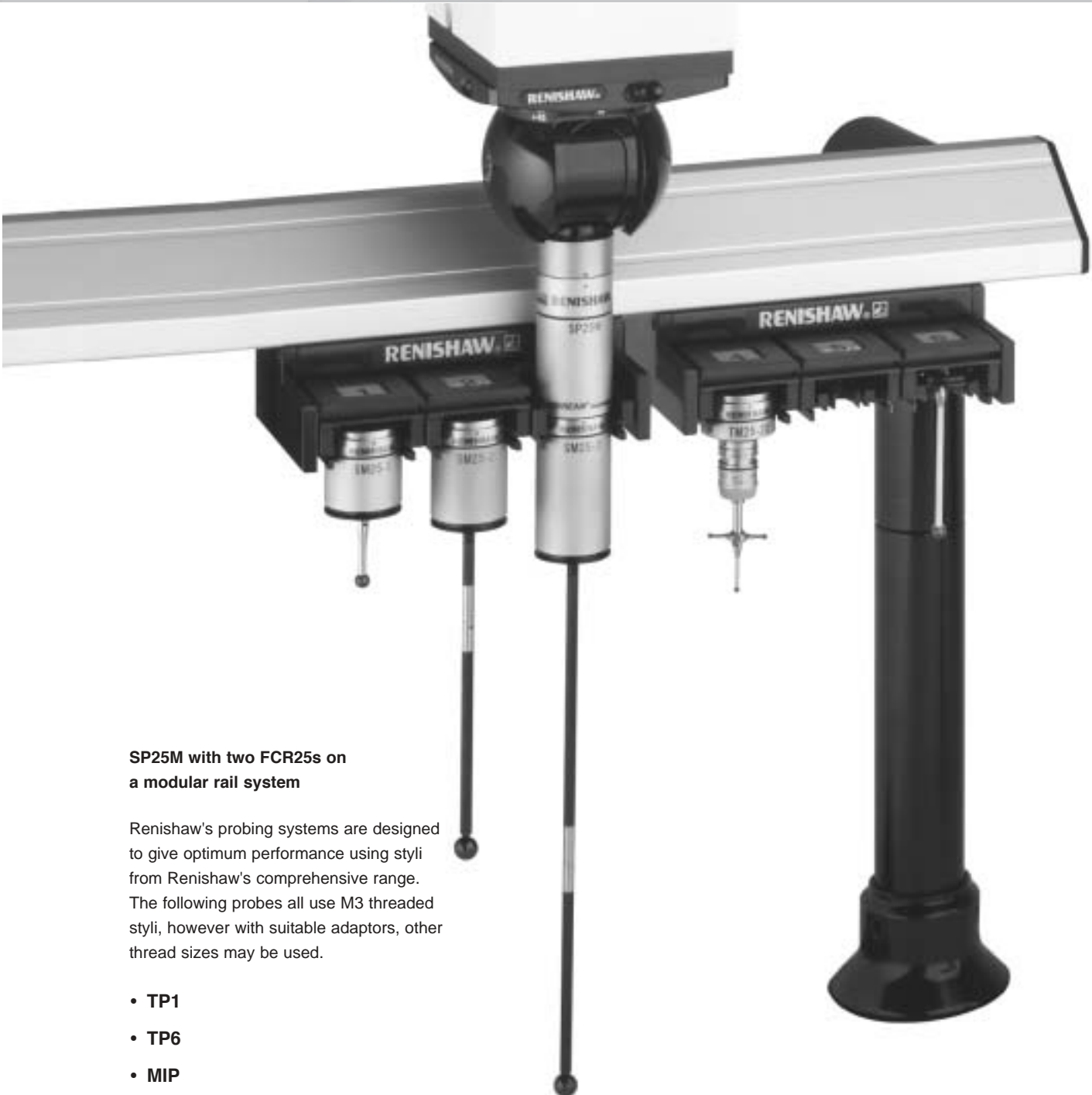


### Special purpose styli

Part number	M-5000-4150 Silver steel	A-5000-7813 Tungsten carbide	A-5000-3614 Ceramic
Length mm (inch)	15.0 (0.60)	10.0 (0.40)	11.0 (0.44)
Ball dia. mm (inch)	NA	NA	18.0 (0.71)
End feature mm (inch)	Flat Rad 0.05 (0.002)	Spherical Rad 0.1 (0.004)	NA
Mass grammes	0.7	0.7	3.3



# M3 threaded stylus range



**SP25M with two FCR25s on  
a modular rail system**

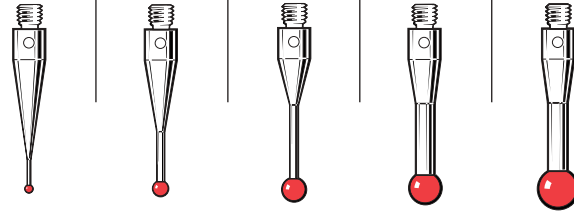
Renishaw's probing systems are designed to give optimum performance using styli from Renishaw's comprehensive range. The following probes all use M3 threaded styli, however with suitable adaptors, other thread sizes may be used.

- TP1
- TP6
- MIP
- SP25M

Ruby ball styli (stainless steel stems)

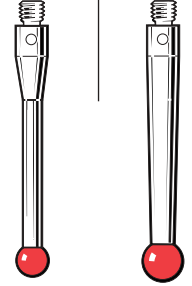
Part number	A-5000-3551	A-5000-3552	A-5000-3553	A-5000-7606	A-5000-7630
<b>A</b> Ball dia. mm (inch)	1.0 (0.04)	2.0 (0.08)	3.0 (0.12)	4.0 (0.16)	5.0 (0.20)
<b>B</b> Length mm (inch)	21.0 (0.83)	21.0 (0.83)	21.0 (0.83)	21.0 (0.83)	21.0 (0.83)
<b>C</b> Stem dia. mm (in.)	0.6 (0.03)	1.4 (0.06)	1.5 (0.06)	2.5 (0.10)	2.5 (0.10)
<b>D</b> EWL* mm (inch)	4.0 (0.16)	8.0 (0.32)	12.0 (0.48)	17.2 (0.68)	21.0 (0.83)
Mass grammes	1.0	1.0	1.0	1.3	1.5

21 mm range



31 mm range

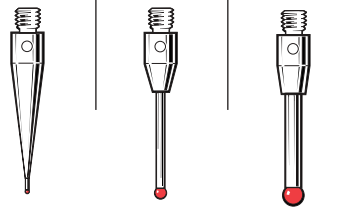
A-5000-3554	A-5000-7648
4.0 (0.16)	5.0 (0.20)
31.0 (1.23)	31.0 (1.23)
2.5 (0.10)	3.5 (0.14)
27.0 (1.07)	31.0 (1.23)
2.5	3.0



Ruby ball styli (tungsten carbide stems)

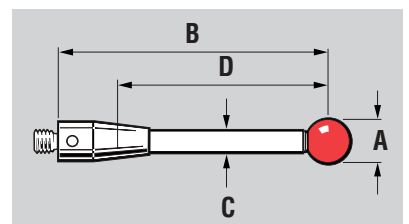
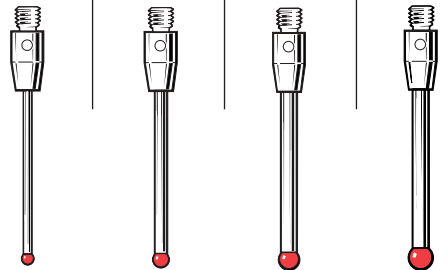
Part number	A-5000-7632	A-5003-0050	A-5003-0054
<b>A</b> Ball dia. mm (inch)	0.5 (0.02)	1.5 (0.06)	2.5 (0.10)
<b>B</b> Length mm (inch)	21.0 (0.83)	21.0 (0.83)	21.0 (0.83)
<b>C</b> Stem dia. mm (in.)	0.4 (0.02)	1.0 (0.04)	2.0 (0.08)
<b>D</b> EWL* mm (inch)	2.0 (0.08)	12.5 (0.50)	12.5 (0.50)
Mass grammes	1.0	0.8	1.3

21 mm range



30 mm range

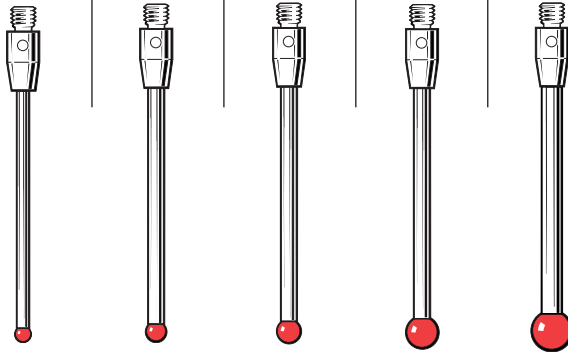
A-5003-0051	A-5003-0052	A-5003-0055	A-5003-0057
1.5 (0.06)	2.0 (0.08)	2.5 (0.10)	3.0 (0.12)
30.0 (1.19)	30.0 (1.19)	30.0 (1.19)	30.0 (1.19)
1.0 (0.04)	1.5 (0.06)	2.0 (0.08)	2.0 (0.08)
22.5 (0.89)	22.5 (0.89)	22.5 (0.89)	22.5 (0.89)
0.93	1.32	1.81	1.83



## Ruby ball styli (tungsten carbide stems)

Part number	A-5003-0053	A-5003-0056	A-5003-0058	A-5003-0060	A-5003-0062
<b>A</b> Ball dia. mm (inch)	2.0 (0.08)	2.5 (0.10)	3.0 (0.12)	4.0 (0.16)	5.0 (0.20)
<b>B</b> Length mm (inch)	40.0 (1.58)	40.0 (1.58)	40.0 (1.58)	40.0 (1.58)	40.0 (1.58)
<b>C</b> Stem dia. mm (in.)	1.5 (0.06)	2.0 (0.08)	2.0 (0.08)	2.0 (0.08)	2.5 (0.10)
<b>D</b> EWL* mm (inch)	32.5 (1.28)	32.5 (1.28)	32.5 (1.28)	36.0 (1.42)	40.0 (1.58)
Mass grammes	1.58	2.28	2.30	2.38	3.50

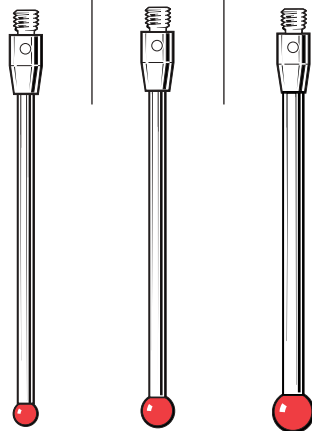
40 mm range



## Ruby ball styli (tungsten carbide stems)

Part number	A-5003-0059	A-5003-0061	A-5003-0063
<b>A</b> Ball dia. mm (inch)	3.0 (0.12)	4.0 (0.16)	5.0 (0.20)
<b>B</b> Length mm (inch)	50.0 (1.97)	50.0 (1.97)	50.0 (1.97)
<b>C</b> Stem dia. mm (in.)	2.0 (0.08)	2.0 (0.08)	2.5 (0.10)
<b>D</b> EWL* mm (inch)	42.5 (1.68)	46.0 (1.82)	50.0 (1.97)
Mass grammes	2.78	2.85	4.10

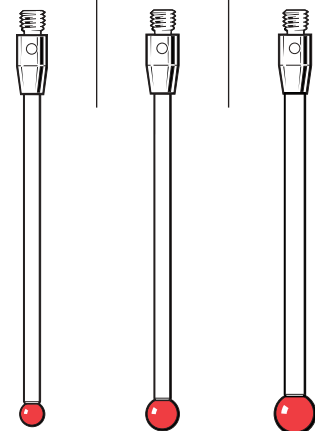
50 mm range



## Ruby ball styli (ceramic stems)

Part number	A-5003-0067	A-5003-0068	A-5003-0069
<b>A</b> Ball dia. mm (inch)	3.0 (0.12)	4.0 (0.16)	5.0 (0.20)
<b>B</b> Length mm (inch)	50.0 (1.97)	50.0 (1.97)	50.0 (1.97)
<b>C</b> Stem dia. mm (in.)	2.0 (0.08)	2.0 (0.08)	2.5 (0.10)
<b>D</b> EWL* mm (inch)	42.5 (1.68)	46.0 (1.82)	50.0 (1.97)
Mass grammes	1.17	1.24	1.33

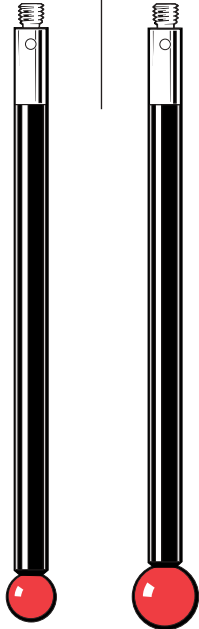
50 mm range



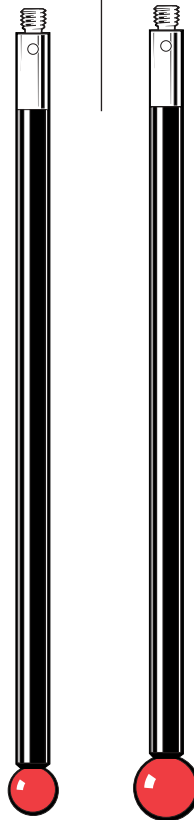
Ruby ball styli (carbon fibre stems)

Part number	A-5003-4860	A-5003-4862	A-5003-4861	A-5003-4863
<b>A</b> Ball dia. mm (inch)	6.0 (0.24)	8.0 (0.32)	6.0 (0.24)	8.0 (0.32)
<b>B</b> Length mm (inch)	75.0 (2.96)	75.0 (2.96)	100.0 (3.94)	100.0 (3.94)
<b>C</b> Stem dia. mm (in.)	4.0 (0.16)	4.0 (0.16)	4.0 (0.16)	4.0 (0.16)
<b>D</b> EWL* mm (inch)	75.0 (2.96)	75.0 (2.96)	100.0 (3.94)	100.0 (3.94)
Mass grammes	2.40	2.98	2.89	3.47

75 mm range

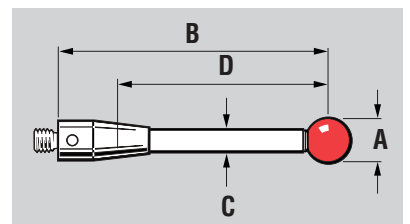
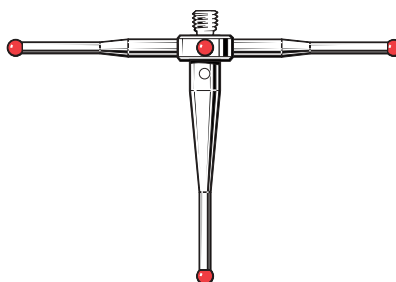
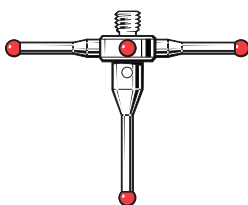


100 mm range



Star styli (fixed)

Part number	A-5003-0076	A-5003-0077
Span mm (inch)	30.0 (1.19)	50.0 (1.97)
Ball mm (inch)	2.0 (0.08)	2.0 (0.08)
Stem dia. mm (in.)	1.4 (0.06)	1.4 (0.06)
EWL* mm (inch)	11.0 (0.44)	11.0 (0.44)
Mass grammes	2.38	5.25





### Stylus extensions (stainless steel)

Part number	M-5000-7633	M-5000-3592	M-5000-3593
Length mm (inch)	10.0 (0.40)	20.0 (0.79)	35.0 (1.38)
Stem dia. mm (in.)	4.0 (0.16)	4.0 (0.16)	4.0 (0.16)
Mass grammes	0.9	1.6	2.9



### Stylus extensions (carbon fibre)

Part number	A-5003-4864	A-5003-4865
Length mm (inch)	75.0 (2.96)	100.0 (3.94)
Stem dia. mm (in.)	4.0 (0.16)	4.0 (0.16)
Mass grammes	2.53	3.02



### Stylus extension (ceramic)

Part number	A-5003-0075
Length mm (inch)	50.0 (1.97)
Stem dia. mm (in.)	4.0 (0.16)
Mass grammes	2.95

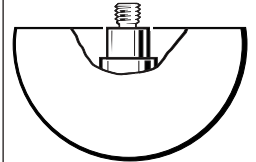
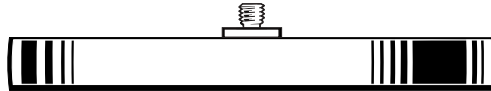
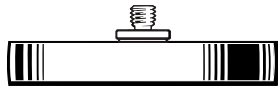
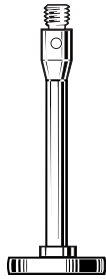


M3 threaded  
stylus range

4.4

Disc and hollow ball styli

Part number	A-5000-3615 Silver steel	A-5000-7612 Silver steel	A-5000-7669 Carbon steel	A-5000-7814 Ceramic
Disc dia mm (inch)	12.7 (0.50)	35.0 (1.38)	63.5 (2.51)	30.0 (1.19)
Disc depth mm (inch)	2.0 (0.08)	5.0 (0.20)	6.0 (0.24)	17.0 (0.67)
Stem dia. mm (in.)	3.5 (0.14)	NA	NA	NA
Mass grammes	4.0	10.0	45.0	18.0



# M4 threaded stylus range

M4 threaded  
stylus range

5.0



**OMP40** a compact probe suited to small machining centres

Renishaw's probing systems are designed to give optimum performance using styli from Renishaw's comprehensive range. The following probes all use M4 threaded styli, however with suitable adaptors, other thread sizes may be used.

**CMM**

- TP7
- SP600
- TP800

**Machine tool**

- MP1
- MP3
- MP4
- MP6
- MP7
- MP8
- MP9
- MP10
- MP11
- MP12
- MP700
- LP2

**Digitising**

- Cyclone



Ruby ball styli (stainless steel stems)

Part number	A-5003-3550	A-5000-7545	A-5000-7547	A-5000-7549	A-5000-7551
<b>A</b> Ball dia. mm (inch)	5.0 (0.20)	1.0 (0.04)	2.0 (0.08)	3.0 (0.12)	4.0 (0.16)
<b>B</b> Length mm (inch)	10.5 (0.42)	19.5 (0.77)	19.0 (0.75)	18.5 (0.73)	18.0 (0.71)
<b>C</b> Stem dia. mm (in.)	3.5 (0.14)	0.7 (0.03)	1.4 (0.05)	2.0 (0.08)	3.0 (0.12)
<b>D</b> EWL* mm (inch)	5.5 (0.22)	4.0 (0.16)	8.0 (0.32)	13.0 (0.52)	13.0 (0.52)
Mass grammes	2.0	2.5	2.3	2.0	2.1

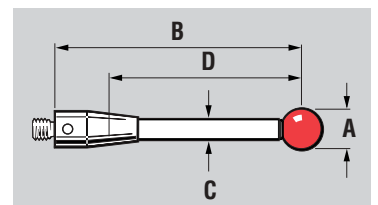
Part number	A-5000-7553	A-5000-6731	A-5000-6352	A-5000-7555	A-5000-7557
<b>A</b> Ball dia. mm (inch)	5.0 (0.20)	5.0 (0.20)	5.0 (0.20)	6.0 (0.24)	8.0 (0.32)
<b>B</b> Length mm (inch)	18.0 (0.71)	20.0 (0.79)	30.0 (1.19)	17.5 (0.69)	16.0 (0.63)
<b>C</b> Stem dia. mm (in.)	3.5 (0.14)	3.0 (0.12)	3.0 (0.12)	4.5 (0.18)	6.0 (0.24)
<b>D</b> EWL* mm (inch)	13.5 (0.54)	16.0 (0.63)	26.0 (1.03)	13.5 (0.54)	16.0 (0.63)
Mass grammes	2.3	2.4	3.0	3.0	3.9

10 mm – 30 mm range

(Tungsten carbide stems)

Part number	A-5003-4792	A-5003-2932	A-5003-4793	A-5003-4794	A-5003-4795	A-5003-4796
<b>A</b> Ball dia. mm (inch)	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>B</b> Length mm (inch)	20.0 (0.79)	20.0 (0.79)	20.0 (0.79)	20.0 (0.79)	20.0 (0.79)	20.0 (0.79)
<b>C</b> Stem dia. mm (in.)	0.7 (0.03)	1.5 (0.06)	1.5 (0.06)	1.5 (0.06)	2.5 (0.10)	2.5 (0.10)
<b>D</b> EWL* mm (inch)	10.0 (0.40)	10.0 (0.40)	10.0 (0.40)	10.0 (0.40)	6.0 (0.24)	6.0 (0.24)
Mass grammes	2.39	3.01	3.53	3.53	4.52	4.66

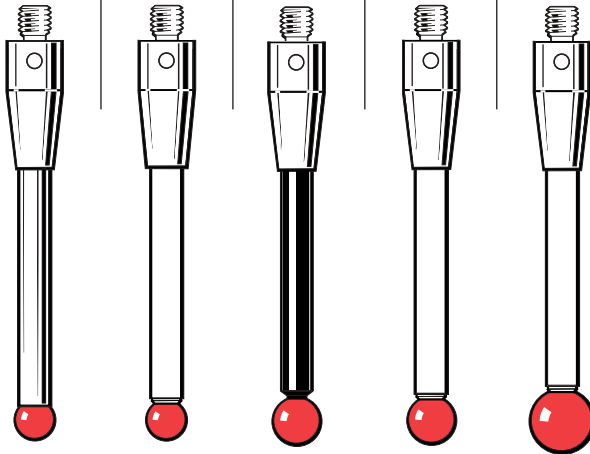
20 mm range



## Ruby ball styli

Part number	A-5000-7521 Stainless steel	A-5003-0235 Ceramic	A-5003-1436 Carbon fibre	A-5000-3709 Ceramic	A-5000-7795 Ceramic
<b>A</b> Ball dia. mm (inch)	5.0 (0.20)	5.0 (0.20)	6.0 (0.24)	6.0 (0.24)	8.0 (0.32)
<b>B</b> Length mm (inch)	50.0 (1.97)	50.0 (1.97)	50.0 (1.97)	50.0 (1.97)	50.0 (1.97)
<b>C</b> Stem dia. mm (inch)	4.5 (0.18)	3.8 (0.15)	4.4 (0.18)	4.5 (0.18)	4.5 (0.18)
<b>D</b> EWL* mm (inch)	35.0 (1.38)	34.0 (1.34)	36.0 (1.42)	36.0 (1.42)	50.0 (1.97)
Mass grammes	5.8	5.0	4.1	4.8	5.4

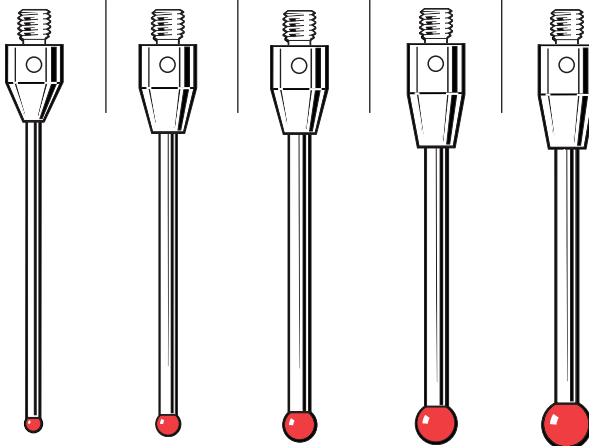
50 mm range



## (Tungsten carbide stems)

Part number	A-5003-4797	A-5003-3680	A-5003-4799	A-5003-4800	A-5003-4801
<b>A</b> Ball dia. mm (inch)	2.0 (0.08)	3.0 (0.12)	4.0 (0.16)	5.0 (0.20)	6.0 (0.24)
<b>B</b> Length mm (inch)	50.0 (1.97)	50.0 (1.97)	50.0 (1.97)	50.0 (1.97)	50.0 (1.97)
<b>C</b> Stem dia. mm (in.)	1.5 (0.06)	2.0 (0.08)	2.5 (0.10)	2.5 (0.10)	2.5 (0.10)
<b>D</b> EWL* mm (inch)	40.0 (1.58)	38.0 (1.50)	38.0 (1.50)	36.0 (1.42)	36.0 (1.42)
Mass grammes	3.80	4.94	4.99	6.72	6.86

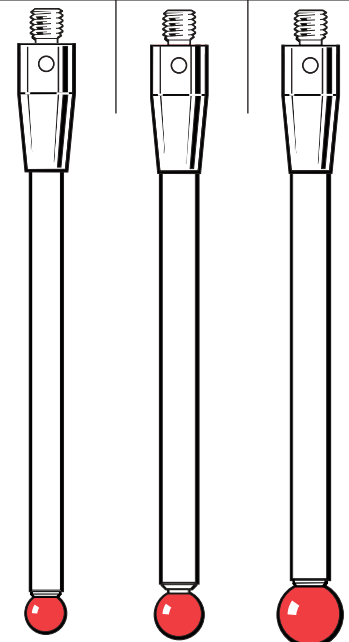
50 mm range



## (Ceramic stems)

Part number	A-5003-0236	A-5003-2764	A-5003-4802
Ball dia. mm (inch)	5.0 (0.20)	6.0 (0.24)	8.0 (0.32)
Length mm (inch)	75.0 (2.96)	75.0 (2.96)	75.0 (2.96)
Stem dia. mm (in.)	3.8 (0.15)	4.4 (0.18)	4.5 (0.18)
EWL* mm (inch)	59.0 (2.33)	63.5 (2.51)	75.0 (2.96)
Mass grammes	5.63	5.64	6.20

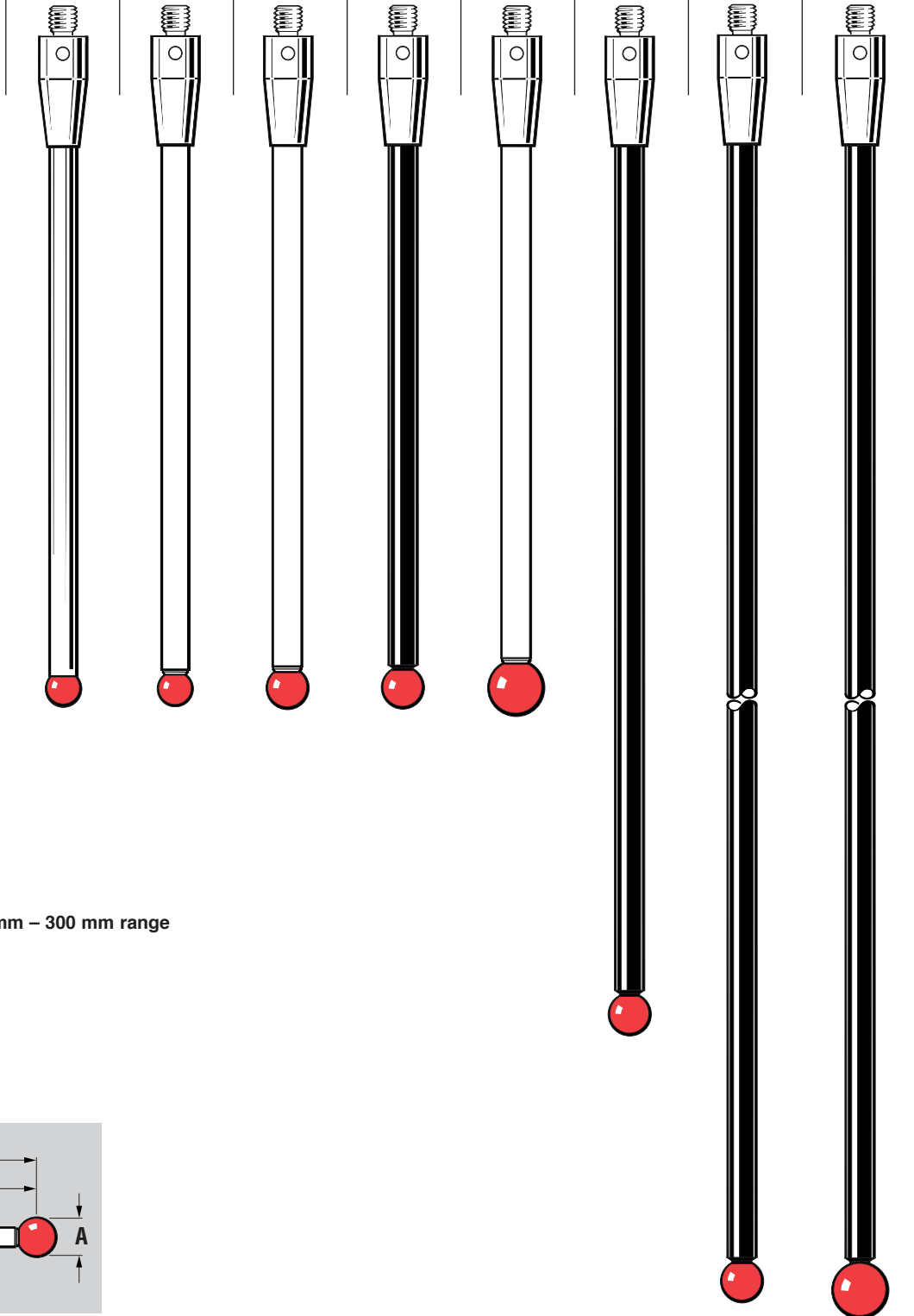
75 mm range



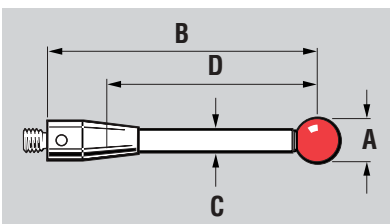
Ruby ball styli

M4 threaded  
stylus range  
5.3

Part number	A-5000-7522	A-5000-9761	A-5000-3712	A-5003-1358	A-5000-7796	A-5003-1255	A-5003-1075	A-5003-3461
	Stainless steel	Ceramic	Ceramic	Carbon fibre	Ceramic	Carbon fibre	Carbon fibre	Carbon fibre
<b>A</b> Ball dia. mm (inch)	5.0 (0.20)	5.0 (0.20)	6.0 (0.24)	6.0 (0.24)	8.0 (0.32)	6.0 (0.24)	6.0 (0.24)	8.0 (0.32)
<b>B</b> Length mm (inch)	100.0 (3.94)	100.0 (3.94)	100.0 (3.94)	100.0 (3.94)	100.0 (3.94)	150.0 (5.91)	200.0 (7.88)	300.0 (11.82)
<b>C</b> Stem dia. mm (in.)	4.5 (0.18)	3.8 (0.15)	4.5 (0.18)	4.4 (0.18)	4.5 (0.18)	4.4 (0.18)	4.5 (0.18)	4.5 (0.18)
<b>D</b> EWL* mm (inch)	85.0 (3.35)	84.0 (3.31)	86.0 (3.39)	86.0 (3.39)	100.0 (3.94)	138.5 (5.46)	186.0 (7.33)	300.0 (11.82)
Mass grammes	11.3	6.4	6.4	6.2	7.0	7.5	8.7	10.4

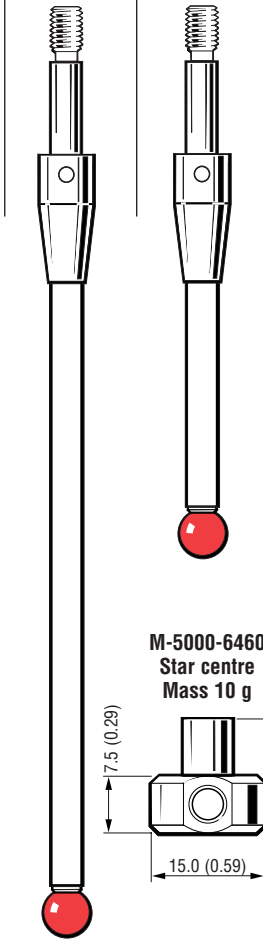


100 mm – 200 mm – 300 mm range



## M4 star styli

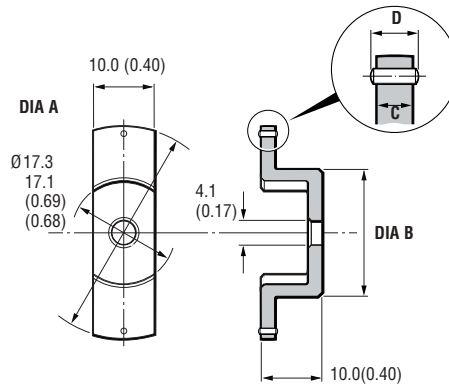
Part number	A-5000-6462 Ceramic	A-5000-7098 Ceramic
Ball mm (inch)	6.0 (0.24)	6.0 (0.24)
Length mm (inch)	100.0 (3.94)	50.0 (1.97)
Stem dia. mm (in.)	4.5 (0.18)	4.5 (0.18)
EWL* mm (inch)	86.0 (3.39)	36.0 (1.42)
Mass grammes	7.5	6.0



\*Effective working length

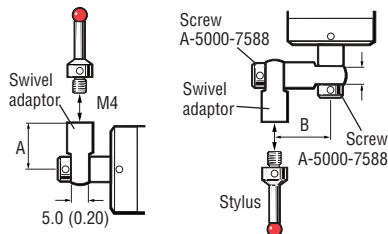
## Disc styli

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



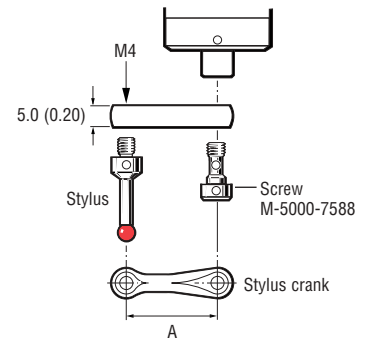
## Swivel adaptor

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



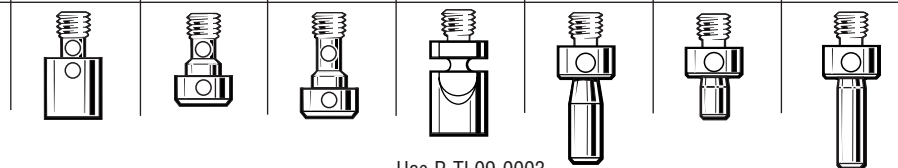
## Styli crank

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



## Crash protection devices

Part number	M-5000-7582 Stainless steel	M-5000-7587 Stainless steel	M-5000-7588 Stainless steel	M-2085-0069 Silver steel	A-5003-5171 Silver steel	M-2197-0156 Silver steel	M-2197-0150 Silver steel
Length mm (inch)	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



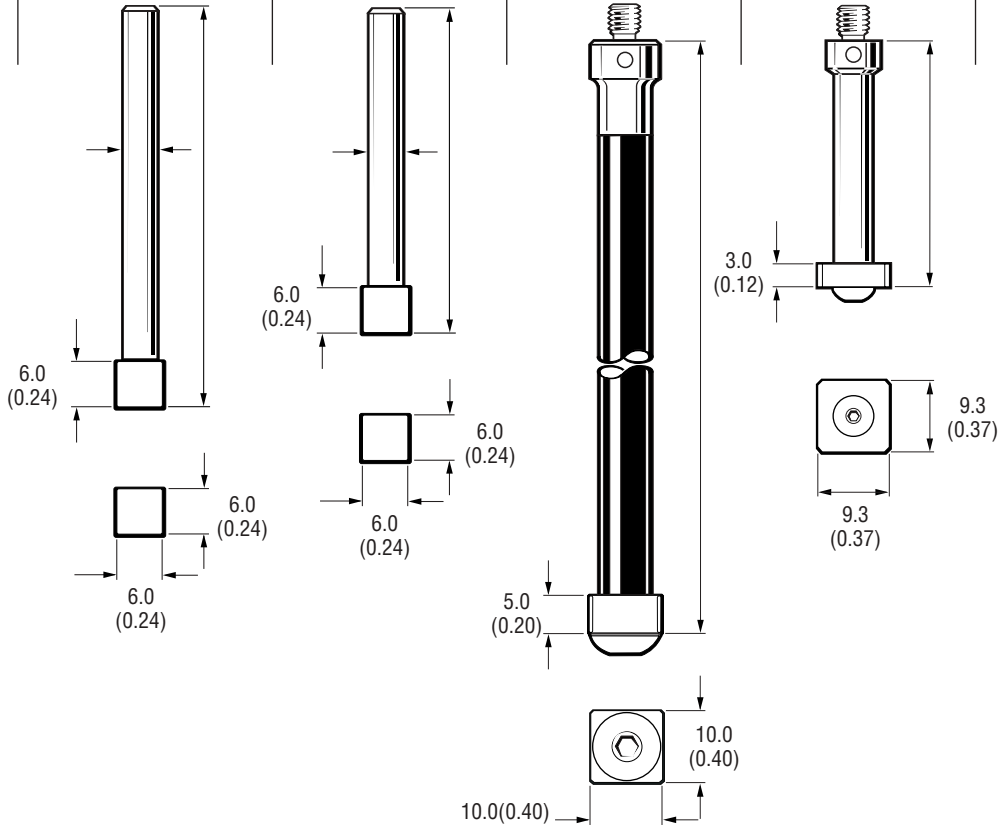
Use P-TL09-0003  
to tighten

These styli are also available with specialist ball materials – see Section 7

\*Effective working length

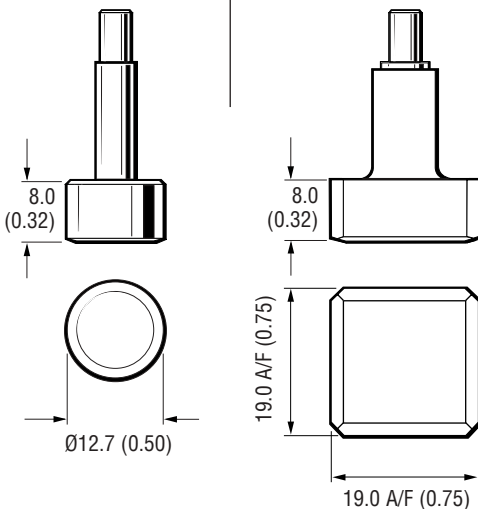
Tool datuming styli

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 (inch)	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

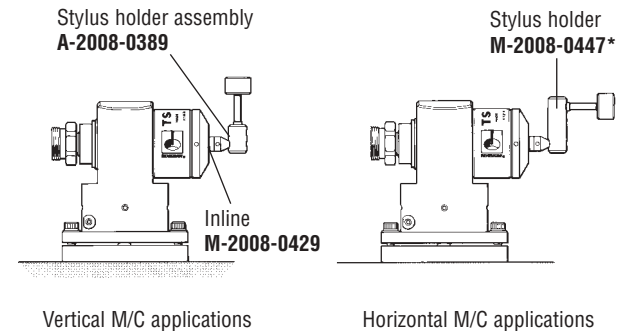


TS27R styli – parallel shafted (not M4) – Not compatible with TS27 probes

Part number	A-2008-0382 Tungsten carbide	A-2008-0384 Ceramic
Overall length mm (inch)	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)

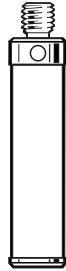


\*Order also requires 3 x P-SC13-0403



## Stylus extensions

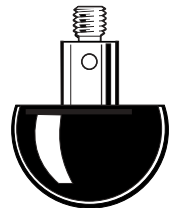
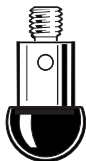
Part number	M-5000-7583 Stainless steel	M-5000-7584 Stainless steel	M-5000-7585 Stainless steel	M-5000-7586 Stainless steel	A-5000-7754 Ceramic	A-5000-7755 Ceramic	A-5000-7727 Ceramic
Length mm (inch)	10.0 (0.40)	15.0 (0.60)	20.0 (0.79)	30.0 (1.19)	30.0 (1.19)	50.0 (1.97)	100.0 (3.94)
Stem dia. mm (inch)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



## M4 digitising styli

### Hemispherical anodised aluminium ball styli (metric)

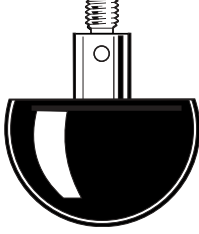
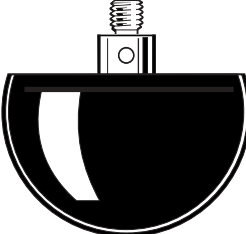
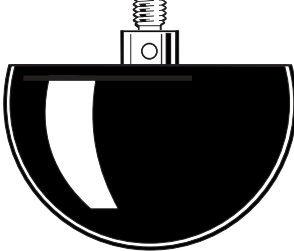
Part number	A-5000-7718	A-5000-7719	A-5000-7720	A-5000-7721	A-5000-7722
Ball dia mm (inch)	8.0 (0.32)	10.0 (0.40)	12.0 (0.48)	16.0 (0.63)	20.0 (0.79)
Length mm (inch)	10.5 (0.42)	10.5 (0.42)	10.5 (0.42)	11.5 (0.46)	11.5 (0.46)
Mass grammes	3.4	3.9	4.6	7.2	10.9



## M4 digitising styli – continued






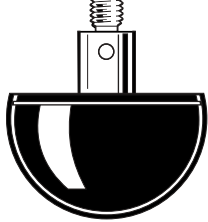
### Hemispherical anodised aluminium ball styli (metric)

Part number	A-5000-7723	A-5000-7724	A-5000-7725
Ball dia mm (inch)	25.0 (0.99)	32.0 (1.26)	38.0 (1.50)
Length mm (inch)	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 (inch)	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

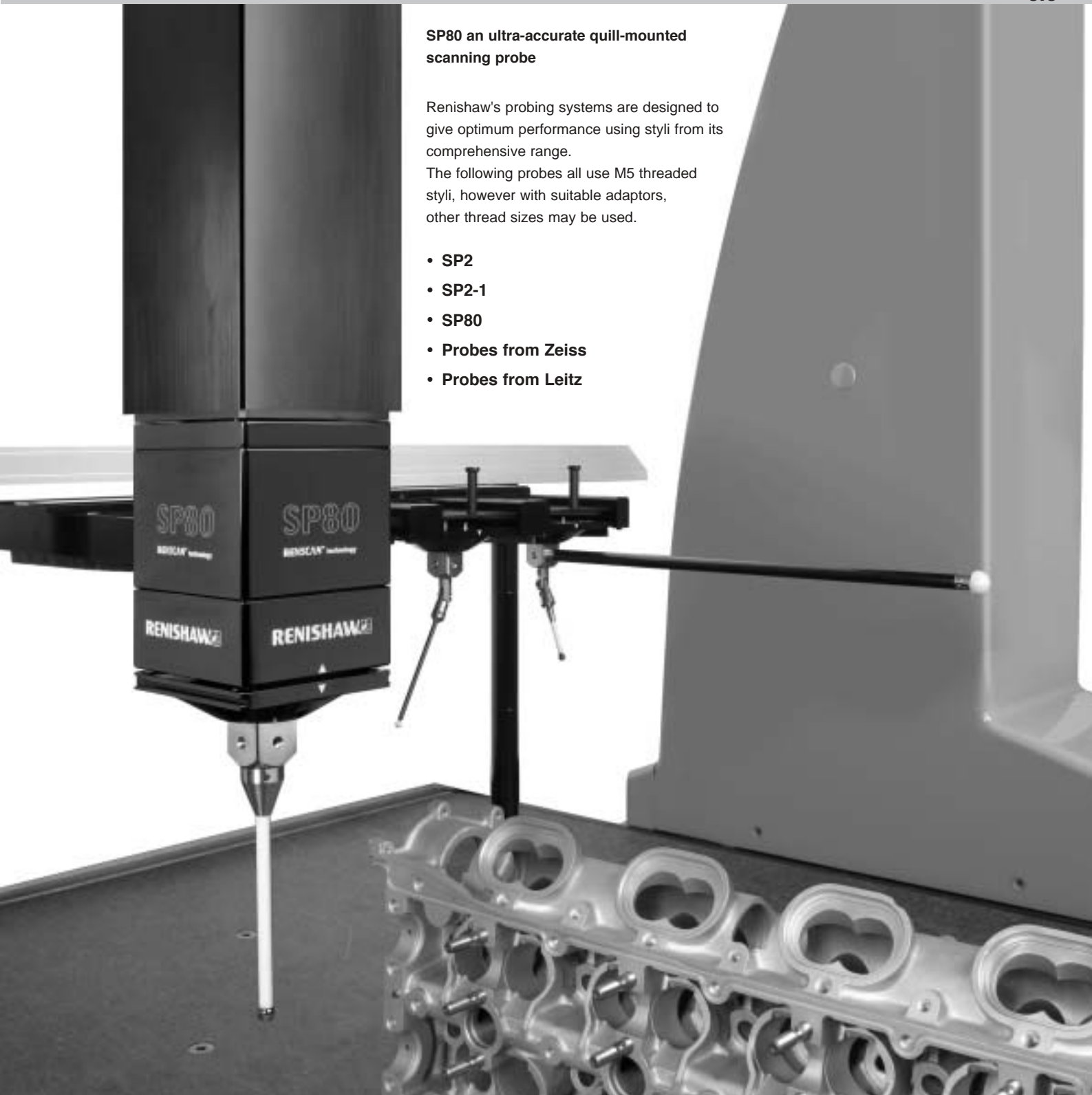
# M5 threaded stylus range

## SP80 an ultra-accurate quill-mounted scanning probe

Renishaw's probing systems are designed to give optimum performance using styli from its comprehensive range.

The following probes all use M5 threaded styli, however with suitable adaptors, other thread sizes may be used.

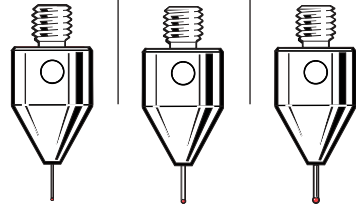
- SP2
- SP2-1
- SP80
- Probes from Zeiss
- Probes from Leitz



Ruby micro ball styli (T.C. stems)

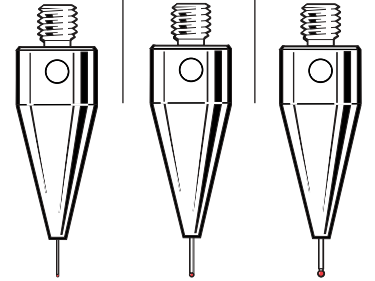
Part number	A-5003-5201	A-5003-5202	A-5003-5203
<b>A</b> Ball dia. mm (inch)	0.3 (0.012)	0.5 (0.02)	0.7 (0.03)
<b>B</b> Length mm (inch)	20.0 (0.79)	20.0 (0.79)	20.0 (0.79)
<b>C</b> Stem dia. mm (inch)	0.2 (0.01)	0.4 (0.02)	0.5 (0.02)
<b>D</b> EWL* mm (inch)	3.0 (0.12)	4.0 (0.16)	5.0 (0.20)
Mass grammes	6.5	6.5	6.5

20 mm range



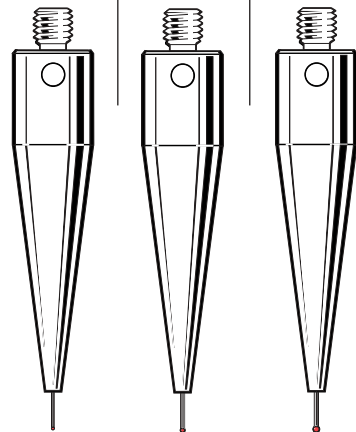
A-5003-5211	A-5003-5212	A-5003-5213
0.3 (0.012)	0.5 (0.02)	0.7 (0.03)
30.0 (1.19)	30.0 (1.19)	30.0 (1.19)
0.2 (0.01)	0.4 (0.02)	0.5 (0.02)
3.0 (0.12)	4.0 (0.16)	5.0 (0.20)
8.95	8.95	8.98

30 mm range



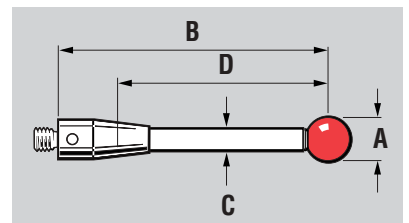
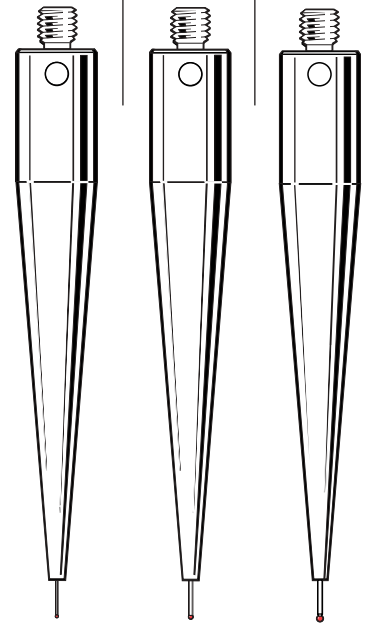
Part number	A-5003-5225	A-5003-5226	A-5003-5227
<b>A</b> Ball dia. mm (inch)	0.3 (0.012)	0.5 (0.02)	0.7 (0.03)
<b>B</b> Length mm (inch)	50.0 (1.97)	50.0 (1.97)	50.0 (1.97)
<b>C</b> Stem dia. mm (inch)	0.2 (0.01)	0.4 (0.02)	0.5 (0.02)
<b>D</b> EWL* mm (inch)	3.0 (0.12)	4.0 (0.16)	5.0 (0.20)
Mass grammes	15.79	15.79	15.79

50 mm range



A-5003-5240	A-5003-5241	A-5003-5242
0.3 (0.012)	0.5 (0.02)	0.7 (0.03)
75.0 (2.96)	75.0 (2.96)	75.0 (2.96)
0.2 (0.01)	0.4 (0.02)	0.5 (0.02)
3.0 (0.12)	4.0 (0.16)	5.0 (0.20)
23.84	23.84	23.84

75 mm range

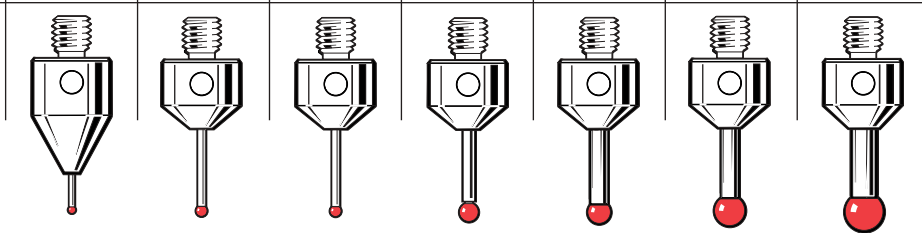


## Ruby ball styli

M5 threaded  
stylus range  
**6.2**

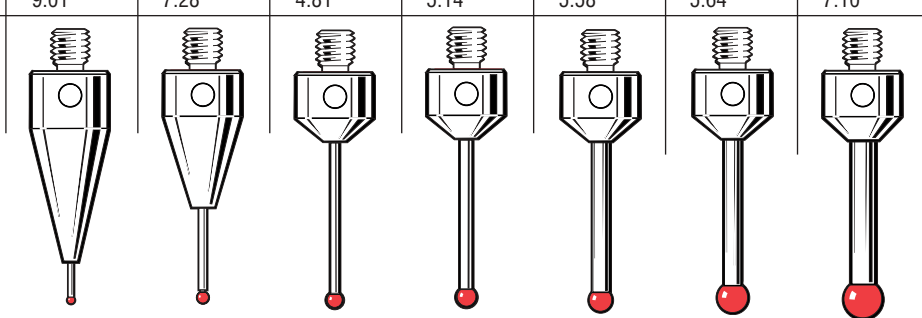
Part number	A-5003-5204	A-5003-5205	A-5003-5206	A-5003-5207	A-5003-5208	A-5003-5209	A-5003-5210
	Tungsten carbide	Tungsten carbide	Tungsten carbide	Tungsten carbide	Tungsten carbide	Tungsten carbide	Tungsten carbide
<b>A</b> Ball dia. mm (inch)	1.0 (0.04)	1.5 (0.06)	2.0 (0.08)	2.5 (0.10)	3.0 (0.12)	4.0 (0.16)	5.0 (0.20)
<b>B</b> Length mm (inch)	20.0 (0.79)	20.0 (0.79)	20.0 (0.79)	20.0 (0.79)	20.0 (0.79)	20.0 (0.79)	20.0 (0.79)
<b>C</b> Stem dia. mm (inch)	0.7 (0.03)	1.0 (0.04)	1.0 (0.04)	1.5 (0.06)	2.0 (0.08)	2.0 (0.08)	3.0 (0.12)
<b>D</b> EWL* mm (inch)	5.0 (0.20)	11.0 (0.44)	11.0 (0.44)	11.0 (0.44)	11.0 (0.44)	11.0 (0.44)	11.0 (0.44)
Mass grammes	6.52	4.68	4.70	4.84	5.12	5.19	6.06

**20 mm range**



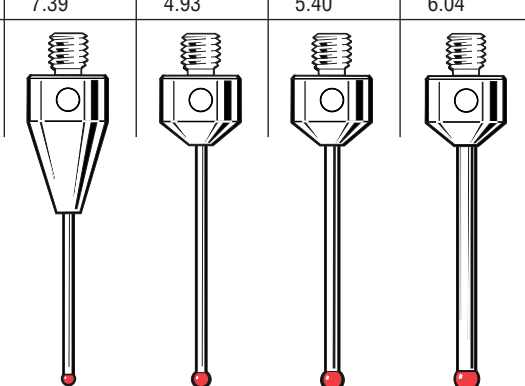
Part number	A-5003-5214	A-5003-5215	A-5003-5216	A-5003-5217	A-5003-5218	A-5003-5219	A-5003-5220
	Tungsten carbide	Tungsten carbide	Tungsten carbide	Tungsten carbide	Tungsten carbide	Tungsten carbide	Tungsten carbide
<b>A</b> Ball dia. mm (inch)	1.0 (0.04)	1.5 (0.06)	2.0 (0.08)	2.5 (0.10)	3.0 (0.12)	4.0 (0.16)	5.0 (0.20)
<b>B</b> Length mm (inch)	30.0 (1.19)	30.0 (1.19)	30.0 (1.19)	30.0 (1.19)	30.0 (1.19)	30.0 (1.19)	30.0 (1.19)
<b>C</b> Stem dia. mm (in.)	0.7 (0.03)	1.0 (0.04)	1.0 (0.04)	1.5 (0.06)	2.0 (0.08)	2.0 (0.08)	3.0 (0.12)
<b>D</b> EWL* mm (inch)	5.0 (0.20)	12.0 (0.48)	21.0 (0.83)	21.0 (0.83)	21.0 (0.83)	21.0 (0.83)	21.0 (0.83)
Mass grammes	9.01	7.28	4.81	5.14	5.58	5.64	7.10

**30 mm range**



Part number	A-5003-5221	A-5003-5222	A-5003-5223	A-5003-5224
	Tungsten carbide	Tungsten carbide	Tungsten carbide	Tungsten carbide
<b>A</b> Ball dia. mm (inch)	1.5 (0.06)	2.0 (0.08)	2.5 (0.10)	3.0 (0.12)
<b>B</b> Length mm (inch)	40.0 (1.58)	40.0 (1.58)	40.0 (1.58)	40.0 (1.58)
<b>C</b> Stem dia. mm (inch)	1.0 (0.04)	1.0 (0.04)	1.5 (0.06)	2.0 (0.08)
<b>D</b> EWL* mm (inch)	20.0 (0.79)	31.0 (1.23)	31.0 (1.23)	31.0 (1.23)
Mass grammes	7.39	4.93	5.40	6.04

**40 mm range**



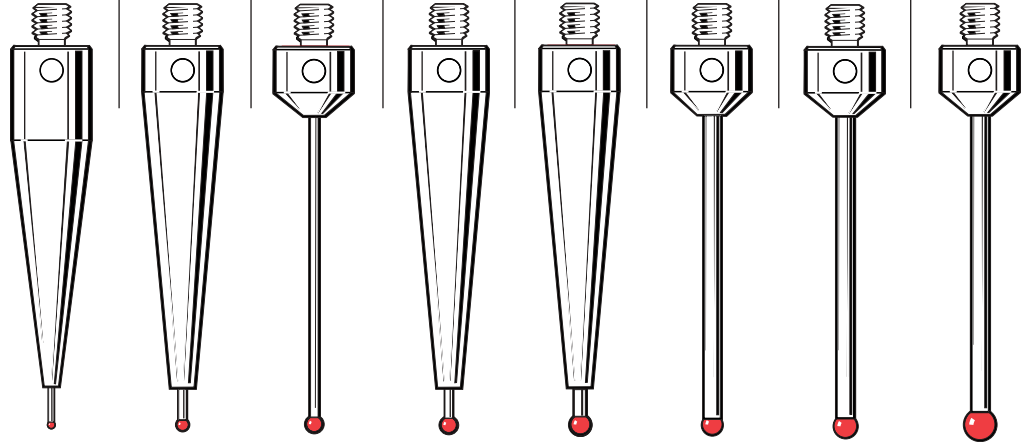
These styli are also available with specialist ball materials – see Section 7

\*Effective working length

Ruby ball styli (<5 mm ball dia.)

Part number	A-5003-5228	A-5003-5229	A-5003-5230	A-5003-5231	A-5003-5233	A-5003-5232	A-5003-5234	A-5003-5235
	Tungsten carbide	Tungsten carbide	Tungsten carbide	Tungsten carbide	Tungsten carbide	Tungsten carbide	Tungsten carbide	Tungsten carbide
<b>A</b> Ball dia. mm (inch)	1.0 (0.04)	1.5 (0.06)	2.0 (0.08)	2.0 (0.08)	2.5 (0.10)	2.5 (0.10)	3.0 (0.12)	4.0 (0.16)
<b>B</b> Length mm (inch)	50.0 (1.97)	50.0 (1.97)	50.0 (1.97)	50.0 (1.97)	50.0 (1.97)	50.0 (1.97)	50.0 (1.97)	50.0 (1.97)
<b>C</b> Stem dia. mm (in.)	0.7 (0.03)	1.0 (0.04)	1.0 (0.04)	1.0 (0.04)	1.5 (0.06)	2.0 (0.08)	2.0 (0.08)	2.0 (0.08)
<b>D</b> EWL* mm (inch)	5.0 (0.20)	5.0 (0.20)	41.0 (1.62)	5.0 (0.20)	5.0 (0.20)	41.0 (1.62)	41.0 (1.62)	41.0 (1.62)
Mass grammes	15.81	14.82	5.05	14.85	14.94	6.48	6.50	6.55

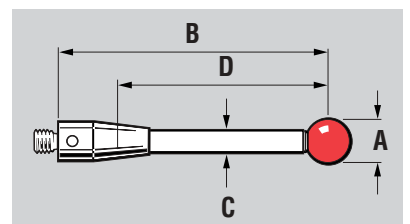
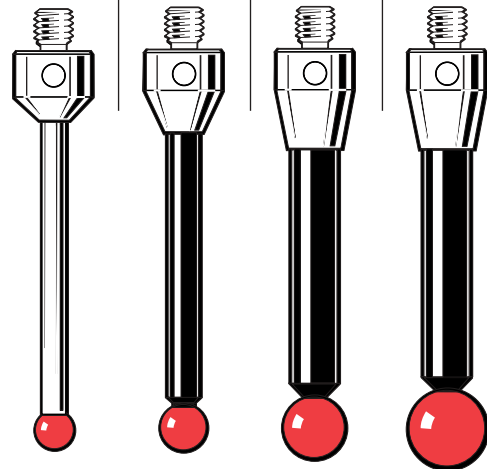
50 mm range



Ruby ball styli (>5 mm ball dia.)

Part number	A-5003-5236	A-5003-5237	A-5003-5238	A-5003-5239
	Tungsten carbide	Carbon fibre	Carbon fibre	Carbon fibre
<b>A</b> Ball dia. mm (inch)	5.0 (0.20)	6.0 (0.24)	8.0 (0.32)	10.0 (0.40)
<b>B</b> Length mm (inch)	50.0 (1.97)	50.0 (1.97)	50.0 (1.97)	50.0 (1.97)
<b>C</b> Stem dia. mm (inch)	3.0 (0.12)	4.0 (0.16)	6.0 (0.24)	6.0 (0.24)
<b>D</b> EWL* mm (inch)	41.0 (1.62)	39.0 (1.54)	37.0 (1.46)	37.0 (1.46)
Mass grammes	9.19	6.10	7.96	8.91

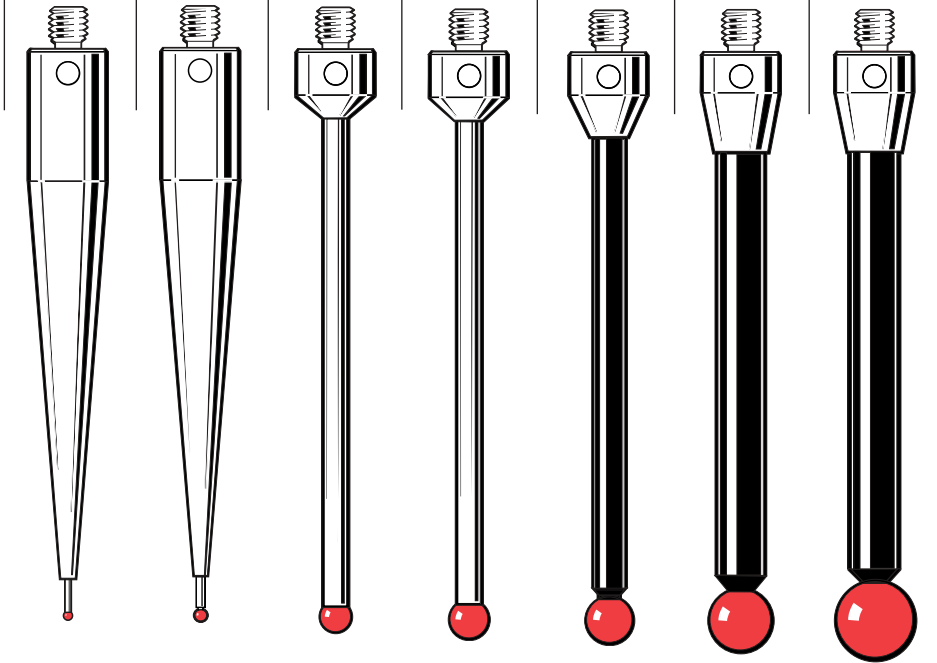
50 mm range



**Ruby ball styli (1 mm – 10 mm ball dia.)**

Part number	A-5003-5243	A-5003-5244	A-5003-5248	A-5003-5249	A-5003-5250	A-5003-5251	A-5003-5252
	Tungsten carbide	Tungsten carbide	Tungsten carbide	Tungsten carbide	Carbon fibre	Carbon fibre	Carbon fibre
<b>A</b> Ball dia. mm (inch)	1.0 (0.04)	1.5 (0.06)	4.0 (0.16)	5.0 (0.20)	6.0 (0.24)	8.0 (0.32)	10.0 (0.40)
<b>B</b> Length mm (inch)	75.0 (2.96)	75.0 (2.96)	75.0 (2.96)	75.0 (2.96)	75.0 (2.96)	75.0 (2.96)	75.0 (2.96)
<b>C</b> Stem dia. mm (inch)	0.7 (0.03)	1.0 (0.04)	3.0 (0.12)	3.0 (0.12)	4.0 (0.16)	6.0 (0.24)	6.0 (0.24)
<b>D</b> EWL* mm (inch)	5.0 (0.20)	5.0 (0.20)	65.0 (2.56)	65.0 (2.56)	64.0 (2.52)	62.0 (2.45)	62.0 (2.45)
Mass grammes	23.86	23.90	11.61	11.80	6.59	9.06	10.01

75 mm range

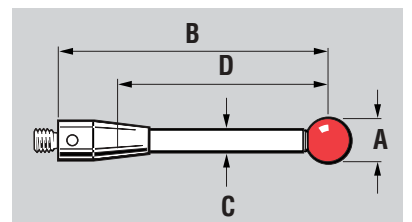
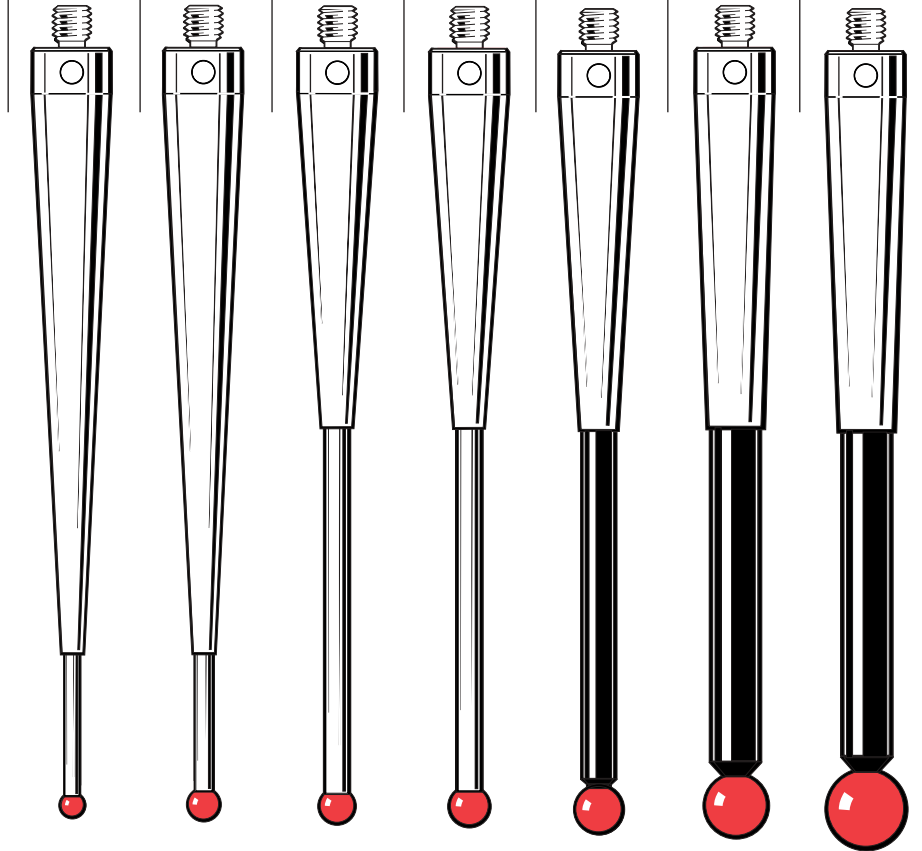


M5 threaded  
styli range  
**6.4**

Ruby ball styli ( $\leq 50$  mm EWL)

Part number	A-5003-5253	A-5003-5255	A-5003-5256	A-5003-5257	A-5003-5259	A-5003-5261	A-5003-5263
	Tungsten carbide	Tungsten carbide	Tungsten carbide	Tungsten carbide	Carbon fibre	Carbon fibre	Carbon fibre
<b>A</b> Ball dia. mm (inch)	3.0 (0.12)	4.0 (0.16)	4.0 (0.16)	5.0 (0.20)	6.0 (0.24)	8.0 (0.32)	10.0 (0.40)
<b>B</b> Length mm (inch)	100.0 (3.94)	100.0 (3.94)	100.0 (3.94)	100.0 (3.94)	100.0 (3.94)	100.0 (3.94)	100.0 (3.94)
<b>C</b> Stem dia. mm (inch)	2.0 (0.08)	2.0 (0.08)	3.0 (0.12)	3.0 (0.12)	4.0 (0.16)	6.0 (0.24)	6.0 (0.24)
<b>D</b> EWL* mm (inch)	20.0 (0.79)	20.0 (0.79)	50.0 (1.97)	50.0 (1.97)	50.0 (1.97)	50.0 (1.97)	50.0 (1.97)
Mass grammes	25.71	25.75	23.07	23.31	19.66	22.97	23.91

100 mm range

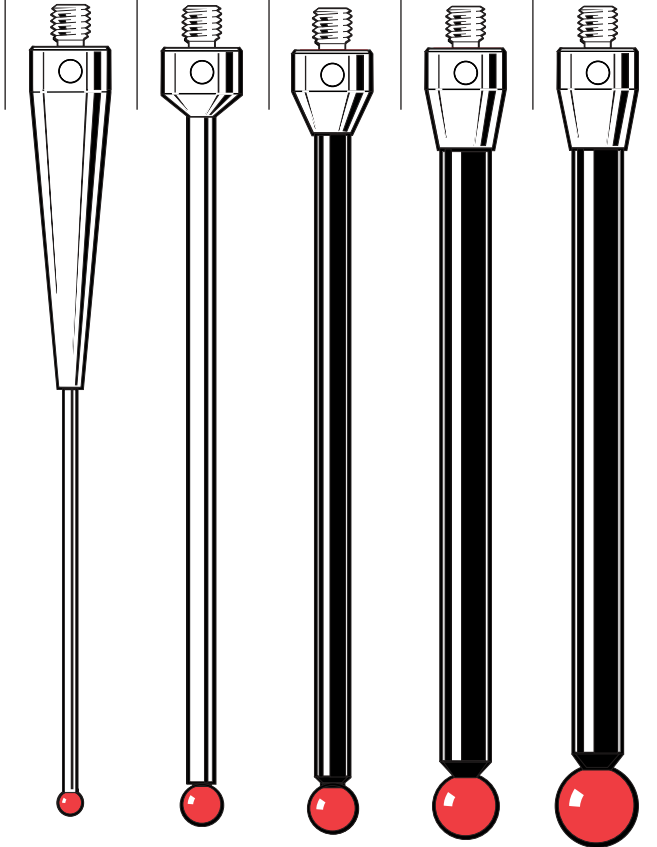




## Ruby ball styli (>50 mm EWL)

Part number	A-5003-5254	A-5003-5258	A-5003-5260	A-5003-5262	A-5003-5264
	Tungsten carbide	Tungsten carbide	Carbon fibre	Carbon fibre	Carbon fibre
<b>A</b> Ball dia. mm (inch)	3.0 (0.12)	5.0 (0.20)	6.0 (0.24)	8.0 (0.32)	10.0 (0.40)
<b>B</b> Length mm (inch)	100.0 (3.94)	100.0 (3.94)	100.0 (3.94)	100.0 (3.94)	100.0 (3.94)
<b>C</b> Stem dia. mm (inch)	1.5 (0.06)	3.0 (0.12)	4.0 (0.16)	6.0 (0.24)	6.0 (0.24)
<b>D</b> EWL* mm (inch)	55.0 (2.17)	91.0 (3.59)	89.0 (3.51)	87.0 (3.43)	87.0 (3.43)
Mass grammes	16.30	14.40	7.08	10.17	11.11

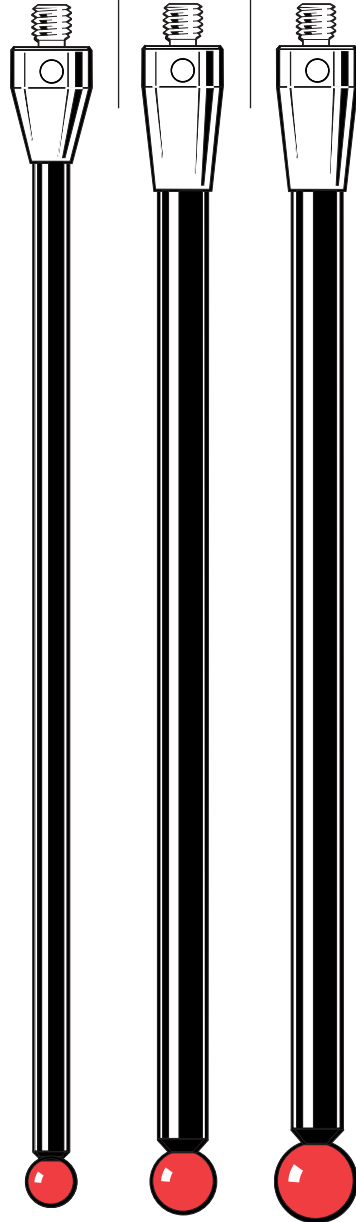
100 mm range



Ruby ball styli (carbon fibre stems)

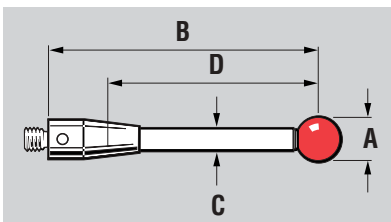
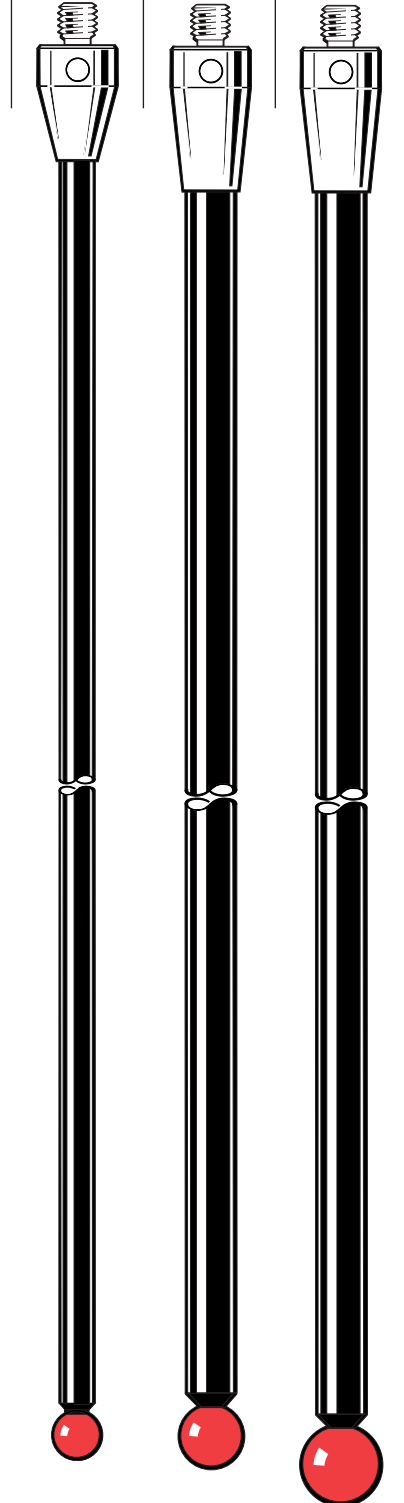
Part number	A-5003-5265	A-5003-5266	A-5003-5267
<b>A</b> Ball dia. mm (inch)	6.0 (0.24)	8.0 (0.32)	10.0 (0.40)
<b>B</b> Length mm (inch)	150.0 (5.91)	150.0 (5.91)	150.0 (5.91)
<b>C</b> Stem dia. mm (inch)	4.0 (0.16)	6.0 (0.24)	6.0 (0.24)
<b>D</b> EWL* mm (inch)	120.0 (4.73)	120.0 (4.73)	120.0 (4.73)
Mass grammes	9.09	13.71	14.66

150 mm range



200 mm range

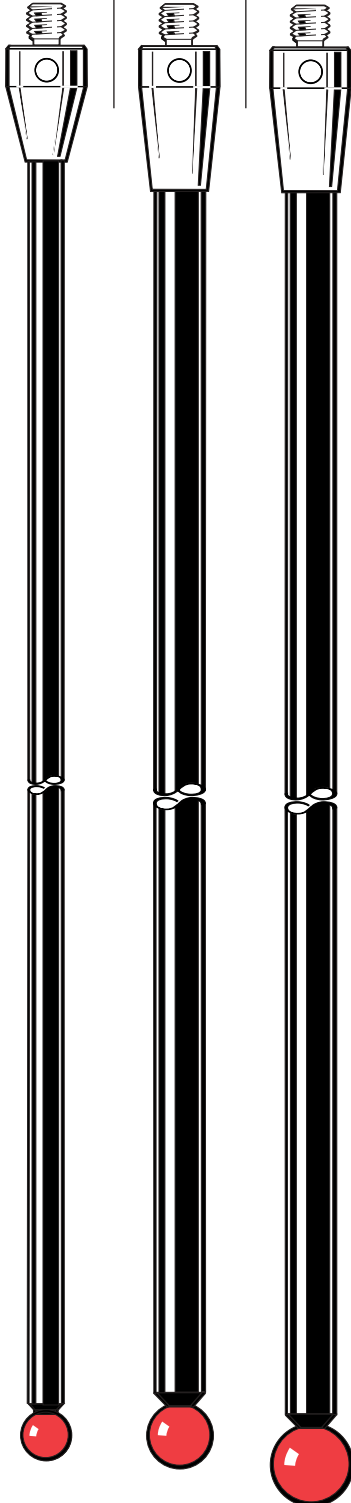
A-5003-5268	A-5003-5269	A-5003-5270
6.0 (0.24)	8.0 (0.32)	10.0 (0.40)
200.0 (7.88)	200.0 (7.88)	200.0 (7.88)
4.0 (0.16)	6.0 (0.24)	6.0 (0.24)
180.0 (7.09)	180.0 (7.09)	180.0 (7.09)
10.07	15.92	16.87



## Ruby ball styli (carbon fibre stems)

Part number	A-5003-5271	A-5003-5272	A-5003-5273
<b>A</b> Ball dia. mm (inch)	6.0 (0.24)	8.0 (0.32)	10.0 (0.40)
<b>B</b> Length mm (inch)	300.0 (11.82)	300.0 (11.82)	300.0 (11.82)
<b>C</b> Stem dia. mm (inch)	4.0 (0.16)	6.0 (0.24)	6.0 (0.24)
<b>D</b> EWL* mm (inch)	280.0 (11.03)	280.0 (11.03)	280.0 (11.03)
Mass grammes	12.02	20.33	21.28

300 mm range



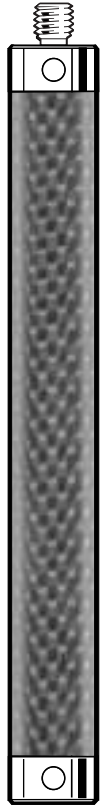
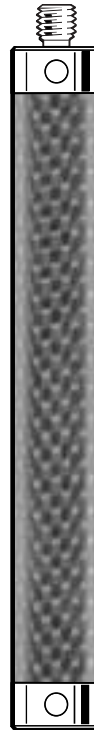
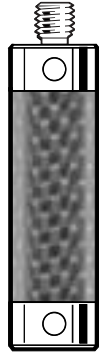
M5 threaded  
styli range

6.8

\*Effective working length

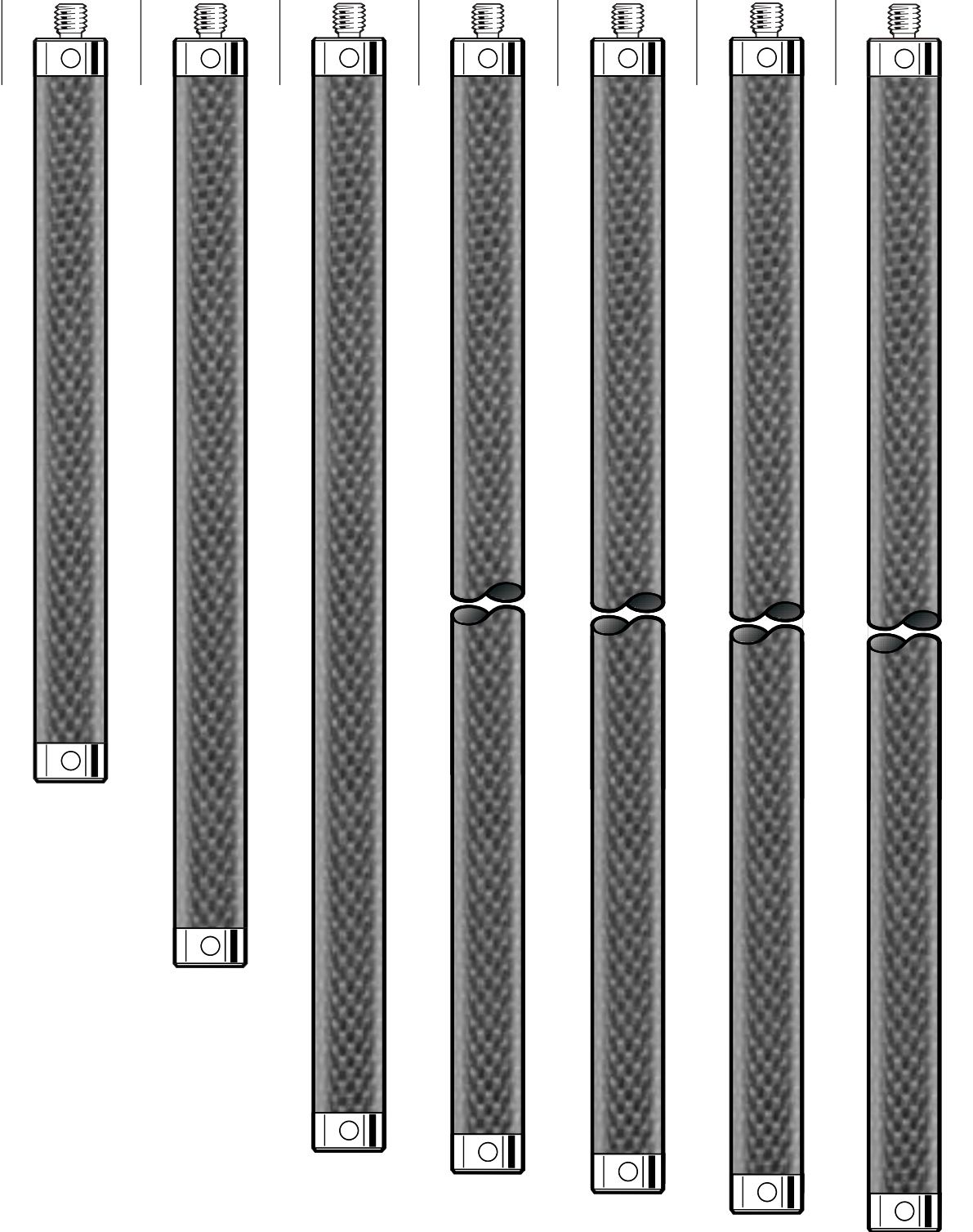
Stylus extensions – carbon fibre stems, titanium ends (stem dia. 11 mm)

Part number	A-5003-4953	A-5003-4954	A-5003-4955	A-5003-4956	A-5003-4957	A-5003-4958	A-5003-4959
Length mm (inch)	40.0 (1.58)	50.0 (1.97)	60.0 (2.37)	70.0 (2.76)	80.0 (3.15)	90.0 (3.55)	100.0 (3.94)
Stem dia. mm (inch)	11.0 (0.44)	11.0 (0.44)	11.0 (0.44)	11.0 (0.44)	11.0 (0.44)	11.0 (0.44)	11.0 (0.44)
Mass grammes	7.6	8.3	9.0	9.7	10.4	11.1	11.8



**Stylus extensions – carbon fibre stems, titanium ends (stem dia. 11 mm)**

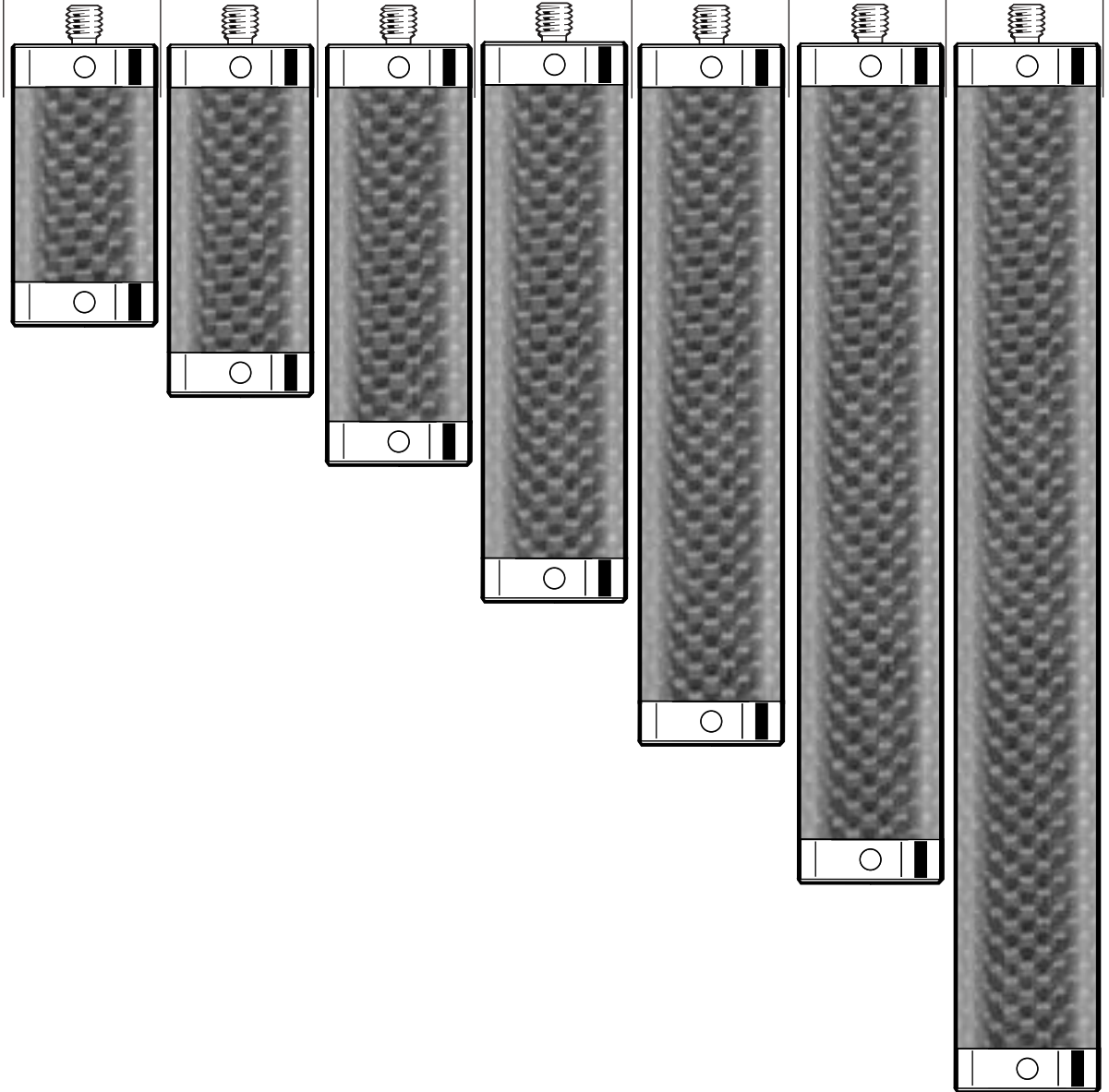
Part number	A-5003-4960	A-5003-4961	A-5003-4962	A-5003-4963	A-5003-4964	A-5003-4965	A-5003-4966
Length mm (inch)	120.0 (4.73)	150.0 (5.91)	180.0 (7.09)	200.0 (7.88)	250.0 (9.85)	300.0 (11.82)	400.0 (15.76)
Stem dia. mm (inch)	11.0 (0.44)	11.0 (0.44)	11.0 (0.44)	11.0 (0.44)	11.0 (0.44)	11.0 (0.44)	11.0 (0.44)
Mass grammes	13.2	15.4	17.5	18.9	22.4	25.9	33.0



M5 threaded  
 stylus range  
**6.10**

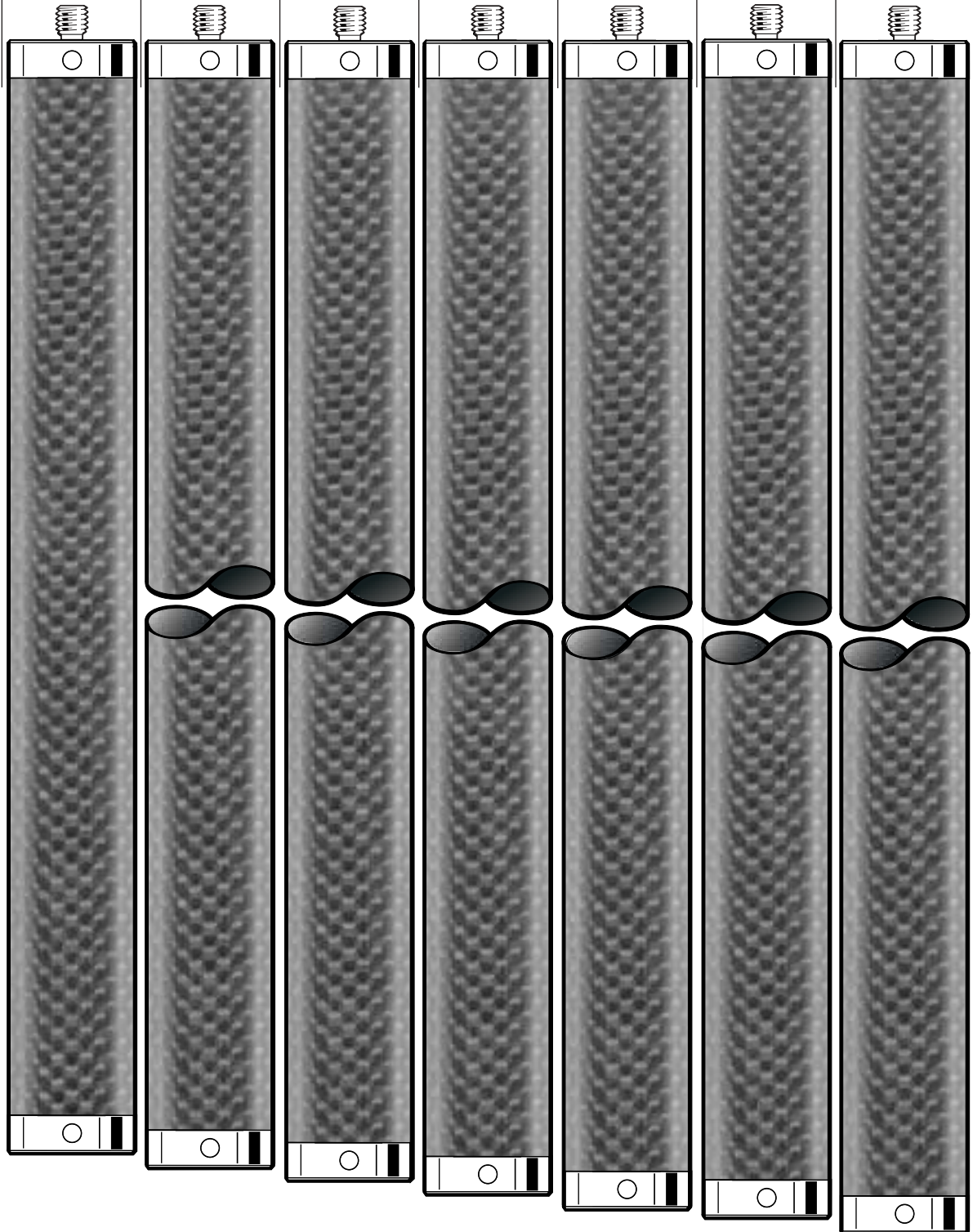
Stylus extensions – carbon fibre stems, titanium ends (stem dia. 20 mm)

Part number	A-5003-4993	A-5003-4994	A-5003-4995	A-5003-4996	A-5003-4997	A-5003-4998	A-5003-4999
Length mm (inch)	40.0 (1.58)	50.0 (1.97)	60.0 (2.37)	80.0 (3.15)	100.0 (3.94)	120.0 (4.73)	150.0 (5.91)
Stem dia. mm (inch)	20.0 (0.79)	20.0 (0.79)	20.0 (0.79)	20.0 (0.79)	20.0 (0.79)	20.0 (0.79)	20.0 (0.79)
Mass grammes	23.8	25.1	26.5	29.3	32.1	34.9	39.0



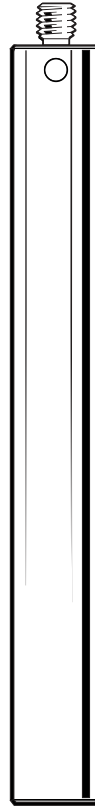
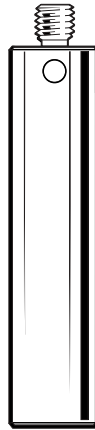
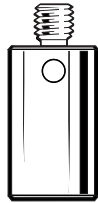
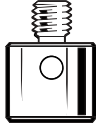
**Stylus extensions – carbon fibre stems, titanium ends (stem dia. 20 mm)**

Part number	A-5003-5000	A-5003-5001	A-5003-5002	A-5003-5003	A-5003-5004	A-5003-5005	A-5003-5006
Length mm (inch)	180.0 (7.09)	200.0 (7.88)	250.0 (9.85)	300.0 (11.82)	400.0 (15.76)	500.0 (19.70)	600.0 (23.64)
Stem dia. mm (inch)	20.0 (0.79)	20.0 (0.79)	20.0 (0.79)	20.0 (0.79)	20.0 (0.79)	20.0 (0.79)	20.0 (0.79)
Mass grammes	43.2	46.0	52.9	59.9	73.8	87.7	101.5



Stylus extensions – stainless steel

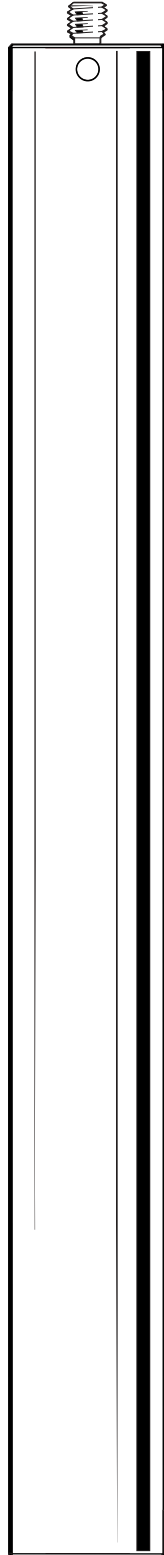
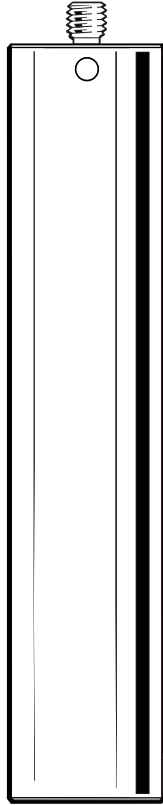
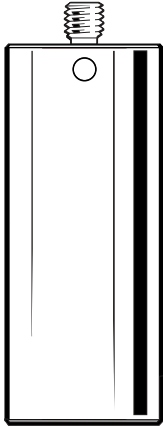
Part number	A-5003-0839	A-5003-0840	A-5003-5282	A-5003-5283	A-5003-0844
Length mm (inch)	10.0 (0.40)	20.0 (0.79)	30.0 (1.19)	50.0 (1.97)	100.0 (3.94)
Stem dia. mm (inch)	11.0 (0.44)	11.0 (0.44)	11.0 (0.44)	11.0 (0.44)	11.0 (0.44)
Mass grammes	6.4	13.2	20.0	34.8	72.9





## Stylus extensions – aluminium

Part number	A-5003-5285	A-5003-0831	A-5003-0833
Length mm (inch)	50.0 (1.97)	100.0 (3.94)	200.0 (7.88)
Stem dia. mm (inch)	20.0 (0.79)	20.0 (0.79)	20.0 (0.79)
Mass grammes	47.2	67.6	110.3



### Disc styli

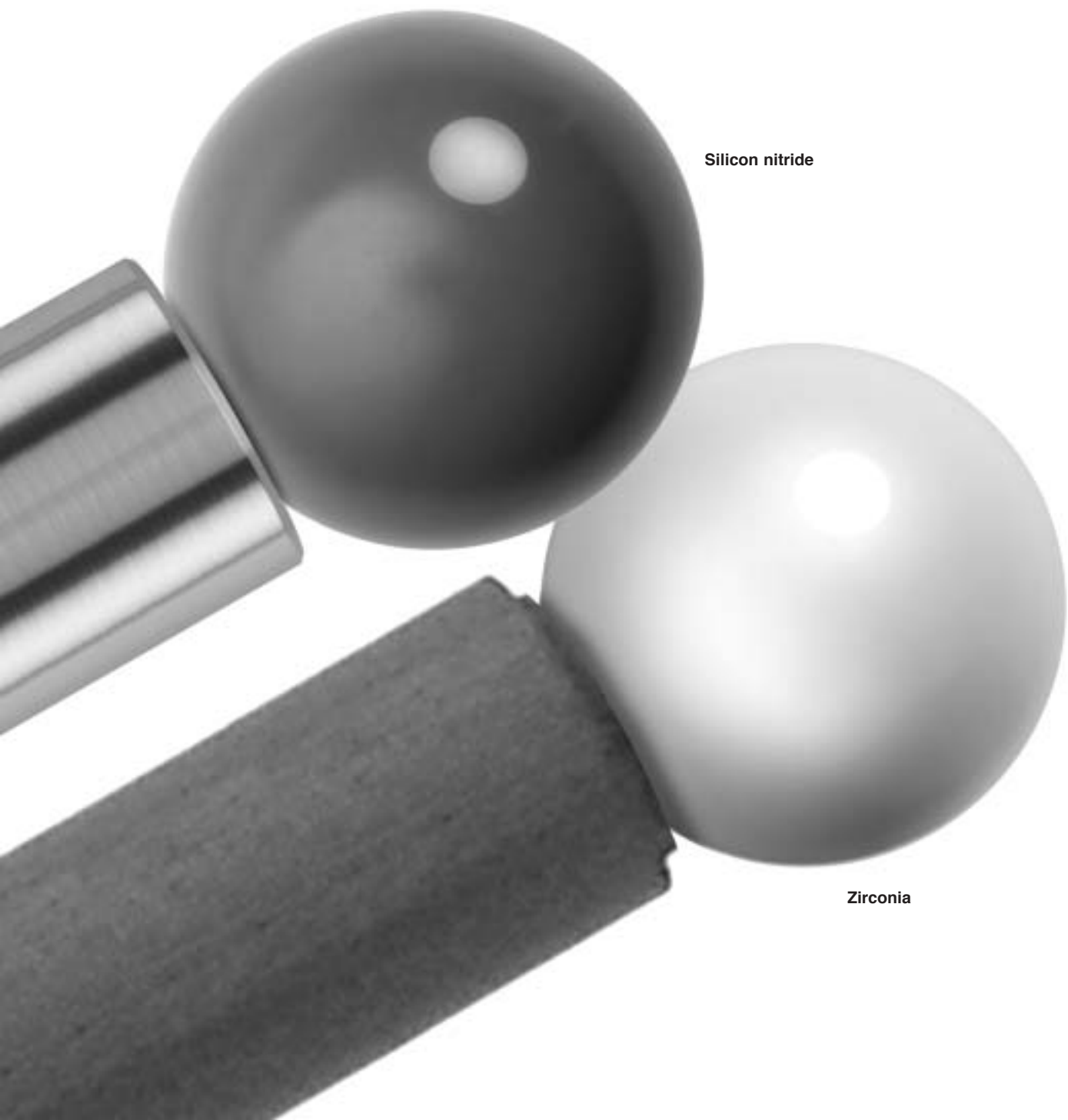
Part number	A-5003-5288	A-5003-5289	A-5003-5290	A-5003-5291
	Silver steel	Silver steel	Silver steel	Silver steel
Disc dia. mm (inch)	12.0 (0.48)	21.0 (0.83)	35.0 (1.38)	63.5 (2.51)
Disc depth mm (inch)	3.0 (0.12)	3.0 (0.12)	5.0 (0.20)	5.0 (0.20)
Roller depth mm (inch)	5.0 (0.20)	5.0 (0.20)	8.0 (0.32)	8.0 (0.32)
Mass grammes	2.52	5.23	14.00	51.00

### Hemispherical styli

Part number	A-5003-5275	A-5003-5276	A-5003-5277
	Ceramic	Ceramic	Ceramic
Ball dia. mm (inch)	16.0 (0.63)	22.0 (0.87)	30.0 (1.19)
Length mm (inch)	19.5 (0.77)	20.5 (0.89)	24.5 (0.97)
Mass grammes	7.0	10.0	15.5

# Specialist ball materials



Silicon nitride

Zirconia

## Styli and accessories

Contact scanning applications involve sliding a hard stylus ball over various surface materials to collect measurements. In the absence of any suitable lubrication, the form of the stylus ball can be altered through material pick-up from the surface, or through wear. This can result in errors in measurement data.

The extent of this alteration is dependant upon the material properties of both the stylus ball and the surface as well as the contact force, scan distance and how contact is distributed over the surface of the ball.

To date, no single stylus ball material has been found which can resist this phenomenon for all common engineering surfaces, however there are very few applications where ruby is not the best ball material.

There are two such applications where balls manufactured from other materials is recommended.

The first is for heavy duty scanning applications on aluminium. Because the materials attract, a phenomenon known as 'adhesive wear' can occur; this involves the build up of aluminium from the surface on the ball. A better ball material for such applications is silicon nitride.

The second circumstance where ruby may be problematic is once again in heavy duty scanning applications on cast iron. Interaction between the two materials can result in wear of the ruby ball surface. For such applications, Zirconia balls are recommended.

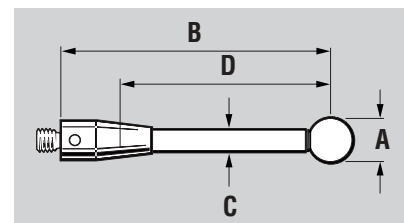
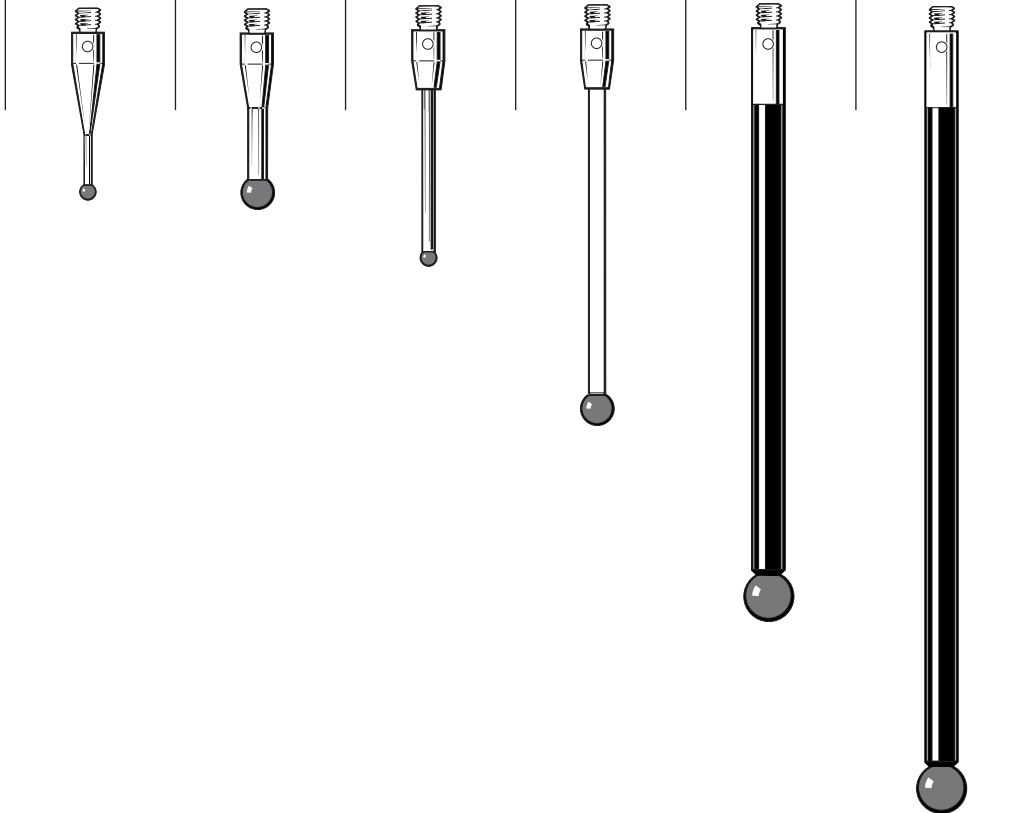


**Silicon nitride** possesses many similar properties to ruby. It is a very hard and wear resistant ceramic which can be machined into very high precision spheres. It can also be polished to an extremely smooth surface finish. Silicon nitride does not have the attraction to aluminium and so does not exhibit the adhesive wear seen with ruby in similar applications. Silicon nitride does, however, show significant 'abrasive wear' characteristics when scanning on steel surfaces, so its applications are best confined to aluminium.

**Zirconia** is a particularly tough ceramic material with hardness and wear characteristics approaching those of ruby. Its surface properties, however, make it an ideal material for aggressive scanning applications on cast iron components.

## Silicon nitride ball styli (M3)

Part number	A-5003-5723	A-5003-5061	A-5003-5724	A-5003-5725	A-5003-5726	A-5003-5727
	Stainless steel	Stainless steel	Tungsten carbide	Ceramic	Carbon fibre	Carbon fibre
Thread size	M3	M3	M3	M3	M3	M3
<b>A</b> Ball dia. mm (inch)	2.0 (0.08)	4.0 (0.16)	2.0 (0.08)	4.0 (0.16)	6.0 (0.24)	6.0 (0.24)
<b>B</b> Length mm (inch)	21.0 (0.83)	21.0 (0.83)	30.0 (1.19)	50.0 (1.97)	75.0 (2.96)	100.0 (3.94)
<b>C</b> Stem dia. mm (inch)	1.4 (0.06)	2.5 (0.10)	1.5 (0.06)	2.0 (0.08)	4.0 (0.16)	4.0 (0.16)
<b>D</b> EWL* mm (inch)	8.0 (0.32)	17.2 (0.68)	22.5 (0.89)	46.0 (1.82)	75.0 (2.96)	100.0 (3.94)
Mass grammes	1.00	1.28	1.32	1.22	2.32	2.81

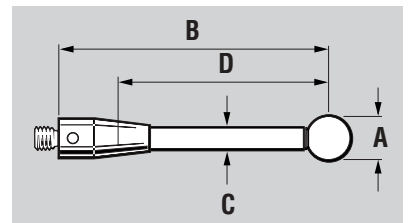
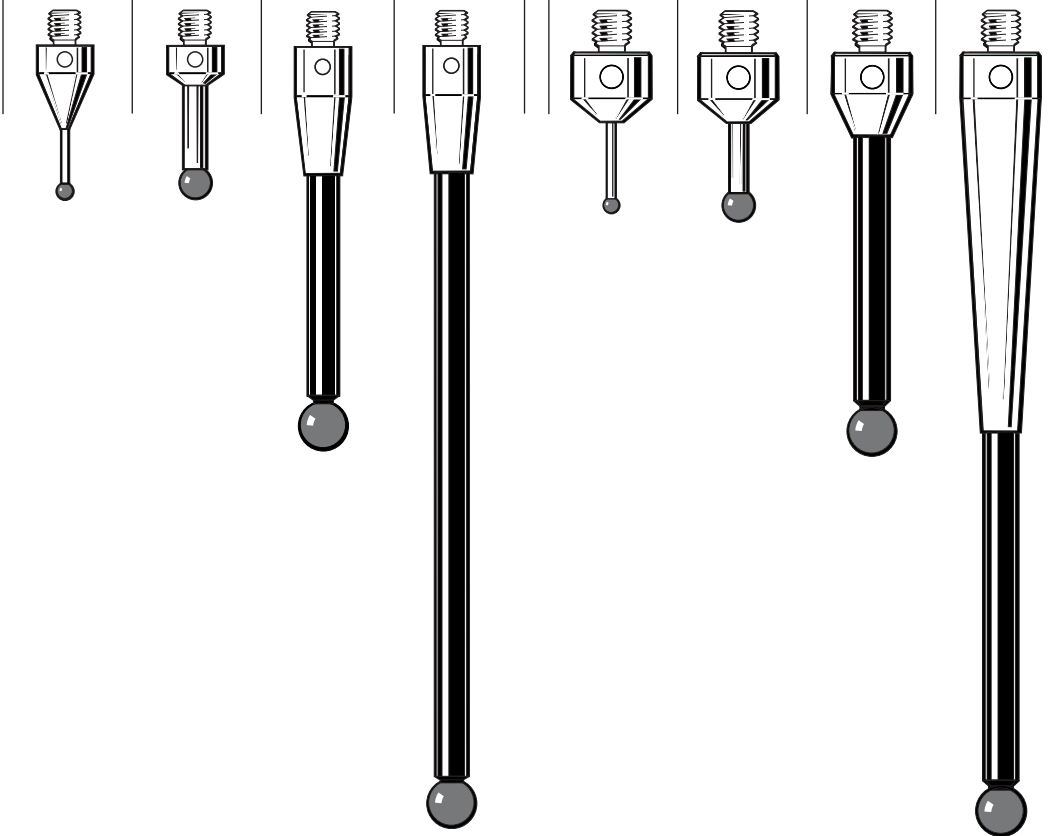


**Silicon nitride** possesses many similar properties to ruby. It is a very hard and wear resistant ceramic which can be machined into very high precision spheres. It can also be polished to an extremely smooth surface finish. **Silicon nitride** does not have the attraction to aluminium and so does not exhibit the adhesive wear seen with ruby in similar applications. **Silicon nitride** does, however, show significant abrasive wear characteristics when scanning on steel surfaces, so its applications are best confined to aluminium.

\*Effective working length

### Silicon nitride ball styli (M4 and M5)

Part number	A-5003-5728	A-5003-5729	A-5003-5730	A-5003-5731	A-5003-5732	A-5003-5733	A-5003-5734	A-5003-5735
	Stainless steel	Stainless steel	Carbon fibre	Carbon fibre	Tungsten carbide	Tungsten carbide	Carbon fibre	Carbon fibre
Thread size	M4	M4	M4	M4	M5	M5	M5	M5
<b>A</b> Ball dia. mm (inch)	2.0 (0.08)	4.0 (0.16)	6.0 (0.24)	6.0 (0.24)	2.0 (0.08)	4.0 (0.16)	6.0 (0.24)	6.0 (0.24)
<b>B</b> Length mm (inch)	19.0 (0.75)	18.0 (0.71)	50.0 (1.97)	100.0 (3.94)	20.0 (0.79)	20.0 (0.79)	50.0 (1.97)	100.0 (3.94)
<b>C</b> Stem dia. mm (inch)	1.4 (0.05)	3.0 (0.12)	4.4 (0.18)	4.4 (0.18)	1.0 (0.04)	2.0 (0.08)	4.0 (0.16)	4.0 (0.16)
<b>D</b> EWL* mm (inch)	8.0 (0.32)	13.0 (0.52)	36.0 (1.42)	86.0 (3.39)	11.0 (0.44)	11.0 (0.44)	39.0 (1.54)	50.0 (1.97)
Mass grammes	2.30	2.08	5.02	6.12	4.70	5.17	6.02	19.58

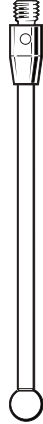


**Silicon nitride** possesses many similar properties to ruby. It is a very hard and wear resistant ceramic which can be machined into very high precision spheres. It can also be polished to an extremely smooth surface finish.

**Silicon nitride** does not have the attraction to aluminium and so does not exhibit the adhesive wear seen with ruby in similar applications. **Silicon nitride** does, however, show significant abrasive wear characteristics when scanning on steel surfaces, so its applications are best confined to aluminium.

## Zirconia ball styli (M3)

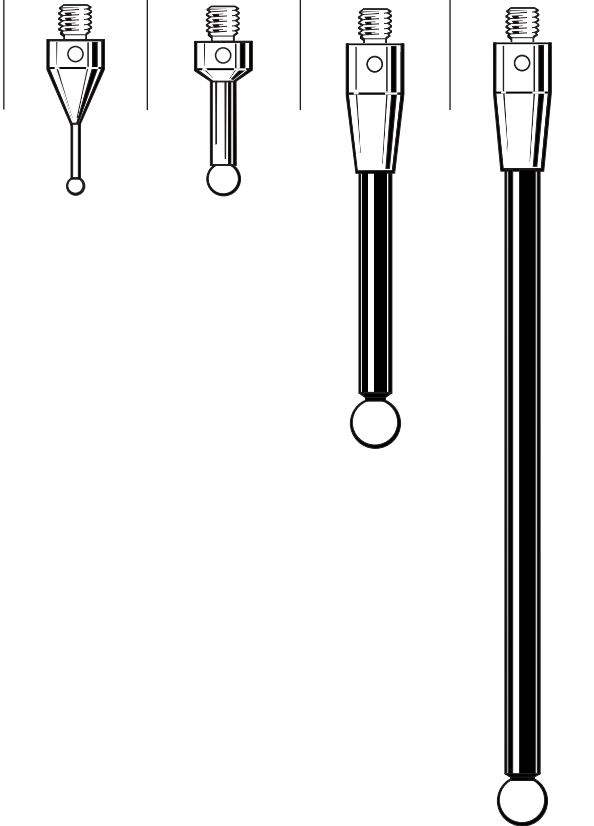
Part number	A-5003-5736	A-5003-5737	A-5003-5738	A-5003-5739	A-5003-5740	A-5003-5741
	Stainless steel	Stainless steel	Tungsten carbide	Ceramic	Carbon fibre	Carbon fibre
Thread size	M3	M3	M3	M3	M3	M3
<b>A</b> Ball dia. mm (inch)	2.0 (0.08)	4.0 (0.16)	2.0 (0.08)	4.0 (0.16)	6.0 (0.24)	6.0 (0.24)
<b>B</b> Length mm (inch)	21.0 (0.83)	21.0 (0.83)	30.0 (1.19)	50.0 (1.97)	75.0 (2.96)	100.0 (3.94)
<b>C</b> Stem dia. mm (inch)	1.4 (0.06)	2.5 (0.10)	1.5 (0.06)	2.0 (0.08)	4.0 (0.16)	4.0 (0.16)
<b>D</b> EWL* mm (inch)	8.0 (0.32)	17.2 (0.68)	22.5 (0.89)	46.0 (1.82)	75.0 (2.96)	100.0 (3.94)
Mass grammes	1.03	1.60	1.35	1.54	3.39	3.88



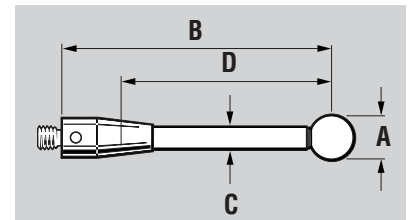
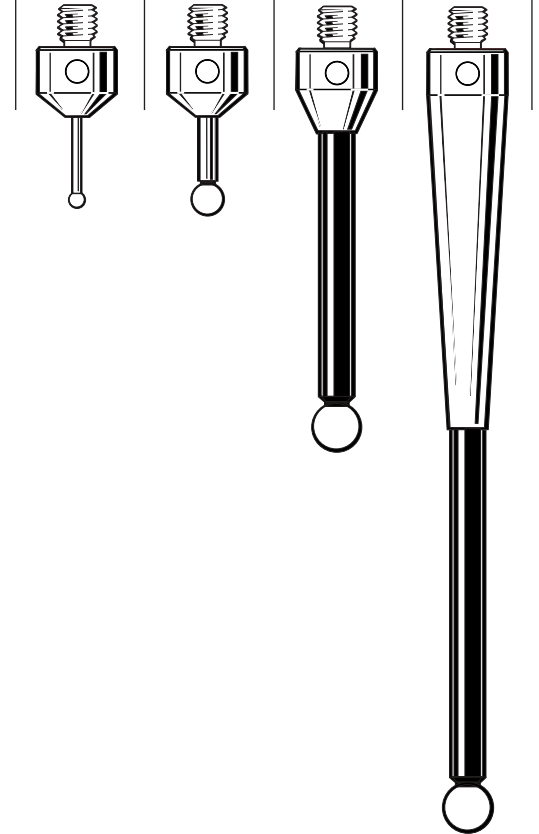
**Zirconia** is a particularly tough ceramic material with hardness and wear characteristics approaching those of ruby. Its surface properties, however, make it an ideal material for aggressive scanning applications on cast iron components.

### Zirconia ball styli (M4 and M5)

Part number	A-5003-5742	A-5003-5743	A-5003-5744	A-5003-5745
	Stainless steel	Stainless steel	Carbon fibre	Carbon fibre
	M4	M4	M4	M4
<b>A</b> Ball dia. mm (inch)	2.0 (0.08)	4.0 (0.16)	6.0 (0.24)	6.0 (0.24)
<b>B</b> Length mm (inch)	19.0 (0.75)	18.0 (0.71)	50.0 (1.97)	100.0 (3.94)
<b>C</b> Stem dia. mm (in.)	1.4 (0.05)	3.0 (0.12)	4.4 (0.18)	4.4 (0.18)
<b>D</b> EWL* mm (inch)	8.0 (0.32)	13.0 (0.52)	36.0 (1.42)	86.0 (3.39)
Mass grammes	2.33	2.40	6.09	7.19



A-5003-5746	A-5003-5747	A-5003-5748	A-5003-5749
Tungsten carbide	Tungsten carbide	Carbon fibre	Carbon fibre
M5	M5	M5	M5
2.0 (0.08)	4.0 (0.16)	6.0 (0.24)	6.0 (0.24)
20.0 (0.79)	20.0 (0.79)	50.0 (1.97)	100.0 (3.94)
1.0 (0.04)	2.0 (0.08)	4.0 (0.16)	4.0 (0.16)
11.0 (0.44)	11.0 (0.44)	39.0 (1.54)	50.0 (1.97)
4.73	5.49	7.09	20.65



**Zirconia** is a particularly tough ceramic material with hardness and wear characteristics approaching those of ruby. Its surface properties, however, make it an ideal material for aggressive scanning applications on cast iron components.




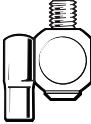


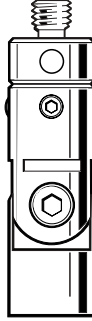
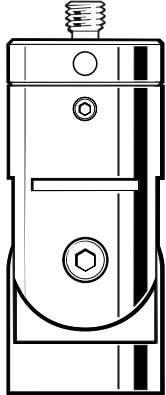


# Accessories

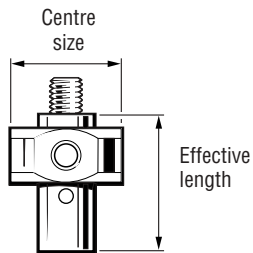





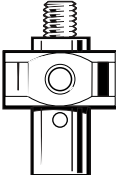
M2 CF stylus tool

### Stylus knuckles






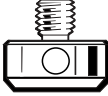
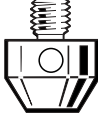

Part number	A-5000-7534	A-5003-4697	A-5000-9902 Rotary	A-5000-7616	A-5003-4686 Rotary	A-5003-4689 Rotary	A-5003-5278 Rotary	A-5003-5279 Rotary
Thread size	M2	M2	M2	M3	M3	M4	M5	M5
Effective length mm (inch)	8.0 (0.32)	13.5 (0.54)	16.5 (0.65)	12.0 (0.48)	17.0 (0.67)	33.0 (1.30)	36.5 (1.44)	46.5 (1.84)
Centre offset mm (inch)	4.5 (0.18)	NA	NA	6.0 (0.24)	NA	NA	NA	NA
Mass grammes	1.6	1.1	1.3	3.7	1.5	9.8	16.5	64.9
								

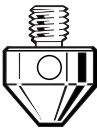
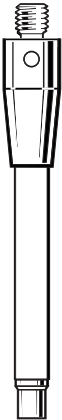

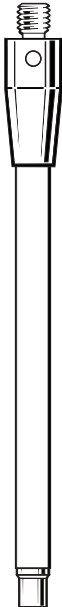
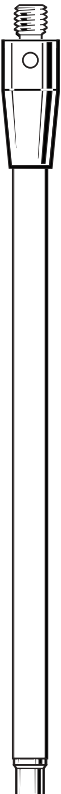

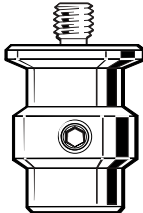
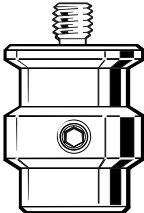
### Stylus centres



Part number	A-5000-8395 4-way	A-5000-3627 5-way	A-5000-7610 5-way	A-5000-7792 5-way
Thread size	M2	M2	M3	M4
Effective length mm (inch)	7.5 (0.30)	8.0 (0.32)	13.0 (0.52)	18.0 (0.71)
Centre size mm (inch)	7.5 (0.30)	7.5 (0.30)	10.0 (0.40)	15.0 (0.60)
Mass grammes	1.1	0.8	2.4	12.1
				

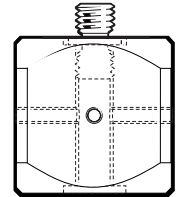
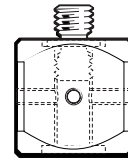
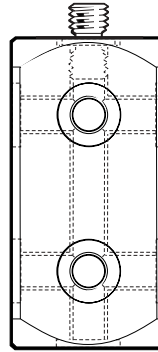
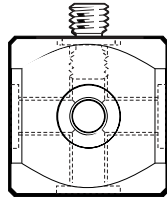
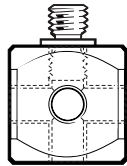
## Adaptors

Part number	M-5000-4164	M-5000-4163	M-5000-6622	M-5000-6714	M-5000-6625	M-5000-9301	A-5003-0856	A-5003-0857
	Stainless steel	Stainless steel	Stainless steel	Stainless steel	Stainless steel	Stainless steel	Stainless steel	Stainless steel
Male/female thread	M2/M3	M3/M2	M4/M2	M4/M3	M4/M3	M5/M4	M5/M4	M5/M3
Length mm (inch)	7.0 (0.28)	5.0 (0.20)	5.0 (0.20)	9.0 (0.36)	20.0 (0.79)	6.5 (0.26)	9.0 (0.36)	10.0 (0.40)
Mass grammes	0.4	0.6	1.5	1.4	3.2	6.0	4.6	5.0
								

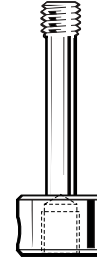
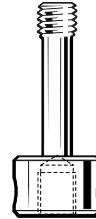
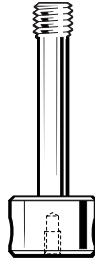
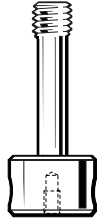
Part number	A-5003-0858	A-5000-7751	M-5000-8167	A-5000-7752	A-5000-7753	A-2054-4657	A-5000-9302	A-5000-9303
	Stainless steel	Ceramic	Stainless steel	Ceramic	Ceramic	Stainless steel	Stainless steel	Stainless steel
Male/female thread	M5/M2	M4/M3	TF6/M3	M4/M3	M4/M3	M4/Ø 4.5	M5/Ø 8.0	M5/Ø 10.0
Length mm (inch)	10.0 (0.40)	50.0 (1.97)	18.0 (0.71)	75.0 (2.96)	100.0 (3.94)	10.0 (0.40)	22.0 (0.87)	22.0 (0.87)
Mass grammes	5.0	4.4	1.9	5.2	6.3	5.0	18.0	20.0
								

Cubes and bolts

Part number	A-5003-5680 Titanium	A-5003-5681 Titanium	A-5003-5682 Titanium	A-5003-5683 Titanium	A-5003-5684 Titanium
Thread size	M5	M5	M5	M5 – M2	M5 – M2
Length mm (inch)	15.0 (0.60)	20.0 (0.79)	20.0 (0.79)	15.0 (0.60)	20.0 (0.79)
Width mm (inch)	15.0 (0.60)	20.0 (0.79)	40.0 (1.58)	15.0 (0.60)	20.0 (0.79)
Mass grammes	12.85	32.55	63.50	13.75	35.18



Part number	A-5003-5679 Stainless steel	A-5003-5678 Stainless steel	A-5003-5677 Stainless steel	A-5003-5676 Stainless steel
Thread size	M5 – M2	M5 – M2	M5	M5
Length mm (inch)	28.0 (1.11)	33.0 (1.30)	28.0 (1.11)	33.0 (1.30)
Mass grammes	6.7	7.1	6.0	6.4

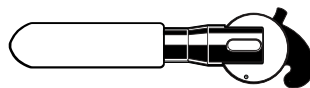


Styli tools

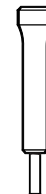
**M-5000-3540**  
For M2 and M3 threaded styli



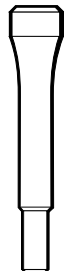
**A-5003-2300**  
For the M2 carbon fibre range of styli



**M-5000-3707**  
For M4 threaded styli



**M-5000-9304**  
For M5 threaded styli



These tools are designed to fit styli to Renishaw probes without causing internal damage

**M2 comprehensive styli kit**

A-5000-0001



Stylus type	Length mm (inch)	Diameter mm (inch)	Quantity	Part number
Ball	10.0 (0.40)	3.0 (0.12)	5	A-5000-3604
Ball	10.0 (0.40)	0.5 (0.02)	2	A-5000-7805
Ball	10.0 (0.40)	4.0 (0.16)	3	A-5000-4154
Ball	10.0 (0.40)	5.0 (0.20)	2	A-5000-4155
Ball	10.0 (0.40)	6.0 (0.24)	2	A-5000-4156
Ball	11.0 (0.44)	8.0 (0.32)	1	A-5000-4158
Ball	20.0 (0.79)	3.0 (0.12)	3	A-5000-4160
Ball	20.0 (0.79)	4.0 (0.16)	3	A-5000-4161
Cylinder	11.0 (0.44)	1.5 (0.06)	1	M-5000-4152
Cylinder	13.0 (0.52)	3.0 (0.12)	1	M-5000-4153
Ball	20.0 (0.79)	2.0 (0.08)	5	A-5000-3603
Pointer	15.0 (0.60)	30 DEG	1	M-5000-4150
Ceramic ball	11.0 (0.44)	18.0 (0.71)	1	A-5000-3614
Ball	20.0 (0.79)	1.0 (0.04)	1	A-5000-7808
Ball	10.0 (0.40)	1.5 (0.06)	1	A-5000-7802
Ball	10.0 (0.40)	2.5 (0.10)	1	A-5000-7803
Ball	20.0 (0.79)	2.5 (0.10)	2	A-5000-7804
Star	10.0 (0.40)	1.0 (0.04)	1	A-5000-7811
Ball	10.0 (0.40)	0.3 (0.012)	1	A-5000-7800
Disc	10.0 (0.40)	6.0 (0.24)	1	A-5000-3611
Ball	10.0 (0.40)	0.7 (0.03)	1	A-5000-7801
Disc	7.5 (0.30)	18.0 (0.71)	1	A-5000-7809
Disc	7.5 (0.30)	25.0 (0.99)	1	A-5000-7810
Cylinder	20.0 (0.79)	2.0 (0.08)	1	A-5000-7812
Pointer	10.0 (0.40)	0.1 RADIUS	1	A-5000-7813
Star	30.0 (1.19)	2.0 (0.08)	1	A-5000-3626
Ball	10.0 (0.04)	2.0 (0.08)	3	A-5000-7807
Ball	10.0 (0.04)	1.0 (0.04)	2	A-5000-7806
Star	20.0 (0.79)	2.0 (0.08)	1	A-5000-7629
M2/M3 adaptor	7.0 (0.28)	-	1	M-5000-4164
5 way centre	8.0 (0.32)	-	1	A-5000-3627
Extension	40.0 (1.58)	3.0 (0.12)	2	M-5000-7779
Extension	10.0 (0.40)	3.0 (0.12)	3	M-5000-3647
Extension	20.0 (0.79)	3.0 (0.12)	2	M-5000-3648
Extension	30.0 (1.19)	3.0 (0.12)	2	M-5000-4162
Extension	5.0 (0.20)	3.0 (0.12)	4	M-5000-7634
Knuckle	8.0 (0.32)	-	1	A-5000-7534
Tool kit	-	-	1	-

**M2 enhancement styli kit**

A-5000-0002



Stylus type	Length mm (inch)	Diameter mm (inch)	Quantity	Part number
Ball	10.0 (0.40)	2.0 (0.08)	1	A-5000-7807
Ball	10.0 (0.40)	1.0 (0.04)	1	A-5000-7806
Ball	10.0 (0.40)	0.5 (0.02)	1	A-5000-7805
Ball	20.0 (0.79)	1.0 (0.04)	1	A-5000-7808
Disc	7.5 (0.30)	18.0 (0.71)	1	A-5000-7809
Disc	7.4 (0.30)	25.0 (0.99)	1	A-5000-7810
Ball	10.0 (0.40)	0.3 (0.012)	1	A-5000-7800
Ball	10.0 (0.40)	0.7 (0.03)	1	A-5000-7801
Ball	10.0 (0.40)	1.5 (0.06)	1	A-5000-7802
Ball	10.0 (0.40)	2.5 (0.10)	1	A-5000-7803
Ball	20.0 (0.79)	2.5 (0.10)	2	A-5000-7804
Star	10.0 (0.40)	1.0 (0.04)	1	A-5000-7811
Cylinder	20.0 (0.79)	2.0 (0.08)	1	A-5000-7812
Pointer	10.0 (0.40)	0.1 RADIUS	1	A-5000-7813
Extension	40.0 (1.58)	3.0 (0.12)	1	M-5000-7779
Tool	-	-	2	M-5000-3540
Tool	-	-	1	-

**M2 high performance styli kit**

A-5003-2310



Stylus type	Length mm (inch)	Diameter mm (inch)	Quantity	Part number
Ball	50.5 (1.99)	4.0 (0.16)	1	A-5003-2285
Ball	50.5 (1.99)	5.0 (0.20)	1	A-5003-2286
Ball	50.5 (1.99)	6.0 (0.24)	1	A-5003-2287
Extension	40.0 (1.58)	3.0 (0.12)	1	A-5003-2280
Extension	50.0 (1.97)	3.0 (0.12)	1	A-5003-2281
Extension	70.0 (2.76)	3.0 (0.12)	1	A-5003-2282
Extension	90.0 (3.55)	3.0 (0.12)	1	A-5003-2283
CF styli tool	-	-	2	A-5003-2300
M2 styli tool	-	-	2	M-5000-3540

**M4 styli kit (TP7M use)**

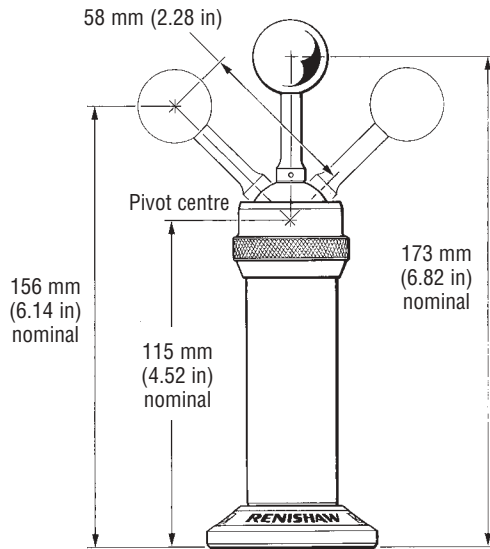
A-5000-7829



Stylus type	Length mm (inch)	Diameter mm (inch)	Quantity	Part number
<b>Ceramic ball</b>	17.0 (0.67)	30.0 (1.19)	1	<b>A-5000-7814</b>
<b>Ball</b>	19.5 (0.77)	1.0 (0.04)	1	<b>A-5000-7545</b>
<b>Ball</b>	19.0 (0.75)	2.0 (0.08)	4	<b>A-5000-7547</b>
<b>Ball</b>	18.0 (0.71)	4.0 (0.16)	1	<b>A-5000-7551</b>
<b>Ball</b>	50.0 (1.97)	8.0 (0.32)	1	<b>A-5000-7795</b>
<b>Ball</b>	100.0 (3.94)	8.0 (0.32)	1	<b>A-5000-7796</b>
<b>Extension</b>	30.0 (1.19)	7.4 (0.30)	1	<b>A-5000-7754</b>
<b>Extension</b>	50.0 (1.97)	7.4 (0.30)	1	<b>A-5000-7755</b>
<b>Extension</b>	20.0 (0.79)	–	1	<b>M-5000-6625</b>
<b>M4/M3 adaptor</b>	50.0 (1.97)	–	1	<b>A-5000-7751</b>
<b>M4/M3 adaptor</b>	75.0 (2.96)	–	1	<b>A-5000-7752</b>
<b>M4/M3 adaptor</b>	100.0 (3.94)	–	1	<b>A-5000-7753</b>
<b>M4 5 way centre</b>	18.0 (0.71)	–	1	<b>A-5000-7792</b>
<b>M3 5 way centre</b>	13.0 (0.52)	–	1	<b>A-5000-7610</b>
<b>M2 5 way centre</b>	8.0 (0.32)	–	1	<b>A-5000-3627</b>
<b>M3/M2 adaptor</b>	5.0 (0.20)	–	5	<b>M-5000-4163</b>
<b>M4/M3 adaptor</b>	9.0 (0.36)	–	2	<b>M-5000-6714</b>
<b>Tool</b>	–	–	2	<b>M-5000-3540</b>
<b>Tool</b>	–	–	2	<b>M-5000-3707</b>

## Datum balls

Each datum sphere is made from hard wearing tungsten carbide and is supplied with its own certificate, giving ball diameter and roundness. All sphere measurements are performed on equipment traceable to UK (NPL) standards.



### Datum sphere kit

	Kit part number
Ø12 mm Datum Ball	A-1034-0028
Ø19 mm Datum Ball	A-1034-0027
Ø25 mm Datum Ball	A-1034-0026
Ø3/4 in Datum Ball	A-1034-0031
Ø1 in Datum Ball	A-1034-0035

**Fixing Stud – a fixing stud is required with each kit to attach pillar to table surface.**

Thread size	Part number
M6 x 1	M-1034-0016
M8 x 1.25	M-1034-0015
M10 x 1.5	M-1034-0014
5/16 in x UNC	M-1034-0018
3/8 in x UNC	M-1034-0017

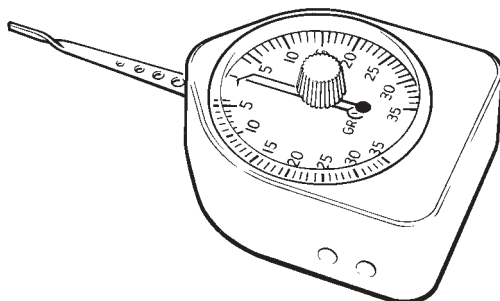
### Optional extras

Datum ball	Part number
Ø12 mm Datum Ball	A-1034-0005
Ø19 mm Datum Ball	A-1034-0023
Ø25 mm Datum Ball	A-1034-0002
Ø3/4 in Datum Ball	A-1034-0032
Ø1 in Datum Ball	A-1034-0036

Adaptors/extension	Part number
2 Way Adaptor	M-1034-0042
3 Way Adaptor	M-1034-0052
Pillar Extension 75mm (2.96 in) long	M-1034-0019

## Gramme gauge

The gramme gauge allows the optimum trigger force to be set to maximise probe performance on all standard Renishaw touch trigger probes.



Part number	P-GA01-0001
Overall length	95 mm
Needle length	41 mm
Depth	27 mm
Width	43 mm
Range	4 TO 35 gramme range With 1 gramme gradutions



# Product listing by part number



## Styli and accessories

Part no.	PS no.	Description	Section no.	Thread	Component	Ball/tip size (mm)	Ball/tip material	Length (mm)	Stem material	EWL (mm)	Mass (g)
A-1034-0002	–	DATUM BALL D25	8.7	–	Accessory	25.0	Tungsten carbide	–	–	–	–
A-1034-0005	–	DATUM BALL D12	8.7	–	Accessory	12.0	Tungsten carbide	–	–	–	–
A-1034-0023	–	DATUM BALL D19	8.7	–	Accessory	19.0	Tungsten carbide	–	–	–	–
A-1034-0026	–	DATUM SPHERE KIT D25	8.7	–	Accessory	25.0	Tungsten carbide	–	–	–	–
A-1034-0027	–	DATUM SPHERE KIT D19	8.7	–	Accessory	19.0	Tungsten carbide	–	–	–	–
A-1034-0028	–	DATUM SPHERE KIT D12	8.7	–	Accessory	12.0	Tungsten carbide	–	–	–	–
A-1034-0031	–	DATUM SPHERE KIT D3/4	8.7	–	Accessory	3/4	Tungsten carbide	–	–	–	–
A-1034-0032	–	DATUM BALL D3/4	8.7	–	Accessory	3/4	Tungsten carbide	–	–	–	–
A-1034-0035	–	DATUM SPHERE KIT D1IN	8.7	–	Accessory	1IN	Tungsten carbide	–	–	–	–
A-1034-0036	–	DATUM BALL D1IN	8.7	–	Accessory	1IN	Tungsten carbide	–	–	–	–
A-2008-0382	–	TS27R TDS L23 TIP12.7X8	5.5	M4	Tool datuming	12.7	Tungsten carbide	23.0	Stainless steel	–	12.1
A-2008-0384	–	TS27R TDS L22 TIP19X19X8	5.5	M4	Tool datuming	19.0	Ceramic	22.0	Stainless steel	–	7.1
A-2008-0389	–	TS27R VERTICAL HOLDER KIT	5.5	M4	Tool datuming	–	–	–	Stainless steel	–	5.19
A-2008-0448	–	TS27R HORIZONTAL ADAPTER KIT	5.5	M4	Tool datuming	–	–	–	Stainless steel	–	8.00
A-2054-4657	SA1	M4-Ø4.5 EXT L10SS	8.2	M4	Extension	–	–	10.0	Stainless steel	–	5.0
A-5000-0001	–	M2 KIT COMPREHENSIVE	8.4	–	Accessory	–	–	–	–	–	–
A-5000-0002	–	M2 KIT ENHANCEMENT	8.5	–	Accessory	–	–	–	–	–	–
A-5000-3212	PS1-13	MP4 TDS L53 TIP6X6X6	5.5	M4	Tool datuming	6.0	Tungsten carbide	53.0	Stainless steel	–	4.5
A-5000-3551	PS1-9R	M3 STY D1R L21 EWL4 d0.6SS	4.1	M3	Ball stylus	1.0	Ruby	21.0	Stainless steel	4.0	1.0
A-5000-3552	PS1-10R	M3 STY D2R L21 EWL8 d1.4SS	4.1	M3	Ball stylus	2.0	Ruby	21.0	Stainless steel	8.0	1.0
A-5000-3553	PS1-11R	M3 STY D3R L21 EWL12 d1.5SS	4.1	M3	Ball stylus	3.0	Ruby	21.0	Stainless steel	12.0	1.0
A-5000-3554	PS1-1R	M3 STY D4R L31 EWL27 d2.5SS	4.1	M3	Ball stylus	4.0	Ruby	31.0	Stainless steel	27.0	2.5
A-5000-3603	PS2R	M2 STY D2R L20 EWL14 d1.4SS	3.1	M2	Ball stylus	2.0	Ruby	20.0	Stainless steel	14.0	0.4
A-5000-3604	PS1R	M2 STY D3R L10 EWL7.5 d1.5SS	3.1	M2	Ball stylus	3.0	Ruby	10.0	Stainless steel	7.5	0.4
A-5000-3609	–	M2 STC D2R L16.5 EWL12 d1.4SS	3.5	M2	Star centre	2.0	Ruby	16.5	Stainless steel	12.0	0.44
A-5000-3611	PS3R	M2 DSC D6R T1.2 L10 BR-Y2	3.5	M2	Disc	6.0	Ruby	10.0	Stainless steel	1.2	0.6
A-5000-3613	PS4R	M2 DSC D18SLVS T2.2 L2.6 BR-Y3	3.5	M2	Disc	18.0	Silver steel	2.6	Stainless steel	2.2	2.7
A-5000-3614	PS21R	M2 HEM D18CE	3.7	M2	Hemispherical	18.0	Ceramic	11.0	Stainless steel	–	3.3
A-5000-3615	PS1-3R	M3 DSC D12.7SLVS T2 L30.8 BR-N	4.5	M3	Disc	12.7	Silver steel	30.8	Stainless steel	2.0	4.0
A-5000-3626	PS7R	M2 STR D2 5BALL L19.2 S30	3.4	M2	Star	2.0	Ruby	19.2	Stainless steel	12.0	1.8
A-5000-3627	SC2	M2 ACC CENTRE 5WAY	8.1	M2	Accessory	–	–	8.0	Stainless steel	–	0.8
A-5000-3709	PS3-1C	M4 STY D6R L50 EWL36 d4.5CE	5.2	M4	Ball stylus	6.0	Ruby	50.0	Ceramic	36.0	4.8
A-5000-3712	PS3-2C	M4 STY D6R L100 EWL86 d4.5CE	5.3	M4	Ball stylus	6.0	Ruby	100.0	Ceramic	86.0	6.4
A-5000-4154	PS12R	M2 STY D4R L10 EWL10 d1.5SS	3.1	M2	Ball stylus	4.0	Ruby	10.0	Stainless steel	10.0	0.4
A-5000-4155	PS13R	M2 STY D5R L10 EWL10 d2.5SS	3.1	M2	Ball stylus	5.0	Ruby	10.0	Stainless steel	10.0	0.7
A-5000-4156	PS14R	M2 STY D6R L10 EWL10 d2.5SS	3.1	M2	Ball stylus	6.0	Ruby	10.0	Stainless steel	10.0	0.9
A-5000-4158	PS15R	M2 STY D8R L11 EWL11 d2.5SS	3.1	M2	Ball stylus	8.0	Ruby	11.0	Stainless steel	11.0	1.5
A-5000-4160	PS16R	M2 STY D3R L20 EWL17.5 d1.5SS	3.1	M2	Ball stylus	3.0	Ruby	20.0	Stainless steel	17.5	0.5
A-5000-4161	PS17R	M2 STY D4R L20 EWL20 d1.5SS	3.1	M2	Ball stylus	4.0	Ruby	20.0	Stainless steel	20.0	0.6
A-5000-4187	PS22R	M2 DSC D25SLVS T3 L2.5 BR-N	3.5	M2	Disc	25.0	Silver steel	2.5	Stainless steel	3.0	3.8
A-5000-6352	PS2-23R	M4 STY D5R L30 EWL26 d3SS	5.1	M4	Ball stylus	5.0	Ruby	30.0	Stainless steel	26.0	3.0
A-5000-6403	PS2-41	M4 TDS L32.5 TIP9.3X9.3X3 LP2	5.5	M4	Tool datuming	9.3	Tungsten carbide	32.5	Stainless steel	–	11.0
A-5000-6462	PS3-5C	M4 STC D6R L100 EWL86 d4.5CE	5.4	M4	Star centre	6.0	Ruby	100.0	Ceramic	86.0	7.5
A-5000-6701	PS1-14	MP4 TDS L43 TIP6X6X6	5.5	M4	Tool datuming	6.0	Tungsten carbide	43.0	Stainless steel	–	4.3
A-5000-6713	PS2-40	M4 TDS L96.5 TIP10x10x5 MP6-3	5.5	M4	Tool datuming	10.0	Tungsten carbide	96.5	Carbon fibre	–	21.9
A-5000-6731	PS2-22R	M4 STY D5R L20 EWL16 d3SS	5.1	M4	Ball stylus	5.0	Ruby	20.0	Stainless steel	16.0	2.4
A-5000-7098	PS3-4C	M4 STC D6R L50 EWL36 d4.5CE	5.4	M4	Star centre	6.0	Ruby	50.0	Ceramic	36.0	6.0
A-5000-7521	PS3-1R	M4 STY D5R L50 EWL35 d4.5SS	5.2	M4	Ball stylus	5.0	Ruby	50.0	Stainless steel	35.0	5.8
A-5000-7522	PS3-2R	M4 STY D5R L100 EWL85 d4.5SS	5.3	M4	Ball stylus	5.0	Ruby	100.0	Stainless steel	85.0	11.3
A-5000-7534	SK2	M2 ACC KNUCKLE OFFSET	8.1	M2	Accessory	–	–	8.0	Stainless steel	–	1.6
A-5000-7545	PS2-3R	M4 STY D1R L19.5 EWL4 d0.7SS	5.1	M4	Ball stylus	1.0	Ruby	19.5	Stainless steel	4.0	2.5
A-5000-7547	PS2-4R	M4 STY D2R L19 EWL8 d1.4SS	5.1	M4	Ball stylus	2.0	Ruby	19.0	Stainless steel	8.0	2.3
A-5000-7549	PS2-5R	M4 STY D3R L18.5 EWL13 d2SS	5.1	M4	Ball stylus	3.0	Ruby	18.5	Stainless steel	13.0	2.0
A-5000-7551	PS2-6R	M4 STY D4R L18 EWL13 d3SS	5.1	M4	Ball stylus	4.0	Ruby	18.0	Stainless steel	13.0	2.1
A-5000-7553	PS2-7R	M4 STY D5R L18 EWL13.5 d3.5SS	5.1	M4	Ball stylus	5.0	Ruby	18.0	Stainless steel	13.5	2.3
A-5000-7555	PS2-8R	M4 STY D6R L17.5 EWL13.5 d4.5SS	5.1	M4	Ball stylus	6.0	Ruby	17.5	Stainless steel	13.5	3.0
A-5000-7557	PS2-9R	M4 STY D8R L16 EWL16 d6SS	5.1	M4	Ball stylus	8.0	Ruby	16.0	Stainless steel	16.0	3.9
A-5000-7596	PS2-12R	M4 DSC D30SLVS T2.2 L8.9 BR-Y3	5.4	M4	Disc	30.0	Silver steel	8.9	Stainless steel	2.2	8.01
A-5000-7597	PS2-13R	M4 DSC D35SLVS T2.2 L8.9 BR-Y3	5.4	M4	Disc	35.0	Silver steel	8.9	Stainless steel	2.2	9.57
A-5000-7598	PS2-14R	M4 DSC D50SLVS T3 L8.9 BR-Y4	5.4	M4	Disc	50.0	Silver steel	8.9	Stainless steel	3.0	13.55

Part no.	PS no.	Description	Section no.	Thread	Component	Ball/tip size (mm)	Ball/tip material	Length (mm)	Stem material	EWL (mm)	Mass (g)
A-5000-7606	PS1-12R	M3 STY D4R L21 EWL17.2 d2.5SS	4.1	M3	Ball stylus	4.0	Ruby	21.0	Stainless steel	17.2	1.3
A-5000-7610	SC4	M3 ACC CENTRE 5WAY	8.1	M3	Accessory	–	–	13.0	Stainless steel	–	2.4
A-5000-7612	PS1-5R	M3 DSC D35SLVS T5 L3.5 BR-N	4.5	M3	Disc	35.0	Silver steel	3.5	Stainless steel	5.0	10.0
A-5000-7616	SK3	M3 ACC KNUCKLE OFFSET	8.1	M3	Accessory	–	–	12.0	Stainless steel	–	3.7
A-5000-7629	PS6R	M2 STR D2 5BALL L19.2 S20	3.4	M2	Star	2.0	Ruby	19.2	Stainless steel	12.0	1.3
A-5000-7630	PS1-13R	M3 STY D5R L21 EWL21 d2.5SS	4.1	M3	Ball stylus	5.0	Ruby	21.0	Stainless steel	21.0	1.5
A-5000-7632	PS1-8R	M3 STY D0.5R L21 EWL2 d0.4TC	4.1	M3	Ball stylus	0.5	Ruby	21.0	Tungsten carbide	2.0	1.0
A-5000-7648	PS1-14R	M3 STY D5R L31 EWL31 d3.5SS	4.1	M3	Ball stylus	5.0	Ruby	31.0	Stainless steel	31.0	3.0
A-5000-7669	PS1-15R	M3 DSC D63.5CS T6 L4 BR-N	4.5	M3	Disc	63.5	Carbon steel	4.0	Stainless steel	6.0	45.0
A-5000-7676	–	M4 DIGITISING KIT METRIC	5.6	M3	Accessory	–	–	–	–	–	–
A-5000-7677	–	M4 DIGITISING KIT IMPERIAL	5.7	M4	Accessory	–	–	–	–	–	–
A-5000-7710	–	M4 HEM D5/16AL d8SS	5.7	M4	Hemispherical	5/16	Aluminium	10.5	Stainless steel	–	3.4
A-5000-7711	–	M4 HEM D3/8AL d8SS	5.7	M4	Hemispherical	3/8	Aluminium	10.5	Stainless steel	–	3.8
A-5000-7712	–	M4 HEM D1/2AL d8SS	5.7	M4	Hemispherical	1/2	Aluminium	10.5	Stainless steel	–	4.9
A-5000-7713	–	M4 HEM D5/8AL d8SS	5.7	M4	Hemispherical	5/8	Aluminium	11.5	Stainless steel	–	7.1
A-5000-7714	–	M4 HEM D3/4AL d8SS	5.7	M4	Hemispherical	3/4	Aluminium	11.5	Stainless steel	–	9.9
A-5000-7715	–	M4 HEM D11NAL d8SS	5.7	M4	Hemispherical	11N	Aluminium	12.5	Stainless steel	–	19.6
A-5000-7718	–	M4 HEM D8AL d8SS	5.6	M4	Hemispherical	8.0	Aluminium	10.5	Stainless steel	–	3.4
A-5000-7719	–	M4 HEM D10AL d8SS	5.6	M4	Hemispherical	10.0	Aluminium	10.5	Stainless steel	–	3.9
A-5000-7720	–	M4 HEM D12AL d8SS	5.6	M4	Hemispherical	12.0	Aluminium	10.5	Stainless steel	–	4.6
A-5000-7721	–	M4 HEM D16AL d8SS	5.6	M4	Hemispherical	16.0	Aluminium	11.5	Stainless steel	–	7.2
A-5000-7722	–	M4 HEM D20AL d8SS	5.6	M4	Hemispherical	20.0	Aluminium	11.5	Stainless steel	–	10.9
A-5000-7723	–	M4 HEM D25AL d8SS	5.7	M4	Hemispherical	25.0	Aluminium	12.5	Stainless steel	–	18.7
A-5000-7724	–	M4 HEM D32AL d8SS	5.7	M4	Hemispherical	32.0	Aluminium	9.5	Stainless steel	–	19.6
A-5000-7725	–	M4 HEM D38AL d8SS	5.7	M4	Hemispherical	38.0	Aluminium	9.5	Stainless steel	–	28.5
A-5000-7727	SE-30	M4 EXT L100 d7.4CE	5.6	M4	Extension	–	–	100.0	Ceramic	–	10.6
A-5000-7751	SE22	M4-M3 EXT L50CE	8.2	M4	Extension	–	–	50.0	Ceramic	–	4.4
A-5000-7752	SE23	M4-M3 EXT L75CE	8.2	M4	Extension	–	–	75.0	Ceramic	–	5.2
A-5000-7753	SE24	M4-M3 EXT L100CE	8.2	M4	Extension	–	–	100.0	Ceramic	–	6.3
A-5000-7754	SE-19	M4 EXT L30 d7.4CE	5.6	M4	Extension	–	–	30.0	Ceramic	–	5.1
A-5000-7755	SE-20	M4 EXT L50 d7.4CE	5.6	M4	Extension	–	–	50.0	Ceramic	–	6.7
A-5000-7792	SC5	M4 ACC CENTRE 5WAY	8.1	M4	Accessory	–	–	18.0	Stainless steel	–	12.1
A-5000-7795	PS3-6C	M4 STY D8R L50 EWL50 d4.5CE	5.2	M4	Ball stylus	8.0	Ruby	50.0	Ceramic	50.0	5.4
A-5000-7796	PS3-7C	M4 STY D8R L100 EWL100 d4.5CE	5.3	M4	Ball stylus	8.0	Ruby	100.0	Ceramic	100.0	7.0
A-5000-7800	PS29R	M2 STY D0.3R L10 EWL2 d0.2TC	3.1	M2	Ball stylus	0.3	Ruby	10.0	Tungsten carbide	2.0	0.3
A-5000-7801	PS31R	M2 STY D0.7R L10 EWL4 d0.5TC	3.1	M2	Ball stylus	0.7	Ruby	10.0	Tungsten carbide	4.0	0.3
A-5000-7802	PS24R	M2 STY D1.5R L10 EWL4.5 d0.7SS	3.1	M2	Ball stylus	1.5	Ruby	10.0	Stainless steel	4.5	0.3
A-5000-7803	PS26R	M2 STY D2.5R L10 EWL6 d1SS	3.1	M2	Ball stylus	2.5	Ruby	10.0	Stainless steel	6.0	0.3
A-5000-7804	PS27R	M2 STY D2.5R L20 EWL14 d1.4SS	3.1	M2	Ball stylus	2.5	Ruby	20.0	Stainless steel	14.0	0.4
A-5000-7805	PS10R	M2 STY D0.5R L10 EWL3 d0.4TC	3.1	M2	Ball stylus	0.5	Ruby	10.0	Tungsten carbide	3.0	0.3
A-5000-7806	PS9R	M2 STY D1R L10 EWL4.5 d0.7SS	3.1	M2	Ball stylus	1.0	Ruby	10.0	Stainless steel	4.5	0.3
A-5000-7807	PS8R	M2 STY D2R L10 EWL6 d1SS	3.1	M2	Ball stylus	2.0	Ruby	10.0	Stainless steel	6.0	0.3
A-5000-7808	PS23R	M2 STY D1R L20 EWL7 d0.7TC	3.1	M2	Ball stylus	1.0	Ruby	20.0	Tungsten carbide	7.0	0.50
A-5000-7809	PS33R	M2 DSC D18SLVS T1.5 L8.6 BR-Y2.5	3.5	M2	Disc	18.0	Silver steel	8.6	Stainless steel	1.5	3.0
A-5000-7810	PS34R	M2 DSC D25SLVS T1.5 L8.6 BR-Y2.5	3.5	M2	Disc	25.0	Silver steel	8.6	Stainless steel	1.5	4.0
A-5000-7811	PS28R	M2 STR D1 4BALL L7.5T S10	3.4	M2	Star	1.0	Ruby	7.5	Stainless steel	–	0.5
A-5000-7812	PS35R	M2 SPH D2R L20 EWL7.2 SS	3.5	M2	Spherically ended cylinder	2.0	Ruby	20.0	Stainless steel	7.2	0.5
A-5000-7813	PS36R	M2 PNT D1.4TC 30deg L10	3.7	M2	Pointer	1.4	Tungsten carbide	10.0	Stainless steel	–	0.7
A-5000-7814	PS1-16R	M3 HEM D30CE	4.5	M3	Hemispherical	30.0	Ceramic	17.0	Stainless steel	–	18.0
A-5000-7829	–	M4 KIT TP7M USE	8.6	–	Accessory	–	–	–	–	–	–
A-5000-8395	SC6	M2 ACC CENTRE 4WAY	8.1	M2	Accessory	–	–	7.5	Stainless steel	–	1.1
A-5000-8663	PS51R	M2 STY D1R L27 EWL20.5 d0.7TC	3.2	M2	Ball stylus	1.0	Ruby	27.0	Tungsten carbide	20.5	0.40
A-5000-8876	PS44R	M2 SPH D1R L15 EWL8	3.5	M2	Spherically ended cylinder	1.0	Ruby	15.0	Stainless steel	8.0	0.3
A-5000-8877	PS45R	M2 SPH D1.5R L15 EWL8	3.5	M2	Spherically ended cylinder	1.5	Ruby	15.0	Stainless steel	8.0	0.3
A-5000-9302	–	M5-Ø8 EXT L22SS	8.2	M5	Extension	–	–	22.0	Stainless steel	–	18.0
A-5000-9303	–	M5-Ø10 EXT L22SS	8.2	M5	Extension	–	–	22.0	Stainless steel	–	20.0
A-5000-9761	–	M4 STY D5R L100 EWL84 d3.8CE	5.3	M4	Ball stylus	5.0	Ruby	100.0	Ceramic	84.0	6.4
A-5000-9902	–	M2 ACC KNUCKLE ROTARY	8.1	M2	Accessory	–	–	16.5	Stainless steel	–	1.3
A-5003-0033	PS48R	M2 STY D1R L20 EWL12.5 d0.8TC	3.1	M2	Ball stylus	1.0	Ruby	20.0	Tungsten carbide	12.5	0.41
A-5003-0034	PS49R	M2 STY D1.5R L20 EWL12.5 d1TC	3.1	M2	Ball stylus	1.5	Ruby	20.0	Tungsten carbide	12.5	0.50

## Styli and accessories

Part no.	PS no.	Description	Section no.	Thread	Component	Ball/tip size (mm)	Ball/tip material	Length (mm)	Stem material	EWL (mm)	Mass (g)
A-5003-0035	PS52R	M2 STY D1.5R L30 EWL25 d1TC	3.2	M2	Ball stylus	1.5	Ruby	30.0	Tungsten carbide	25.0	0.58
A-5003-0036	PS53R	M2 STY D2R L30 EWL25 d1.5TC	3.2	M2	Ball stylus	2.0	Ruby	30.0	Tungsten carbide	25.0	0.99
A-5003-0037	PS58R	M2 STY D2R L40 EWL35 d1.5TC	3.3	M2	Ball stylus	2.0	Ruby	40.0	Tungsten carbide	35.0	1.29
A-5003-0038	PS54R	M2 STY D2.5R L30 EWL25 d2TC	3.2	M2	Ball stylus	2.5	Ruby	30.0	Tungsten carbide	25.0	1.48
A-5003-0039	PS59R	M2 STY D2.5R L40 EWL35 d2TC	3.3	M2	Ball stylus	2.5	Ruby	40.0	Tungsten carbide	35.0	1.95
A-5003-0040	PS55R	M2 STY D3R L30 EWL25 d2TC	3.2	M2	Ball stylus	3.0	Ruby	30.0	Tungsten carbide	25.0	1.49
A-5003-0041	PS60R	M2 STY D3R L40 EWL35 d2TC	3.3	M2	Ball stylus	3.0	Ruby	40.0	Tungsten carbide	35.0	1.97
A-5003-0042	PS63R	M2 STY D3R L50 EWL42.5 d2TC	3.3	M2	Ball stylus	3.0	Ruby	50.0	Tungsten carbide	42.5	2.44
A-5003-0043	PS56R	M2 STY D4R L30 EWL30 d2TC	3.2	M2	Ball stylus	4.0	Ruby	30.0	Tungsten carbide	30.0	1.57
A-5003-0044	PS61R	M2 STY D4R L40 EWL40 d2TC	3.3	M2	Ball stylus	4.0	Ruby	40.0	Tungsten carbide	40.0	2.04
A-5003-0045	PS64R	M2 STY D4R L50 EWL50 d2TC	3.3	M2	Ball stylus	4.0	Ruby	50.0	Tungsten carbide	50.0	2.52
A-5003-0046	PS50R	M2 STY D5R L20 EWL20 d2.5TC	3.2	M2	Ball stylus	5.0	Ruby	20.0	Tungsten carbide	20.0	1.98
A-5003-0047	PS57R	M2 STY D5R L30 EWL30 d2.5TC	3.2	M2	Ball stylus	5.0	Ruby	30.0	Tungsten carbide	30.0	2.57
A-5003-0048	PS62R	M2 STY D5R L40 EWL40 d2.5TC	3.3	M2	Ball stylus	5.0	Ruby	40.0	Tungsten carbide	40.0	3.17
A-5003-0049	PS65R	M2 STY D5R L50 EWL50 d2.5TC	3.3	M2	Ball stylus	5.0	Ruby	50.0	Tungsten carbide	50.0	3.75
A-5003-0050	PS1-17R	M3 STY D1.5R L21 EWL12.5 d1TC	4.1	M3	Ball stylus	1.5	Ruby	21.0	Tungsten carbide	12.5	0.8
A-5003-0051	PS1-19R	M3 STY D1.5R L30 EWL22.5 d1TC	4.1	M3	Ball stylus	1.5	Ruby	30.0	Tungsten carbide	22.5	0.93
A-5003-0052	PS1-20R	M3 STY D2R L30 EWL22.5 d1.5TC	4.1	M3	Ball stylus	2.0	Ruby	30.0	Tungsten carbide	22.5	1.32
A-5003-0053	PS1-23R	M3 STY D2R L40 EWL32.5 d1.5TC	4.2	M3	Ball stylus	2.0	Ruby	40.0	Tungsten carbide	32.5	1.58
A-5003-0054	PS1-18R	M3 STY D2.5R L21 EWL12.5 d2TC	4.1	M3	Ball stylus	2.5	Ruby	21.0	Tungsten carbide	12.5	1.3
A-5003-0055	PS1-21R	M3 STY D2.5R L30 EWL22.5 d2TC	4.1	M3	Ball stylus	2.5	Ruby	30.0	Tungsten carbide	22.5	1.81
A-5003-0056	PS1-24R	M3 STY D2.5R L40 EWL32.5 d2TC	4.2	M3	Ball stylus	2.5	Ruby	40.0	Tungsten carbide	32.5	2.28
A-5003-0057	PS1-22R	M3 STY D3R L30 EWL22.5 d2TC	4.1	M3	Ball stylus	3.0	Ruby	30.0	Tungsten carbide	22.5	1.83
A-5003-0058	PS1-25R	M3 STY D3R L40 EWL32.5 d2TC	4.2	M3	Ball stylus	3.0	Ruby	40.0	Tungsten carbide	32.5	2.30
A-5003-0059	PS1-28R	M3 STY D3R L50 EWL42.5 d2TC	4.2	M3	Ball stylus	3.0	Ruby	50.0	Tungsten carbide	42.5	2.78
A-5003-0060	PS1-26R	M3 STY D4R L40 EWL36 d2TC	4.2	M3	Ball stylus	4.0	Ruby	40.0	Tungsten carbide	36.0	2.38
A-5003-0061	PS1-29R	M3 STY D4R L50 EWL46 d2TC	4.2	M3	Ball stylus	4.0	Ruby	50.0	Tungsten carbide	46.0	2.85
A-5003-0062	PS1-27R	M3 STY D5R L40 EWL40 d2.5TC	4.2	M3	Ball stylus	5.0	Ruby	40.0	Tungsten carbide	40.0	3.50
A-5003-0063	PS1-30R	M3 STY D5R L50 EWL50 d2.5TC	4.2	M3	Ball stylus	5.0	Ruby	50.0	Tungsten carbide	50.0	4.10
A-5003-0064	PS66R	M2 STY D3R L50 EWL42.5 d2CE	3.3	M2	Ball stylus	3.0	Ruby	50.0	Ceramic	42.5	0.83
A-5003-0065	PS67R	M2 STY D4R L50 EWL46 d2CE	3.3	M2	Ball stylus	4.0	Ruby	50.0	Ceramic	50.0	0.91
A-5003-0066	PS68R	M2 STY D5R L50 EWL50 d2.5CE	3.3	M2	Ball stylus	5.0	Ruby	50.0	Ceramic	50.0	1.31
A-5003-0067	PS1-31R	M3 STY D3R L50 EWL42.5 d2CE	4.2	M3	Ball stylus	3.0	Ruby	50.0	Ceramic	42.5	1.17
A-5003-0068	PS1-32R	M3 STY D4R L50 EWL46 d2CE	4.2	M3	Ball stylus	4.0	Ruby	50.0	Ceramic	46.0	1.24
A-5003-0069	PS1-33R	M3 STY D5R L50 EWL50 d2.5CE	4.2	M3	Ball stylus	5.0	Ruby	50.0	Ceramic	50.0	1.33
A-5003-0070	SE26	M2 EXT L30 d3CE	3.6	M2	Extension	–	–	30.0	Ceramic	–	0.97
A-5003-0071	SE27	M2 EXT L40 d3CE	3.6	M2	Extension	–	–	40.0	Ceramic	–	1.22
A-5003-0072	SE28	M2 EXT L50 d3CE	3.6	M2	Extension	–	–	50.0	Ceramic	–	1.51
A-5003-0073	PS69R	M2 SPH D4R L20 EWL10SS	3.5	M2	Spherically ended cylinder	4.0	Ruby	20.0	Stainless steel	10.0	0.9
A-5003-0074	PS70R	M2 SPH D2TC L40 EWL32	3.6	M2	Spherically ended cylinder	2.0	Tungsten carbide	40.0	Stainless steel	32.0	2.0
A-5003-0075	SE29	M3 EXT L50 d4CE	4.4	M3	Extension	–	–	50.0	Ceramic	–	2.95
A-5003-0076	PS1-34R	M3 STR D2 5BALL L21.5 S30	4.3	M3	Star	2.0	Ruby	21.5	Stainless steel	11.0	2.38
A-5003-0077	PS1-35R	M3 STR D2 5BALL L31.5 S50	4.3	M3	Star	2.0	Ruby	31.5	Stainless steel	11.0	5.25
A-5003-0235	–	M4 STY D5R L50 EWL34 d3.8CE	5.2	M4	Ball stylus	5.0	Ruby	50.0	Ceramic	34.0	5.0
A-5003-0236	–	M4 STY D5R L75 EWL59 d3.8CE	5.2	M4	Ball stylus	5.0	Ruby	75.0	Ceramic	59.0	5.63
A-5003-0470	–	M2 STY D6R L50 EWL50 d2.5CE	3.3	M2	Ball stylus	6.0	Ruby	50.0	Ceramic	50.0	1.49
A-5003-0577	–	M2 STY D0.7R L20 EWL12 d0.5TC	3.1	M2	Ball stylus	0.7	Ruby	20.0	Tungsten carbide	12.0	0.32
A-5003-0831	–	M5 EXT L100 d20AL	6.14	M5	Extension	–	–	100.0	Aluminium	–	67.6
A-5003-0833	–	M5 EXT L200 d20AL	6.14	M5	Extension	–	–	200.0	Aluminium	–	110.3
A-5003-0839	–	M5 EXT L10 d11SS	6.13	M5	Extension	–	–	10.0	Stainless steel	–	6.4
A-5003-0840	–	M5 EXT L20 d11SS	6.13	M5	Extension	–	–	20.0	Stainless steel	–	13.2
A-5003-0844	–	M5 EXT L100 d11SS	6.13	M5	Extension	–	–	100.0	Stainless steel	–	72.9
A-5003-0856	–	M5-M4 EXT L9SS	8.2	M5	Extension	–	–	9.0	Stainless steel	–	4.6
A-5003-0857	–	M5-M3 EXT L10SS	8.2	M5	Extension	–	–	10.0	Stainless steel	–	5.0
A-5003-0858	–	M5-M2 EXT L10SS	8.2	M5	Extension	–	–	10.0	Stainless steel	–	5.0
A-5003-0938	–	M2 STY D3R L20 EWL20 d1.5TC	3.2	M2	Ball stylus	3.0	Ruby	20.0	Tungsten carbide	20.0	0.77
A-5003-1029	–	M2 STY D4R L22 EWL22 d2TC	3.2	M2	Ball stylus	4.0	Ruby	22.0	Tungsten carbide	22.0	1.24
A-5003-1075	–	M4 STY D6R L200 EWL186 d4.5CF	5.3	M4	Ball stylus	6.0	Ruby	200.0	Carbon fibre	186.0	8.7
A-5003-1208	–	M2 SPH D0.3TC L10.2 EWL2.7	3.6	M2	Spherically ended cylinder	0.3	Tungsten carbide	10.2	Stainless steel	2.7	0.3
A-5003-1210	–	M2 SPH D0.5TC L15.3 EWL7.8	3.6	M2	Spherically ended cylinder	0.5	Tungsten carbide	15.3	Stainless steel	7.8	0.3

Part no.	PS no.	Description	Section no.	Thread	Component	Ball/tip size (mm)	Ball/tip material	Length (mm)	Stem material	EWL (mm)	Mass (g)
A-5003-1218	-	M2 SPH D1TC L35.5 EWL29.8	3.6	M2	Spherically ended cylinder	1.0	Tungsten carbide	35.5	Stainless steel	29.8	0.7
A-5003-1219	-	M2 SPH D1.5TC L15.8 EWL8.3	3.6	M2	Spherically ended cylinder	1.5	Tungsten carbide	15.8	Stainless steel	8.3	0.6
A-5003-1228	-	M2 SPH D2TC L16 EWL8.5	3.6	M2	Spherically ended cylinder	2.0	Tungsten carbide	16.0	Stainless steel	8.5	0.8
A-5003-1255	-	M4 STY D6R L150 EWL138.5 d4.4CF	5.3	M4	Ball stylus	6.0	Ruby	150.0	Carbon fibre	138.5	7.5
A-5003-1258	-	M2 SPH D3TC L22.5 EWL22.5	3.6	M2	Spherically ended cylinder	3.0	Tungsten carbide	22.5	Stainless steel	22.5	2.0
A-5003-1325	-	M2 STY D1R L10 EWL4 d0.7TC	3.1	M2	Ball stylus	1.0	Ruby	10.0	Tungsten carbide	4.0	0.3
A-5003-1345	-	M2 STY D0.5R L20 EWL7 d0.3TC	3.1	M2	Ball stylus	0.5	Ruby	20.0	Tungsten carbide	7.0	0.48
A-5003-1358	-	M4 STY D6R L100 EWL86 d4.4CF	5.3	M4	Ball stylus	6.0	Ruby	100.0	Carbon fibre	86.0	6.2
A-5003-1370	-	M2 STY D4R L30 EWL30 d2CE	3.2	M2	Ball stylus	4.0	Ruby	30.0	Ceramic	30.0	0.68
A-5003-1436	-	M4 STY D6R L50 EWL36 d4.4CF	5.2	M4	Ball stylus	6.0	Ruby	50.0	Carbon fibre	36.0	4.1
A-5003-1896	-	M2 STY D2.5R L20 EWL15.5 d1TC	3.2	M2	Ball stylus	2.5	Ruby	20.0	Tungsten carbide	15.5	0.5
A-5003-2280	-	M2 EXT L40 d3CF	3.7	M2	Extension	-	-	40.0	Carbon fibre	-	0.9
A-5003-2281	-	M2 EXT L50 d3CF	3.7	M2	Extension	-	-	50.0	Carbon fibre	-	1.0
A-5003-2282	-	M2 EXT L70 d3CF	3.7	M2	Extension	-	-	70.0	Carbon fibre	-	1.3
A-5003-2283	-	M2 EXT L90 d3CF	3.7	M2	Extension	-	-	90.0	Carbon fibre	-	1.5
A-5003-2285	-	M2 STY D4R L50 EWL50 d3CF	3.3	M2	Ball stylus	4.0	Ruby	50.0	Carbon fibre	50.0	1.0
A-5003-2286	-	M2 STY D5R L50 EWL50 d3CF	3.3	M2	Ball stylus	5.0	Ruby	50.0	Carbon fibre	50.0	1.1
A-5003-2287	-	M2 STY D6R L50 EWL50 d3CF	3.3	M2	Ball stylus	6.0	Ruby	50.0	Carbon fibre	50.0	1.2
A-5003-2289	-	M2 STY D4R L100 EWL100 d3CF	3.4	M2	Ball stylus	4.0	Ruby	100.0	Carbon fibre	100.0	1.50
A-5003-2290	-	M2 STY D5R L100 EWL100 d3CF	3.4	M2	Ball stylus	5.0	Ruby	100.0	Carbon fibre	100.0	1.59
A-5003-2291	-	M2 STY D6R L100 EWL100 d3CF	3.4	M2	Ball stylus	6.0	Ruby	100.0	Carbon fibre	100.0	1.78
A-5003-2300	-	M2 STYLUS TOOL CF RANGE	8.3	-	Accessory	-	-	-	-	-	-
A-5003-2310	-	M2 KIT HIGH PERFORMANCE	8.5	-	Accessory	-	-	-	-	-	-
A-5003-2764	-	M4 STY D6R L75 EWL63.5 d4.4CE	5.2	M4	Ball stylus	6.0	Ruby	75.0	Ceramic	63.5	5.64
A-5003-2932	-	M4 STY D2R L20 EWL10 d1.5TC	5.1	M4	Ball stylus	2.0	Ruby	20.0	Tungsten carbide	10.0	3.01
A-5003-3461	-	M4 STY D8R L300 EWL300 d4.5CF	5.3	M4	Ball Stylus	8.0	Ruby	300.0	Carbon Fibre	300.0	10.4
A-5003-3550	-	M4 STY D5R L10.5 EWL5.5 d3.5SS	5.1	M4	Ball stylus	5.0	Ruby	10.0	Stainless steel	5.5	2.0
A-5003-3680	-	M4 STY D3R L50 EWL38 d2TC	5.2	M4	Ball stylus	3.0	Ruby	50.0	Tungsten carbide	38.0	4.94
A-5003-3822	-	M2 STY D2R L20 EWL12 d1TC	3.2	M2	Ball stylus	2.0	Ruby	20.0	Tungsten carbide	12.0	0.48
A-5003-4011	-	M2 STR D0.5 4BALL L7.5 S10	3.4	M2	Star	0.5	Ruby	7.5	Stainless steel	-	0.7
A-5003-4177	-	M2 STY D3R L30 EWL27.5 d2CE	3.2	M2	Ball stylus	3.0	Ruby	30.0	Ceramic	27.5	0.44
A-5003-4241	-	M2 STY D4R L30 EWL30 d2CF	3.2	M2	Ball stylus	4.0	Ruby	30.0	Carbon fibre	30.0	0.57
A-5003-4686	-	M3 ACC KNUCKLE ROTARY	8.1	M3	Accessory	-	-	17.0	Stainless steel	-	1.5
A-5003-4689	-	M4 ACC KNUCKLE ROTARY	8.1	M4	Accessory	-	-	33.0	Stainless steel	-	9.8
A-5003-4697	-	M2 ACC KNUCKLE	8.1	M2	Accessory	-	-	13.5	Stainless steel	-	1.1
A-5003-4779	-	M2 STY D5R L30 EWL30 d2.5CE	3.2	M2	Ball stylus	5.0	Ruby	30.0	Ceramic	30.0	0.93
A-5003-4780	-	M2 STY D6R L30 EWL30 d2.5CE	3.2	M2	Ball stylus	6.0	Ruby	30.0	Ceramic	30.0	1.11
A-5003-4781	-	M2 STY D5R L30 EWL30 d3CF	3.2	M2	Ball stylus	5.0	Ruby	30.0	Carbon fibre	30.0	0.79
A-5003-4782	-	M2 STY D6R L30 EWL30 d3CF	3.2	M2	Ball stylus	6.0	Ruby	30.0	Carbon fibre	30.0	0.96
A-5003-4784	-	M2 STY D4R L75 EWL75 d3CF	3.4	M2	Ball stylus	4.0	Ruby	75.0	Carbon fibre	75.0	0.78
A-5003-4785	-	M2 STY D5R L75 EWL75 d3CF	3.4	M2	Ball stylus	5.0	Ruby	75.0	Carbon fibre	75.0	1.27
A-5003-4786	-	M2 STY D6R L75 EWL75 d3CF	3.4	M2	Ball stylus	6.0	Ruby	75.0	Carbon fibre	75.0	1.45
A-5003-4787	-	M2 STR D0.5 4BALL L7.5 S20	3.4	M2	Star	0.5	Ruby	7.5	Stainless steel	-	0.7
A-5003-4788	-	M2 STR D1 4BALL L7.5 S20	3.4	M2	Star	1.0	Ruby	7.5	Stainless steel	-	0.9
A-5003-4789	-	M2 STC D1R L8.5 EWL4 d0.7TC	3.5	M2	Star centre	1.0	Ruby	8.5	Tungsten carbide	4.0	0.31
A-5003-4790	-	M2 STC D0.5R L18.5 EWL7 d0.4TC	3.5	M2	Star centre	0.5	Ruby	18.5	Tungsten carbide	7.0	0.43
A-5003-4791	-	M2 STC D1R L18.5 EWL11 d0.7TC	3.5	M2	Star centre	1.0	Ruby	18.5	Tungsten carbide	4.0	0.45
A-5003-4792	-	M4 STY D1R L20 EWL10 d0.7TC	5.1	M4	Ball stylus	1.0	Ruby	20.0	Tungsten carbide	10.0	2.39
A-5003-4793	-	M4 STY D3R L20 EWL10 d1.5TC	5.1	M4	Ball stylus	3.0	Ruby	20.0	Tungsten carbide	10.0	3.53
A-5003-4794	-	M4 STY D4R L20 EWL10 d1.5TC	5.1	M4	Ball stylus	4.0	Ruby	20.0	Tungsten carbide	10.0	3.53
A-5003-4795	-	M4 STY D5R L20 EWL6 d2.5TC	5.1	M4	Ball stylus	5.0	Ruby	20.0	Tungsten carbide	6.0	4.52
A-5003-4796	-	M4 STY D6R L20 EWL6 d2.5TC	5.1	M4	Ball stylus	6.0	Ruby	20.0	Tungsten carbide	6.0	4.66
A-5003-4797	-	M4 STY D2R L50 EWL40 d1.5TC	5.2	M4	Ball stylus	2.0	Ruby	50.0	Tungsten carbide	40.0	3.80
A-5003-4799	-	M4 STY D4R L50 EWL36 d2.5TC	5.2	M4	Ball stylus	4.0	Ruby	50.0	Tungsten carbide	36.0	4.99
A-5003-4800	-	M4 STY D5R L50 EWL36 d2.5TC	5.2	M4	Ball stylus	5.0	Ruby	50.0	Tungsten carbide	36.0	6.72
A-5003-4801	-	M4 STY D6R L50 EWL36 d2.5TC	5.2	M4	Ball stylus	6.0	Ruby	50.0	Tungsten carbide	36.0	6.86
A-5003-4802	-	M4 STY D8R L75 EWL75 d4.5CE	5.2	M4	Ball stylus	8.0	Ruby	75.0	Ceramic	75.0	6.20
A-5003-4860	-	M3 STY D6R L75 EWL75 d4CF	4.3	M3	Ball stylus	6.0	Ruby	75.0	Carbon fibre	75.0	2.40
A-5003-4861	-	M3 STY D6R L100 EWL100 d4CF	4.3	M3	Ball stylus	6.0	Ruby	100.0	Carbon fibre	100.0	2.89
A-5003-4862	-	M3 STY D8R L75 EWL75 d4CF	4.3	M3	Ball stylus	8.0	Ruby	75.0	Carbon fibre	75.0	2.98

## Styli and accessories

Product range listing  
by part number

9.5

Part no.	PS no.	Description	Section no.	Thread	Component	Ball/tip size (mm)	Ball/tip material	Length (mm)	Stem material	EWL (mm)	Mass (g)
A-5003-4863	–	M3 STY D8R L100 EWL100 d4CF	4.3	M3	Ball stylus	8.0	Ruby	100.0	Carbon fibre	100.0	3.47
A-5003-4864	–	M3 EXT L75 d4CF	4.4	M3	Extension	–	–	75.0	Carbon fibre	–	2.53
A-5003-4865	–	M3 EXT L100 d4CF	4.4	M3	Extension	–	–	100.0	Carbon fibre	–	3.02
A-5003-4953	–	M5 EXT L40 d11CF	6.9	M5	Extension	–	–	40.0	Carbon fibre	–	7.6
A-5003-4954	–	M5 EXT L50 d11CF	6.9	M5	Extension	–	–	50.0	Carbon fibre	–	8.3
A-5003-4955	–	M5 EXT L60 d11CF	6.9	M5	Extension	–	–	60.0	Carbon fibre	–	9.0
A-5003-4956	–	M5 EXT L70 d11CF	6.9	M5	Extension	–	–	70.0	Carbon fibre	–	9.7
A-5003-4957	–	M5 EXT L80 d11CF	6.9	M5	Extension	–	–	80.0	Carbon fibre	–	10.4
A-5003-4958	–	M5 EXT L90 d11CF	6.9	M5	Extension	–	–	90.0	Carbon fibre	–	11.1
A-5003-4959	–	M5 EXT L100 d11CF	6.9	M5	Extension	–	–	100.0	Carbon fibre	–	11.8
A-5003-4960	–	M5 EXT L120 d11CF	6.10	M5	Extension	–	–	120.0	Carbon fibre	–	13.2
A-5003-4961	–	M5 EXT L150 d11CF	6.10	M5	Extension	–	–	150.0	Carbon fibre	–	15.4
A-5003-4962	–	M5 EXT L180 d11CF	6.10	M5	Extension	–	–	180.0	Carbon fibre	–	17.5
A-5003-4963	–	M5 EXT L200 d11CF	6.10	M5	Extension	–	–	200.0	Carbon fibre	–	18.9
A-5003-4964	–	M5 EXT L250 d11CF	6.10	M5	Extension	–	–	250.0	Carbon fibre	–	22.4
A-5003-4965	–	M5 EXT L300 d11CF	6.10	M5	Extension	–	–	300.0	Carbon fibre	–	25.9
A-5003-4966	–	M5 EXT L400 d11CF	6.10	M5	Extension	–	–	400.0	Carbon fibre	–	33.0
A-5003-4993	–	M5 EXT L40 d20CF	6.11	M5	Extension	–	–	40.0	Carbon fibre	–	23.8
A-5003-4994	–	M5 EXT L50 d20CF	6.11	M5	Extension	–	–	50.0	Carbon fibre	–	25.1
A-5003-4995	–	M5 EXT L60 d20CF	6.11	M5	Extension	–	–	60.0	Carbon fibre	–	26.5
A-5003-4996	–	M5 EXT L80 d20CF	6.11	M5	Extension	–	–	80.0	Carbon fibre	–	29.3
A-5003-4997	–	M5 EXT L100 d20CF	6.11	M5	Extension	–	–	100.0	Carbon fibre	–	32.1
A-5003-4998	–	M5 EXT L120 d20CF	6.11	M5	Extension	–	–	120.0	Carbon fibre	–	34.9
A-5003-4999	–	M5 EXT L150 d20CF	6.11	M5	Extension	–	–	150.0	Carbon fibre	–	39.0
A-5003-5000	–	M5 EXT L180 d20CF	6.12	M5	Extension	–	–	180.0	Carbon fibre	–	43.2
A-5003-5001	–	M5 EXT L200 d20CF	6.12	M5	Extension	–	–	200.0	Carbon fibre	–	46.0
A-5003-5002	–	M5 EXT L250 d20CF	6.12	M5	Extension	–	–	250.0	Carbon fibre	–	52.9
A-5003-5003	–	M5 EXT L300 d20CF	6.12	M5	Extension	–	–	300.0	Carbon fibre	–	59.9
A-5003-5004	–	M5 EXT L400 d20CF	6.12	M5	Extension	–	–	400.0	Carbon fibre	–	73.8
A-5003-5005	–	M5 EXT L500 d20CF	6.12	M5	Extension	–	–	500.0	Carbon fibre	–	87.7
A-5003-5006	–	M5 EXT L600 d20CF	6.12	M5	Extension	–	–	600.0	Carbon fibre	–	101.5
A-5003-5061	–	M3 STY D4SN L21 EWL17.2 d2.5SS	7.2	M3	Ball stylus	4.0	Silicon nitride	21.0	Stainless steel	17.2	1.28
A-5003-5171	–	M4 CPD L15.2SLVS TS27R	5.4	M4	Crash protection device	–	–	15.2	Silver steel	–	4.6
A-5003-5201	–	M5 STY D0.3R L20 EWL3 d0.2TC	6.1	M5	Ball stylus	0.3	Ruby	20.0	Tungsten carbide	3.0	6.5
A-5003-5202	–	M5 STY D0.5R L20 EWL4 d0.4TC	6.1	M5	Ball stylus	0.5	Ruby	20.0	Tungsten carbide	4.0	6.5
A-5003-5203	–	M5 STY D0.7R L20 EWL5 d0.5TC	6.1	M5	Ball stylus	0.7	Ruby	20.0	Tungsten carbide	5.0	6.5
A-5003-5204	–	M5 STY D1R L20 EWL5 d0.7TC	6.2	M5	Ball stylus	1.0	Ruby	20.0	Tungsten carbide	5.0	6.52
A-5003-5205	–	M5 STY D1.5R L20 EWL11 d1TC	6.2	M5	Ball stylus	1.5	Ruby	20.0	Tungsten carbide	11.0	4.68
A-5003-5206	–	M5 STY D2R L20 EWL11 d1TC	6.2	M5	Ball stylus	2.0	Ruby	20.0	Tungsten carbide	11.0	4.70
A-5003-5207	–	M5 STY D2.5R L20 EWL11 d1.5TC	6.2	M5	Ball stylus	2.5	Ruby	20.0	Tungsten carbide	11.0	4.84
A-5003-5208	–	M5 STY D3R L20 EWL11 d2TC	6.2	M5	Ball stylus	3.0	Ruby	20.0	Tungsten carbide	11.0	5.12
A-5003-5209	–	M5 STY D4R L20 EWL11 d2TC	6.2	M5	Ball stylus	4.0	Ruby	20.0	Tungsten carbide	11.0	5.19
A-5003-5210	–	M5 STY D5R L20 EWL11 d3TC	6.2	M5	Ball stylus	5.0	Ruby	20.0	Tungsten carbide	11.0	6.06
A-5003-5211	–	M5 STY D0.3R L30 EWL3 d0.2TC	6.1	M5	Ball stylus	0.3	Ruby	30.0	Tungsten carbide	3.0	8.95
A-5003-5212	–	M5 STY D0.5R L30 EWL4 d0.4TC	6.1	M5	Ball stylus	0.5	Ruby	30.0	Tungsten carbide	4.0	8.95
A-5003-5213	–	M5 STY D0.7R L30 EWL5 d0.5TC	6.1	M5	Ball stylus	0.7	Ruby	30.0	Tungsten carbide	5.0	8.98
A-5003-5214	–	M5 STY D1R L30 EWL5 d0.7TC	6.2	M5	Ball stylus	1.0	Ruby	30.0	Tungsten carbide	5.0	9.01
A-5003-5215	–	M5 STY D1.5R L30 EWL12 d1TC	6.2	M5	Ball stylus	1.5	Ruby	30.0	Tungsten carbide	12.0	7.28
A-5003-5216	–	M5 STY D2R L30 EWL21 d1TC	6.2	M5	Ball stylus	2.0	Ruby	30.0	Tungsten carbide	21.0	4.81
A-5003-5217	–	M5 STY D2.5R L30 EWL21 d1.5TC	6.2	M5	Ball stylus	2.5	Ruby	30.0	Tungsten carbide	21.0	5.14
A-5003-5218	–	M5 STY D3R L30 EWL21 d2TC	6.2	M5	Ball stylus	3.0	Ruby	30.0	Tungsten carbide	21.0	5.58
A-5003-5219	–	M5 STY D4R L30 EWL21 d2TC	6.2	M5	Ball stylus	4.0	Ruby	30.0	Tungsten carbide	21.0	5.64
A-5003-5220	–	M5 STY D5R L30 EWL21 d3TC	6.2	M5	Ball stylus	5.0	Ruby	30.0	Tungsten carbide	21.0	7.10
A-5003-5221	–	M5 STY D1.5R L40 EWL20 d1TC	6.2	M5	Ball stylus	1.5	Ruby	40.0	Tungsten carbide	20.0	7.39
A-5003-5222	–	M5 STY D2R L40 EWL31 d1TC	6.2	M5	Ball stylus	2.0	Ruby	40.0	Tungsten carbide	31.0	4.93
A-5003-5223	–	M5 STY D2.5R L40 EWL31 d1.5TC	6.2	M5	Ball stylus	2.5	Ruby	40.0	Tungsten carbide	31.0	5.40
A-5003-5224	–	M5 STY D3R L40 EWL31 d2TC	6.2	M5	Ball stylus	3.0	Ruby	40.0	Tungsten carbide	31.0	6.04
A-5003-5225	–	M5 STY D0.3R L50 EWL3 d0.2TC	6.1	M5	Ball stylus	0.3	Ruby	50.0	Tungsten carbide	3.0	15.79
A-5003-5226	–	M5 STY D0.5R L50 EWL4 d0.4TC	6.1	M5	Ball stylus	0.5	Ruby	50.0	Tungsten carbide	4.0	15.79
A-5003-5227	–	M5 STY D0.7R L50 EWL5 d0.5TC	6.1	M5	Ball stylus	0.7	Ruby	50.0	Tungsten carbide	5.0	15.79

Part no.	PS no.	Description	Section no.	Thread	Component	Ball/tip size (mm)	Ball/tip material	Length (mm)	Stem material	EWL (mm)	Mass (g)
A-5003-5228	-	M5 STY D1R L50 EWL5 d0.7TC	6.3	M5	Ball stylus	1.0	Ruby	50.0	Tungsten carbide	5.0	15.81
A-5003-5229	-	M5 STY D1.5R L50 EWL5 d1TC	6.3	M5	Ball stylus	1.5	Ruby	50.0	Tungsten carbide	5.0	14.82
A-5003-5230	-	M5 STY D2R L50 EWL41 d1TC	6.3	M5	Ball stylus	2.0	Ruby	50.0	Tungsten carbide	41.0	5.05
A-5003-5231	-	M5 STY D2R L50 EWL5 d1TC	6.3	M5	Ball stylus	2.0	Ruby	50.0	Tungsten carbide	5.0	14.85
A-5003-5232	-	M5 STY D2.5R L50 EWL41 d2TC	6.3	M5	Ball stylus	2.5	Ruby	50.0	Tungsten carbide	41.0	6.48
A-5003-5233	-	M5 STY D2.5R L50 EWL5 d1.5TC	6.3	M5	Ball stylus	2.5	Ruby	50.0	Tungsten carbide	5.0	14.94
A-5003-5234	-	M5 STY D3R L50 EWL41 d2TC	6.3	M5	Ball stylus	3.0	Ruby	50.0	Tungsten carbide	41.0	6.50
A-5003-5235	-	M5 STY D4R L50 EWL41 d2TC	6.3	M5	Ball stylus	4.0	Ruby	50.0	Tungsten carbide	41.0	6.50
A-5003-5236	-	M5 STY D5R L50 EWL41 d3TC	6.3	M5	Ball stylus	5.0	Ruby	50.0	Tungsten carbide	41.0	9.19
A-5003-5237	-	M5 STY D6R L50 EWL39 d4CF	6.3	M5	Ball stylus	6.0	Ruby	50.0	Carbon fibre	39.0	6.10
A-5003-5238	-	M5 STY D8R L50 EWL37 d6CF	6.3	M5	Ball stylus	8.0	Ruby	50.0	Carbon fibre	37.0	7.96
A-5003-5239	-	M5 STY D10R L50 EWL37 d6CF	6.3	M5	Ball stylus	10.0	Ruby	50.0	Carbon fibre	37.0	8.91
A-5003-5240	-	M5 STY D0.3R L75 EWL3 d0.2TC	6.1	M5	Ball stylus	0.3	Ruby	75.0	Tungsten carbide	3.0	23.84
A-5003-5241	-	M5 STY D0.5R L75 EWL4 d0.4TC	6.1	M5	Ball stylus	0.5	Ruby	75.0	Tungsten carbide	4.0	23.84
A-5003-5242	-	M5 STY D0.7R L75 EWL5 d0.5TC	6.1	M5	Ball stylus	0.7	Ruby	75.0	Tungsten carbide	5.0	23.84
A-5003-5243	-	M5 STY D1R L75 EWL5 d0.7TC	6.4	M5	Ball stylus	1.0	Ruby	75.0	Tungsten carbide	5.0	23.86
A-5003-5244	-	M5 STY D1.5R L75 EWL5 d1TC	6.4	M5	Ball stylus	1.5	Ruby	75.0	Tungsten carbide	5.0	23.90
A-5003-5248	-	M5 STY D4R L75 EWL65 d3TC	6.4	M5	Ball stylus	4.0	Ruby	75.0	Tungsten carbide	65.0	11.61
A-5003-5249	-	M5 STY D5R L75 EWL65 d3TC	6.4	M5	Ball stylus	5.0	Ruby	75.0	Tungsten carbide	65.0	11.80
A-5003-5250	-	M5 STY D6R L75 EWL64 d4CF	6.4	M5	Ball stylus	6.0	Ruby	75.0	Carbon fibre	64.0	6.59
A-5003-5251	-	M5 STY D8R L75 EWL62 d6CF	6.4	M5	Ball stylus	8.0	Ruby	75.0	Carbon fibre	62.0	9.06
A-5003-5252	-	M5 STY D10R L75 EWL62 d6CF	6.4	M5	Ball stylus	10.0	Ruby	75.0	Carbon fibre	62.0	10.01
A-5003-5253	-	M5 STY D3R L100 EWL20 d2TC	6.5	M5	Ball stylus	3.0	Ruby	100.0	Tungsten carbide	20.0	25.71
A-5003-5254	-	M5 STY D3R L100 EWL55 d1.5TC	6.6	M5	Ball stylus	3.0	Ruby	100.0	Tungsten carbide	55.0	16.30
A-5003-5255	-	M5 STY D4R L100 EWL20 d2TC	6.5	M5	Ball stylus	4.0	Ruby	100.0	Tungsten carbide	20.0	24.80
A-5003-5256	-	M5 STY D4R L100 EWL50 d3TC	6.5	M5	Ball stylus	4.0	Ruby	100.0	Tungsten carbide	50.0	18.00
A-5003-5257	-	M5 STY D5R L100 EWL50 d3TC	6.5	M5	Ball stylus	5.0	Ruby	100.0	Tungsten carbide	50.0	25.75
A-5003-5258	-	M5 STY D5R L100 EWL91 d3TC	6.6	M5	Ball stylus	5.0	Ruby	100.0	Tungsten carbide	91.0	23.07
A-5003-5259	-	M5 STY D6R L100 EWL50 d4CF	6.5	M5	Ball stylus	6.0	Ruby	100.0	Carbon fibre	50.0	23.31
A-5003-5260	-	M5 STY D6R L100 EWL89 d4CF	6.6	M5	Ball stylus	6.0	Ruby	100.0	Carbon fibre	89.0	7.08
A-5003-5261	-	M5 STY D8R L100 EWL50 d6CF	6.5	M5	Ball stylus	8.0	Ruby	100.0	Carbon fibre	50.0	22.97
A-5003-5262	-	M5 STY D8R L100 EWL87 d6CF	6.6	M5	Ball stylus	8.0	Ruby	100.0	Carbon fibre	87.0	10.17
A-5003-5263	-	M5 STY D10R L100 EWL50 d6CF	6.5	M5	Ball stylus	10.0	Ruby	100.0	Carbon fibre	50.0	23.91
A-5003-5264	-	M5 STY D10R L100 EWL87 d6CF	6.6	M5	Ball stylus	10.0	Ruby	100.0	Carbon fibre	87.0	11.11
A-5003-5265	-	M5 STY D6R L150 EWL120 d4CF	6.7	M5	Ball stylus	6.0	Ruby	150.0	Carbon fibre	120.0	9.09
A-5003-5266	-	M5 STY D8R L150 EWL120 d6CF	6.7	M5	Ball stylus	8.0	Ruby	150.0	Carbon fibre	120.0	13.71
A-5003-5267	-	M5 STY D10R L150 EWL120 d6CF	6.7	M5	Ball stylus	10.0	Ruby	150.0	Carbon fibre	120.0	14.66
A-5003-5268	-	M5 STY D6R L200 EWL180 d4CF	6.7	M5	Ball stylus	6.0	Ruby	200.0	Carbon fibre	180.0	10.07
A-5003-5269	-	M5 STY D8R L200 EWL180 d6CF	6.7	M5	Ball stylus	8.0	Ruby	200.0	Carbon fibre	180.0	15.92
A-5003-5270	-	M5 STY D10R L200 EWL180 d6CF	6.7	M5	Ball stylus	10.0	Ruby	200.0	Carbon fibre	180.0	16.87
A-5003-5271	-	M5 STY D6R L300 EWL280 d4CF	6.8	M5	Ball stylus	6.0	Ruby	300.0	Carbon fibre	280.0	12.02
A-5003-5272	-	M5 STY D8R L300 EWL280 d6CF	6.8	M5	Ball stylus	8.0	Ruby	300.0	Carbon fibre	280.0	20.33
A-5003-5273	-	M5 STY D10R L300 EWL280 d6CF	6.8	M5	Ball stylus	10.0	Ruby	300.0	Carbon fibre	280.0	21.28
A-5003-5275	-	M5 HEM D16CE d7SS	6.15	M5	Hemispherical	16.0	Ceramic	11.5	Stainless steel	-	7.0
A-5003-5276	-	M5 HEM D22CE d7SS	6.15	M5	Hemispherical	22.0	Ceramic	9.5	Stainless steel	-	10.0
A-5003-5277	-	M5 HEM D30CE d7SS	6.15	M5	Hemispherical	30.0	Ceramic	9.5	Stainless steel	-	15.5
A-5003-5278	-	M5 ACC KNUCKLE d11 ROTARY	8.1	M5	Accessory	-	-	36.5	Stainless steel	-	16.5
A-5003-5279	-	M5 ACC KNUCKLE d20 ROTARY	8.1	M5	Accessory	-	-	46.5	Stainless steel	-	64.9
A-5003-5282	-	M5 EXT L30 d11SS	6.13	M5	Extension	-	-	30.0	Stainless steel	-	20.0
A-5003-5283	-	M5 EXT L50 d11SS	6.13	M5	Extension	-	-	50.0	Stainless steel	-	34.8
A-5003-5285	-	M5 EXT L50 d20AL	6.14	M5	Extension	-	-	50.0	Aluminium	-	47.2
A-5003-5288	-	M5 DSC D12SLVS T3 L3 BR-Y5	6.15	M5	Disc	12.0	Silver steel	3.0	Stainless steel	3.0	2.52
A-5003-5289	-	M5 DSC D21SLVS T3 L3 BR-Y5	6.15	M5	Disc	21.0	Silver steel	3.0	Stainless steel	3.0	5.23
A-5003-5290	-	M5 DSC D35SLVS T5 L4 BR-Y8	6.15	M5	Disc	35.0	Silver steel	4.0	Stainless steel	5.0	14.0
A-5003-5291	-	M5 DSC D63.5SLVS T5 L4 BR-Y8	6.15	M5	Disc	63.5	Silver steel	4.0	Stainless steel	5.0	51.00
A-5003-5676	-	M5 ACC CUBE BOLT L33	8.3	M5	Accessory	-	-	33.0	Stainless steel	-	6.4
A-5003-5677	-	M5 ACC CUBE BOLT L28	8.3	M5	Accessory	-	-	28.0	Stainless steel	-	6.0
A-5003-5678	-	M5-M2 ACC CUBE BOLT L33	8.3	M5	Accessory	-	-	33.0	Stainless steel	-	7.1
A-5003-5679	-	M5-M2 ACC CUBE BOLT L28	8.3	M5	Accessory	-	-	28.0	Stainless steel	-	6.7
A-5003-5680	-	M5 ACC 15X15 CUBE	8.3	M5	Accessory	-	-	15.0	Titanium	-	12.85

## Styli and accessories

Part no.	PS no.	Description	Section no.	Thread	Component	Ball/tip size (mm)	Ball/tip material	Length (mm)	Stem material	EWL (mm)	Mass (g)
A-5003-5681	–	M5 ACC 20X20 CUBE	8.3	M5	Accessory	–	–	20.0	Titanium	–	32.55
A-5003-5682	–	M5 ACC 40X20 DOUBLE CUBE	8.3	M5	Accessory	–	–	40.0	Titanium	–	63.50
A-5003-5683	–	M5-M2 15X15 CUBE	8.3	M5	Accessory	–	–	15.0	Titanium	–	13.75
A-5003-5684	–	M5-M2 20X20 CUBE	8.3	M5	Accessory	–	–	20.0	Titanium	–	35.18
A-5003-5723	–	M3 STY D2SN L21 EWL8 d1.4SS	7.2	M3	Ball stylus	2.0	Silicon nitride	21.0	Stainless steel	8.0	1.00
A-5003-5724	–	M3 STY D2SN L30 EWL22.5 d1.5TC	7.2	M3	Ball stylus	2.0	Silicon nitride	30.0	Tungsten carbide	22.5	1.32
A-5003-5725	–	M3 STY D4SN L50 EWL46 d2CE	7.2	M3	Ball stylus	4.0	Silicon nitride	50.0	Ceramic	46.0	1.22
A-5003-5726	–	M3 STY D6SN L75 EWL75 d4CF	7.2	M3	Ball stylus	6.0	Silicon nitride	75.0	Carbon fibre	75.0	2.32
A-5003-5727	–	M3 STY D6SN L100 EWL100 d4CF	7.2	M3	Ball stylus	6.0	Silicon nitride	100.0	Carbon fibre	100.0	2.81
A-5003-5728	–	M4 STY D2SN L19 EWL8 d1.4SS	7.3	M4	Ball stylus	2.0	Silicon nitride	19.0	Stainless steel	8.0	2.30
A-5003-5729	–	M4 STY D4SN L18 EWL13 d3SS	7.3	M4	Ball stylus	4.0	Silicon nitride	18.0	Stainless steel	13.0	2.08
A-5003-5730	–	M4 STY D6SN L50 EWL36 d4.4CF	7.3	M4	Ball stylus	6.0	Silicon nitride	50.0	Carbon fibre	36.0	5.02
A-5003-5731	–	M4 STY D6SN L100 EWL86 d4.4CF	7.3	M4	Ball stylus	6.0	Silicon nitride	100.0	Carbon fibre	86.0	6.12
A-5003-5732	–	M5 STY D2SN L20 EWL11 d1TC	7.3	M5	Ball stylus	2.0	Silicon nitride	20.0	Tungsten carbide	11.0	4.70
A-5003-5733	–	M5 STY D4SN L20 EWL11 d2TC	7.3	M5	Ball stylus	4.0	Silicon nitride	20.0	Tungsten carbide	11.0	5.17
A-5003-5734	–	M5 STY D6SN L50 EWL39 d4CF	7.3	M5	Ball stylus	6.0	Silicon nitride	50.0	Carbon fibre	39.0	6.02
A-5003-5735	–	M5 STY D6SN L100 EWL50 d4CF	7.3	M5	Ball stylus	6.0	Silicon nitride	100.0	Carbon fibre	50.0	19.58
A-5003-5736	–	M3 STY D2Z L21 EWL8 d1.4SS	7.4	M3	Ball stylus	2.0	Zirconia	21.0	Stainless steel	8.0	1.03
A-5003-5737	–	M3 STY D4Z L21 EWL17.2 d2.5SS	7.4	M3	Ball stylus	4.0	Zirconia	21.0	Stainless steel	17.2	1.60
A-5003-5738	–	M3 STY D2Z L30 EWL22.5 d1.5TC	7.4	M3	Ball stylus	2.0	Zirconia	30.0	Tungsten carbide	22.5	1.35
A-5003-5739	–	M3 STY D4Z L50 EWL46 d2CE	7.4	M3	Ball stylus	4.0	Zirconia	50.0	Ceramic	46.0	1.54
A-5003-5740	–	M3 STY D6Z L75 EWL75 d4CF	7.4	M3	Ball stylus	6.0	Zirconia	75.0	Carbon fibre	75.0	3.39
A-5003-5741	–	M3 STY D6Z L100 EWL100 d4CF	7.4	M3	Ball stylus	6.0	Zirconia	100.0	Carbon fibre	100.0	3.88
A-5003-5742	–	M4 STY D2Z L19 EWL8 d1.4SS	7.5	M4	Ball stylus	2.0	Zirconia	19.0	Stainless steel	8.0	2.33
A-5003-5743	–	M4 STY D4Z L18 EWL13 d3SS	7.5	M4	Ball stylus	4.0	Zirconia	18.0	Stainless steel	13.0	2.40
A-5003-5744	–	M4 STY D6Z L50 EWL36 d4.4CF	7.5	M4	Ball stylus	6.0	Zirconia	50.0	Carbon fibre	36.0	6.09
A-5003-5745	–	M4 STY D6Z L100 EWL86 d4.4CF	7.5	M4	Ball stylus	6.0	Zirconia	100.0	Carbon fibre	86.0	7.19
A-5003-5746	–	M5 STY D2Z L20 EWL11 d1TC	7.5	M5	Ball stylus	2.0	Zirconia	20.0	Tungsten carbide	11.0	4.73
A-5003-5747	–	M5 STY D4Z L20 EWL11 d2TC	7.5	M5	Ball stylus	4.0	Zirconia	20.0	Carbon fibre	11.0	4.95
A-5003-5748	–	M5 STY D6Z L50 EWL39 d4CF	7.5	M5	Ball stylus	6.0	Zirconia	50.0	Tungsten carbide	39.0	5.49
A-5003-5749	–	M5 STY D6Z L100 EWL50 d4CF	7.5	M5	Ball stylus	6.0	Zirconia	100.0	Carbon fibre	50.0	20.65
M-1034-0014	–	DATUM FIXING STUD M10	8.7	M10	Accessory	–	–	–	–	–	–
M-1034-0015	–	DATUM FIXING STUD M8	8.7	M8	Accessory	–	–	–	–	–	–
M-1034-0016	–	DATUM FIXING STUD M6	8.7	M6	Accessory	–	–	–	–	–	–
M-1034-0017	–	DATUM FIXING STUD 3/8 UNC	8.7	3/8 UNC	Accessory	–	–	–	–	–	–
M-1034-0018	–	DATUM FIXING STUD 5/16 UNC	8.7	5/16 UNC	Accessory	–	–	–	–	–	–
M-1034-0019	–	DATUM EXTENSION L75	8.7	–	Accessory	–	–	–	–	–	–
M-1034-0042	–	DATUM ADAPTER 2WAY	8.7	–	Accessory	–	–	–	–	–	–
M-1034-0052	–	DATUM ADAPTER 3WAY	8.7	–	Accessory	–	–	–	–	–	–
M-2008-0447	–	TS27R HORIZONTAL HOLDER	5.5	M4	Tool datuming	–	–	–	Stainless steel	–	7.43
M-2085-0069	–	M4 CPD L12SLVS	5.4	M4	Crash protection device	–	–	12.0	Silver steel	–	2.7
M-2197-0150	–	M4 CPD L16SLVS	5.4	M4	Crash protection device	–	–	16.0	Silver steel	–	2.1
M-2197-0156	–	M4 CPD L9SLVS	5.4	M4	Crash protection device	–	–	9.0	Silver steel	–	1.5
M-5000-3540	–	M2-M3 STYLUS TOOL	8.3	–	Accessory	–	–	–	–	–	–
M-5000-3592	SE2	M3 EXT L20 d4SS	4.4	M3	Extension	–	–	20.0	Stainless steel	–	1.6
M-5000-3593	SE3	M3 EXT L35 d4SS	4.4	M3	Extension	–	–	35.0	Stainless steel	–	2.9
M-5000-3647	SE4	M2 EXT L10 d3SS	3.6	M2	Extension	–	–	10.0	Stainless steel	–	0.4
M-5000-3648	SE5	M2 EXT L20 d3SS	3.6	M2	Extension	–	–	20.0	Stainless steel	–	0.9
M-5000-3707	–	M4 STYLUS TOOL	8.3	–	Accessory	–	–	–	–	–	–
M-5000-4150	PS20R	M2 PNT D3SLVS 30deg L15	3.7	M2	Pointer	0.1	Silver steel	15.0	Silver steel	–	0.7
M-5000-4152	PS18R	M2 CYL D1.5SLVS L11 EWL1.5	3.5	M2	Cylinder	1.5	Silver steel	11.0	Silver steel	1.5	0.3
M-5000-4153	PS19R	M2 CYL D3SLVS L13 EWL3.8	3.5	M2	Cylinder	3.0	Silver steel	13.0	Silver steel	3.8	0.6
M-5000-4162	SE6	M2 EXT L30 d3SS	3.6	M2	Extension	–	–	30.0	Stainless steel	–	1.4
M-5000-4163	SA3	M3-M2 EXT L5SS	8.2	M3	Extension	–	–	5.0	Stainless steel	–	0.6
M-5000-4164	SA2	M2-M3 EXT L7SS	8.2	M2	Extension	–	–	7.0	Stainless steel	–	0.4
M-5000-6460	–	M4 STR 5Way L15	5.4	M4	Star	–	–	15.0	–	–	10.0
M-5000-6622	SA5	M4-M2 EXT L5SS	8.2	M4	Extension	–	–	5.0	Stainless steel	–	1.5
M-5000-6625	SE21	M4-M3 EXT L20SS	8.2	M4	Extension	–	–	20.0	Stainless steel	–	3.2
M-5000-6714	SA6	M4-M3 EXT L9SS	8.2	M4	Extension	–	–	9.0	Stainless steel	–	1.4
M-5000-7582	SA-8	M4 CPD L8SS	5.4	M4	Crash protection device	–	–	8.0	Stainless steel	–	1.8



Part no.	PS no.	Description	Section no.	Thread	Component	Ball/tip size (mm)	Length (mm)	Stem material	Mass (g)
M-5000-7583	SE-9	M4 EXT L10 d7SS	5.6	M4	Extension	–	10.0	Stainless steel	2.4
M-5000-7584	SE-10	M4 EXT L15 d7SS	5.6	M4	Extension	–	15.0	Stainless steel	3.7
M-5000-7585	SE-11	M4 EXT L20 d7SS	5.6	M4	Extension	–	20.0	Stainless steel	4.8
M-5000-7586	SE-12	M4 EXT L30 d7SS	5.6	M4	Extension	–	30.0	Stainless steel	7.4
M-5000-7587	SS2	M4 CPD L8 CRANK SS	5.4	M4	Crash protection device	–	8.0	Stainless steel	1.4
M-5000-7588	SS3	M4 CPD L8SS SWIVEL	5.4	M4	Crash protection device	–	10.0	Stainless steel	1.5
M-5000-7589	CR-1	M4 CEX SS L1-5 L2-21.9	5.4	M4	Cranked extension	–	21.9	Stainless steel	6.07
M-5000-7590	CR-2	M4 CEX SS L1-5 L2-27.6	5.4	M4	Cranked extension	–	27.6	Stainless steel	6.94
M-5000-7591	SW-1	M4 ACC SWIVEL L1-10 L2-12.5	5.4	M4	Accessory	–	10.0	Stainless steel	2.76
M-5000-7592	SW-2	M4 ACC SWIVEL L1-13.5 L2-16	5.4	M4	Accessory	–	13.5	Stainless steel	3.70
M-5000-7633	SE8	M3 EXT L10 d4SS	4.4	M3	Extension	–	10.0	Stainless steel	0.9
M-5000-7634	SE7	M2 EXT L5 d3SS	3.6	M2	Extension	–	5.0	Stainless steel	0.2
M-5000-7779	SE18	M2 EXT L40 d3SS	3.6	M2	Extension	–	40.0	Stainless steel	1.8
M-5000-8167	SATF6	TF6-M3 EXT L18SS	8.2	TF6	Extension	–	18.0	Stainless steel	1.9
M-5000-9301	–	M5-M4 EXT L6.5SS	8.2	M5	Extension	–	6.5	Stainless steel	6.0
M-5000-9304	–	M5 STYLUS TOOL	8.3	–	Accessory	–	–	–	–
P-GA01-0001	–	GRAMME GAUGE	8.7	–	Accessory	–	–	–	–
P-TL09-0003	–	SPANNER 5 MM A/F	5.4	–	Accessory	–	–	–	–

## Renishaw applies innovation to provide solutions to your problems

Renishaw is an established world leader in metrology, providing high performance, cost-effective solutions for measurement and increased productivity. A worldwide network of subsidiary companies and distributors provides exceptional service and support for its customers.

Renishaw designs, develops and manufactures products which conform to ISO 9001 standards.

Renishaw provides innovative solutions using the following products:

- Probe systems for inspection on CMMs (co-ordinate measuring machines).
- Systems for job set-up, tool setting and inspection on machine tools.
- Scanning and digitising systems.
- Laser and automated ballbar systems for performance measurement and calibration of machines.
- Encoder systems for high accuracy position feedback.
- Spectroscopy systems for non-destructive material analysis in laboratory and process environments.
- Styli for inspection and tool setting probes.
- Customised solutions for your applications.

## Renishaw worldwide

### Australia

**T** +61 3 9521 0922  
**E** australia@renishaw.com

### Austria

**T** +43 2236 379790  
**E** austria@renishaw.com

### Brazil

**T** +55 11 4195 2866  
**E** brazil@renishaw.com

### Canada

**T** +1 905 828 0104  
**E** canada@renishaw.com

### The People's Republic of China

**T** +86 10 8448 5306  
**E** beijing@renishaw.com

### Czech Republic

**T** +420 5 4821 6553  
**E** czech@renishaw.com

### France

**T** +33 1 64 61 84 84  
**E** france@renishaw.com

### Germany

**T** +49 7127 9810  
**E** germany@renishaw.com

### Hong Kong

**T** +852 2753 0638  
**E** hongkong@renishaw.com

### Hungary

**T** +36 1 262 2642  
**E** hungary@renishaw.com

### India

**T** +91 80 5320 144  
**E** india@renishaw.com

### Italy

**T** +39 011 966 10 52  
**E** italy@renishaw.com

### Japan

**T** +81 3 5332 6021  
**E** japan@renishaw.com

### The Netherlands

**T** +31 76 543 11 00  
**E** benelux@renishaw.com

### Poland

**T** +48 22 575 8000  
**E** poland@renishaw.com

### Russia

**T** +7 095 231 1677  
**E** russia@renishaw.com

### Singapore

**T** +65 6897 5466  
**E** singapore@renishaw.com

### Slovenia

**T** +386 1 52 72 100  
**E** mail@rls.si

### South Korea

**T** +82 2 2108 2830  
**E** southkorea@renishaw.com

### Spain

**T** +34 93 663 34 20  
**E** spain@renishaw.com

### Sweden

**T** +46 8 584 90 880  
**E** sweden@renishaw.com

### Switzerland

**T** +41 55 415 50 60  
**E** switzerland@renishaw.com

### Taiwan

**T** +886 4 2251 3665  
**E** taiwan@renishaw.com

### UK (Head Office)

**T** +44 1453 524524  
**E** uk@renishaw.com

### USA

**T** +1 847 286 9953  
**E** usa@renishaw.com

### For all other countries

**T** +44 1453 524524  
**E** international@renishaw.com