

STYLI AND ACCESSORIES

MAXIMUM PRECISION, PIONEERING INNOVATION
AND CONVINCING ECONOMICS

GENERAL



Probe components from Mitutoyo: Add the touch of perfection to your quality assurance.

STYLLI FOR CMM

Industrial quality assurance requires increasing universality, flexibility and the ideal shape for absolute precision. Here Mitutoyo styli show exactly what they are capable of: maximum precision, pioneering innovation and convincing economics.

It is not only the technical capabilities of Mitutoyo styli that stand out from the crowd. Equally impressive is the integrated nature of the entire concept, right through to the seamless service environment.

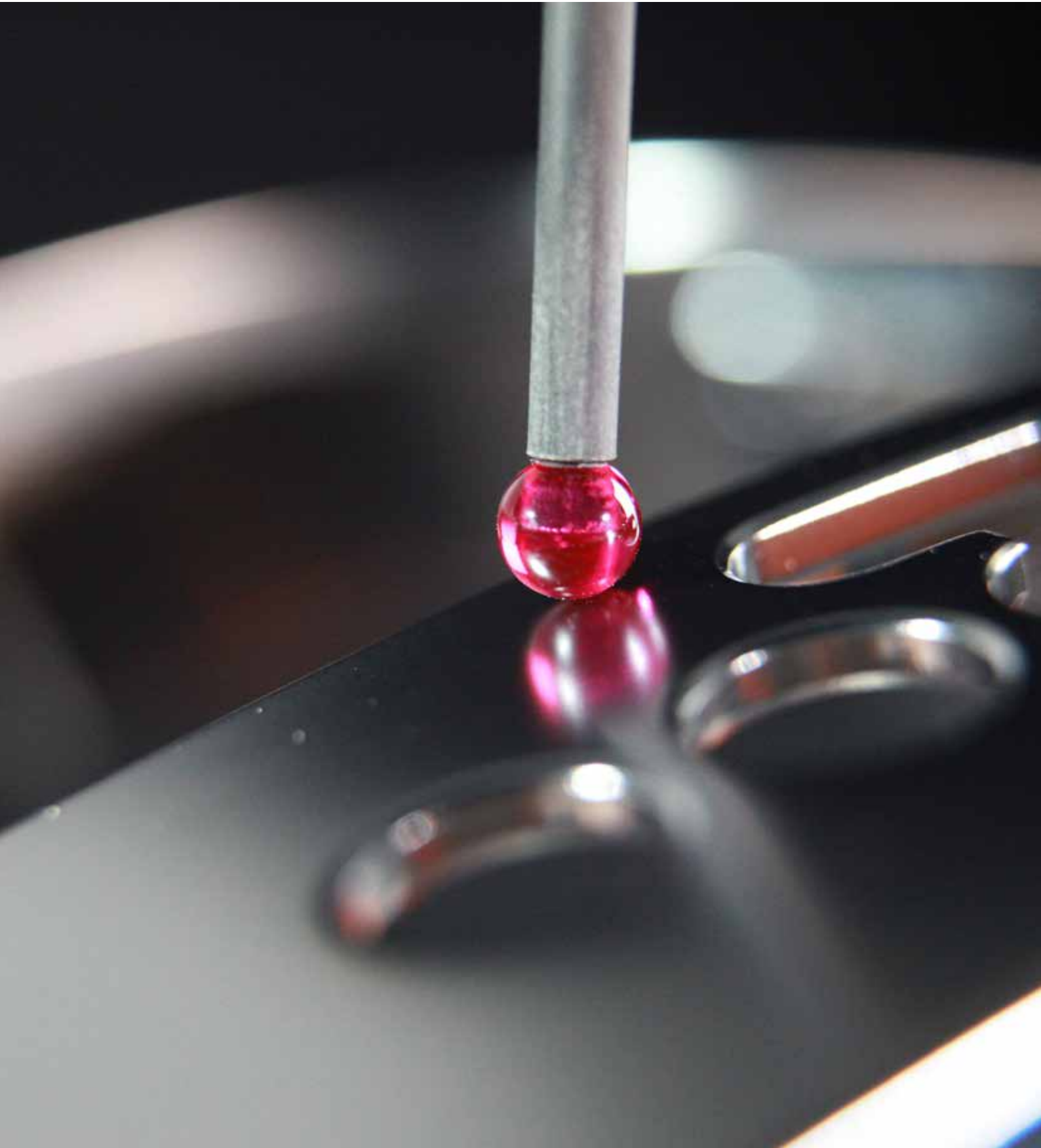
This concept forms the customer-oriented basis for a multi-faceted range of services that will open up a new dimension of quality assurance to every user: world-class measuring technology from Mitutoyo.

Steel, aluminium or ceramics? Ruby, zirconium oxide or silicon nitride?

The Mitutoyo product line includes over 600 probe components plus highly specialised equipment - listed in this current product information - to provide the best possible solution to your specific measurement needs with a sophisticated sense of touch. For measurably better results.

Mitutoyo means that you can count on the experience, competence and performance of a one of the world's leading measurement technology specialists, as well as. And a customer- focused service without equal comparison.

Mitutoyo: performance made perfect.



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39-40	Adaptor					

Styli made by Mitutoyo: Tip top quality.

Which stylus is best suited, and under which conditions, for use with your measuring equipment, for your specific measuring task? Mitutoyo offers you the answers. We have 30 years of experience in developing and manufacturing styli, based on cutting-edge materials development, our experts know which material and which combination will enable you to achieve your goals reliably and accurately. Whatever you choose, the result is the same: the best. Our expertise and use of the highest-quality materials guarantee products of unparalleled excellence:

The materials we use for contact points

Ruby

As the hardest of all probe element materials, ruby is the perfect all-rounder when it comes to manufacturing spherical contact points that must be highly resistant to wear. Contact points made of ruby have been used as tried and tested equipment for most standard applications for decades. The low specific density of ruby enables the mass of the stylus tip to be kept as small as possible – this effectively allows the elimination of false triggers caused by mass inertia when the CMM moves or vibrates.



Zirconium oxide

Because of the specific surface properties of contact points made of zirconium oxide - a ceramic compound – they are the acknowledged as the best choice for aggressive scanning of abrasive surfaces, such as workpieces made of cast iron. Zirconium oxide has virtually the same hardness and wear-resistant properties as ruby.



Silicon nitride

Silicon nitride is extremely hard and superbly wear-resistant, with the least surface roughness of all ball materials. Specific advantage: silicon nitride is not attracted by aluminum and therefore coats the surfaces of workpieces made of aluminum alloy to a much lesser extent than other ball materials.



The materials we use for bases and styli stems

Steel

The primary material of choice for high-strength precision styli that enable very accurate measuring tasks. Its superb material strength makes steel an excellent choice of material for manufacturing styli or reference probe elements.



Carbon fiber tube

Thermal expansion coefficient range is virtually undetectable at temperatures of between 15 and 40 degrees centigrade. Mitutoyo uses carbon fiber tube for styli with outstanding quality, sophisticated styli configurations and probe extensions.



Aluminum alloy

Lightweight and stable, and therefore frequently used for probe extensions. Styli stems or extensions made of aluminum alloy perform best in measuring labs with stable temperatures and accordingly, the lowest possible temperature gradients.



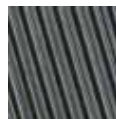
Carbon fiber

The highest-quality material with an expansion coefficient of virtually zero at ambient temperatures of up to 45 degrees celsius. Carbon fiber is also very lightweight and extremely stiff, making it particularly suitable for the manufacture of long styli.



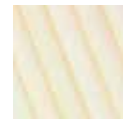
Tungsten carbide

Bend-resistant styli stems made of tungsten carbide are ideal for virtually all standard applications in the measuring lab with its stable ambient temperature. A durable material that has proved its worth.



Ceramic

Very lightweight and extremely stiff. The ideal material, especially for long stems. Their low tendency to expand in higher temperatures makes ceramic styli also suitable for use in production surroundings.



Titanium

Titanium is remarkably stiff yet has a relatively low density. Probe components made of titanium offer the outstanding characteristics of being extremely rigid and stable, yet surprisingly lightweight. Mitutoyo uses the material primarily for bases, connecting pieces and extensions for measuring styli.



TECHNICAL SUPPORT - CHECKLIST

- The shortest, most stable styli possible must be used. When using longer styli parts, always check that they are sufficiently stable.
- To be sure that the mount is secure, make sure that your styli are free from defects, especially on the seating area and thread.
- Make sure the probe component is completely securely attached to minimise variations.
- Remember to replace older styli regularly.
- Take account of the ambient temperature and conditions when using thermally stable components.
- The manufacturer's instructions for setting up stylus configurations will specify the permitted masses; always refer to these.
- Use as few individual components as possible and keep superfluous thread connections to a minimum.
- It is advisable to use silicon nitride balls when scanning aluminium.
- The balls used should be as large as possible. Large ball styli perform a mechanical filter function on the workpiece surface. Due to their size, they have hardly any impact on the surface's fine structure, thus eliminating flyers or random measurement variations.
- As far as possible you should always place the styli at right angles to the planes you are measuring. You can use angled cubes and knuckles to align styli correctly on angled measuring planes. Use the same methods to measure angled bores.
- Make sure that you employ the right dynamics and measuring strength for the stylus components you are working with. Decrease these as needed when working with small ball, slim-stemmed styli.

Technical data

Material characteristics

Diameter and form deviations

Grade	Ball ϕ to	VDws max.	Ra max.	tDws
G3	12.7 mm	0.08 μm	0.010 μm	0.08 μm
G5	12.7 mm	0.13 μm	0.014 μm	0.13 μm
G10	25.4 mm	0.25 μm	0.020 μm	0.25 μm
G16	25.4 mm	0.40 μm	0.025 μm	0.40 μm
G20	38.1 mm	0.50 μm	0.032 μm	0.50 μm

VDws Difference between the largest and smallest of the single diameters of ball

Ra max. Surface roughness

tDws Deviation from the perfect spherical form

Characteristics of ball materials

Characteristics	Unit	Sapphire	Ruby	Aluminum oxide	Silicon nitride	Zirconium oxide
					gehipt (HP-Si ₃ N ₄)	ATZ
chemical formula		Al ₂ O ₃	Al ₂ O ₃	Al ₂ O ₃	Si ₃ N ₄	ZrO ₂
consistence	weight %	99.99	99	99,8	>90	76/20/4
density	g/cm ³	3.99	3.99	3,86	3,2	5,5
hardness	HV	2300	2300	1900	1600	1400
pressure resistance	MPa	2100	2100	2500	3000	>2000
equivalent fibre	MPa	400-700	400-700	350	850	2400
fracture toughness K _{1c}	MN/m ^{3/2}	1	1	3,5	7	10
elasticity moduls	GPa	430	430	350	320	220
heat expansion	10 ⁻⁶ /K	5.4	5.4	7.8	3.2	9
heat conductance	W/mK	36	36	29	40	6
specific heat	J/kgK	755	755	900	750	600
maximum application temperature of the air	°C	1800	1800	1900	1100	1000
chemical resistance	(acids) (leaching)	optimally good	optimally good	optimally good	optimally good	good good

STYLI KITS



Kits M2 / M3

**Styli Kit M2
Starter**



Part No.	Contents	Description	ø S mm	L mm
K651376				
		wooden box		
	1x Part No. K651012	Stylus steel-ruby M2	1	10
	1x Part No. K651019	Stylus steel-ruby M2	2	20
	1x Part No. K651021	Stylus steel-ruby M2	3	20
	1x Part No. K651022	Stylus steel-ruby M2	4	20
	1x Part No. K651038	Extension steel M2		10
	1x Part No. K651039	Extension steel M2		20
	2x Part No. K651223	Pin spanner ø 1,2 mm		23

**Styli Kit M2
Addition**



Part No.	Contents	Description	ø S mm	L mm
K651382				
		wooden box		
	1x Part No. K651058	5-way stylus holder M2		7.5
	1x Part No. K651040	Extension steel M2		30
	1x Part No. K651039	Extension steel M2		20
	4x Part No. K651038	Extension steel M2		10
	1x Part No. K651022	Stylus steel-ruby M2	4	20
	1x Part No. K651021	Stylus steel-ruby M2	3	20
	5x Part No. K651019	Stylus steel-ruby M2	2	20
	1x Part No. K651012	Stylus steel-ruby M2	1	10
	2x Part No. K651223	Pin spanner ø 1,2 mm		23

**Styli Kit M2
Basic 1**



Part No.	Contents	Description	ø S mm	L mm
K651377				
		wooden box		
	1x Part No. K651012	Stylus steel-ruby M2	1	10
	1x Part No. K651014	Stylus steel-ruby M2	2	10
	1x Part No. K651019	Stylus steel-ruby M2	2	20
	1x Part No. K651016	Stylus steel-ruby M2	3	10
	1x Part No. K651021	Stylus steel-ruby M2	3	20
	1x Part No. K651022	Stylus steel-ruby M2	4	20
	1x Part No. K651031	Cylinder stylus steel M2	3	13
	1x Part No. K651062	Adaptor M2		7
	1x Part No. K651054	5-way stylus M2	2	30
	1x Part No. K651083	Disk stylus steel M2	18	7.5
	1x Part No. K651085	Disk stylus steel - ruby M2	6	10
	1x Part No. K651038	Extension steel M2		10
	1x Part No. K651039	Extension steel M2		20
	2x Part No. K651223	Pin spanner ø 1,2 mm		23

STYLI KITS

Styli Kit M2 Basic 2



Part No.	Contents	Description	ø S mm	L mm
K651354				
		wooden box		
1x Part No. K651235		Stylus tungsten carbide-ruby M2	0,5	20
1x Part No. K651249		Stylus tungsten carbide-ruby M2	1	20
1x Part No. K651019		stylus steel-ruby M2	2	20
1x Part No. K651347		Stylus carbon fiber-ruby M2	4	50
1x Part No. K651348		Stylus carbon fiber-ruby M2	5	50
1x Part No. K651349		Stylus carbon fiber-ruby M2	6	50
1x Part No. K651350		Stylus extension CRP M2		40
1x Part No. K651351		Stylus extension CRP M2		50
1x Part No. K651352		Stylus extension CFK M2		70
1x Art.:Nr.: K651353		Stylus extension CFK M2		90
1x Part No. K651058		5-way stylus holder M2		7,5
1x Part No. K651223		pin spanner ø 1,2 mm		

Styli Kit M2 Expansion



Part No.	Contents	Description	ø S mm	L mm
K651378				
		wooden box		
1x Part No. K651236		Stylus tungsten carbide-ruby M2	0,7	10
1x Part No. K651248		Stylus tungsten carbide-ruby M2	1	20
2x Part No. K651257		Stylus tungsten carbide-ruby M2	1,5	30
1x Part No. K651233		Stylus tungsten carbide-ruby M2	0,3	10
1x Part No. K651276		Stylus tungsten carbide-ruby M2	0,5	10
1x Part No. K651012		Stylus steel-ruby M2	1	10
1x Part No. K651013		Stylus steel-ruby M2	1,5	10
1x Part No. K651014		Stylus steel-ruby M2	2	10
1x Part No. K651015		Stylus steel-ruby M2	2,5	10
2x Part No. K651020		Stylus steel-ruby M2	2,5	20
1x Part No. K651032		Cylinder stylus-ruby M2	2	20
1x Part No. K651052		4-way stylus-ruby M2	1	10
1x Part No. K651098		Tip stylus tungsten carbide M2		10
1x Part No. K651083		Disk stylus steel M2	18	7,5
1x Part No. K651084		Disk stylus steel M2	25	7,5
1x Part No. K651041		Extension steel M2		40
2x Part No. K651223		Pin spanner ø 1,2 mm		23

Kits M2 / M3

Styli Kit M2 Professional



Part No.	Contents	Description	ø S mm	L mm
K651379				
		wooden box		
1x Part No. K651236		Stylus tungsten carbide-ruby M2	0.7	10
1x Part No. K651248		Stylus tungsten carbide-ruby M2	1	20
1x Part No. K651233		Stylus tungsten carbide-ruby M2	0.3	10
2x Part No. K651276		Stylus tungsten carbide-ruby M2	0.5	10
2x Part No. K651012		Stylus steel-ruby M2	1	10
1x Part No. K651013		Stylus steel-ruby M2	1.5	10
3x Part No. K651014		Stylus steel-ruby M2	2	10
5x Part No. K651019		Stylus steel-ruby M2	2	20
1xPart No. K651015		Stylus steel-ruby M2	2.5	10
2xPart No. K651020		Stylus steel-ruby M2	2.5	20
1x Part No. K651016		Stylus steel-ruby M2	3	10
2x Part No. K651021		Stylus steel-ruby M2	3	20
3x Part No. K651017		Stylus steel-ruby M2	4	10
3x Part No. K651022		Stylus steel-ruby M2	4	20
2x Part No. K651018		Stylus steel-ruby M2	5	10
2x Part No. K651024		Stylus steel-ruby M2	6	10
1x Part No. K651025		Stylus steel-ruby M2	8	11
1x Part No. K651030		Cylinder stylus steel M2	1.5	11
1x Part No. K651031		Cylinder stylus steel M2	3	13
1x Part No. K651032		Cylinder stylus-ruby M2	2	20
1x Part No. K651062		Adaptor M2		7
1x Part No. K651052		4-way stylus-ruby M2	1	10
1x Part No. K651053		5-way stylus-ruby M2	2	18
1xPart No. K651054		5-way stylus-ruby M2	2	30
1xPart No. K651097		Tip stylus steel M2		15
1xPart No. K651098		Tip stylus tungsten carbide M2		10
1x Part No. K651083		Disk stylus steel M2	18	7.5
1x Part No. K651084		Disk stylus steel M2	25	7.5
1xPart No. K651085		Disk stylus steel - ruby M2	6	10
1xPart No. K651090		Hollow ball ceramic M2		11
1xPart No. K651058		5-way stylus holder M2		7.5
4xPart No. K651037		Extension steel M2		5
2x Part No. K651038		Extension steel M2		10
2x Part No. K651039		Extension steel M2		20
2xPart No. K651040		Extension steel M2		30
2x Part No. K651041		Extension steel M2		40
2x Part No. K651223		Pin spanner ø 1,2 mm		23

Styli Kit M3 CRP 1



Part No.	Contents	Description	ø S mm	L mm
K651318				
		Wooden box		
1x Part No. K651297		Stylus carbon fiber-ruby M3	3	21
1x Part No. K651298		Stylus carbon fiber-ruby M3	4	21
1x Part No. K651301		Stylus carbon fiber-SiNi M3	4	21
1x Part No. K651299		Stylus carbon fiber-ruby M3	4	31
1x Part No. K651300		Stylus carbon fiber-ruby M3	4	40
1x Part No. K651303		Stylus carbon fiber-ruby M3	5	50
1x Part No. K651223		pin spanner ø 1.2 mm		

STYLI KITS

**Styli Kit M3
CRP 2**



Part No.	Contents	Description	ø S mm	L mm
K651319				
		Wooden box		
	1x Part No. K651302	Stylus carbon fiber-ruby M3	5	21
	1x Part No. K651304	Stylus carbon fiber-ruby M3	5	21
	1x Part No. K651303	Stylus carbon fiber-ruby M3	5	50
	1x Part No. K651305	Stylus carbon fiber-ruby M3	6	50
	1x Part No. K651306	Stylus carbon fiber-ruby M3	6	75
	1x Part No. K651223	Pin spanner ø 1.2 mm		

**Styli Kit M3
CRP 3**



Part No.	Contents	Description	ø S mm	L mm
K651320				
		Wooden box		
	1x Part No. K651302	Stylus carbon fiber-ruby M3	5	21
	1x Part No. K651304	Stylus carbon fiber-ruby M3	5	21
	1x Part No. K651303	Stylus carbon fiber-ruby M3	5	50
	1x Part No. K651306	Stylus carbon fiber-ruby M3	6	75
	1x Part No. K651309	Stylus carbon fiber-ruby M3	8	100
	1x Part No. K651223	Pin spanner ø 1.2 mm		

**Styli Kit M3
Small Features**



Part No.	Contents	Description	ø S mm	L mm
K651412				
	1x Part No. K651276	Stylus tungsten carbide-ruby M2	0.5	10
	1x Part No. K651236	Stylus tungsten carbide-ruby M2	0.7	10
	1x Part No. K651012	Stylus steel-ruby M2	1	10
	1x Part No. K651248	Stylus tungsten carbide-ruby M2	1	20
	4x Part No. K651019	Stylus steel-ruby M2	2	20
	1x Part No. K651170	Adaptor M3/M2		5
	1x Part No. K651058	5-way stylus holder M2		7.5
	1x Part No. K651039	Extension steel		20
	2x Part No. K651223	Pin spanner ø1,2		21

Styli Kits M3 / M4

Styli Kit M3 Starter



Part No.	Contents	Description	ø S mm	L mm
K651380				
		Wooden box		
	1x Part No. K651146	Stylus steel-ruby M3	1	21
	1x Part No. K651147	Stylus steel-ruby M3	2	21
	1x Part No. K651148	Stylus steel-ruby M3	3	21
	1x Part No. K651151	Stylus steel-ruby M3	4	31
	1x Part No. K651152	Stylus steel-ruby M3	5	33.5
	1x Part No. K651157	extension steel M3		20
	1x Part No. K651159	extension steel M3		35
	2x Part No. K651223	Pin spanner ø 1.2 mm		23

Styli Kit M4



Part No.	Contents	Description	ø S mm	L mm
K651383				
		Wooden box		
	1x Part No. K651184	Stylus ceramic-ruby M4	8	100
	1x Part No. K651182	Stylus ceramic-ruby M4	8	50
	1x Part No. K651216	Adaptor ceramic M4/M3	7	100
	1x Part No. K651215	Adaptor ceramic M4/M3	7	75
	1x Part No. K651214	Adaptor ceramic M4/M3	7	50
	1x Part No. K651204	extension ceramic M4	7	50
	1x Part No. K651203	extension ceramic M4	7	30
	1x Part No. K651170	Adaptor M3/M2	4	5
	1x Part No. K651208	Adaptor M4/M3	7	9
	2x Part No. K650346	Pin spanner	1.7	49
	2x Part No. K651223	Pin spanner	1.2	23
	1x Part No. K651058	5-way stylus holder M2	7	7.5
	1x Part No. K651169	5-way stylus holder M3	10	13
	1x Part No. K651206	5-way stylus holder M4	15	18
	1x Part No. K651186	Stylus steel-ruby M4	1	19.5
	4x Part No. K651187	Stylus steel-ruby M4	2	19
	1x Part No. K651188	Stylus steel-ruby M4	4	18

Components for measuring heads WITH M2 THREAD

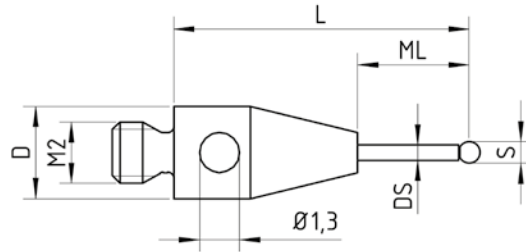
TP20
TP200
MH20i
TP2



Styli M2

Stylus tungsten carbide

base stainless steel
stem tungsten carbide
ball ruby

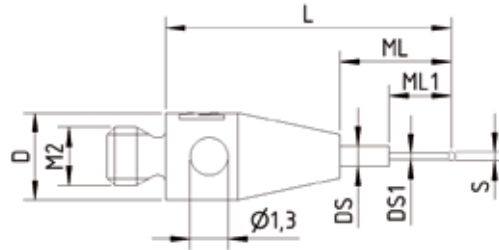


Part No.	S mm	L mm	ML mm	ML1 mm	D mm	DS mm	DS1 mm	Weight g
K651236	0.7	10	4		3	0.5		0.23
K651237	1	10	6		3	0.8		0.24
K651246	1	15	11		3	0.8		0.5
K651248	1	20	7		3	0.7		0.48
K651249	1	20	12.5		3	0.8		0.39
K651256	1	27.5	20.5		3	0.7		0.4
K651322	1	52	37		3	0.7		0.89
K651238	1.5	10	4.2		3	1		0.32
K651250	1.5	20	12.5		3	1		0.46
K651257	1.5	30	22.5		3	1		0.56
K651239	2	10	5		3	1		0.34
K651240	2	10	6.3		3	1		0.29
K651247	2	15	11.3		3	1		0.33
K651251	2	20	15		3	1		0.45
K651258	2	30	22.5		3	1.5		0.96
K651263	2	40	32.5		3	1.5		1.22
K651323	2	58	52		3	1.5		1.63
K651241	2.5	10	5.5		3	1.5		0.42
K651252	2.5	20	15		3	1.5		0.69
K651259	2.5	30	25		3	2		1.44
K651264	2.5	40	32.5		3	2		1.93
K651242	3	10	7		3	1.5		0.45
K651253	3	20	16.5		3	1.5		0.72
K651260	3	30	27.5		3	2		1.46
K651265	3	40	37.5		3	2		1.88
K651268	3	50	47.5		3	2		2.35
K651261	4	30	30		3	2		1.56
K651266	4	40	40		3	2		2
K651269	4	50	50		3	2		2.52
K651243	5	10	10		3	2		0.77
K650866	5	20	20		3	2		1.15
K651254	5	20	20		3	2.5		1.47
K651262	5	30	30		3	2.5		2.18
K651267	5	40	40		3	2.5		2.89
K651270	5	50	50		3	2.5		3.6
K651244	6	10	10		3	2		0.96
K651255	6	25	25		3	2		1.63

STYL M2

Stylus tungsten carbide

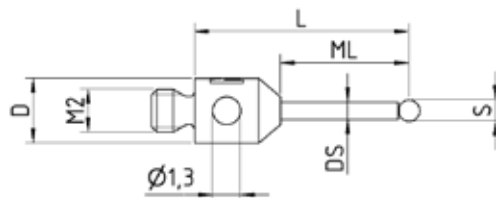
base stainless steel
stem tungsten carbide
ball ruby



Part No.	S mm	L mm	ML mm	ML1 mm	D mm	DS mm	DS1 mm	Weight g
K651233	0.3	10	4	2	3	0.7	0.2	0.27
K651234	0.5	10	4	2.25	3	1	0.3	0.29
K651276	0.5	10	4	3	3	0.7	0.3	0.26
K651235	0.5	20	12	2.25	3	1	0.3	0.45

Stylus tungsten carbide

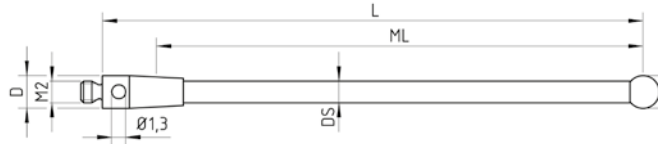
base stainless steel
stem tungsten carbide
ball zirconium oxide



Part No.	S mm	L mm	ML mm	ML1 mm	D mm	DS mm	DS1 mm	Weight g
K651426	1	10	6		3	0,8		0,25
K651427	1	20	7		3	0,7		0,48
K651428	2	10	6		3	1		0,35
K651429	2	20	15		3	1		0,45
K651430	3	20	16,5		3	1,5		0,72
K651431	3	30	27,5		3	2		1,46

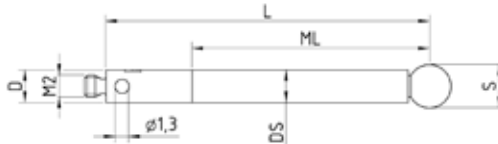
Styli M2

Stylus ceramic
 base stainless steel
 stem ceramic
 ball ruby



Part No.	S mm	L mm	ML mm	ML1 mm	D mm	DS mm	DS1 mm	Weight g
K651009	3	50	47.5		3	2		0.84
K651325	3	83.5	68.5		3	2		1.56
K651231	4	10	10		3	2		0.38
K651004	4	20	20		3	2		0.51
K651006	4	30	30		3	2		0.67
K651008	4	40	40		3	2		0.77
K651010	4	50	50		3	2		0.9
K651327	4	98	98		3	3		2.91
K651232	5	10	10		3	2		0.65
K651005	5	20	20		3	2		0.63
K651007	5	30	30		3	2		0.79
K651011	5	50	50		3	2,5		1.3
K651328	5	97.5	97.5		3	3		2.99
K651003	6	10	10		3	2		0.69

Stylus carbon fiber
 base stainless steel
 stem carbon fiber
 ball ruby

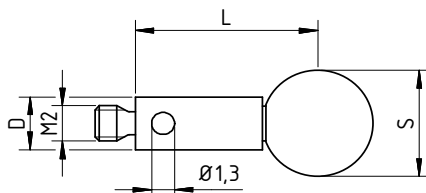


Part No.	S mm	L mm	ML mm	ML1 mm	D mm	DS mm	DS1 mm	Weight g
K651414	4	30	30		3	2		0,6
K651347	4	50	50		3	3		0,83
K651415	5	30	30		3	3		0,8
K651348	5	50	50		3	3		1,1
K651417	5	75	75		3	3		1,3
K651416	6	30	30		3	3		1
K651349	6	50	50		3	3		1,2
K651418	6	75	75		3	3		1,45
K651419	6	100	100		3	3		1,8
K651420	8	75	75		3	3		1,8
K651421	8	100	100		3	3		2,1

STYL M2

Stylus steel

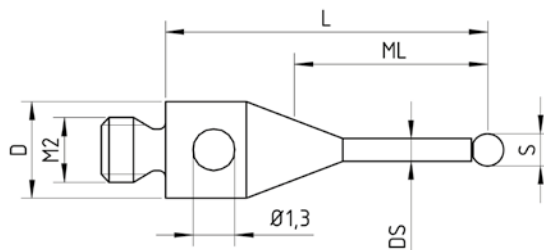
base stainless steel
ball ruby



Part No.	S mm	L mm	ML mm	ML1 mm	D mm	DS mm	DS1 mm	Weight g
K651026	6	25	25		3			1.7
K651023	8	9	9		3			1.4

Stylus steel

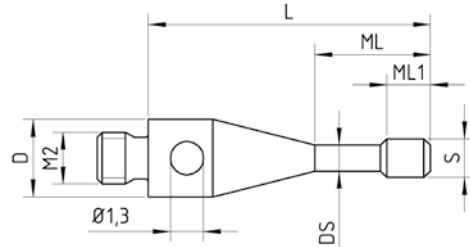
base stainless steel
ball ruby



Part No.	S mm	L mm	ML mm	ML1 mm	D mm	DS mm	DS1 mm	Weight g
K651012	1	10	4.5		3	0.7		0.23
K651013	1.5	10	4.5		3	0.7		0.25
K651014	2	10	6		3	1		0.24
K651019	2	20	14		3	1.4		0.43
K651015	2.5	10	6		3	1		0.26
K651020	2.5	20	14		3	1.4		0.45
K651016	3	10	7.5		3	1.5		0.34
K651021	3	20	17.5		3	1.5		0.51
K651324	3	68	60		3	1.5		1.22
K651017	4	10	10		3	1.5		0.42
K651022	4	20	20		3	1.5		0.51
K651326	4	68	68		3	2		1.82
K651018	5	10	10		3	2.5		0.63
K651024	6	10	10		3	2.5		0.82
K651025	8	11	11		3	2.5		1.49

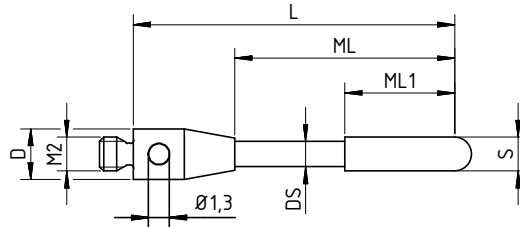
Styli M2

Cylinder stylus, steel
stainless steel



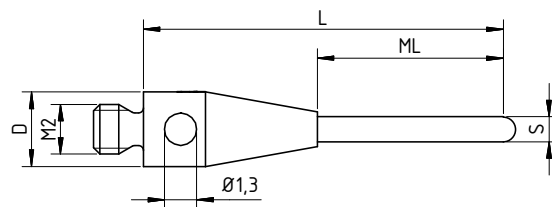
Part No.	S mm	L mm	ML mm	ML1 mm	D mm	DS mm	DS1 mm	Weight g
K651030	1.5	11	4.5	1.7	3	1		0.28
K651031	3	13	8	4	3	1.5		0.49

Cylinder stylus, ruby
base stainless steel
stem tungsten carbide
tip ruby



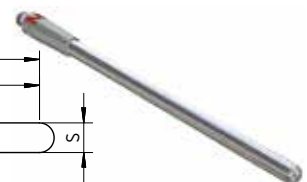
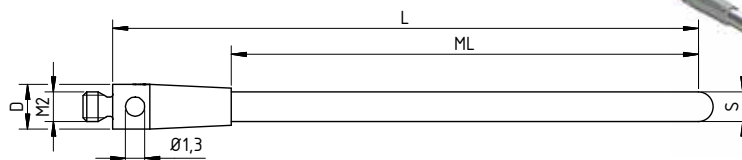
Part No.	S mm	L mm	ML mm	ML1 mm	D mm	DS mm	DS1 mm	Weight g
K651032	2	20	13	6.5	3	1.5		0.47
K651033	4	20	13	8.5	3	2		0.9

Cylinder stylus, ruby
base stainless steel
tip ruby



Part No.	S mm	L mm	ML mm	ML1 mm	D mm	DS mm	DS1 mm	Weight g
K651034	1	14.5	7.5		3			0.28
K651035	1.5	14.25	7.25		3			0.3

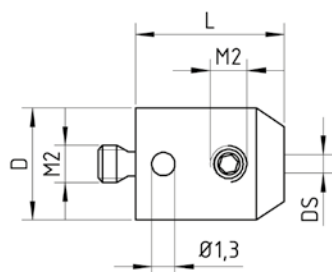
Cylinder stylus, tungsten carbide
base stainless steel
tip tungsten carbide



Part No.	S mm	L mm	ML mm	ML1 mm	D mm	DS mm	DS1 mm	Weight g
K651036	2	39	31		3			1.87

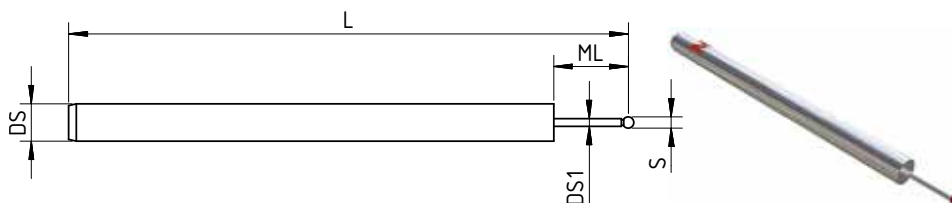
STYL M2

Stylus holder
stainless steel



Part No.	S mm	L mm	ML mm	ML1 mm	D mm	DS mm	DS1 mm	Weight g
K651065		8			6	1.0 G7		1.54
K651066		8			6	1.5 G7		1.51
K651067		8			6	2.0 G7		1.47

Stylus for holder
stem tungsten carbide
ball ruby



Part No.	S mm	L mm	ML mm	ML1 mm	D mm	DS mm	DS1 mm	Weight g
K651068	0.3	15.15	2.15			1	0.2	0.14
K651069	0.5	15.25	2.25			1	0.3	0.15
K651070	0.6	15.3	4.3			1	0.4	0.13
K651071	0.8	15.4	4.4			1	0.6	0.14
K651072	1	15.5	4.5			1	0.8	0.15

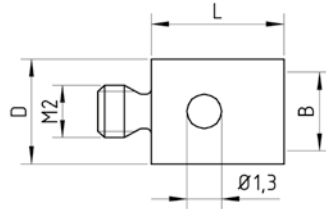
Stylus for holder
stem tungsten carbide
ball ruby



Part No.	S mm	L mm	ML mm	ML1 mm	D mm	DS mm	DS1 mm	Weight g
K651073	1.35	26.4				1		0.28
K651074	1.5	25.75				1		0.29
K651075	2	26				1.5		0.65
K651076	2.5	26.25				1.5		0.67
K651077	3	26.5				2		1.24
K651080	3	36.5				2		1.62
K651078	4	27.2				2		1.37
K651079	5	27.5				2		1.51

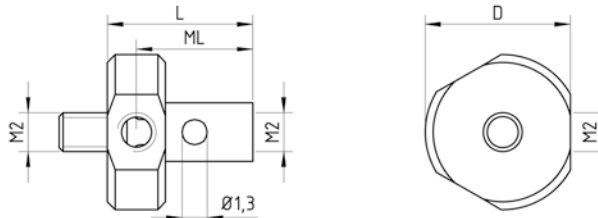
Styli M2

Adaptor
stainless steel



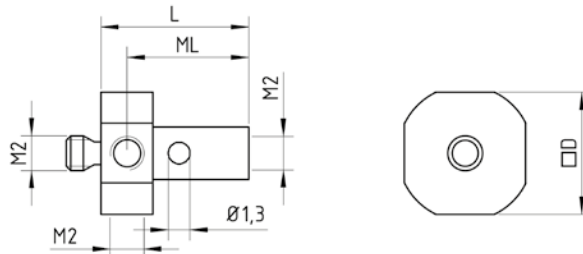
Part No.	S mm	L mm	ML mm	ML1 mm	D mm	DS mm	B	Weight g
K651061		5			4		M3	0.29
K651062		7			4		M3	0.42
K651063		10			4		M3	0.58
K651064		10			5		M4	0.79

4-way stylus holder
stainless steel, rotatable



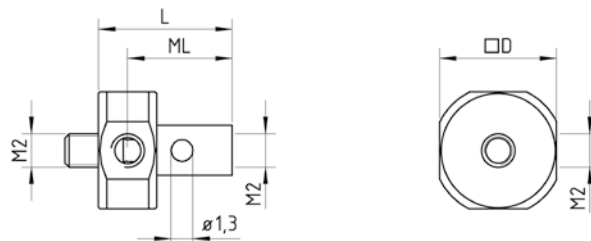
Part No.	S mm	L mm	ML mm	ML1 mm	D mm	DS mm	DS1 mm	Weight g
K651056		7.5	6		7.5			1.07

5-way stylus holder
stainless steel, fixed



Part No.	S mm	L mm	ML mm	ML1 mm	D mm	DS mm	DS1 mm	Weight g
K651057		8.5	7		7			0.96

5-way stylus holder
stainless steel, rotatable

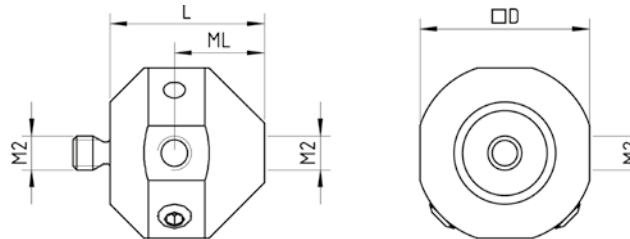


Part No.	S mm	L mm	ML mm	ML1 mm	D mm	DS mm	DS1 mm	Weight g
K651058		7.5	6		7			0.92

STYLI M2

5-way stylus holder, large

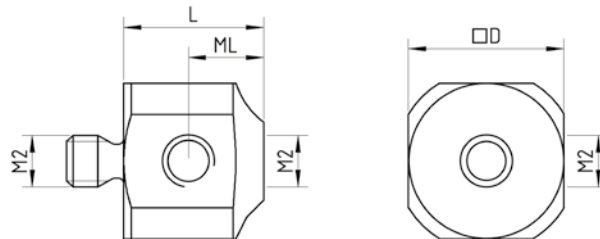
stainless steel, rotatable



Part No.	S mm	L mm	ML mm	ML1 mm	D mm	DS mm	B mm	Weight g
K651059		9.1	5.3		10			3.62

5-way stylus holder, small

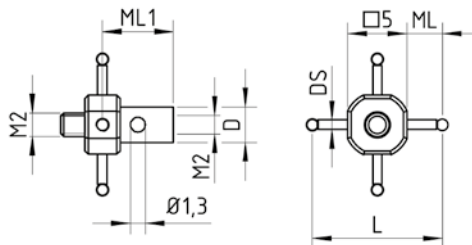
stainless steel, fixed



Part No.	S mm	L mm	ML mm	ML1 mm	D mm	DS mm	B mm	Weight g
K651060		5.4	2.9		6			0.94

4-way stylus

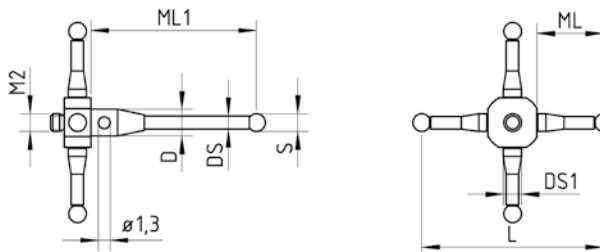
base stainless steel
stem tungsten carbide
ball ruby



Part No.	S mm	L mm	ML mm	ML1 mm	D mm	DS mm	DS1 mm	Weight g
K651052	1	10	2.5	6	3	0.7		0.5

5-way stylus

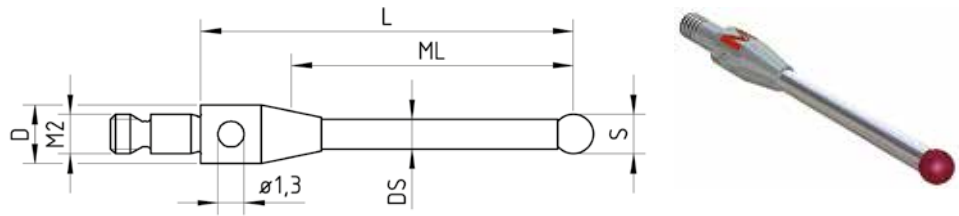
base stainless steel
stem tungsten carbide
stainless steel
ball ruby



Part No.	S mm	L mm	ML mm	ML1 mm	D mm	DS mm	DS1 mm	Weight g
K651053	2	18	5.25	16.5	2H7	1.4	2	1.54
K650451	2	20	7.2	18.5	2H7	1.4	2	1.74
K651054	2	30	10.75	16.5	2H7	1.4	2	1.88

Stylus for 5-way stylus

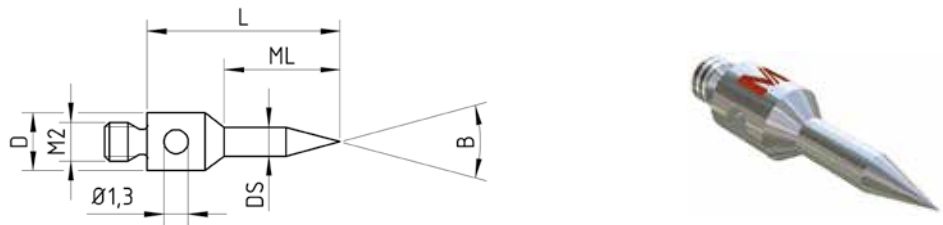
base stainless steel
stem tungsten carbide
ball ruby



Part No.	S mm	L mm	ML mm	ML1 mm	D mm	DS mm	DS1 mm	Weight g
K650449	2	18.5	12.5		3	1.5		0.63
K651055	2	16.5	11		3	1.4		0.57

Tip stylus, steel

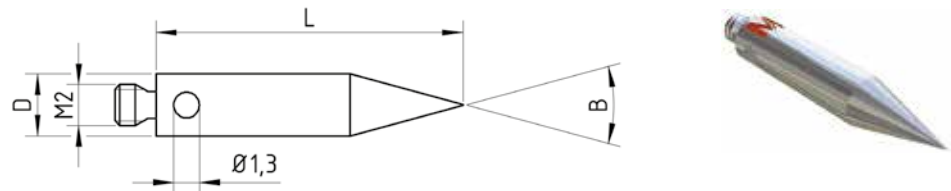
steel, hardened



Part No.	S mm	L mm	ML mm	ML1 mm	D mm	DS mm	B mm	Weight g
K651095		10	6		3	1.5	30°	0.26
K651096		10	6		3	1.5	60°	0.27

Tip stylus, steel

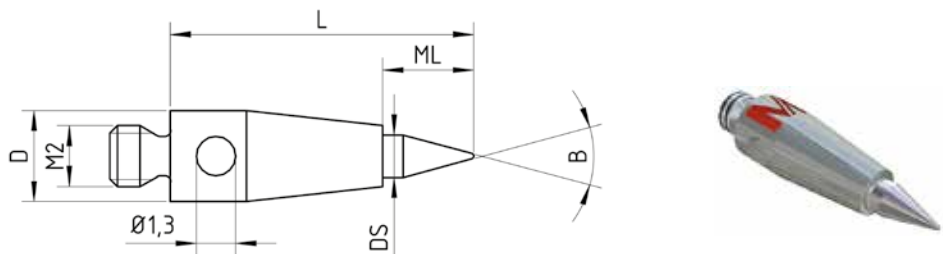
steel, hardened



Part No.	S mm	L mm	ML mm	ML1 mm	D mm	DS mm	B	Weight g
K651097		15			3		30°	0,61

Tip stylus, tungsten carbide

base stainless steel
stem tungsten carbide

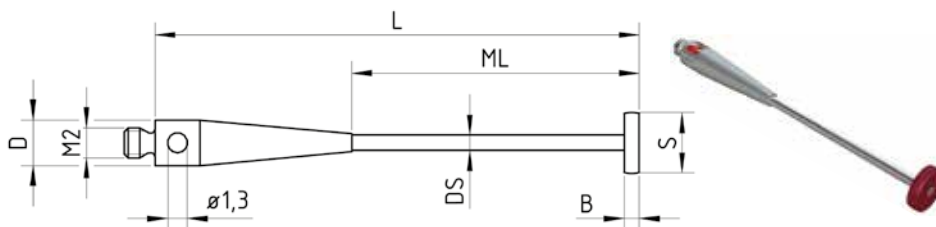


Part No.	S mm	L mm	ML mm	ML1 mm	D mm	DS mm	B	Weight g
K651098		10	3		3	1.4	30°	0.37

STYLI M2

Disk stylus ruby

base stainless steel
stem tungsten carbide
disk ruby



Part No.	S mm	L mm	ML mm	ML1 mm	D mm	DS mm	B mm	Weight g
K651086	4	32	19		3	1	1	0.78
K651087	8	32	19		3	1.5	1.5	1.38

Disk stylus steel

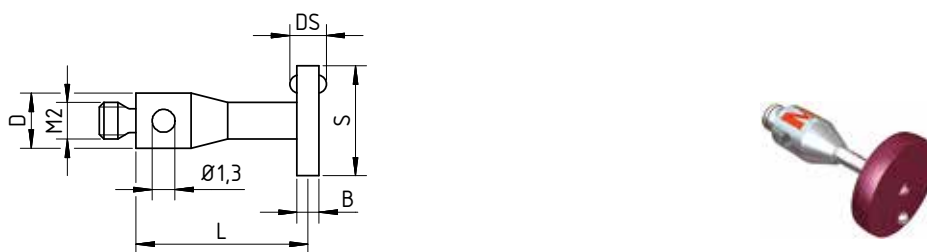
base stainless steel
disk hardened steel



Part No.	S mm	L mm	ML mm	ML1 mm	D mm	DS mm	B mm	Weight g
K651081	18	2.6			3	3	2.3	4
K651082	25	2.5			3	no ball	3.1	5
K651083	18	7.5			3	2.5	1.6	4.5
K651084	25	7.5			3	2.5	1.6	6.6

Disk stylus ruby

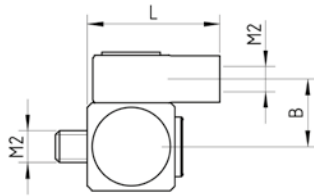
base stainless steel
disk ruby



Part No.	S mm	L mm	ML mm	ML1 mm	D mm	DS mm	B mm	Weight g
K651085	6	10			3	2	1.2	0.6

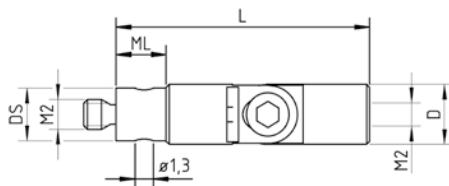
Styli M2

Knuckle joint stainless steel



Part No.	S mm	L mm	ML mm	ML1 mm	D mm	DS mm	B mm	Weight g
K651100		8					4.5	1.67

Knuckle/swivel joint stainless steel

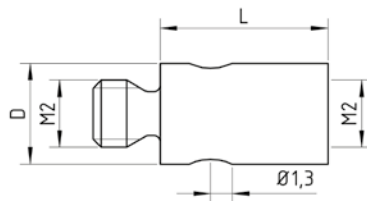


Part No.	S mm	L mm	ML mm	ML1 mm	D mm	DS mm	DS1 mm	Weight g
K651101		17.2	3.4		4	3.5		1.38

STYLI M2

Extension steel

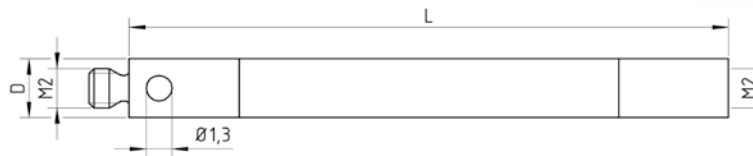
stainless steel



Part No.	S mm	L mm	ML mm	ML1 mm	D mm	DS mm	DS1 mm	Weight g
K651037		5			3			0.2
K651038		10			3			0.41
K651039		20			3			0.96
K651040		30			3			1.53
K651041		40			3			2.05
K651042		60			3			2.7
K651043		90			3			3.8

Extension ceramic

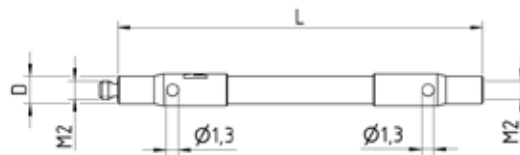
end pieces stainless steel
stem ceramic



Part No.	S mm	L mm	ML mm	ML1 mm	D mm	DS mm	DS1 mm	Weight g
K651044		30			3			0.99
K651045		40			3			1.26
K651046		50			3			1.54
K651047		60			3			1.82

Extension carbon fiber

end pieces: stainless steel
stem: carbon fiber



Part No.	S mm	L mm	ML mm	ML1 mm	D mm	DS mm	DS1 mm	Weight g
K651350		40			3			1,4
K651351		50			3			1,6
K651352		70			3			1,8
K651353		90			3			2

Mitutoyo - added value for you!

CRYSTA-Apex S



HR-500



HV-100



MACH-3A



Surftest SJ410/SJ-500



Roundtest RA-2200



Linear Height LH 600



Eco-Fix Kit L



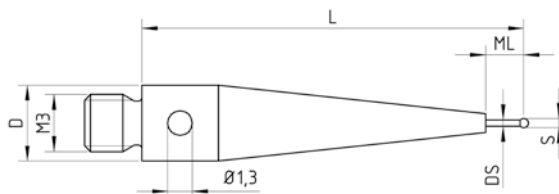
Components for measuring heads **WITH M3 THREAD** TP8
SP25M



Styli M3

Stylus tungsten carbide

base stainless steel
stem tungsten carbide
ball ruby

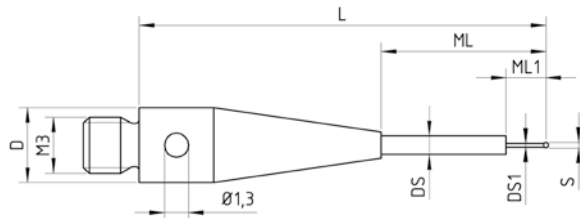


Part No.	S mm	L mm	ML mm	ML1 mm	D mm	DS mm	DS1 mm	Weight g
K651111	0.5	20	2		4	0.35		1.09
K651107	1	10	5		4	0.8		0.53
K651329	1	22	12		4	0.8		0.8
K651330	1	32	25		4	0.8		0.81
K651112	1.5	20	12.5		4	1		0.82
K651118	1.5	21.35	8.7		4	1		1.05
K651119	1.5	30	22.5		4	1		0.92
K651109	2	20	14.9		4	1		0.71
K651113	2	21	10.0		4	1		1.01
K651120	2	30	22		4	1.5		1.28
K651127	2	40	32.5		4	1.5		1.54
K651114	2.5	21	14		4	1.5		1.07
K651121	2.5	30	22		4	2		1.79
K651128	2.5	40	32		4	2		2.28
K651110	3	20	15.6		4	1.5		1.25
K651122	3	30	22.5		4	2		1.79
K651126	3	38.5	22.3		5.5	2		3.87
K651129	3	40	32.5		4	2		2.22
K651132	3	50	42.5		4	2		2.49
K651332	3	64	50		4	2		3.61
K651115	4	21	17		4	2		1.54
K651123	4	30	27		4	2		1.8
K651130	4	40	36		4	2		2.35
K651133	4	50	46		4	2		2.69
K651333	4	57	53.0		4	2		3.15
K651116	5	21	21		4	2		1.64
K651124	5	31	31		4	2		2.01
K651131	5	40	40		4	2		2.49
K651134	5	50	50		4	2		2.98
K651117	8	21	21		4	3		3.14

STYLI M3

Stylus tungsten carbide

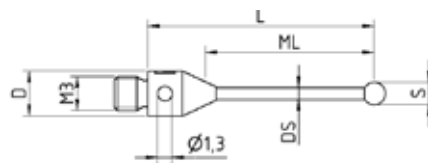
base stainless steel
stem tungsten carbide
ball ruby



Part No.	S mm	L mm	ML mm	ML1 mm	D mm	DS mm	DS1 mm	Weight g
K651106	0.3	21.85	8.85	2.15	4	1	0.2	0.98
K651105	0.5	21.75	8.75	2.25	4	1	0.3	1
K651104	0.6	21.7	8.7	4.3	4	1	0.4	1.07
K651103	0.8	21.6	8.6	4.4	4	1	0.6	0.98
K651102	1	21.5	8.5	4.5	4	1	0.8	0.99

Stylus tungsten carbide

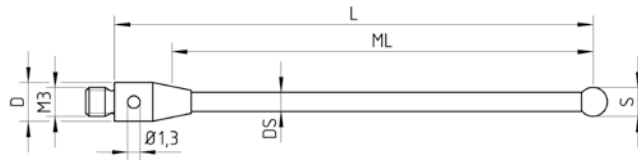
base: stainless steel
stem: tungsten carbide
ball: silicon nitride



Part No.	S mm	L mm	ML mm	ML1 mm	D mm	DS mm	DS1 mm	Weight g
K651432	2	20	14,9		4	1		0,72
K651433	2	30	22,5		4	1,5		1,24
K651434	3	30	22,5		4	2		1,85
K651435	3	40	32,5		4	2		2,22
K651436	4	40	36		4	2		2,35
K651437	4	50	46		4	2		2,7

Stylus ceramic

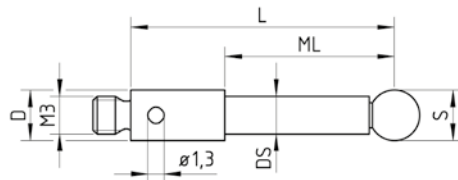
base stainless steel
stem ceramic
ball ruby



Part No.	S mm	L mm	ML mm	ML1 mm	D mm	DS mm	DS1 mm	Weight g
K651143	3	50	43		4	2		1.19
K651136	4	21	17		4	2		0.98
K651140	4	30	27		4	2		0.89
K651141	4	40	36.0		4	2		1.13
K651144	4	50	45.5		4	2		1.27
K651137	5	21	21		4	2		1
K651139	5	29.5	29.5		4	2		1.33
K651142	5	40	40		4	2		1.45
K651145	5	50	50		4	2.5		1.63
K651135	6	10	10		4	2		0.86
K651138	8	21	21		4	2		1.89
K651334	8	130	110		6	4		9.52

Stylus carbon fiber

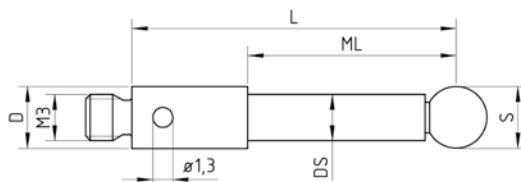
base stainless steel
stem carbon fiber
ball silicon nitride



Part No.	S mm	L mm	ML mm	ML1 mm	D mm	DS mm	DS1 mm	Weight g
K651301	4	21	13.5		4	3		0.88
K651304	5	21	21		4	3		0.91

Stylus carbon fiber

base stainless steel
stem carbon fiber
ball ruby

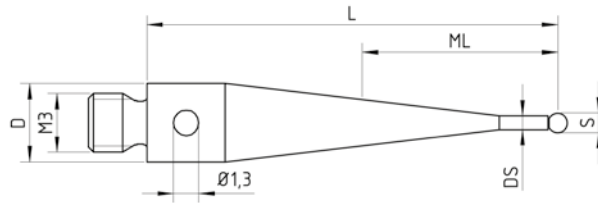


Part No.	S mm	L mm	ML mm	ML1 mm	D mm	DS mm	DS1 mm	Weight g
K651297	3	21	14.7		4	2		0.76
K651298	4	21	13.5		4	3		0.88
K651299	4	31	23.5		4	3		0.95
K651300	4	40	32.5		4	3		1
K651302	5	21	21		4	3		0.91
K651303	5	50	50		4	3		1.11
K651305	6	50	50		4	4		1.76
K651306	6	75	75		4	4		2.26
K651307	6	100	100		4	4		2.76
K651308	8	75	75		4	4		2.43
K651309	8	100	100		4	4		2.94
K651310	10	75	75		4	4		4,1
K651311	10	100	100		4	4		4,6
K651312	10	150	150		4	4		5,5
K651313	10	200	200		4	4		6,5

Styli M3

Stylus steel

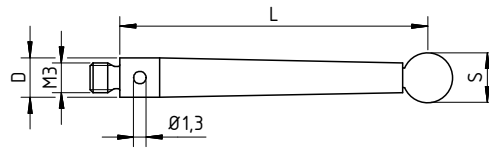
base stainless steel
ball ruby



Part No.	S mm	L mm	ML mm	ML1 mm	D mm	DS mm	DS1 mm	Weight g
K651146	1	21	4		4	0.7		1.05
K651147	2	21	8		4	1.4		1.06
K651148	3	21	12		4	1.5		0.96
K651149	4	21	17		4	2.5		1.38
K651151	4	31	27		4	2.5		1.78
K651150	5	21	21		4	2.5		1.48

Stylus steel

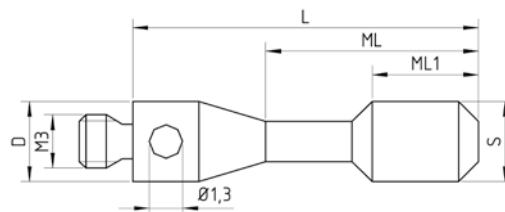
base stainless steel
ball ruby



Part No.	S mm	L mm	ML mm	ML1 mm	D mm	DS mm	DS1 mm	Weight g
K651152	5	31			4			2.61

Cylinder stylus, steel

stainless steel

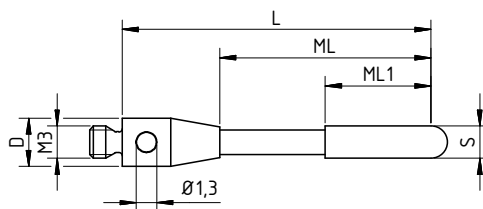


Part No.	S mm	L mm	ML mm	ML1 mm	D mm	DS mm	DS1 mm	Weight g
K651153	1.5	11	5	1.5	4			0.53
K651154	3	13	8.5	4	4			0.79

STYLI M3

Cylinder stylus, ruby

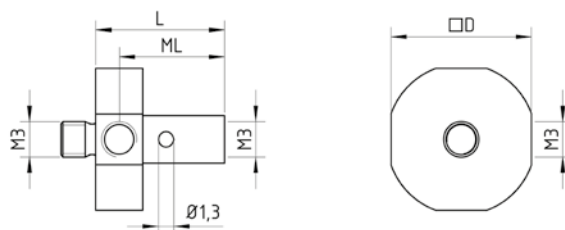
base stainless steel
stem tungsten carbide
tip ruby



Part No.	S mm	L mm	ML mm	ML1 mm	D mm	DS mm	DS1 mm	Weight g
K651155	2	19	13	6.5	4			0.83

5-way stylus holder

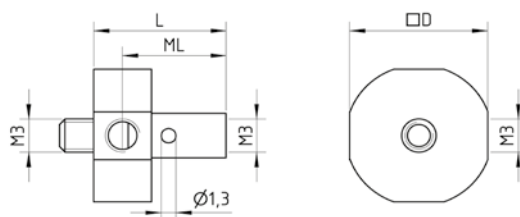
stainless steel, fixed



Part No.	S mm	L mm	ML mm	ML1 mm	D mm	DS mm	DS1 mm	Weight g
K651167		11	9		12			3.28

5-way stylus holder

stainless steel, rotatable

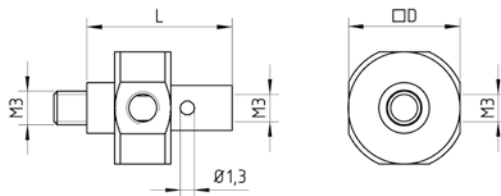


Part No.	S mm	L mm	ML mm	ML1 mm	D mm	DS mm	DS1 mm	Weight g
K651168		11.5	9		12			4.24

Styli M3

5-way stylus holder

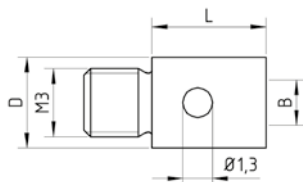
stainless steel, rotatable



Part No.	S mm	L mm	ML mm	ML1 mm	D mm	DS mm	DS1 mm	Weight g
K651169		13			10			3.23

Adaptor

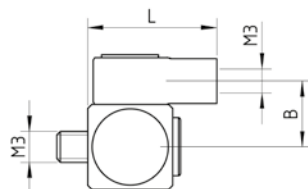
stainless steel



Part No.	S mm	L mm	ML mm	ML1 mm	D mm	DS mm	B	Weight g
K651170		5			4		M2	0.41
K651171		10			5		M4	0.9

Knuckle joint

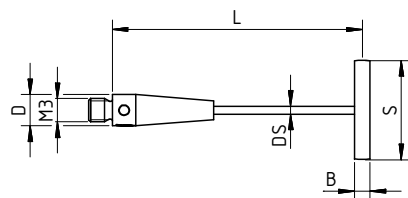
stainless steel



Part No.	S mm	L mm	ML mm	ML1 mm	D mm	DS mm	B mm	Weight g
K651180		11.5			4		5.5	3.71

Disk stylus steel

base stainless steel
stem tungsten carbide
disk hardened steel

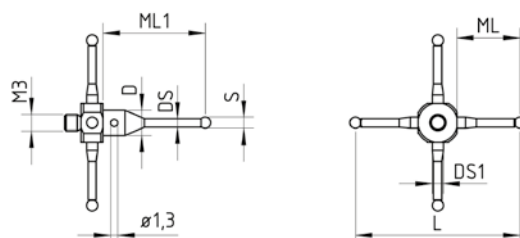


Part No.	S mm	L mm	ML mm	ML1 mm	D mm	DS mm	B mm	Weight g
K651172	12.7	31			4	3.5	2.3	4

STYLI M3

4-way stylus

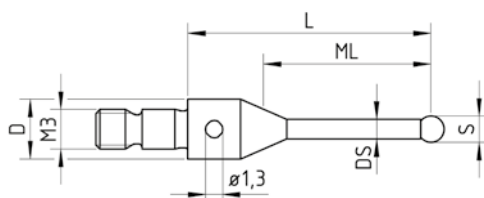
base stainless steel
stem tungsten carbide
stainless steel
ball ruby



Part No.	S mm	L mm	ML mm	ML1 mm	D mm	DS mm	DS1 mm	Weight g
K651163	2	30	8	18.5	3H7	1.5	2	1.82
K651164	2	50	12	28.5	3H7	1.5	2	2.58

Stylus for multi-way stylus

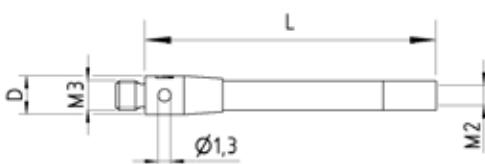
base stainless steel
ball ruby



Part No.	S mm	L mm	ML mm	ML1 mm	D mm	DS mm	DS1 mm	Weight g
K651165	2	18.5	11.58		4.5	1.5		1.16
K651166	2	28.5	13.25		4.5	1.5		1.75

Adaptor M3/M2 carbon fiber

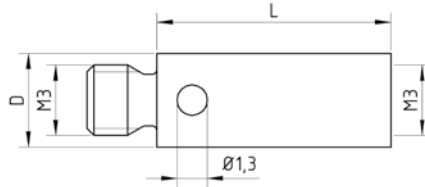
end pieces stainless steel
stem carbon fiber



Part No.	S mm	L mm	ML mm	ML1 mm	D mm	DS mm	DS1 mm	Weight g
K651409		30			4	3		1,6
K651410		55			4	3		2
K651411		80			4	3		2,8

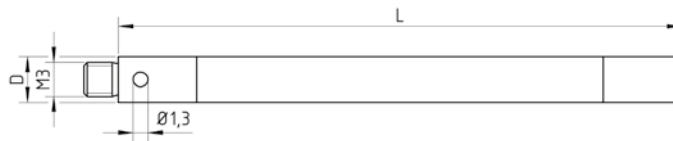
Styli M3

Extension steel stainless steel



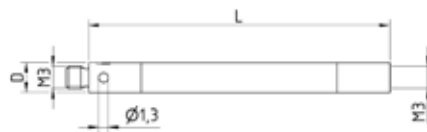
Part No.	S mm	L mm	ML mm	ML1 mm	D mm	DS mm	DS1 mm	Weight g
K651156		10			4			0.76
K651157		20			4			1.58
K651158		30			4			2.63
K651159		35			4			3.16
K651160		40			4			3.47
K651161		50			4			4.44

Extension ceramic end pieces stainless steel stem ceramic



Part No.	S mm	L mm	ML mm	ML1 mm	D mm	DS mm	DS1 mm	Weight g
K651162		50			4			2.78

Extension carbon fiber end pieces stainless steel stem: carbon fiber



Part No.	S mm	L mm	ML mm	ML1 mm	D mm	DS mm	DS1 mm	Weight g
K651425		30			4			1,9
K651422		50			4			2,1
K651423		75			4			2,6
K651424		100			4			3,1

Components for measuring heads WITH M4 THREAD

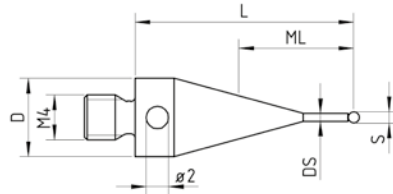
TP7
SP600
MPP310
MTP2000



Styli M4

Stylus steel

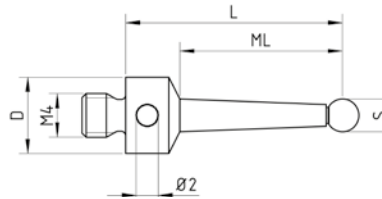
base stainless steel
ball ruby



Part No.	S mm	L mm	ML mm	ML1 mm	D mm	DS mm	DS1 mm	Weight g
K651186	1	19.5	4		7	0.7		2.52
K651187	2	19	8		7	1.35		2.25
K651188	4	18	13		7	3		2.13
K651185	5	17.5	12.5		7	3.5		2.39
K651189	5	20	15		7	3.5		2.3
K651192	5	50	36		7	4		4.72
K651193	5	100	86		7	4		11.3
K651190	6	20	15.5		7	4.5		3.51
K651191	8	20	20		7	5.5		4.72

Stylus steel

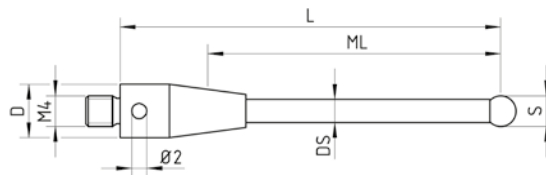
base stainless steel
ball ruby



Part No.	S mm	L mm	ML mm	ML1 mm	D mm	DS mm	DS1 mm	Weight g
K651194	3	20	14.5		7			2.03

Stylus ceramic

base stainless steel
stem ceramic
ball ruby

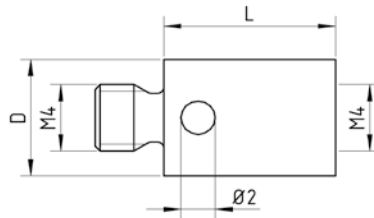


Part No.	S mm	L mm	ML mm	ML1 mm	D mm	DS mm	DS1 mm	Weight g
K651321	4	50	33.5		7	3		4.73
K651404	6	50	36		7	4		5.09
K651403	6	100	86		7	4		7.76
K651182	8	50	50		7	4.5		6.06
K651184	8	100	100		7	4.5		9.14

STYLI M4

Extension steel

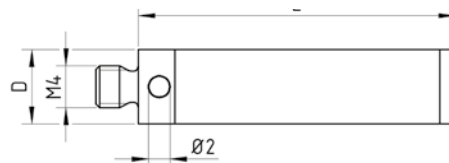
stainless steel



Part No.	S mm	L mm	ML mm	ML1 mm	D mm	DS mm	DS1 mm	Weight g
K651199		10			7			2.39
K651200		15			7			3.81
K651201		20			7			5.33
K651202		30			7			8.52

Extension ceramic

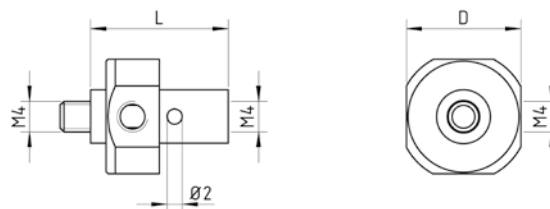
end pieces stainless steel
stem ceramic



Part No.	S mm	L mm	ML mm	ML1 mm	D mm	DS mm	DS1 mm	Weight g
K651203		30			7			5.09
K651204		50			7			6.15
K651205		100			7			10.6

5-way stylus holder

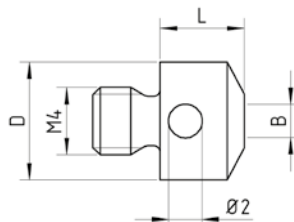
stainless steel, rotatable



Part No.	S mm	L mm	ML mm	ML1 mm	D mm	DS mm	DS1 mm	Weight g
K651206		18			15			12.1

Adaptor

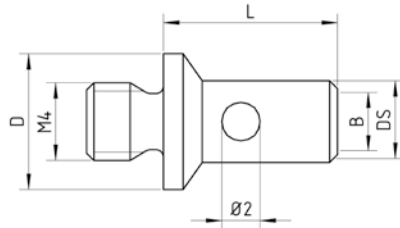
stainless steel



Part No.	S mm	L mm	ML mm	ML1 mm	D mm	DS mm	B mm	Weight g
K651207		5			7		M2	1.41

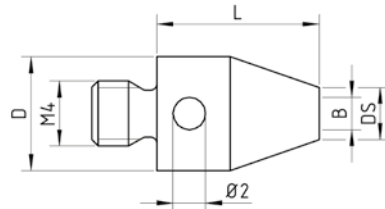
Styli M4

Adaptor
stainless steel



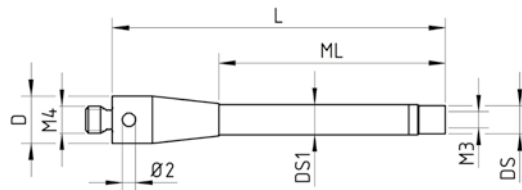
Part No.	S mm	L mm	ML mm	ML1 mm	D mm	DS mm	B mm	Weight g
K651208		9			7	4.2	M3	1.45
K651209		20			7	4.2	M3	6.15

Adaptor
stainless steel



Part No.	S mm	L mm	ML mm	ML1 mm	D mm	DS mm	B mm	Weight g
K651212		10			7	3.2	M2	2.2
K651213		10			7	4.2	M3	2.2

Adaptor ceramic
end pieces stainless steel
stem ceramic



Part No.	S mm	L mm	ML mm	ML1 mm	D mm	DS mm	DS1 mm	Weight g
K651214		50	34		7	4.0	4.5	4.4
K651215		75	59		7	4.0	4.5	5.48
K651216		100	84		7	4.0	4.5	6.71

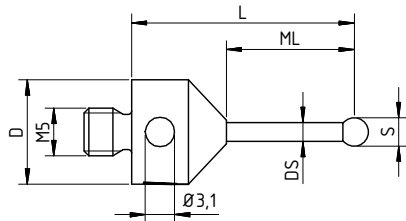
Components for measuring heads SP80
WITH M5 THREAD



Styli M5

Stylus tungsten carbide

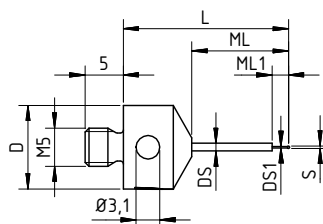
base titanium
stem tungsten carbide
ball ruby



Part No.	S mm	L mm	ML mm	ML1 mm	D mm	DS mm	DS1 mm	Weight g
K650090	3	23.5	13.5		11	2		3.88
K650089	3	32	22		11	2		4.29
K650087	3	48.5	38.5		11	2		4.98
K650080	3	56.5	46.5		11	2		5.38
K650088	4	31.5	21.5		11	2		4.43
K650085	4	62	52		11	2		5.79
K650084	5	47.5	37.5		11	3.5		8.95
K650086	5	50.5	40.5		11	3.5		9.28
K650074	5	72.5	62.5		11	3.5		12.49
K650083	6	51	41		11	3.5		9.47
K650082	7	51.5	41.5		11	3.5		9.76
K650078	8	59.5	46.5		11	6		24.64
K650073	8	71	58		11	6		29.84
K650072	8	96	83		11	6		41.16
K650107	8	110.5	97.5		11	6		46.24
K650076	9	60	46		11	6		25.32
K650079	10	60.5	47.5		11	6		25.86
K650106	10	113	100		11	6		47.67

Stylus tungsten carbide

base stainless steel
stem tungsten carbide
ball ruby

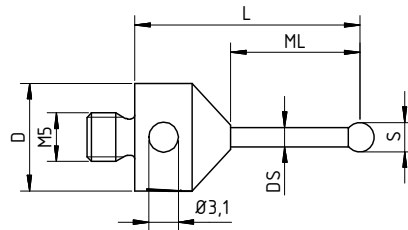


Part No.	S mm	L mm	ML mm	ML1 mm	D mm	DS mm	DS1 mm	Weight g
K650691	0.3	21.65	12.65	2.3	11	1	0.2	6.44
K650692	0.5	21.75	12.75	2.5	11	1	0.3	6.34
K650693	0.6	21.8	12.8	4.6	11	1	0.4	6.27
K650687	0.8	21.9	12.9	4.8	11	1	0.6	6.34
K650689	1	22	13	5	11	1	0.8	6.39

STYLI M5

Stylus tungsten carbide

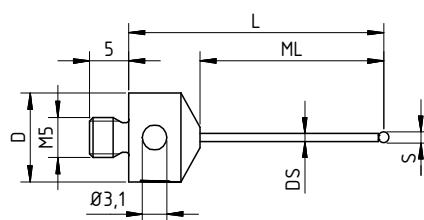
base titanium
stem tungsten carbide
ball silicon nitride



Part No.	S mm	L mm	ML mm	ML1 mm	D mm	DS mm	DS1 mm	Weight g
K656000	3	23.5	13.5		11	2		3.88
K656001	3	32	22		11	2		4.29
K656002	3	48.5	38.5		11	2		4.98
K656003	3	56.5	46.5		11	2		5.38
K656004	4	31.5	21.5		11	2		4.43
K656005	4	62	52		11	2		5.79
K656006	5	47.5	37.5		11	3.5		8.95
K656007	5	50.5	40.5		11	3.5		9.28
K656008	5	72.5	62.5		11	3.5		12.49
K656009	6	51	41		11	3.5		9.47
K656010	7	51.5	41.5		11	3.5		9.76
K656011	8	59.5	46.5		11	6		24.64
K656013	8	70	57		11	6		29.67
K656014	8	71	58		11	6		29.84
K656015	8	96	83		11	6		41.16
K656018	9	60	46		11	6		25.32
K656020	10	60.5	47.5		11	6		25.86

Stylus tungsten carbide

base stainless steel
stem tungsten carbide
ball ruby

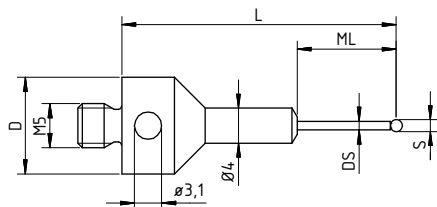


Part No.	S mm	L mm	ML mm	ML1 mm	D mm	DS mm	DS1 mm	Weight g
K650688	1.35	32.225	23.225		11	1		6.6
K650685	1.5	32.25	23.25		11	1		6.59
K650686	2	32.5	23.5		11	1.5		6.82
K650690	2.5	32.75	23.75		11	1.5		6.96

Styli M5

Stylus tungsten carbide

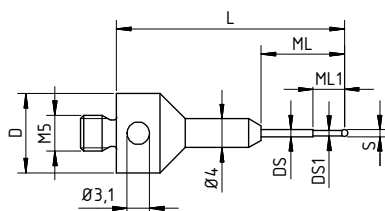
base titanium
stem tungsten carbide
ball ruby



Part No.	S mm	L mm	ML mm	ML1 mm	D mm	DS mm	DS1 mm	Weight g
K650648	1.35	31.325	11.325		11	1		3.87
K650649	1.35	43.325	18.325		11	1		4.24
K650650	1.5	31.25	11.25		11	1		3.82
K650651	1.5	43.25	18.25		11	1		4.24
K650652	2	31	11		11	1.5		4.07
K650658	2	43	18		11	1.5		4.49
K650659	2	57	32		11	1.5		4.88
K650660	2.5	30.75	10.75		11	1.5		4.07
K650653	2.5	42.75	17.75		11	1.5		4.58
K650661	2.5	56.75	31.75		11	1.5		4.9

Stylus tungsten carbide

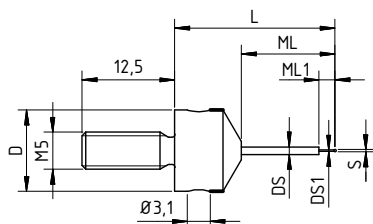
base titanium
stem tungsten carbide
ball ruby



Part No.	S mm	L mm	ML mm	ML1 mm	D mm	DS mm	DS1 mm	Weight g
K650646	0.8	31.6	11.6	4.4	11	1	0.6	3.77
K650647	1	31.5	11.5	4.5	11	1	0.8	3.9

Stylus for multi-way stylus

base stainless steel
stem tungsten carbide
ball ruby

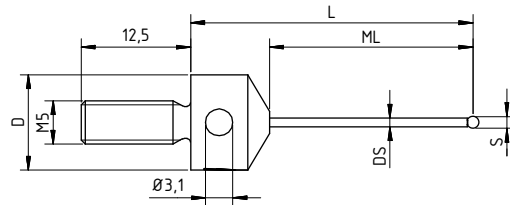


Part No.	S mm	L mm	ML mm	ML1 mm	D mm	DS mm	DS1 mm	Weight g
K650329	0.3	21.65	12.65	2.15	11	1	0.2	6.44
K650328	0.5	21.75	12.75	2.25	11	1	0.3	6.34
K650327	0.6	21.8	12.8	4.3	11	1	0.4	6.27
K650326	0.8	21.9	12.9	4.4	11	1	0.6	6.34
K650325	1	22	13	4.5	11	1	0.8	6.39

STYLI M5

Stylus for multi-way stylus

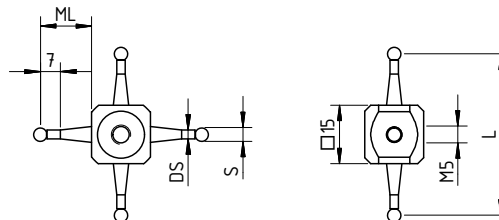
base stainless steel
stem tungsten carbide
ball ruby



Part No.	S mm	L mm	ML mm	ML1 mm	D mm	DS mm	DS1 mm	Weight g
K650324	1.35	32.225	23.225		11	1		6.6
K650323	1.5	32.25	23.25		11	1		6.59
K650322	2	32.5	23.5		11	1.5		6.82
K650321	2.5	32.75	23.75		11	1.5		6.96

4-way cube

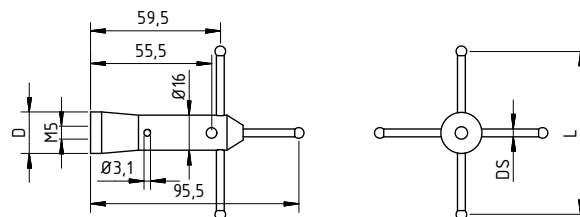
cube titanium
stem tungsten carbide
ball ruby



Part No.	S mm	L mm	ML mm	ML1 mm	D mm	DS mm	DS1 mm	Weight g
K650114	1	44	14.5			0.7		15.3
K650113	1.5	43.5	14.25			1.1		14.93
K650112	2	43	14			1.5		15.1
K650111	2.5	42.5	13.75			1.8		15.46
K650555	3.5	41.5	13.25			2.2		16.64

Multi-way stylus

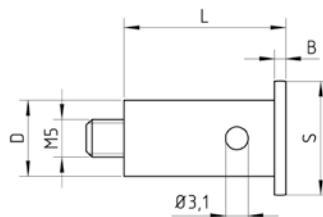
base aluminium
stem tungsten carbide
ball ruby



Part No.	S mm	L mm	ML mm	ML1 mm	D mm	DS mm	DS1 mm	Weight g
K650069	5	75			19	3.5		63.05

Ball disk stylus

base aluminium
disk hardened steel or ceramic

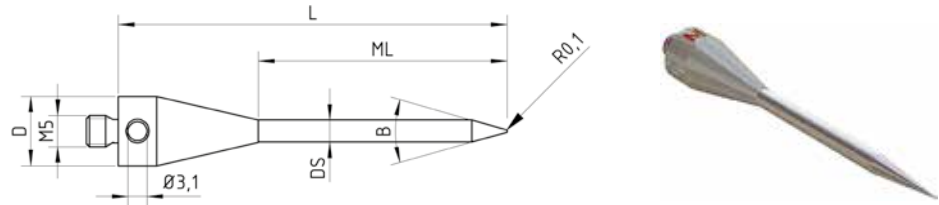


Part No.	disc	S mm	L mm	ML mm	D mm	DS mm	B mm	Weight g
K650357	steel	10	21.5		7		1.5	3.57
K650356	steel	15	21.5		10		1.5	6.34
K650170	ceramic	15	40		7		1	5
K650164	ceramic	20	60		7		1	8

Styli M5

Tip stylus

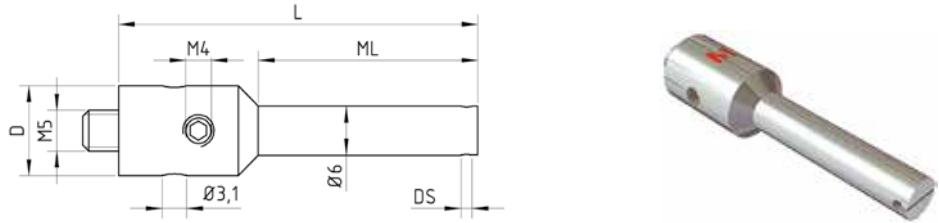
base titanium
stem tungsten carbide



Part No.	S mm	L mm	ML mm	ML1 mm	D mm	DS mm	B	Weight g
K650068		61	39		11	3.5	30°	12.13

Stylus holder

base stainless steel



Part No.	S mm	L mm	ML mm	ML1 mm	D mm	DS mm	DS1 mm	Weight g
K650361		45	27.5		11	1.0-1.5		11.15

5-way stylus holder

stainless steel

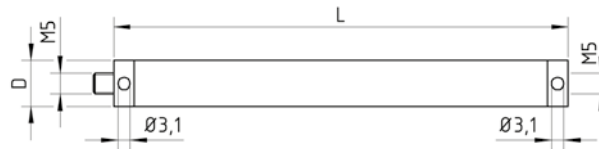


Part No.	S mm	L mm	ML mm	ML1 mm	D mm	DS mm	DS1 mm	Weight g
K650128		10			11	1		5.73
K650122		10			11	1.5		5.62

STYLI M5

Extension carbon fibre thermo

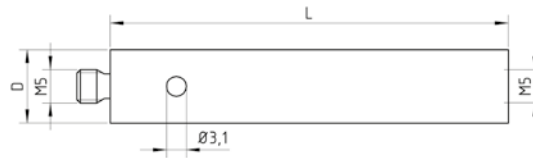
end pieces titanium
improved bending strength
and torsion
resistance thermostable



Part No.	S mm	L mm	ML mm	ML1 mm	D mm	DS mm	DS1 mm	Weight g
K656023		40			11			7.6
K656024		50			11			8.3
K656025		60			11			9
K656026		70			11			9.7
K656027		80			11			10.4
K656028		90			11			11.1
K656029		100			11			11.8
K656030		120			11			13.2
K656031		150			11			15.4
K656032		180			11			17.5
K656033		200			11			18.9
K656034		250			11			22.4
K656035		300			11			25.9
K656036		400			11			33.0
K656037		40			20			23.8
K656038		50			20			25.1
K656039		60			20			26.5
K656040		80			20			29.3
K656041		100			20			32.1
K656042		120			20			34.9
K656043		150			20			39.0
K656044		180			20			43.2
K656045		200			20			46.0
K656046		250			20			52.9
K656047		300			20			59.9
K656048		400			20			73.8
K656049		500			20			87.7
K656050		600			20			101.5

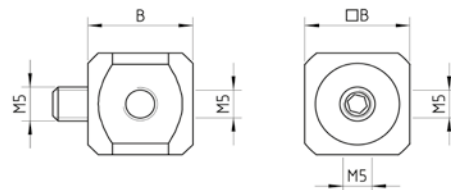
Styli M5

Extension steel stainless steel



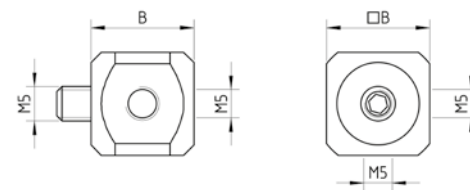
Part No.	S mm	L mm	ML mm	ML1 mm	D mm	DS mm	DS1 mm	Weight g
K650341		10			11			6.16
K650342		15			11			9.74
K650343		20			11			13.04
K650344		40			11			27.51
K650345		60			11			42.76
K650301		80			11			57.01
K650302		100			11			73.17

Cube titanium



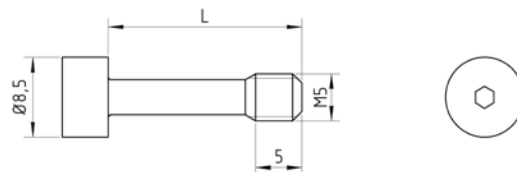
Part No.	S mm	L mm	ML mm	ML1 mm	D mm	DS mm	B mm	Weight g
K650052							15	11.65
K650051							20	31.09

Cube aluminium



Part No.	S mm	L mm	ML mm	ML1 mm	D mm	DS mm	B mm	Weight g
K650499							15	7.5
K650498							20	20

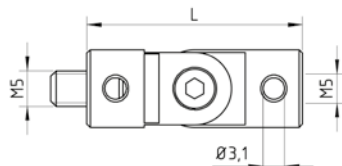
Screw for cube stainless steel



Part No.	S mm	L mm	ML mm	ML1 mm	D mm	DS mm	DS1 mm	Weight g
K650070		21						3.65
K650041		26						4.04

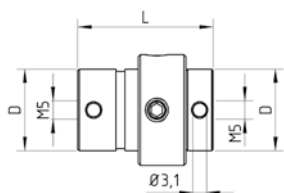
STYLI M5

Joint titanium



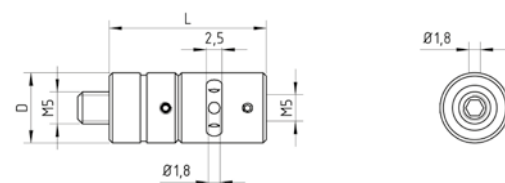
Part No.	S mm	L mm	ML mm	ML1 mm	D mm	DS mm	DS1 mm	Weight g
K650054		30			11			10.88
K650053		36			18			36.49

Swivel piece titanium



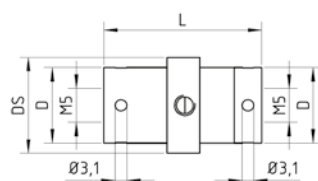
Part No.	S mm	L mm	ML mm	ML1 mm	D mm	DS mm	DS1 mm	Weight g
K650049		30			18			43.39

Swivel piece piezo titanium



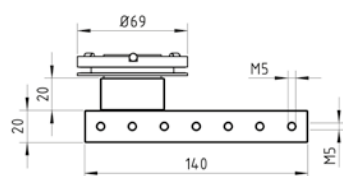
Part No.	S mm	L mm	ML mm	ML1 mm	D mm	DS mm	DS1 mm	Weight g
K650627		25			11			10.76
K650047		25			18			26.1

Swivel piece titanium - hardened steel patented



Part No.	S mm	L mm	ML mm	ML1 mm	D mm	DS mm	DS1 mm	Weight g
K650977		23			11	14		11.92
K650976		26.7			18	19.8		33.68

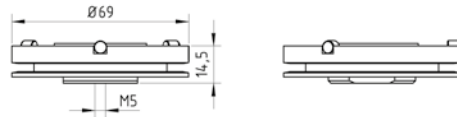
Multi-way stylus holder aluminium only for measuring probe head



Part No.	VPE	S mm	L mm	ML mm	ML1 mm	D mm	DS mm	DS1 mm	Weight g
K650497	1								357

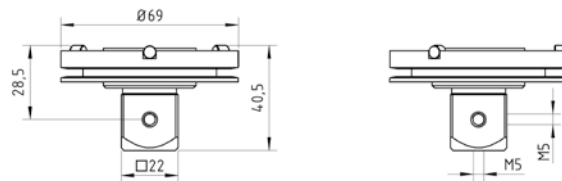
Styli M5

Adaptor plate with disk with cylinders



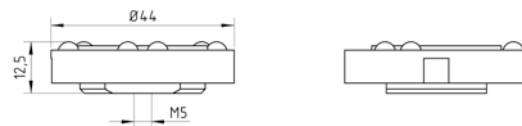
Part No.	VPE						Weight g
K650605	1					1 piece	166

Adaptor plate with cube (MT) with cylinders



Part No.	VPE						Weight g
K650628	1					1 piece	181
K650551	2					1 piece	181
K650140	10					1 piece	181

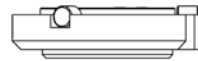
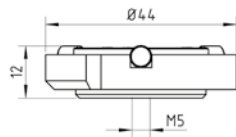
Adaptor plate switch.-system with balls



Part No.	VPE						Weight g
K650857	1					1 piece	72
K650552	2					1 piece	72
K650141	10					1 piece	72

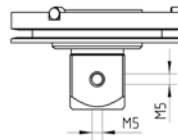
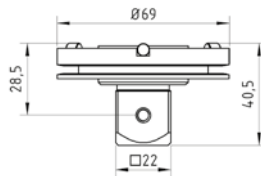
STYLI M5

Adaptor plate Prismo ST with cylinders



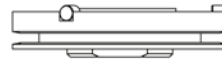
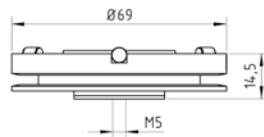
Part No.	VPE						Weight g
K650553	2					1 piece	67
K650655	10					1 piece	67

Adaptor plate with cube Prismo Vast with cylinders with ID-chip



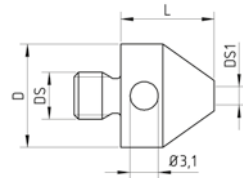
Part No.	VPE						Weight g
K650978	1					1 piece	158
K650979	2					1 piece	158
K650980	10					1 piece	158

Adaptor plate with disk Prismo Vast with cylinders with ID-chip



Part No.	VPE						Weight g
K650610	1					1 piece	131
K650842	2					1 piece	131
K651277	10					1 piece	131

Adaptor stainless steel

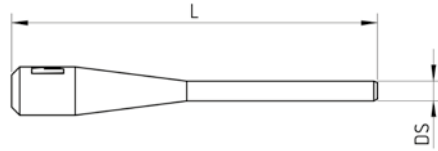


Part No.	S mm	L mm	ML mm	ML1 mm	D mm	DS mm	DS1 mm	Weight g
K650448		10			11	M5	M2	4.9
K650447		10			11	M5	M3	4.78
K650960		10			11	M5	M4	4.6

Accessories

Pin spanner

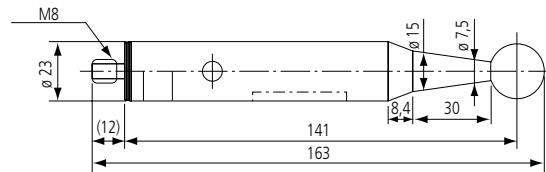
stainless steel or
hardened steel



Part No.	S mm	L mm	ML mm	ML1 mm	D mm	DS mm	DS1 mm	Weight g
K651223		23				1.2		0.51

Master ball

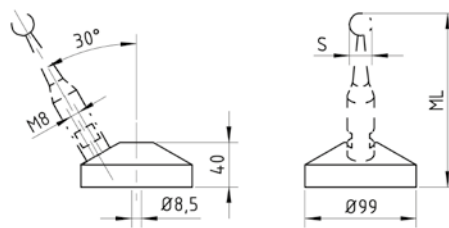
Base: Stainless Steel
Tip: Ruby (ø 10 mm)
Ceramic (ø 20 mm)



Part No.	S mm	L mm	Description	B mm	Weight g
06ABH830D	10		incl. factory certificate		
06ABM941D	20		High Accuracy Master Ball (e.g. for LEGEX and FALCIO-Apex Series) Incl. Calibration Certificate from Swiss National Laboratory METAS		
06ABM944D	20		Standard Master Ball		

Base plate for calibration sphere

stainless steel

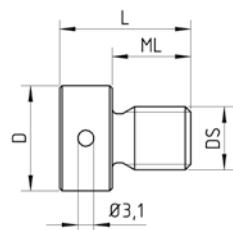


Part No.	S mm	ML mm		B mm	Weight g
K651222		141			

SPECIAL ORDER ARTICLE

Thread insert

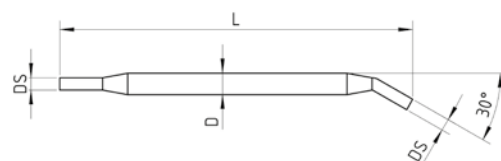
steel, hardened and ground



S mm	L mm	ML mm	ML1 mm	D mm	DS mm	DS1 mm	Weight g
	16	10		10	M4		3.75
	16	10		10	M5		4.67
	18	12		12	M6		7.04
	20	12		15	M8		13.82
	25	15		18	M10		25.91
	25	15		20	M12		32.96

Pin spanner

stainless steel or
hardened steel



S mm	L mm	ML mm	ML1 mm	D mm	DS mm	DS1 mm	Weight g
	49			2.5	1.7		2.07
	70			5	2.9		2.07

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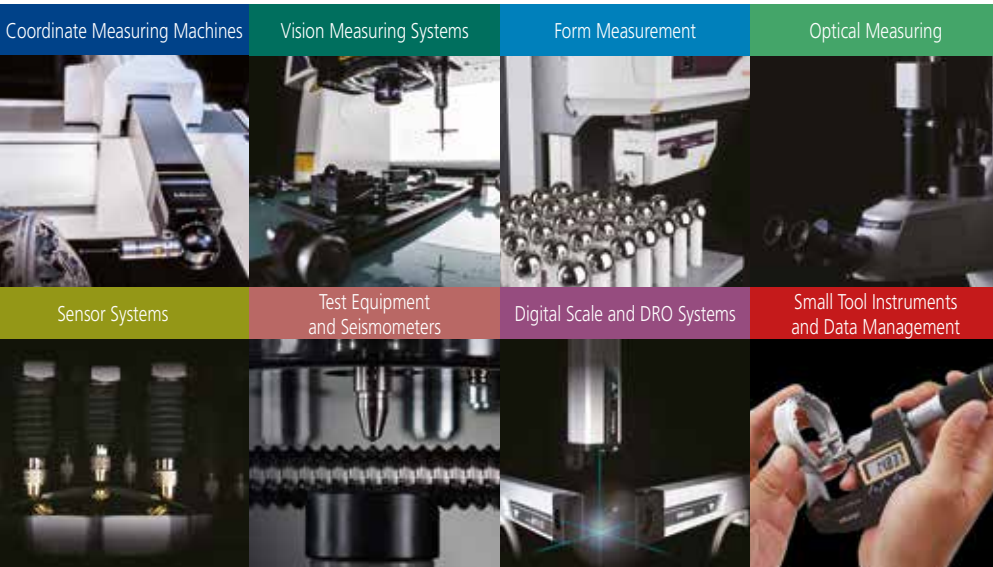
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