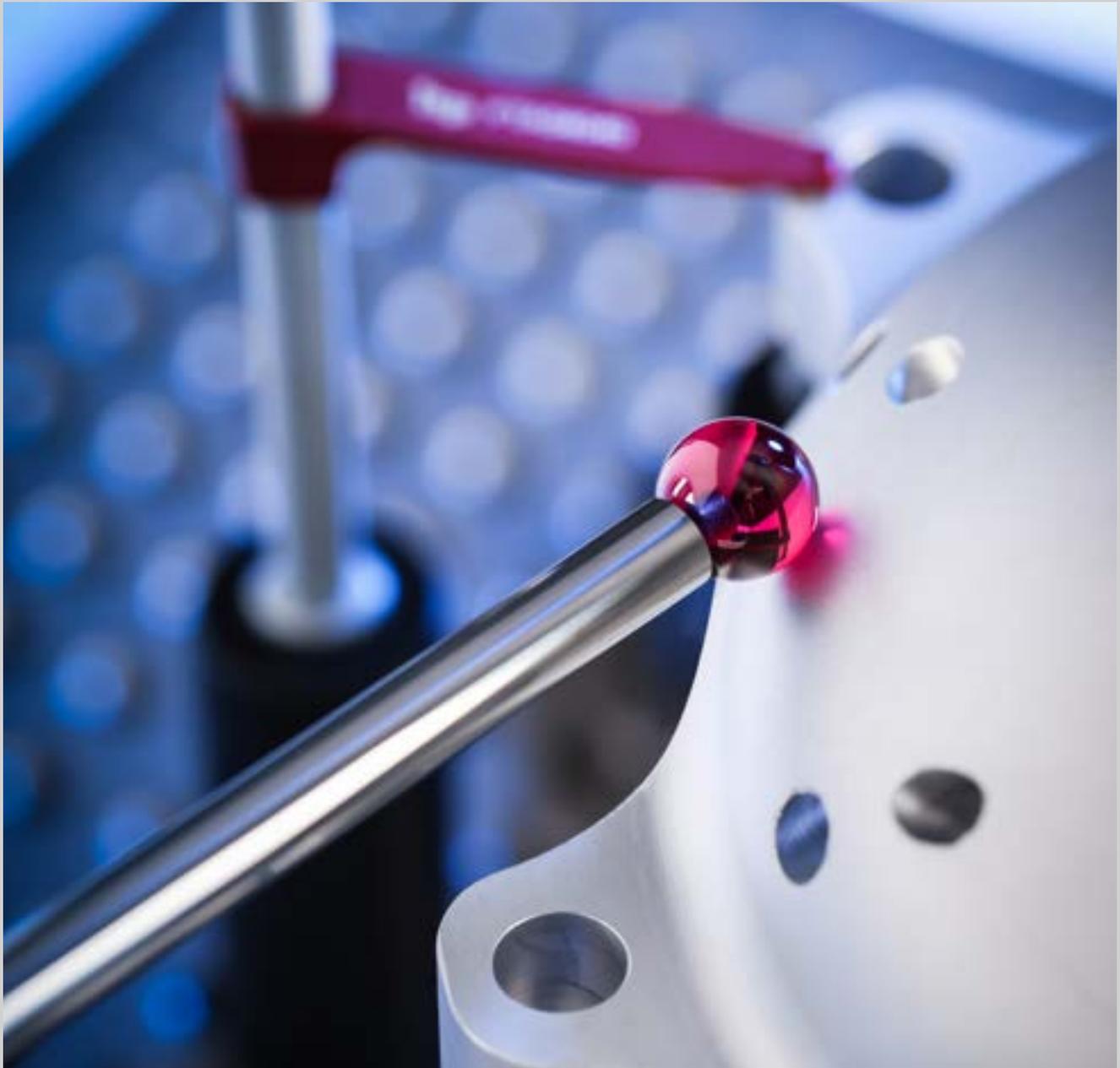


# Styli and Accessories





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# Materials

## Carbide

Deflection-resistant carbide stems for all standard applications at stable ambient temperatures, primarily for the use in the measuring room.



## Aluminium

Lightweight, for smaller temperature gradients. For use in temperature stable measuring rooms.



## Carbon fiber

Very lightweight and extremely strong material with a thermal expansion coefficient approaching zero. Ideal for long probing elements in production measuring technology at ambient temperatures of 15 to 45°C.



## Ceramics

A very lightweight material of an extraordinary strength. For the use in long probing elements with a significantly lower weight. For greater temperature gradients in applications of the production environment.



## Steel

High-strength precision probing elements with a material strength of 1100 N/mm<sup>2</sup> for ultra precise measuring jobs, e.g. as reference probing elements for calibration purposes.



## Titanium

Extremely lightweight, high-strength material. itp uses this material in many combinations as connecting element or for extensions. Thanks to the cutting edge laser welding technology, the connections are firmly fused, giving the probing configurations the highest degree of rigidity and stability.



## Carbon fiber tube

Wound carbon fiber tube of the highest quality used in aviation and space technology for probing elements, extensions, and complex probing configurations. With a thermal expansion coefficient in the nano range at temperatures between 15 and 40°C. Reproducible results and highest process stability in production measuring technology.



## Ball materials

### Silicon nitride

The probe ball material of the future for coordinate measuring technology. Extremely wear-resistant ceramic material with the lowest surface roughness of all ball materials. Silicon nitride is not attracted by aluminium. That is why during the scanning of aluminium surfaces the transfer of material onto the ball surface is significantly smaller.



### Diamond coated

Our probes of the UltraScanning series consist of a silicon carbide core whose surface is covered with a diamond coating of about 0.03 mm. The material coating does not adhere to the ball, and the slightest material residue can simply be wiped off.



### Ruby

The ball material for standard applications that has been used for years.



### Aluminium oxide

This is the most commonly used high-performance ceramic material. Has a very high hardness and its areas of application are comparable to those of zirconium oxide.



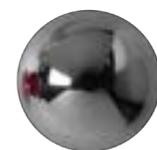
### Zirconium oxide

Due to its specific surface, this material is especially appropriate for the scanning of abrasive surfaces, such as cast elements.



### Carbide

A material characterized by its high hardness, wear resistance and high density. Its special fields of application are, for example, calibration ball standards.



# Types

## Straight Styli

### Type A



The simplest form of a straight stylus. The stem shape is cylindrical throughout and can be made of stainless steel, carbide, ceramic or CFRP. These styli usually have three components: holder, stem, and ball. In a few cases, the holder and shaft are monolithically made of stainless steel. The ball materials can be found in our material overview.

### Type B



A straight stylus with a single or multiple stepped stem made of carbide. These styli usually have three components: holder, stem, and ball. The ball materials can be found in our material overview.

### Type C



Fine probes are mainly used for measuring small bore diameters. Due to the stepped base, a greater overall length is reached with high stability. The stem has a continuous cylindrical shape and is made of tungsten carbide. These styli usually have three components: holder, stem, and ball.

### Type D



Fine probes are mainly used for measuring small bore diameters. Due to the stepped base, a greater overall length can be reached with high stability. The shafts are single or multiple-stepped and made of carbide. These styli have three components: holder, stem, and ball.

### Type E



Fine styli with a conical holder enable the combination of small ball diameters, considerable overall length, and maximum rigidity. These styli consist of three parts: Holder, stem, and ball.

## Straight Styli

### Type F



A straight probe with a long (12.5 mm) M5 thread. The stem is cylindrical and can be made from stainless steel, carbide, ceramic, or CFRP. These styli usually have three components: holder, stem, and ball. The holder and stem are monolithically made from stainless steel in a few cases. The ball materials are listed in our material overview.

### Type G



A straight probe with a single or multi-stepped carbide stem. The M5 thread is 12.5 mm long. These styli consist of three components: holder, stem, and ball. The ball materials are listed in our material overview.

### Type J



A straight stylus in its simplest form. The stem and holder geometry are cylindrical throughout and have the same diameter. The holders can be manufactured monolithically from stainless steel or have a carbon fiber stem. The ball materials are listed in our material overview.

### Type K



Pointer styli are a form of straight styli in which the ball radius is close to zero. When probing, it should be noted that surfaces can very easily be damaged by the tip, which is itself very sensitive to wear or damage. These probes can detect roughness to a limited extent. However, they are mainly used for small probing surfaces or self-centering probing of bores.

### Type S



Styli consist of a stem and ball and have no thread. Suitable clamping holders are required to use these styli. Advantages: quick changeover is possible; they are inexpensive and flexible.

## Straight styli

### Type T



Styli consists of a stem and a ball and does not have a thread. Appropriate clamp holders are required to use them. Advantage: Quick retooling is possible; it is inexpensive and flexible. This version has a stepped stem.

## Star styli

### Type U



The cube star is a 4-way star stylus without a direct threaded connection. The base material of the standard version is titanium. A clamping screw is required for attachment to the measuring system.

### Type V



Type V star styli has a threaded connection and can be mounted directly. They usually have two to four probe arms in the radial direction and one in the central direction. The axially aligned probe arms clamp the rotating star depending on the configuration.

### Type W



The type W star styli has a threaded connection and can be mounted directly. In the radial direction, it has two to four probe arms. Depending on the configuration, clamping screws with the same internal thread are used in the central direction.

## Adaptor holders

### Thread Adaptors



Thread adaptors are used to combine probes and accessories with different thread sizes.

## Adaptor holders

### HOLDERS for non-threaded Styli



Holders for non-threaded styli (available in central and radial versions) enable the use of threadless styli.

### Type Knuckles



Knuckles and rotary knuckles are commonly used to create a spatial angle of probes. A rotary knuckle is required for the rotational alignment of the first type.

### Rotary Adaptors



The rotary adaptor is used for the rotary alignment of touch probes that do not have an integrated solution for carrying out the measuring task.

### Styli Holders/ Cubes



Both styli holders and cubes are mainly used to produce angled or other styli configurations.

## Extensions

### Plate Extensions



Plate extensions are prefabricated configurations that combine an extension with a titanium cube. These components have a mounting plate and can be mounted directly onto a removable disc. In this way, a connection point can be avoided, making the resulting configuration more stable.

## Extensions

### Styli Extensions



Extensions are used to bring the probe into areas of the workpiece that are difficult to access or separate several probes from each other so that the probes do not interfere. By the metrology rules, extensions should be kept as short and rigid as possible. The number of screw connection points should be kept as small as possible.

## Cylinders probes

### Type P



Cylinder probes are used for probing thin sheet metal and sharp edges. They are used where precise probing with a ball is not possible. The face of the probing element of this type is ground flat.

### Type Q



Cylinder probes are used for probing thin sheet metal and sharp edges, where precise probing with a ball is not possible. The end face of the probing element is spherical and is used for axial probing.

### Type R



Cylinder probes are used for probing thin sheet metal and sharp edges, where precise probing with a ball is not possible. The face of the probing element is spherical and is ideal for probing deep features and bores in X, Y and Z directions. The stem is cylindrical throughout without a step.

## Disc Styli

### Type N



Spherical discs are generally used alone or in combination with a clamping probe or a clamping screw. These discs are usually used when large probe diameters are required to measure diameters in undercuts.

## Disc Styli

### Type M



A spherical disc stylus offers the convenience of a straight spherical disc as a probe element. Regarding function, spherical disc styli are identical to spherical discs, but they provide better and more stable connections due to the fixed mounting. They also have a more comprehensive feasibility range regarding disc thickness.

### Type O



A spherical disc stylus with a through stem offers greater rigidity than a "normal" spherical disc stylus. Otherwise, the two types function and are applied in the same way.

## Adaptor plates

### Type Vast



Adapter plates provide an interface between a measuring device's measuring head and the probe configuration. All adapter plates compatible with Zeiss VAST systems belong to this type.

### Type Vast XXT



Adapter plates provide an interface between the measuring head of a measuring device and the probe configuration. This type includes all Adaptor plates compatible with ZEISS VAST XXT systems.

## Accessories

### Type Styli Tools



Stylus tools are used for mounting probes and accessories. Their dimensions match the thread size and correspond to the itp standard program.

## Accessories

### Type Calibration Spheres



Calibration spheres are used to calibrate measuring probes. They are supplied with a factory certificate.

The material of the ball standards is aluminum oxide. It is also known as ceramic.

### Type Screws



These items are used as clamping screws for star styli, spherical discs, or cubes.

### Thread Measuring Gauges



Thread-measuring gauges are used for the indirect measurement of threaded holes and distances.

### Type Other



Accessories can be used across pallets, e.g., crash protection devices or magnetic bases.

### Type Reference Styli



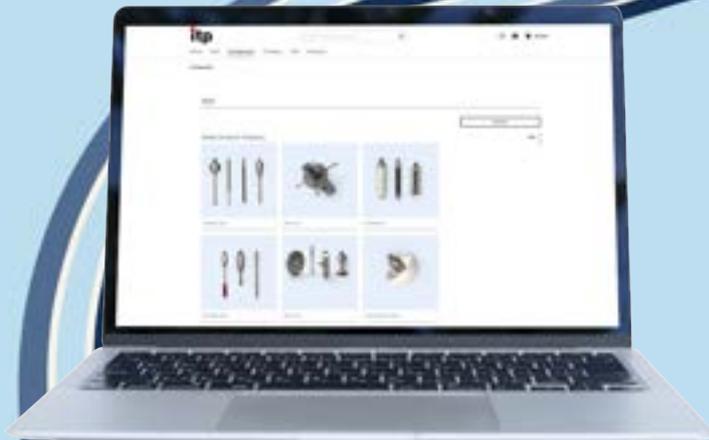
Straight styli with special optical features for determining the position of the calibration sphere.

## Type Hemispherical Styli



Hemispherical stylus are suitable for measuring elements requiring a large diameter of the probe ball with low weight or reduced overall height, as opposed to disc probes, which only allow radial probing. The hemispherical stylus probes can also be used to measure the stem direction. The advantage is that the entire surface of the hollow hemisphere can be used for probing.

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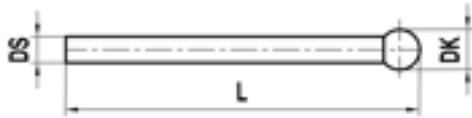




## Without Thread



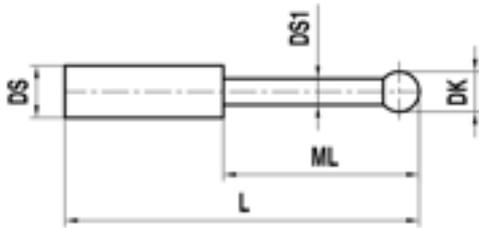
## Straight styli: Type S



### Stem material carbide, ball material ruby

Pos.	Item number	DK	L	DS	Weight (g)
1	KTM501310026	1.35	26.35	1.00	0.30
2	KTSO01510016	1.50	16.00	1.00	0.20
3	KTM501510026	1.50	26.50	1.00	0.30
4	KTSO02010016	2.00	16.00	1.00	0.20
5	KTM502015027	2.00	27.00	1.50	0.70
6	KTM502010027	2.00	27.00	1.00	0.30
7	KTM502515027	2.50	27.50	1.50	0.70
8	KTM502510027	2.50	27.50	1.00	0.30
9	KTM503020038	3.00	38.00	2.00	1.70
10	KTM505035045	5.00	45.00	3.50	5.80
11	KTM507004038	7.00	38.50	4.00	6.50
12	KTM510004040	10.00	40.00	4.00	7.60

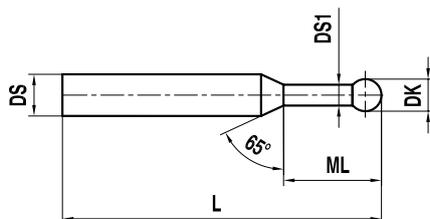
## Straight styli: Type T



### Stem material carbide, ball material ruby

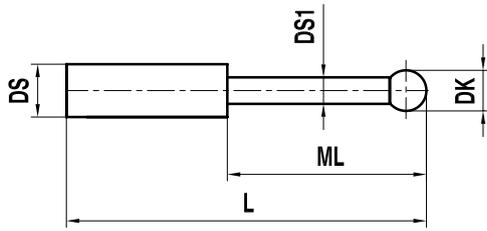
Pos.	Item number	DK	ML	L	DS	DS1	Weight (g)
1	KTM500201015	0.20	2.30	15.20	1.00	0.18	0.20
2	KTM5002501015	0.25	2.35	15.25	1.00	0.18	0.10
3	KTM500301015	0.30	2.30	15.30	1.00	0.20	0.10
4	KTM500302022	0.30	4.00	22.00	2.00	0.20	0.80
5	KTM500401015	0.40	2.50	15.40	1.00	0.30	0.10
6	KTM500501015	0.50	2.50	15.50	1.00	0.30	0.10
7	KTM500502022	0.50	4.25	22.25	2.00	0.30	0.80
8	KTM500601015	0.60	4.60	15.60	1.00	0.40	0.10
9	KTM500701015	0.70	4.60	15.70	1.00	0.40	0.10
10	KTM500801015	0.80	4.80	15.80	1.00	0.60	0.10
11	KTM500802022	0.80	4.40	22.40	2.00	0.60	0.90
12	KTM501001016	1.00	5.00	16.00	1.00	0.80	0.20
13	KTM501002022	1.00	4.50	22.50	2.00	0.80	0.80
14	KTM501002034	1.00	14.50	34.50	2.00	0.80	1.00

### Stem material carbide, ball material ruby



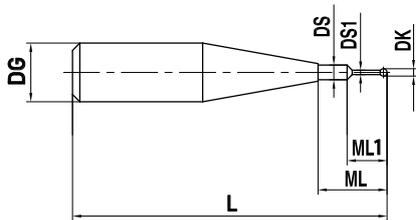
Pos.	Item number	DK	ML	L	DS	DS1	Weight (g)
1	KTM500301015/65°	0.30	2.30	15.30	1.00	0.20	0.10
2	KTM500501015/65°	0.50	2.50	16.00	1.00	0.30	0.20

**Stem material carbide, ball material ruby**



Pos.	Item number	DK	ML	L	DS	DS1	Weight (g)
1	KTM500804035	0.80	4.90	35.40	4.00	0.60	4.40
2	KTM501004035	1.00	5.00	35.50	4.00	0.80	4.60
3	KTM501004060	1.00	5.00	60.50	4.00	0.80	9.10
4	KTM501504035	1.50	5.25	35.75	4.00	1.00	4.70
5	KTM501504060	1.50	5.25	60.75	4.00	1.00	9.20
6	KTM502004036	2.00	5.50	36.00	4.00	1.20	4.80
7	KTM502004061	2.00	8.50	61.00	4.00	1.20	8.80
8	KTM503004036	3.00	9.00	36.50	4.00	1.80	4.70
9	KTM503004061	3.00	11.50	61.50	4.00	1.80	8.90
10	KTM505004037	5.00	12.50	37.50	4.00	3.00	5.60

**Stem material carbide, ball material ruby**



Pos.	Item number	DK	ML	ML1	L	DS	DS1	DS2	Weight (g)
1	KTM500504035	0.50	2.75	2.50	35.25	4.00	0.30	1.00	4.70

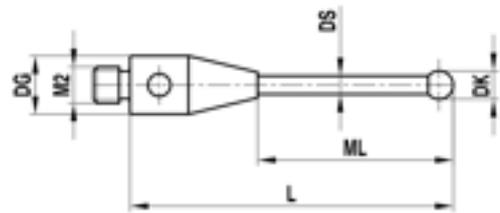
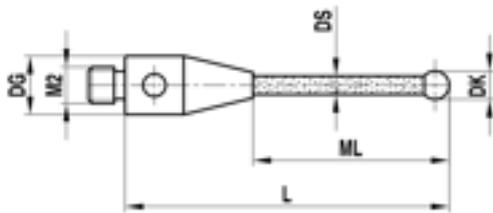




## Thread M2



## Straight styli: Type A



### Stem material stainless steel, ball material silicon nitride

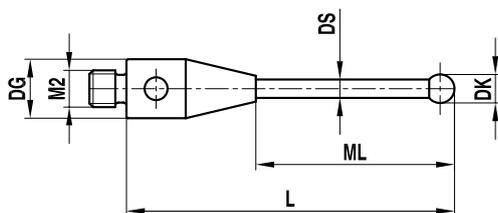
Pos.	Item number	DK	ML	DG	L	DS	Weight (g)
1	TIM2S1003010	1.00	5.00	3.00	10.50	0.70	0.20
2	TIM2S1503011	1.50	5.00	3.00	10.75	0.70	0.30
3	TIM2S2003011	2.00	6.00	3.00	11.00	1.00	0.30
4	TIM2S2003021	2.00	14.50	3.00	21.00	1.40	0.50
5	TIM2S2503011	2.50	6.50	3.00	11.25	1.00	0.30
6	TIM2S2503021	2.50	15.00	3.00	21.25	1.40	0.50
7	TIM2S3003011	3.00	6.00	3.00	11.50	1.50	0.40
8	TIM2S3003021	3.00	15.00	3.00	21.50	1.50	0.50
9	TIM2S4003012	4.00	7.00	3.00	12.00	1.50	0.50
10	TIM2S4003022	4.00	15.00	3.00	22.00	1.50	0.60
11	TIM2S5003012	5.00	7.50	3.00	12.50	2.50	0.60
12	TIM2S60R3013	6.00	8.00	3.00	13.00	2.00	0.70
13	TIM2S8003015	8.00	11.00	3.00	15.00	2.50	1.20



### Stem material ceramic, ball material silicon nitride

Pos.	Item number	DK	ML	DG	L	DS	Weight (g)
1	TKM2S3003051	3.00	44.00	3.00	51.50	2.00	0.90
2	TKM2S4003052	4.00	44.50	3.00	52.00	2.00	0.90
3	TKM2S5003053	5.00	45.00	3.00	52.50	2.50	1.00



**Stem material carbide, ball material silicon nitride**


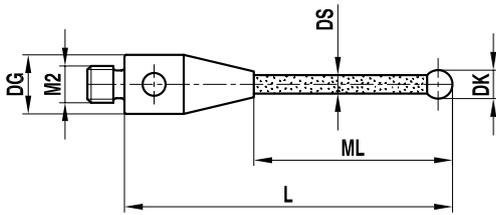
Pos.	Item number	DK	ML	DG	L	DS	Weight (g)
1	THM2S1003020	1.00	7.50	3.00	20.50	0.70	0.60
2	THM2S1003021	1.00	13.00	3.00	20.50	0.80	0.40
3	THM2S1003027	1.00	20.50	3.00	27.50	0.70	0.40
4	THM2S1503021	1.50	13.25	3.00	20.75	1.00	0.50
5	THM2S1503031	1.50	23.25	3.00	30.75	1.00	0.60
6	THM2S2003031	2.00	23.50	3.00	31.00	1.50	1.00
7	THM2S2003041	2.00	33.50	3.00	41.00	1.50	1.20
8	THM2S2503031	2.50	23.75	3.00	31.25	2.00	1.40
9	THM2S2503041	2.50	33.75	3.00	41.25	2.00	1.90
10	THM2S3003032	3.00	24.00	3.00	31.50	2.00	1.50
11	THM2S3003042	3.00	34.00	3.00	41.50	2.00	1.90
12	THM2S3003051	3.00	44.00	3.00	51.50	2.00	2.40
13	THM2S4003032	4.00	24.50	3.00	32.00	2.00	1.50
14	THM2S4003042	4.00	34.50	3.00	42.00	2.00	2.00
15	THM2S4003052	4.00	44.50	3.00	52.00	2.00	2.50
16	THM2S5003022	5.00	16.50	3.00	22.50	2.00	1.20
17	THM2S5003032	5.00	25.00	3.00	32.50	2.50	2.20
18	THM2S5003042	5.00	35.00	3.00	42.50	2.50	3.00
19	THM2S5003052	5.00	45.00	3.00	52.50	2.50	3.60

**Stem material stainless steel, ball material ruby**

Pos.	Item number	DK	ML	DG	L	DS	Weight (g)
1	TIM201003010	1.00	5.00	3.00	10.50	0.70	0.30
2	TIM201503011	1.50	5.00	3.00	10.75	0.70	0.30
3	TIM202003011	2.00	6.00	3.00	11.00	1.00	0.30
4	TIM202003021	2.00	14.50	3.00	21.00	1.40	0.50
5	TIM202503011	2.50	6.50	3.00	11.25	1.00	0.30
6	TIM202503021	2.50	15.00	3.00	21.25	1.40	0.50
7	TIM203003011	3.00	6.00	3.00	11.50	1.50	0.30
8	TIM203003021	3.00	15.00	3.00	21.50	1.50	0.50
9	TIM203003070	3.00	64.50	3.00	69.50	1.50	1.10
10	TIM204003012	4.00	7.00	3.00	12.00	1.50	0.40
11	TIM204003022	4.00	15.00	3.00	22.00	1.50	0.60
12	TIM204003070	4.00	62.00	3.00	70.00	2.00	1.90
13	TIM205003012	5.00	7.50	3.00	12.50	2.50	0.70
14	TIM2060R3013	6.00	9.00	3.00	13.00	2.00	0.80
15	TIM208003015	8.00	11.00	3.00	15.00	2.50	1.40



### Stem material ceramic, ball material ruby

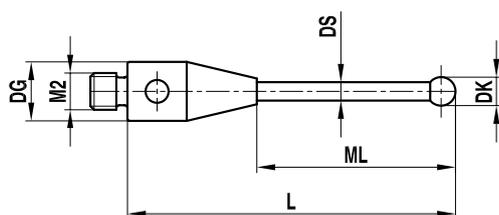


Pos.	Item number	DK	ML	DG	L	DS	Weight (g)
1	TKM203003031	3.00	24.00	3.00	31.50	2.00	0.60
2	TKM203003051	3.00	44.00	3.00	51.50	2.00	0.70
3	TKM203003060	3.00	53.00	3.00	60.00	2.00	0.90
4	TKM203003085	3.00	71.50	3.00	86.50	2.00	1.54
5	TKM204003016	4.00	12.25	3.00	16.25	2.00	0.40
6	TKM204003032	4.00	24.50	3.00	32.00	2.00	0.70
7	TKM204003036	4.00	30.00	3.00	36.00	2.00	0.70
8	TKM204003052	4.00	44.50	3.00	52.00	2.00	0.90
9	TKM204003100	4.00	92.50	3.00	100.00	3.00	2.87
10	TKM205003014	5.00	10.00	3.00	14.00	2.00	0.50
11	TKM205003022	5.00	16.50	3.00	22.50	2.00	0.70
12	TKM205003032	5.00	25.00	3.00	32.50	2.50	0.90
13	TKM205003038	5.00	32.00	3.00	38.00	2.00	0.80
14	TKM205003053	5.00	45.00	3.00	52.50	2.50	1.30
15	TKM206003013	6.00	9.00	3.00	13.00	2.00	0.60
16	TKM206003033	6.00	25.50	3.00	33.00	2.50	1.10
17	TKM206003053	6.00	45.50	3.00	53.00	2.50	1.50

### Stem material carbon fiber, ball material ruby

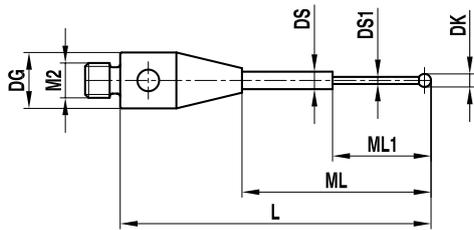
Pos.	Item number	DK	ML	DG	L	DS	Weight (g)
1	TCM203003031	3.00	24.00	3.00	31.50	2.00	0.50
2	TCM203003041	3.00	34.00	3.00	41.50	2.00	0.60
3	TCM204003032	4.00	24.50	3.00	32.00	2.00	0.50



**Stem material carbide, ball material ruby**


Pos.	Item number	DK	ML	DG	L	DS	Weight (g)
1	THM200503020	0.50	7.25	3.00	20.25	0.30	0.50
2	THM200703010	0.70	4.35	3.00	10.35	0.50	0.30
3	THM200703020	0.70	12.35	3.00	20.35	0.50	0.40
4	THM201003010	1.00	6.50	3.00	10.50	0.80	0.20
5	THM2010R3010	1.00	4.50	3.00	10.50	0.70	0.30
6	THM201003015	1.00	11.50	3.00	15.50	0.80	0.20
7	THM201003021	1.00	13.00	3.00	20.50	0.80	0.40
8	THM201003020	1.00	7.50	3.00	20.50	0.70	0.50
9	THM201003027	1.00	20.50	3.00	27.50	0.70	0.40
10	THM201003053	1.00	37.50	3.00	52.50	0.70	0.70
11	THM201503021	1.50	13.25	3.00	20.75	1.00	0.50
12	THM201503031	1.50	23.25	3.00	30.75	1.00	0.60
13	THM202063011	2.00	5.00	3.00	11.00	1.00	0.30
14	THM202003011	2.00	7.00	3.00	11.00	1.00	0.30
15	THM202003016	2.00	12.00	3.00	16.00	1.00	0.30
16	THM202003021	2.00	15.00	3.00	21.00	1.00	0.50
17	THM2020R3021	2.00	13.00	3.00	21.00	1.00	0.50
18	THM202003031	2.00	23.50	3.00	31.00	1.50	1.00
19	THM202003041	2.00	33.50	3.00	41.00	1.50	1.20
20	THM202003059	2.00	53.00	3.00	59.00	1.50	1.50
21	THM202503012	2.50	6.00	3.00	12.00	1.50	0.50
22	THM202503021	2.50	13.75	3.00	21.25	1.00	0.50
23	THM202503031	2.50	23.75	3.00	31.25	2.00	1.40
24	THM202503041	2.50	33.75	3.00	41.25	2.00	1.80
25	THM203003012	3.00	6.00	3.00	12.00	2.00	0.60
26	THM203003021	3.00	15.50	3.00	21.50	1.50	0.70
27	THM203003032	3.00	24.00	3.00	31.50	2.00	1.40
28	THM203003042	3.00	34.00	3.00	41.50	2.00	1.90
29	THM203003051	3.00	44.00	3.00	51.50	2.00	2.30
30	THM204003012	4.00	6.00	3.00	12.00	2.00	0.70
31	THM204003022	4.00	16.00	3.00	22.00	2.00	1.20
32	THM204003024	4.00	16.50	3.00	24.00	2.00	1.20
33	THM204003032	4.00	24.50	3.00	32.00	2.00	2.20
34	THM204003042	4.00	34.50	3.00	42.00	2.00	2.90
35	THM204003052	4.00	44.50	3.00	52.00	2.00	3.60
36	THM205003022	5.00	16.50	3.00	22.50	2.00	1.20
37	THM205003032	5.00	25.00	3.00	32.50	2.50	2.60
38	THM205003042	5.00	35.00	3.00	42.50	2.50	3.20
39	THM205003052	5.00	45.00	3.00	52.50	2.50	3.80

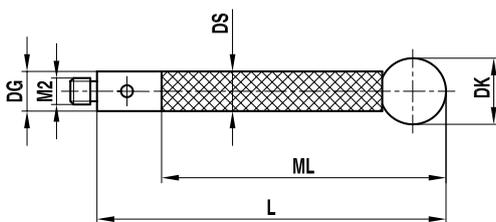
## Straight styli: Type B



### Stem material carbide, ball material ruby

Pos.	Item number	DK	ML	ML1	DG	L	DS	DS1	Weight (g)
1	THM200203010	0.20	4.15	2.30	3.00	10.15	1.00	0.18	0.30
2	THM200203017	0.20	12.50	2.30	3.00	17.00	1.00	0.18	0.30
3	THM2002503010	0.25	4.15	2.30	3.00	10.15	1.00	0.18	0.30
4	THM2002503017	0.25	12.50	2.30	3.00	17.00	1.00	0.18	0.30
5	THM200303010	0.30	4.15	2.15	3.00	10.15	0.70	0.20	0.30
6	THM200303018	0.30	13.50	2.30	3.00	18.00	1.00	0.20	0.30
7	THM200503010	0.50	4.25	3.25	3.00	10.25	0.70	0.40	0.30
8	THM200503018	0.50	13.50	2.50	3.00	18.00	1.00	0.30	0.40
9	THM200603018	0.60	13.80	4.60	3.00	18.30	1.00	0.40	0.30
10	THM200803018	0.80	13.50	4.80	3.00	18.00	1.00	0.60	0.30
11	THM201003018	1.00	14.00	5.00	3.00	18.50	1.00	0.80	0.40

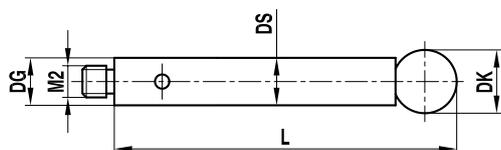
## Straight styli: Type J



### Stem material carbon fiber, ball material silicon nitride

Pos.	Item number	DK	ML	DG	L	DS	Weight (g)
1	TCM2S4003052	4.00	44.00	3.00	52.00	3.00	0.90
2	TCM2S5003052	5.00	44.50	3.00	52.50	3.00	1.00
3	TCM2S6003053	6.00	45.00	3.00	53.00	3.00	1.20

### Stem material stainless steel, ball material ruby



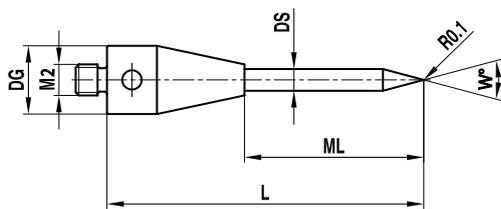
Pos.	Item number	DK	ML	DG	L	DS	Weight (g)
1	TIM204003032	4.00	32.00	3.00	32.00	3.00	1.70
2	TIM204003042	4.00	42.00	3.00	42.00	3.00	2.30
3	TIM204003052	4.00	52.00	3.00	52.00	3.00	2.80
4	TIM205003022	5.00	22.00	3.00	22.00	3.00	1.20
5	TIM205003032	5.00	32.00	3.00	32.00	3.00	1.80
6	TIM205003042	5.00	42.50	3.00	42.50	3.00	2.40
7	TIM205003052	5.00	52.50	3.00	52.50	3.00	2.90
8	TIM206003013	6.00	13.00	3.00	13.00	3.00	0.90
9	TIM206003028	6.00	28.00	3.00	28.00	3.00	1.70
10	TIM208003013	8.00	13.00	3.00	13.00	3.00	1.40

### Stem material carbon fiber, ball material ruby

Pos.	Item number	DK	ML	DG	L	DS	Weight (g)
1	TCM204003052	4.00	44.00	3.00	52.00	3.00	1.00
2	TCM204003077	4.00	67.00	3.00	77.00	2.00	0.80
3	TCM204003102	4.00	92.00	3.00	102.00	3.00	1.60
4	TCM205003032	5.00	25.00	3.00	32.50	3.00	0.80
5	TCM205003052	5.00	44.50	3.00	52.50	3.00	1.10
6	TCM205003077	5.00	67.50	3.00	77.50	3.00	1.40
7	TCM205003102	5.00	92.50	3.00	102.50	3.00	1.60
8	TCM206003033	6.00	25.50	3.00	33.00	3.00	1.00
9	TCM206003053	6.00	45.00	3.00	53.00	3.00	1.20
10	TCM206003078	6.00	70.00	3.00	78.00	3.00	1.60
11	TCM206003103	6.00	93.00	3.00	103.00	3.00	1.70



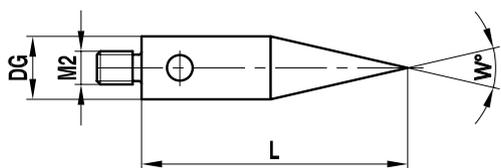
## Straight styli: Type K



### Stem material carbide

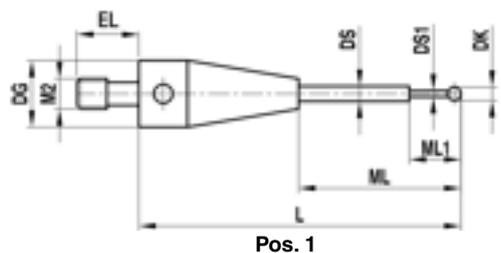
Pos.	Item number	ML	DG	L	DS	W°	Weight (g)
1	IHM203003010	6.00	3.00	10.00	1.50	30.00	1.00
2	IHM206003010	6.00	3.00	10.00	1.50	60.00	1.00

### Stem material stainless steel

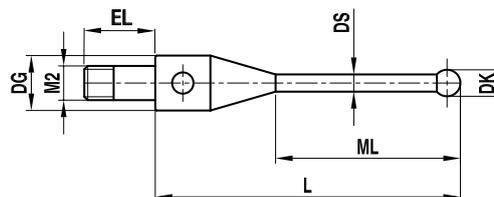


Pos.	Item number	DG	L	DS	W°	Weight (g)
1	IIM203003015	3.00	15.00	3.00	30.00	0.60

## Straight styli: Type others



Pos. 1



### Stem material carbide, ball material ruby

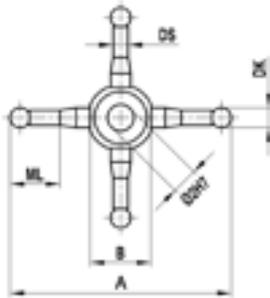
Pos.	Item number	DK	ML	ML1	DG	L	DS	DS1	EL	Weight (g)
1	THM200503019	0.50	11.50	7.00	3.00	19.00	0.70	0.40	5.00	0.40
2	THM201003009	1.00	4.50	–	3.00	9.50	0.70	–	5.00	0.30
3	THM201003019	1.00	11.50	–	3.00	19.00	0.70	–	5.00	0.50
4	THM202003017	2.00	12.00	–	3.00	17.50	1.40	–	5.00	0.60



### Stem material stainless steel, ball material ruby

Pos.	Item number	DK	ML	ML1	DG	L	DS	DS1	EL	Weight (g)
1	SIM202003019	2.00	13.50	–	3.00	19.50	1.50	–	5.00	0.50

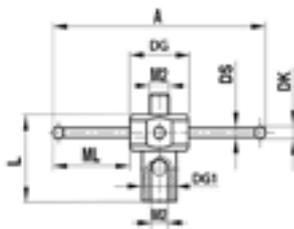
### Star styli: Type U



**NOTE:** itp recommend to also order one of the straight styli from type “others”

### Stem material stainless steel, ball material ruby

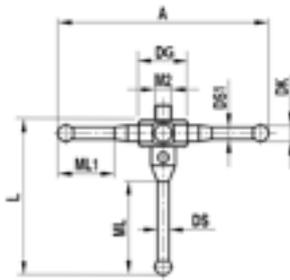
Pos.	Item number	DK	ML	DG	L	DS	A	B	Weight (g)
1	SIM202006022	2.00	4.50	-	22.00	3.00	22.00	5.50	1.00
2	SIM202006032	2.00	9.50	-	32.00	3.00	32.00	5.50	1.30



### Stem material carbide, ball material ruby

Pos.	Item number	DK	ML	DG	L	DS	A	B	Weight (g)
1	SIM200505010	0.50	2.75	5.00	7.50	0.30	10.50	10.00	0.70
2	SIM200505020	0.50	7.75	5.00	7.50	0.30	20.50	20.00	0.70
3	SIM201005011	1.00	14.50	5.00	7.50	0.70	11.00	10.00	0.70

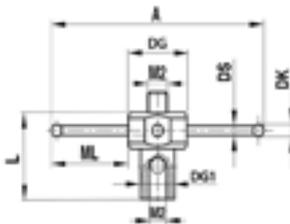
## Star styli: Type V



Stem material stainless steel, ball material ruby

Pos.	Item number	DK	ML	ML1	DG	L	DS	DS1	A	B	Weight (g)
1	SIM202005022	2.00	13.50	4.50	5.50	22.50	1.50	1.40	22.00	20.00	1.30
2	SIM202005032	2.00	13.50	9.50	5.50	32.00	1.40	–	32.00	30.00	1.80

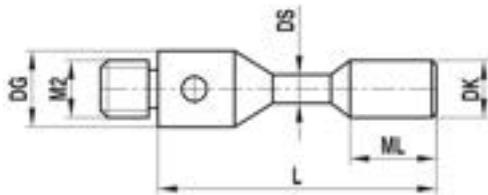
## Star styli: Type W



Stem material stainless steel, ball material ruby

Pos.	Item number	DK	ML	DG	L	DS	A	B	Weight (g)
1	SIM201005021	1.00	14.50	5.00	7.50	0.70	21.00	20.00	0.80

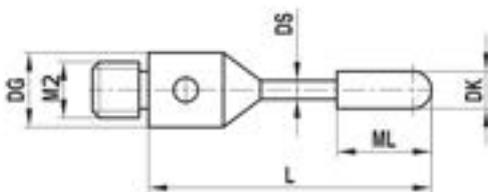
## Cylinder styli: Type P



Stem material carbide, cylinder material carbide

Pos.	Item number	DK	ML	DG	L	DS	Weight (g)
1	ZHM201503011	1.50	1.50	3.00	11.00	1.00	0.40
2	ZHM203003013	3.00	4.00	3.00	13.00	1.50	0.80

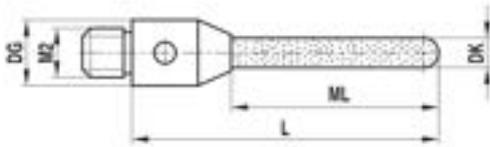
## Cylinder styli: Type Q



Cylinder material ruby

Pos.	Item number	DK	ML	DG	L	DS	Weight (g)
1	ZRM2020R3020	2.00	7.00	3.00	20.00	1.50	0.50
2	ZRM202003020	2.00	7.00	3.00	21.00	1.00	0.50
3	ZRM204003022	4.00	10.00	3.00	22.00	2.00	0.90

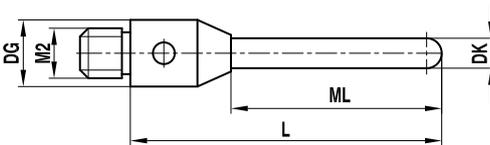
## Cylinder styli: Type R



### Stem/ball material zirconium oxide

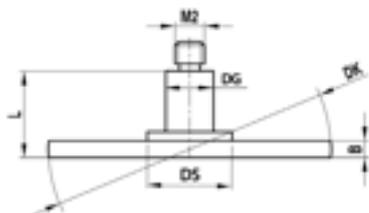
Pos.	Item number	DK	ML	DG	L	Weight (g)
1	ZRM201003015	1.00	8.00	3.00	15.00	0.30
2	ZRM201503015	1.50	8.00	3.00	15.00	0.40

### Stem/ball material carbide



Pos.	Item number	DK	ML	DG	L	Weight (g)
1	ZHM201503016	1.50	8.30	3.00	15.80	0.60
2	ZHM202003016	2.00	8.50	3.00	16.00	0.80
3	ZHM202003A40	2.00	7.00	3.00	40.00	2.20
4	ZHM202003040	2.00	32.00	3.00	40.00	1.90
5	ZHM203003022	3.00	22.50	3.00	22.50	1.90

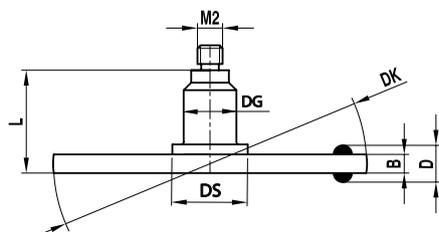
## Disc styli: Type M



### Stem material stainless steel, disc material stainless steel

Pos.	Item number	DK	DG	L	DS	B	Weight (g)
1	KIM200518002	18.00	3.00	2.00	–	0.50	1.10
2	KIM200818002	18.00	3.00	2.00	–	0.80	1.70

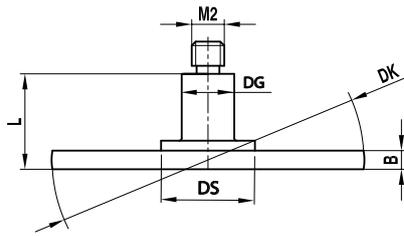
### Stem material stainless steel, disc material stainless steel/ruby



Pos.	Item number	D	DK	DG	L	DS	B	Weight (g)
1	KIM201518008	2.00	18.00	4.20	8.25	6.00	1.50	6.30
2	KIM201518M20	2.50	18.00	4.20	8.25	6.00	1.50	3.80
3	KIM201525008	2.00	25.00	4.20	8.25	6.00	1.50	6.30
4	KIM201525M20	2.50	25.00	4.20	8.25	6.00	1.50	6.30
5	KIM202218M20	3.00	18.00	6.00	3.70	–	2.20	4.80
6	KIM203018004	4.00	18.00	6.00	4.00	–	3.00	6.20
7	KIM203025004	4.00	25.00	6.00	4.00	–	3.00	11.40
8	KIM203025M20	–	25.00	6.00	4.00	–	3.00	11.40

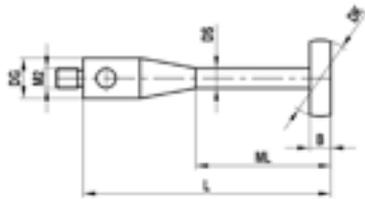
**NOTE:** Position 2, 4, 5 and 8 have an M2 thread on the front.

### Stem material stainless steel, disc material ceramic



Pos.	Item number	DK	DG	L	DS	B	Weight (g)
1	KIM214020005	14.00	3.00	5.00	5.00	2.00	1.60
2	KIM220025005	20.00	3.00	5.00	6.50	2.50	3.70

### Disc styli: Type O



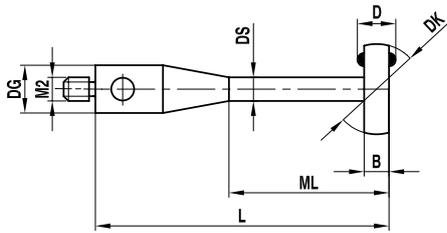
### Stem material stainless steel, disc material stainless steel

Pos.	Item number	DK	ML	DG	L	DS	B	Weight (g)
1	KIM205003015	5.00	11.00	3.00	15.00	1.50	0.50	0.50
2	KIM206003010/0.8	6.00	6.00	3.00	10.00	2.00	0.80	0.60
3	KIM208003020	8.00	14.00	3.00	20.00	2.00	0.50	1.20
4	KIM210003020	10.00	14.00	3.00	20.00	2.00	0.50	1.30
5	KIM210003020/0.8	10.00	14.00	3.00	20.00	2.00	0.80	1.40
6	KIM212003020	12.00	14.00	3.00	20.00	2.00	0.80	1.60

### Stem material carbide, disc material ceramic

Pos.	Item number	DK	ML	DG	L	DS	B	Weight (g)
1	KKM204003032	4.00	19.00	3.00	32.00	1.00	1.00	0.80
2	KKM208003032	8.00	19.00	3.00	32.00	1.50	1.50	1.40

### Stem material stainless steel, disc material ruby/stainless steel

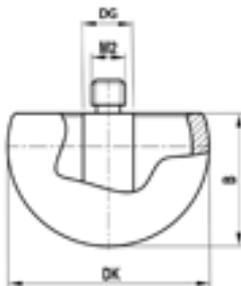


Pos.	Item number	DK	ML	DG	L	DS	B	D	Weight (g)
1	KRM206003010	6.00	6.20	3.00	10.60	2.00	1.20	2.00	0.60

### Stem material stainless steel, disc material stainless steel

Pos.	Item number	DK	ML	DG	L	DS	B	D	Weight (g)
1	KIM206003010	6.00	5.00	3.00	10.00	2.00	1.50	2.00	0.70

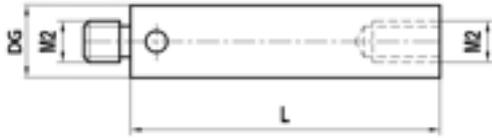
## Type Hemispherical styli



### Base material stainless steel, ball material ceramic

Pos.	Item number	DK	DG	B	Weight (g)
1	HKM218003012	18.00	5.00	11.00	3.40
2	HKM230003018	30.00	5.00	17.00	14.30

## Extensions: Type styli extensions



### Stem material stainless steel

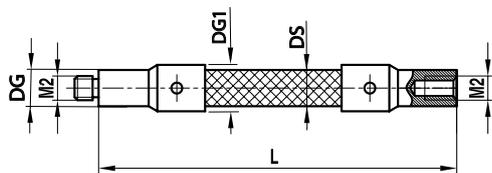
Pos.	Item number	DG	L	Weight (g)
1	VIM200003005	3.00	5.00	0.20
2	VIM200003010	3.00	10.00	0.40
3	VIM200003020	3.00	20.00	0.90
4	VIM200003030	3.00	30.00	1.50
5	VIM200003035	3.00	35.00	1.80
6	VIM200003040	3.00	40.00	2.00
7	VIM200003050	3.00	50.00	2.60

### Stem material ceramic

Pos.	Item number	DG	L	Weight (g)
1	VKM200003020	3.00	20.00	0.70
2	VKM200003030	3.00	30.00	1.00
3	VKM200003040	3.00	40.00	1.30
4	VKM200003050	3.00	50.00	1.50
5	VKM200003060	3.00	60.00	1.80
6	VKM200003080	3.00	80.00	2.30

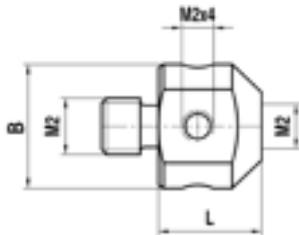


### Stem material carbon fiber



Pos.	Item number	DG	DG1	L	DS	Weight (g)
1	VCM200003040	3.00	3.50	40.00	3.00	1.20
2	VCM200003050	3.00	3.50	50.00	3.00	1.30
3	VCM200003070	3.00	3.50	70.00	3.00	1.40
4	VCM200003090	3.00	3.50	90.00	3.00	1.60

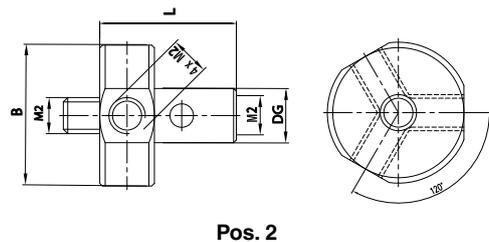
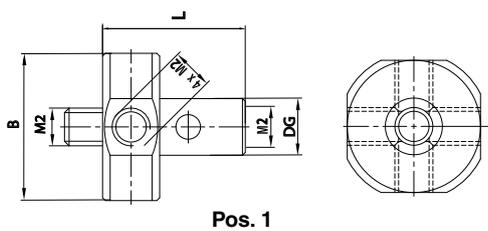
## Adaptors/holders: Type styli holders



### Base material stainless steel

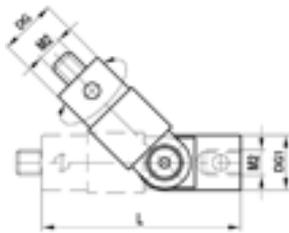
Pos.	Item number	L	B	Weight (g)
1	HIM200007005	6.00	7.00	1.60
2	HIM200010009	9.50	10.00	3.90

### Base material stainless steel, stem material stainless steel



Pos.	Item number	DG	L	B	Weight (g)
1	HIM200007008	3.00	7.50	7.00	0.20
2	HIM200007007	3.00	7.50	7.50	1.00

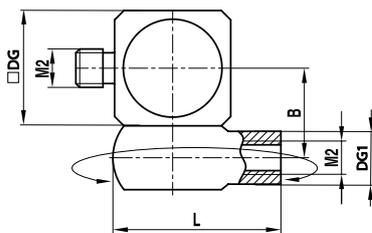
## Adaptors/holders: Type knuckles



### Base material stainless steel

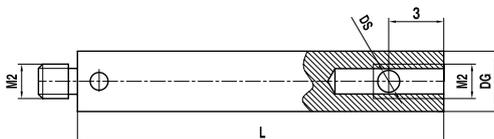
Pos.	Item number	DG	DG1	L	Weight (g)
1	GIM200004016	3.50	4.00	16.50	1.60

### Base material stainless steel



Pos.	Item number	DG	DG1	L	B	Weight (g)
1	DIM200004008	5.50	3.00	8.00	4.50	1.60

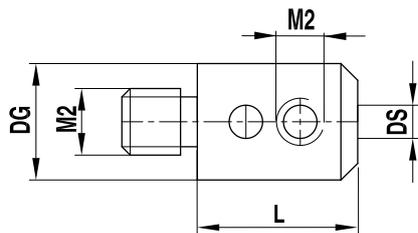
## Adaptors/holders: Type holders for non threaded styli



### Stem material stainless steel

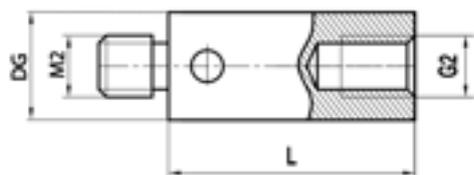
Pos.	Item number	DG	L	DS	Weight (g)
1	KHM201503030	3.00	30.00	1.50	1.50
2	KHM201003030	3.00	30.00	1.00	1.50

### Stem material stainless steel



Pos.	Item number	DG	L	DS	Weight (g)
1	KHM201006008	6.00	8.00	1.00	1.40
2	KHM201506008	6.00	8.00	1.50	1.40
3	KHM202006008	6.00	8.00	2.00	1.40

### Adaptors/holders: Type thread holders



### Base material stainless steel

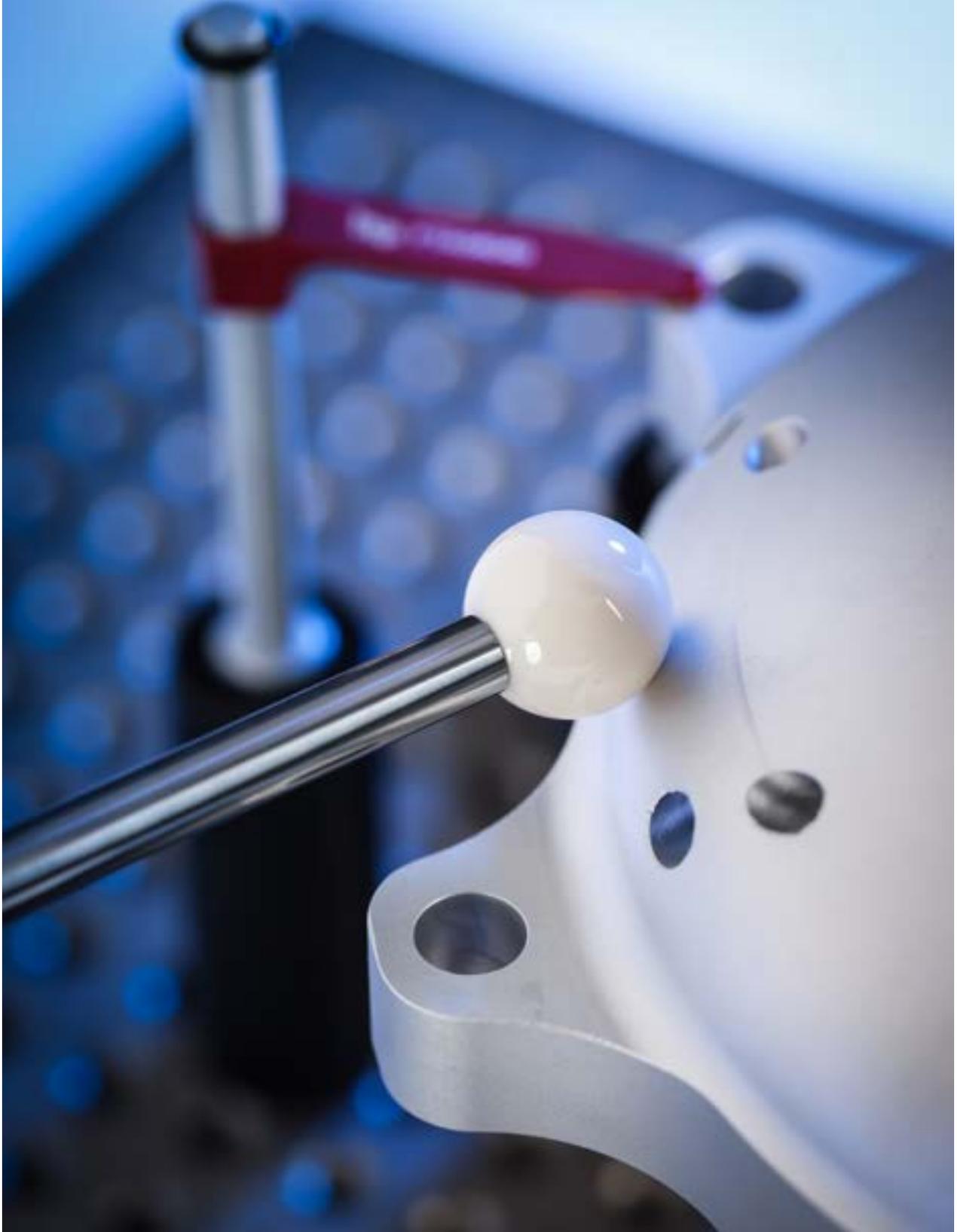
Pos.	Item number	DG	L	G2	Weight (g)
1	RIM200004005	4.00	5.00	M3	0.30
2	RIM200004007	4.00	7.00	M3	0.40

### Accessories: Type styli tools

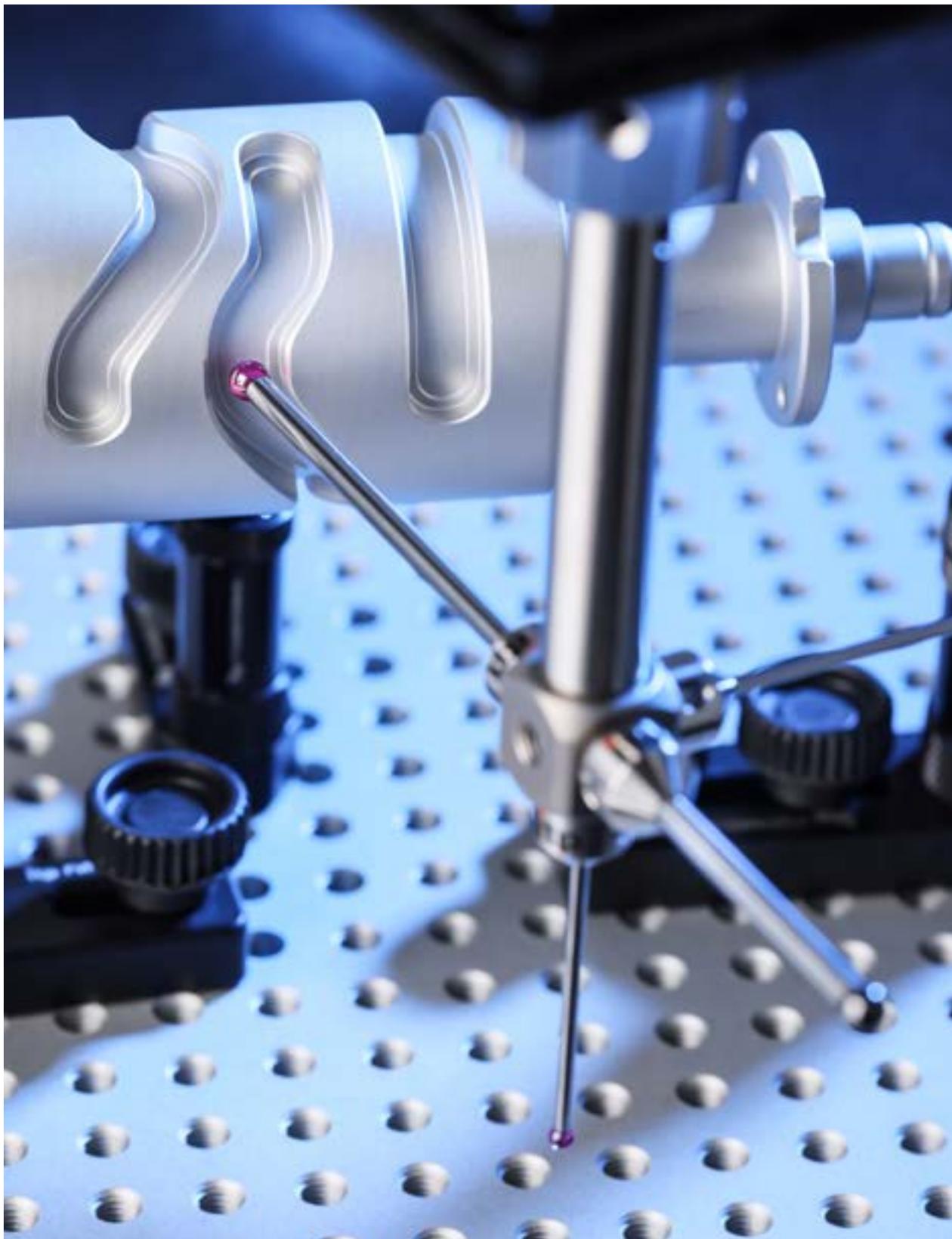


### Base material stainless steel

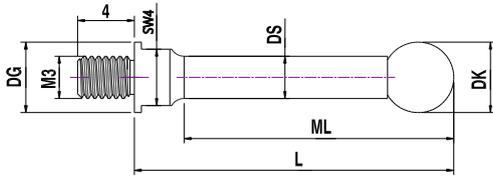
Pos.	Item number	DG	L	Weight (g)
1	MIMO01200023	1.20	23.00	0.70



## Thread M3



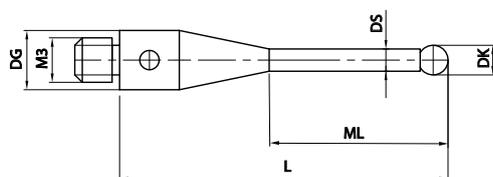
## Straight styli: Type A compatible with Hexagon measuring system



### Stem material stainless steel, ball material ruby

Pos.	Item number	DK	ML	DG	L	DS	Weight (g)
1	TIM3050X5077	5.00	74.00	5.00	77.50	3.00	4.70
2	TIM3050X5052	5.00	49.00	5.00	52.50	3.00	3.30
3	TIM3050X5022	5.00	19.00	5.00	22.50	3.00	1.70
4	TIM3050X5102	5.00	99.00	5.00	102.50	3.00	6.10
5	TIM3030X5051	3.00	47.50	5.00	51.50	2.00	1.80
6	TIM3030X5021	3.00	17.50	5.00	21.50	2.00	1.00
7	TIM3015X5021	1.50	16.25	5.00	20.75	1.00	0.70

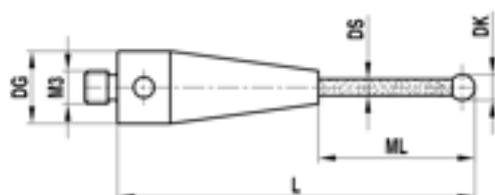
## Straight styli: Type A



### Stem material stainless steel, ball material silicon nitride

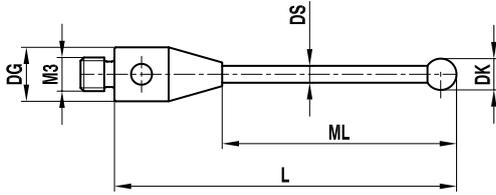
Pos.	Item number	DK	ML	DG	L	DS	Weight (g)
1	TIM3S1004021	1.00	4.50	4.00	21.50	0.70	1.00
2	TIM3S2004022	2.00	9.00	4.00	22.00	1.50	1.00
3	TIM3S3004022	3.00	13.50	4.00	22.50	1.50	0.90
4	TIM3S4004023	4.00	13.00	4.00	23.00	2.50	1.40
5	TIM3S4004033	4.00	23.00	4.00	33.00	2.50	1.70
6	TIM3S50R4023	5.00	13.50	4.00	23.50	2.50	1.50
7	TIM3S50R4033	5.00	33.50	4.00	33.50	3.50	2.90

### Stem material ceramic, ball material silicon nitride



Pos.	Item number	DK	ML	DG	L	DS	Weight (g)
1	TKM3S3004051	3.00	44.00	4.00	51.50	2.00	1.20
2	TKM3S4004052	4.00	44.50	4.00	52.00	2.00	1.20
3	TKM3S5004052	5.00	45.00	4.00	52.50	2.50	1.40

**Stem material carbide, ball material silicon nitride**



Pos.	Item number	DK	ML	DG	L	DS	Weight (g)
1	THM3S15R4022	1.50	14.25	4.00	21.75	1.00	0.80
2	THM3S1504031	1.50	23.25	4.00	30.75	1.00	0.90
3	THM3S2004031	2.00	23.50	4.00	31.00	1.50	1.30
4	THM3S2004041	2.00	33.50	4.00	41.00	1.50	1.60
5	THM3S2504022	2.50	14.75	4.00	22.25	2.00	1.30
6	THM3S2504031	2.50	23.75	4.00	31.25	2.00	1.80
7	THM3S2504041	2.50	33.75	4.00	41.25	2.00	2.20
8	THM3S3004031	3.00	24.00	4.00	31.50	2.00	1.80
9	THM3S3004041	3.00	34.00	4.00	41.50	2.00	2.20
10	THM3S3004051	3.00	44.00	4.00	51.50	2.00	2.70
11	THM3S4004042	4.00	34.50	4.00	42.00	2.00	2.30
12	THM3S4004052	4.00	44.50	4.00	52.00	2.00	2.70
13	THM3S5004042	5.00	35.00	4.00	42.50	2.50	3.20
14	THM3S5004052	5.00	45.00	4.00	52.50	2.50	3.90

**Stem material stainless steel, ball material zirconium oxide**

Pos.	Item number	DK	ML	DG	L	DS	Weight (g)
1	TIM3Z2004022	2.00	9.00	4.00	22.00	1.50	1.00
2	TIM3Z4004023	4.00	13.00	4.00	23.00	2.50	1.40



**Stem material ceramic, ball material zirconium oxide**

Pos.	Item number	DK	ML	DG	L	DS	Weight (g)
1	TKM3Z4004052	4.00	44.50	4.00	52.00	2.00	1.30

**Stem material carbide, ball material zirconium oxide**

Pos.	Item number	DK	ML	DG	L	DS	Weight (g)
1	THM3Z2004031	2.00	23.50	4.00	31.00	1.50	1.30

### Stem material stainless steel, ball material ruby

Pos.	Item number	DK	ML	DG	L	DS	Weight (g)
1	TIM301004021	1.00	4.50	4.00	21.50	0.70	1.00
2	TIM302004022	2.00	9.00	4.00	22.00	1.50	1.00
3	TIM303004022	3.00	13.50	4.00	22.50	1.50	1.00
4	TIM304004023	4.00	13.00	4.00	23.00	2.50	1.40
5	TIM304004033	4.00	23.00	4.00	33.00	2.50	1.80
6	TIM3050R4023	5.00	13.50	4.00	23.50	2.50	1.50



### Stem material ceramic, ball material ruby

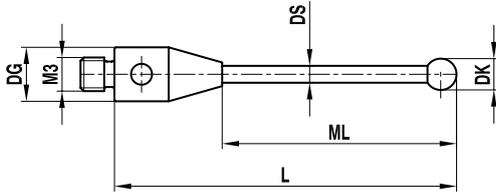
Pos.	Item number	DK	ML	DG	L	DS	Weight (g)
1	TKM303004051	3.00	44.00	4.00	51.50	2.00	1.20
2	TKM304004032	4.00	26.00	4.00	32.00	2.00	1.00
3	TKM304004052	4.00	44.50	4.00	52.00	2.00	1.30
4	TKM305004032	5.00	24.50	4.00	32.50	2.00	1.20
5	TKM305004052	5.00	45.00	4.00	52.50	2.50	1.60
6	TKM306004013	6.00	9.00	4.00	13.00	2.00	0.90
7	TKM306004043	6.00	30.50	4.00	43.50	2.00	1.80
8	TKM306004063	6.00	50.50	4.00	63.50	2.00	2.00
9	TKM308004031	8.00	18.50	4.00	31.50	2.00	2.20



### Stem material ceramic, ball material ruby

Pos.	Item number	DK	ML	DG	L	DS	Weight (g)
1	TKM308006134	8.00	118.00	6.00	134.00	4.00	9.10

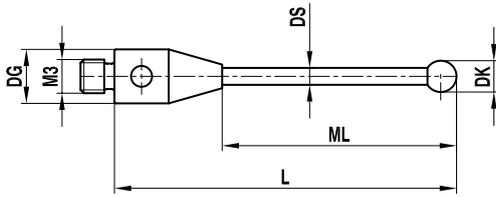
**Stem material carbide, ball material ruby**



Pos.	Item number	DK	ML	DG	L	DS	Weight (g)
1	THM300504021	0.50	2.25	4.00	21.25	0.30	1.20
2	THM3010M4022	1.00	12.50	4.00	22.50	0.80	0.80
3	THM301004033	1.00	25.50	4.00	32.50	0.80	0.80
4	THM3015R4022	1.50	14.25	4.00	21.75	1.00	0.80
5	THM301504022	1.50	9.00	4.00	22.00	1.00	1.00
6	THM301504031	1.50	23.25	4.00	30.75	1.00	0.90
7	THM302004021	2.00	15.00	4.00	21.00	1.00	0.80
8	THM302004022	2.00	14.00	4.00	22.00	1.00	0.80
9	THM302004031	2.00	23.50	4.00	31.00	1.50	1.30
10	THM302004040	2.00	34.00	4.00	40.00	1.50	1.50
11	THM302004041	2.00	33.50	4.00	41.00	1.50	1.60
12	THM302004070	2.00	63.50	4.00	70.00	1.50	2.20
13	THM302504022	2.50	14.75	4.00	22.25	2.00	1.30
14	THM302504031	2.50	23.75	4.00	31.25	2.00	1.80
15	THM302504041	2.50	33.75	4.00	41.25	2.00	2.20
16	THM303004021	3.00	13.00	4.00	21.00	2.00	1.30
17	THM303004022	3.00	15.50	4.00	21.50	1.50	1.00
18	THM303004031	3.00	24.00	4.00	31.50	2.00	1.80
19	THM303004041	3.00	34.00	4.00	41.50	2.00	2.20
20	THM303004051	3.00	44.00	4.00	51.50	2.00	2.70
21	THM303004066	3.00	51.50	4.00	65.50	2.00	3.50
22	THM304004030	4.00	22.00	4.00	30.00	2.00	1.80
23	THM304004040	4.00	32.00	4.00	40.00	2.00	2.30
24	THM304004042	4.00	34.50	4.00	42.00	2.00	2.30
25	THM304004050	4.00	42.00	4.00	50.00	2.00	2.70
26	THM304004052	4.00	44.50	4.00	52.00	2.00	2.80
27	THM304004059	4.00	51.00	4.00	59.00	2.00	3.10
28	THM305004030	5.00	22.00	4.00	30.00	2.00	1.90
29	THM305004040	5.00	32.00	4.00	40.00	2.00	2.40
30	THM305004042	5.00	35.00	4.00	42.50	2.50	3.20
31	THM305004050	5.00	42.00	4.00	50.00	2.00	2.80
32	THM305004052	5.00	45.00	4.00	52.50	2.50	4.00
33	THM305004060	5.00	52.00	4.00	60.00	2.00	3.20
34	THM306004030	6.00	22.00	4.00	30.00	2.00	2.10
35	THM306004040	6.00	32.00	4.00	40.00	2.00	2.50
36	THM306004050	6.00	42.00	4.00	50.00	2.00	2.90
37	THM3Z3005040	3.00	21.50	5.50	40.00	2.00	3.30
38	THM303005050	3.00	31.50	5.50	50.00	2.00	3.70



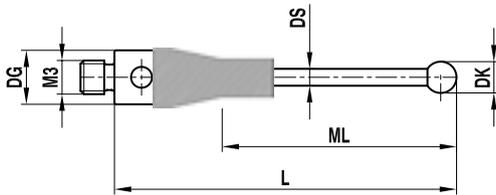
## Straight styli: Type A compatible with Heidenhain measuring system



### Stem material carbide, ball material ruby

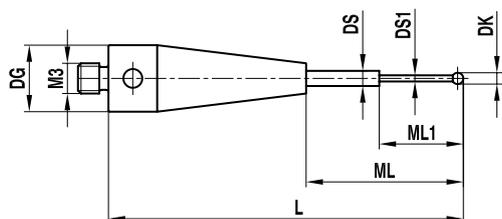
Pos.	Item number	DK	L	DG	ML	DS	Weight (g)
1	THM3020H4022	2.00	22.00	4.00	14.50	1.00	0.80
2	THM3030H4022	3.00	22.50	4.00	15.00	1.00	0.90

### Stem material carbide, ball material ruby



Pos.	Item number	DK	L	DG	ML	DS	Weight (g)
1	THM3040H4023	4.00	23.00	4.00	15.00	2.00	1.60
2	THM3030H4041	3.00	41.50	4.00	33.50	2.00	2.20
3	THM3040H4042	4.00	42.00	4.00	34.00	2.00	2.50
4	THM3050H4042	5.00	42.50	4.00	34.50	2.00	2.50
5	THM3060H4043	6.00	43.00	4.00	35.00	2.00	2.70
6	THM3080H4044	8.00	44.00	4.00	34.00	3.00	5.10

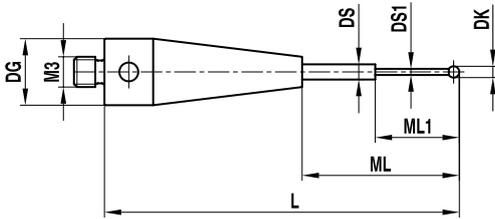
## Straight styli: Type B compatible with Heidenhain measuring system



### Stem material carbide, ball material ruby

Pos.	Item number	DK	L	DG	ML	ML1	DS	DS1	Weight (g)
1	THM3010H4021	1.00	21.50	4.00	14.00	5.00	1.00	0.80	0.80

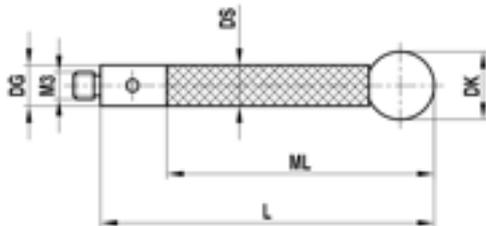
## Straight styli: Type B



Stem material carbide, ball material ruby

Pos.	Item number	DK	ML	ML1	DG	L	DS	DS1	Weight (g)
1	THM300204022	0.20	9.00	2.30	4.00	22.00	1.00	0.18	1.00
2	THM3002504022	0.25	9.00	2.30	4.00	22.00	1.00	0.18	1.00
3	THM300304022	0.30	9.00	2.30	4.00	22.00	1.00	0.20	1.00
4	THM300504022	0.50	11.25	2.50	4.00	21.25	1.00	0.30	0.90
5	THM300604022	0.60	9.00	4.60	4.00	22.00	1.00	0.40	1.00
6	THM300804022	0.80	9.00	4.80	4.00	22.00	1.00	0.60	1.00
7	THM301004010	1.00	5.50	5.00	4.00	10.50	1.00	0.80	0.50
8	THM301004022	1.00	9.00	5.00	4.00	22.00	1.00	0.80	1.00

## Straight styli: Type J



Stem material carbon fiber, ball material silicon nitride

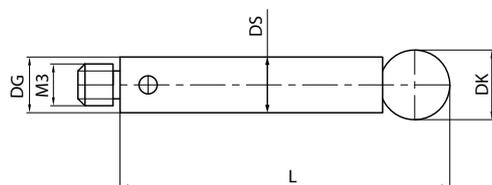
Pos.	Item number	DK	ML	DG	L	DS	Weight (g)
1	TCM3S6004078	6.00	68.00	4.00	78.00	4.00	2.50
2	TCM3S6004103	6.00	93.00	4.00	103.00	4.00	3.10
3	TCM3S8004079	8.00	69.00	4.00	79.00	4.00	2.90
4	TCM3S8004104	8.00	94.00	4.00	104.00	4.00	3.60

**Stem material carbon fiber, ball material zirconium oxide**

Pos.	Item number	DK	ML	DG	L	DS	Weight (g)
1	TCM3Z6004078	6.00	68.00	4.00	78.00	4.00	2.50
2	TCM3Z6004103	6.00	93.00	4.00	103.00	4.00	3.40
3	TCM3Z8004079	8.00	69.00	4.00	79.00	4.00	3.60
4	TCM3Z8004104	8.00	94.00	4.00	104.00	4.00	4.10

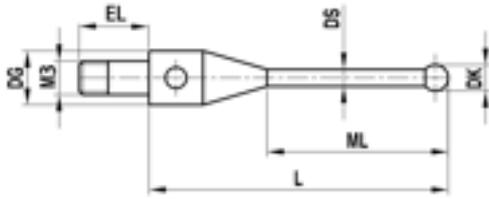

**Stem material carbon fiber, ball material ruby**

Pos.	Item number	DK	ML	DG	L	DS	Weight (g)
1	TCM306004078	6.00	68.00	4.00	78.00	4.00	2.60
2	TCM306004103	6.00	93.00	4.00	103.00	4.00	3.20
3	TCM308004079	8.00	69.00	4.00	79.00	4.00	3.20
4	TCM308004104	8.00	94.00	4.00	104.00	4.00	3.80
5	TCM310004080	10.00	70.00	4.00	80.00	4.00	4.20
6	TCM310004105	10.00	95.00	4.00	105.00	4.00	4.80
7	TCM310004155	10.00	145.00	4.00	155.00	4.00	5.90
8	TCM310004205	10.00	195.00	4.00	205.00	4.00	7.10
9	TCM312004106	12.00	96.00	4.00	106.00	4.00	6.30
10	TCM312004156	12.00	146.00	4.00	156.00	4.00	7.40
11	TCM312004206	12.00	196.00	4.00	206.00	4.00	8.60


**Stem material stainless steel, ball material ruby**


Pos.	Item number	DK	ML	DG	L	DS	Weight (g)
1	TIM305004023	5.00	23.50	4.00	23.50	4.00	2.20
2	TIM3050R4033	5.00	33.50	4.00	33.50	3.50	2.90
3	TIM305004033	5.00	33.50	4.00	33.50	4.00	3.20
4	TIM305004042	5.00	42.50	4.00	42.50	4.00	4.00
5	TIM305004052	5.00	52.50	4.00	52.50	4.00	5.00
6	TIM306004024	6.00	24.00	4.00	24.00	4.00	2.40
7	TIM306004034	6.00	34.00	4.00	34.00	4.00	3.40
8	TIM306004043	6.00	43.00	4.00	43.00	4.00	4.20
9	TIM306004053	6.00	53.00	4.00	53.00	4.00	5.40

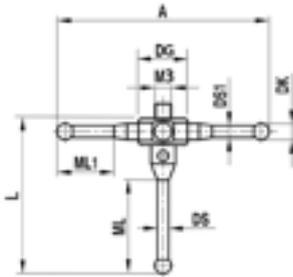
## Straight styli: Type others



Stem material stainless steel, ball material ruby

Pos.	Item number	DK	ML	DG	EL	L	DS	Weight (g)
1	TIM302004019	2.00	12.00	4.00	6.00	19.00	1.40	0.90
2	TIM302004029	2.00	11.00	4.00	6.00	29.00	1.40	1.40

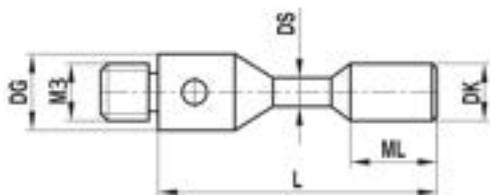
## Star styli: Type V



Stem material stainless steel, ball material ruby

Pos.	Item number	DK	ML	ML1	L	DS	DS1	A	Weight (g)
1	SIM302007032	2.00	12.00	9.50	22.00	1.40	1.40	32.00	2.40
2	SIM302007052	2.00	11.00	12.00	32.00	1.40	1.40	52.00	3.70

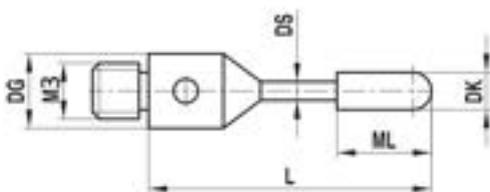
## Cylinder styli: Type P



Stem material carbide, cylinder material carbide

Pos.	Item number	DK	ML	DG	L	DS	Weight (g)
1	ZHM301504011	1.50	1.50	4.00	11.00	1.00	0.70
2	ZHM303004013	3.00	4.00	4.00	13.00	1.50	1.10

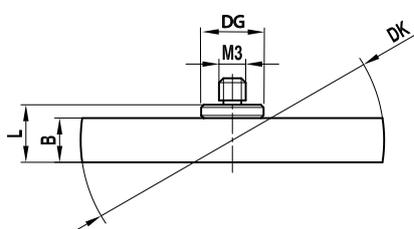
## Cylinder styli: Type Q



Stem material carbide, cylinder material ruby

Pos.	Item number	DK	ML	DG	L	DS	Weight (g)
1	ZRM302004020	2.00	7.00	4.00	21.00	1.00	0.80

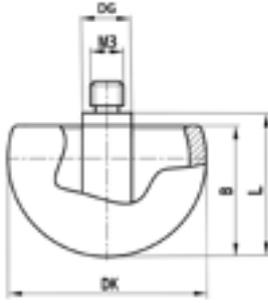
## Disc styli: Type M



Stem material stainless steel, disc material stainless steel

Pos.	Item number	DK	DG	L	B	Weight (g)
1	KIM305035M30	35.00	7.00	6.50	5.00	8.60
2	KIM306063M30	63.50	7.00	7.50	6.00	45.40

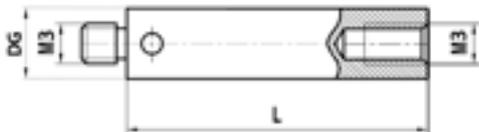
## Type Hemispherical styli



Base material stainless steel, ball material ceramic

Pos.	Item number	DK	DG	L	B	Weight (g)
1	HKM318004012	18.00	4.00	12.00	11.00	3.70
2	HKM330004018	30.00	4.00	18.00	17.00	14.50

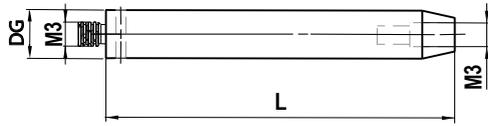
## Extensions: Styli extensions



Stem material stainless steel

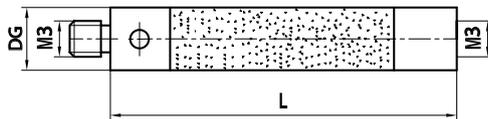
Pos.	Item number	DG	L	Weight (g)
1	VIM300004010	4.00	10.00	0.70
2	VIM300004020	4.00	20.00	1.70
3	VIM300004030	4.00	30.00	2.70
4	VIM300004035	4.00	35.00	3.10
5	VIM300004040	4.00	40.00	3.60
6	VIM300004050	4.00	50.00	4.70

### Stem material stainless steel



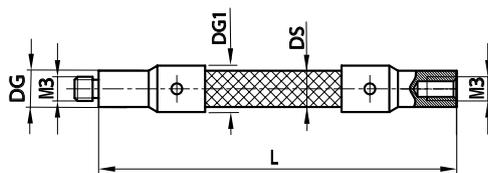
Pos.	Item number	DG	L	Weight (g)
1	VIM3000H6050	6.00	50.00	10.50

### Stem material ceramic



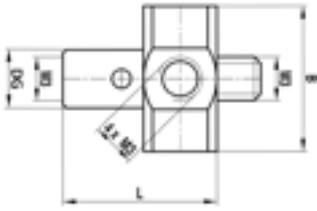
Pos.	Item number	DG	L	Weight (g)
1	VKM300004030	4.00	30.00	1.90
2	VKM300004040	4.00	40.00	2.40
3	VKM300004050	4.00	50.00	2.90
4	VKM300004060	4.00	60.00	3.30

### Stem material carbon fiber



Pos.	Item number	DG	DG1	L	DS	Weight (g)
1	VCM300004075	4.00	4.60	75.00	4.00	3.20
2	VCM300004100	4.00	4.60	100.00	4.00	3.80

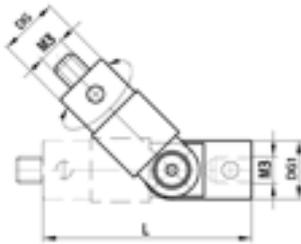
## Adaptors/holders: Styli holders



### Base material stainless steel

Pos.	Item number	DG	L	B	Weight (g)
1	HIM300012011	4.00	11.50	12.00	4.40
2	HIM300010013	4.00	13.00	10.00	3.30

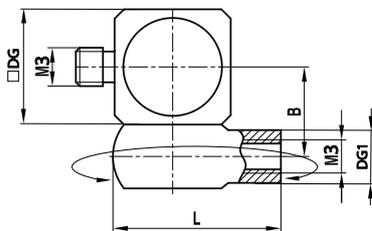
## Adaptors/holders: Type knuckles



### Base material stainless steel

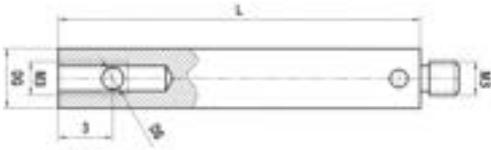
Pos.	Item number	DG	DG1	L	Weight (g)
1	GIM300004017	4.00	4.00	17.00	0.20

### Base material stainless steel



Pos.	Item number	DG	DG1	L	B	Weight (g)
1	DIM300006012	7.50	4.00	12.00	6.00	4.10

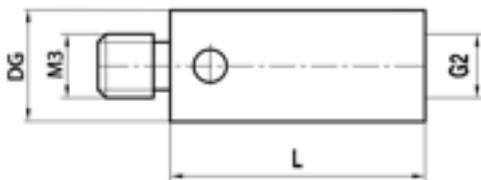
## Adaptors/holders: Type holders for non threaded styli



### Base material stainless steel

Pos.	Item number	DG	L	DS	Weight (g)
1	KHM301004030	4.00	30.00	1.00	2.90
2	KHM301504030	4.00	30.00	1.50	2.90

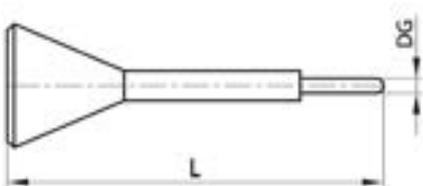
## Adaptors/holders: Type thread adaptors



### Base material stainless steel

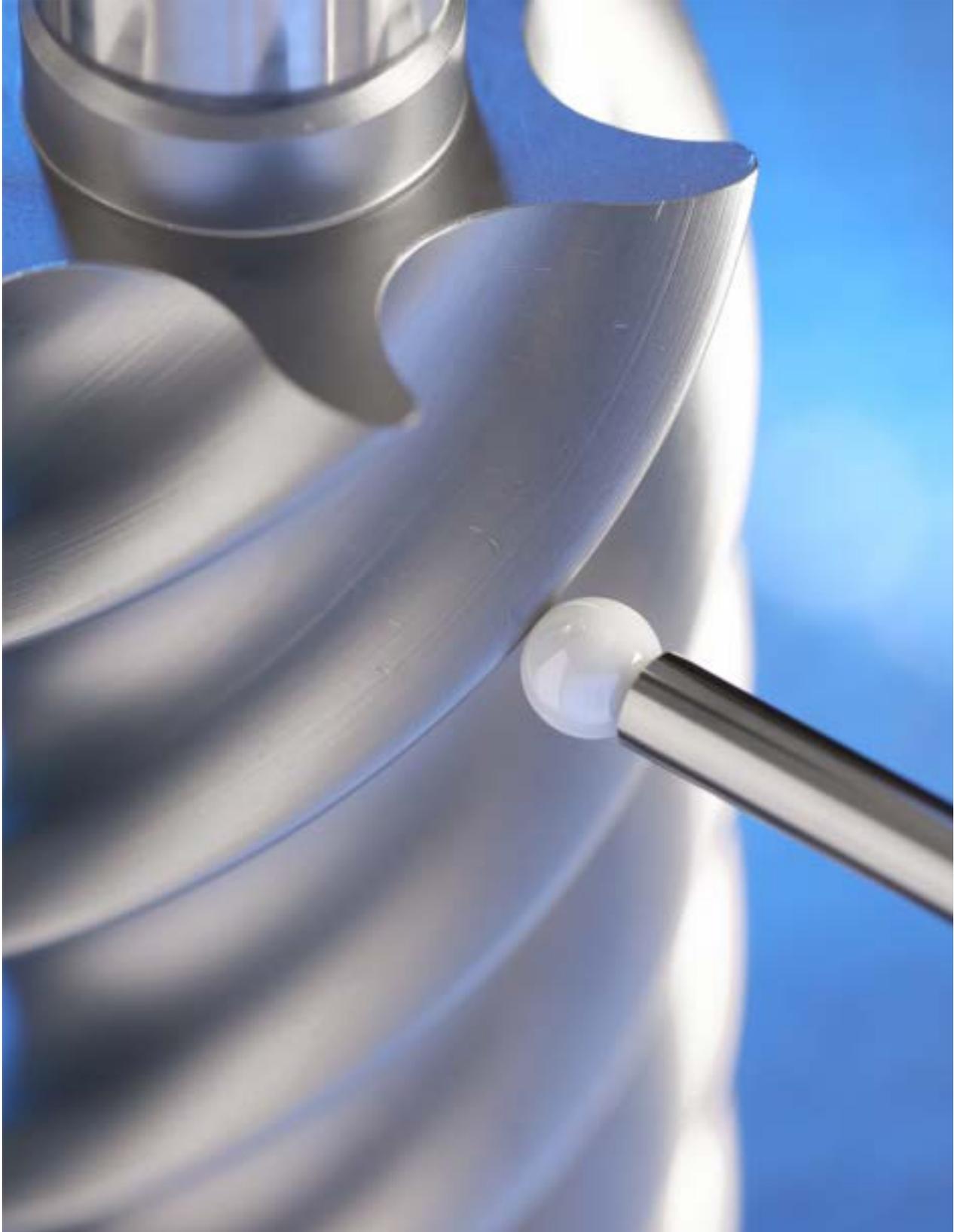
Pos.	Item number	DG	G2	L	Weight (g)
1	RIM300004005	4.00	M2	5.00	0.50

## Accessories: Type styli tools

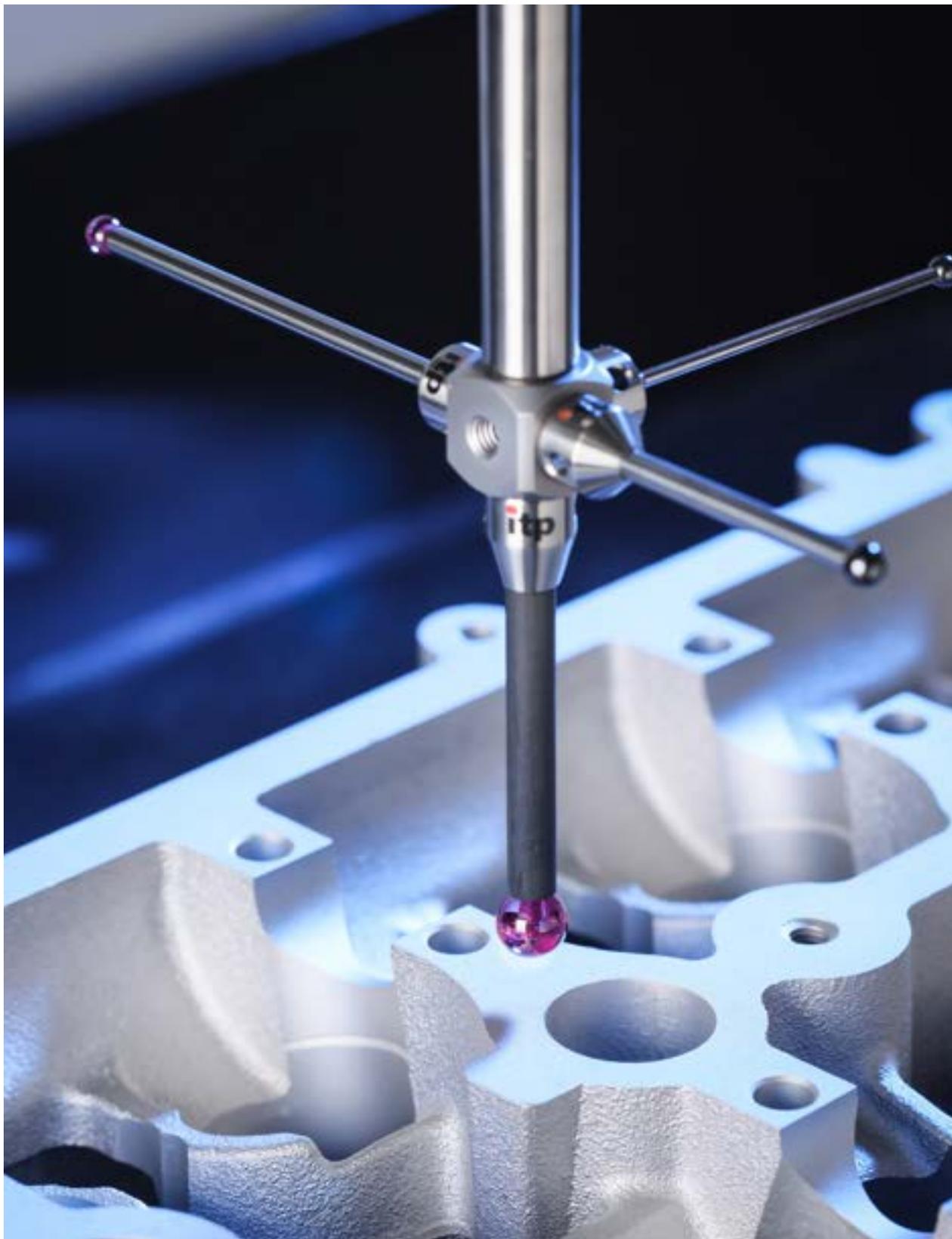


### Base material stainless steel

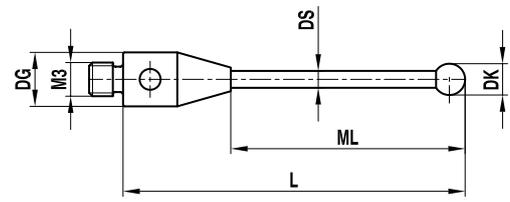
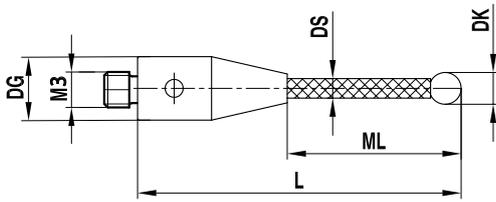
Pos.	Item number	DG	L	Weight (g)
1	MIMO01200023	1.20	23.00	0.70



## Thread M3 XXT



## Straight styli: Type A



NOTE: K = bonded into spherical cup

### Stem material carbon fiber, ball material silicon nitride

Pos.	Item number	DK	ML	DG	L	DS	Weight (g)
1	TCM3S3005033	3.00	24.00	5.00	33.00	2.00	0.70
2	TCM3S3005033/K	3.00	24.00	5.00	33.00	2.00	0.80
3	TCM3S3005050	3.00	41.00	5.00	50.00	2.00	0.80
4	TCM3S3005050/K	3.00	41.00	5.00	50.00	2.00	0.80
5	TCM3S5005050	5.00	41.00	5.00	50.00	3.50	1.80
6	TCM3S5005050/K	5.00	41.00	5.00	50.00	3.50	1.40
7	TCM3S5005075	5.00	66.00	5.00	75.00	3.50	1.80
8	TCM3S5005075/K	5.00	66.00	5.00	75.00	3.50	1.80
9	TCM3S8005070	8.00	70.00	5.00	70.00	5.00	3.30
10	TCM3S8005125	8.00	125.00	5.00	125.00	5.00	4.70



### Stem material carbon fiber, ball material diamond coated

Pos.	Item number	DK	ML	DG	L	DS	Weight (g)
1	TCM3DC3005033	3.00	24.00	5.00	33.00	2.00	0.80
2	TCM3DC3005050	3.00	41.00	5.00	50.00	2.00	0.90
3	TCM3DC3005058	3.00	49.00	5.00	58.00	2.00	0.90
4	TCM3DC3005059	3.00	50.00	5.00	59.00	2.00	0.90
5	TCM3DC3005075	3.00	66.00	5.00	75.00	2.00	1.00
6	TCM3DC4005050	4.00	41.00	5.00	50.00	2.00	0.90
7	TCM3DC5005050	5.00	41.00	5.00	50.00	3.50	1.40
8	TCM3DC5005075	5.00	66.00	5.00	75.00	3.50	1.90

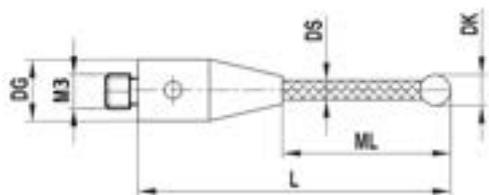


### Stem material carbide, ball material diamond coated

Pos.	Item number	DK	ML	DG	L	DS	Weight (g)
1	THM3DC1505030	1.50	22.50	5.00	30.00	1.00	0.80
2	THM3DC1505040	1.50	31.00	5.00	40.00	1.00	0.90
3	THM3DC2005020	2.00	11.00	5.00	20.00	1.00	0.70
4	THM3DC2005030	2.00	21.00	5.00	30.00	1.00	0.80
5	THM3DC2005040	2.00	31.00	5.00	40.00	1.50	1.50

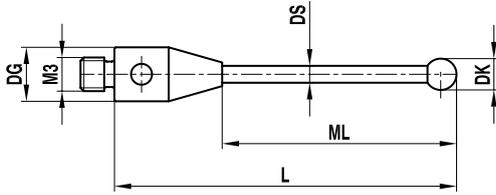


## Stem material carbon fiber, ball material ruby



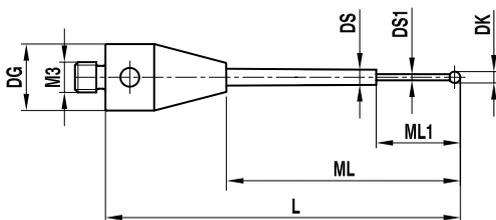
Pos.	Item number	DK	ML	DG	L	DS	Weight (g)
1	TCM303005025	3.00	16.00	5.00	25.00	2.00	0.70
2	TCM303005033	3.00	24.00	5.00	33.00	2.00	0.80
3	TCM303005040/2,0	3.00	31.00	5.00	40.00	2.00	0.80
4	TCM303005042	3.00	33.00	5.00	42.00	2.00	0.80
5	TCM303005050	3.00	41.00	5.00	50.00	2.00	0.90
6	TCM303005058	3.00	49.00	5.00	58.00	2.00	0.90
7	TCM303005059	3.00	50.00	5.00	59.00	2.00	0.90
8	TCM303005075	3.00	66.00	5.00	75.00	2.00	1.00
9	TCM304005050	4.00	41.00	5.00	50.00	2.00	0.90
10	TCM304005075	4.00	66.00	5.00	75.00	3.50	1.80
11	TCM305005030/9	5.00	21.00	5.00	30.00	3.50	1.10
12	TCM305005040	5.00	31.00	5.00	40.00	3.50	1.30
13	TCM305005050	5.00	41.00	5.00	50.00	3.50	1.40
14	TCM305005060	5.00	51.00	5.00	60.00	3.50	1.60
15	TCM305005075	5.00	66.00	5.00	75.00	3.50	1.90
16	TCM306005050	6.00	41.00	5.00	50.00	3.50	1.60
17	TCM306005070	6.00	61.00	5.00	70.00	3.50	2.00
18	TCM306005100	6.00	91.00	5.00	100.00	3.50	2.50

## Stem material carbide, ball material ruby



Pos.	Item number	DK	ML	DG	L	DS	Weight (g)
1	THM300805014	0.80	5.00	5.00	14.00	0.60	0.60
2	THM301005014	1.00	5.00	5.00	14.00	0.80	0.60
3	THM301005020/11,0	1.00	11.00	5.00	20.00	0.80	0.60
4	THM301505014	1.50	5.50	5.00	14.00	1.00	0.70
5	THM301505020	1.50	11.00	5.00	20.00	1.00	0.70
6	THM301505030/9,0	1.50	21.00	5.00	30.00	1.00	0.80
7	THM301505030	1.50	22.50	5.00	30.00	1.00	0.80
8	THM301505040	1.50	31.00	5.00	40.00	1.00	0.90
9	THM302005014	2.00	5.00	5.00	14.00	1.00	0.70
10	THM302005020	2.00	11.00	5.00	20.00	1.00	0.70
11	THM302005025	2.00	16.00	5.00	25.00	1.00	0.80
12	THM302005030	2.00	21.00	5.00	30.00	1.00	0.80
13	THM302005040	2.00	31.00	5.00	40.00	1.50	1.50
14	THM302505020	2.50	11.00	5.00	20.00	1.50	0.93
15	THM302505030	2.50	21.00	5.00	30.00	1.50	1.20
16	THM302505040	2.50	31.00	5.00	40.00	1.50	1.40

## Straight styli: Type B



## Stem material carbide, ball material diamond coated

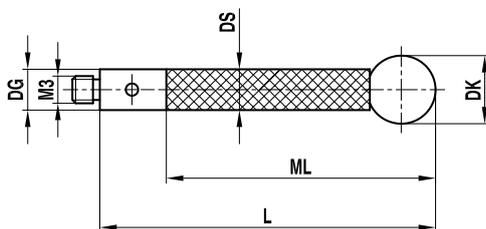
Pos.	Item number	DK	ML	ML1	DG	L	DS	DS1	Weight (g)
1	THM3DC1005020	1.00	11.00	5.00	5.00	20.00	1.00	0.60	0.70
2	THM3DC1005030	1.00	21.00	5.00	5.00	30.00	1.00	0.80	0.80
3	THM3DC1005040	1.00	31.00	5.00	5.00	40.00	1.00	0.80	0.90

## Stem material carbide, ball material ruby



Pos.	Item number	DK	ML	ML1	DG	L	DS	DS1	Weight (g)
1	THM300305013	0.30	4.00	2.30	5.00	13.00	1.00	0.20	0.60
2	THM300305020	0.30	11.00	2.30	5.00	20.00	1.00	0.20	0.70
3	THM300505013	0.50	4.00	2.30	5.00	13.00	1.00	0.30	0.60
4	THM300505020	0.50	11.00	2.30	5.00	20.00	1.00	0.30	0.70
5	THM300505024	0.50	15.00	2.30	5.00	24.00	1.00	0.30	0.80
6	THM300605014	0.60	5.00	4.60	5.00	14.00	1.00	0.40	0.60
7	THM300605017	0.60	8.00	4.60	5.00	17.00	1.00	0.40	0.60
8	THM300605020	0.60	11.00	4.60	5.00	20.00	1.00	0.40	0.70
9	THM300805020	0.80	11.00	4.80	5.00	20.00	1.00	0.60	0.70
10	THM300805034	0.80	25.00	4.10	5.00	34.00	1.00	0.60	0.90
11	THM301005020	1.00	11.00	5.10	5.00	20.00	1.00	0.60	0.70
12	THM301005020/0,8	1.00	11.00	5.00	5.00	20.00	1.00	0.80	0.70
13	THM301005030	1.00	21.00	5.00	5.00	30.00	1.00	0.80	0.80
14	THM301005040	1.00	31.00	5.00	5.00	40.00	1.00	0.80	0.90

## Straight styli: Type J



NOTE: K = bonded into spherical cup

## Stem material carbon fiber, ball material silicon nitride

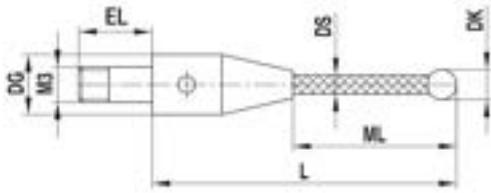
Pos.	Item number	DK	ML	DG	L	DS	Weight (g)
1	TCM3S8005070/K	8.00	70.00	5.00	70.00	5.00	3.10
2	TCM3S8005125/K	8.00	125.00	5.00	125.00	5.00	5.00

## Stem material carbon fiber, ball material ruby

Pos.	Item number	DK	ML	DG	L	DS	Weight (g)
1	TCM308005030	8.00	30.00	5.00	30.00	5.00	2.00
2	TCM308005050	8.00	50.00	5.00	50.00	5.00	2.50
3	TCM308005070	8.00	70.00	5.00	70.00	5.00	3.60
4	TCM308005100	8.00	100.00	5.00	100.00	5.00	4.10
5	TCM308005125	8.00	125.00	5.00	125.00	5.00	3.10



## Straight styli: Type others



**NOTE:** K = bonded into spherical cup

### Stem material carbon fiber, ball material silicon nitride

Pos.	Item number	DK	ML	DG	EL	L	DS	Weight (g)
1	TCM3S3005020/K	3.00	11.00	5.00	8.00	20.00	2.00	0.90
2	TCM3S3005020	3.00	11.00	5.00	8.00	20.00	2.00	0.90
3	TCM3S3005030	3.00	21.00	5.00	8.00	30.00	2.00	1.00
4	TCM3S3005030/K	3.00	21.00	5.00	8.00	30.00	2.00	0.90
5	TCM3S3005040/K	3.00	31.00	5.00	8.00	40.00	2.00	1.00
6	TCM3S3005040	3.00	31.00	5.00	8.00	40.00	2.00	1.00

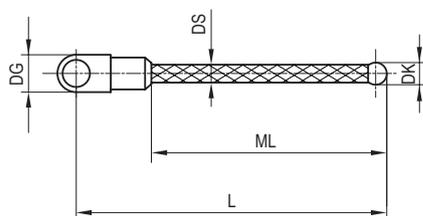
### Stem material carbon fiber, ball material ruby

Pos.	Item number	DK	ML	DG	EL	L	DS	Weight (g)
1	TCM303005020	3.00	11.00	5.00	8.00	20.00	2.00	0.90
2	TCM303005030	3.00	21.00	5.00	8.00	30.00	2.00	0.90
3	TCM303005040	3.00	31.00	5.00	8.00	40.00	2.00	1.00

## Star styli: Type others

Stem material carbon fiber, ball material silicon nitride

0°



Pos.	Item number	DK	ML	DG	L	DS	Weight (g)
1	SCM3S3005020	3.00	11.00	5.00	20.50	2.00	0.80
2	SCM3S3005030	3.00	21.00	5.00	30.50	2.00	0.90
3	SCM3S3005040	3.00	31.00	5.00	40.50	2.00	0.90

Stem material carbon fiber, ball material ruby

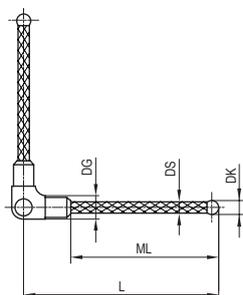
0°

Pos.	Item number	DK	ML	DG	L	DS	Weight (g)
1	SCM303005020	3.00	11.00	5.00	20.50	2.00	0.90
2	SCM303005030	3.00	21.00	5.00	30.50	2.00	0.90
3	SCM303005040	3.00	31.00	5.00	40.50	2.00	1.00



Stem material carbon fiber, ball material silicon nitride

90°



Pos.	Item number	DK	ML	DG	L	DS	Weight (g)
1	SCM3S3005020/90°	3.00	11.00	5.00	20.50	2.00	1.50
2	SCM3S3005030/90°	3.00	21.00	5.00	30.50	2.00	1.50
3	SCM3S3005040/90°	3.00	31.00	5.00	40.50	2.00	1.60

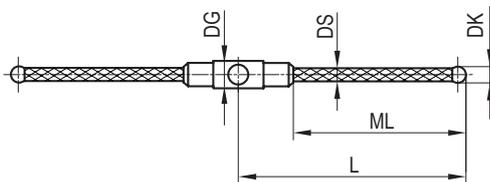
**Stem material carbon fiber, ball material ruby**

**90°**

Pos.	Item number	DK	ML	DG	L	DS	Weight (g)
1	SCM303005020/90°	3.00	11.00	5.00	20.50	2.00	1.50
2	SCM303005030/90°	3.00	21.00	5.00	30.50	2.00	1.60
3	SCM303005040/90°	3.00	31.00	5.00	40.50	2.00	1.70

**Stem material carbon fiber, ball material silicon nitride**

**180°**



Pos.	Item number	DK	ML	DG	L	DS	Weight (g)
1	SCM3S3005020/180°	3.00	11.00	5.00	20.00	2.00	1.40
2	SCM3S3005030/180°	3.00	21.00	5.00	30.00	2.00	1.50
3	SCM3S3005040/180°	3.00	31.00	5.00	40.00	2.00	1.70

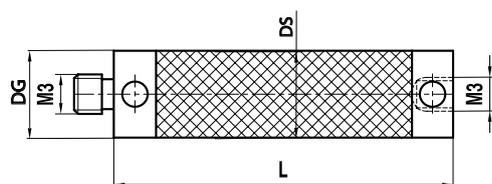
**Stem material carbon fiber, ball material ruby**

**180°**

Pos.	Item number	DK	ML	DG	L	DS	Weight (g)
1	SCM303005020/180°	3.00	11.00	5.00	20.00	2.00	1.50
2	SCM303005030/180°	3.00	21.00	5.00	30.00	2.00	1.50
3	SCM303005040/180°	3.00	31.00	5.00	40.00	2.00	1.60



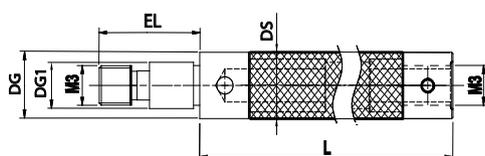
## Extensions: Type styli extensions



### Carbon fiber

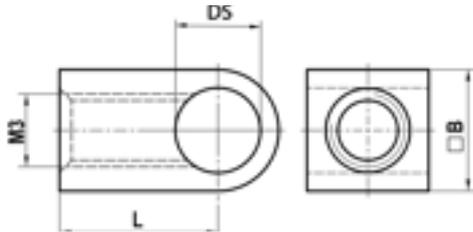
Pos.	Item number	DS	DG	L	Weight (g)
1	VCM300005020	5.00	5.00	20.00	1.10
2	VCM300005025	5.00	5.00	25.00	1.20
3	VCM300005030	5.00	5.00	30.00	1.30
4	VCM300005040	5.00	5.00	40.00	1.40
5	VCM300005050	5.00	5.00	50.00	1.70
6	VCM300005060	5.00	5.00	60.00	1.80
7	VCM300005065	5.00	5.00	65.00	1.80
8	VCM300005075	5.00	5.00	75.00	2.20
9	VCM300005080	5.00	5.00	80.00	2.60
10	VCM300005100	5.00	5.00	100.00	2.60
11	VCM300005130	5.00	5.00	130.00	2.90
12	VCM300005150	5.00	5.00	150.00	3.60

### Carbon fiber



Pos.	Item number	DS	DG	DG1	EL	L	Weight (g)
1	VCM30000k5020	5.00	5.00	3.50	8.00	20.00	1.80
2	VCM30000k5045	5.00	5.00	3.50	8.00	45.00	1.30

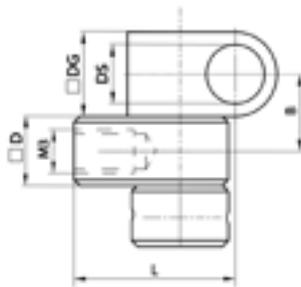
## Adaptors/holders: Styli holders



### Base material titanium

Pos.	Item number	L	DS	B	Weight (g)
1	WTM300005006	6.50	3.50	5.00	0.60
2	WTM318005013	13.00	3.50	5.00	1.00

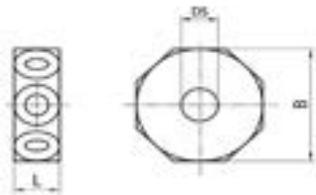
## Adaptors/holders: Type knuckles



### Base material titanium

Pos.	Item number	DG	L	DS	D	B	Weight (g)
1	DTM300005010	5.00	10.20	3.50	5.00	5.00	1.60

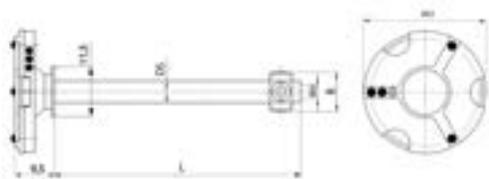
## Adaptors/holders: Type cubes



### Base material titanium

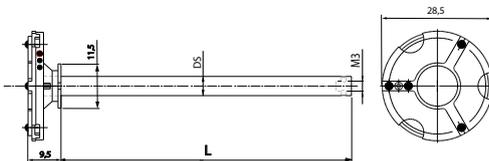
Pos.	Item number	L	DS	B	Weight (g)
1	WTM300014005	5.00	3.50	14.00	2.30
2	WTM300012005	5.00	3.50	12.00	1.80
3	WTM300005013	5.00	3.50	13.00	1.70

## Adaptor plates: Type Vast XXT



### Stem material carbon fiber

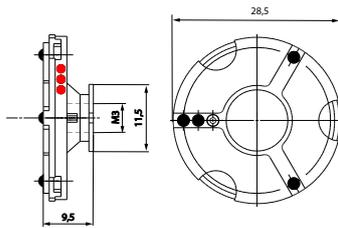
Pos.	Item number	L	DS	B	Weight (g)
1	TPM3MESSOTL1S	55.00	5.00	9.00	5.90
2	TPM3MESSOTL3S	55.00	5.00	9.00	6.00



### Stem material carbon fiber

Pos.	Item number	L	DS	B	Weight (g)
1	TPM3MESSOTL2R	75.00	5.00	–	5.50
2	TPM3MESSOTL2	75.00	5.00	–	5.50

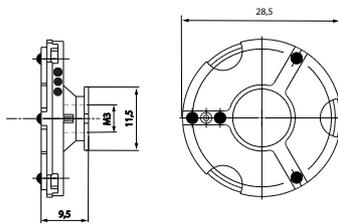
## Base material aluminium



**NOTE:** These are reference plates.

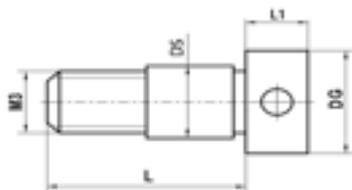
Pos.	Item number	Weight (g)
1	TPM3MESSOTL1R	4.50
2	TPM3MESSOTL3R	4.60

## Base material aluminium



Pos.	Item number	Weight (g)
1	TPM3MESSOTL3	4.50
2	TPM3MESSOTL1	4.50

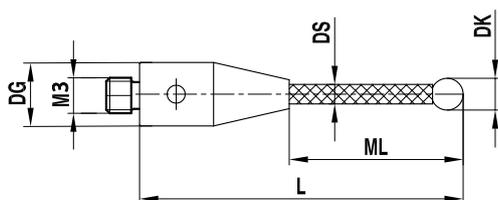
## Accessories: Type screws



### Base material titanium

Pos.	Item number	DG	L	DS	Weight (g)
1	SIM300005008	5.00	8.00	3.50	0.40
2	SIM3M3005008	5.00	8.00	3.50	0.60

## Accessories: Type reference styli



### Stem material carbon fiber, ball material ruby

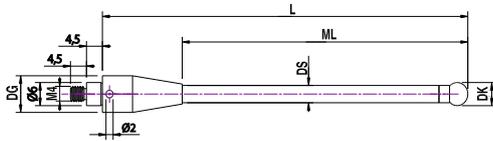
Pos.	Item number	DK	ML	DG	L	DS	Weight (g)
1	TCM3R5005030	5.00	21.00	5.00	30.00	3.50	1.10
2	TCM3R5005050	5.00	41.00	5.00	50.00	3.50	1.40



## Thread M4



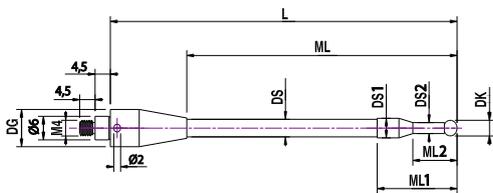
## Straight styli: Typ A compatible with Blum measuring system



Stem material ceramic/stainless steel, ball material ruby

Pos.	Item number	DK	ML	DG	L	DS	Weight (g)
1	TKM4060B95053	6.00	30.50	9.50	53.00	4.50	9.50
2	TKM4060B95103	6.00	80.50	9.50	103.00	4.50	11.30

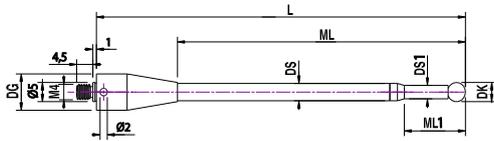
## Straight styli: Typ B compatible with Blum measuring system



Stem material ceramic/stainless steel, ball material ruby

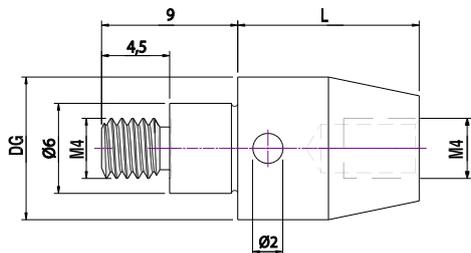
Pos.	Item number	DK	ML	ML1	ML2	DG	L	DS	DS1	DS2	Weight (g)
1	TKM4020B95051	2.00	28.50	19.50	9.00	9.50	51.00	4.50	5.00	1.20	10.60
2	TKM4040B95052	4.00	29.50	23.50	13.00	9.50	52.00	4.50	5.00	2.80	11.20
3	TKM4050B95052	5.00	30.00	25.00	14.50	9.50	52.50	4.50	5.00	3.50	11.50
4	TKM4020B95101	2.00	78.50	19.80	9.30	9.50	101.00	4.50	5.00	1.20	13.00
5	TKM4030B95101	3.00	79.00	22.00	11.50	9.50	101.50	4.50	5.00	2.00	13.20
6	TKM4040B95102	4.00	79.50	23.50	13.00	9.50	102.00	4.50	5.00	2.80	13.50
7	TKM4050B95102	5.00	80.50	25.00	14.50	9.50	102.50	4.50	5.00	3.50	13.90

Stem material ceramic/stainless steel, ball material ruby



Pos.	Item number	DK	ML	ML1	DG	L	DS	DS1	Weight (g)
1	TKM4020B95051/1,2	2.00	28.50	19.30	9.50	51.00	4.50	1.20	9.10
2	TKM4040B95052/2,5	4.00	29.50	15.70	9.50	52.00	4.50	2.50	9.80
3	TKM4050B95052/3,5	5.00	30.00	17.00	9.50	52.50	4.50	3.50	10.50
4	TKM4050B95102/3,5	5.00	80.00	17.00	9.50	102.50	4.50	3.50	12.70
5	TKM4010B95050	1.00	28.00	5.60	9.50	50.50	4.50	0.70	9.50

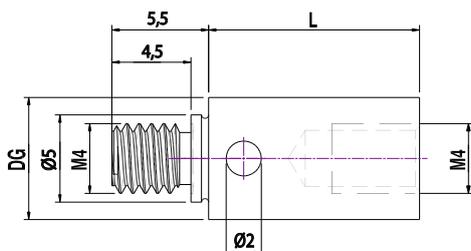
Adaptors/holders: Type thread adaptors compatible with Blum measuring system



Base material stainless steel

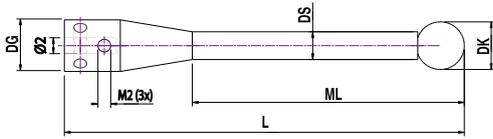
Pos.	Item number	DG	L	Weight (g)
1	RIM4M4B095012	9.50	12.00	6.50

Base material stainless steel



Pos.	Item number	DG	L	Weight (g)
1	RIM4M4B007012	7.00	12.00	3.50

## Straight styli: Type A identical to Hexagon

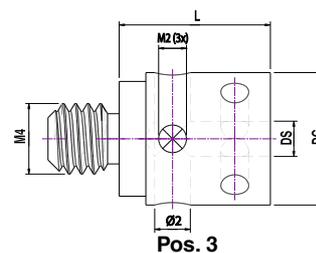
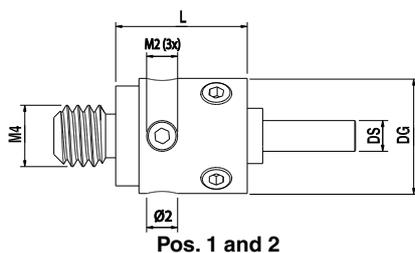


### Stem material stainless steel, ball material ruby/silicon nitride

Pos.	Item number	DK	ML	DG	L	DS	Weight (g)
1	TIM0S60X6050	6.00	34.00	6.50	50.00	3.50	5.70
2	TIM0060X6050	6.00	34.00	6.50	50.00	3.50	5.80
3	TIM0060X6080	6.00	64.00	6.50	80.00	3.50	8.00
4	TIM0060X6103	6.00	87.00	6.50	103.00	3.50	9.60

**NOTE:** Styli can only be used in combination with Hexagon holders for non threaded styli and Hexagon crash protective device.

## Adaptors/holders: Type holders for non threaded styli



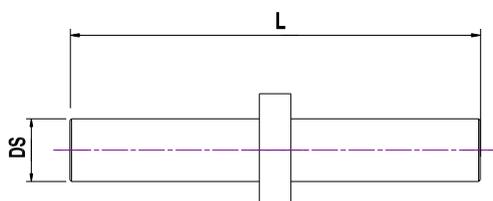
### Base material stainless steel

Pos.	Item number	DG	L	DS	incl.	Weight (g)
1	KHM402007008/H	7.50	8.50	2.00	H-force	2.90
2	KHM402007008/S	7.50	8.50	2.00	S-force	2.90
3	KHM402007008	7.50	8.50	2.00	-	2.90



**NOTE:** Holders for non threaded styli can only be used in combination with Hexagon styli and Hexagon crash protective device.

## Accessories: Type others (crash protective devices)

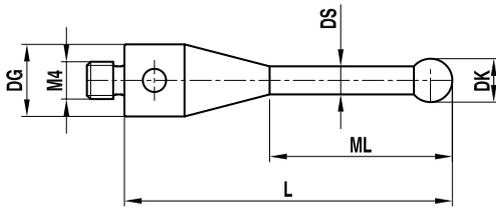


### Base material stainless steel

Pos.	Item number	L	DS	F	Weight (g)
1	SHM000X20013/H	13.00	2.00	H-force	0.60
2	SHM000X20013/S	13.00	2.00	S-force	0.60

**NOTE:** Crash protective device can only be used in combination with Hexagon styli and Hexagon holder for non threaded styli.

## Straight styli: Type A



### Stem material stainless steel, ball material silicon nitride

Pos.	Item number	DK	ML	DG	L	DS	Weight (g)
1	TIM4S1007020	1.00	4.50	7.00	20.00	0.70	2.60
2	TIM4S2007020	2.00	9.00	7.00	20.00	1.30	2.20
3	TIM4S4007020	4.00	15.00	7.00	20.00	3.00	2.20
4	TIM4S5007020	5.00	15.00	7.00	20.00	3.50	2.50
5	TIM4S5007022	5.00	17.50	7.00	22.50	3.00	2.40
6	TIM4S5007052	5.00	35.50	7.00	52.50	4.50	8.30
7	TIM4S5007102	5.00	85.50	7.00	102.50	4.50	14.80
8	TIM4S6007020	6.00	16.00	7.00	20.00	4.50	3.00
9	TIM4S8007020	8.00	16.50	7.00	20.00	6.00	4.00

### Stem material stainless steel, ball material zirconium oxide

Pos.	Item number	DK	ML	DG	L	DS	Weight (g)
1	TIM4Z2007020	2.00	9.00	7.00	20.00	1.30	2.30
2	TIM4Z4007020	4.00	15.00	7.00	20.00	3.00	2.20

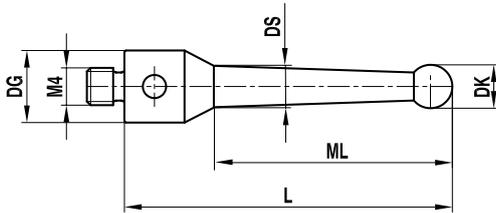


### Stem material stainless steel, ball material ruby

Pos.	Item number	DK	ML	DG	L	DS	Weight (g)
1	TIM401007020	1.00	4.50	7.00	20.00	0.70	2.60
2	TIM402007020	2.00	9.00	7.00	20.00	1.30	2.20
3	TIM404007020	4.00	15.00	7.00	20.00	3.00	2.20
4	TIM405007013	5.00	9.00	7.00	13.00	3.50	1.80
5	TIM405007020	5.00	15.00	7.00	20.00	3.50	2.50
6	TIM405007022	5.00	17.50	7.00	22.50	3.00	2.40
7	TIM405007032	5.00	27.50	7.00	32.50	3.00	3.00
8	TIM405007052	5.00	35.50	7.00	52.50	4.50	8.40
9	TIM405007102	5.00	85.50	7.00	102.50	4.50	14.80
10	TIM405007152	5.00	135.50	7.00	152.50	4.50	21.00
11	TIM406007020	6.00	20.00	7.00	20.00	4.50	3.00
12	TIM408007020	8.00	20.00	7.00	20.00	6.00	4.20



**Stem material stainless steel, ball material silicon nitride**

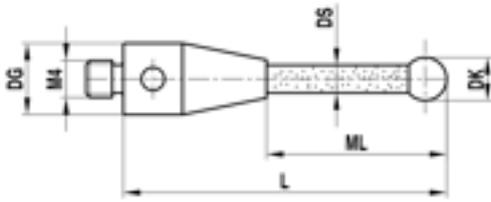


Pos.	Item number	DK	ML	DG	L	DS	DS1	Weight (g)
1	TIM4S3007020	3.00	14.50	7.00	20.00	3.00	2.00	2.00

**Stem material stainless steel, ball material ruby**

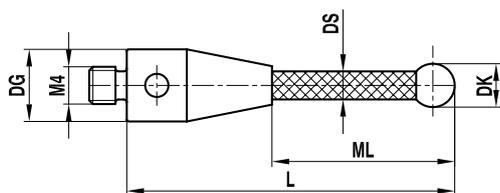
Pos.	Item number	DK	ML	DG	L	DS	DS1	Weight (g)
1	TIM403007020	3.00	14.50	7.00	20.00	3.00	2.00	2.10

**Stem material ceramic, ball material silicon nitride**



Pos.	Item number	DK	ML	DG	L	DS	Weight (g)
1	TKM4S6007053	6.00	36.50	7.00	53.00	4.50	5.30
2	TKM4S6007103	6.00	86.50	7.00	103.00	4.50	7.70
3	TKM4S8007054	8.00	37.50	7.00	54.00	4.50	5.80
4	TKM4S8007104	8.00	87.50	7.00	104.00	4.50	8.20

### Stem material carbon fiber, ball material silicon nitride



Pos.	Item number	DK	ML	DG	L	DS	Weight (g)
1	TCM4S6007053	6.00	36.50	7.00	53.00	4.50	4.50
2	TCM4S6007103	6.00	86.50	7.00	103.00	4.50	6.00
3	TCM4S6007153	6.00	136.50	7.00	153.00	4.50	7.30
4	TCM4S6007203	6.00	186.50	7.00	203.00	4.50	8.00
5	TCM4S6007303	6.00	286.50	7.00	303.00	4.50	11.00

### Stem material carbon fiber, ball material zirconium oxide

Pos.	Item number	DK	ML	DG	L	DS	Weight (g)
1	TCM4Z6007053	6.00	36.50	7.00	53.00	4.50	4.70
2	TCM4Z6007103	6.00	86.50	7.00	103.00	4.50	6.10
3	TCM4Z6007153	6.00	136.50	7.00	153.00	4.50	7.40
4	TCM4Z6007203	6.00	186.50	7.00	203.00	4.50	8.70
5	TCM4Z6007303	6.00	286.50	7.00	303.00	4.50	11.40

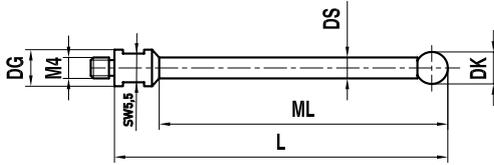


### Stem material carbon fiber, ball material ruby

Pos.	Item number	DK	ML	DG	L	DS	Weight (g)
1	TCM406007053	6.00	36.50	7.00	53.00	4.50	4.60
2	TCM406007103	6.00	86.50	7.00	103.00	4.50	6.10
3	TCM406007153	6.00	136.50	7.00	153.00	4.50	7.30
4	TCM406007203	6.00	186.50	7.00	203.00	4.50	8.90
5	TCM406007303	6.00	286.50	7.00	303.00	4.50	11.20



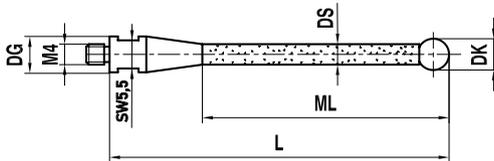
## Straight styli : Type A compatible with Marposs measuring system



### Stem material carbide, ball material ruby

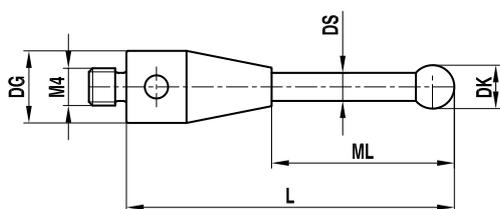
Pos.	Item number	DK	ML	DG	L	DS	Weight (g)
1	THM401007020	1.00	4.50	7.00	20.50	0.80	3.30
2	THM402007020	2.00	8.00	7.00	21.00	1.50	3.30
3	THM404007020	4.00	12.00	7.00	22.00	3.00	4.00
4	THM406007020	6.00	14.50	7.00	23.00	4.00	5.10
5	THM406007035	6.00	29.50	7.00	38.00	4.00	7.90
6	THM406007040	6.00	34.50	7.00	43.00	4.00	8.80
7	THM406007050	6.00	44.50	7.00	53.00	4.00	10.60
8	THM406007075	6.00	69.50	7.00	78.00	4.00	15.70
9	THM406007100	6.00	94.50	7.00	103.00	4.00	19.70
10	THM407007150	7.00	135.50	7.00	153.50	4.00	30.60
11	THM408007020	8.00	15.50	7.00	24.00	4.00	5.60

### Stem material ceramic, ball material ruby



Pos.	Item number	DK	ML	DG	L	DS	Weight (g)
1	TKM406007035	6.00	29.50	7.00	38.00	4.00	3.40
2	TKM406007040	6.00	34.50	7.00	43.00	4.00	3.60
3	TKM406007045	6.00	39.50	7.00	48.00	4.00	3.80
4	TKM406007050	6.00	44.50	7.00	53.00	4.00	3.90
5	TKM406007075	6.00	60.00	7.00	78.00	4.00	6.40
6	TKM406007100	6.00	85.00	7.00	103.00	4.00	7.20
7	TKM407007070	7.00	55.50	7.00	73.50	4.00	6.50
8	TKM407007125	7.00	110.50	7.00	128.50	4.00	8.40
9	TKM407007150	7.00	135.50	7.00	153.50	4.00	9.30
10	TKM410007100	10.00	87.00	7.00	105.00	4.00	8.80

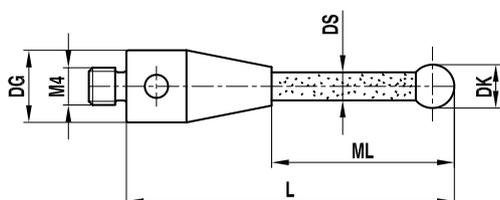
## Straight styli: Type A



### Stem material carbide, ball material ruby

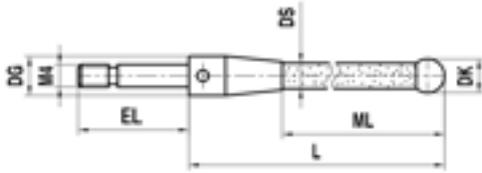
Pos.	Item number	DK	ML	DG	L	DS	Weight (g)
1	THM4010R7020	1.00	10.50	7.00	20.50	0.70	2.50
2	THM402007021	2.00	11.00	7.00	21.00	1.50	2.80
3	THM402007051	2.00	41.00	7.00	51.00	1.50	3.50
4	THM403007021	3.00	11.50	7.00	21.50	1.50	2.80
5	THM403007051	3.00	40.00	7.00	51.50	2.00	4.50
6	THM404007022	4.00	10.50	7.00	22.00	1.50	3.10
7	THM404007052	4.00	40.50	7.00	52.00	2.00	4.70
8	THM405007022	5.00	8.65	7.00	22.15	2.50	2.80
9	THM405007052	5.00	39.00	7.00	52.50	2.50	5.90
10	THM406007023	6.00	9.50	7.00	23.00	2.50	4.00
11	THM406007053	6.00	39.50	7.00	53.00	2.50	6.10

### Stem material ceramic, ball material ruby



Pos.	Item number	DK	ML	DG	L	DS	Weight (g)
1	TKM404007052	4.00	35.50	7.00	52.00	3.00	4.80
2	TKM405007052	5.00	36.00	7.00	52.50	3.50	4.90
3	TKM405007077	5.00	61.00	7.00	77.50	3.50	5.60
4	TKM405007102	5.00	86.00	7.00	102.50	3.50	6.30
5	TKM406007053	6.00	36.50	7.00	53.00	4.50	5.60
6	TKM406007078	6.00	61.50	7.00	78.00	4.50	6.70
7	TKM406007103	6.00	86.50	7.00	103.00	4.50	7.80
8	TKM408007054	8.00	37.50	7.00	54.00	4.50	6.00
9	TKM408007079	8.00	62.50	7.00	79.00	4.50	7.20
10	TKM408007104	8.00	87.50	7.00	104.00	4.50	8.40

## Straight styli: Type others



**NOTE:** Can be used with HIM400015015

### Stem material ceramic, ball material ruby

Pos.	Item number	DK	ML	DG	L	EL	DS	Weight (g)
1	TKM4060S7053	6.00	36.50	7.00	53.00	19.50	4.50	6.80
2	TKM4060S7103	6.00	86.50	7.00	103.00	19.50	4.50	9.10

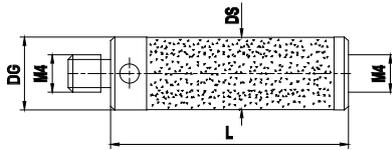
## Extensions: Type styli extensions



### Stem material stainless steel

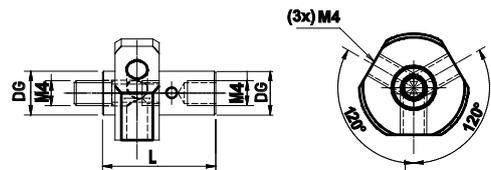
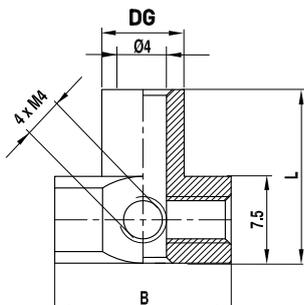
Pos.	Item number	DG	L	Weight (g)
1	VIM400007010	7.00	10.00	2.60
2	VIM4000M7010	7.00	10.00	2.70
3	VIM4000M7015	7.00	15.00	4.20
4	VIM400007015	7.00	15.00	3.80
5	VIM400007020	7.00	20.00	5.20
6	VIM4000M7020	7.00	20.00	5.70
7	VIM400007030	7.00	30.00	8.20
8	VIM4000M7030	7.00	30.00	8.60
9	VIM4000M7050	7.00	50.00	14.80

### Stem material ceramic



Pos.	Item number	DG	L	DS	Weight (g)
1	VKM400007030	7.00	30.00	7.00	4.40
2	VKM400007050	7.00	50.00	7.00	5.70
3	VKM400007100	7.00	100.00	7.00	9.20

### Adaptors/holders: Styli holders



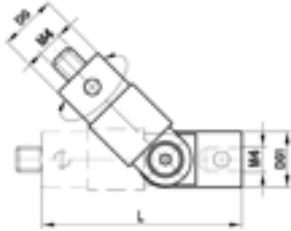
Pos.3

### Base material stainless steel

Pos.	Item number	DG	L	B	Weight (g)
1	HIM400015015	7.00	15.00	15	10.90
2	HIM400015018	7.00	18.00	15	11.80
3	HIM400015018/3	7.00	18.00	–	13.60



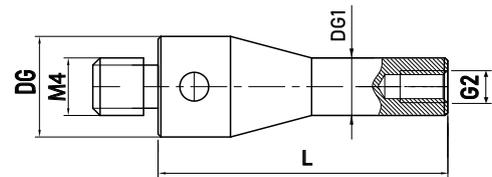
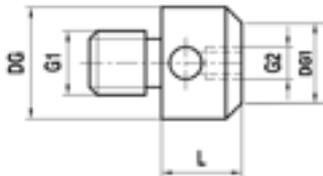
## Adaptors/holders: Type knuckles



### Base material stainless steel

Pos.	Item number	DG	L	DG1	Weight (g)
1	GIM400009033	7.00	33.00	7.00	9.40

## Adaptors/holders: Type thread adaptors



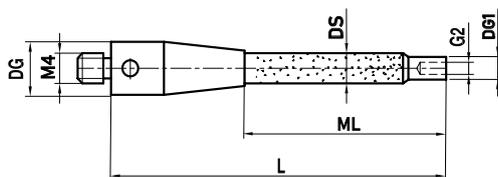
Pos.4

### Base material stainless steel

Pos.	Item number	DG	DG1	L	G1	G2	Weight (g)
1	RIM400007005	7.00	5.00	5.00	M4	M2	1.50
2	RIM400007009	7.00	4.50	9.00	M4	M3	1.40
3	RIM430007018	7.00	4.50	18.00	M4 × 0.5	M3	2.30
4	RIM430007020	7.00	4.00	20.00	M4	M3	3.30
5	RTM450011010	11.00	10.00	10.00	M4	M5	6.40

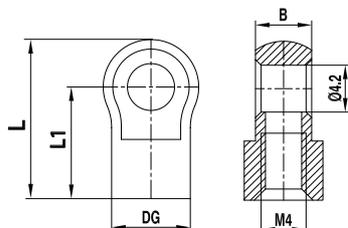


### Base material stainless steel, stem material ceramic



Pos.	Item number	DG	L	DS	DG1	G2	ML	Weight (g)
1	RKM430007050	7.00	50.00	4.50	4.00	M3	33.5	4.50
2	RKM430007075	7.00	75.00	4.50	4.00	M3	58.5	5.10
3	RKM430007100	7.00	100.00	4.50	4.00	M3	83.5	5.80

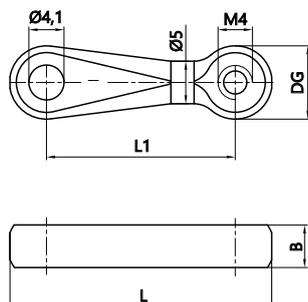
### Adaptors/holders: Type others



### Base material stainless steel

Pos.	Item number	DG	L	L1	B	Weight (g)
1	RIM400007014	7.00	14.25	10.00	5.00	2.70
2	RIM400007018	7.00	17.75	13.50	5.00	3.60

### Base material stainless steel



Pos.	Item number	DG	L	L1	B	Weight (g)
1	RIM400007022	8.60	30.50	22.00	5.00	6.50
2	RIM400007028	8.60	36.50	28.00	5.00	7.50

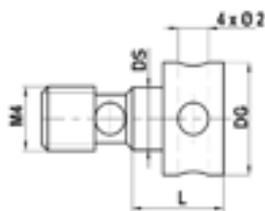
# Accessories: Type Styli tool



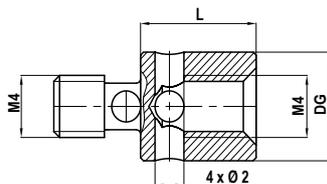
## Material stainless steel

Pos.	Item number	DG	L	Weight (g)
1	MIMO01700049	1.70	49.00	1.40

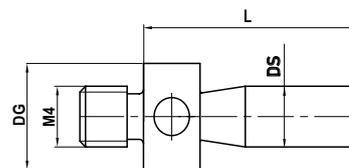
## Accessories: Type others (crash protective devices)



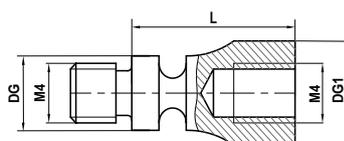
Pos. 1 and 2



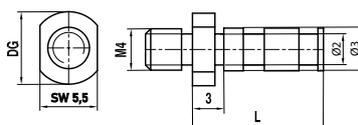
Pos. 3



Pos. 4, 6 and 7



Pos. 5

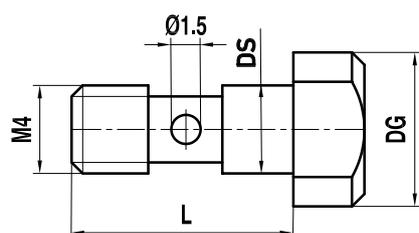


Pos. 8



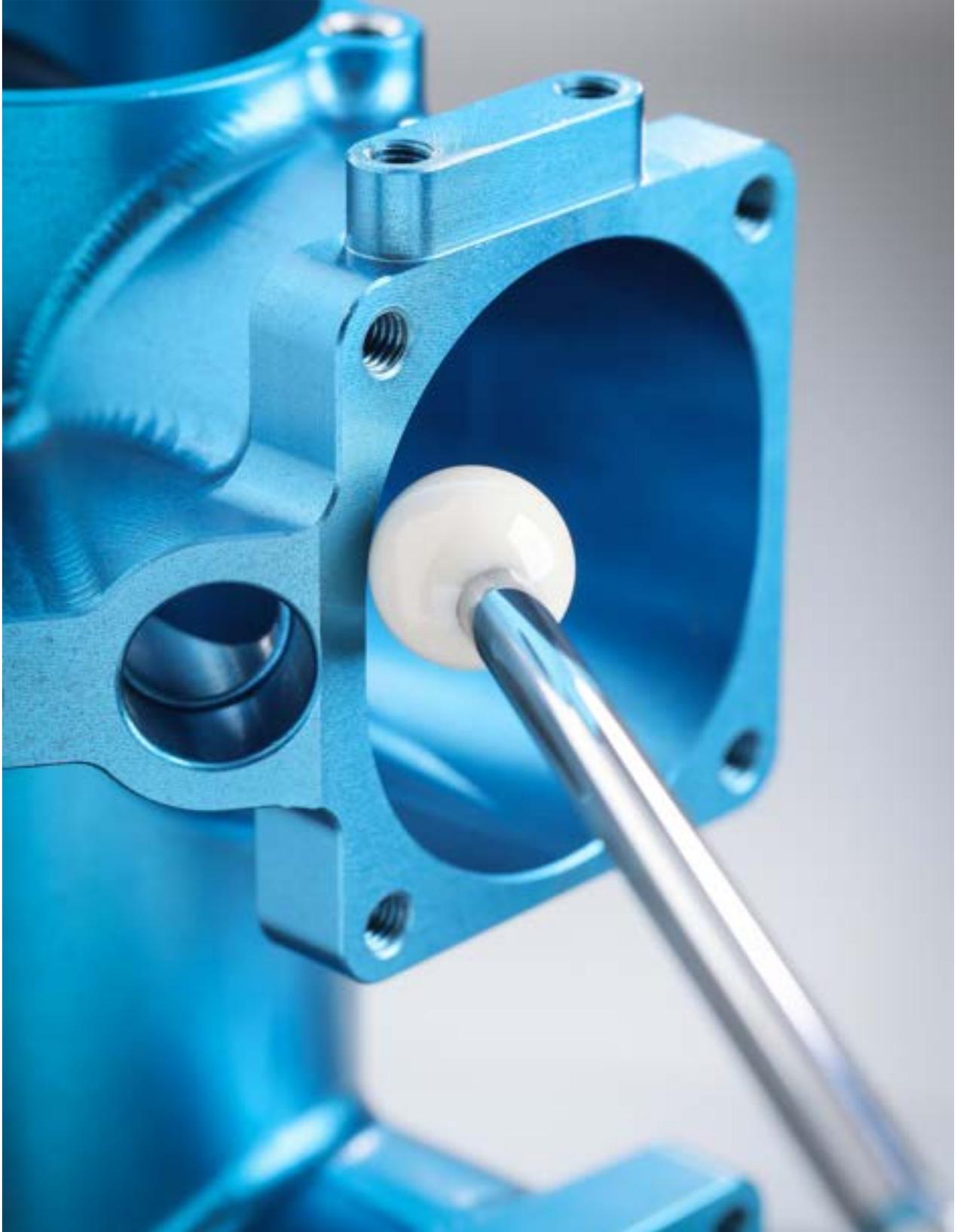
### Base material stainless steel

Pos.	Item number	DG	L	DS	Weight (g)
1	BIM400007010	7.00	6.00	3.90	1.50
2	BIM400007006	7.00	6.00	3.90	1.40
3	BIM400007008	7.00	8.00	–	1.90
4	BIM400007009	7.00	9.00	3.40	1.50
5	BIM400007012	7.00	12.00	–	2.60
6	BIM400007015	7.00	15.20	4.00	2.30
7	BIM4000R7016	7.00	16.00	3.40	2.10
8	BIM400007016	7.00	16.00	–	1.40



### Base material stainless steel

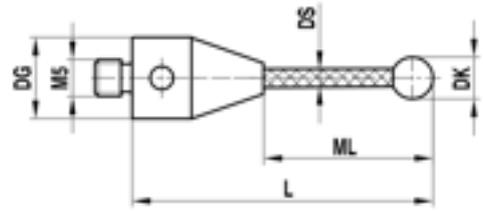
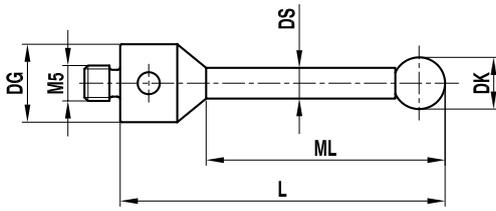
Pos.	Item number	DG	L	DS	Weight (g)
1	SIM400007010	7.00	10.00	4.00	1.80



## Thread M5



## Straight styli: Type A



### Stem material stainless steel, ball material silicon nitride

Pos.	Item number	DK	ML	DG	L	DS	Weight (g)
1	TIM5S5011050	5.00	40.00	11.00	50.00	3.50	8.80
2	TIM5S5011053	5.00	43.00	11.00	53.00	3.50	9.00
3	TIM5S5011075	5.00	65.00	11.00	75.00	3.50	11.10
4	TIM5S8011063	8.00	50.50	11.00	63.50	6.00	17.80
5	TIM5S8011075	8.00	62.00	11.00	75.00	6.00	20.10
6	TIM5S8011100	8.00	87.00	11.00	100.00	6.00	26.70
7	TIM5S8011114	8.00	101.50	11.00	114.50	6.00	29.00



### Stem material ceramic, ball material silicon nitride

Pos.	Item number	DK	ML	DG	L	DS	Weight (g)
1	TKM5S5011053	5.00	43.00	11.00	53.00	3.50	4.30
2	TKM5S6011054	6.00	44.00	11.00	54.00	3.50	4.70
3	TKM5S7011055	7.00	45.00	11.00	55.00	3.50	4.80
4	TKM5S8011063	8.00	50.50	11.00	63.50	6.00	8.40
5	TKM5S8011114	8.00	101.50	11.00	114.50	6.00	12.70
6	TKM5S9011064	9.00	51.50	11.00	64.50	6.00	8.80
7	TKM5S10011065	10.00	52.50	11.00	65.50	6.00	9.20



### Stem material ceramic, ball material silicon nitride

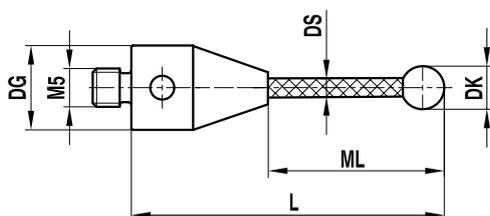
Pos.	Item number	DK	ML	DG	L	DS	Weight (g)
1	TKM5S8012090	8.00	78.00	12.00	94.00	6.00	15.70
2	TKM5S8012125	8.00	113.00	12.00	129.00	6.00	21.90

### Stem material carbon fiber, ball material silicon nitride

Pos.	Item number	DK	ML	DG	L	DS	Weight (g)
1	TCM5S4010022	4.00	13.00	10.00	22.00	2.00	2.70
2	TCM5S6010053	6.00	42.00	10.00	53.00	4.00	4.00
3	TCM5S6050103	6.00	53.00	10.00	103.00	4.00	12.00



### Stem material carbon fiber, ball material silicon nitride

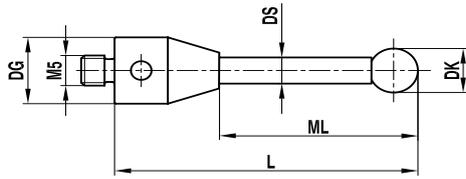


Pos.	Item number	DK	ML	DG	L	DS	Weight (g)
1	TCM5S3011025	3.00	15.00	11.00	25.00	2.00	4.00
2	TCM5S3011033	3.00	23.50	11.00	33.50	2.00	4.20
3	TCM5S3011050	3.00	40.00	11.00	50.00	2.00	3.40
4	TCM5S3011058	3.00	48.00	11.00	58.00	2.00	3.40
5	TCM5S4011033	4.00	23.50	11.00	33.50	2.00	4.20
6	TCM5S4011064	4.00	54.00	11.00	64.00	2.00	3.50
7	TCM5S5011050	5.00	40.00	11.00	50.00	3.50	3.90
8	TCM5S5011053	5.00	43.00	11.00	53.00	3.50	3.90
9	TCM5S5011075	5.00	65.00	11.00	75.00	3.50	4.30
10	TCM5S5011100	5.00	90.00	11.00	100.00	3.50	4.80
11	TCM5S6011054	6.00	44.00	11.00	54.00	3.50	4.20
12	TCM5S7011055	7.00	45.00	11.00	55.00	3.50	4.40
13	TCM5S8011063	8.00	50.50	11.00	63.50	6.00	6.90
14	TCM5S8011075	8.00	62.00	11.00	75.00	6.00	7.40
15	TCM5S8011100	8.00	87.00	11.00	100.00	6.00	8.20
16	TCM5S8011114	8.00	101.50	11.00	114.50	6.00	9.40
17	TCM5S8011150	8.00	137.00	11.00	150.00	6.00	11.20
18	TCM5S8011200	8.00	187.00	11.00	200.00	6.00	13.70
19	TCM5S9011064	9.00	51.50	11.00	64.50	6.00	7.20
20	TCM5S10011065	10.00	52.50	11.00	65.50	6.00	7.50
21	TCM5S10011118	10.00	105.00	11.00	118.00	6.00	10.20
22	TCM5S10011150	10.00	137.00	11.00	150.00	6.00	11.90
23	TCM5S10011200	10.00	187.00	11.00	200.00	6.00	14.40

### Stem material carbide, ball material silicon nitride

Pos.	Item number	DK	ML	DG	L	DS	Weight (g)
1	THM5S2010021	2.00	12.00	10.00	21.00	1.00	2.70

**Stem material carbide, ball material silicon nitride**

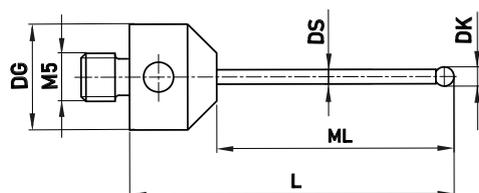


**NOTE:** K = bonded into spherical cup

Pos.	Item number	DK	ML	DG	L	DS	Weight (g)
1	THM5S1511025	1.50	15.00	11.00	25.00	1.00	3.30
2	THM5S2011020/K	2.00	10.00	11.00	20.00	1.00	3.30
3	THM5S2011020	2.00	10.00	11.00	20.00	1.00	3.30
4	THM5S2011025/K	2.00	15.00	11.00	25.00	1.00	3.40
5	THM5S2011025	2.00	15.00	11.00	25.00	1.00	3.40
6	THM5S2011030	2.00	20.00	11.00	30.00	1.50	3.70
7	THM5S2011030/K	2.00	20.00	11.00	30.00	1.50	3.70
8	THM5S2011040	2.00	30.00	11.00	40.00	1.50	4.00
9	THM5S2011040/K	2.00	30.00	11.00	40.00	1.50	4.00
10	THM5S3011025	3.00	15.00	11.00	25.00	2.00	3.90
11	THM5S3011025/K	3.00	15.00	11.00	25.00	2.00	3.90
12	THM5S3011033/K	3.00	23.50	11.00	33.50	2.00	4.30
13	THM5S3011033	3.00	23.50	11.00	33.50	2.00	4.30
14	THM5S3011050/K	3.00	40.00	11.00	50.00	2.00	5.00
15	THM5S3011050	3.00	40.00	11.00	50.00	2.00	5.10
16	THM5S3011058	3.00	48.00	11.00	58.00	2.00	5.40
17	THM5S3011058/K	3.00	48.00	11.00	58.00	2.00	5.40
18	THM5S4011033/K	4.00	23.50	11.00	33.50	2.00	4.30
19	THM5S4011033	4.00	23.50	11.00	33.50	2.00	4.30
20	THM5S4011064/K	4.00	54.00	11.00	64.00	2.00	5.70
21	THM5S4011064	4.00	54.00	11.00	64.00	2.00	5.70
22	THM5S5011030/K	5.00	20.00	11.00	30.00	3.50	5.30
23	THM5S5011030	5.00	20.00	11.00	30.00	3.50	6.10
24	THM5S5011050	5.00	40.00	11.00	50.00	3.50	8.90
25	THM5S5011050/K	5.00	40.00	11.00	50.00	3.50	4.00
26	THM5S5011053/K	5.00	43.00	11.00	53.00	3.50	7.70
27	THM5S5011053	5.00	43.00	11.00	53.00	3.50	9.20
28	THM5S5011075/K	5.00	65.00	11.00	75.00	3.50	9.90
29	THM5S5011075	5.00	65.00	11.00	75.00	3.50	12.40
30	THM5S5011100/K	5.00	90.00	11.00	100.00	3.50	12.50
31	THM5S5011100	5.00	90.00	11.00	100.00	3.50	15.80
32	THM5S6011054/K	6.00	44.00	11.00	54.00	3.50	9.80
33	THM5S6011054	6.00	44.00	11.00	54.00	3.50	9.40
34	THM5S7011055/K	7.00	45.00	11.00	55.00	3.50	8.10
35	THM5S8011063/K	8.00	50.50	11.00	63.50	6.00	18.80
36	THM5S8011075/K	8.00	62.00	11.00	75.00	6.00	22.10

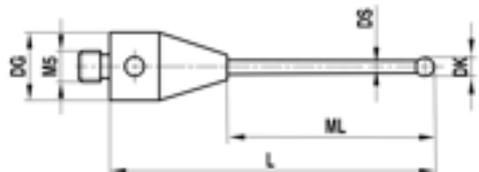
Pos.	Item number	DK	ML	DG	L	DS	Weight (g)
37	THM5S8011100/K	8.00	87.00	11.00	100.00	6.00	30.00
38	THM5S8011114/K	8.00	101.50	11.00	114.50	6.00	33.50
39	THM5S9011064/K	9.00	51.50	11.00	64.50	6.00	19.60
40	THM5S10011065/K	10.00	52.50	11.00	65.50	6.00	19.60
41	THM5S10011118/K	10.00	105.00	11.00	118.00	6.00	35.00
42	THM5S10011150/K	10.00	135.00	11.00	150.00	6.00	44.30

### Stem material carbide, ball material silicon nitride



Pos.	Item number	DK	ML	DG	L	DS	Weight (g)
1	NHM5S1511033	1.50	24.00	11.00	33.00	1.00	5.80
2	NHM5S2011033	2.00	24.50	11.00	33.50	1.50	6.20
3	NHM5S2511034	2.50	25.00	11.00	34.00	1.00	6.20

### Stem material carbide, ball material silicon nitride



Pos.	Item number	DK	ML	DG	L	DS	Weight (g)
1	THM5S1512028	1.50	7.75	12.00	28.75	1.00	10.30
2	THM5S1512040	1.50	19.75	12.00	40.75	1.00	10.30
3	THM5S2012030	2.00	19.50	12.00	31.00	1.50	7.30
4	THM5S2012035	2.00	24.50	12.00	36.00	1.50	7.80
5	THM5S2012041	2.00	31.00	12.00	42.00	1.50	7.60
6	THM5S2012060	2.00	40.50	12.00	61.00	1.50	11.60
7	THM5S3012035	3.00	25.50	12.00	36.50	2.00	8.10
8	THM5S3012050	3.00	40.50	12.00	51.50	2.00	8.80
9	THM5S3512091	3.50	79.75	12.00	92.75	3.00	16.20
10	THM5S4012055	4.00	44.00	12.00	57.00	3.00	13.00
11	THM5S4012080	4.00	71.00	12.00	82.00	2.50	12.10
12	THM5S5012060	5.00	51.50	12.00	62.50	3.50	14.80
13	THM5S5012080	5.00	71.50	12.00	82.50	3.50	17.00
14	THM5S8012068	8.00	54.00	12.00	72.00	3.00	15.90
15	THM5S8012090	8.00	78.00	12.00	94.00	6.00	32.20
16	THM5S8012125	8.00	113.00	12.00	129.00	6.00	58.00
17	THM5S8012176	8.00	164.00	12.00	180.00	6.00	80.00

### Stem material carbon fiber, ball material zirconium oxide

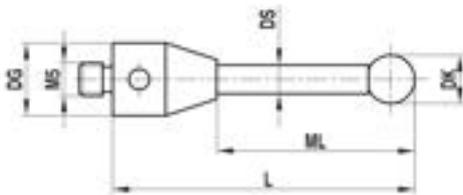
Pos.	Item number	DK	ML	DG	L	DS	Weight (g)
1	TCM5Z4010022	4.00	13.00	10.00	22.00	2.00	2.80
2	TCM5Z6010053	6.00	42.00	10.00	53.00	4.00	4.30
3	TCM5Z6050103	6.00	53.00	10.00	103.00	4.00	12.40



### Stem material carbide, ball material zirconium oxide

Pos.	Item number	DK	ML	DG	L	DS	Weight (g)
1	THM5Z2010021	2.00	12.00	10.00	21.00	1.00	2.70

### Stem material carbide, ball material diamond coated



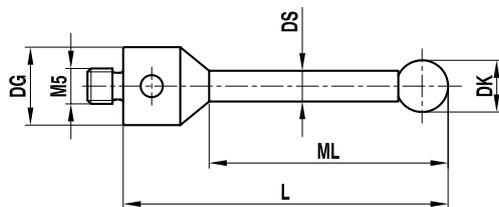
Pos.	Item number	DK	ML	DG	L	DS	Weight (g)
1	THM5DC1511040	1.50	30.00	11.00	40.00	1.00	3.60
2	THM5DC2011030	2.00	20.00	11.00	30.00	1.50	3.70
3	THM5DC2011040	2.00	30.00	11.00	40.00	1.50	4.00
4	THM5DC3011033	3.00	23.50	11.00	33.50	2.00	4.30
5	THM5DC3011050	3.00	40.00	11.00	50.00	2.00	5.10
6	THM5DC3011058	3.00	48.00	11.00	58.00	2.00	5.40
7	THM5DC4011064	4.00	54.00	11.00	64.00	2.00	5.70
8	THM5DC5011050	5.00	40.00	11.00	50.00	3.50	8.90
9	THM5DC5011053	5.00	43.00	11.00	53.00	3.50	9.20
10	THM5DC5011075	5.00	65.00	11.00	75.00	3.50	12.40
11	THM5DC8011063	8.00	50.50	11.00	63.50	6.00	18.80
12	THM5DC8011114	8.00	101.50	11.00	114.50	6.00	33.50

### Stem material carbide, ball material ceramic

Pos.	Item number	DK	ML	DG	L	DS	Weight (g)
1	THM512011065	12.00	52.50	11.00	65.50	6.00	21.20
2	THM512011118	12.00	105.00	11.00	118.00	6.00	36.10
3	THM512011200	12.00	175.00	11.00	200.00	6.00	63.60
4	THM515011065	15.00	52.50	11.00	65.50	6.00	29.70
5	THM515011118	15.00	105.00	11.00	118.00	6.00	52.00
6	THM515011200	15.00	175.00	11.00	200.00	6.00	89.20



### Stem material carbide, ball material carbide



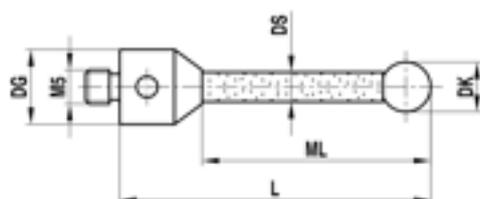
Pos.	Item number	DK	ML	DG	L	DS	Weight (g)
1	THM5H3011033	3.00	23.50	11.00	33.50	2.00	4.50
2	THM5H5011105	5.00	95.00	11.00	105.00	3.50	17.20
3	THM5H8011063	8.00	50.50	11.00	63.50	6.00	28.80

### Stem material stainless steel, ball material ruby

Pos.	Item number	DK	ML	DG	L	DS	Weight (g)
1	TIM505011050	5.00	40.00	11.00	50.00	3.50	8.80
2	TIM505011053	5.00	43.00	11.00	53.00	3.50	9.50
3	TIM505011075	5.00	65.00	11.00	75.00	3.50	10.70
4	TIM508011063	8.00	50.50	11.00	63.50	6.00	18.00
5	THM5R8011063	8.00	50.50	11.00	63.50	6.00	18.00
6	TIM508011075	8.00	62.00	11.00	75.00	6.00	21.20
7	TIM508011100	8.00	87.00	11.00	100.00	6.00	27.00
8	TIM508011114	8.00	101.50	11.00	114.50	6.00	29.10



### Stem material ceramic, ball material ruby



Pos.	Item number	DK	ML	DG	L	DS	Weight (g)
1	TKM505011053	5.00	43.00	11.00	53.00	3.50	4.40
2	TKM506011054	6.00	44.00	11.00	54.00	3.50	4.60
3	TKM507011055	7.00	45.00	11.00	55.00	3.50	4.90
4	TKM508011063	8.00	50.50	11.00	63.50	6.00	8.50
5	TKM508011114	8.00	101.50	11.00	114.50	6.00	12.90
6	TKM510011065	10.00	52.50	11.00	65.50	6.00	9.60

### Stem material ceramic, ball material ruby

Pos.	Item number	DK	ML	DG	L	DS	Weight (g)
1	TKM508012090	8.00	78.00	12.00	94.00	6.00	15.70
2	TKM508012125	8.00	113.00	12.00	129.00	6.00	18.80



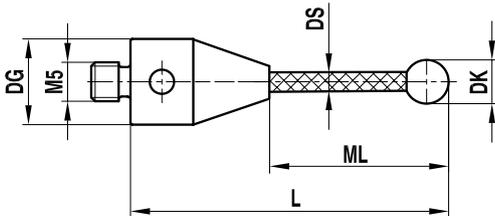
### Stem material ceramic, ball material ceramic

Pos.	Item number	DK	ML	DG	L	DS	Weight (g)
1	TKM515012090	15.00	81.50	12.00	97.50	6.00	23.70

### Stem material ceramic, ball material ruby

Pos.	Item number	DK	ML	DG	L	DS	Weight (g)
1	TKM508019063	8.00	41.50	19.00	63.50	6.00	20.70
2	TKM508019114	8.00	92.50	19.00	114.50	6.00	24.60
3	TKM510019065	10.00	43.50	19.00	65.50	6.00	23.00

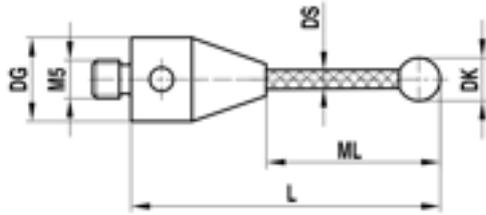
### Stem material carbon fiber, ball material ruby



Pos.	Item number	DK	ML	DG	L	DS	Weight (g)
1	TCM502510051	2.50	42.25	10.00	51.25	2.00	2.70
2	TCM503010021	3.00	12.50	10.00	21.50	2.00	2.60
3	TCM503010031	3.00	22.50	10.00	31.50	2.00	2.60
4	TCM503010041	3.00	32.50	10.00	41.50	2.00	2.70
5	TCM503010051	3.00	42.50	10.00	51.50	2.00	2.70
6	TCM503010101	3.00	21.50	10.00	101.50	2.00	14.30
7	TCM504010022	4.00	13.00	10.00	22.00	2.00	2.60
8	TCM504010032	4.00	23.00	10.00	32.00	2.00	2.70
9	TCM504010052	4.00	43.00	10.00	52.00	2.00	2.80
10	TCM504010077	4.00	68.00	10.00	77.00	3.00	3.40
11	TCM504080102	4.00	22.00	10.00	102.00	2.00	14.40
12	TCM504050102	4.00	52.00	10.00	102.00	3.00	10.70
13	TCM505010022	5.00	13.50	10.00	22.50	3.00	2.80
14	TCM505010032	5.00	23.50	10.00	32.50	3.00	3.00
15	TCM505010052	5.00	43.50	10.00	52.50	3.00	3.20
16	TCM505010077	5.00	68.50	10.00	77.50	3.00	3.50
17	TCM505010102	5.00	93.50	10.00	102.50	3.00	3.80
18	TCM505050102	5.00	52.50	10.00	102.50	3.00	10.70
19	TCM506010053	6.00	42.00	10.00	53.00	4.00	4.10
20	TCM506010078	6.00	67.00	10.00	78.00	4.00	4.60

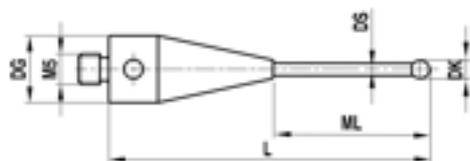
Pos.	Item number	DK	ML	DG	L	DS	Weight (g)
21	TCM506050103	6.00	53.00	10.00	103.00	4.00	12.22
22	TCM506010103	6.00	92.00	10.00	103.00	4.00	5.20
23	TCM506010153	6.00	138.00	10.00	153.00	4.00	7.00
24	TCM506010203	6.00	188.00	10.00	203.00	4.00	7.80
25	TCM506010303	6.00	288.00	10.00	303.00	4.00	10.00
26	TCM508010054	8.00	41.00	10.00	54.00	6.00	5.90
27	TCM508010079	8.00	66.00	10.00	79.00	6.00	7.20
28	TCM508010104	8.00	91.00	10.00	104.00	6.00	8.30
29	TCM508050104	8.00	54.00	10.00	104.00	6.00	15.60
30	TCM508010154	8.00	135.00	10.00	154.00	6.00	11.60
31	TCM508010204	8.00	185.00	10.00	204.00	6.00	14.20
32	TCM508010304	8.00	285.00	10.00	304.00	6.00	19.20
33	TCM510010055	10.00	42.00	10.00	55.00	6.00	6.90
34	TCM510010080	10.00	67.00	10.00	80.00	6.00	8.10
35	TCM510050105	10.00	55.00	10.00	105.00	6.00	16.60
36	TCM510010105	10.00	92.00	10.00	105.00	6.00	9.20
37	TCM510010155	10.00	136.00	10.00	155.00	6.00	12.60
38	TCM510010205	10.00	186.00	10.00	205.00	6.00	15.10
39	TCM510010305	10.00	286.00	10.00	305.00	6.00	20.30

## Stem material carbon fiber, ball material ruby



Pos.	Item number	DK	ML	DG	L	DS	Weight (g)
1	TCM503011025	3.00	15.00	11.00	25.00	2.00	3.30
2	TCM503011033	3.00	23.50	11.00	33.50	2.00	3.30
3	TCM503011050	3.00	40.00	11.00	50.00	2.00	3.40
4	TCM503011058	3.00	48.00	11.00	58.00	2.00	3.50
5	TCM504011033	4.00	23.50	11.00	33.50	2.00	3.40
6	TCM504011064	4.00	54.00	11.00	64.00	2.00	3.50
7	TCM505011050	5.00	40.00	11.00	50.00	3.50	4.00
8	TCM505011053	5.00	43.00	11.00	53.00	3.50	4.40
9	TCM505011075	5.00	65.00	11.00	75.00	3.50	4.30
10	TCM505011100	5.00	90.00	11.00	100.00	3.50	4.90
11	TCM506011054	6.00	44.00	11.00	54.00	3.50	4.60
12	TCM507011055	7.00	45.00	11.00	55.00	3.50	4.90
13	TCM508011063	8.00	50.50	11.00	63.50	6.00	6.90
14	TCM508011075	8.00	62.00	11.00	75.00	6.00	7.20
15	TCM508011100	8.00	87.00	11.00	100.00	6.00	8.80
16	TCM508011114	8.00	101.50	11.00	114.50	6.00	9.60
17	TCM508011150	8.00	137.00	11.00	150.00	6.00	11.40
18	TCM508011200	8.00	187.00	11.00	200.00	6.00	13.40
19	TCM510011065	10.00	52.50	11.00	65.50	6.00	7.70
20	TCM510011118	10.00	105.00	11.00	118.00	6.00	10.70
21	TCM510011150	10.00	137.00	11.00	150.00	6.00	12.30
22	TCM510011200	10.00	187.00	11.00	200.00	6.00	13.60

## Stem material carbide, ball material ruby



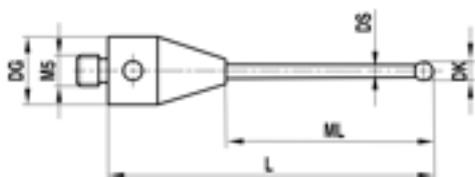
Pos.	Item number	DK	ML	DG	L	DS	B	Weight (g)
1	THM500710020	0.70	5.35	10.00	20.35	0.50	5.00	3.70
2	THM500710030	0.70	5.35	10.00	30.35	0.50	5.00	5.20
3	THM500710050	0.70	5.35	10.00	50.35	0.50	5.00	9.40
4	THM500710075	0.70	5.35	10.00	75.35	0.50	5.00	14.10
5	THM501010020	1.00	5.50	10.00	20.50	0.70	5.00	3.70
6	THM501010030	1.00	5.50	10.00	30.50	0.70	5.00	5.20
7	THM501010050	1.00	5.50	10.00	50.50	0.70	5.00	9.40
8	THM501010075	1.00	5.50	10.00	75.50	0.70	5.00	14.10
9	THM501510020	1.50	11.75	10.00	20.75	1.00	11.00	2.70
10	THM501510030	1.50	12.75	10.00	30.75	1.00	12.00	4.30
11	THM501510040	1.50	22.75	10.00	40.75	1.00	20.00	4.40
12	THM501510050	1.50	5.75	10.00	50.75	1.00	5.00	9.40
13	THM501510075	1.50	5.75	10.00	75.75	1.00	5.00	14.30
14	THM502010021	2.00	12.00	10.00	21.00	1.00	11.00	2.70
15	THM502010031	2.00	22.00	10.00	31.00	1.00	21.00	2.80
16	THM502010041	2.00	32.00	10.00	41.00	1.00	31.00	2.90
17	THM502010051	2.00	42.00	10.00	51.00	1.00	41.00	3.00
18	THM502045051	2.00	6.00	10.00	51.00	1.00	5.00	9.40
19	THM502510021	2.50	12.25	10.00	21.25	1.50	11.00	2.90
20	THM502510031	2.50	22.25	10.00	31.25	1.50	21.00	3.10
21	THM502510041	2.50	32.25	10.00	41.25	1.50	31.00	3.40
22	THM502510051	2.50	6.26	10.00	51.25	1.50	5.00	9.60
23	THM503010031	3.00	22.50	10.00	31.50	2.00	55.00	3.60
24	THM503010101	3.00	56.50	10.00	101.50	1.50	55.00	10.80

## Stem material carbide, ball material ruby

Pos.	Item number	DK	ML	DG	L	DS	Weight (g)
1	THM501011020/0,8	1.00	10.00	11.00	20.00	0.80	5.50
2	THM501011030/0,8	1.00	20.00	11.00	30.00	0.80	5.60
3	NHM501311032	1.35	23.85	11.00	32.85	1.00	5.80
4	NHM501511033	1.50	24.00	11.00	33.00	1.00	5.80
5	THM502011020	2.00	10.00	11.00	20.00	1.00	3.30
6	THM502011025	2.00	15.00	11.00	25.00	1.00	3.40
7	THM502011030	2.00	20.00	11.00	30.00	1.50	3.80
8	THM502011033	2.00	23.00	11.00	33.00	1.50	3.80
9	NHM502011033	2.00	24.50	11.00	33.50	1.50	6.20
10	NHM502010033	2.00	24.50	11.00	33.50	1.00	5.90
11	THM502011040	2.00	30.00	11.00	40.00	1.50	4.00
12	THM502011060	2.00	50.00	11.00	60.00	1.50	4.50
13	NHM502511034	2.50	25.00	11.00	34.00	1.50	6.20
14	NHM502510034	2.50	25.00	11.00	34.00	1.00	5.90
15	THM503011025	3.00	15.00	11.00	25.00	2.00	4.00
16	NHM503011025	3.00	16.50	11.00	25.50	2.00	6.30
17	THM503011033	3.00	23.50	11.00	33.50	2.00	4.30
18	THM503011040	3.00	30.00	11.00	40.00	2.00	4.60
19	THM503011050	3.00	40.00	11.00	50.00	2.00	5.10
20	THM503011058	3.00	48.00	11.00	58.00	2.00	5.50
21	THM503011060	3.00	50.00	11.00	60.00	2.00	5.00
22	THM503011075	3.00	65.00	11.00	75.00	2.00	6.20
23	THM503011080	3.00	70.00	11.00	80.00	2.00	6.40
24	THM503011085	3.00	75.00	11.00	85.00	2.00	6.70
25	THM503511058	3.50	48.00	11.00	58.00	2.00	5.50
26	THM503511075	3.50	65.00	11.00	75.00	2.50	7.90
27	THM503511100	3.50	85.00	11.00	100.00	2.50	12.40
28	THM504011030	4.00	20.00	11.00	30.00	2.00	4.30
29	THM504011033	4.00	23.50	11.00	33.50	2.00	4.40
30	THM504011064	4.00	54.00	11.00	64.00	2.00	5.80
31	THM504011150	4.00	135.00	11.00	150.00	3.00	20.3
32	THM504511053	4.50	43.00	11.00	53.00	3.50	9.20
33	THM505011030	5.00	20.00	11.00	30.00	3.50	6.10
34	NHM505011034	5.00	25.50	11.00	34.50	3.50	8.80
35	THM505011050	5.00	40.00	11.00	50.00	3.50	8.90
36	THM505011053	5.00	43.00	11.00	53.00	3.50	9.30
37	THM505011075	5.00	65.00	11.00	75.00	3.50	12.40
38	THM505011085	5.00	75.00	11.00	85.00	3.50	13.80
39	THM505011100	5.00	90.00	11.00	100.00	3.50	15.90
40	THM5052511050	5.25	40.00	11.00	50.00	3.50	8.90
41	THM506011054	6.00	44.00	11.00	54.00	3.50	9.50
42	THM507011055	7.00	45.00	11.00	55.00	3.50	9.80
43	THM508011063	8.00	50.50	11.00	63.50	6.00	24.70
44	THM508011074	8.00	61.00	11.00	74.00	6.00	29.10
45	THM508011075	8.00	62.00	11.00	75.00	6.00	29.10
46	THM508011100	8.00	87.00	11.00	100.00	6.00	39.80

Pos.	Item number	DK	ML	DG	L	DS	Weight (g)
47	THM508011114	8.00	101.50	11.00	114.50	6.00	45.60
48	THM508011150	8.00	137.00	11.00	150.00	6.00	60.50
49	THM508011200	8.00	175.00	11.00	200.00	6.00	84.80
50	THM510011065	10.00	52.50	11.00	65.50	6.00	25.70
51	THM510011118	10.00	105.00	11.00	118.00	6.00	47.40
52	THM510011150	10.00	137.00	11.00	150.00	6.00	60.70
53	THM510011200	10.00	175.00	11.00	200.00	6.00	88.20

### Stem material carbide, ball material ruby

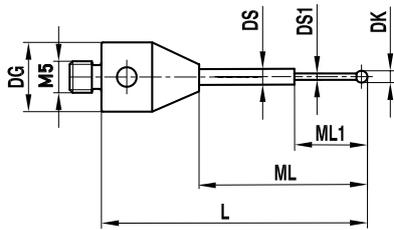


Pos.	Item number	DK	ML	DG	L	DS	Weight (g)
1	THM501512028	1.50	7.75	12.00	28.75	1.00	10.20
2	THM501512040	1.50	19.75	12.00	40.75	1.00	10.00
3	THM502012030	2.00	19.50	12.00	31.00	1.50	7.30
4	THM502012035	2.00	24.50	12.00	36.00	1.50	7.50
5	THM502012041	2.00	31.00	12.00	42.00	1.50	7.60
6	THM502012060	2.00	40.50	12.00	61.00	1.50	11.60
7	THM503012035	3.00	25.50	12.00	36.50	2.00	8.20
8	THM503012050	3.00	40.50	12.00	51.50	2.00	8.80
9	THM503512091	3.50	79.75	12.00	92.75	3.00	16.10
10	THM504012080	4.00	71.00	12.00	82.00	2.50	12.10
11	THM505012060	5.00	51.50	12.00	62.50	3.50	14.10
12	THM505012080	5.00	71.50	12.00	82.50	3.50	17.00
13	THM508012068	8.00	54.00	12.00	72.00	3.00	16.40
14	THM508012090	8.00	78.00	12.00	94.00	6.00	41.80
15	THM508012125	8.00	113.00	12.00	129.00	6.00	59.00
16	THM508012176	8.00	164.00	12.00	180.00	6.00	76.80

### Stem material carbide, ball material ruby

Pos.	Item number	DK	ML	DG	L	DS	Weight (g)
1	THM508019063	8.00	41.50	19.00	63.50	6.00	35.90
2	THM508019114	8.00	92.50	19.00	114.50	6.00	56.80
3	THM510019065	10.00	43.50	19.00	65.50	6.00	36.50

## Straight styli: Type B



**NOTE:** K = bonded into spherical cup

### Stem material carbide, ball material silicon nitride

Pos.	Item number	DK	ML	ML1	DG	L	DS	DS1	Weight (g)
1	THM5S1011020/K	1.00	10.00	5.00	11.00	20.00	1.00	0.80	3.50
2	THM5S1011020	1.00	10.00	5.00	11.00	20.00	1.00	0.80	3.30
3	NHM5S1011022	1.00	13.50	5.00	11.00	22.50	1.00	0.80	5.70
4	THM5S1011025/K	1.00	15.00	5.00	11.00	25.00	1.00	0.80	3.40
5	THM5S1011025	1.00	15.00	5.00	11.00	25.00	1.00	0.80	3.30
6	THM5S1011030/K	1.00	20.00	5.00	11.00	30.00	1.00	0.80	3.40
7	THM5S1011030	1.00	20.00	5.00	11.00	30.00	1.00	0.80	3.40
8	THM5S1511030	1.50	20.00	8.00	11.00	30.00	1.50	1.00	3.70
9	THM5S1511030/K	1.50	20.00	8.00	11.00	30.00	1.50	1.00	3.60



### Stem material carbide, ball material diamond coated

Pos.	Item number	DK	ML	ML1	DG	L	DS	DS1	Weight (g)
1	THM5DC1011030	1.00	20.00	5.00	11.00	30.00	1.00	0.80	3.40
2	THM5DC1511030	1.50	20.00	8.00	11.00	30.00	1.50	1.00	3.70



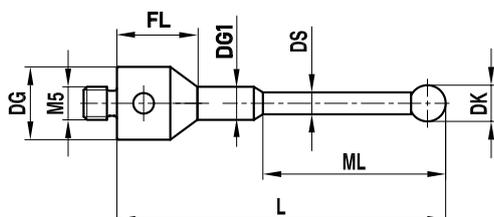
### Stem material carbide, ball material ruby

Pos.	Item number	DK	ML	ML1	DG	L	DS	DS1	B	Weight (g)
1	THM500210020	0.20	5.15	2.30	10.00	20.15	1.00	0.18	2.20	3.70
2	THM5002510020	0.25	5.15	2.30	10.00	20.15	1.00	0.18	2.20	3.70
3	THM500310020	0.30	5.15	3.15	10.00	20.15	0.70	0.20	3.00	3.70
4	THM500310030	0.30	5.15	3.15	10.00	30.15	0.70	0.20	3.00	5.20
5	THM500310050	0.30	5.15	3.15	10.00	50.15	0.70	0.20	3.00	9.30
6	THM500310075	0.30	5.15	3.15	10.00	75.15	0.70	0.20	3.00	14.10
7	THM500510020	0.50	5.25	4.25	10.00	20.25	0.70	0.40	4.00	3.70
8	THM500510030	0.50	5.25	4.25	10.00	30.25	0.70	0.40	4.00	9.00
9	THM500510050	0.50	5.25	4.25	10.00	50.25	0.70	0.40	4.00	9.40
10	THM500510075	0.50	5.25	4.25	10.00	75.25	0.70	0.40	4.00	14.10

### Stem material carbide, ball material ruby

Pos.	Item number	DK	ML	ML1	DG	L	DS	DS1	Weight (g)
1	NHM500311021	0.30	12.80	2.30	11.00	21.80	1.00	0.20	5.70
2	NHM500511022	0.50	13.00	2.50	11.00	22.00	1.00	0.30	5.70
3	NHM500611022	0.60	13.10	4.60	11.00	22.10	1.00	0.40	5.60
4	NHM500811022	0.80	13.30	4.80	11.00	22.30	1.00	0.60	5.60
5	THM501011020	1.00	10.00	5.00	11.00	20.00	1.00	0.80	3.30
6	NHM501011022	1.00	13.50	5.00	11.00	22.50	1.00	0.80	5.70
7	THM501011025	1.00	15.00	5.00	11.00	25.00	1.00	0.80	3.40
8	THM501011030	1.00	20.00	5.00	11.00	30.00	1.00	0.80	3.40
9	THM501511030	1.50	20.00	8.00	11.00	30.00	1.50	1.00	3.70
10	NHM5K1511033	1.50	24.00	7.00	11.00	33.00	1.50	1.00	6.10

### Straight styli: Type C



NOTE: DG1 = 4.00 mm, FL = 9.00 mm

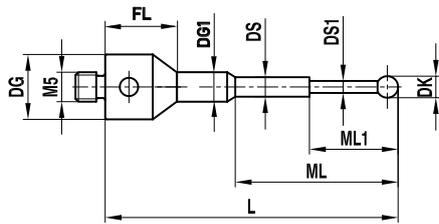
### Stem material carbide, ball material ruby

Pos.	Item number	DK	ML	DG	DG1	L	DS	Weight (g)
1	FHM501311032	1.35	12.00	11.00	4.00	32.00	1.00	6.60
2	FHM501311044	1.35	19.00	11.00	4.00	44.00	1.00	7.20
3	FHM501511032	1.50	12.00	11.00	4.00	32.00	1.00	6.70
4	FHM501511044	1.50	19.00	11.00	4.00	44.00	1.00	7.20
5	FHM502011032	2.00	12.00	11.00	4.00	32.00	1.50	6.70
6	FHM502011044	2.00	19.00	11.00	4.00	44.00	1.50	7.60
7	FHM502011058	2.00	33.00	11.00	4.00	58.00	1.50	7.90
8	FHM502511032	2.50	12.00	11.00	4.00	32.00	1.50	6.80
9	FHM502511044	2.50	19.00	11.00	4.00	44.00	1.50	7.50
10	FHM502511058	2.50	33.00	11.00	4.00	58.00	1.50	8.00

### Stem material carbide, ball material ruby

Pos.	Item number	DK	ML	FL	DG1	DG	L	DS	Weight (g)
1	FHM502012066	2.00	16.00	10.00	4.00	12.00	67.00	1.50	11.10

## Straight styli: Type D

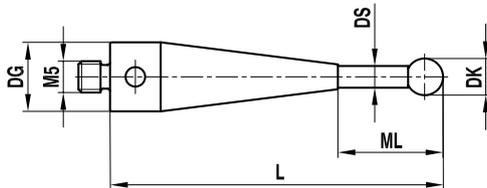


NOTE: DG1 = 4.00 mm, FL = 9.00 mm

### Stem material carbide, ball material ruby

Pos.	Item number	DK	ML	ML1	DG	L	DS	DS1	Weight (g)
1	FHM500211032	0.20	12.00	2.30	11.00	32.00	1.00	0.18	6.50
2	FHM5002511032	0.25	12.00	2.30	11.00	32.00	1.00	0.18	6.60
3	FHM500311032	0.30	12.00	2.30	11.00	32.00	1.00	0.20	6.60
4	FHM500511032	0.50	12.00	2.50	11.00	32.00	1.00	0.30	6.60
5	FHM500611032	0.60	12.00	4.60	11.00	32.00	1.00	0.40	6.60
6	FHM500811032	0.80	12.00	4.80	11.00	32.00	1.00	0.60	6.50
7	FHM501011032	1.00	12.00	5.00	11.00	32.00	1.00	0.80	6.50

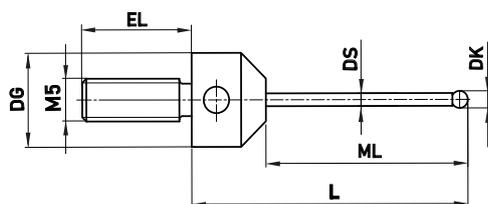
## Straight styli: Type E



### Stem material carbide, ball material ruby

Pos.	Item number	DK	ML	DG	L	DS	Weight (g)
1	FTM501011055	1.00	5.00	11.00	55.00	0.80	10.20
2	FTM501511055	1.50	5.00	11.00	55.00	1.00	10.20
3	FTM502011055	2.00	5.00	11.00	55.00	1.50	12.00
4	FTM502511055	2.50	5.00	11.00	55.00	2.00	12.20
5	FTM503511055	3.50	10.00	11.00	55.00	2.50	11.30

## Straight styli: Type F



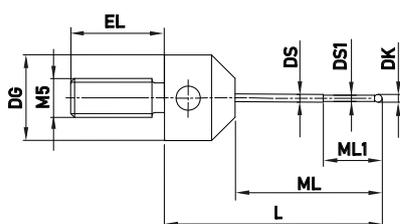
### Stem material carbide, ball material ruby

Pos.	Item number	DK	ML	DG	L	DS	EL	Weight (g)
1	LHM501311032	1.35	23.85	11.00	32.85	1.00	12.50	6.70
2	LHM501511033	1.50	24.00	11.00	33.00	1.00	12.50	6.80
3	LHM502011033	2.00	24.50	11.00	33.50	1.50	12.50	7.10
4	LHM502511034	2.50	25.00	11.00	34.00	1.50	12.50	7.10
5	LHM503011025	3.00	16.50	11.00	25.50	2.00	12.50	7.20
6	LHM505011034	5.00	25.50	11.00	34.50	3.50	12.50	9.70

### Stem material carbide, ball material ruby

Pos.	Item number	DK	ML	DG	L	DS	EL	Weight (g)
1	LHM503019034	3.00	16.50	19.00	34.50	2.00	12.50	20.60
2	LHM505019043	5.00	25.50	19.00	43.50	3.50	12.50	23.40

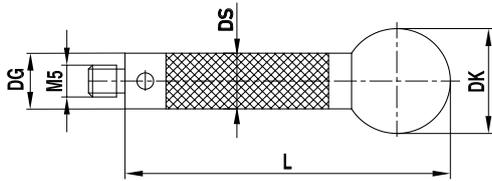
## Straight styli: Type G



### Stem material carbide, ball material ruby

Pos.	Item number	DK	ML	ML1	DG	L	DS	DS1	EL	Weight (g)
1	LHM500311021	0.30	12.80	2.30	11.00	21.80	1.00	0.20	12.50	6.60
2	LHM500511022	0.50	13.00	2.50	11.00	22.00	1.00	0.30	12.50	6.60
3	LHM500611022	0.60	13.10	4.60	11.00	22.10	1.00	0.40	12.50	6.60
4	LHM500811022	0.80	13.30	4.80	11.00	22.30	1.00	0.60	12.50	6.60
5	LHM501011022	1.00	13.50	5.00	11.00	22.50	1.00	0.80	12.50	6.60

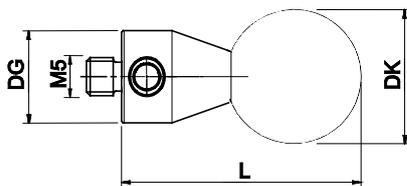
## Straight styli: Type J



### Stem material carbon fiber, ball material ceramic

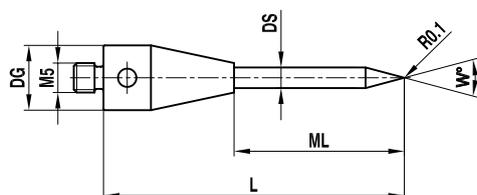
Pos.	Item number	DK	ML	DG	L	DS	Weight (g)
1	TCM515011200	15.00	200.00	11.00	200.00	11.00	28.50
2	TCM515011300	15.00	300.00	11.00	300.00	11.00	37.10
3	TCM515011400	15.00	400.00	11.00	400.00	11.00	45.70
4	TCM515011500	15.00	500.00	11.00	500.00	11.00	54.30
5	TCM518011200	18.00	200.00	11.00	200.00	11.00	33.50
6	TCM518011300	18.00	300.00	11.00	300.00	11.00	42.10
7	TCM518011400	18.00	400.00	11.00	400.00	11.00	50.70
8	TCM518011500	18.00	500.00	11.00	500.00	11.00	59.30
9	TCM520011200	20.00	200.00	11.00	200.00	11.00	37.80
10	TCM520011300	20.00	300.00	11.00	300.00	11.00	47.10
11	TCM520011400	20.00	400.00	11.00	400.00	11.00	56.40
12	TCM520011500	20.00	500.00	11.00	500.00	11.00	65.70
13	TCM525011200	25.00	200.00	11.00	200.00	11.00	53.70
14	TCM525011300	25.00	300.00	11.00	300.00	11.00	63.80
15	TCM525011400	25.00	400.00	11.00	400.00	11.00	73.10
16	TCM525011500	25.00	500.00	11.00	500.00	11.00	80.00

### Base material titanium, ball material ceramic



Pos.	Item number	DK	DG	L	Weight (g)
1	TIM515011028	15.00	11.00	28.00	15.50
2	TIM516011028	16.00	11.00	28.00	15.70
3	TIM518011028	18.00	11.00	28.00	19.50
4	TIM520011033	20.00	11.00	33.00	26.50
5	TIM530011043	30.00	11.00	43.00	65.70

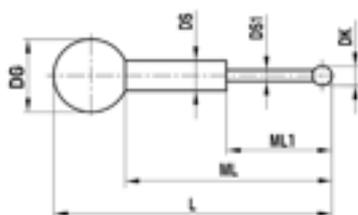
## Straight styli: Type K



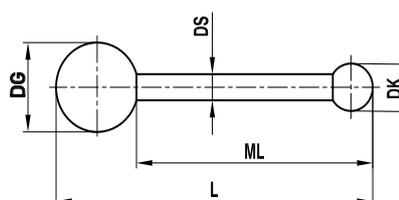
### Stem material carbide

Pos.	Item number	ML	DG	L	DS	W	Weight (g)
1	IHM503011061	39.00	11.00	61.00	3.50	30°	12.50

## Straight styli: Type others



Pos. 1



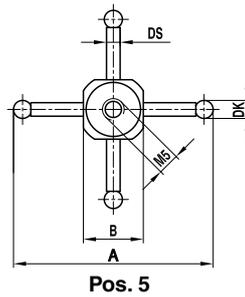
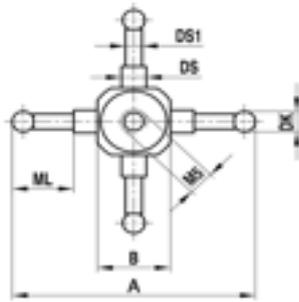
Pos. 2



### Stem material carbide, ball material ruby

Pos.	Item number	DK	ML	ML1	DG	L	DS	DS1	Weight (g)
1	KKM501010017	1.00	13.50	5.00	4.00	17.50	1.00	0.80	0.40
2	KKM502015028	2.00	24.50	–	4.00	28.50	1.50	–	0.90

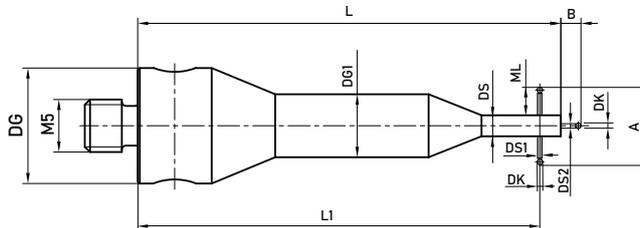
## Star styli: Type U



Stem material carbide, ball material ruby

Pos.	Item number	DK	ML	DS	DS1	A	B	Weight (g)
1	WTM501015045	1.00	7.00	2.00	0.80	45.00	15.00	15.80
2	WTM501515045	1.50	7.50	2.00	1.00	45.00	15.00	15.80
3	WTM502015045	2.00	7.50	2.00	1.50	45.00	15.00	17.30
4	WTM502515045	2.50	8.00	2.00	1.50	45.00	15.00	16.30
5	WTM503515045	3.50	15.00	2.00	–	45.00	15.00	17.00

## Star styli: Type V

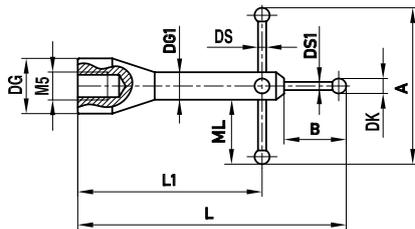


NOTE: DG1 = 6.00

Stem material carbide, ball material ruby

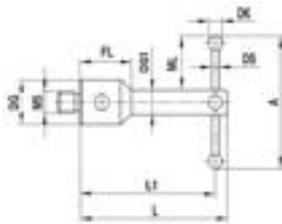
Pos.	Item number	DK	ML	DG	L	DS	DS1	DS2	A	B	Weight (g)
1	TIM500511040	0.50	0.75	11.00	40.00	2.00	0.40	0.40	3.50	1.90	15.80
2	TIM500811040	0.80	1.50	11.00	40.00	2.00	0.60	0.60	5.00	1.90	15.80
3	TIM501311040	1.35	3.50	11.00	40.00	2.00	1.00	1.00	9.00	2.00	17.30
4	TIM501811040	1.80	4.00	11.00	40.00	2.00	1.00	1.00	10.00	2.00	16.30
5	TIM502311040	2.30	5.00	11.00	40.00	2.00	1.00	1.00	12.00	2.50	17.00

### Stem material carbide, ball material ruby



Pos.	Item number	DK	ML	DG	DG1	L	DS	DS1	A	B	Weight (g)
1	SAM505019080	5.00	32.00	19.00	16.00	98.00	3.50	3.50	80.00	28.00	62.50

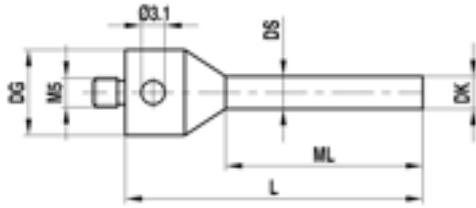
### Star styli: Type W



### Stem material carbide, ball material ruby

Pos.	Item number	DK	ML	DG	DG1	FL	L1	L	DS	A	Weight (g)
1	SIM500611040	0.60	2.00	11.00	4.00	10.00	39.10	40.00	0.40	8.00	9.10
2	SIM500811040	0.80	2.00	11.00	4.00	10.00	39.10	40.00	0.60	8.00	9.10
3	SIM501011040	1.00	2.00	11.00	4.00	10.00	39.10	40.00	0.80	8.00	9.10

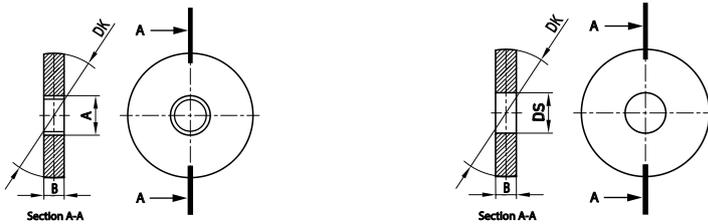
## Cylinder styli: Type P



Stem material carbide, cylinder material carbide

Pos.	Item number	DK	ML	DG	L	DS	Weight (g)
1	ZHM503012050	3.00	39.00	12.00	50.00	3.00	11.30

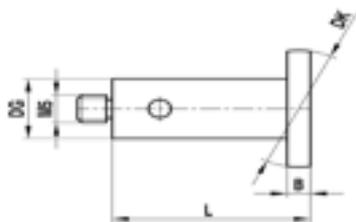
## Disc styli: Type N



Disc material stainless steel

Pos.	Item number	DK	ML	L	DS	A	B	Weight (g)
1	KIM504015M50	15.00	4.00	4.00	–	M5	4.00	4.80
2	KIM502020080	20.00	2.00	2.00	8.00	–	2.00	4.00
3	KIM504020080	20.00	4.00	4.00	8.00	–	4.00	8.00
4	KIM504020M50	20.00	4.00	4.00	–	M5	4.00	8.90
5	KIM504030M50	30.00	4.00	4.00	–	M5	4.00	15.70
6	KIM504030080	30.00	4.00	4.00	8.00	–	4.00	14.70
7	KIM504040080	40.00	4.00	4.00	8.00	–	4.00	21.40
8	KIM505040M50	40.00	5.00	5.00	–	M5	5.00	32.90
9	KIM505050M50	50.00	5.00	5.00	–	M5	5.00	38.90
10	KIM505050080	50.00	5.00	5.00	8.00	–	5.00	35.90
11	KIM505060M50	60.00	5.00	5.00	–	M5	5.00	40.30
12	KIM506060080	60.00	6.00	6.00	8.00	–	6.00	60.50

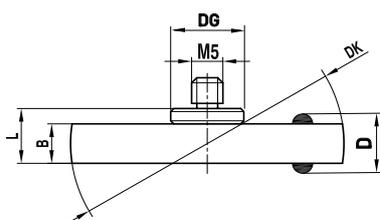
## Disc styli: Type M



### Stem material titanium, disc material stainless steel

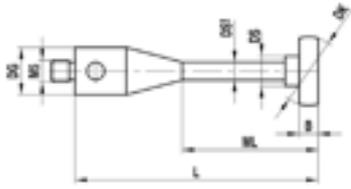
Pos.	Item number	DK	DG	L	B	Weight (g)
1	KIM510007021	10.00	7.00	21.50	1.50	3.50
2	KIM515007040	15.00	7.00	40.00	1.00	5.70
3	KIM520007060	20.00	7.00	60.00	1.00	8.90
4	KIM515010021	15.00	10.00	21.50	1.50	6.20

### Stem material stainless steel, disc material stainless steel/ruby



Pos.	Item number	D	DK	DG	L	B	Weight (g)
1	KIM503012M50	5.00	12.00	7.00	5.00	3.00	3.60
2	KIM503021M50	5.00	21.00	7.00	5.00	3.00	9.10
3	KIM505035M50	8.00	35.00	7.00	7.00	5.00	26.30
4	KIM505063M50	8.00	63.50	7.00	7.00	5.00	71.20

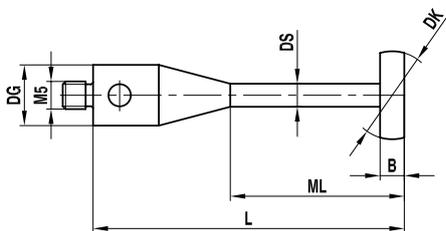
## Disc styli: Type O



### Stem material carbide, disc material stainless steel

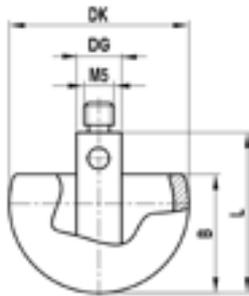
Pos.	Item number	DK	ML	DG	L	DS	DS1	B	Weight (g)
1	KIM510011065/2	10.00	55.00	11.00	65.00	5.50	3.50	2.00	12.80
2	KIM510011065	10.00	55.00	11.00	65.00	5.50	3.50	1.00	12.20
3	KIM515011065/2	15.00	55.00	11.00	65.00	5.50	3.50	2.00	14.50
4	KIM515011065	15.00	55.00	11.00	65.00	5.50	3.50	1.00	13.00
5	KIM520011065	20.00	55.00	11.00	65.00	5.50	3.50	1.00	14.00
6	KIM520011065/2	20.00	55.00	11.00	65.00	5.50	3.50	2.00	16.30
7	KIM525011065	25.00	55.00	11.00	65.00	10.00	3.50	1.00	17.70
8	KIM525011065/2	25.00	55.00	11.00	65.00	10.00	3.50	2.00	21.50
9	KIM530011065	30.00	55.00	11.00	65.00	10.00	3.50	2.00	25.30
10	KIM540011065	40.00	55.00	11.00	65.00	10.00	3.50	2.00	33.10

### Stem material carbide, disc material stainless steel



Pos.	Item number	DK	ML	DG	L	DS	B	Weight (g)
1	KHM508012056	8.00	46.00	12.00	57.00	2.50	1.00	10.80
2	KHM510012046	10.00	35.70	12.00	46.70	3.00	0.70	11.40
3	KHM516012057	16.00	49.50	12.00	60.50	3.50	2.50	17.90

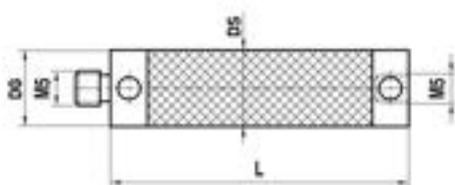
## Type Hemispherical styli



Stem material stainless steel, ball material ceramic

Pos.	Item number	DK	DG	L	B	Weight (g)
1	HKM516010019	16.00	10.00	19.50	10.00	9.60
2	HKM518010020	18.00	10.00	20.00	11.00	9.90
3	HKM522010020	22.00	10.00	20.50	13.00	14.40
4	HKM530010024	30.00	10.00	24.50	17.00	20.70

## Extensions: Type Styli extensions



Stainless steel Ø11.0

Pos.	Item number	DG	L	Weight (g)
1	VIM500011010	11.00	10.00	6.40
2	VIM500011015	11.00	15.00	9.50
3	VIM500011020	11.00	20.00	13.00
4	VIM500011030	11.00	30.00	20.60
5	VIM500011040	11.00	40.00	27.90
6	VIM500011050	11.00	50.00	35.40
7	VIM500011060	11.00	60.00	43.10
8	VIM500011080	11.00	80.00	57.90
9	VIM500011100	11.00	100.00	72.70

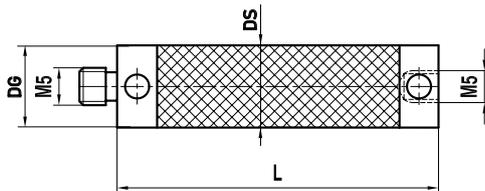


## Carbon fiber Ø11.0

Pos.	Item number	DG	L	DS	Weight (g)
1	VCM5TZ011040	11.00	40.00	11.00	7.80
2	VCM5TZ011050	11.00	50.00	11.00	8.50
3	VCM5TZ011060	11.00	60.00	11.00	9.50
4	VCM5TZ011070	11.00	70.00	11.00	10.30
5	VCM5TZ011080	11.00	80.00	11.00	11.50
6	VCM5TZ011090	11.00	90.00	11.00	12.30
7	VCM5TZ011100	11.00	100.00	11.00	13.10
8	VCM5TZ011120	11.00	120.00	11.00	14.70
9	VCM5TZ011150	11.00	150.00	11.00	17.50
10	VCM5TZ011180	11.00	180.00	11.00	20.60
11	VCM5TZ011200	11.00	200.00	11.00	22.10
12	VCM5TZ011250	11.00	250.00	11.00	26.30
13	VCM5TZ011300	11.00	300.00	11.00	30.70
14	VCM5TZ011400	11.00	400.00	11.00	41.20



## Carbon fiber Ø20.0



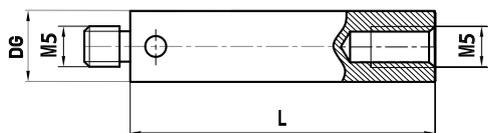
Pos.	Item number	DG	L	DS	Weight (g)
1	VCM5TZ020040	20.00	40.00	20.00	25.10
2	VCM5TZ020050	20.00	50.00	20.00	26.80
3	VCM5TZ020060	20.00	60.00	20.00	28.30
4	VCM5TZ020080	20.00	80.00	20.00	32.10
5	VCM5TZ020100	20.00	100.00	20.00	36.40
6	VCM5TZ020120	20.00	120.00	20.00	39.20
7	VCM5TZ020150	20.00	150.00	20.00	44.20
8	VCM5TZ020180	20.00	180.00	20.00	50.00
9	VCM5TZ020200	20.00	200.00	20.00	53.90
10	VCM5TZ020250	20.00	250.00	20.00	62.70
11	VCM5TZ020300	20.00	300.00	20.00	71.90
12	VCM5TZ020400	20.00	400.00	20.00	89.40
13	VCM5TZ020500	20.00	500.00	20.00	107.60
14	VCM5TZ020600	20.00	600.00	20.00	126.60

## Titanium Ø11.0

Pos.	Item number	DG	L	Weight (g)
1	VTM500011010	11.00	10.00	3.70
2	VTM500011015	11.00	15.00	5.60
3	VTM500011020	11.00	20.00	7.50
4	VTM500011025	11.00	25.00	9.70
5	VTM500011030	11.00	30.00	12.10
6	VTM500011035	11.00	35.00	14.10
7	VTM500011040	11.00	40.00	16.40
8	VTM500011050	11.00	50.00	12.90
9	VTM500011060	11.00	60.00	14.00
10	VTM500011075	11.00	75.00	15.40
11	VTM500011080	11.00	80.00	16.10
12	VTM500011090	11.00	90.00	17.00
13	VTM500011100	11.00	100.00	17.90
14	VTM500011120	11.00	120.00	20.00
15	VTM500011150	11.00	150.00	23.20



## Titanium Ø12.0



Pos.	Item number	DG	L	Weight (g)
1	VTM500012020	12.00	20.00	9.00
2	VTM500012040	12.00	40.00	18.90
3	VTM500012050	12.00	50.00	14.60
4	VTM500012070	12.00	70.00	16.60
5	VTM500012100	12.00	100.00	20.10

## Titanium Ø18.0

Pos.	Item number	DG	L	Weight (g)
1	VTM500018020	18.00	20.00	21.60
2	VTM500018025	18.00	25.00	27.30
3	VTM500018040	18.00	40.00	44.40
4	VTM500018050	18.00	50.00	36.00
5	VTM500018060	18.00	60.00	38.70
6	VTM500018075	18.00	75.00	43.10
7	VTM500018080	18.00	80.00	44.50
8	VTM500018090	18.00	90.00	47.10
9	VTM500018100	18.00	100.00	50.50
10	VTM500018120	18.00	120.00	57.00
11	VTM500018150	18.00	150.00	64.90
12	VTM500018200	18.00	200.00	79.70
13	VTM500018250	18.00	250.00	96.00
14	VTM500018300	18.00	300.00	110.30

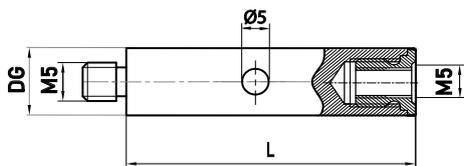


## Aluminium Ø11.0

Pos.	Item number	DG	L	Weight (g)
1	VAM500011020	11.00	20.00	7.60
2	VAM500011040	11.00	40.00	11.50
3	VAM500011050	11.00	50.00	–
4	VAM500011060	11.00	60.00	14.50
5	VAM500011080	11.00	80.00	18.90
6	VAM500011100	11.00	100.00	24.10
7	VAM500011120	11.00	120.00	29.20

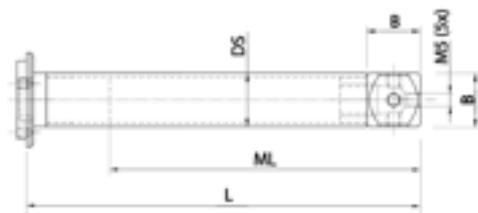


## Aluminium Ø20.0



Pos.	Item number	DG	L	Weight (g)
1	VAM500020040	20.00	40.00	32.40
2	VAM500020050	20.00	50.00	36.30
3	VAM500020060	20.00	60.00	38.70
4	VAM500020080	20.00	80.00	45.60
5	VAM500020100	20.00	100.00	51.20
6	VAM500020150	20.00	150.00	69.10
7	VAM500020200	20.00	200.00	84.70

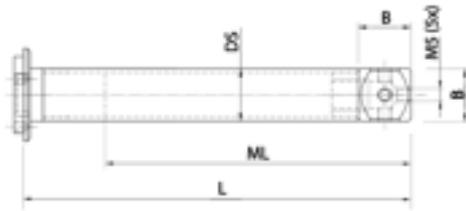
## Extensions: Type adaptor plate extensions



### Carbon fiber Ø11.0

Pos.	Item number	ML	L	DS	B	Weight (g)
1	TVM5TZ115025	51.00	66.50	11.00	15.00	44.30
2	TVM5TZ115040	66.00	81.50	11.00	15.00	45.30
3	TVM5TZ115050	76.00	91.50	11.00	15.00	46.10
4	TVM5TZ115060	86.00	101.50	11.00	15.00	46.80
5	TVM5TZ115080	106.00	121.50	11.00	15.00	48.30
6	TVM5TZ115100	126.00	141.50	11.00	15.00	49.80
7	TVM5TZ115120	146.00	161.50	11.00	15.00	51.30
8	TVM5TZ115150	176.00	191.50	11.00	15.00	53.50
9	TVM5TZ115200	226.00	241.50	11.00	15.00	57.20

## Carbon fiber Ø20.0



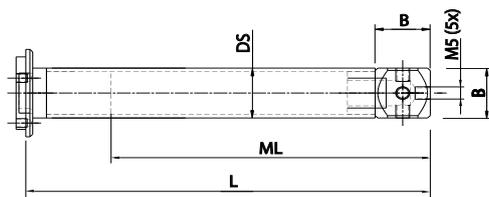
Pos.	Item number	ML	L	DS	B	Weight (g)
1	TVM5TZ215025	49.00	66.50	20.00	15.00	58.00
2	TVM5TZ220025	54.00	71.50	20.00	20.00	69.30
3	TVM5TZ215040	64.00	81.50	20.00	15.00	60.10
4	TVM5TZ220040	69.00	86.50	20.00	20.00	71.50
5	TVM5TZ215050	74.00	91.50	20.00	15.00	61.60
6	TVM5TZ220050	79.00	96.50	20.00	20.00	73.00
7	TVM5TZ215060	84.00	101.50	20.00	15.00	63.10
8	TVM5TZ220060	89.00	106.50	20.00	20.00	74.50
9	TVM5TZ215080	104.00	121.50	20.00	15.00	66.10
10	TVM5TZ220080	106.00	126.50	20.00	20.00	77.50
11	TVM5TZ215100	124.00	141.50	20.00	15.00	69.10
12	TVM5TZ220100	129.00	146.50	20.00	20.00	80.50
13	TVM5TZ215120	144.00	161.50	20.00	15.00	72.10
14	TVM5TZ220120	149.00	166.50	20.00	20.00	83.50
15	TVM5TZ215150	174.00	191.50	20.00	15.00	76.60
16	TVM5TZ220150	179.00	196.50	20.00	20.00	88.00
17	TVM5TZ215200	224.00	241.50	20.00	15.00	83.80
18	TVM5TZ220200	229.00	246.50	20.00	20.00	95.50

## Titanium Ø11.0

Pos.	Item number	ML	L	DS	B	Weight (g)
1	TVM501115025	51.00	66.50	11.00	15.00	47.00
2	TVM501115040	66.00	81.50	11.00	15.00	48.10
3	TVM501115050	76.00	91.50	11.00	15.00	48.90
4	TVM501115060	86.00	101.50	11.00	15.00	49.70
5	TVM501115080	106.00	121.50	11.00	15.00	51.20
6	TVM501115100	126.00	141.50	11.00	15.00	52.70
7	TVM501115120	146.00	161.50	11.00	15.00	54.20
8	TVM501115150	175.00	191.50	11.00	15.00	56.50

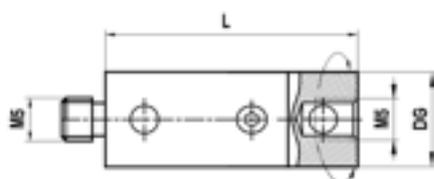


## Titanium Ø18.0



Pos.	Item number	ML	L	DS	B	Weight (g)
1	TVM501815025	56.00	66.50	18.00	15.00	64.00
2	TVM501820025	61.00	71.50	18.00	20.00	73.30
3	TVM501815040	71.00	81.50	18.00	15.00	69.70
4	TVM501820040	76.00	86.50	18.00	20.00	78.80
5	TVM501815050	81.00	91.50	18.00	15.00	73.50
6	TVM501820050	86.00	96.50	18.00	20.00	82.50
7	TVM501815060	91.00	101.50	18.00	15.00	77.30
8	TVM501820060	96.00	106.50	18.00	20.00	86.20
9	TVM501815080	111.00	121.50	18.00	15.00	84.90
10	TVM501820080	116.00	126.50	18.00	20.00	93.60
11	TVM501815100	131.00	141.50	18.00	15.00	92.50
12	TVM501820100	136.00	146.50	18.00	20.00	101.00
13	TVM501815120	151.00	161.50	18.00	15.00	100.10
14	TVM501820120	156.00	166.50	18.00	20.00	108.40
15	TVM501815150	181.00	191.50	18.00	15.00	111.50
16	TVM501820150	186.00	196.50	18.00	20.00	119.50
17	TVM501815200	231.00	241.50	18.00	15.00	130.50
18	TVM501820200	236.00	246.50	18.00	20.00	138.00

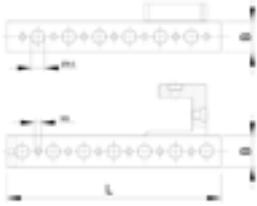
## Adaptors/holders: Type rotary adaptors



## Base material titanium

Pos.	Item number	DG	L	Weight (g)
1	DTM500011029	11.00	29.00	11.00
2	DTM500018030	18.00	30.00	31.70
3	DSM500014027	14.00	27.00	25.90

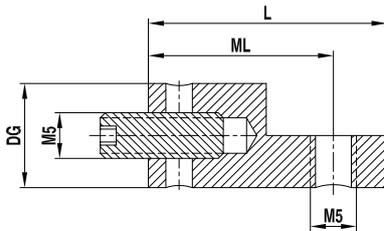
## Adaptors/holders: Type styli holders



### Titanium

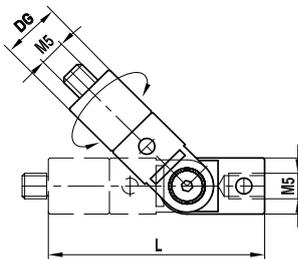
Pos.	Item number	L	B	Weight (g)
1	MAM500020100	100.00	20.00	213.60
2	MAM500020140	140.00	20.00	258.00
3	MAM500020200	200.00	20.00	323.00

### Titanium



Pos.	Item number	ML	DG	L	Weight (g)
1	KHM500011022	17.00	11.00	22.50	6.00

## Adaptors/holders: Type knuckles

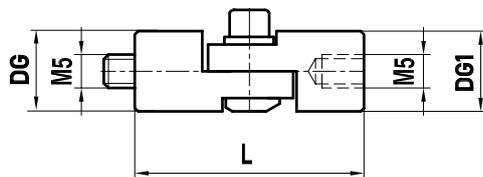


### Titanium 11.0

**NOTE:** Position 1 does not rotate

Pos.	Item number	DG	DG1	L	Weight (g)
1	GTM500011030	11.00	11.00	30.00	11.50
2	DGM500011051	11.00	11.00	51.00	23.20

### Titanium Ø12.0

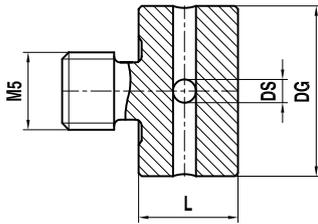


Pos.	Item number	DG	DG1	L	Weight (g)
1	GTM500012034	12.00	12.00	34.00	16.50

### Titanium Ø18.0

Pos.	Item number	DG	DG1	L	Weight (g)
1	GTM500018036	18.00	18.00	36.00	37.50
2	GTM500018040	18.00	18.00	40.00	39.90
3	DGM500018058	18.00	18.00	58.00	71.40

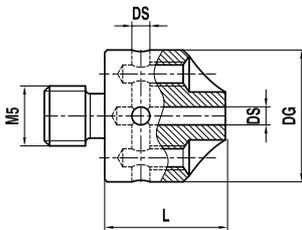
## Adaptors/holders: Type holders for non threaded styli



### Base material titanium

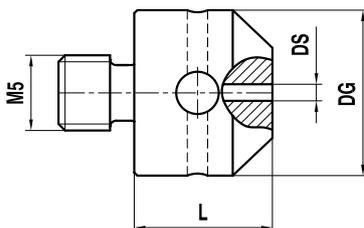
Pos.	Item number	DG	L	DS	Weight (g)
1	KHM500020010	10.00	6.00	1.00	4.10

### Base material stainless steel



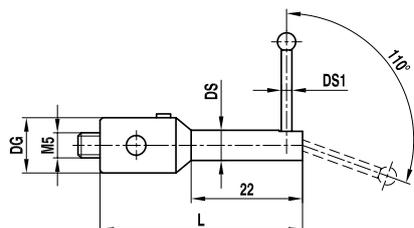
Pos.	Item number	DG	L	DS	Weight (g)
1	KHM500011020	11.00	10.00	2.00	5.20
2	KHM500011010	11.00	10.00	1.00	5.90
3	KHM500011015	11.00	10.00	1.50	5.50

### Base material stainless steel



Pos.	Item number	DG	L	DS	Weight (g)
1	SHM500011010	11.00	10.00	1.00	6.00
2	KHM500030040	11.00	29.50	4.00	11.30

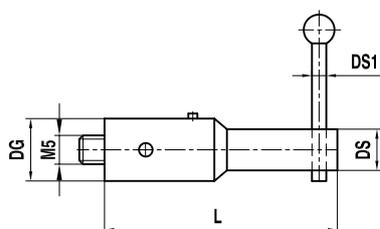
### Base material stainless steel



**NOTE:** Stylus not included

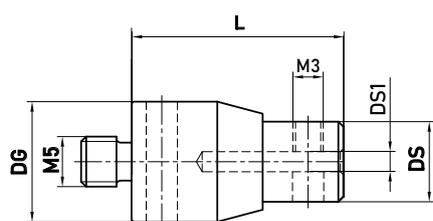
Pos.	Item number	DG	L	DS	DS1	Weight (g)
1	KIM502211040	11.00	40.00	6.00	1.00 - 1.50	15.60

### Base material stainless steel



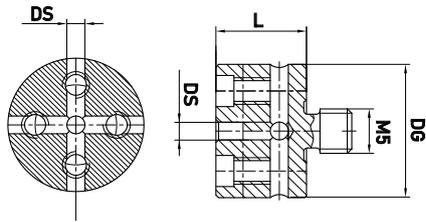
Pos.	Item number	DG	L	DS	DS1	Weight (g)
1	KIM511511045	11.00	45.00	6.00	1.00 - 1.50	18.40

### Base material titanium



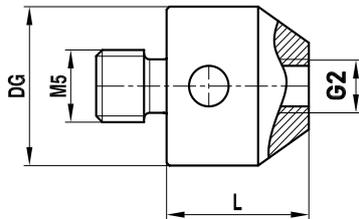
Pos.	Item number	DG	L	DS	DS1	Weight (g)
1	KHM500012021	12.00	21.00	8.00	2.00	14.00

## Base material titanium



Pos.	Item number	DG	L	DS	Weight (g)
1	KHM500015020	15.00	10.00	2.00	6.60
2	KHM500015012	15.00	12.00	2.00	13.90

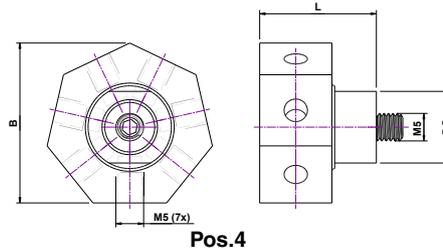
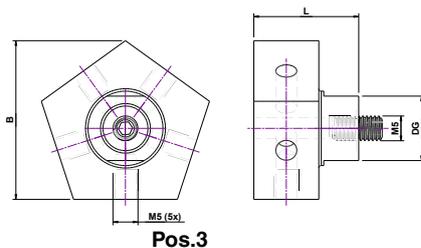
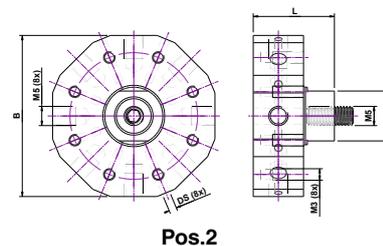
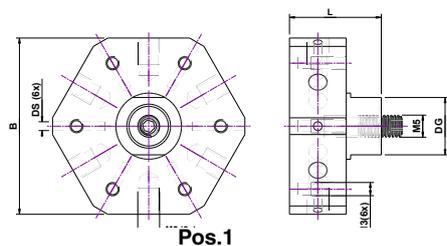
## Adaptors/holders: Type thread adaptors



## Base material stainless steel

Pos.	Item number	DG	G2	L	Weight (g)
1	RTM520011010	11.00	M2	10.00	6.10
2	RTM540011010	11.00	M4	10.00	6.20
3	RTM530011010	11.00	M3	10.00	6.00

## Adaptors/holders: Type cubes

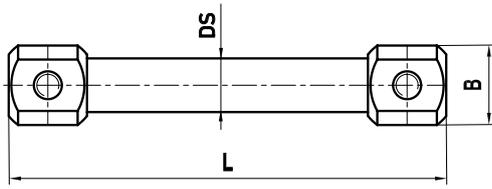


### Base material titanium

Pos.	Item number	DG	DS	G1	L	B	Weight (g)
1	KHM5L0613021	10.0	2.0	M5	21.00	40.00	78.90
2	KHM5L0813021	10.0	2.0	M5	21.00	42.00	81.90
3	KHM5L0513021	10.0	-	M5	21.00	32.00	45.20
4	KHM5L0713021	10.0	2.0	M5	21.00	29.00	38.00

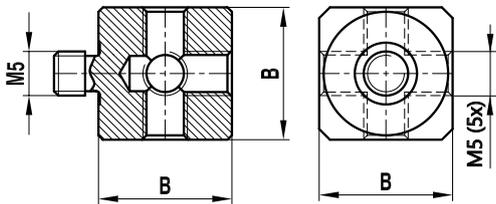


### Base material titanium



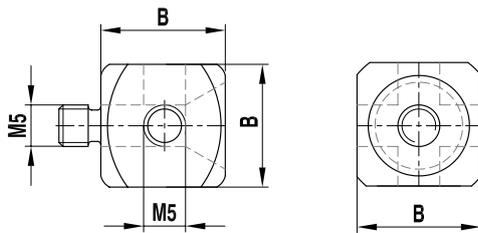
Pos.	Item number	L	DS	B	Weight (g)
1	WTM500020120	120.00	11.00	20.00	74.50

### Base material aluminium



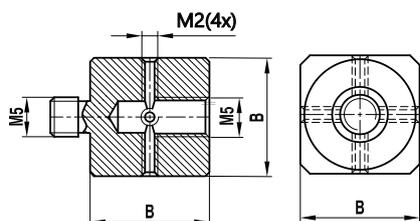
Pos.	Item number	B	Weight (g)
1	WAM500015000	15.00	7.70
2	WAM500020000	20.00	18.70

### Base material titanium



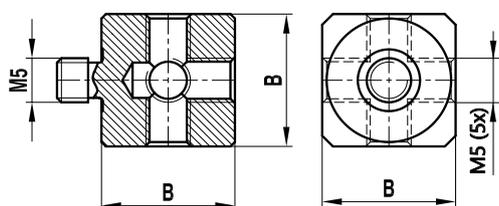
Pos.	Item number	B	Weight (g)
1	WTM5S0015000	15.00	13.20

### Base material titanium



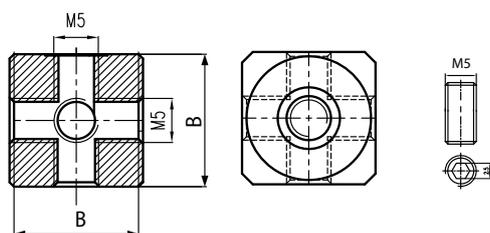
Pos.	Item number	B	Weight (g)
1	WTM50M220000	20.00	31.90
2	WTM50M215000	15.00	13.40

### Base material titanium



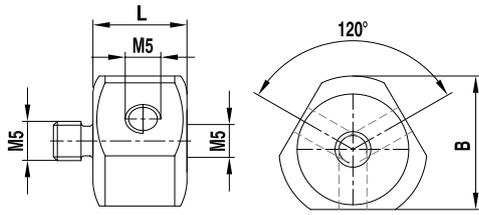
Pos.	Item number	B	Weight (g)
1	WTM500015000	15.00	12.00
2	WTM5L0015000	15.00	12.30
3	WTM5L0020000	20.00	29.70
4	WTM500020000	20.00	30.00

### Base material titanium



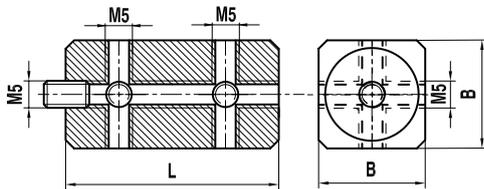
Pos.	Item number	B	Weight (g)
1	WTM500015000OZ	15.00	12.30
2	WTM500020000OZ	20.00	30.40

**Base material titanium**



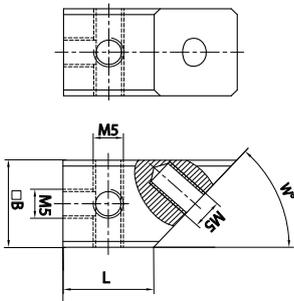
Pos.	Item number	L	B	Weight (g)
1	WTM512015000	15.00	17.02	12.40

**Base material titanium**



Pos.	Item number	L	B	Weight (g)
1	WTM500020040	40.00	20.00	61.30

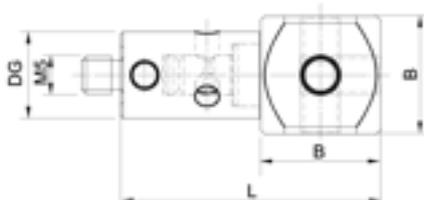
**Base material titanium**



Pos.	Item number	L	B	W°	Weight (g)
1	WTM587515000	15.00	15.00	87.50	13.50
2	WTM547515000	15.00	15.00	47.50	20.00
3	WTM585015000	15.00	15.00	85.00	13.90
4	WTM582515000	15.00	15.00	82.50	14.30
5	WTM580015000	15.00	15.00	80.00	14.40
6	WTM577515000	15.00	15.00	77.50	14.60
7	WTM575015000	15.00	15.00	75.00	14.90
8	WTM572515000	15.00	15.00	72.50	15.10
9	WTM570015000	15.00	15.00	70.00	15.60
10	WTM567515000	15.00	15.00	67.50	16.00
11	WTM565015000	15.00	15.00	65.00	16.40

Pos.	Item number	L	B	W°	Weight (g)
12	WTM562515000	15.00	15.00	62.50	16.90
13	WTM560015000	15.00	15.00	60.00	17.30
14	WTM557515000	15.00	15.00	57.50	17.70
15	WTM555015000	15.00	15.00	55.00	18.20
16	WTM550015000	15.00	15.00	50.00	19.20
17	WTM545015000	15.00	15.00	45.50	20.00
18	WTM552515000	15.00	15.00	52.50	45.00

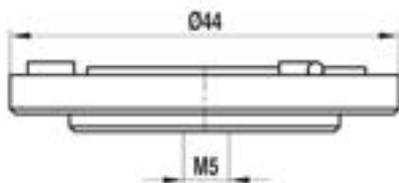
## Adaptors/holders: Type cubes (rotary)



### Base material titanium

Pos.	Item number	DG	L	B	Weight (g)
1	DWTM500015032	11.00	32.50	15.00	18.90

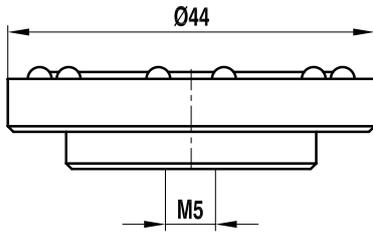
## Adaptor plates: Type Vast



### Base material aluminium

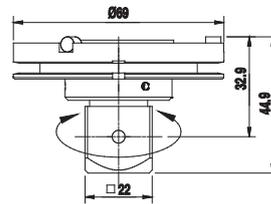
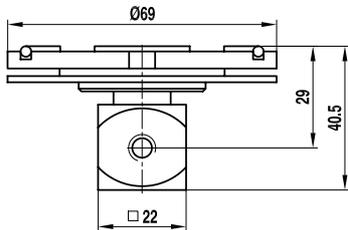
Pos.	Item number	Quantity	Weight (g)
1	TPM5SCHAL002	2	144.30
2	TPM5SCHAL001	1	72.10

### Base material aluminium



Pos.	Item number	Quantity	Weight (g)
1	ATM5SCHAL001	1	73.50
2	ATM5SCHAL002	2	146.90

### Base material aluminium



**NOTE:** Equipped with ID chip

Pos.	Item number	Quantity	Weight (g)
1	TPM5MESSO001	1	158.30
2	TPM5MESSO002	2	317.20
3	TPM5MESSO001OW	1	132.60
4	TPM5MEASY001	1	197.90
5	TPM5MEASY002	2	396.30

### Accessories: Type styli tools



### Base material stainless steel

Pos.	Item number	DG	L	Weight (g)
1	SSM500208596	2.90	70.50	15.50
2	MIMO02900070	2.90	70.50	7.70

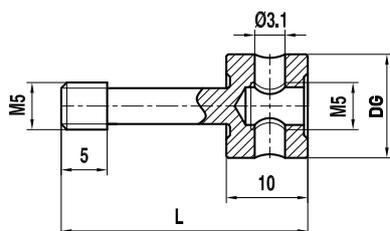
## Accessories: Type screws



### Base material stainless steel

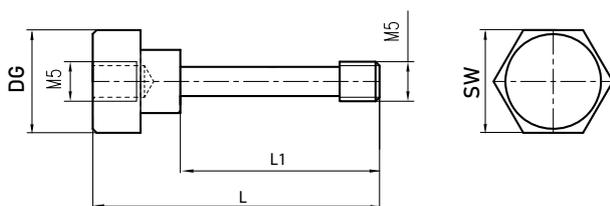
Pos.	Item number	DG	L	L1	SW	Weight (g)
1	SIM500021000	8.00	26.00	21.00	4.00	3.40
2	SIM500026000	8.00	31.00	26.00	4.00	3.90

### Base material titanium

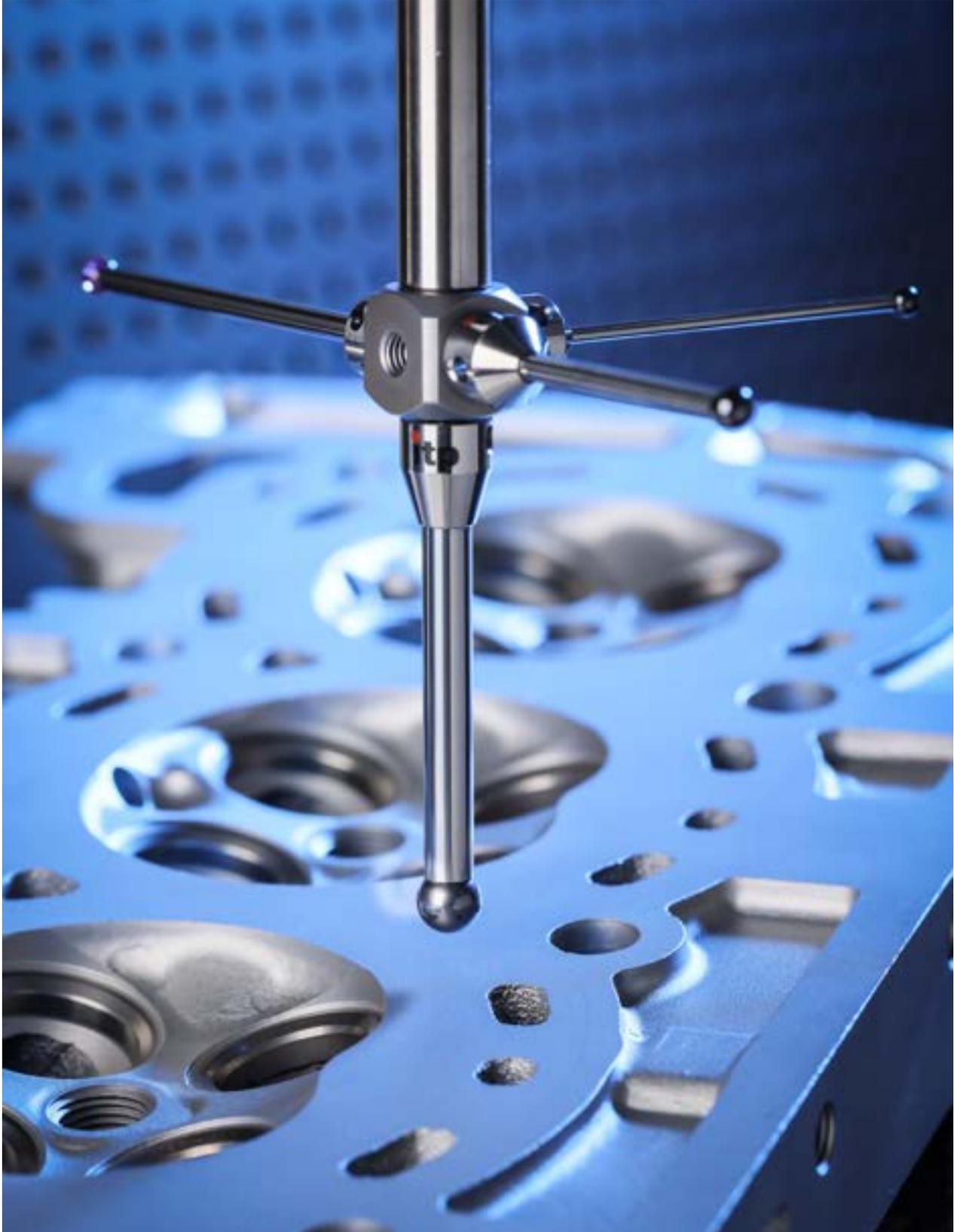


Pos.	Item number	DG	L	Weight (g)
1	VTM5SGO11010	11.00	30.00	4.40

### Base material stainless steel



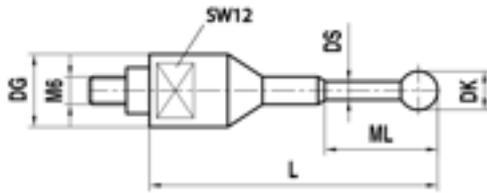
Pos.	Item number	DG	L	L1	SW	Weight (g)
1	SIM500010017	13.00	18.00	9.00	13.00	7.70
2	SIM50M220030	13.00	30.00	20.00	13.00	10.00
3	SIM500021030	13.00	30.00	21.00	13.00	8.70
4	SIM50M226035	13.00	35.00	26.00	13.00	10.40
5	SIM500026035	13.00	35.00	26.00	13.00	9.30



## Thread M6 compatible with Faro measuring system



## Straight styli: Type C



### Stem material carbide, ball material zirconium oxide

Pos.	Item number	DK	ML	DG	L	DS	B	Weight (g)
1	THM6Z3016049	3.00	11.00	16.00	49.00	2.00	–	37.50
2	THM6Z0816049	3.18	11.00	16.00	49.00	2.00	1/8"	38.30
3	THM6Z6016049	6.00	11.00	16.00	49.00	2.00	–	38.00
4	THM6Z0416049	6.35	11.00	16.00	49.00	2.00	1/4"	38.10

### Stem material carbide, ball material delrin®

Pos.	Item number	DK	ML	DG	L	DS	B	Weight (g)
1	THM6D0816049	3.18	11.00	16.00	49.00	2.00	1/8"	38.20
2	THM6D0816100	3.18	62.00	16.00	100.00	2.00	1/8"	40.60
3	THM6D0416049	6.35	11.00	16.00	49.00	2.00	1/4"	37.50



### Stem material carbide, ball material carbide

Pos.	Item number	DK	ML	DG	L	DS	B	Weight (g)
1	THM6H1616047	1.58	9.00	16.00	47.00	1.00	1/16"	37.30
2	THM6H0816100	3.18	62.00	16.00	100.00	2.00	1/8"	40.00
3	THM6H0416100	6.35	62.00	16.00	100.00	3.50	1/4"	45.10
4	THM6H51616049	7.93	11.00	16.00	49.00	3.50	5/16"	42.70
5	THM6H0216059	12.69	21.00	16.00	59.00	3.50	1/2"	55.60
6	THM6H16016059	16.00	21.00	16.00	59.00	3.50	–	71.20
7	THM6H18016059	18.00	21.00	16.00	59.00	3.50	–	84.60
8	THM6H20016059	20.00	21.00	16.00	59.00	3.50	–	101.30
9	THM6H1016069	25.40	31.00	16.00	69.00	3.50	1"	168.00

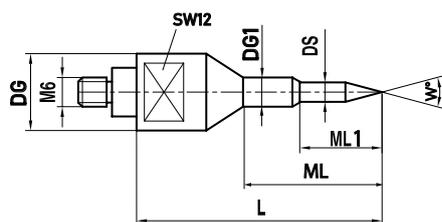


### Stem material carbide, ball material ruby

Pos.	Item number	DK	ML	DG	L	DS	B	Weight (g)
1	THM6R3016049	3.00	11.00	16.00	49.00	2.00	–	37.50
2	THM6R0816049	3.18	11.00	16.00	49.00	2.00	1/8"	38.30
3	THM6R6016049	6.00	11.00	16.00	49.00	2.00	–	37.80
4	THM6R0416049	6.35	11.00	16.00	49.00	2.00	1/4"	38.00
5	THM6R8016049	8.00	11.00	16.00	49.00	3.50	–	39.30
6	THM6R10016049	10.00	11.00	16.00	49.00	3.50	–	40.10
7	THM6R12016059	12.00	21.00	16.00	59.00	3.50	–	42.70



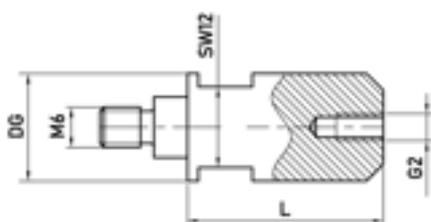
## Straight styli: Type K



### Stem material carbide

Pos.	Item number	ML	ML1	DG	DG1	L	DS	W°	Weight (g)
1	IHM603016047	22.50	9.00	16.00	6.00	47.00	2.00	30.00	37.50

## Adaptors/holders: Type thread adaptors

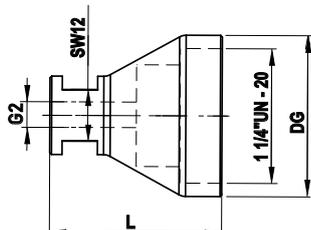


### Base material stainless steel

Pos.	Item number	DG	L	G2	Weight (g)
1	RIM650016029	16.00	29.00	M5	44.80
2	RIM640016029	16.00	29.00	M4	45.10
3	RIM630016029	16.00	29.00	M3	45.50
4	RIM620016029	16.00	29.00	M2	45.70

### Base material stainless steel

Pos.	Item number	DG	L	G2	Weight (g)
1	RIUN11/4M538039	38.00	39.00	M5	103.90
2	RIUN11/4M638039	38.00	39.00	M6	99.00

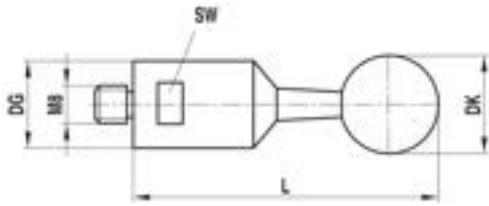




## Other accessories



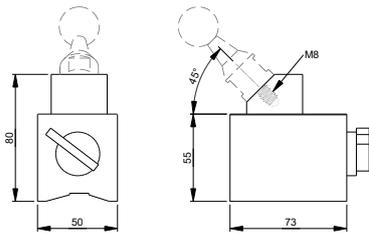
## Accessories: Calibration sphere



Stem material stainless steel, ball material ceramic

Pos.	Item number	DK	DG	L	B	SW	Weight (g)
1	KNM815024130	15.00	24.00	130.00	12.00	20.00	323.70
2	KNM820024135	20.00	24.00	135.00	12.00	20.00	332.50
3	KNM825024140	25.00	24.00	140.00	12.00	20.00	349.10
4	KNM830024145	30.00	24.00	145.00	12.00	20.00	372.00

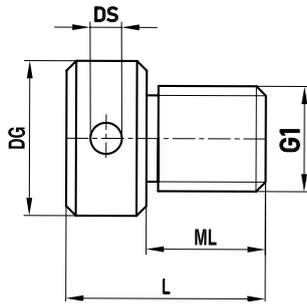
## Accessories: Magnetic base



**NOTE:** Calibration sphere not included.

Pos.	Item number	Weight (g)
1	MAGNETFUSSKNM8	1400.00

## Accessories: Type thread measuring gauges



### Base material stainless steel

Pos.	Item number	ML	DG	L	DS	G1	Weight (g)
1	GWM400010016	10.00	10.00	16.00	3.10	M4	3.80
2	GWM500010016	10.00	10.00	16.00	1.80	M5	4.60
3	GWM600012018	12.00	12.00	18.00	3.10	M6	6.50
4	GWM800015020	12.00	15.00	20.00	3.10	M8	14.00
5	GWM100018025	15.00	18.00	25.00	3.10	M10	26.10
6	GWM120020025	15.00	20.00	25.00	3.10	M12	33.40

# Terms and Conditions

## 1 General Sales and Delivery Terms

Version: December 2024

### I. Scope, exclusion of purchase terms

(1.) The following term definitions apply in these terms and conditions: **“Contractor”** refers to **itp GmbH**; **“Customer”** refers to a Customer who issues the Contractor with an order that the Contractor accepts; **“Goods”** refers to all of the items (devices and software) stated in the Contractor's order confirmation with the exception of Services; **“Device”** refers to the device stated in the Contractor's order confirmation and delivered by the Contractor; **“Intellectual Property Rights”** refers to patents, brands, design patent rights and all patent, brand and design patent registrations, copyrights or sample rights and all other similar or related rights worldwide; **“Deliveries”** refers to the delivery of Goods and items; **“Services”** to the provision of Services.”

(2.) All Deliveries, Services and offers by the Contractor are made exclusively on the basis of these General Sales and Delivery Terms. They are part of all contracts that the Contractor concludes with the buyer for the Goods and Services offered by it. They also apply to all future Deliveries, Services or offers within the framework of an ongoing business relationship even if these have not been agreed separately again.

(3.) Differing or contradictory conditions of the Customer are not recognised by the Contractor unless the Contractor has explicitly agreed to these in writing. This form requirement can only be removed by an appropriate written agreement. Differing or contradictory conditions of the Customer also do not apply if the Contractor in the knowledge of terms that oppose or differ from these terms and conditions from the Customer, implements the delivery and/or service to the Customer without restriction.

(4.) These General Sales and Delivery Terms only apply to companies, legal entities under public law or public law special assets as defined by Section 310 Para. 1 of the German Civil Code (BGB).

### II. Offer and order confirmation

(1.) In order to purchase Goods via the online order form, the Customer must first place them in the shopping basket and then the order must be sent. This requires registration during which the Customer and shipping data are recorded. Before sending the order in a binding manner, the client receives a summary of the individual products including the prices and the total price stating the value-added tax. The order is conducted by pressing the buttons labelled “Send order”.

(2.) If the Customer orders Deliveries and/or Services via the online order form or by email, the Contractor will initially confirm receipt of the order. The receipt confirmation however does not represent binding acceptance of the order. In the event of ordering by email the order (and receipt confirmation) is processed manually.

(3.) For an order via the online order form or by email, the contract only comes into existence with the Contractor's order confirmation, delivery of the Goods or provision of the service. The receipt confirmation may be associated with the order confirmation. The order confirmation contains a summary of the individual products ordered as well as the prices and total price stating the value-added tax.

(4.) For orders made by letter, fax or telephone, the contract only comes into existence with the Contractor's order confirmation, delivery of the Goods or provision of the service. In general such orders are made without a separate confirmation of receipt of the order.

(5.) Additions and changes to the affected agreements including these General Sales and Delivery Terms must be in written form to be effective. With the exception of directors or authorised signatories, the Contractor's employees are not permitted to make oral agreements that vary from this. To maintain the written

form, telecommunication communication is sufficient, in particular by fax or email, if the copy of the signed declaration is provided.

(6.) Information from the Contractor on the subject of the delivery (e.g. weights, dimensions, utilisation values, loads, tolerances and technical data) and the depiction of these (e.g. drawings and diagrams) is only used for orientation purposes if its ability to be used for the contractually agreed purpose does not require it to match precisely. There are no guaranteed characteristic features. Normal commercial variations and variances occurring on the basis of legal regulations or technical improvements as well as the replacement of components with equivalent parts are permitted if they do not adversely affect the contractually agreed purpose.

### III. Price

(1.) The prices apply to the scope of Goods and Services listed in the order confirmations. Additional and special Services are to be charged separately. The prices of the Goods are understood as ex works from the Contractor's address at Rathausstr. 75-79, 66333 Völklingen ("**Place of Fulfilment**"), plus packaging and freight, and plus all fees, costs and taxes associated with the transportation, such as customs charges, and any transport insurance. Otherwise, the Contractor's head office in 66333 Völklingen is considered to be the Place of Fulfilment for all other Services.

(2.) The prices do not include statutorily applicable value-added tax; it is shown separately on the invoice at the statutory amount on the invoicing date. Deliveries to other countries are handled in line with the statutory provisions.

### IV. Delivery time, periods

(1.) Periods and deadlines stated by the Contractor for Deliveries and performance only apply approximately unless the Customer explicitly stipulates or has agreed a fixed period or deadline. If shipment of the Goods has been agreed the delivery periods and deadlines refer to the time of transfer to the forwarder, carrier or other third-party appointed to provide transportation.

(2.) Any agreed binding delivery/service period starts at the earliest with receipt of the order confirmation by the Customer and requires compliance with the agreed payment terms and fulfilment of the contractual obligations and other duties imposed on the Customer. If the order is subsequently changed, a previously agreed delivery/service period is removed.

(3.) The Contractor is entitled to provide sub-Deliveries or Services to an appropriate extent.

(4.) The Contractor is not liable for the impossibility of delivery or service provision, for delays to Deliveries and Services if these were caused by force majeure or other events not predictable at the time the contract was concluded (e.g. business disturbances of all kinds, difficulties in purchasing materials or energy, transport delays, strikes, legal lockouts, lack of personnel, energy or raw materials, export licence, approval, response to a valuation request from the responsible authority(ies) or other difficulties in procuring necessary official approvals, incorrect or delayed delivery by suppliers) for which the Contractor is not responsible. If such events make delivery or performance more difficult or impossible for the Contractor and the hindrance is not only temporary, the Contractor may withdraw from the contract. For temporary hindrances the delivery and performance periods are extended or the deadlines are delayed by the period of the hindrance plus a reasonable start-up period. If as a consequence of the delay it is unreasonable for the Customer to accept delivery or performance, it may withdraw from the contract by providing a written declaration to the Contractor without delay.

### V. Payment terms

(1.) If nothing further has been agreed, invoice amounts for orders delivered to Germany are to be paid within 14 days of the invoicing date minus a 2% discount or within 30 days of the invoicing date without deduction. For orders delivered to other countries, the invoice amounts are to be paid without deduction within 30 days of the invoicing date if nothing further has been agreed. The receipt of the transfer by the Contractor is decisive

as to whether the payment was received on time. Bank transfer is accepted as payment. Only cheques from France, Spain and Ireland are accepted as other means of payment and these only at their fulfilment amount. If the Customer is in default the still outstanding amounts are subject to interest from the date of the default at 9% per annum above the base interest rate; the assertion of other damages in the event of default remains unaffected. Payment in advance may be agreed in individual cases.

(2.) The Contractor is entitled to execute or provide outstanding Deliveries or performances only against payment in advance or the provision of collateral if after concluding the contract it becomes aware of circumstances that could seriously reduce the creditworthiness of the Customer and by which the payment of the Contractor's pending claims by the Customer from the relevant contractual relationship (including from other individual orders to which the same framework agreement applies) is put at risk.

(3.) The Customer only has the right to offset the damages if his counter-claims are legally binding, undisputed or recognised by the Contractor.

(4.) If the Customer is in default of payment for other transactions with the Contractor, the Contractor is entitled to withdraw from the current contractual relationship.

(5.) If the Contractor is in default, the Customer can - if it demonstrates that it has consequently suffered damage - request compensation for each default week completed of 0.5%, in total however 5% of the net price for the part of the Services that could not be used properly due to the default.

(6.) Claims for damages by the Customer due to delays in the Services and claims for damages instead of performance that go beyond the limits stated in Number V.(5) and other claims are excluded in all cases of delayed performance, even after the end of a period set by the Contractor for performance. This does not apply if the Contractor is liable by force in cases of deliberate actions and gross negligence or injury to life, limb or health, under the German Product Liability Act or the infringement of key contractual obligations. Key contractual obligations are those obligations the fulfilment of which defines the contract and on which the client may rely. The provisions above are not associated with a change in the burden of proof to the disadvantage of the Customer.

(7.) For default the Customer is only entitled to a withdrawal right if it has set the Contractor an appropriate period to provide the delivery, it rejects acceptance of the delivery or performance after the end of the period and the period ends without success. This is not associated with a change in the burden of proof to the disadvantage of the Customer.

(8.) At the request of the Contractor, the Customer is required to explain whether it will withdraw from the contract due to the delay in performance of Services or whether it will insist on the delivery or performance of Services.

## **VI. Shipment, transfer of risk and approval**

(1.) Shipment is made in return for payment by and at the risk of the Customer.

(2.) The Contractor has the right to determine the shipment type if a particular shipment type is justified due to the special type of delivery.

(3.) The type of packaging is decided solely by the Contractor.

(4.) The risk is transferred to the Customer on delivery as soon as the delivery is provided to the fulfilment location (Number III. (1.)), at the latest however on handover of the item for delivery (whereby the start of the loading process is key) to the forwarder, delivering organisation or other third party appointed to execute the shipment.

(5.) This also applies to sub-Deliveries. For delivery with agreed approval, the risk is transferred on implementation of the approval to the Customer. If the shipment or handover is delayed as a result of circumstances that are caused by the client, the risk is transferred to the Customer from the date on which the item for delivery is ready for dispatch and the Contractor has informed the client of this.

(6.) Insurance to cover theft, breakage, transport, fire and water damage or other insurable risks is only provided on written request by and at the expense of the Customer.

## VII. Complaints concerning faults

(1.) The Deliveries are to be carefully inspected without delay after delivery to the Customer or the third parties appointed by it as per the German Commercial Code provisions (Section 377 HGB). They apply with regard to apparent and other defects that would have been detected in an immediate, careful inspection as approved if the Contractor does not receive written notification of complaint within 14 working days of delivery. With regard to other defects, the Deliveries are considered to have been approved by the client if the complaint is not received by the Contractor within 14 working day of the fault being notified; if the defect was detectable for the client during normal use at an earlier point in time, this earlier time is key to the start of the complaint period.

(2.) Faults that only become apparent later must be contested with the Contractor without delay, but at the latest within 14 days of the user becoming aware of them.

## VIII. Liability for defects in delivery or service performance

The Contractor is liable as follows for Deliveries and Services that do not have the characteristics listed in the order confirmation and/or service specification (“material defects”) at the time of the risk transfer (VI.):

(1.) The warranty period is one year from delivery of the Goods. This restriction shall not apply if longer periods are stipulated in Section 438 Para. 2 No. 2, 479 Para. 1 and Section 634 a Para. 1 of the German Civil Code (BGB). It also does not apply in cases of injury to life, limb or health caused by negligence as a minimum or in cases of a deliberate or grossly negligent duty infringement and for the malicious hiding of the fault. The statutory provisions on the suspension of statute of limitations, lapsing or restarting of periods remain unaffected.

(2.) The Deliveries are guaranteed if the material defect already existed when the risk was transferred, initially as selected by the Contractor for subsequent improvement or replacement delivery (“subsequent fulfilment”). In the event of replacement delivery, the Customer is obliged to return and transfer the defective item to the Contractor.

(3.) No new period of limitation starts due to the subsequent fulfilment.

(4.) The Contractor must be given the opportunity of subsequent fulfilment within a proper period of time. If this is refused it is released from liability for material defects.

(5.) If the fault cannot be resolved within an appropriate period or if the subsequent fulfilment is considered to have failed for other reasons, the Customer may choose to request a reduction of the fee or withdraw from the contract. However, the client has no withdrawal right for minor contractual infringements and in particular for minor defects.

(6.) No liability is accepted for unsuitable or improper use, defective assembly or commissioning by the Customer or a third party, natural use, defective or negligent handling, unsuitable resources etc. if the Contractor is not responsible for this.

(7.) Defect claims do not exist for simply insignificant variances from the agreed characteristic, only minor effects on usability, damage incurred after the transfer of risk as a result of defective or negligent treatment or due to special external influences not required in the contract.

(8.) Claims by the Customer due to costs, including transport, travel, work and material costs, required for subsequent fulfilment are excluded if the expenses increase because the delivery was subsequently moved to a location different from the fulfilment location.

(9.) The delivery of used items agreed in the individual case with the Customer takes place with the exclusion of all warranties for material defects.

## **IX. Liability limitations**

(1.) The liability of the Contractor to reimburse damages and expenses, no matter the legal basis, in particular due to impossibility, default, defective or incorrect delivery, contractual infringement, infringement of duties for contractual negotiations and tort, is excluded.

(2.) If the Contractor provides technical information or advice and this information or advice is not part of the contractually agreed scope of Services it is required to provide, this is provided free of charge and with the exclusion of all liability. The Customer is not released in particular from its own responsibility to inspect the Goods for the intended use.

(3.) **Number IX. (1.)** and **Number IX. (2.)** do not apply in cases of deliberate actions and gross negligence if the Contractor is liable for injury to life, limb or health or under the German Product Liability Act or the infringement of key contractual obligations. Key contractual obligations are those obligations the fulfilment of which defines the contract and on which the client may rely.

(4.) If the Contractor is liable under **Number IX. (3.)** for the infringement of key contractual obligations, the level of this liability is restricted to predictable damage when the contract was concluded and that is typical of the contract.

(5.) If nothing further is explicitly stated in the order documents, the Contractor does not act as an expert or assessor.

(6.) If the liability is excluded or restricted under **Number IX.**, this also applies to the personal liability of the statutory representatives, senior managers or other vicarious agents.

## **X. Retention of title**

(1.) The Contractor retains title to the delivered Goods until complete payment of the purchase price, including all subsidiary costs. The retention of title also covers the recognised balance if the Contractor posts claims against the Customer on an ongoing basis (current account retention). The retention of title also covers all existing and future receivables from the business relationship with the ordering party. The Goods and any Goods covered by the retention of title that replace the original Goods under the following provisions are referred to below as "retained Goods".

(2.) The Customer stores the retained Goods for the Contractor free of charge.

(3.) The Customer is obliged to inform the Contractor about access by third parties to the retained Goods, for example due to pledging and any damage or the destruction of the retained Goods without delay. The costs incurred as a result of the refusal to accept are borne by the Customer.

(4.) If the Customer acts in contradiction to the contract, in particular for default payment or infringement of an obligation under Number (2.) and (3.) above, the Contractor is entitled to withdraw from the contract and request the return of the retained Goods (realisation of collateral). On executing this right, the Customer must inform the Contractor about the location of the Goods.

(5.) In the event of the onward sale of retained Goods, the Customer already assigns the resulting receivables against the buyer by way of security to the Contractor - for joint ownership by the Contractor to the retained Goods pro rata to the relevant joint ownership share. This also applies to other receivables that replace the retained Goods or are otherwise incurred on the retained Goods, such as insurance claims or claims from tort due to loss or destruction. The Contractor revocably authorises the Customer to collect the claims assigned to the Contractor in its own name. The Contractor may revoke this collection authorisation only in the event of a sale.

(6.) The Customer is entitled to process or sell the retained Goods until the occurrence of the realisation of collateral (5.) in normal business operations. Pledging and transfer of collateral are not permitted.

(7.) If the Customer processes the retained Goods, it is agreed that the processing takes place in the name of and for the account of the Contractor as the manufacturer and the Contractor directly acquires the ownership or - if the processing is from materials from several owners or the value of the processed item is higher than the value of the retained Goods - the joint ownership (fractional ownership) of the newly created item in the ratio of the value of the retained Goods to the value of the newly created item. In the event that such

ownership acquisition occurs with the Contractor, the Customer already transfers its future ownership or - in the ratio stated above - joint ownership of the newly created item as collateral to the Contractor. If the retained Goods are combined with other items into a common item or mixed and cannot be separated and if one of the other items is considered the main item, the Contractor, if the main item belongs to it, transfers to the client the ownership of the common item in the ratio stated in Sentence 1.

(8.) If the value of the collateral exceeds the value of the receivables still open by 120%, the Customer has a release right.

#### **XI. Replacement clause for the retention of title in legal transactions with other countries**

For Deliveries to other countries, if in the importing state certain measures are required for the effectiveness of the retention of title stated in **Number X.** or the other rights of the Contractor stated there, the Customer must refer to these and implement such measures at its expense. If the law of the import state does not permit retention of title but gives the Contractor other rights to retain the delivered item, the Contractor can execute all rights of this kind. If an equivalent securing of the claims against the Customer is not achieved by this means, the Customer is obliged to the Contractor to obtain at its expense other collateral for the delivered Goods or other security.

#### **XII. Right to Intellectual Property**

(1.) The rights to Intellectual Property remain with the Contractor if nothing further is regulated by law.

(2.) On creation of the order, the Customer must ensure that no Intellectual Property Rights of third parties are infringed or used improperly.

#### **XIII. Obligation to provide information**

The Customer will inform all people who use the Deliveries - or in the event of the Deliveries being sold on by the Customer, the buyer - about the instructions and/or recommendations of the Contractor for using the Deliveries including the instructions and/or other recommendations contained in the Contractor's catalogues or brochures or otherwise informed to the Customer by the Contractor. The Customer is obliged to pass on operating instructions, data sheets and other information on the Goods and Services that the Customer has received from the Contractor.

#### **XIV. Export control**

1.) All Goods, Services, Intellectual Property Rights, technical assistance, technical documentation and other information provided by Contractor to Customer (collectively, the **"Supplied Items"**) and anything derived, created, manufactured, or provided from or using the Supplied Items (collectively, the **"Customer Outputs"**) may be subject to applicable export control and/or import laws, regulations, trade embargoes and sanctions (collectively **"Export Laws"**). Customer warrants, represents and undertakes:

(i) to comply with Export Laws;

(ii) to obtain all necessary licences for subsequent export or re-export after receipt from Contractor; and

(iii) that it shall not directly or indirectly access, use, disclose, export, re-export, assign, transfer or sub-license Supplied Items or Customer Outputs: (i) contrary to Export Laws; (ii) to or via Cuba, Iran, North Korea, the Republic of South Sudan, the Republic of Sudan, Syria, Russia, Belarus, Venezuela, Afghanistan, Myanmar, any region of Ukraine that is annexed or occupied by Russia, or any other destination listed at <https://www.renishaw.com/legal/en/restricted-destinations>; or (iii) for any end use prohibited by Export Laws (including military end uses in a country subject to arms embargo or for end uses related to nuclear, chemical or biological weapons, missiles or their delivery systems).

(2.) Customer certifies that neither it nor any individual or entity intended to benefit from the Supplied Items or

Customer Outputs is (i) an individual or entity subject to Export Laws that prohibit or restrict their access to the Supplied Items or Customer Outputs, or (ii) located, organised or resident in a country prohibited by number XIV. (1.) or otherwise subject to any relevant embargo or sanction. Upon request, and notwithstanding clause XIV. (7.) below, Customer will certify the end user and end use for Supplied Items and Customer Outputs in a form required by Contractor to Contractor's satisfaction.

(3.) Customer shall use its best endeavours to ensure the purpose of Numbers XIV and XV is not frustrated by any third parties further down the commercial chain including by any possible distributors or resellers, and shall adopt and maintain an adequate monitoring mechanism to ensure compliance with Numbers XIV and XV.

(4.) Any breach of Numbers XIV and XV shall constitute a material breach of an essential element of this contract, and Contractor shall be entitled to terminate the contract with immediate effect without the need for notice in writing, and Customer shall indemnify Contractor against all liabilities, losses, interest, costs and expenses that Contractor may suffer or incur under or in connection with such breach.

(5.) Customer acknowledges and agrees that Contractor may delay, reject or terminate performance and delivery of Customer's order at any time without liability if Contractor has a reasonable belief that acceptance or continued performance and delivery of such order may be in breach of Export Laws. Contractor is not obliged to seek, and has no liability for delay or failure to obtain, an export licence or permit, answer to a rating enquiry from the applicable government(s), or other documentation required by the relevant authorities to comply with applicable Export Laws.

(6.) Customer shall immediately inform Contractor if there has been, or it has reasonable grounds to suspect, a breach of Numbers XIV and XV.

(7.) Customer shall permit Contractor or its authorised representatives (subject to appropriate confidentiality undertakings) to have reasonable access to its accounts and records relating to activities under this contract to ensure its compliance with Numbers XIV and XV..

#### **XV. Re-Export to Russia and/or Belarus**

(1.) Without limiting Number XIV, Customer shall not sell, export or re-export, directly or indirectly to Russia and/or Belarus or for use in Russia and/or Belarus any Goods supplied under or in connection with this contract that fall under the scope of Article 12g of Council Regulation (EU) No. 833/2014 and/or Article 8g of Council Regulation (EU) No. 765/2006 as amended from time to time.

(2.) Without limiting Number XIV, Customer shall not use and shall prohibit any possible sublicensees from using Intellectual Property Rights, trade secrets or other information in connection with common high priority items listed in the annexes to Council Regulation (EU) No. 833/2014 and/or Council Regulation (EU) No. 765/2006 that are intended for sale, supply, transfer or export, directly or indirectly, to Russia and /or Belarus or for use in Russia and/or Belarus.

#### **XVI. Disposal of Goods**

If the Contractor is entitled under the laws on disposing of electrical and electronic waste in the country to which the Contractor sends the Goods, it is permitted to transfer these to the Customer if the Customer is responsible for the disposal of the Goods under the laws of the relevant country at its own expense. If the Contractor is not permitted to do so, the Contractor is responsible for the safe disposal of the Goods as per the laws of the relevant country at its own expense.

### **XVII. Data protection**

The parties are obliged to adhere to the applicable statutory regulations on data protection and to handle personal data in compliance with the applicable statutory regulations. Personal data may only be processed to the extent required to supply the contractual Deliveries and Services as part of contract fulfilment (intended purpose). Personal data shall be deleted after the intended purpose and the statutory retention periods to be complied with have lapsed.

### **XVIII. Court of jurisdiction, applicable law, severability clause**

(1.) If the Customer is a business, legal entity under public law or public law investment fund, the exclusive court of jurisdiction for all disputes arising from this contract is the Contractor's head office. This also applies if the Customer has no general court of jurisdiction in Germany or if the place in which it is resident or usually resident is not known when the lawsuit starts.

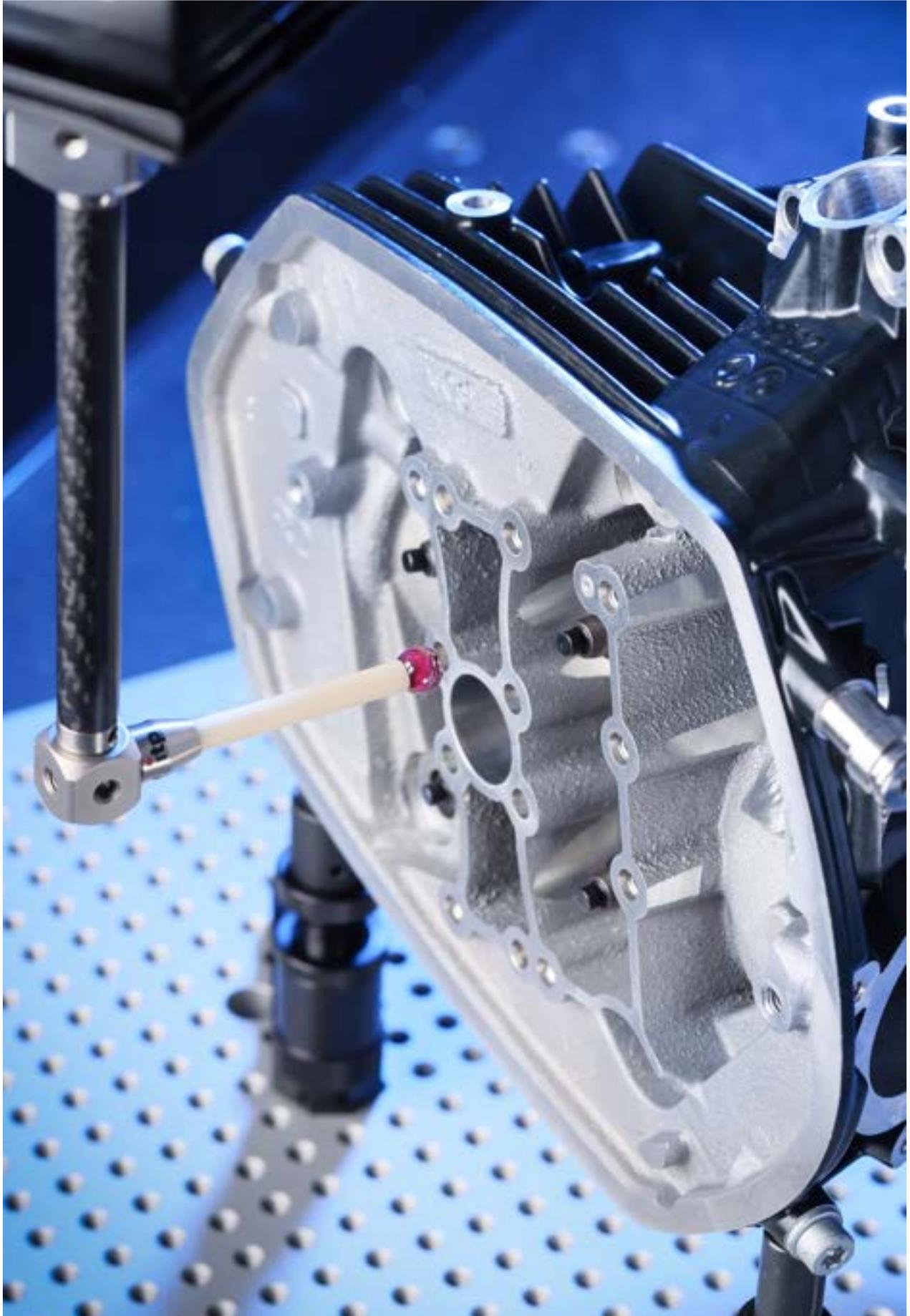
(2.) Only the laws of the Federal Republic of Germany apply. The United Nations Convention for the International Sale of Goods dated 11/04/1980 does not apply to this contract.

(3.) The contractual language is German.

(4.) All online orders, emails and postal orders are stored and provided to the Customer on request.

(5.) If individual provisions in the agreement including these General Sales and Delivery Terms are or become ineffective in part or full, this does not affect the validity of the other provisions. The fully or partially ineffective provision is to be replaced by a provision that comes as close as possible to the ineffective one.







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