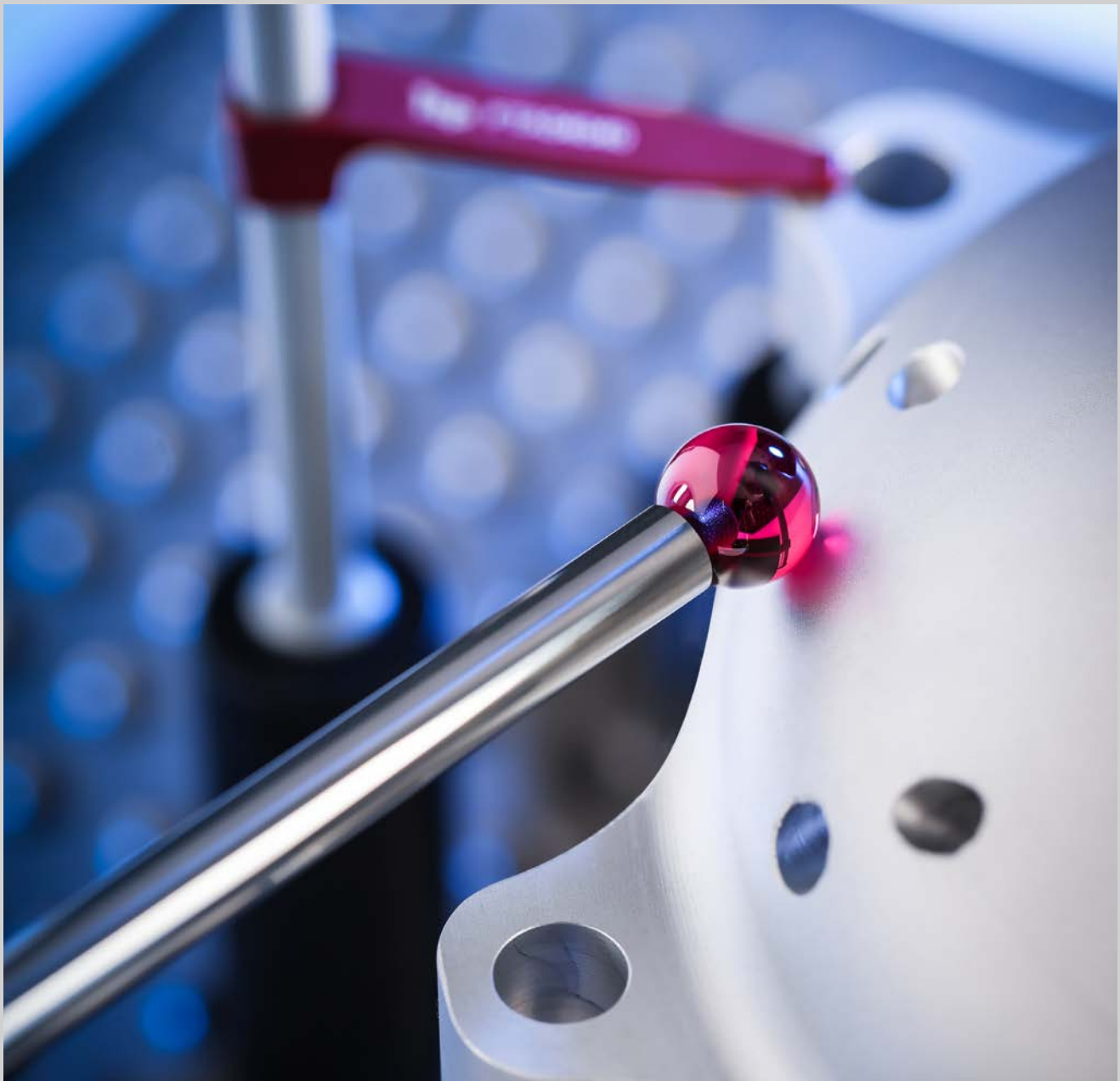


## Styli and Accessories





## Contents

Materials .....	10
Carbide .....	10
Carbon fiber .....	10
Steel .....	10
Carbon fiber tube .....	10
Aluminium .....	10
Ceramics .....	10
Titanium .....	10
Ball materials .....	11
Silicon nitride .....	11
Ruby .....	11
Zirconium oxide .....	11
Diamond coated .....	11
Aluminium oxide .....	11
Carbide .....	11
Thread M2 .....	12
Stylus (steel) ruby .....	13
Stylus (steel) silicon nitride .....	14
Stylus (carbide) ruby .....	14
Stylus (carbide) silicon nitride .....	16
Stylus (ceramic) ruby .....	17
Stylus (ceramic) silicon nitride .....	18
Stylus (carbon fiber) ruby .....	18
Stylus (carbon fiber) silicon nitride .....	19
Stylus pointer steel .....	19
Stylus pointer carbide .....	19
Cylinder stylus carbide .....	20
Cylinder stylus ruby .....	20
Cylinder stylus zirconium oxide .....	21
Star stylus (4 arms) ruby .....	21
Star stylus (with clamping) ruby .....	22
Clamping stylus for star styli .....	23
Spherical disk stylus steel .....	24
Spherical disk stylus ceramic .....	24
Spherical disk stylus ruby with steel pin .....	25
Spherical disk stylus with 2 hemispherical rubies .....	25
Hollow ceramic hemisphere .....	26

Extension steel . . . . .	26
Extension ceramic . . . . .	27
Extension carbon fiber . . . . .	27
Stylus holder rigid . . . . .	27
Stylus holder rotatable . . . . .	28
Holder for pins . . . . .	28
Rotary adapter . . . . .	28
Rotary knuckle . . . . .	29
Reducing adapter . . . . .	29
Wrench . . . . .	29
Thread M3 . . . . .	30
Stylus (steel) ruby . . . . .	31
Stylus (steel) silicon nitride . . . . .	32
Stylus (steel) zirconium oxide . . . . .	32
Stylus (carbide) ruby . . . . .	33
Table continues on the next page . . . . .	33
Stylus (carbide) ruby with anticrash protection . . . . .	34
Stylus (carbide) silicon nitride . . . . .	35
Stylus (carbide) zirconium oxide . . . . .	35
Stylus (ceramic) ruby . . . . .	36
Stylus (ceramic) silicon nitride . . . . .	36
Stylus (ceramic) zirconium oxide . . . . .	37
Stylus (carbon fiber) ruby . . . . .	37
Stylus (carbon fiber) silicon nitride . . . . .	38
Stylus (carbon fiber) zirconium oxide . . . . .	38
Cylinder stylus carbide . . . . .	39
Cylinder stylus ruby . . . . .	39
Star stylus (with clamping) ruby . . . . .	40
Clamping stylus for star styli . . . . .	40
Spherical disk stylus steel . . . . .	41
Hollow ceramic hemisphere . . . . .	41
Extension steel . . . . .	42
Extension ceramic . . . . .	42
Extension carbon fiber . . . . .	43
Holder . . . . .	43
Holder 90° . . . . .	44
Rotary adapter . . . . .	44
Rotary knuckle . . . . .	44
Reducing adapter . . . . .	45

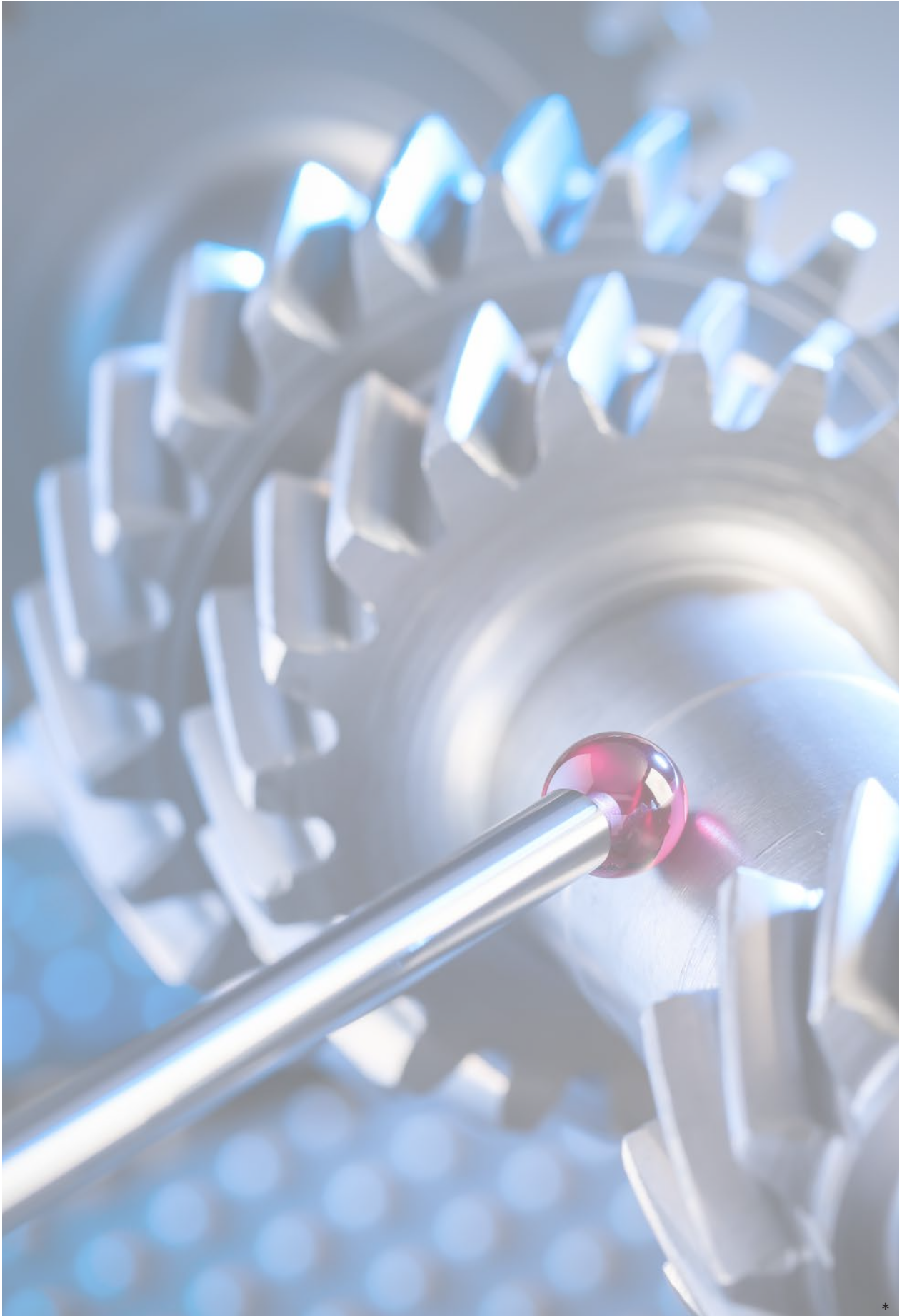
Wrench .....	45
Thread M3 XXT .....	46
Stylus XXT (carbide) ruby .....	47
Stylus XXT (carbide) ULTRA Scanning .....	48
Stylus XXT (carbon fiber) ruby .....	48
Stylus XXT (carbon fiber) silicon nitride .....	49
Stylus XXT (carbon fiber) ULTRA Scanning .....	50
Reference stylus XXT (carbon fiber) ruby .....	51
¼ star stylus XXT (carbon fiber) ruby .....	51
¼ star stylus XXT (carbon fiber) silicon nitride .....	52
½ star stylus XXT 90° (carbon fiber) ruby .....	52
½ star stylus XXT 90° (carbon fiber) silicon nitride .....	53
½ star stylus XXT 180° (carbon fiber) ruby .....	53
½ star stylus XXT 180° (carbon fiber) silicon nitride .....	54
Clamping stylus XXT (carbon fiber) ruby .....	54
Clamping stylus XXT (carbon fiber) silicon nitride .....	55
Extension XXT (carbon fiber) .....	56
Clamping extension XXT (carbon fiber) .....	56
Adapter plate VAST XXT .....	57
Adapter plate VAST XXT (star) .....	57
Adapter plate VAST XXT (extension) .....	58
Reference adapter plate VAST XXT .....	58
Reference adapter plate VAST XXT (extension) .....	58
Cube 90° XXT, 1-way .....	59
Cube 180° XXT, 2-way .....	59
Cube XXT, 4-way .....	59
Cube XXT, 6-way .....	60
Cube XXT, 8-way .....	60
Clamping screw XXT .....	60
Knuckle XXT .....	61
Thread M4 .....	62
Stylus (steel) ruby .....	63
Stylus (steel) silicon nitride .....	64
Stylus (steel) zirconium oxide .....	64
Stylus (carbide) ruby .....	65
Stylus (carbide) ruby (wrench size 5,5) .....	66
Stylus (ceramic) ruby .....	67
Stylus (ceramic) ruby (wrench size 5,5) .....	68
Stylus (ceramic) silicon nitride .....	68

Stylus (carbon fiber) ruby	69
Stylus (carbon fiber) silicon nitride	69
Stylus (carbon fiber) zirconium oxide	70
Clamping stylus (ceramic) ruby	70
Extension steel	71
Extension steel with wrench size 5,5	71
Reducing extension	72
Reducing adapter	72
Holder for stylus rotatable	73
Holder for stylus without clamping	73
Disk stylus with hemispherical balls	74
Screw with anticrash protection	74
Anticrash protection adapter	75
Rotary knuckle	76
Swivel adapter/Adapter for crank stylus	76
Wrench	77
Thread M5	78
Stylus non threaded (carbide) ruby	79
Stylus for gear measurement non threaded (carbide) ruby	80
Stylus for swiveling configurations (carbide) ruby	81
Stylus (steel) ruby	81
Stylus (steel) ceramic	82
Stylus (steel) silicon nitride	82
Stylus (carbide) ruby	83
Stylus (carbide) silicon nitride	84
Stylus (carbide) ruby DG 10,0	84
Stylus (carbide) silicon nitride DG 10,0	85
Stylus (carbide) zirconium oxide DG 10,0	86
Stylus (carbide) ruby DG 11,0	86
Stylus (carbide) ceramic DG 11,0	88
Stylus (carbide) silicon nitride DG 11,0	89
Stylus (carbide) ruby DG 12,0	91
Stylus (carbide) silicon nitride DG 12,0	92
Stylus (carbide) ruby DG 19,0	93
Stylus ScanMax (carbide) carbide	93
Stylus ULTRA Scanning (carbide) diamond-coated	94
Stylus (ceramic) ruby	95
Stylus (ceramic) silicon nitride	96
Stylus (carbon fiber) ruby DG 10,0	96

Stylus (carbon fiber) silicon nitride DG 10,0	98
Stylus (carbon fiber) zirconium oxide DG 10,0	98
Stylus (carbon fiber) ruby DG 11,0	99
Stylus (carbon fiber) silicon nitride DG 11,0	100
Stylus (carbon fiber) ceramic DG 11,0	101
Micro ball stylus (carbide) ruby	102
Long thread stylus (carbide) ruby	104
Reference stylus (high-strength stainless steel) ruby	104
Stylus pointer carbide	105
Spherical disk stylus steel	105
Spherical disk stylus steel with 2 hemispherical rubies	106
Spherical disk stylus steel ScanMax	107
Spherical disk steel	108
Stylus for thread measuring (carbide) ruby	109
Star stylus (carbide) ruby	109
Cube star stylus (carbide) ruby	110
Cylinder stylus carbide	111
Hollow ceramic hemisphere	111
Rotary adapter	111
Rotary knuckle	112
Rotary cube element	112
Knuckle	113
Cube titanium	113
Cube aluminium	114
Cube with countersunk screw	114
Double cube	114
Cube adapter	115
Cube extension	115
Extension steel	115
Extension carbon fiber	116
Extension titanium	117
Extension aluminium	118
Holder for stylus non threaded	118
1-way holder for stylus non threaded	119
2-way holder for stylus non threaded	119
5-way holder for stylus non threaded	120
Holder for stylus	120
Holder with angle	121
Holder for multiple stylus	122

Multiple stylus adapter. . . . .	122
Mounting screw for cube . . . . .	123
Thread measuring gage . . . . .	123
Clamping screw for cube and disk. . . . .	124
Reducing adapter . . . . .	124
Angle adapter 90° . . . . .	125
Adapter plate for VAST/MT . . . . .	125
Adapter plate EASY! suitable for VAST/MT . . . . .	126
Adapter plate for dynamic system (ST) . . . . .	126
Adapter plate for Prismo dynamic systems (ST) . . . . .	127
Extension for adapter plate VAST/MT . . . . .	128
Grooved disk for star styli. . . . .	130
Clamping disc for star styli . . . . .	130
Pin for star stylus carbide . . . . .	131
Wrench . . . . .	131
Thread M6. . . . .	132
Stylus (carbide) carbide . . . . .	133
Stylus (carbide) ruby. . . . .	133
Stylus (carbide) zirconium oxide . . . . .	134
Stylus (carbide) POM . . . . .	134
Stylus pointer carbide. . . . .	135
Reducing adapter . . . . .	135
Adapter for Faro Platin/Gold . . . . .	135
Thread M8. . . . .	136
Calibration sphere with stem. . . . .	137
Magnet base for calibration spheres. . . . .	137
Terms and Conditions. . . . .	138





\*

# 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 ultraprecise measuring jobs, e.g. as reference probing elements for calibration purposes.



## Titanium

Extremely lightweight, high-strength material. It 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 ceramic ball 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.

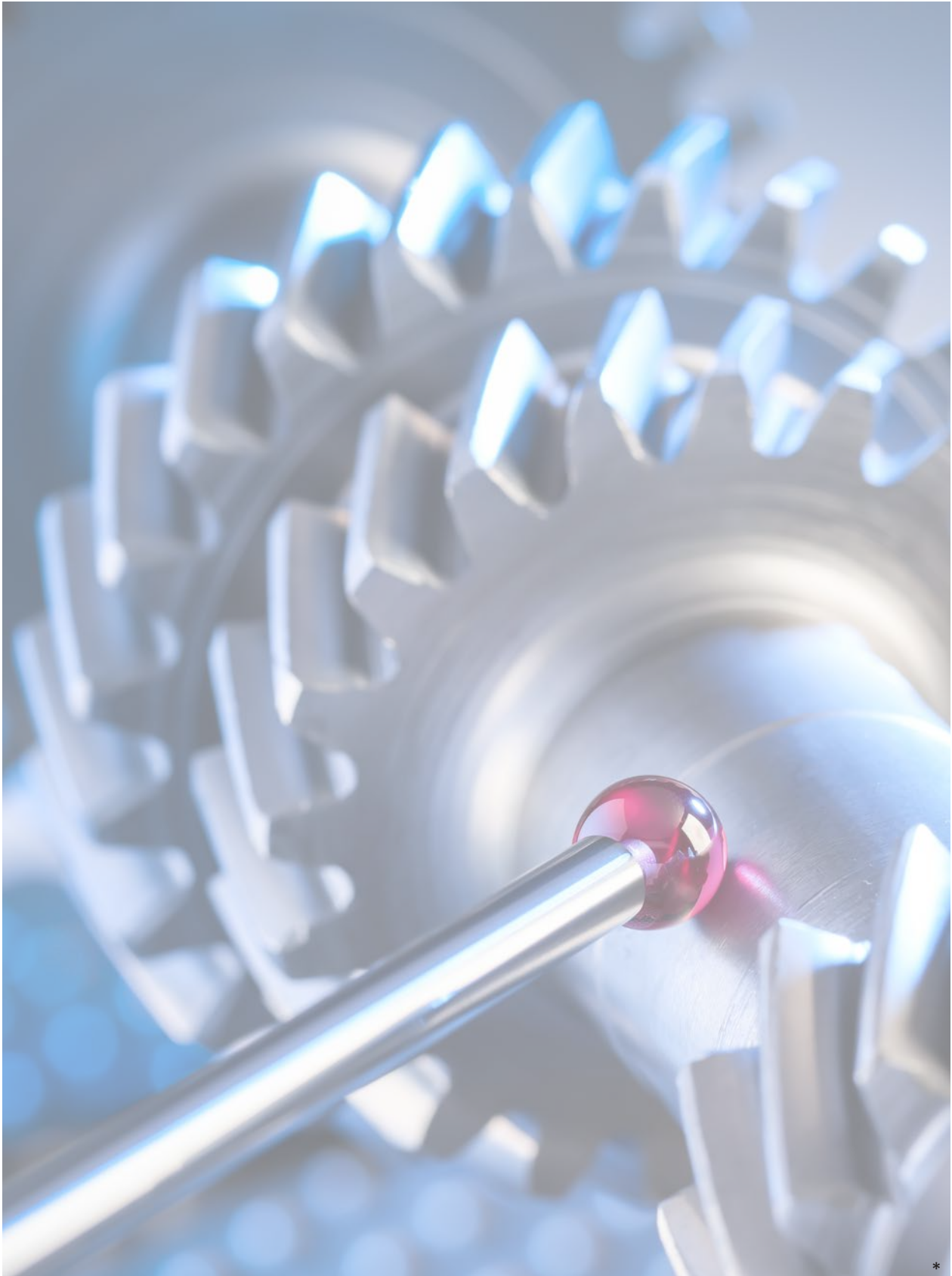


## Carbide

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



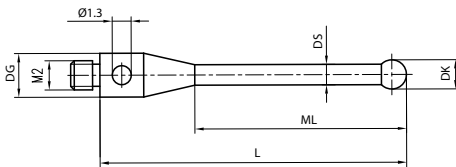
## Thread M2



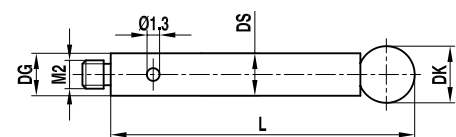
## Stylus (steel) ruby

### Stainless steel base and stem, ruby ball

Pos.	itp Order No	Variant	DK	ML	DG	L	DS	Weight (g)	Price/Piece (€)
1	TI M2 010 03 010	A	1,0	5,0	3,0	10,5	0,7	0,3	19,00
2	TI M2 015 03 011	A	1,5	5,0	3,0	10,75	0,7	0,3	19,00
3	TI M2 020 03 011	A	2,0	6,0	3,0	11,0	1,0	0,3	15,00
4	TI M2 020 03 021	A	2,0	14,5	3,0	21,0	1,4	0,5	18,00
5	TI M2 025 03 011	A	2,5	6,5	3,0	11,25	1,0	0,3	16,50
6	TI M2 025 03 021	A	2,5	15,0	3,0	21,25	1,4	0,5	19,00
7	TI M2 030 03 011	A	3,0	6,0	3,0	11,5	1,5	0,3	19,00
8	TI M2 030 03 021	A	3,0	15,0	3,0	21,5	1,5	0,5	19,00
9	TI M2 040 03 012	A	4,0	7,0	3,0	12,0	1,5	0,4	22,00
10	TI M2 040 03 022	A	4,0	15,0	3,0	22,0	1,5	0,6	23,00
11	TI M2 040 03 032	B	4,0	32,0	3,0	32,0	3,0	1,7	23,00
12	TI M2 040 03 042	B	4,0	42,0	3,0	42,0	3,0	2,3	24,00
13	TI M2 040 03 052	B	4,0	52,0	3,0	52,0	3,0	2,8	25,00
14	TI M2 050 03 012	A	5,0	8,5	3,0	12,5	2,5	0,7	26,00
15	TI M2 050 03 022	B	5,0	22,0	3,0	22,0	3,0	1,2	26,00
16	TI M2 050 03 032	B	5,0	32,0	3,0	32,0	3,0	1,8	26,00
17	TI M2 050 03 042	B	5,0	42,5	3,0	42,5	3,0	2,4	27,50
18	TI M2 050 03 052	B	5,0	52,5	3,0	52,5	3,0	2,9	27,50
19	TI M2 060 03 013	B	6,0	13,0	3,0	13,0	3,0	0,9	27,50
20	TI M2 060 R3 013	A	6,0	9,0	3,0	13,0	2,5	0,8	31,00
21	TI M2 060 03 028	B	6,0	28,0	3,0	28,0	3,0	1,7	29,00
22	TI M2 080 03 013	B	8,0	13,0	3,0	13,0	3,0	1,4	41,00
23	TI M2 080 03 015	A	8,0	11,0	3,0	15,0	2,5	1,4	49,50



Variant A



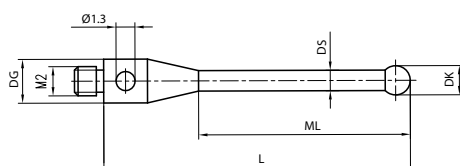
Variant B

**NOTE:** Peg mounted balls.

## Stylus (steel) silicon nitride

### Stainless steel base and stem, silicon nitride ball

Pos.	itp Order No	DK	ML	DG	L	DS	Weight (g)	Price/Piece (€)
1	TI M2 S10 03 010	1,0	5,0	3,0	10,5	0,7	0,2	33,00
2	TI M2 S15 03 011	1,5	5,0	3,0	10,75	0,7	0,3	34,00
3	TI M2 S20 03 011	2,0	6,0	3,0	11,0	1,0	0,3	33,00
4	TI M2 S20 03 021	2,0	14,5	3,0	21,0	1,4	0,5	34,00
5	TI M2 S25 03 011	2,5	6,5	3,0	11,25	1,0	0,3	44,00
6	TI M2 S25 03 021	2,5	15,0	3,0	21,25	1,4	0,5	45,00
7	TI M2 S30 03 011	3,0	6,0	3,0	11,5	1,5	0,4	44,00
8	TI M2 S30 03 021	3,0	15,0	3,0	21,5	1,5	0,5	45,00
9	TI M2 S40 03 012	4,0	7,0	3,0	12,0	1,5	0,5	59,00
10	TI M2 S40 03 022	4,0	15,0	3,0	22,0	1,5	0,6	60,50
11	TI M2 S50 03 012	5,0	8,5	3,0	12,5	2,5	0,6	60,50
12	TI M2 S60 R3 013	6,0	9,0	3,0	13,0	2,5	0,7	64,00
13	TI M2 S80 03 015	8,0	11,0	3,0	15,0	2,5	1,2	64,00



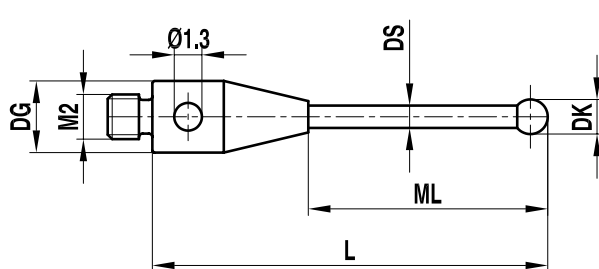
**NOTE:** Peg mounted balls.

## Stylus (carbide) ruby

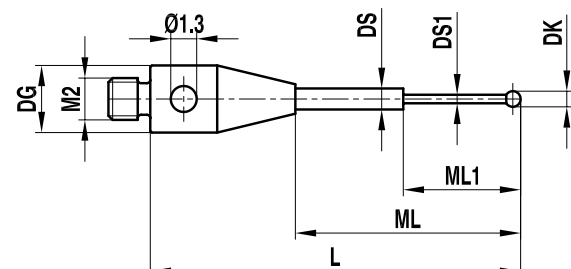
### Stainless steel base, carbide stem, ruby ball

Pos.	itp Order No	Variant	DK	ML1/ML	DG	L	DS1/DS	Weight (g)	Price/Piece (€)
1	TH M2 005 03 020	A	0,5	7,25	3,0	20,25	0,3	0,5	66,00
2	TH M2 007 03 010	A	0,7	4,35	3,0	10,35	0,5	0,3	55,00
3	TH M2 007 03 020	A	0,7	12,35	3,0	20,35	0,5	0,4	58,00
4	TH M2 010 03 010	A	1,0	6,5	3,0	10,5	0,8	0,2	22,00
5	TH M2 010 R3 010	A	1,0	4,5	3,0	10,5	0,7	0,3	24,00
6	TH M2 010 03 015	A	1,0	11,5	3,0	15,5	0,8	0,2	22,00
7	TH M2 010 03 020	A	1,0	7,5	3,0	20,5	0,7	0,5	24,00
8	TH M2 010 03 021	A	1,0	13,0	3,0	20,5	0,8	0,4	31,00
9	TH M2 010 03 027	A	1,0	20,5	3,0	27,5	0,7	0,4	34,00
10	TH M2 015 03 021	A	1,5	13,25	3,0	20,75	1,0	0,5	24,00
11	TH M2 015 03 031	A	1,5	23,25	3,0	30,75	1,0	0,6	33,00
12	TH M2 020 63 011	A	2,0	5,0	3,0	11,0	1,0	0,3	15,00
13	TH M2 020 03 011	A	2,0	7,0	3,0	11,0	1,0	0,3	16,50
14	TH M2 020 03 016	A	2,0	12,0	3,0	16,0	1,0	0,3	16,50

Pos.	itp Order No	Variant	DK	ML1/ML	DG	L	DS1/DS	Weight (g)	Price/Piece (€)
15	TH M2 020 03 021	A	2,0	15,0	3,0	21,0	1,0	0,5	16,50
16	TH M2 020 R3 021	A	2,0	13,0	3,0	21,0	1,0	0,5	25,00
17	TH M2 020 03 031	A	2,0	23,5	3,0	31,0	1,5	1,0	25,00
18	TH M2 020 03 041	A	2,0	33,5	3,0	41,0	1,5	1,2	31,00
19	TH M2 025 03 012	A	2,5	6,0	3,0	12,0	1,5	0,5	26,00
20	TH M2 025 03 021	A	2,5	13,75	3,0	21,25	1,0	0,5	24,00
21	TH M2 025 03 031	A	2,5	23,75	3,0	31,25	2,0	1,4	31,00
22	TH M2 025 03 041	A	2,5	33,75	3,0	41,25	2,0	1,8	33,00
23	TH M2 030 03 012	A	3,0	6,0	3,0	12,0	2,0	0,6	22,00
24	TH M2 030 03 021	A	3,0	15,5	3,0	21,5	1,5	0,7	21,00
25	TH M2 030 03 032	A	3,0	24,0	3,0	31,5	2,0	1,4	31,00
26	TH M2 030 03 042	A	3,0	34,0	3,0	41,5	2,0	1,9	32,00
27	TH M2 030 03 051	A	3,0	44,0	3,0	51,5	2,0	2,3	35,00
28	TH M2 040 03 012	A	4,0	6,0	3,0	12,0	2,0	0,7	21,00
29	TH M2 040 03 022	A	4,0	16,0	3,0	22,0	2,0	1,2	22,00
30	TH M2 040 03 024	A	4,0	17,0	3,0	24,0	2,0	1,2	30,00
31	TH M2 040 03 032	A	4,0	24,5	3,0	32,0	2,0	2,2	30,00
32	TH M2 040 03 042	A	4,0	34,5	3,0	42,0	2,0	2,9	33,00
33	TH M2 040 03 052	A	4,0	44,5	3,0	52,0	2,0	3,6	36,00
34	TH M2 050 03 022	A	5,0	16,5	3,0	22,5	2,0	1,2	31,00
35	TH M2 050 03 032	A	5,0	25,0	3,0	32,5	2,5	2,6	38,50
36	TH M2 050 03 042	A	5,0	35,0	3,0	42,5	2,5	3,2	43,00
37	TH M2 050 03 052	A	5,0	45,0	3,0	52,5	2,5	3,8	46,00
38	TH M2 002 03 010	B	0,2	2,3/4,15	3,0	10,15	0,18/1,0	0,3	153,00
39	TH M2 002 03 017	B	0,2	2,3/12,5	3,0	17,0	0,18/1,0	0,3	153,00
40	TH M2 0025 03 010	B	0,25	2,3/4,15	3,0	10,15	0,18/1,0	0,3	153,00
41	TH M2 0025 03 017	B	0,25	2,3/12,5	3,0	17,0	0,18/1,0	0,3	153,00
42	TH M2 003 03 010	B	0,3	2,15/4,15	3,0	10,15	0,2/0,7	0,3	66,00
43	TH M2 003 03 018	B	0,3	2,3/13,5	3,0	18,0	0,2/1,0	0,3	58,00
44	TH M2 005 03 010	B	0,5	3,25/4,25	3,0	10,25	0,4/0,7	0,3	66,00
45	TH M2 005 03 018	B	0,5	2,5/13,5	3,0	18,0	0,3/1,0	0,4	54,00
46	TH M2 006 03 018	B	0,6	4,6/13,8	3,0	18,3	0,4/1,0	0,3	49,50
47	TH M2 008 03 018	B	0,8	4,8/13,8	3,0	18,3	0,6/1,0	0,3	43,00
48	TH M2 010 03 018	B	1,0	5,0/14,0	3,0	18,5	0,8/1,0	0,4	34,00



Variant A



Variant B

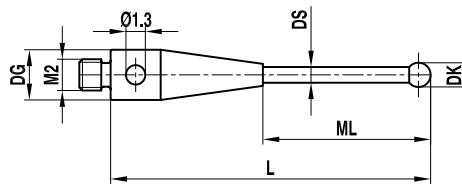
**NOTE:** Peg mounted balls from ball – Ø 0,8 mm.



## Stylus (carbide) silicon nitride

Stainless steel base, carbide stem, silicon nitride ball

Pos.	itp Order No	DK	ML	DG	L	DS	Weight (g)	Price/Piece (€)
1	TH M2 S10 03 020	1,0	7,5	3,0	20,5	0,7	0,6	38,50
2	TH M2 S10 03 021	1,0	13,0	3,0	20,5	0,8	0,4	45,00
3	TH M2 S10 03 027	1,0	20,5	3,0	27,5	0,7	0,4	46,00
4	TH M2 S15 03 021	1,5	13,25	3,0	20,75	1,0	0,5	37,00
5	TH M2 S15 03 031	1,5	23,25	3,0	30,75	1,0	0,6	46,00
6	TH M2 S20 03 031	2,0	23,5	3,0	31,0	1,5	1,0	38,50
7	TH M2 S20 03 041	2,0	33,5	3,0	41,0	1,5	1,2	42,00
8	TH M2 S25 03 031	2,5	23,75	3,0	31,25	2,0	1,4	49,50
9	TH M2 S25 03 041	2,5	33,75	3,0	41,25	2,0	1,9	51,00
10	TH M2 S30 03 032	3,0	24,0	3,0	31,5	2,0	1,5	49,50
11	TH M2 S30 03 042	3,0	34,0	3,0	41,5	2,0	1,9	52,00
12	TH M2 S30 03 051	3,0	44,0	3,0	51,5	2,0	2,4	53,00
13	TH M2 S40 03 032	4,0	24,5	3,0	32,0	2,0	1,5	65,00
14	TH M2 S40 03 042	4,0	34,5	3,0	42,0	2,0	2,0	66,00
15	TH M2 S40 03 052	4,0	44,5	3,0	52,0	2,0	2,5	67,00
16	TH M2 S50 03 022	5,0	16,5	3,0	22,5	2,0	1,2	65,00
17	TH M2 S50 03 032	5,0	25,0	3,0	32,5	2,5	2,2	65,00
18	TH M2 S50 03 042	5,0	35,0	3,0	42,5	2,5	3,0	66,00
19	TH M2 S50 03 052	5,0	45,0	3,0	52,5	2,5	3,6	67,00



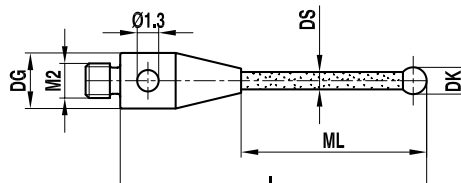
**NOTE:** Peg mounted balls.



## Stylus (ceramic) ruby

### Stainless steel base, ceramic stem, ruby ball

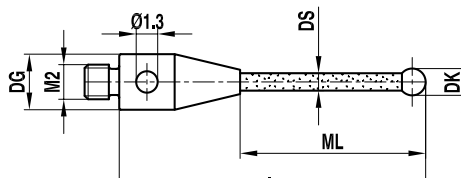
Pos.	itp Order No	DK	ML	DG	L	DS	Weight (g)	Price/Piece (€)
1	TK M2 030 03 031	3,0	24,0	3,0	31,5	2,0	0,6	54,00
2	TK M2 030 03 051	3,0	44,0	3,0	51,5	2,0	0,7	54,00
3	TK M2 040 03 016	4,0	12,0	3,0	16,0	2,0	0,4	34,00
4	TK M2 040 03 032	4,0	24,5	3,0	32,0	2,0	0,7	47,00
5	TK M2 040 03 036	4,0	30,0	3,0	36,0	2,0	0,7	35,00
6	TK M2 040 03 052	4,0	44,5	3,0	52,0	2,0	0,9	62,00
7	TK M2 050 03 014	5,0	10,0	3,0	14,0	2,0	0,5	34,00
8	TK M2 050 03 022	5,0	16,5	3,0	22,5	2,0	0,7	34,00
9	TK M2 050 03 032	5,0	25,0	3,0	32,5	2,5	0,9	51,00
10	TK M2 050 03 038	5,0	32,0	3,0	38,0	2,0	0,8	38,50
11	TK M2 050 03 053	5,0	45,0	3,0	52,5	2,5	1,3	64,00
12	TK M2 060 03 013	6,0	9,0	3,0	13,0	2,0	0,6	30,00
13	TK M2 060 03 033	6,0	25,5	3,0	33,0	2,5	1,1	59,00
14	TK M2 060 03 053	6,0	45,5	3,0	53,0	2,5	1,5	65,00



## Stylus (ceramic) silicon nitride

Stainless steel base, ceramic stem, silicon nitride ball

Pos.	itp Order No	DK	ML	DG	L	DS	Weight (g)	Price/Piece (€)
1	TK M2 S30 03 051	3,0	44,0	3,0	51,5	2,0	0,9	67,00
2	TK M2 S40 03 052	4,0	44,5	3,0	52,0	2,0	0,9	72,00
3	TK M2 S50 03 053	5,0	45,0	3,0	52,5	2,5	1,0	77,00

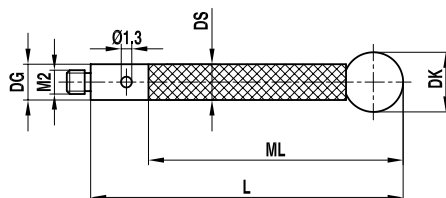


**NOTE:** Peg mounted balls.

## Stylus (carbon fiber) ruby

Stainless steel base, thermostable carbon fiber stem, ruby ball

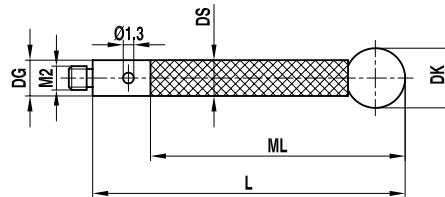
Pos.	itp Order No	DK	ML	DG	L	DS	Weight (g)	Price/Piece (€)
1	TC M2 030 03 031	3,0	24,0	3,0	31,5	2,0	0,5	49,50
2	TC M2 030 03 041	3,0	34,0	3,0	41,5	2,0	0,6	59,00
3	TC M2 040 03 032	4,0	24,5	3,0	32,0	2,0	0,5	49,50
4	TC M2 040 03 052	4,0	44,0	3,0	52,0	3,0	1,0	59,00
5	TC M2 040 03 077	4,0	67,0	3,0	77,0	2,0	0,8	76,00
6	TC M2 040 03 102	4,0	92,0	3,0	102,0	3,0	1,6	108,00
7	TC M2 050 03 032	5,0	25,0	3,0	32,5	3,0	0,8	51,00
8	TC M2 050 03 052	5,0	44,5	3,0	52,5	3,0	1,1	62,00
9	TC M2 050 03 077	5,0	67,5	3,0	77,5	3,0	1,4	98,00
10	TC M2 050 03 102	5,0	92,5	3,0	102,5	3,0	1,6	108,00
11	TC M2 060 03 033	6,0	25,5	3,0	33,0	3,0	1,0	53,00
12	TC M2 060 03 053	6,0	45,0	3,0	53,0	3,0	1,2	63,00
13	TC M2 060 03 078	6,0	70,0	3,0	78,0	3,0	1,6	108,00
14	TC M2 060 03 103	6,0	93,0	3,0	103,0	3,0	1,7	118,00



## Stylus (carbon fiber) silicon nitride

Stainless steel base, thermostable carbon fiber stem, silicon nitride ball

Pos.	itp Order No	DK	ML	DG	L	DS	Weight (g)	Price/Piece (€)
1	TC M2 S40 03 052	4,0	44,0	3,0	52,0	3,0	0,9	76,00
2	TC M2 S50 03 052	5,0	44,5	3,0	52,5	3,0	1,0	78,00
3	TC M2 S60 03 053	6,0	45,0	3,0	53,0	3,0	1,2	79,00

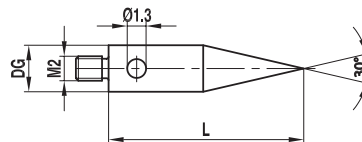


**NOTE:** Peg mounted balls. Thermostable carbon fiber E-Modul about 450 GPa.

## Stylus pointer steel

Stainless steel base and stem

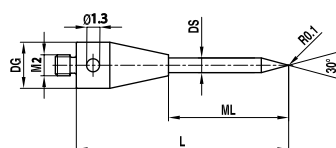
Pos.	itp Order No	DK	DG	L	DS	Weight (g)	Price/Piece (€)
1	II M2 030 03 015	30°	3,0	15,0	3,0	0,6	19,00



## Stylus pointer carbide

Stainless steel base, stem carbide

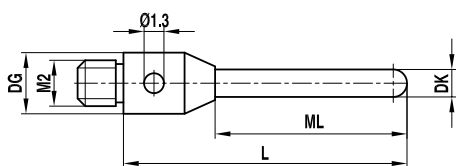
Pos.	itp Order No	Variant	DK	DG	L	DS	Weight (g)	Price/Piece (€)
1	IH M2 030 03 010	B	30°	3,0	10,0	1,5	1,0	17,00
2	IH M2 060 03 010	B	60°	3,0	10,0	1,5	1,0	17,00



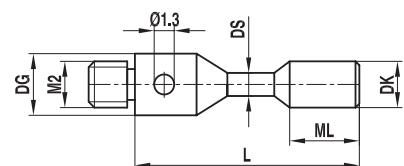
## Cylinder stylus carbide

### Stainless steel base, carbide cylinder

Pos.	itp Order No	Variant	DK	ML	DG	L	DS	Weight (g)	Price/Piece (€)
1	ZH M2 015 03 016	A	1,5	8,3	3,0	15,8		0,6	79,00
2	ZH M2 020 03 016	A	2,0	8,5	3,0	16,0		0,8	82,50
3	ZH M2 020 03 040	A	2,0	32,0	3,0	40,0		1,9	69,00
4	ZH M2 020 03 A40	A	2,0	7,0	3,0	40,0		2,2	137,50
5	ZH M2 030 03 022	A	3,0	22,5	3,0	22,5		1,9	89,00
6	ZH M2 015 03 011	B	1,5	1,5	3,0	11,0	1,0	0,4	16,00
7	ZH M2 030 03 013	B	3,0	4,0	3,0	13,0	1,5	0,8	16,00



Variant A

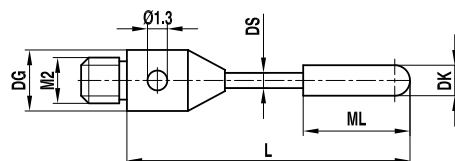


Variant B

## Cylinder stylus ruby

### Stainless steel base, ruby cylinder

Pos.	itp Order No	DK	ML	DG	L	DS	Weight (g)	Price/Piece (€)
1	ZR M2 020 03 020 *	2,0	7,0	3,0	21,0	1,0	0,5	91,00
2	ZR M2 020 R3 020	2,0	7,0	3,0	20,0	1,5	0,5	91,00
3	ZR M2 040 03 022	4,0	10,5	3,0	22,0	2,0	0,9	114,00

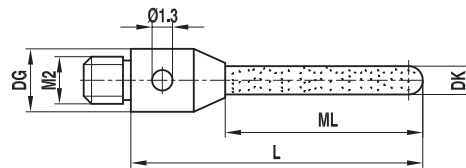


**NOTE:** \* carbide stem

## Cylinder stylus zirconium oxide

### Stainless steel base, cylinder zirconium oxide

Pos.	itp Order No	DK	ML	DG	L	DS	Weight (g)	Price/Piece (€)
1	ZR M2 010 03 015	1,0	8,0	3,0	15,0		0,3	132,00
2	ZR M2 015 03 015	1,5	8,0	3,0	15,0		0,4	205,00

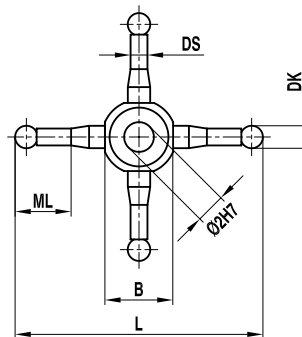


**NOTE:** \* carbide stem

## Star stylus (4 arms) ruby

### Stainless steel cube base and stems, ruby balls

Pos.	itp Order No	DK	ML	L	DS	B	Weight (g)	Price/Piece (€)
1	SI M2 020 06 022	2,0	4,5	22,0	3,0	5,5	1,0	82,50
2	SI M2 020 06 032	2,0	9,5	32,0	3,0	5,5	1,3	78,00

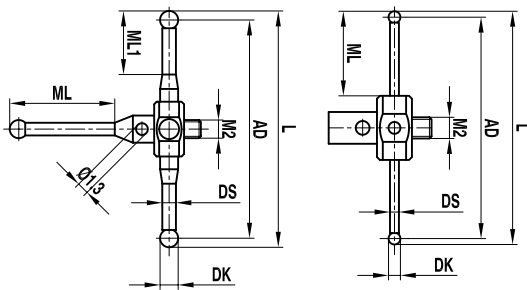


**NOTE:** Can be used with e.g. SI M2 020 03 019. Peg mounted balls.

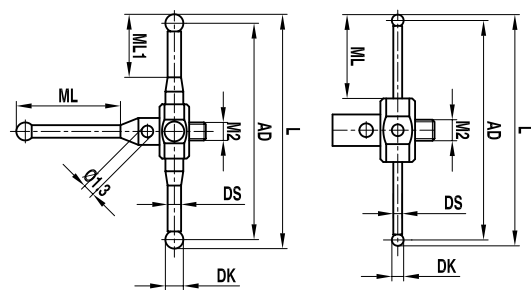
## Star stylus (with clamping) ruby

### Stainless steel cube base and stems, ruby balls

Pos.	itp Order No	Variant	DK	ML1/ML	DG	L	DS	AD	Weight (g)	Price/Piece (€)
1	SI M2 005 05 010	A	0,5	2,75	5,0	10,5	0,3	10,0	0,7	197,00
2	SI M2 005 05 020	A	0,5	7,75	5,0	20,5	0,3	20,0	0,7	164,00
3	SI M2 010 05 011	A	1,0	3,0	5,0	11,0	0,7	10,0	0,7	153,00
4	SI M2 010 05 021	A	1,0	8,0	5,0	21,0	0,7	20,0	0,8	169,00
5	SI M2 020 05 022	B	2,0	4,5/13,5	5,5	22,0	1,4	20,0	1,3	91,00
6	SI M2 020 05 032	B	2,0	9,5/13,5	5,5	32,0	1,4	30,0	1,8	86,00



Variant A (4 arms)



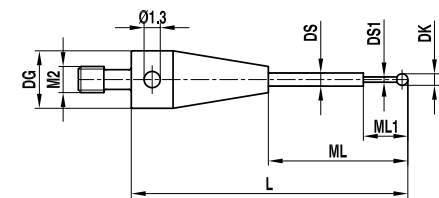
Variant B (5 arms)

**NOTE:** Peg mounted balls.

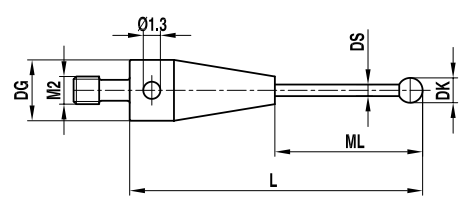
## Clamping stylus for star styli

Stainless steel base, carbide stem, ruby ball

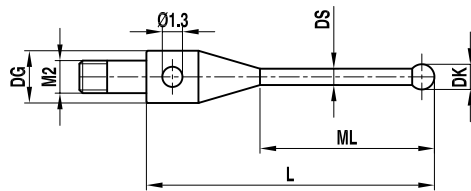
Pos.	itp Order No	Variant	DK	ML1/ML	DG	L	DS1/DS	Weight (g)	Price/Piece (€)
1	TH M2 005 03 019	A	0,5	7,0/11,5	3,0	19,0	0,4/0,7	0,4	93,50
2	TH M2 010 03 009	B	1,0	4,5	3,0	9,5	0,7	0,3	93,50
3	TH M2 010 03 019	B	1,0	11,5	3,0	19,0	0,7	0,5	93,50
4	TH M2 020 03 017	B	2,0	12,0	3,0	17,5	1,4	0,6	32,00
5	SI M2 020 03 019	C	2,0	13,5	3,0	19,5	1,5	0,5	26,00



Variant A



Variant B



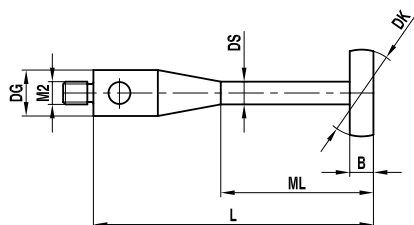
Variant C

**NOTE:** Peg mounted balls.

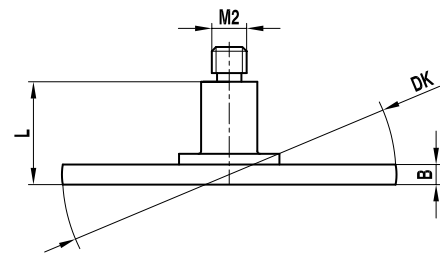
## Spherical disk stylus steel

Stainless steel base, high-strength steel disk

Pos.	itp Order No	Variant	DK	ML	DG	L	DS	B	Weight (g)	Price/Piece (€)
1	KI M2 050 03 015	A	5,0	11,0	3,0	15,0	1,5	0,5	0,5	71,50
2	KI M2 060 03 010/0,8	A	6,0	6,0	3,0	10,0	2,0	0,8	0,6	66,00
3	KI M2 080 03 020	A	8,0	14,0	3,0	20,0	2,0	0,5	1,2	68,00
4	KI M2 100 03 020	A	10,0	14,0	3,0	20,0	2,0	0,5	1,3	71,50
5	KI M2 100 03 020/0,8	A	10,0	14,0	3,0	20,0	2,0	0,8	1,4	71,50
6	KI M2 120 03 020	A	12,0	14,0	3,0	20,0	2,0	0,8	1,6	75,00
7	KI M2 030 25 M20	B	25,0			4,0		3,0	11,4	87,00
8	KI M2 005 18 002	B	18,0		3,0	2,0		0,5	1,1	106,00
9	KI M2 008 18 002	B	18,0		3,0	2,0		0,8	1,7	106,00



Variant A

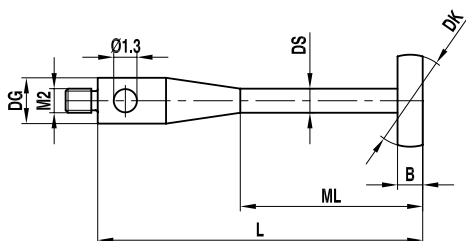


Variant B

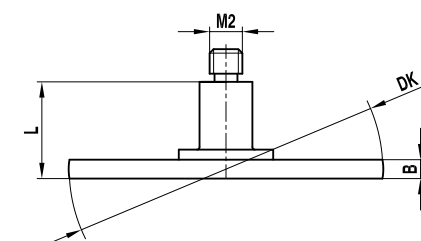
## Spherical disk stylus ceramic

Stainless steel base, carbide stem, ceramic disk

Pos.	itp Order No	Variant	DK	ML	DG	L	DS	B	Weight (g)	Price/Piece (€)
1	KK M2 040 03 032	A	4,0	19,0	3,0	32,0	1,0	1,0	0,8	54,00
2	KK M2 080 03 032	A	8,0	19,0	3,0	32,0	1,5	1,5	1,4	73,00
3	KI M2 140 20 005	B	14,0			5,0		2,0	1,6	98,00
4	KI M2 200 25 005	B	20,0			5,0		2,5	3,7	117,00



Variant A



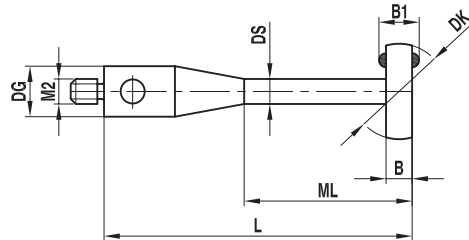
Variant B



## Spherical disk stylus ruby with steel pin

Stainless steel base, high-strength steel disk

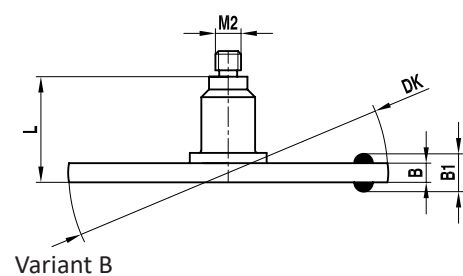
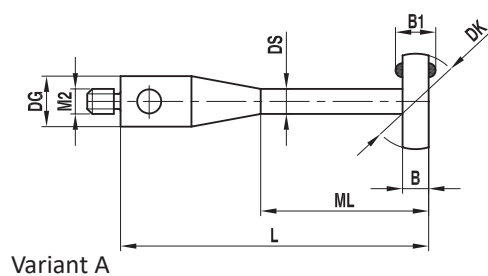
Pos.	itp Order No	DK	ML	DG	L	DS	B1/B	Weight (g)	Price/Piece (€)
1	KR M2 060 03 010	6,0		3,0	10,5	2,0	1,2/2,0	0,6	66,00



## Spherical disk stylus with 2 hemispherical rubies

Stainless steel base, high-strength steel disk

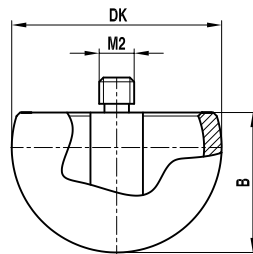
Pos.	itp Order No	Variant	DK	ML	DG	L	DS	B1/B	Weight (g)	Price/Piece (€)
1	KI M2 060 03 010	A	6,0	5,0	3,0	10,0	2,0	1,5/2,0	0,7	76,00
2	KI M2 015 18 M20	B	18,0			8,25	3,0	2,5/1,5	3,8	102,00
3	KI M2 015 25 M20	B	25,0			8,25	3,0	2,5/1,5	6,3	102,00
4	KI M2 022 18 M20	B	18,0			3,7		3,0/2,2	4,8	95,00
5	KI M2 015 18 008	B	18,0			8,25	3,0	2,0/1,5	6,3	102,00
6	KI M2 030 18 004	B	18,0			4,0	3,0	4,0/3,0	6,2	95,00
7	KI M2 015 25 008	B	25,0			8,25	3,0	2,0/1,5	6,3	102,00
8	KI M2 030 25 004	B	25,0			4,0	3,0	4,0/3,0	11,4	87,00



## Hollow ceramic hemisphere

### Stainless steel base, hollow ceramic hemisphere

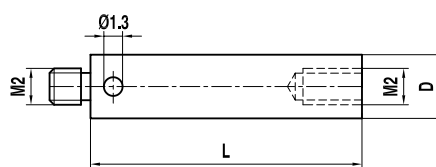
Pos.	itp Order No	DK	B	Weight (g)	Price/Piece (€)
1	HK M2 180 03 012	18,0	11,0	3,4	264,00
2	HK M2 300 03 018	30,0	18,0	14,3	409,00



## Extension steel

### Stainless steel

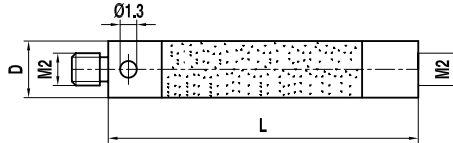
Pos.	itp Order No	DG	L	Weight (g)	Price/Piece (€)
1	VI M2 000 03 005	3,0	5,0	0,2	7,00
2	VI M2 000 03 010	3,0	10,0	0,4	8,00
3	VI M2 000 03 020	3,0	20,0	0,9	9,00
4	VI M2 000 03 030	3,0	30,0	1,5	10,00
5	VI M2 000 03 035	3,0	35,0	1,8	11,00
6	VI M2 000 03 040	3,0	40,0	2,0	12,00
7	VI M2 000 03 050	3,0	50,0	2,6	12,00



## Extension ceramic

### Ceramic, stainless steel ends

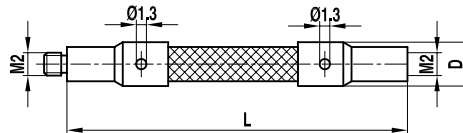
Pos.	itp Order No	DG	L	Weight (g)	Price/Piece (€)
1	VK M2 000 03 030	3,0	30,0	1,0	32,00
2	VK M2 000 03 040	3,0	40,0	1,3	34,00
3	VK M2 000 03 050	3,0	50,0	1,5	36,00
4	VK M2 000 03 060	3,0	60,0	1,8	38,50



## Extension carbon fiber

### Carbon fiber, stainless steel ends

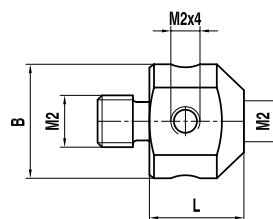
Pos.	itp Order No	DG	L	Weight (g)	Price/Piece (€)
1	VC M2 000 03 040	3,5	40,0	1,2	58,00
2	VC M2 000 03 050	3,5	50,0	1,3	60,50
3	VC M2 000 03 070	3,5	70,0	1,4	65,00
4	VC M2 000 03 090	3,5	90,0	1,6	67,00



## Stylus holder rigid

### Stainless steel

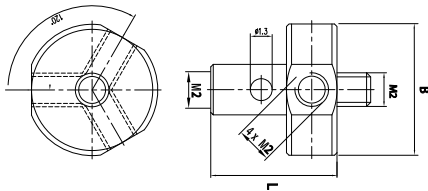
Pos.	itp Order No	L	B	Weight (g)	Price/Piece (€)
1	HI M2 000 07 005	5,4	7,0	1,0	24,00
2	HI M2 000 10 009	9,1	10,5	3,4	50,50



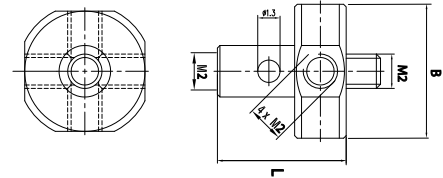
## Stylus holder rotatable

### Stainless steel

Pos.	itp Order No	Variant	L	B	Weight (g)	Price/Piece (€)
1	HI M2 000 07 007	A	7,5	7,5	1,2	42,00
2	HI M2 000 07 008	B	7,5	7,0	1,2	30,00



Variant A

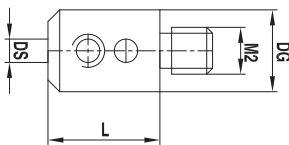


Variant B

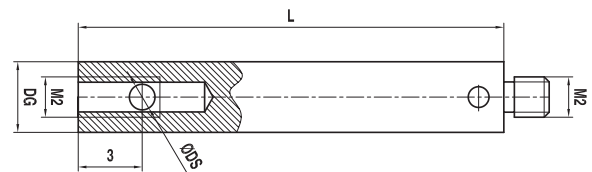
## Holder for pins

### Stainless steel

Pos.	itp Order No	Variant	DG	L	DS	Weight (g)	Price/Piece (€)
1	KH M2 010 06 008	A	6,0	8,0	1,0	1,4	18,00
2	KH M2 015 06 008	A	6,0	8,0	1,5	1,4	18,00
3	KH M2 020 06 008	A	6,0	8,0	2,0	1,4	18,00
4	KH M2 010 03 030	B	3,0	30,0	1,0	1,5	38,50
5	KH M2 015 03 030	B	3,0	30,0	1,5	1,5	38,50



Variant A

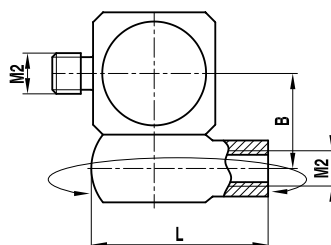


Variant B (base 90°)

## Rotary adapter

### Stainless steel

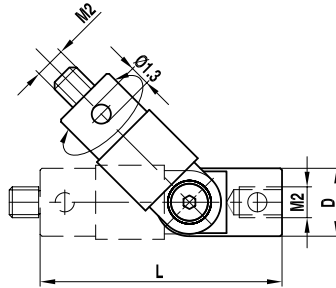
Pos.	itp Order No	L	B	Weight (g)	Price/Piece (€)
1	DI M2 000 04 008	8,0	4,5	1,6	44,00



## Rotary knuckle

Stainless steel, slewing range 360°, swing range 180°

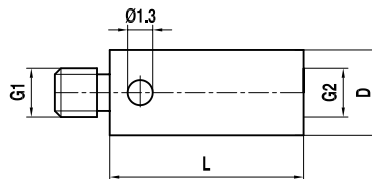
Pos.	itp Order No	DG	L	Weight (g)	Price/Piece (€)
1	GI M2 000 04 016	4,0	16,5	1,6	50,50



## Reducing adapter

Stainless steel

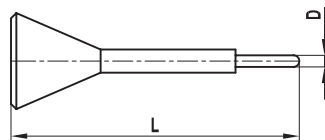
Pos.	itp Order No	DG	L	G1/G2	Weight (g)	Price/Piece (€)
1	RI M2 000 04 005	4,0	5,0	M2/M3	0,3	8,00
2	RI M2 000 04 007	4,0	7,0	M2/M3	0,4	8,00



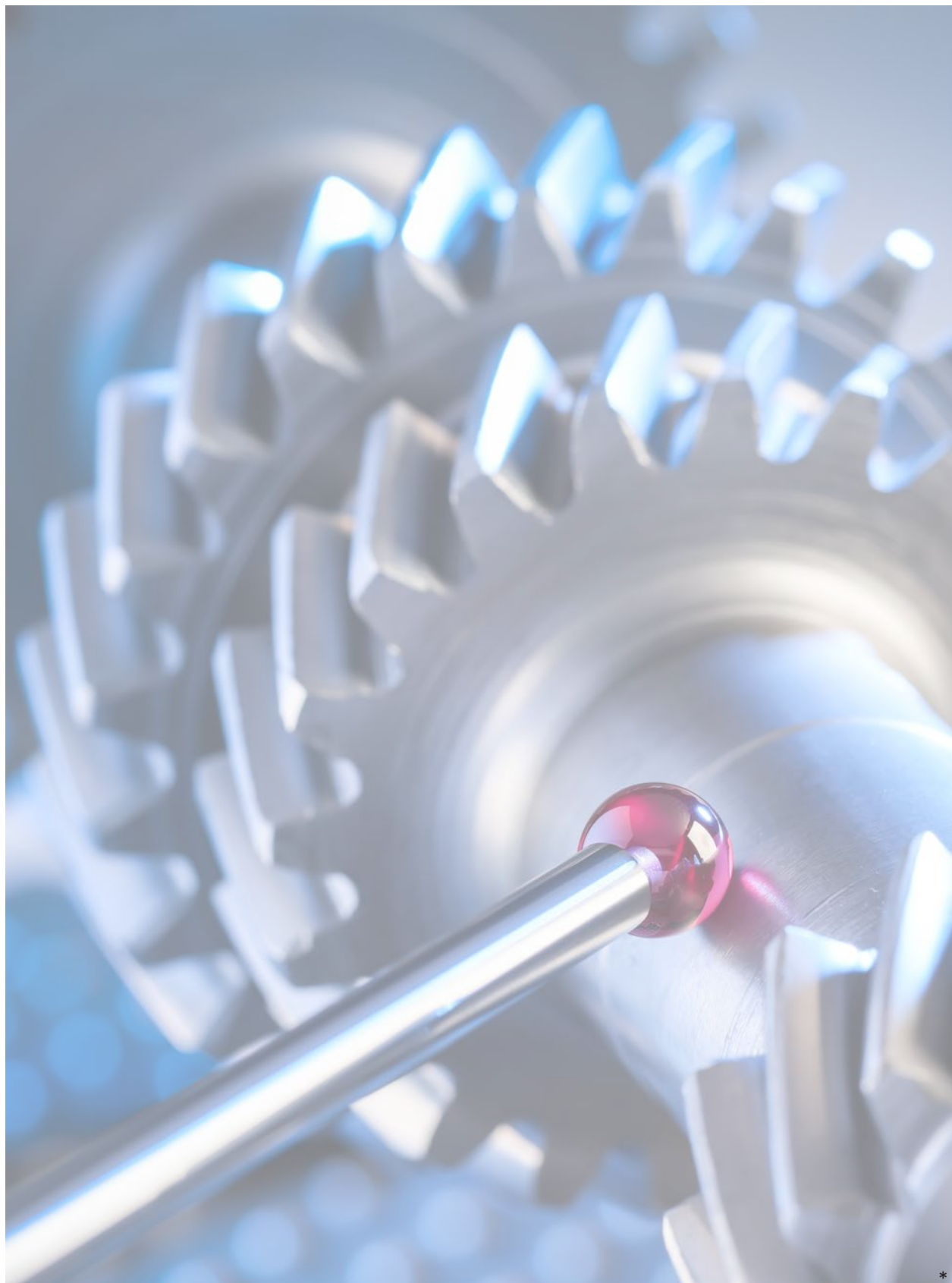
## Wrench

Stainless steel

Pos.	itp Order No	DG	L	Weight (g)	Price/Piece (€)
1	MI MO 012 00 023	1,2	23,0	0,7	6,00



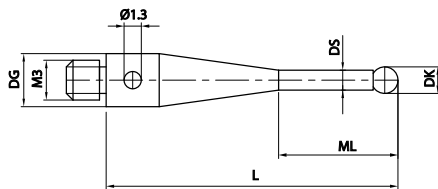
## Thread M3



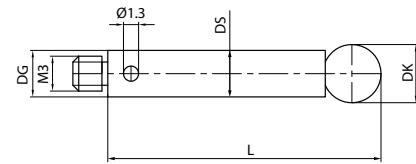
## Stylus (steel) ruby

### Stainless steel base and stem, ruby ball

Pos.	itp Order No	Variant	DK	ML	DG	L	DS	Weight (g)	Price/Piece (€)
1	TI M3 010 04 021	A	1,0	4,5	4,0	21,5	0,7	1,0	25,00
2	TI M3 020 04 022	A	2,0	9,0	4,0	22,0	1,5	1,0	22,00
3	TI M3 030 04 022	A	3,0	13,5	4,0	22,5	1,5	1,0	23,00
4	TI M3 040 04 023	A	4,0	13,0	4,0	23,0	2,5	1,4	25,00
5	TI M3 040 04 033	A	4,0	23,0	4,0	33,0	2,5	1,8	26,00
6	TI M3 050 04 023	B	5,0	23,5	4,0	23,5	4,0	2,2	35,00
7	TI M3 050 R4 023	A	5,0	13,5	4,0	23,5	2,5	1,5	29,00
8	TI M3 050 04 033	B	5,0	33,5	4,0	33,5	4,0	3,2	35,00
9	TI M3 050 R4 033	B	5,0	33,5	4,0	33,5	3,5	2,9	30,00
10	TI M3 050 04 042	B	5,0	42,5	4,0	42,5	4,0	4,0	36,00
11	TI M3 050 04 052	B	5,0	52,5	4,0	52,5	4,0	5,0	36,00
12	TI M3 060 04 024	B	6,0	24,0	4,0	24,0	4,0	2,4	37,00
13	TI M3 060 04 034	B	6,0	34,0	4,0	34,0	4,0	3,4	38,50
14	TI M3 060 04 043	B	6,0	43,0	4,0	43,0	4,0	4,2	38,50
15	TI M3 060 04 053	B	6,0	53,0	4,0	53,0	4,0	5,4	40,00



Variant A



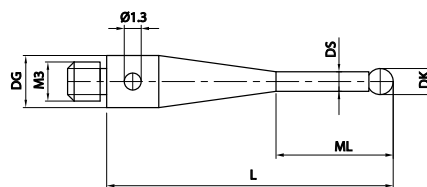
Variant B

**NOTE:** Peg mounted balls.

## Stylus (steel) silicon nitride

### Stainless steel base and stem, silicon nitride ball

Pos.	itp Order No	DK	ML	DG	L	DS	Weight (g)	Price/Piece (€)
1	TI M3 S10 04 021	1,0	4,5	4,0	21,5	0,7	1,0	37,00
2	TI M3 S20 04 022	2,0	9,0	4,0	22,0	1,5	1,0	34,00
3	TI M3 S30 04 022	3,0	13,5	4,0	22,5	1,5	0,9	40,00
4	TI M3 S40 04 023	4,0	13,0	4,0	23,0	2,5	1,4	40,00
5	TI M3 S40 04 033	4,0	23,0	4,0	33,0	2,5	1,7	43,00
6	TI M3 S50 R4 023	5,0	13,5	4,0	23,5	2,5	1,5	58,00
7	TI M3 S50 R4 033	5,0	33,5	4,0	33,5	3,5	2,9	60,50

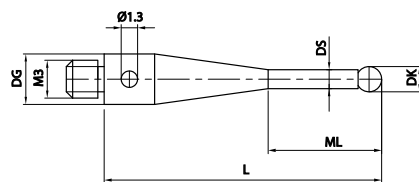


**NOTE:** Peg mounted balls.

## Stylus (steel) zirconium oxide

### Stainless steel base and stem, zirconium oxide ball

Pos.	itp Order No	DK	ML	DG	L	DS	Weight (g)	Price/Piece (€)
1	TI M3 Z20 04 022	2,0	9,0	4,0	22,0	1,5	1,0	35,00
2	TI M3 Z40 04 023	4,0	13,0	4,0	23,0	2,5	1,4	46,00



**NOTE:** Peg mounted balls.



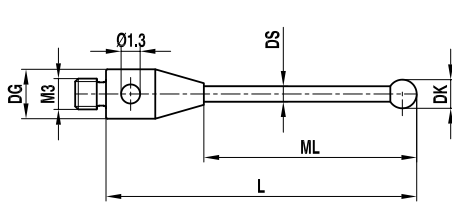
## Stylus (carbide) ruby

### Stainless steel base, carbide stem, ruby ball

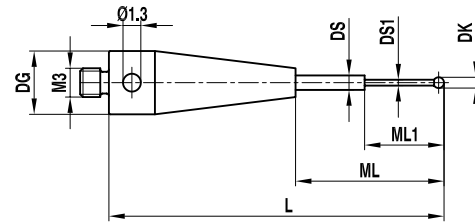
Pos.	itp Order No	Variant	DK	ML	DG	L	DS	Weight (g)	Price/Piece (€)
1	TH M3 005 04 021	A	0,5	2,25	4,0	21,25	0,4	1,2	55,00
2	TH M3 010 04 033	A	1,0	25,5	4,0	32,5	0,8	0,8	35,00
3	TH M3 015 04 022	A	1,5	9,0	4,0	22,0	1,0	1,0	25,00
4	TH M3 015 R4 022	A	1,5	14,25	4,0	21,75	1,0	0,8	25,00
5	TH M3 015 04 031	A	1,5	23,25	4,0	30,75	1,0	0,9	29,00
6	TH M3 020 04 021	A	2,0	15,0	4,0	21,0	1,0	0,8	22,00
7	TH M3 020 04 022	A	2,0	14,0	4,0	22,0	1,0	0,8	20,00
8	TH M3 020 H4 022	A	2,0	14,5	4,0	22,0	1,0	0,8	39,00
9	TH M3 020 04 031	A	2,0	23,5	4,0	31,0	1,5	1,3	25,00
10	TH M3 020 04 040	A	2,0	34,0	4,0	40,0	1,5	1,5	25,00
11	TH M3 020 04 041	A	2,0	33,5	4,0	41,0	1,5	1,6	30,00
12	TH M3 025 04 022	A	2,5	14,75	4,0	22,25	2,0	1,3	24,00
13	TH M3 025 04 031	A	2,5	23,75	4,0	31,25	2,0	1,8	26,00
14	TH M3 025 04 041	A	2,5	33,75	4,0	41,25	2,0	2,2	27,50
15	TH M3 030 04 021	A	3,0	13,0	4,0	21,0	2,0	1,3	24,00
16	TH M3 030 04 022	A	3,0	15,5	4,0	21,5	1,5	1,0	25,00
17	TH M3 030 H4 022	A	3,0	15,0	4,0	22,5	1,0	0,9	39,00
18	TH M3 030 04 031	A	3,0	24,0	4,0	31,5	2,0	1,8	26,00
19	TH M3 030 04 041	A	3,0	34,0	4,0	41,5	2,0	2,2	27,50
20	TH M3 030 04 051	A	3,0	44,0	4,0	51,5	2,0	2,7	30,00
21	TH M3 Z30 05 040	A	3,0	21,5	5,5	40,0	2,0	3,3	26,00
22	TH M3 030 05 050	A	3,0	31,5	5,5	50,0	2,0	3,7	24,00
23	TH M3 040 04 030	A	4,0	22,0	4,0	30,0	2,0	1,8	27,50
24	TH M3 040 04 040	A	4,0	32,0	4,0	40,0	2,0	2,3	29,00
25	TH M3 040 04 042	A	4,0	34,5	4,0	42,0	2,0	2,3	33,00
26	TH M3 040 04 050	A	4,0	42,0	4,0	50,0	2,0	2,7	30,00
27	TH M3 040 04 052	A	4,0	44,5	4,0	52,0	2,0	2,8	34,00
28	TH M3 050 04 030	A	5,0	22,0	4,0	30,0	2,0	1,9	34,00
29	TH M3 050 04 040	A	5,0	32,0	4,0	40,0	2,0	2,4	35,00
30	TH M3 050 04 042	A	5,0	35,0	4,0	42,5	2,5	3,2	41,00
31	TH M3 050 04 050	A	5,0	42,0	4,0	50,0	2,0	2,8	35,00
32	TH M3 050 04 052	A	5,0	45,0	4,0	52,5	2,5	4,0	44,00
33	TH M3 050 04 060	A	5,0	52,0	4,0	60,0	2,0	3,2	37,00
34	TH M3 060 04 030	A	6,0	22,0	4,0	30,0	2,0	2,1	41,00
35	TH M3 060 04 040	A	6,0	32,0	4,0	40,0	2,0	2,5	41,00
36	TH M3 060 04 050	A	6,0	42,0	4,0	50,0	2,0	2,9	42,00

Table continues on the next page.

Pos.	itp Order No	Variant	DK	ML	DG	L	DS	Weight (g)	Price/Piece (€)
37	TH M3 002 04 022	B	0,2	2,3/9,0	4,0	22,0	0,18/1,0	1,0	153,00
38	TH M3 0025 04 022	B	0,25	2,3/9,0	4,0	22,0	0,18/1,0	1,0	153,00
39	TH M3 003 04 022	B	0,3	2,3/9,0	4,0	22,0	0,2/1,0	1,0	46,00
40	TH M3 005 04 022	B	0,5	2,5/11,25	4,0	21,25	0,3/1,0	0,9	34,00
41	TH M3 006 04 022	B	0,6	4,6/9,0	4,0	22,0	0,4/1,0	1,0	34,00
42	TH M3 008 04 022	B	0,8	4,8/9,0	4,0	22,0	0,6/1,0	1,0	32,00
43	TH M3 010 04 010	B	1,0	5,0/5,5	4,0	10,5	0,8/1,0	0,5	33,00
44	TH M3 010 H4 021	B	1,0	5,0/14,0	4,0	21,5	0,7/1,0	0,8	39,00
45	TH M3 010 04 022	B	1,0	5,0/9,0	4,0	22,0	0,8/1,0	1,0	30,00



Variant A



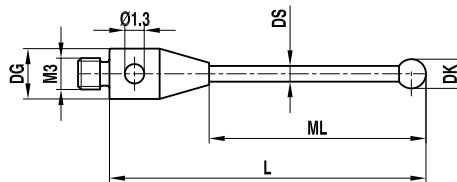
Variant B

**NOTE:** Peg mounted balls from ball  $\varnothing$  0,8 mm.

## Stylus (carbide) ruby with anticrash protection

Stainless steel base, carbide stem, ruby ball

Pos.	itp Order No	DK	ML	DG	L	DS	Weight (g)	Price/Piece (€)
1	TH M3 040 H4 023	4,0	15,0	4,0	23,0	2,0	1,6	39,00
2	TH M3 040 H4 042	4,0	34,0	4,0	42,0	2,0	2,5	39,00
3	TH M3 050 H4 042	5,0	34,5	4,0	42,5	2,0	2,5	39,00
4	TH M3 060 H4 043	6,0	35,0	4,0	43,0	2,0	2,7	39,00
5	TH M3 080 H4 044	8,0	34,0	4,0	44,0	3,0	5,1	49,00

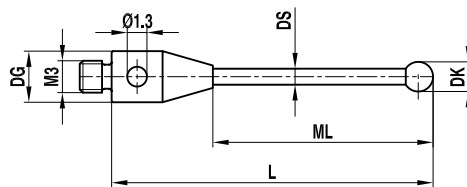


**NOTE:** Peg mounted balls.

## Stylus (carbide) silicon nitride

### Stainless steel base, carbide stem, silicon nitride ball

Pos.	itp Order No	DK	ML	DG	L	DS	Weight (g)	Price/Piece (€)
1	TH M3 S15 R4 022	1,5	14,25	4,0	21,75	1,0	0,8	37,00
2	TH M3 S15 04 031	1,5	23,25	4,0	30,75	1,0	0,9	46,00
3	TH M3 S20 04 031	2,0	23,5	4,0	31,0	1,5	1,3	38,50
4	TH M3 S20 04 041	2,0	33,5	4,0	41,0	1,5	1,6	46,00
5	TH M3 S25 04 022	2,5	14,75	4,0	22,25	2,0	1,3	43,00
6	TH M3 S25 04 031	2,5	23,75	4,0	31,25	2,0	1,8	46,00
7	TH M3 S25 04 041	2,5	33,75	4,0	41,25	2,0	2,2	47,00
8	TH M3 S30 04 031	3,0	24,0	4,0	31,5	2,0	1,8	44,00
9	TH M3 S30 04 041	3,0	34,0	4,0	41,5	2,0	2,2	46,00
10	TH M3 S30 04 051	3,0	44,0	4,0	51,5	2,0	2,7	49,50
11	TH M3 S40 04 042	4,0	34,5	4,0	42,0	2,0	2,3	57,00
12	TH M3 S40 04 052	4,0	44,5	4,0	52,0	2,0	2,7	62,00
13	TH M3 S50 04 042	5,0	35,0	4,0	42,5	2,5	3,2	64,00
14	TH M3 S50 04 052	5,0	45,0	4,0	52,5	2,5	3,9	65,00

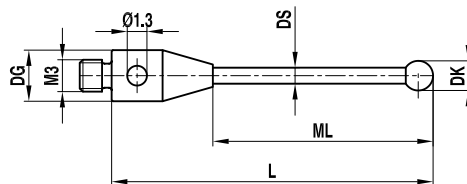


NOTE: Peg mounted balls.

## Stylus (carbide) zirconium oxide

### Stainless steel base, carbide stem, zirconium oxide ball

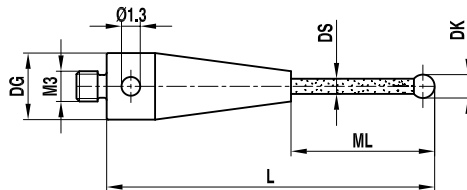
Pos.	itp Order No	DK	ML	DG	L	DS	Weight (g)	Price/Piece (€)
1	TH M3 Z20 04 031	2,0	23,5	4,0	31,0	1,5	1,3	38,50



## Stylus (ceramic) ruby

Stainless steel base, ceramic stem, ruby ball

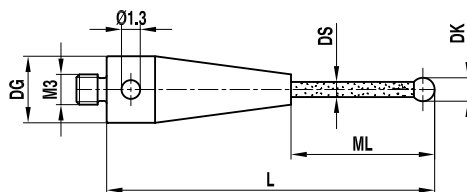
Pos.	itp Order No	DK	ML	DG	L	DS	Weight (g)	Price/Piece (€)
1	TK M3 030 04 051	3,0	44,0	4,0	51,5	2,0	1,2	47,00
2	TK M3 040 04 032	4,0	26,0	4,0	32,0	2,0	1,0	26,00
3	TK M3 040 04 052	4,0	44,5	4,0	52,0	2,0	1,3	54,00
4	TK M3 050 04 032	5,0	24,0	4,0	32,5	2,0	1,2	27,50
5	TK M3 050 04 052	5,0	45,0	4,0	52,5	2,5	1,6	58,00
6	TK M3 060 04 013	6,0	9,0	4,0	13,0	2,0	0,9	30,00
7	TK M3 060 04 043	6,0	30,5	4,0	43,5	2,0	1,8	33,00
8	TK M3 060 04 063	6,0	50,5	4,0	63,5	2,0	2,0	45,00
9	TK M3 080 04 031	8,0	18,5	4,0	31,5	2,0	2,2	48,00



## Stylus (ceramic) silicon nitride

Stainless steel base, ceramic stem, silicon nitride ball

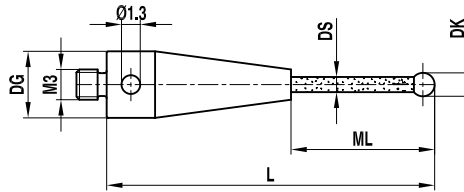
Pos.	itp Order No	DK	ML	DG	L	DS	Weight (g)	Price/Piece(€)
1	TK M3 S30 04 051	3,0	44,0	4,0	51,5	2,0	1,2	76,00
2	TK M3 S40 04 052	4,0	44,5	4,0	52,0	2,0	1,2	83,00
3	TK M3 S50 04 052	5,0	45,0	4,0	52,5	2,5	1,4	87,00



## Stylus (ceramic) zirconium oxide

Stainless steel base, ceramic stem, zirconium oxide ball

Pos.	itp Order No	DK	ML	DG	L	DS	Weight (g)	Price/Piece (€)
1	TK M3 Z40 04 052	4,0	44,5	4,0	52,0	2,0	1,3	98,00

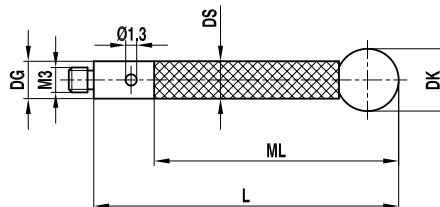


**NOTE:** Peg mounted balls.

## Stylus (carbon fiber) ruby

Stainless steel base, thermostable carbon fiber stem, ruby ball

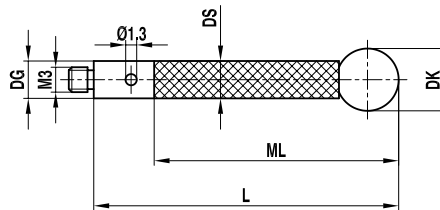
Pos.	itp Order No	DK	ML	DG	L	DS	Weight (g)	Price/Piece (€)
1	TC M3 060 04 078	6,0	68,0	4,0	78,0	4,0	2,6	87,00
2	TC M3 060 04 103	6,0	93,0	4,0	103,0	4,0	3,2	98,00
3	TC M3 080 04 079	8,0	69,0	4,0	79,0	4,0	3,2	107,00
4	TC M3 080 04 104	8,0	94,0	4,0	104,0	4,0	3,8	118,00
5	TC M3 100 04 080	10,0	70,0	4,0	80,0	4,0	4,2	126,50
6	TC M3 100 04 105	10,0	95,0	4,0	105,0	4,0	4,8	134,00
7	TC M3 100 04 155	10,0	145,0	4,0	155,0	4,0	5,9	145,00
8	TC M3 100 04 205	10,0	195,0	4,0	205,0	4,0	7,1	156,00
9	TC M3 120 04 106	12,0	96,0	4,0	106,0	4,0	6,3	159,50
10	TC M3 120 04 156	12,0	146,0	4,0	156,0	4,0	7,4	175,00
11	TC M3 120 04 206	12,0	196,0	4,0	206,0	4,0	8,6	192,50



## Stylus (carbon fiber) silicon nitride

Stainless steel base, thermostable carbon fiber stem, silicon nitride ball

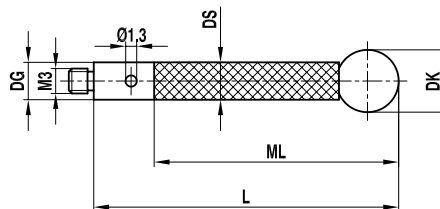
Pos.	itp Order No	DK	ML	DG	L	DS	Weight (g)	Price/Piece (€)
1	TC M3 S60 04 078	6,0	68,0	4,0	78,0	4,0	2,5	101,00
2	TC M3 S60 04 103	6,0	93,0	4,0	103,0	4,0	3,1	112,00
3	TC M3 S80 04 079	8,0	69,0	4,0	79,0	4,0	2,9	118,00
4	TC M3 S80 04 104	8,0	94,0	4,0	104,0	4,0	3,6	129,00



## Stylus (carbon fiber) zirconium oxide

Stainless steel base, thermostable carbon fiber stem, zirconium oxide ball

Pos.	itp Order No	DK	ML	DG	L	DS	Weight (g)	Price/Piece (€)
1	TC M3 Z60 04 078	6,0	68,0	4,0	78,0	4,0	2,5	101,00
2	TC M3 Z60 04 103	6,0	93,0	4,0	103,0	4,0	3,4	112,00
3	TC M3 Z80 04 079	8,0	69,0	4,0	79,0	4,0	3,6	118,00
4	TC M3 Z80 04 104	8,0	94,0	4,0	104,0	4,0	4,1	129,00

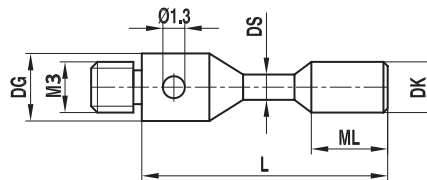


**NOTE:** Peg mounted balls. Thermostable carbon fiber E-Modul about 450 GPa.

## Cylinder stylus carbide

### Stainless steel base, stem and cylinder carbide

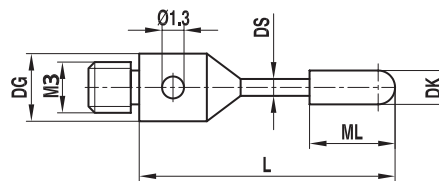
Pos.	itp Order No	DK	ML	DG	L	DS	Weight (g)	Price/Piece (€)
1	ZH M3 015 04 011	1,5	1,5	4,0	11,0	1,0	0,7	16,50
2	ZH M3 030 04 013	3,0	4,0	4,0	13,0	1,5	1,1	16,50



## Cylinder stylus ruby

### Stainless steel base, stem and cylinder ruby

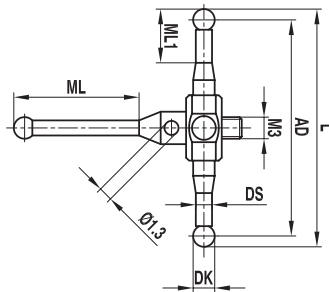
Pos.	itp Order No	DK	ML	DG	L	DS	Weight (g)	Price/Piece (€)
1	ZR M3 020 04 020	2,0	7,0	4,0	21,0	1,0	0,8	92,00



## Star stylus (with clamping) ruby

### Stainless steel cube base and stems, ruby balls

Pos.	itp Order No	DK	ML1/ML	DG	L	DS	AD	Weight (g)	Price/Piece (€)
1	SI M3 020 07 032	2,0	9,5/12,5	7,0	32,0	1,4	30,0	2,4	95,00
2	SI M3 020 07 052	2,0	12,0/12,0	7,0	52,0	1,4	50,0	3,7	106,00

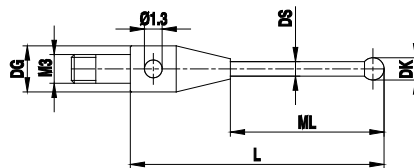


**NOTE:** Peg mounted balls.

## Clamping stylus for star styli

### Stainless steel base and stem, ruby ball

Pos.	itp Order No	DK	ML	DG	L	DS	Weight (g)	Price/Piece (€)
1	TI M3 020 04 019	2,0	12,0	4,0	19,0	1,4	0,9	27,00
2	TI M3 020 04 029	2,0	11,0	4,0	29,0	1,4	1,4	34,00



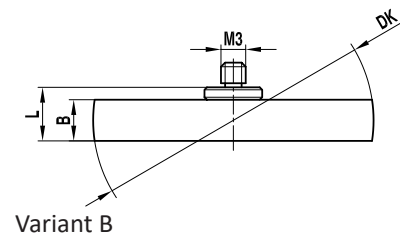
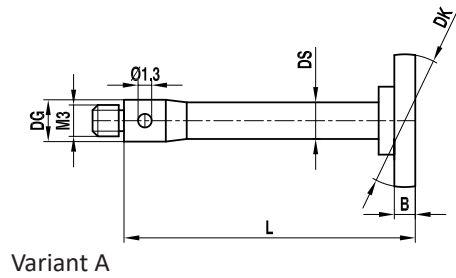
**NOTE:** Peg mounted balls.



## Spherical disk stylus steel

Stainless steel base and stems, high-strength steel disk

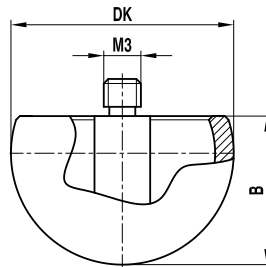
Pos.	itp Order No	Variant	DK	DG	L	DS	B	Weight (g)	Price/Piece (€)
1	KI M3 127 04 032	A	12,7	4,0	32,0	3,5	2,3	4,4	69,00
2	KI M3 050 35 M30	B	35,0		7,0		5,0	8,6	99,00
3	KI M3 060 63 M30	B	63,5		7,5		6,0	45,4	121,00



## Hollow ceramic hemisphere

Stainless steel base, hollow ceramic hemisphere

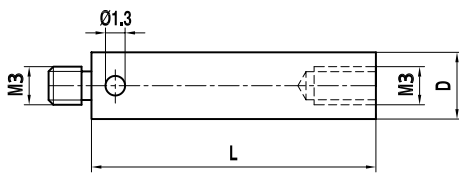
Pos.	itp Order No	DK	L	B	Weight (g)	Price/Piece (€)
1	HK M3 180 04 012	18,0	12,00	11,0	3,7	254,00
2	HK M3 300 04 018	30,0	18,00	17,0	14,5	371,00



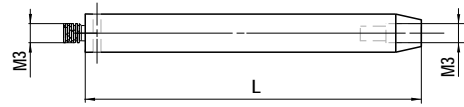
## Extension steel

### Stainless steel

Pos.	itp Order No	Variant	DG	L	Weight (g)	Price/Piece (€)
1	VI M3 000 04 010	A	4,0	10,0	0,7	8,00
2	VI M3 000 04 020	A	4,0	20,0	1,7	9,00
3	VI M3 000 04 030	A	4,0	30,0	2,7	11,00
4	VI M3 000 04 035	A	4,0	35,0	3,1	13,00
5	VI M3 000 04 040	A	4,0	40,0	3,6	14,00
6	VI M3 000 04 050	A	4,0	50,0	4,7	14,00
7	VI M3 000 H6 050	B	6,0	50,0	10,5	49,00



Variant A

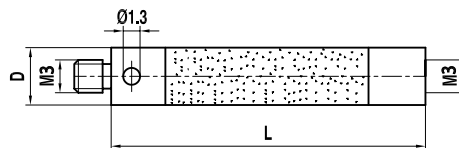


Variant B

## Extension ceramic

### Ceramic, stainless steel ends

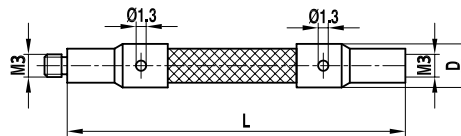
Pos.	itp Order No	DG	L	Weight (g)	Price/Piece (€)
1	VK M3 000 04 030	4,0	30,0	1,9	43,00
2	VK M3 000 04 040	4,0	40,0	2,4	44,00
3	VK M3 000 04 050	4,0	50,0	2,9	45,00
4	VK M3 000 04 060	4,0	60,0	3,3	48,00



## Extension carbon fiber

### Carbon fiber, stainless steel ends

Pos.	itp Order No	DG	L	Weight (g)	Price/Piece (€)
1	VC M3 000 04 075	4,6	75,0	3,2	98,00
2	VC M3 000 04 100	4,6	100,0	3,8	106,00

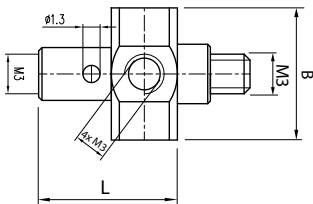


**NOTE:** Carbon fibre base made of high-tech fibres from space technology. E-Modul about 450 GPa.

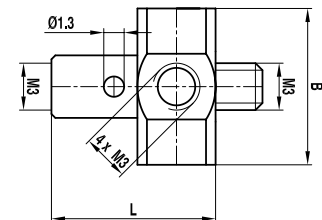
## Holder

### Stainless steel

Pos.	itp Order No	Variant	L	B	Weight (g)	Price/Piece (€)
1	HI M3 000 10 013	A	13,0	10,0	3,3	41,00
2	HI M3 000 12 011	B	11,5	12,0	4,4	34,00



Variant A

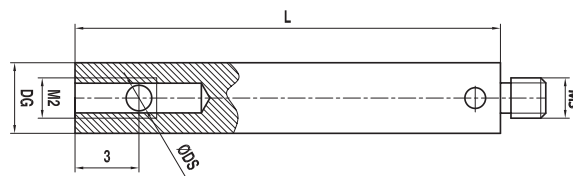


Variant B (rotatable)

## Holder 90°

Stainless steel

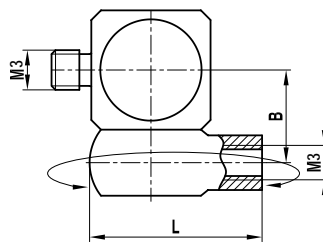
Pos.	itp Order No	DG	L	DS	Weight (g)	Price/Piece (€)
1	KH M3 010 04 030	4,0	30,0	1,0	2,9	38,50
2	KH M3 015 04 030	4,0	30,0	1,5	2,9	38,50



## Rotary adapter

Stainless steel

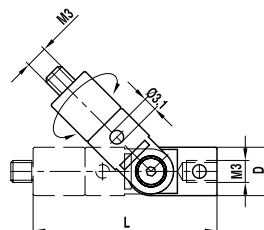
Pos.	itp Order No	L	B	Weight (g)	Price/Piece (€)
1	DI M3 000 06 012	12,0	6,0	4,1	44,00



## Rotary knuckle

Stainless steel, slewing range 360°, swing range 180°

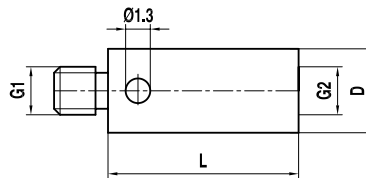
Pos.	itp Order No	DG	L	Weight (g)	Price/Piece (€)
1	GI M3 000 04 017	4,0	17,0	0,2	59,00



## Reducing adapter

Stainless steel

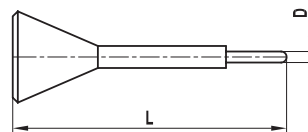
Pos.	itp Order No	DG	L	G1/G2	Weight (g)	Price/Piece (€)
1	RI M3 000 04 005	4,0	5,0	M3/M2	0,5	8,00



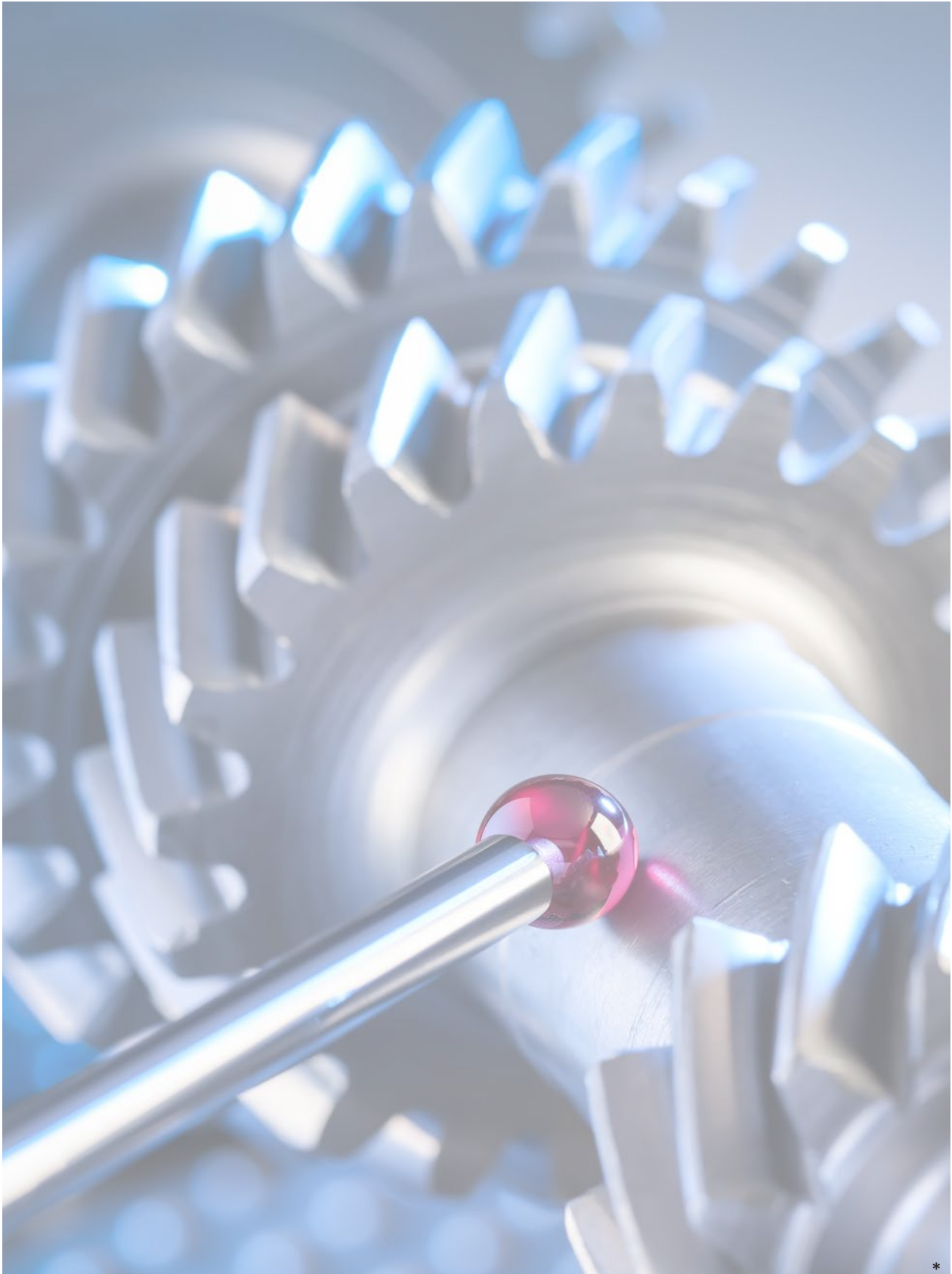
## Wrench

Stainless steel

Pos.	itp Order No	DG	L	Weight (g)	Price/Piece (€)
1	MI MO 012 00 023	1,2	23,0	0,7	6,00



## Thread M3 XXT

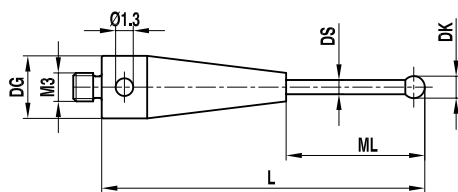


\*

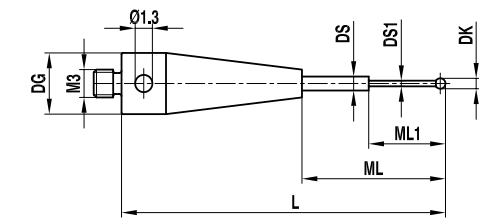
## Stylus XXT (carbide) ruby

### Titanium base, carbide stem, ruby ball

Pos.	itp Order No	Variant	DK	ML1/ML	DG	L	DS1/DS	Weight (g)	Price/Piece (€)
1	TH M3 008 05 014	A	0,8	5,0	5,0	14,0	0,6	0,6	32,00
2	TH M3 010 05 014	A	1,0	5,0	5,0	14,0	0,8	0,6	33,00
3	TH M3 010 05 020/11,0	A	1,0	11,0	5,0	20,0	0,8	0,6	36,00
4	TH M3 015 05 014	A	1,5	5,0	5,0	14,0	1,0	0,7	32,00
5	TH M3 015 05 020	A	1,5	11,0	5,0	20,0	1,0	0,7	34,00
6	TH M3 015 05 030/9,0	A	1,5	21,0	5,0	30,0	1,0	0,8	35,00
7	TH M3 015 05 030	A	1,5	22,5	5,0	30,0	1,0	0,8	38,00
8	TH M3 015 05 040	A	1,5	31,0	5,0	40,0	1,0	0,9	39,00
9	TH M3 020 05 014	A	2,0	5,0	5,0	14,0	1,0	0,7	33,00
10	TH M3 020 05 020	A	2,0	11,0	5,0	20,0	1,0	0,7	35,00
11	TH M3 020 05 025	A	2,0	16,0	5,0	25,0	1,0	0,8	35,00
12	TH M3 020 05 030	A	2,0	21,0	5,0	30,0	1,0	0,8	34,00
13	TH M3 020 05 040	A	2,0	31,0	5,0	40,0	1,5	1,5	36,00
14	TH M3 025 05 020	A	2,5	11,0	5,0	20,0	1,5	0,9	34,00
15	TH M3 025 05 030	A	2,5	21,0	5,0	30,0	1,5	1,2	35,00
16	TH M3 025 05 040	A	2,5	31,0	5,0	40,0	1,5	1,4	36,00
17	TH M3 003 05 013	B	0,3	2,3/4,0	5,0	13,0	0,2/1,0	0,6	41,00
18	TH M3 003 05 020	B	0,3	2,3/11,0	5,0	20,0	0,2/1,0	0,7	41,00
19	TH M3 005 05 013	B	0,5	2,3/4,0	5,0	13,0	0,3/1,0	0,6	41,00
20	TH M3 005 05 020	B	0,5	2,3/11,0	5,0	20,0	0,3/1,0	0,7	41,00
21	TH M3 005 05 024	B	0,5	2,3/15,0	5,0	24,0	6,3/1,0	0,8	47,00
22	TH M3 006 05 014	B	0,6	4,6/5,0	5,0	14,0	0,4/1,0	0,6	32,00
23	TH M3 006 05 017	B	0,6	4,6/8,0	5,0	17,0	0,4/1,0	0,6	37,00
24	TH M3 006 05 020	B	0,6	4,6/11,0	5,0	20,0	0,4/1,0	0,7	34,00
25	TH M3 008 05 020	B	0,8	4,8/11,0	5,0	20,0	0,6/1,0	0,7	32,00
26	TH M3 008 05 034	B	0,8	4,1/25,0	5,0	34,0	0,6/1,0	0,9	39,00
27	TH M3 010 05 020	B	1,0	5,1/11,0	5,0	20,0	0,6/1,0	0,7	36,00
28	TH M3 010 05 020/0,8	B	1,0	5,0/11,0	5,0	20,0	0,8/1,0	0,7	34,00
29	TH M3 010 05 030	B	1,0	5,0/21,0	5,0	30,0	0,8/1,0	0,8	36,00
30	TH M3 010 05 040	B	1,0	5,0/31,0	5,0	40,0	0,8/1,0	0,9	37,00



Variant A



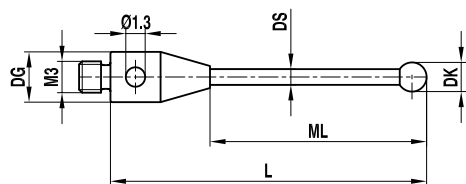
Variant B

**NOTE:** Peg mounted balls from ball  $\varnothing$  0,8 mm.

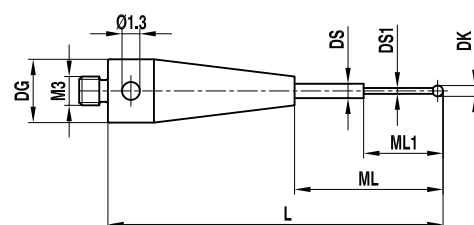
## Stylus XXT (carbide) ULTRA Scanning

Titanium base, carbide stem, diamond-coated ball

Pos.	itp Order No	Variant	DK	ML1/ML	DG	L	DS1/DS	Weight (g)	Price/Piece (€)
1	TH M3 DC15 05 030	A	1,5	22,5	5,0	30,0	1,0	0,8	479,00
2	TH M3 DC15 05 040	A	1,5	31,0	5,0	40,0	1,0	0,9	479,00
3	TH M3 DC20 05 020	A	2,0	11,0	5,0	20,0	1,0	0,7	479,00
4	TH M3 DC20 05 030	A	2,0	21,0	5,0	30,0	1,0	0,8	479,00
5	TH M3 DC20 05 040	A	2,0	31,0	5,0	40,0	1,5	1,5	479,00
6	TH M3 DC10 05 020	B	1,0	5,0/11,0	5,0	20,0	06/1,0	0,7	479,00
7	TH M3 DC10 05 030	B	1,0	5,0/21,0	5,0	30,0	0,8/1,0	0,8	479,00
8	TH M3 DC10 05 040	B	1,0	5,0/31,0	5,0	40,0	0,8/1,0	0,9	479,00



Variant A



Variant B

**NOTE:** Balls actively brazed to the stem.

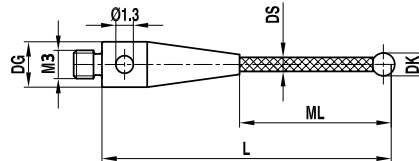
## Stylus XXT (carbon fiber) ruby

Titanium base, thermostable carbon fiber stem, ruby ball

Pos.	itp Order No	DK	ML	DG	L	DS	Weight (g)	Price/Piece (€)
1	TC M3 030 05 025	3,0	16,0	5,0	25,0	2,0	0,7	50,00
2	TC M3 030 05 033	3,0	24,0	5,0	33,0	2,0	0,8	55,00
3	TC M3 030 05 040/2,0	3,0	31,0	5,0	40,0	2,0	0,8	54,00
4	TC M3 030 05 042	3,0	33,0	5,0	42,0	2,0	0,8	56,00
5	TC M3 030 05 050	3,0	41,0	5,0	50,0	2,0	0,9	56,00
6	TC M3 030 05 058	3,0	49,0	5,0	58,0	2,0	0,9	60,00
7	TC M3 030 05 059	3,0	50,0	5,0	59,0	2,0	0,9	60,00
8	TC M3 030 05 075	3,0	66,0	5,0	75,0	2,0	1,0	61,00
9	TC M3 040 05 050	4,0	41,0	5,0	50,0	2,0	0,9	56,00
10	TC M3 040 05 075	4,0	66,0	5,0	75,0	3,5	1,8	63,00
11	TC M3 050 05 030/9	5,0	21,0	5,0	30,0	3,5	1,1	60,00
12	TC M3 050 05 040	5,0	31,0	5,0	40,0	3,5	1,3	60,00
13	TC M3 050 05 050	5,0	41,0	5,0	50,0	3,5	1,4	60,00
14	TC M3 050 05 060	5,0	51,0	5,0	60,0	3,5	1,6	61,00
15	TC M3 050 05 075	5,0	66,0	5,0	75,0	3,5	1,9	64,00
16	TC M3 060 05 050	6,0	40,0	5,0	50,0	3,5	1,6	71,00



Pos.	itp Order No	DK	ML	DG	L	DS	Weight (g)	Price/Piece (€)
17	TC M3 060 05 070	6,0	61,0	5,0	70,0	3,5	2,0	72,00
18	TC M3 060 05 100	6,0	91,0	5,0	100,0	3,5	2,5	73,00
19	TC M3 080 05 030	8,0	30,0	5,0	30,0	5,0	2,0	78,00
20	TC M3 080 05 050	8,0	50,0	5,0	50,0	5,0	2,5	84,00
21	TC M3 080 05 070	8,0	70,0	5,0	70,0	5,0	3,6	87,00
22	TC M3 080 05 100	8,0	100,0	5,0	100,0	5,0	4,1	90,00
23	TC M3 080 05 125	8,0	125,0	5,0	125,0	5,0	4,9	92,00

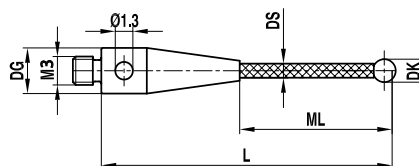


**NOTE:** Peg mounted balls. Thermostable carbon fiber E-Modul about 450 GPa.

## Stylus XXT (carbon fiber) silicon nitride

### Titanium base, thermostable carbon fiber stem, silicon nitride ball

Pos.	itp Order No	DK	ML	DG	L	DS	Weight (g)	Price/Piece (€)
1	TC M3 S30 05 033/K	3,0	24,0	5,0	33,0	2,0	0,8	69,00
2	TC M3 S30 05 050/K	3,0	41,0	5,0	50,0	2,0	0,8	71,00
3	TC M3 S50 05 050/K	5,0	41,0	5,0	50,0	3,5	1,4	76,00
4	TC M3 S50 05 075/K	5,0	66,0	5,0	75,0	3,5	1,8	78,00
5	TC M3 S80 05 070/K	8,0	70,0	5,0	70,0	5,0	3,1	116,00
6	TC M3 S80 05 125/K	8,0	125,0	5,0	125,0	5,0	5,0	120,00

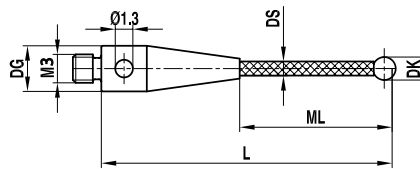


**NOTE:** Cup mounted. Thermostable carbon fiber E-Modul about 450 GPa.

## Stylus XXT (carbon fiber) silicon nitride

Titanium base, thermostable carbon fiber stem, silicon nitride ball

Pos.	itp Order No	DK	ML	DG	L	DS	Weight (g)	Price/Piece (€)
1	TC M3 S30 05 033	3,0	24,0	5,0	33,0	2,0	0,7	74,00
2	TC M3 S30 05 050	3,0	41,0	5,0	50,0	2,0	0,8	76,00
3	TC M3 S50 05 050	5,0	41,0	5,0	50,0	3,5	1,8	81,00
4	TC M3 S50 05 075	5,0	66,0	5,0	75,0	3,5	1,8	83,00
5	TC M3 S80 05 070	8,0	70,0	5,0	70,0	5,0	3,3	125,00
6	TC M3 S80 05 125	8,0	125,0	5,0	125,0	5,0	4,7	135,00

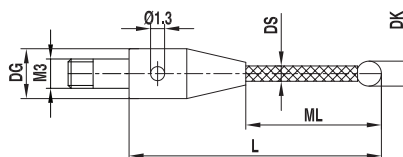


**NOTE:** Peg mounted for higher stiffness. Thermostable carbon fiber E-Modul about 450 GPa.

## Stylus XXT (carbon fiber) ULTRA Scanning

Titanium base, carbon fiber stem, diamond-coated ball

Pos.	itp Order No	DK	ML	DG	L	DS	Weight (g)	Price/Piece (€)
1	TC M3 DC30 05 033	3,0	24,0	5,0	33,0	2,0	0,8	479,00
2	TC M3 DC30 05 050	3,0	41,0	5,0	50,0	2,0	0,9	479,00
3	TC M3 DC30 05 058	3,0	49,0	5,0	58,0	2,0	0,9	479,00
4	TC M3 DC30 05 059	3,0	50,0	5,0	59,0	2,0	0,9	479,00
5	TC M3 DC30 05 075	3,0	66,0	5,0	75,0	2,0	1,0	479,00
6	TC M3 DC40 05 050	4,0	41,0	5,0	50,0	2,0	0,9	479,00
7	TC M3 DC50 05 050	5,0	41,0	5,0	50,0	3,5	1,4	659,00
8	TC M3 DC50 05 075	5,0	66,0	5,0	75,0	3,5	1,9	659,00

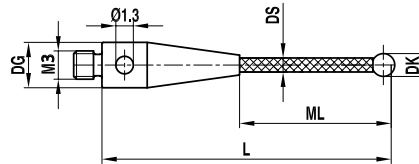


**NOTE:** Glued balls. Thermostable carbon fiber E-Modul about 450 GPa.

## Reference stylus XXT (carbon fiber) ruby

Titanium base, thermostable carbon fiber stem, ruby ball

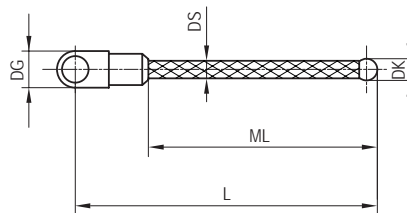
Pos.	itp Order No	DK	ML	DG	L	DS	Weight (g)	Price/Piece (€)
1	TC M3 R50 05 030	5,0	21,0	5,0	30,0	3,5	1,1	60,00
2	TC M3 R50 05 050	5,0	41,0	5,0	50,0	3,5	1,4	60,00



## ¼ star stylus XXT (carbon fiber) ruby

Titanium base, thermostable carbon fiber stem, ruby ball

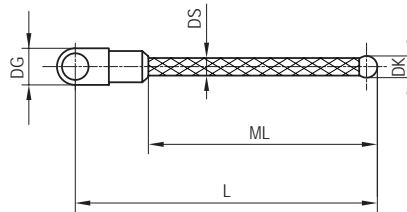
Pos.	itp Order No	DK	ML	DG	L	DS	Weight (g)	Price/Piece (€)
1	SC M3 030 05 020	3,0	11,0	5,0	20,0	2,0	0,9	89,00
2	SC M3 030 05 030	3,0	21,0	5,0	30,0	2,0	0,9	92,00
3	SC M3 030 05 040	3,0	31,0	5,0	40,0	2,0	1,0	95,00



## ¼ star stylus XXT (carbon fiber) silicon nitride

Titanium base, thermostable carbon fiber stem, silicon nitride ball

Pos.	itp Order No	DK	ML	DG	L	DS	Weight (g)	Price/Piece (€)
1	SC M3 S30 05 020	3,0	11,0	5,0	20,0	2,0	0,8	89,00
2	SC M3 S30 05 030	3,0	21,0	5,0	30,0	2,0	0,9	92,00
3	SC M3 S30 05 040	3,0	31,0	5,0	40,0	2,0	0,9	95,00

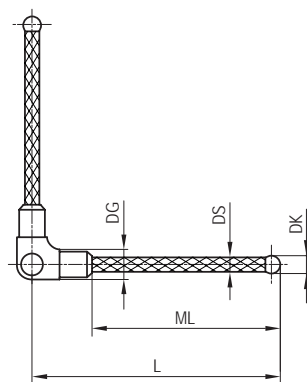


**NOTE:** Peg mounted balls. Thermostable carbon fiber E-Modul about 450 GPa.

## ½ star stylus XXT 90° (carbon fiber) ruby

Titanium base, thermostable carbon fiber stem, ruby ball

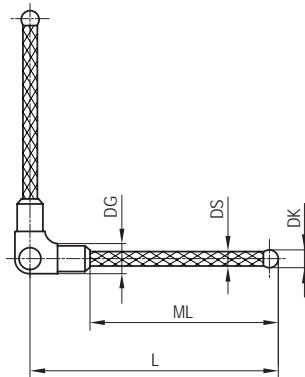
Pos.	itp Order No	DK	ML	DG	L	DS	Weight (g)	Price/Piece (€)
1	SC M3 030 05 020/90°	3,0	11,0	5,0	20,0	2,0	1,5	175,00
2	SC M3 030 05 030/90°	3,0	21,0	5,0	30,0	2,0	1,6	178,00
3	SC M3 030 05 040/90°	3,0	31,0	5,0	40,0	2,0	1,7	181,00



## ½ star stylus XXT 90° (carbon fiber) silicon nitride

Titanium base, thermostable carbon fiber stem, silicon nitride ball

Pos.	itp Order No	DK	ML	DG	L	DS	Weight (g)	Price/Piece (€)
1	SC M3 S30 05 020/90°	3,0	11,0	5,0	20,0	2,0	1,5	175,00
2	SC M3 S30 05 030/90°	3,0	21,0	5,0	30,0	2,0	1,5	178,00
3	SC M3 S30 05 040/90°	3,0	31,0	5,0	40,0	2,0	1,6	181,00

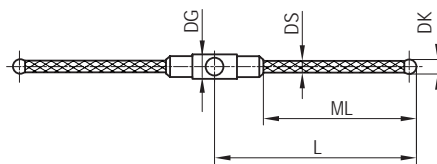


**NOTE:** Peg mounted balls. Thermostable carbon fiber E-Modul about 450 GPa.

## ½ star stylus XXT 180° (carbon fiber) ruby

Titanium base, thermostable carbon fiber stem, ruby ball

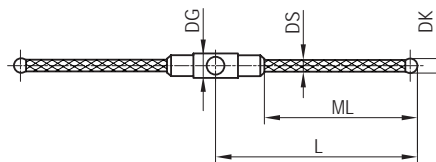
Pos.	itp Order No	DK	ML	DG	L	DS	Weight (g)	Price/Piece (€)
1	SC M3 030 05 020/180°	3,0	11,0	5,0	20,0	2,0	1,5	175,00
2	SC M3 030 05 030/180°	3,0	21,0	5,0	30,0	2,0	1,5	178,00
3	SC M3 030 05 040/180°	3,0	31,0	5,0	40,0	2,0	1,6	181,00



## ½ star stylus XXT 180° (carbon fiber) silicon nitride

Titanium base, thermostable carbon fiber stem, silicon nitride ball

Pos.	itp Order No	DK	ML	DG	L	DS	Weight (g)	Price/Piece (€)
1	SC M3 S30 05 020/180°	3,0	11,0	5,0	20,0	2,0	1,4	175,00
2	SC M3 S30 05 030/180°	3,0	21,0	5,0	30,0	2,0	1,5	178,00
3	SC M3 S30 05 040/180°	3,0	31,0	5,0	40,0	2,0	1,7	181,00

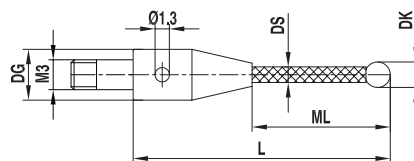


**NOTE:** Peg mounted balls. Thermostable carbon fiber E-Modul about 450 GPa.

## Clamping stylus XXT (carbon fiber) ruby

Titanium base, thermostable carbon fiber stem, ruby ball

Pos.	itp Order No	DK	ML	DG	L	DS	Weight (g)	Price/Piece (€)
1	TC M3 030 05 020	3,0	11,0	5,0	20,0	2,0	0,9	56,00
2	TC M3 030 05 030	3,0	21,0	5,0	30,0	2,0	0,9	59,00
3	TC M3 030 05 040	3,0	31,0	5,0	40,0	2,0	1,0	62,00

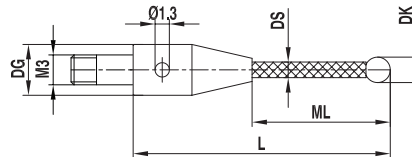


**NOTE:** Thermostable carbon fiber E-Modul about 450 GPa.

## Clamping stylus XXT (carbon fiber) silicon nitride

Titanium base, thermostable carbon fiber stem, silicon nitride ball

Pos.	itp Order No	DK	ML	DG	L	DS	Weight (g)	Price/Piece (€)
1	TC M3 S30 05 020/K	3,0	11,0	5,0	20,0	2,0	0,9	59,00
2	TC M3 S30 05 030/K	3,0	21,0	5,0	30,0	2,0	0,9	62,00
3	TC M3 S30 05 040/K	3,0	31,0	5,0	40,0	2,0	1,0	64,00

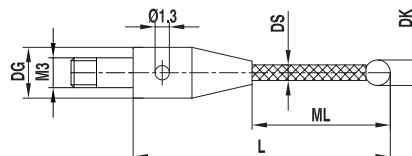


**NOTE:** Cup mounted. Thermostable carbon fiber E-Modul about 450 GPa.

## Clamping stylus XXT (carbon fiber) silicon nitride

Titanium base, thermostable carbon fiber stem, silicon nitride ball

Pos.	itp Order No	DK	ML	DG	L	DS	Weight (g)	Price/Piece (€)
1	TC M3 S30 05 020	3,0	11,0	5,0	20,0	2,0	0,9	64,00
2	TC M3 S30 05 030	3,0	21,0	5,0	30,0	2,0	1,0	67,00
3	TC M3 S30 05 040	3,0	31,0	5,0	40,0	2,0	1,0	69,00

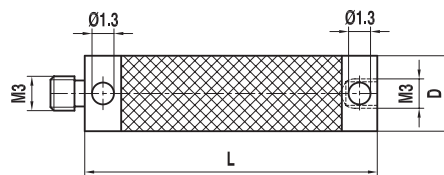


**NOTE:** Peg mounted for higher stiffness. Thermostable carbon fiber E-Modul about 450 GPa.

## Extension XXT (carbon fiber)

### Thermostable carbon fiber

Pos.	itp Order No	DG	L	Weight (g)	Price/Piece (€)
1	VC M3 000 05 020	5,0	20,0	1,1	41,00
2	VC M3 000 05 025	5,0	25,0	1,2	44,00
3	VC M3 000 05 030	5,0	30,0	1,3	46,00
4	VC M3 000 05 040	5,0	40,0	1,4	47,00
5	VC M3 000 05 050	5,0	50,0	1,7	56,00
6	VC M3 000 05 060	5,0	60,0	1,8	60,00
7	VC M3 000 05 065	5,0	65,0	1,8	63,00
8	VC M3 000 05 075	5,0	75,0	2,2	68,00
9	VC M3 000 05 080	5,0	80,0	2,6	70,00
10	VC M3 000 05 100	5,0	100,0	2,6	79,00
11	VC M3 000 05 130	5,0	130,0	2,9	94,00
12	VC M3 000 05 150	5,0	150,0	3,5	103,00

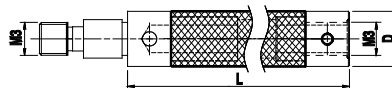


**NOTE:** Thermostable carbon fiber E-Modul about 450 GPa.

## Clamping extension XXT (carbon fiber)

### Thermostable carbon fiber

Pos.	itp Order No	DG	L	Weight (g)	Price/Piece (€)
1	VC M3 000 K5 020	5,0	20,0	1,3	46,00
2	VC M3 000 K5 045	5,0	45,0	1,8	61,00



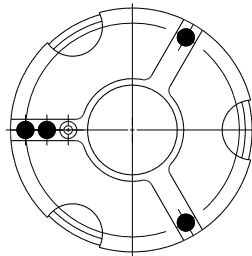
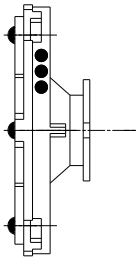
**NOTE:** Thermostable carbon fiber E-Modul about 450 GPa.



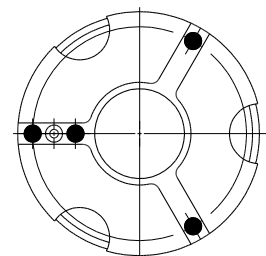
## Adapter plate VAST XXT

TL1/TL3, aluminium

Pos.	itp Order No	Variant	Weight (g)	Price/Piece (€)
1	TP M3 MES SO TL1	A	4,5	297,00
2	TP M3 MES SO TL3	B	4,5	297,00



Variant A

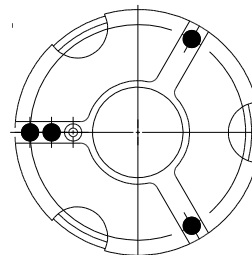
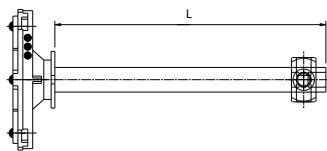


Variant B

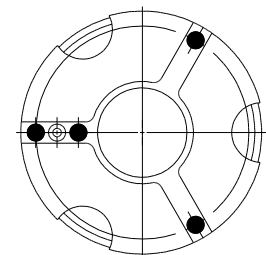
## Adapter plate VAST XXT (star)

TL1S/TL3S, star, aluminium

Pos.	itp Order No	Variant	L	Weight (g)	Price/Piece (€)
1	TP M3 MES SO TL1S	A	55,0	5,9	310,00
2	TP M3 MES SO TL3S	B	55,0	6,0	310,00



Variant A

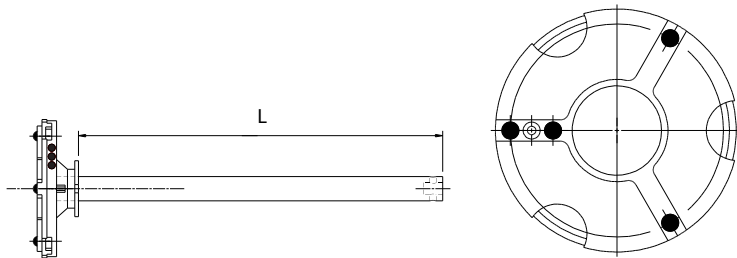


Variant B

## Adapter plate VAST XXT (extension)

TL2, aluminium

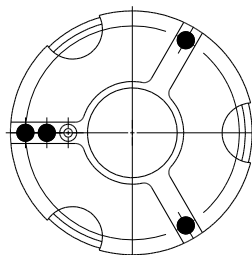
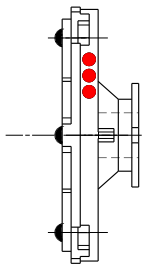
Pos.	itp Order No	Weight (g)	Price/Piece (€)
1	TP M3 MES SO TL2	5,5	310,00



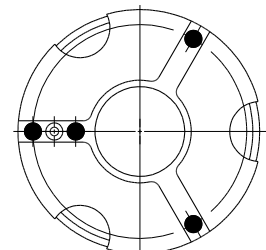
## Reference adapter plate VAST XXT

TL1/TL3, aluminium

Pos.	itp Order No	Variant	Weight (g)	Price/Piece (€)
1	TP M3 MES SO TL1R	A	4,5	297,00
2	TP M3 MES SO TL3R	B	4,6	297,00



Variant A

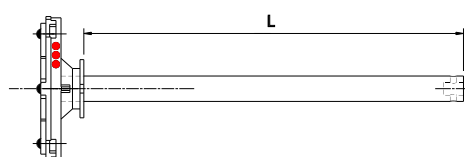


Variant B

## Reference adapter plate VAST XXT (extension)

TL2, aluminium

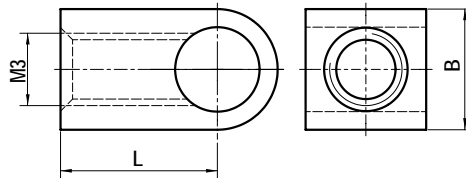
Pos.	itp Order No	Weight (g)	Price/Piece (€)
1	TP M3 MES SO TL2R	5,5	310,00



## Cube 90° XXT, 1-way

Titanium

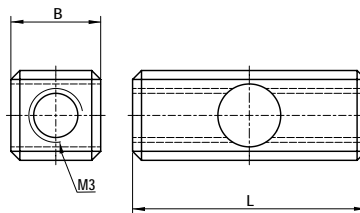
Pos.	itp Order No	L	B	Weight (g)	Price/Piece (€)
1	WT M3 000 05 006	6,5	5,0	0,6	40,00



## Cube 180° XXT, 2-way

Titanium

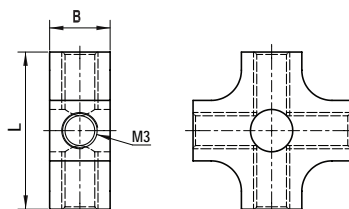
Pos.	itp Order No	L	B	Weight (g)	Price/Piece (€)
1	WT M3 180 05 013	13,0	5,0	1,0	46,00



## Cube XXT, 4-way

Titanium

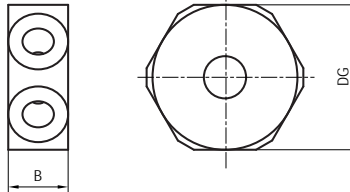
Pos.	itp Order No	L	B	Weight (g)	Price/Piece (€)
1	WT M3 000 05 013	13,0	1,8	1,7	51,00



## Cube XXT, 6-way

Titanium

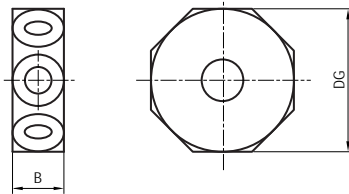
Pos.	itp Order No	DG	B	Weight (g)	Price/Piece (€)
1	WT M3 000 12 005	12,0	5,0	1,8	64,00



## Cube XXT, 8-way

Titanium

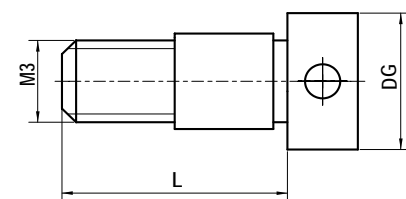
Pos.	itp Order No	DG	B	Weight (g)	Price/Piece (€)
1	WT M3 000 14 005	14,0	5,0	2,3	74,00



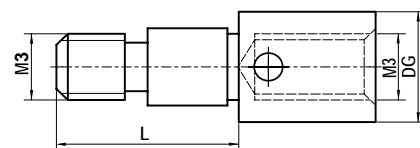
## Clamping screw XXT

Titanium

Pos.	itp Order No	Variant	DG	L	Weight (g)	Price/Piece (€)
1	SI M3 000 05 008	A	5,0	8,0	0,4	10,00
2	SI M3 M30 05 008	B	5,0	8,0	0,6	10,00



Variant A

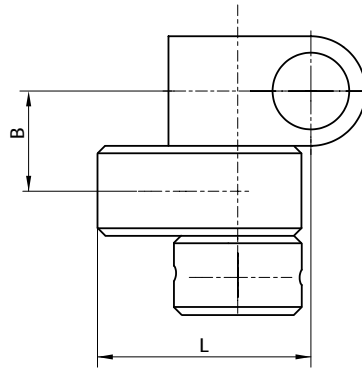


Variant B with internal thread M3

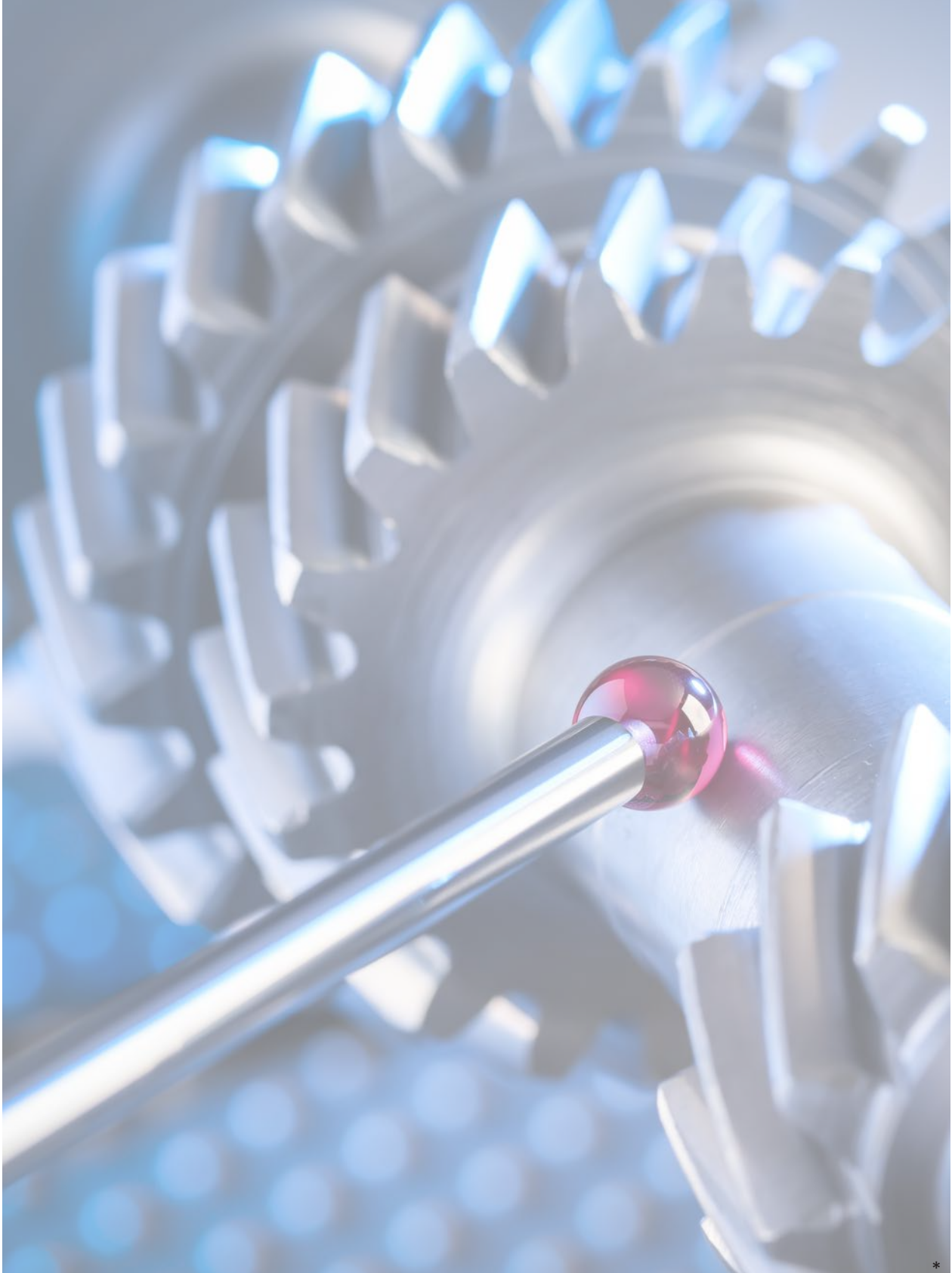
## Knuckle XXT

### Titanium

Pos.	itp Order No	L	B	Weight (g)	Price/Piece (€)
1	DT M3 000 05 010	10,0	5,0	1,6	95,00



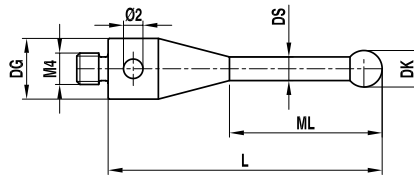
## Thread M4



## Stylus (steel) ruby

### Stainless steel base and stem, ruby ball

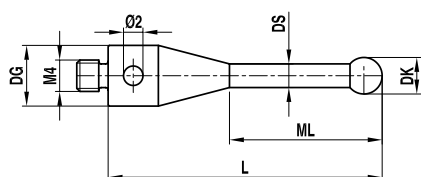
Pos.	itp Order No	DK	ML	DG	L	DS	Weight (g)	Price/Piece (€)
1	TI M4 010 07 020	1,0	4,5	7,0	20,0	0,7	2,6	23,00
2	TI M4 020 07 020	2,0	9,0	7,0	20,0	1,3	2,2	22,00
3	TI M4 030 07 020	3,0	14,5	7,0	20,0	2,0 - 3,0	2,1	29,00
4	TI M4 040 07 020	4,0	15,0	7,0	20,0	3,0	2,2	27,50
5	TI M4 050 07 013	5,0	9,0	7,0	13,0	3,5	1,8	40,00
6	TI M4 050 07 020	5,0	16,0	7,0	20,0	3,5	2,5	31,00
7	TI M4 050 07 022	5,0	17,5	7,0	22,5	3,0	2,4	31,00
8	TI M4 050 07 032	5,0	27,5	7,0	32,5	3,0	3,0	33,00
9	TI M4 050 07 052	5,0	35,5	7,0	52,5	4,5	8,4	36,00
10	TI M4 050 07 102	5,0	85,5	7,0	102,5	4,5	14,8	49,00
11	TI M4 050 07 152	5,0	135,5	7,0	152,5	4,5	21,0	76,00
12	TI M4 060 07 020	6,0	16,0	7,0	20,0	4,5	3,0	32,00
13	TI M4 080 07 020	8,0	16,5	7,0	20,0	6,0	4,2	48,00



## Stylus (steel) silicon nitride

### Stainless steel base and stem, silicon nitride ball

Pos.	itp Order No	DK	ML	DG	L	DS	Weight (g)	Price/Piece (€)
1	TI M4 S10 07 020	1,0	4,5	7,0	20,0	0,7	2,6	48,00
2	TI M4 S20 07 020	2,0	9,0	7,0	20,0	1,3	2,2	54,00
3	TI M4 S30 07 020	3,0	14,5	7,0	20,0	2,0 - 3,0	2,0	51,00
4	TI M4 S40 07 020	4,0	15,0	7,0	20,0	3,0	2,2	51,00
5	TI M4 S50 07 020	5,0	16,0	7,0	20,0	3,5	2,5	53,00
6	TI M4 S50 07 022	5,0	17,5	7,0	22,5	3,0	2,4	55,00
7	TI M4 S50 07 052	5,0	35,5	7,0	52,5	4,5	8,3	59,00
8	TI M4 S50 07 102	5,0	85,5	7,0	102,5	4,5	14,8	84,00
9	TI M4 S60 07 020	6,0	16,0	7,0	20,0	4,5	3,0	54,00
10	TI M4 S80 07 020	8,0	16,5	7,0	20,0	6,0	4,0	71,50

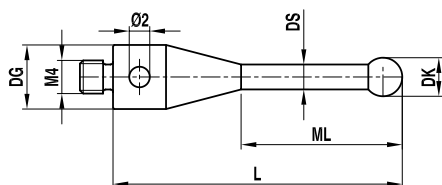


**NOTE:** Peg mounted balls.

## Stylus (steel) zirconium oxide

### Stainless steel base and stem, zirconium oxide ball

Pos.	itp Order No	DK	ML	DG	L	DS	Weight (g)	Price/Piece (€)
1	TI M4 Z20 07 020	2,0	9,0	7,0	20,0	1,3	2,3	55,00
2	TI M4 Z40 07 020	4,0	15,0	7,0	20,0	3,0	2,2	48,00



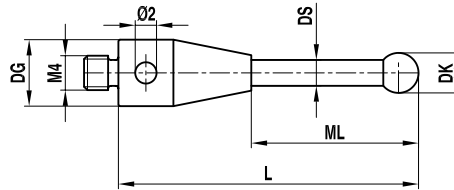
**NOTE:** Peg mounted balls.



## Stylus (carbide) ruby

### Stainless steel base, carbide stem, ruby ball

Pos.	itp Order No	DK	ML	DG	L	DS	Weight (g)	Price/Piece (€)
1	TH M4 010 R7 020	1,0	10,5	7,0	20,5	0,7	2,5	44,00
2	TH M4 020 07 021	2,0	11,0	7,0	21,0	1,5	2,8	37,00
3	TH M4 020 07 051	2,0	41,0	7,0	51,0	1,5	3,5	43,00
4	TH M4 030 07 021	3,0	11,5	7,0	21,5	1,5	2,8	33,00
5	TH M4 030 07 051	3,0	40,0	7,0	51,5	2,0	4,5	43,00
6	TH M4 040 07 022	4,0	10,5	7,0	22,0	1,5	3,1	33,00
7	TH M4 040 07 052	4,0	40,5	7,0	52,0	2,0	4,7	43,00
8	TH M4 050 07 022	5,0	9,0	7,0	22,5	2,5	2,8	35,00
9	TH M4 050 07 052	5,0	39,0	7,0	52,5	2,5	5,9	53,00
10	TH M4 060 07 023	6,0	9,5	7,0	23,0	2,5	4,0	56,00
11	TH M4 060 07 053	6,0	39,5	7,0	53,0	2,5	6,1	57,00

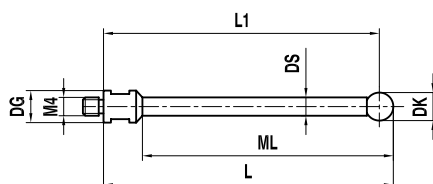


**NOTE:** Peg mounted balls.

## Stylus (carbide) ruby (wrench size 5,5)

Stainless steel base, carbide stem, ruby ball

Pos.	itp Order No	DK	ML	DG	L1/L	DS	Weight (g)	Price/Piece (€)
1	TH M4 010 07 020	1,0	4,5	7,0	20,0/20,5	0,8	3,3	69,00
2	TH M4 020 07 020	2,0	8,0	7,0	20,0/21,0	1,5	3,3	63,00
3	TH M4 040 07 020	4,0	12,0	7,0	20,0/22,0	3,0	4,0	57,00
4	TH M4 060 07 020	6,0	14,5	7,0	20,0/23,0	4,0	5,1	57,00
5	TH M4 060 07 035	6,0	29,5	7,0	35,0/38,0	4,0	7,9	53,00
6	TH M4 060 07 040	6,0	34,5	7,0	40,0/43,0	4,0	8,8	53,00
7	TH M4 060 07 050	6,0	44,5	7,0	50,0/53,0	4,0	10,6	53,00
8	TH M4 060 07 075	6,0	69,5	7,0	75,0/78,0	4,0	15,7	61,00
9	TH M4 060 07 100	6,0	94,5	7,0	100,0/103,0	4,0	19,7	64,00
10	TH M4 070 07 150	7,0	135,5	7,0	150,0/153,5	4,0	36,0	76,00
11	TH M4 080 07 020	8,0	15,5	7,0	20,0/24,0	4,0	5,6	65,00

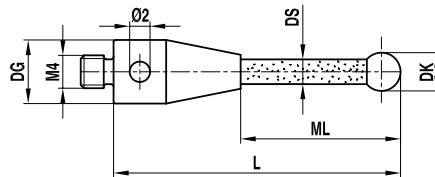


**NOTE:** Peg mounted balls.

## Stylus (ceramic) ruby

### Stainless steel base, ceramic stem, ruby ball

Pos.	itp Order No	DK	ML	DG	L	DS	Weight (g)	Price/Piece (€)
1	TK M4 040 07 052	4,0	35,5	7,0	52,0	3,0	4,8	49,00
2	TK M4 050 07 052	5,0	36,0	7,0	52,5	3,5	4,9	52,00
3	TK M4 050 07 077	5,0	61,0	7,0	77,5	3,5	5,6	67,00
4	TK M4 050 07 102	5,0	86,0	7,0	102,5	3,5	6,3	73,00
5	TK M4 060 07 053	6,0	36,5	7,0	53,0	4,5	5,6	48,00
6	TK M4 060 07 078	6,0	61,5	7,0	78,0	4,5	6,7	53,00
7	TK M4 060 07 103	6,0	86,5	7,0	103,0	4,5	7,8	54,00
8	TK M4 080 07 054	8,0	37,5	7,0	54,0	4,5	6,0	63,00
9	TK M4 080 07 079	8,0	62,5	7,0	79,0	4,5	7,2	74,00
10	TK M4 080 07 104	8,0	87,5	7,0	104,0	4,5	8,4	76,00

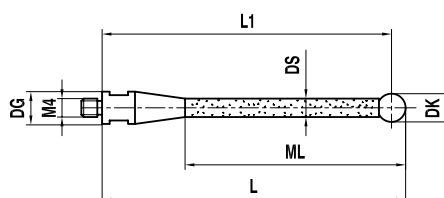


**NOTE:** Cup mounted balls.

## Stylus (ceramic) ruby (wrench size 5,5)

Stainless steel base, ceramic stem, ruby ball

Pos.	itp Order No	DK	ML	DG	L1/L	DS	Weight (g)	Price/Piece (€)
1	TK M4 060 07 035	6,0	29,5	7,0	35,0/38,0	4,0	3,4	60,00
2	TK M4 060 07 040	6,0	34,5	7,0	40,0/43,0	4,0	3,6	61,00
3	TK M4 060 07 045	6,0	39,5	7,0	45,0/48,0	4,0	3,8	63,00
4	TK M4 060 07 050	6,0	44,5	7,0	50,0/53,0	4,0	3,9	69,00
5	TK M4 060 07 075	6,0	60,0	7,0	75,0/78,0	4,0	6,4	73,00
6	TK M4 060 07 100	6,0	85,0	7,0	100,0/103,0	4,0	7,2	79,00
7	TK M4 070 07 070	7,0	55,5	7,0	70,0/73,5	4,0	6,5	80,00
8	TK M4 070 07 125	7,0	110,5	7,0	125,0/128,5	4,0	8,4	123,00
9	TK M4 070 07 150	7,0	135,5	7,0	150,0/153,5	4,0	9,3	135,00
10	TK M4 100 07 100	10,0	87,0	7,0	100,0/105,0	4,0	8,8	162,00

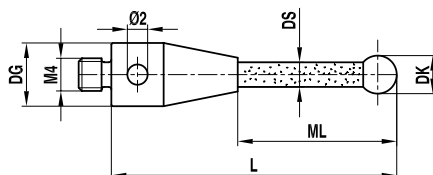


NOTE: Cup mounted balls.

## Stylus (ceramic) silicon nitride

Stainless steel base, ceramic stem, silicon nitride ball

Pos.	itp Order No	DK	ML	DG	L	DS	Weight (g)	Price/Piece (€)
1	TK M4 S60 07 053	6,0	36,5	7,0	53,0	4,5	5,3	70,00
2	TK M4 S60 07 103	6,0	86,5	7,0	103,0	4,5	7,7	76,00
3	TK M4 S80 07 054	8,0	37,5	7,0	54,0	4,5	5,8	85,00
4	TK M4 S80 07 104	8,0	87,5	7,0	104,0	4,5	8,2	98,00

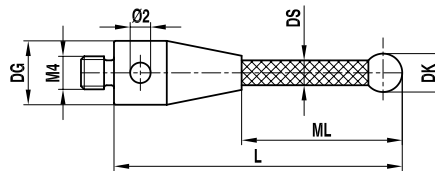


NOTE: Cup mounted balls.

## Stylus (carbon fiber) ruby

Stainless steel base, thermostable carbon fiber stem, ruby ball

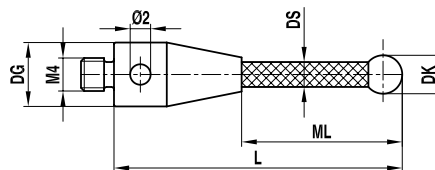
Pos.	itp Order No	DK	ML	DG	L	DS	Weight (g)	Price/Piece (€)
1	TC M4 060 07 053	6,0	36,5	7,0	53,0	4,5	4,6	68,00
2	TC M4 060 07 103	6,0	86,5	7,0	103,0	4,5	6,1	89,00
3	TC M4 060 07 153	6,0	136,5	7,0	153,0	4,5	7,3	103,00
4	TC M4 060 07 203	6,0	186,5	7,0	203,0	4,5	8,9	125,00
5	TC M4 060 07 303	6,0	286,5	7,0	303,0	4,5	11,2	186,00



## Stylus (carbon fiber) silicon nitride

Stainless steel base, thermostable carbon fiber stem, silicon nitride ball

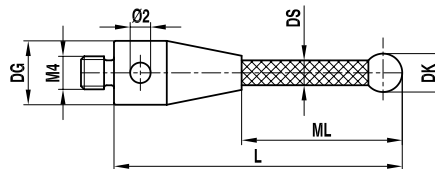
Pos.	itp Order No	DK	ML	DG	L	DS	Weight (g)	Price/Piece (€)
1	TC M4 S60 07 053	6,0	36,5	7,0	53,0	4,5	4,5	90,00
2	TC M4 S60 07 103	6,0	86,5	7,0	103,0	4,5	6,0	111,00
3	TC M4 S60 07 153	6,0	136,5	7,0	153,0	4,5	7,3	131,00
4	TC M4 S60 07 203	6,0	186,5	7,0	203,0	4,5	8,0	153,00
5	TC M4 S60 07 303	6,0	286,5	7,0	303,0	4,5	11,0	213,00



## Stylus (carbon fiber) zirconium oxide

Stainless steel base, thermostable carbon fiber stem, zirconium oxide ball

Pos.	itp Order No	DK	ML	DG	L	DS	Weight (g)	Price/Piece (€)
1	TC M4 Z60 07 053	6,0	36,5	7,0	53,0	4,5	4,7	101,00
2	TC M4 Z60 07 103	6,0	86,5	7,0	103,0	4,5	6,1	122,00
3	TC M4 Z60 07 153	6,0	136,5	7,0	153,0	4,5	7,4	142,00
4	TC M4 Z60 07 203	6,0	186,5	7,0	203,0	4,5	8,7	164,00
5	TC M4 Z60 07 303	6,0	286,5	7,0	303,0	4,5	11,4	224,00

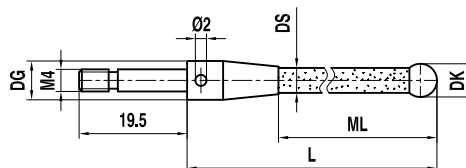


**NOTE:** Peg mounted balls. Thermostable carbon fiber E-Modul about 450 GPa.

## Clamping stylus (ceramic) ruby

Stainless steel base, ceramic stem, ruby ball

Pos.	itp Order No	DK	ML	DG	L	DS	Weight (g)	Price/Piece (€)
1	TK M4 060 S7 053	6,0	36,5	7,0	53,0	4,5	6,8	58,00
2	TK M4 060 S7 103	6,0	86,0	7,0	103,0	4,5	9,1	59,00

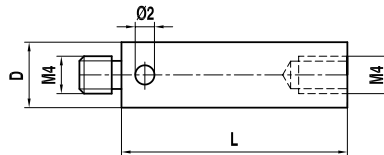


**NOTE:** Cup mounted balls. Can only be used with HI M4 000 15 015.

## Extension steel

### Stainless steel

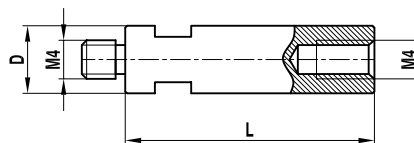
Pos.	itp Order No	DG	L	Weight (g)	Price/Piece (€)
1	VI M4 000 07 010	7,0	10,0	2,6	12,00
2	VI M4 000 07 015	7,0	15,0	3,8	14,00
3	VI M4 000 07 020	7,0	20,0	5,2	15,00
4	VI M4 000 07 030	7,0	30,0	8,2	15,00



## Extension steel with wrench size 5,5

### Stainless steel

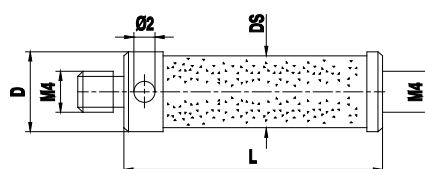
Pos.	itp Order No	DG	L	Weight (g)	Price/Piece (€)
1	VI M4 000 M7 010	7,0	10,0	2,7	26,00
2	VI M4 000 M7 015	7,0	15,0	4,2	26,00
3	VI M4 000 M7 020	7,0	20,0	5,7	26,00
4	VI M4 000 M7 030	7,0	30,0	8,6	26,00
5	VI M4 000 M7 050	7,0	50,0	14,8	26,00



## Extension ceramic

### Ceramic, stainless steel ends

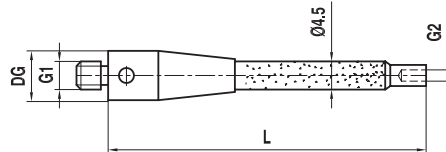
Pos.	itp Order No	DG	L	Weight (g)	Price/Piece (€)
1	VK M4 000 07 030	7,0	30,0	4,4	30,00
2	VK M4 000 07 050	7,0	50,0	5,7	45,00
3	VK M4 000 07 100	7,0	100,0	9,2	86,00



## Reducing extension

Stainless steel base, ceramic stem

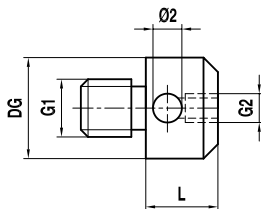
Pos.	itp Order No	DG	L	G1/G2	Weight (g)	Price/Piece (€)
1	RK M4 300 07 050	7,0	50,0	M4/M3	4,5	55,00
2	RK M4 300 07 075	7,0	75,0	M4/M3	5,1	66,00
3	RK M4 300 07 100	7,0	100,0	M4/M3	5,8	73,00



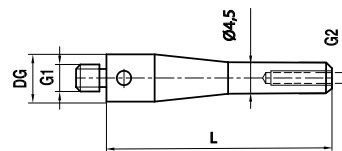
## Reducing adapter

Stainless steel

Pos.	itp Order No	Variant	DG	L	G1/G2	Weight (g)	Price/Piece (€)
1	RI M4 000 07 005	A	7,0	5,0	M4/M2	1,5	13,00
2	RI M4 000 07 009	A	7,0	9,0	M4/M3	1,4	13,00
3	RT M4 500 11 010	A	11,0	10,0	M4/M5	6,4	14,00
4	RI M4 300 07 018	A	7,0	18,0	M4x0,5/M3	2,3	30,00
5	RI M4 300 07 020	B	7,0	20,0	M4/M3	3,3	19,00



Variant A



Variant B

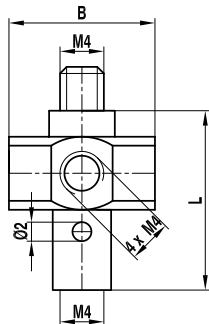
**NOTE:** RI M4 300 07 018 for Dea TF6.



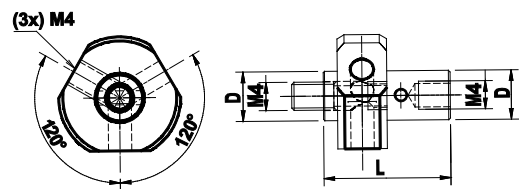
## Holder for stylus rotatable

Stainless steel

Pos.	itp Order No	Variant	L	B	Weight (g)	Price/Piece (€)
1	HI M4 000 15 018	A	18,0	15,0	11,8	42,00
2	HI M4 000 15 018/3	B	18,0	7,0	13,6	42,00



Variant A

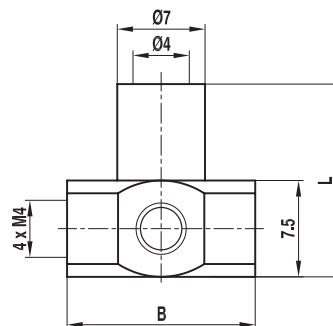


Variant B

## Holder for stylus without clamping

Stainless steel

Pos.	itp Order No	L	B	Weight (g)	Price/Piece (€)
1	HI M4 000 15 015	15,0	15,0	10,9	49,50

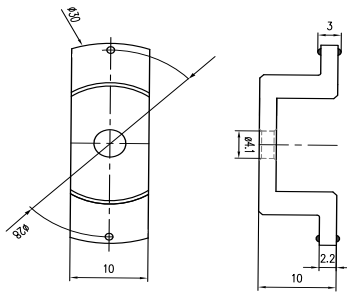


**NOTE:** Can only used with TK M4 060 S7 053 and TK M4 060 S7 103.

## Disk stylus with hemispherical balls

Stainless steel

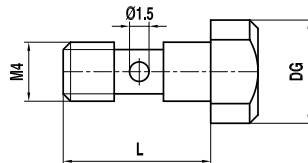
Pos.	itp Order No	C/D	A/B	Weight (g)	Price/Piece (€)
1	KI M4 022 30 021	2,2/3,0	21,0/30,0	8,0	76,00
2	KI M4 022 35 021	2,2/3,0	21,0/35,0	9,6	73,00
3	KI M4 030 50 023	3,0/4,0	23,0/50,0	13,6	79,00



## Screw with anticrash protection

Stainless steel

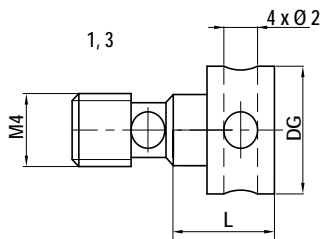
Pos.	itp Order No	DG	L	Weight (g)	Price/Piece (€)
1	SI M4 000 07 010	7,0	10,0	1,8	7,00



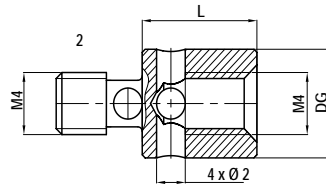
## Anticrash protection adapter

### Stainless steel

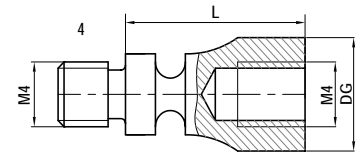
Pos.	itp Order No	Variant	DG	L	Weight (g)	Price/Piece (€)
1	BI M4 000 07 006	A	7,0	6,0	1,4	3,50
2	BI M4 000 07 008	B	7,0	8,0	1,9	3,50
3	BI M4 000 07 010	A	7,0	10,0	1,5	3,50
4	BI M4 000 07 012	C	7,0	12,0	2,6	16,50
5	BI M4 000 07 015	D	7,0	15,2	2,3	21,00
6	BI M4 000 07 009	D	7,0	9,0	1,5	5,50
7	BI M4 000 R7 016	D	7,0	16,0	2,1	5,50
8	BI M4 000 07 016	E	7,0	16,0	1,4	7,00



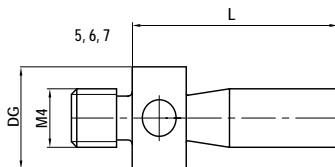
Variant A



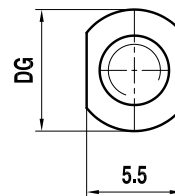
Variant B



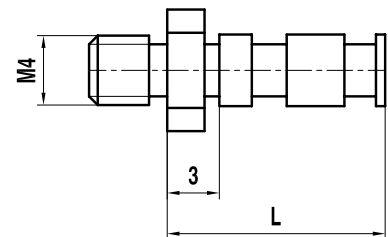
Variant C



Variant D



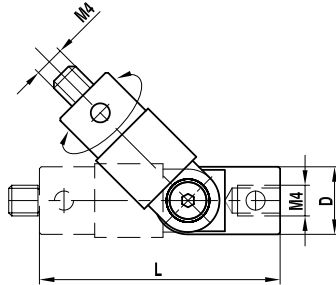
Variant E with wrench size 5,5



## Rotary knuckle

Stainless steel, slewing range 360°, swing range 180°

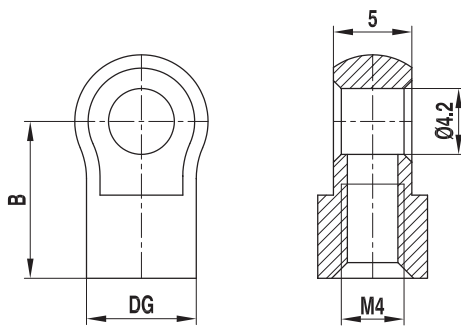
Pos.	itp Order No	DG	L	Weight (g)	Price/Piece (€)
1	GI M4 000 09 033	7,0	33,0	9,4	67,00



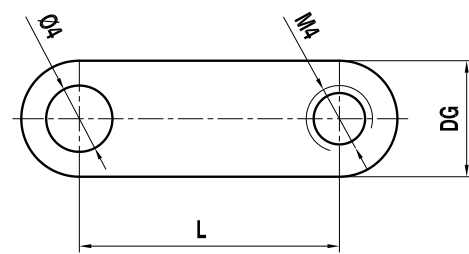
## Swivel adapter/Adapter for crank stylus

Stainless steel

Pos.	itp Order No	Variant	DG	L	B	Weight (g)	Price/Piece (€)
1	RI M4 000 07 014	A	7,0	14,25	10,0	2,7	21,00
2	RI M4 000 07 018	A	7,0	17,75	13,5	3,6	21,00
3	RI M4 000 07 022	B	7,0	22,0	5,0	6,5	43,00
4	RI M4 000 07 028	B	7,0	28,0	5,0	7,5	43,00



Variant A

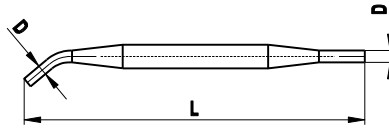


Variant B

## Wrench

### Stainless steel

Pos.	itp Order No	DG	L	Weight (g)	Price/Piece (€)
1	MI MO 017 00 049	1,7	49,0	1,4	7,00



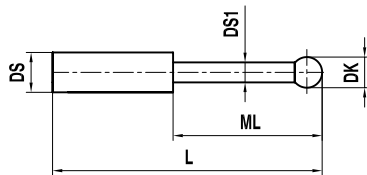
## Thread M5



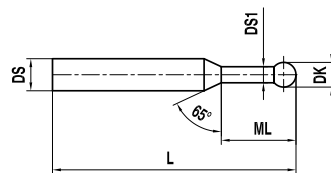
## Stylus non threaded (carbide) ruby

### Carbide stem, ruby ball, non threaded

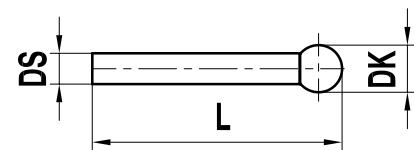
Pos.	itp Order No	Variant	DK	ML	L	DS1/DS	Weight (g)	Price/Piece (€)
1	KT M5 002 01 015	A	0,2	2,3	15,2	0,18/1,0	0,2	100,00
2	KT M5 0025 01 015	A	0,25	2,35	15,25	0,18/1,0	0,1	100,00
3	KT M5 003 01 015	A	0,3	2,3	15,3	0,2/1,0	0,1	36,00
4	KT M5 004 01 015	A	0,4	2,5	15,5	0,3/1,0	0,1	52,00
5	KT M5 005 01 015	A	0,5	2,5	15,5	0,3/1,0	0,1	27,00
6	KT M5 006 01 015	A	0,6	4,6	15,6	0,4/1,0	0,1	27,00
7	KT M5 007 01 015	A	0,7	4,6	15,7	0,4/1,0	0,1	27,00
8	KT M5 008 01 015	A	0,8	4,8	15,8	0,6/1,0	0,1	26,00
9	KT M5 010 01 016	A	1,0	5,0	16,0	0,8/1,0	0,2	27,00
10	KT M5 013 10 026	C	1,35		26,35	1,0	0,3	27,00
11	KT M5 015 10 026	C	1,5		26,5	1,0	0,3	22,00
12	KT M5 020 10 027	C	2,0		27,0	1,0	0,3	25,00
13	KT M5 020 15 027	C	2,0		27,0	1,5	0,7	25,00
14	KT M5 025 10 027	C	2,5		27,5	1,0	0,3	26,00
15	KT M5 025 15 027	C	2,5		27,5	1,5	0,7	26,00
16	KT M5 030 20 038	C	3,0		38,0	2,0	1,7	25,00
17	KT M5 050 35 045	C	5,0		45,0	3,5	5,8	28,00
18	KT SO 015 10 016	C	1,5		16,0	1,0	0,2	29,00
19	KT SO 020 10 016	C	2,0		16,0	1,0	0,2	29,00
20	KT M5 003 02 022	A	0,3	4,15	22,15/22,0	0,2/2,0	0,8	203,00
21	KT M5 005 02 022	A	0,5	4,25	22,25/22,0	0,3/2,0	0,8	141,00
22	KT M5 008 02 022	A	0,8	4,4	22,4/22,0	0,6/2,0	0,9	80,00
23	KT M5 010 02 022	A	1,0	4,5	22,5/22,0	0,8/2,0	0,8	79,00
24	KT M5 010 02 034	A	1,0	14,5	34,5/34,0	0,8/2,0	1,0	82,00
25	KT M5 015 02 022	A	1,5	10,35	22,75/22,0	1,2/2,0	0,7	79,00
26	KT M5 020 02 022	A	2,0	10,6	23,0/22,0	1,5/2,0	0,8	56,00
27	KT M5 050 04 037	A	5,0	12,5	37,5	3,0/4,0	5,6	45,00
28	KT M5 070 04 038	C	7,0	38,5	4,0	6,0	6,5	48,00
29	KT M5 100 04 040	C	10,0	40,0	4,0	6,0	7,6	69,00
30	KT M5 003 01 015/65°	B	0,3	2,3	15,3	0,2/1,0	0,1	125,00
31	KT M5 005 01 015/65°	B	0,5	2,5	15,5	0,3/1,0	0,2	98,00



Variant A



Variant B 65° angle



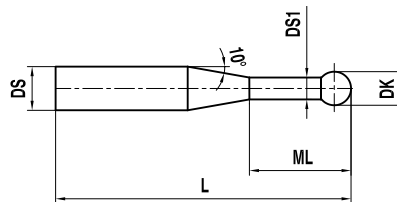
Variant C

**NOTE:** Peg mounted balls from  $\varnothing 0,5$  mm.  $\varnothing < 0,5$  mm brazed.

## Stylus for gear measurement non threaded (carbide) ruby

Carbide stem, ruby ball, non threaded

Pos.	itp Order No	DK	ML1/ML	L	DS1/DS	Weight (g)	Price/Piece (€)
1	KT M5 008 04 035	0,8	4,9	35,4	0,6/4,0	4,4	114,00
2	KT M5 010 04 035	1,0	5,0	35,5	0,8/4,0	4,6	98,00
3	KT M5 010 04 060	1,0	5,0	60,5	0,8/4,0	9,1	103,00
4	KT M5 015 04 035	1,5	5,25	35,75	1,0/4,0	4,7	98,00
5	KT M5 015 04 060	1,5	5,25	60,75	1,0/4,0	9,2	103,00
6	KT M5 020 04 036	2,0	5,5	36,0	1,2/4,0	4,8	67,00
7	KT M5 020 04 061	2,0	8,5	61,0	1,2/4,0	8,8	74,00
8	KT M5 030 04 036	3,0	9,0	36,5	1,8/4,0	4,7	68,00
9	KT M5 030 04 061	3,0	11,5	61,5	1,8 / 4,0	8,9	75,00
10	KT M5 005 04 035	0,5	2,75/4,75	35,25	0,3/1,0/4,0	4,7	114,00



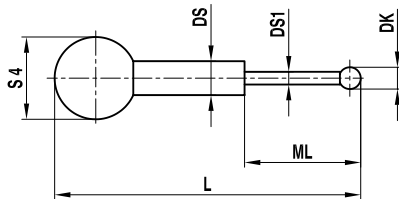
**NOTE:** Peg mounted balls from  $\varnothing$  0,5 mm.  $\varnothing < 0,5$  mm brazed.



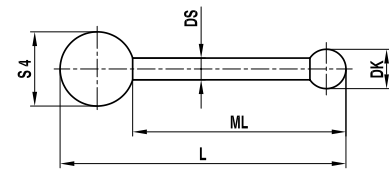
## Stylus for swiveling configurations (carbide) ruby

### S4 steel ball, carbide stem, ruby ball

Pos.	itp Order No	Variant	DK	ML	L	DS1/DS	Weight (g)	Price/Piece (€)
1	KK M5 010 10 017	A	1,0	5,0	17,5	0,8/1,0	0,4	39,00
2	KK M5 020 15 028	B	2,0	24,5	28,5	1,5	0,9	38,00



Variant A



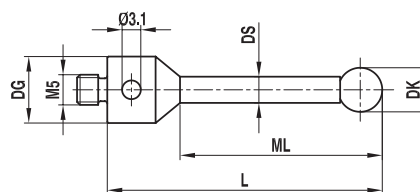
Variant B

**NOTE:** Peg mounted balls.

## Stylus (steel) ruby

### Base and stem high strength stainless steel, ruby ball

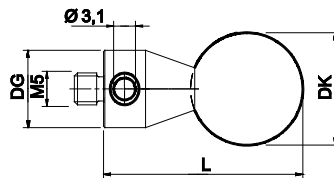
Pos.	itp Ordner No	DK	ML	DG	L	DS	Weight (g)	Price/Piece (€)
1	TI M5 050 11 050	5,0	40,0	11,0	50,0	3,5	8,8	53,00
2	TI M5 050 11 053	5,0	43,0	11,0	53,0	3,5	9,5	55,00
3	TI M5 050 11 075	5,0	65,0	11,0	75,0	3,5	10,7	59,00
4	TI M5 080 11 063	8,0	50,5	11,0	63,5	6,0	18,0	60,00
5	TI M5 080 11 075	8,0	62,0	11,0	75,0	6,0	21,2	65,00
6	TI M5 080 11 100	8,0	87,0	11,0	100,0	6,0	27,0	70,00
7	TI M5 080 11 114	8,0	101,5	11,0	114,5	6,0	29,1	72,00



## Stylus (steel) ceramic

### Stainless steel stem, ceramic ball

Pos.	itp Order No	DK	DG	L	Weight (g)	Price/Piece (€)
1	TI M5 150 11 028	15,0	11,0	28,0	15,5	149,00
2	TI M5 160 11 028	16,0	11,0	28,0	6,0	159,00
3	TI M5 180 11 028	18,0	11,0	28,0	6,0	169,00
4	TI M5 200 11 033	20,0	11,0	33,0	6,0	198,00
5	TI M5 300 11 043	30,0	11,0	43,00	6,0	289,00

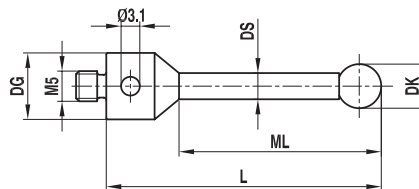


**NOTE:** Cup mounted balls.

## Stylus (steel) silicon nitride

### Base and stem high strength stainless steel, silicon nitride ball

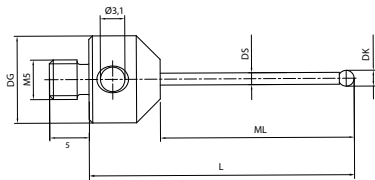
Pos.	itp Ordner No	DK	ML	DG	L	DS	Weight (g)	Price/Piece (€)
1	TI M5 S50 11 050	5,0	40,0	11,0	50,0	3,5	8,8	70,00
2	TI M5 S50 11 053	5,0	43,0	11,0	53,0	3,5	9,0	71,00
3	TI M5 S50 11 075	5,0	65,0	11,0	75,0	3,5	11,1	73,00
4	TI M5 S80 11 063	8,0	50,5	11,0	63,5	6,0	17,8	78,00
5	TI M5 S80 11 075	8,0	62,0	11,0	75,0	6,0	20,1	80,00
6	TI M5 S80 11 100	8,0	87,0	11,0	100,0	6,0	26,7	85,00
7	TI M5 S80 11 114	8,0	101,5	11,0	114,5	6,0	29,0	87,00



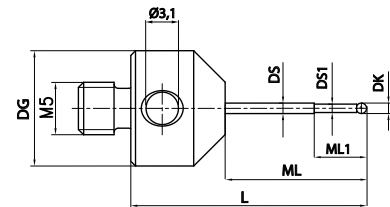
## Stylus (carbide) ruby

### Stainless steel base, carbide stem, ruby ball

Pos.	itp Order No	Variant	DK	ML1/ML	DG	L	DS1/DS	Weight (g)	Price/Piece (€)
1	TH M5 010 11 020/0,8	A	1,0	10,0	11,0	20,0	0,8	5,5	40,00
2	TH M5 010 11 030/0,8	A	1,0	20,0	11,0	30,0	0,8	5,6	40,00
3	NH M5 013 11 032	A	1,35	23,85	11,0	32,85	1,0	5,8	26,00
4	NH M5 015 11 033	A	1,5	24,0	11,0	33,0	1,0	5,8	26,00
5	NH M5 020 10 033	A	2,0	24,5	11,0	33,5	1,0	5,9	23,00
6	NH M5 020 11 033	A	2,0	24,5	11,0	33,5	1,5	6,2	24,00
7	NH M5 025 10 034	A	2,5	25,0	11,0	34,0	1,0	5,9	23,00
8	NH M5 025 11 034	A	2,5	25,0	11,0	34,0	1,5	6,2	24,00
9	NH M5 030 11 025	A	3,0	16,5	11,0	25,5	2,0	6,3	29,00
10	NH M5 050 11 034	A	5,0	25,5	11,0	34,5	3,5	8,8	34,00
11	NH M5 003 11 021	B	0,3	2,3/12,8	11,0	21,8	0,2/1,0	5,7	45,00
12	NH M5 005 11 022	B	0,5	2,5/13,0	11,0	22,0	0,3/1,0	5,7	36,00
13	NH M5 006 11 022	B	0,6	4,6/13,1	11,0	22,1	0,4/1,0	5,6	36,00
14	NH M5 008 11 022	B	0,8	4,8/13,3	11,0	22,3	0,6/1,0	5,6	35,00
15	NH M5 010 11 022	B	1,0	5,0/13,5	11,0	22,5	0,8/1,0	5,7	31,00
16	NH M5 K15 11 033	B	1,5	7,0/24,0	11,0	33,0	1,0/1,5	6,1	35,00



Variant A



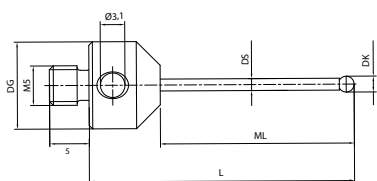
Variant B

**NOTE:** Peg mounted balls, Ø 0,3 brazed.

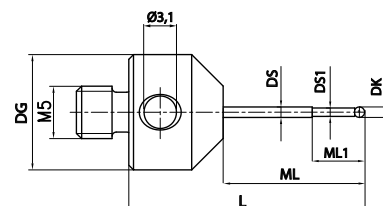
## Stylus (carbide) silicon nitride

### Stainless steel base, carbide stem, silicon nitride ball

Pos.	itp Order No	Variant	DK	ML1/ML	DG	L	DS1/DS	Weight (g)	Price/Piece (€)
1	NH M5 S10 11 022	B	1,0	5,0/13,5	11,0	22,5	0,8/1,0	5,7	39,00
2	NH M5 S15 11 033	A	1,5	24,0	11,0	33,0	1,0	5,8	38,00
3	NH M5 S20 11 033	A	2,0	24,5	11,0	33,5	1,5	6,2	39,00
4	NH M5 S25 11 034	A	2,5	25,0	11,0	34,0	1,0	6,2	43,00



Variant A



Variant B

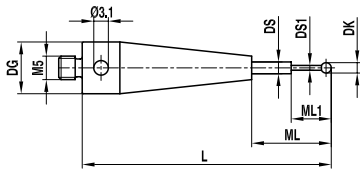
**NOTE:** Peg mounted balls,  $\varnothing$  0,3 brazed.

## Stylus (carbide) ruby DG 10,0

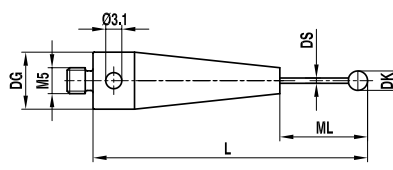
### Titanium base, carbide stem, ruby ball

Pos.	itp Order No	Variant	DK	ML1/ML	DG	L	DS1/DS	EAL/B	Weight (g)	Price/Piece (€)
1	TH M5 007 10 020	B	0,7	5,35	10,0	20,35	0,5	5,0	3,7	45,00
2	TH M5 007 10 030	B	0,7	5,35	10,0	30,35	0,5	5,0	5,2	60,00
3	TH M5 007 10 050	B	0,7	5,35	10,0	50,35	0,5	5,0	9,4	82,00
4	TH M5 007 10 075	B	0,7	5,35	10,0	75,35	0,5	5,0	14,1	82,00
5	TH M5 010 10 020	B	1,0	5,5	10,0	20,5	0,7	5,0	3,7	42,00
6	TH M5 010 10 030	B	1,0	5,5	10,0	30,5	0,7	5,0	5,2	54,00
7	TH M5 010 10 050	B	1,0	5,5	10,0	50,5	0,7	5,0	9,4	78,00
8	TH M5 010 10 075	B	1,0	5,5	10,0	75,5	0,7	5,0	14,1	82,00
9	TH M5 015 10 020	C	1,5	11,75	10,0	20,75	1,0	11,0	2,7	54,00
10	TH M5 015 10 030	B	1,5	12,75	10,0	30,75	1,0	12,0	4,3	54,00
11	TH M5 015 10 040	B	1,5	22,75	10,0	40,75	1,0	20,0	4,4	68,00
12	TH M5 015 10 050	B	1,5	5,75	10,0	50,75	1,0	5,0	9,4	75,00
13	TH M5 015 10 075	B	1,5	5,75	10,0	75,75	1,0	5,0	14,3	75,00
14	TH M5 020 10 021	C	2,0	12,0	10,0	21,0	1,0	11,0	2,7	37,00
15	TH M5 020 10 031	C	2,0	22,0	10,0	31,0	1,0	21,0	2,8	38,00
16	TH M5 020 10 041	C	2,0	32,0	10,0	41,0	1,0	31,0	2,9	39,00
17	TH M5 020 10 051	C	2,0	42,0	10,0	51,0	1,0	41,0	3,0	43,00
18	TH M5 020 45 051	B	2,0	6,0	10,0	51,0	1,0	5,0	9,4	49,00
19	TH M5 025 10 021	C	2,5	12,25	10,0	21,25	1,5	11,0	2,9	37,00
20	TH M5 025 10 031	C	2,5	22,25	10,0	31,25	1,5	21,0	3,1	38,00
21	TH M5 025 10 041	C	2,5	32,25	10,0	41,25	1,5	31,0	3,4	45,00
22	TH M5 025 10 051	B	2,5	6,255	10,0	51,25	1,5	5,0	9,6	49,00

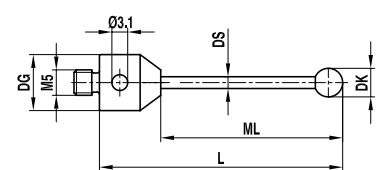
Pos.	itp Order No	Variant	DK	ML1/ML	DG	L	DS1/DS	EAL/B	Weight (g)	Price/Piece (€)
23	TH M5 030 10 031	C	3,0	22,5	10,0	31,5	2,0	55,0	3,6	39,00
24	TH M5 030 10 101	B	3,0	56,5	10,0	101,5	1,5	55,0	10,8	89,00
25	TH M5 002 10 020	A	0,2	2,3/5,15	10,0	20,15	0,18/1,0	2,2	3,7	149,00
26	TH M5 0025 10 020	A	0,25	2,3/5,15	10,0	20,15	0,18/1,0	2,2	3,7	149,00
27	TH M5 003 10 020	A	0,3	3,15/5,15	10,0	20,15	0,2/0,7	3,0	3,7	58,00
28	TH M5 003 10 030	A	0,3	3,15/5,15	10,0	30,15	0,2/0,7	3,0	5,2	68,00
29	TH M5 003 10 050	A	0,3	3,15/5,15	10,0	50,15	0,2/0,7	3,0	9,3	90,00
30	TH M5 003 10 075	A	0,3	3,15/5,15	10,0	75,15	0,2/0,7	3,0	14,1	97,00
31	TH M5 005 10 020	A	0,5	4,25/5,25	10,0	20,25	0,4/0,7	4,0	3,7	49,00
32	TH M5 005 10 030	A	0,5	4,25/5,25	10,0	30,25	0,4/0,7	4,0	9,0	61,00
33	TH M5 005 10 050	A	0,5	4,25/5,25	10,0	50,25	0,4/0,7	4,0	9,4	82,00
34	TH M5 005 10 075	A	0,5	4,25/5,25	10,0	75,25	0,4/0,7	4,0	14,1	90,00



Variant A



Variant B



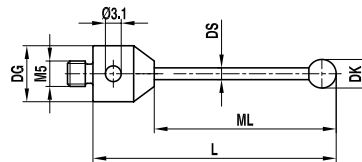
Variant C

**NOTE:** Peg mounted balls.

## Stylus (carbide) silicon nitride DG 10,0

Titanium base, carbide stem, silicon nitride ball

Pos.	itp Order No	Variant	DK	ML1/ML	DG	L	DS1/DS	EAL/B	Weight (g)	Price/Piece (€)
1	TH M5 S20 10 021	C	2,0	12,0	10,0	21,0	1,0	11,0	2,7	61,00

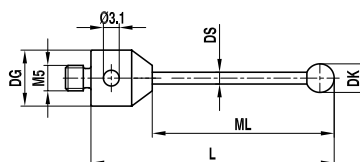


**NOTE:** Peg mounted balls.

## Stylus (carbide) zirconium oxide DG 10,0

Titanium base, carbide stem, zirconium oxide ball

Pos.	itp Order No	DK	ML1/ML	DG	L	DS1/DS	EAL/B	Weight (g)	Price/Piece (€)
1	TH M5 Z20 10 021	2,0	12,0	10,0	21,0	1,0	11,0	2,7	61,00



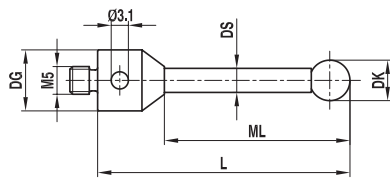
**NOTE:** Peg mounted balls.

## Stylus (carbide) ruby DG 11,0

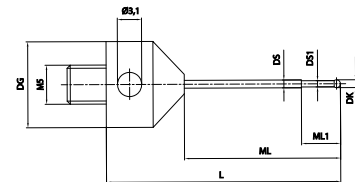
Titanium base, carbide stem, ruby ball

Pos.	itp Order No	Variant	DK	ML1/ML	DG	L	DS1/DS	Weight (g)	Price/Piece (€)
1	TH M5 020 11 020	A	2,0	10,0	11,0	20,0	1,0	3,3	23,00
2	TH M5 020 11 025	A	2,0	15,0	11,0	25,0	1,0	3,4	23,00
3	TH M5 020 11 030	A	2,0	20,0	11,0	30,0	1,5	3,8	23,00
4	TH M5 020 11 040	A	2,0	30,0	11,0	40,0	1,5	4,0	25,00
5	TH M5 030 11 025	A	3,0	15,0	11,0	25,0	2,0	4,0	25,00
6	TH M5 030 11 033	A	3,0	23,5	11,0	33,5	2,0	4,3	25,00
7	TH M5 030 11 040	A	3,0	30,0	11,0	40,0	2,0	4,6	25,00
8	TH M5 030 11 050	A	3,0	40,0	11,0	50,0	2,0	5,1	25,00
9	TH M5 030 11 058	A	3,0	48,0	11,0	58,0	2,0	5,5	25,00
10	TH M5 030 11 075	A	3,0	65,0	11,0	75,0	2,0	6,2	34,00
11	TH M5 035 11 058	A	3,5	48,0	11,0	58,0	2,0	5,5	36,00
12	TH M5 035 11 075	A	3,5	65,0	11,0	75,0	2,5	7,9	36,00
13	TH M5 035 11 100	A	3,5	85,0	11,0	100,0	2,5	12,4	40,00
14	TH M5 040 11 030	A	4,0	20,0	11,0	30,0	2,0	4,3	32,00
15	TH M5 040 11 033	A	4,0	23,5	11,0	33,5	2,0	4,4	32,00
16	TH M5 040 11 064	A	4,0	54,0	11,0	64,0	2,0	5,8	34,00
17	TH M5 045 11 053	A	4,5	43,0	11,0	53,0	3,5	9,2	45,00
18	TH M5 050 11 030	A	5,0	20,0	11,0	30,0	3,5	6,1	30,00
19	TH M5 050 11 050	A	5,0	40,0	11,0	50,0	3,5	8,9	30,00
20	TH M5 050 11 053	A	5,0	43,0	11,0	53,0	3,5	9,3	28,00
21	TH M5 050 11 075	A	5,0	65,0	11,0	75,0	3,5	12,4	32,00
22	TH M5 050 11 100	A	5,0	90,0	11,0	100,0	3,5	15,9	45,00
23	TH M5 060 11 054	A	6,0	44,0	11,0	54,0	3,5	9,5	32,00
24	TH M5 070 11 055	A	7,0	45,0	11,0	55,0	3,5	9,8	34,00

Pos.	itp Order No	Variant	DK	ML1/ML	DG	L	DS1/DS	Weight (g)	Price/Piece (€)
25	TH M5 080 11 063	A	8,0	50,5	11,0	63,5	6,0	24,7	36,00
26	TH M5 080 11 074	A	8,0	61,0	11,0	74,0	6,0	29,1	37,00
27	TH M5 080 11 075	A	8,0	62,0	11,0	75,0	6,0	29,1	37,00
28	TH M5 080 11 100	A	8,0	87,0	11,0	100,0	6,0	39,8	37,00
29	TH M5 080 11 114	A	8,0	101,5	11,0	114,5	6,0	45,6	37,00
30	TH M5 080 11 150	A	8,0	137,0	11,0	150,0	6,0	60,5	69,00
31	TH M5 080 11 200	A	8,0	175,0	11,0	200,0	6,0	84,8	85,00
32	TH M5 090 11 064	A	9,0	51,5	11,0	64,5	6,0	25,1	38,00
33	TH M5 100 11 065	A	10,0	52,5	11,0	65,5	6,0	25,7	49,00
34	TH M5 100 11 118	A	10,0	105,0	11,0	118,0	6,0	47,4	53,00
35	TH M5 100 11 150	A	10,0	137,0	11,0	150,0	6,0	60,7	71,00
36	TH M5 100 11 200	A	10,0	175,0	11,0	200,0	6,0	88,2	89,00
37	TH M5 010 11 020	B	1,0	5,0/10,0	11,0	20,0	0,8/1,0	3,3	31,00
38	TH M5 010 11 025	B	1,0	5,0/15,0	11,0	25,0	0,8/1,0	3,4	35,00
39	TH M5 010 11 030	B	1,0	5,0/20,0	11,0	30,0	0,8/1,0	3,4	37,00
40	TH M5 015 11 030	B	1,5	8,0/20,0	11,0	30,0	1,0/1,5	3,7	26,00



Variant A



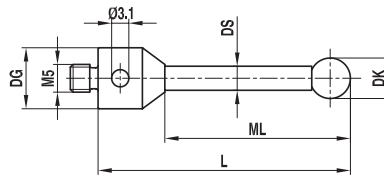
Variant B

**NOTE:** Peg mounted balls.

## Stylus (carbide) ceramic DG 11,0

Titanium base, carbide stem, ceramic ball

Pos.	itp Order No	DK	ML	DG	L	DS	Weight (g)	Price/Piece (€)
1	TH M5 120 11 065	12,0	52,5	11,0	65,5	6,0	21,2	109,00
2	TH M5 120 11 118	12,0	105,0	11,0	118,0	6,0	36,1	118,00
3	TH M5 120 11 200	12,0	175,0	11,0	200,0	6,0	63,6	129,00
4	TH M5 150 11 065	15,0	52,5	11,0	65,5	6,0	29,7	115,00
5	TH M5 150 11 118	15,0	105,0	11,0	118,0	6,0	52,0	124,00
6	TH M5 150 11 200	15,0	175,0	11,0	200,0	6,0	89,2	135,00



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**NOTE:** Peg mounted balls.

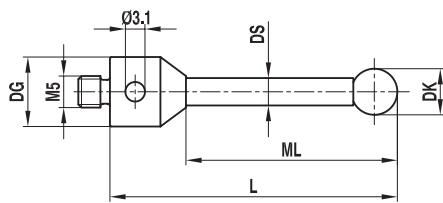
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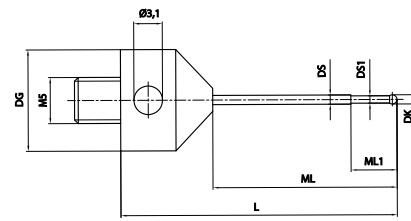
## Stylus (carbide) silicon nitride DG 11,0

Titanium base, carbide stem, silicon nitride ball

Pos.	itp Order No	Variant	DK	ML1/ML	DG	L	DS1/DS	Weight (g)	Price/Piece (€)
1	TH M5 S20 11 020	A	2,0	10,0	11,0	20,0	1,0	3,3	45,00
2	TH M5 S20 11 025	A	2,0	15,0	11,0	25,0	1,0	3,4	46,00
3	TH M5 S20 11 030	A	2,0	20,0	11,0	30,0	1,5	3,7	47,00
4	TH M5 S20 11 040	A	2,0	30,0	11,0	40,0	1,5	4,0	48,00
5	TH M5 S30 11 025	A	3,0	15,0	11,0	25,0	2,0	3,9	49,00
6	TH M5 S30 11 033	A	3,0	23,5	11,0	33,5	2,0	4,3	50,00
7	TH M5 S30 11 050	A	3,0	40,0	11,0	50,0	2,0	5,1	51,00
8	TH M5 S30 11 058	A	3,0	48,0	11,0	58,0	2,0	5,4	57,00
9	TH M5 S40 11 033	A	4,0	23,5	11,0	33,5	2,0	4,3	61,00
10	TH M5 S40 11 064	A	4,0	54,0	11,0	64,0	2,0	5,7	63,00
11	TH M5 S50 11 030	A	5,0	20,0	11,0	30,0	3,5	6,1	63,00
12	TH M5 S50 11 050	A	5,0	40,0	11,0	50,0	3,5	8,9	63,00
13	TH M5 S50 11 053	A	5,0	43,0	11,0	53,0	3,5	9,2	64,00
14	TH M5 S50 11 075	A	5,0	65,0	11,0	75,0	3,5	12,4	66,00
15	TH M5 S50 11 100	A	5,0	90,0	11,0	100,0	3,5	15,8	69,00
16	TH M5 S60 11 054	A	6,0	44,0	11,0	54,0	3,5	9,4	54,00
17	TH M5 S10 11 020	B	1,0	5,0/10,0	11,0	20,0	0,8/1,0	3,3	41,00
18	TH M5 S10 11 025	B	1,0	5,0/15,0	11,0	25,0	0,8/1,0	3,3	41,00
19	TH M5 S10 11 030	B	1,0	5,0/20,0	11,0	30,0	0,8/1,0	3,4	42,00
20	TH M5 S15 11 030	B	1,5	8,0/20,0	11,0	30,0	1,0/1,5	3,7	42,00



Variant A



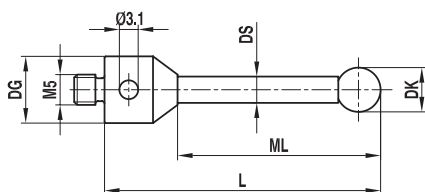
Variant B

**NOTE:** Peg mounted balls for higher strength requirements.

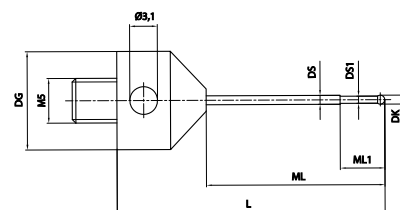
## Stylus (carbide) silicon nitride DG 11,0

Titanium base, carbide stem, silicon nitride ball

Pos.	itp Order No	Variant	DK	ML1/ML	DG	L	DS1/DS	Weight (g)	Price/Piece (€)
1	TH M5 S20 11 020/K	A	2,0	10,0	11,0	20,0	1,0	3,3	29,00
2	TH M5 S20 11 025/K	A	2,0	15,0	11,0	25,0	1,0	3,4	29,00
3	TH M5 S20 11 030/K	A	2,0	20,0	11,0	30,0	1,5	3,7	29,00
4	TH M5 S20 11 040/K	A	2,0	30,0	11,0	40,0	1,5	4,0	29,00
5	TH M5 S30 11 025/K	A	3,0	15,0	11,0	25,0	2,0	3,9	30,00
6	TH M5 S30 11 033/K	A	3,0	23,5	11,0	33,5	2,0	4,3	30,00
7	TH M5 S30 11 050/K	A	3,0	40,0	11,0	50,0	2,0	5,0	30,00
8	TH M5 S30 11 058/K	A	3,0	48,0	11,0	58,0	2,0	5,4	30,00
9	TH M5 S40 11 033/K	A	4,0	23,5	11,0	33,5	2,0	4,3	36,00
10	TH M5 S40 11 064/K	A	4,0	54,0	11,0	64,0	2,0	5,7	36,00
11	TH M5 S50 11 030/K	A	5,0	20,0	11,0	30,0	3,5	5,3	35,00
12	TH M5 S50 11 050/K	A	5,0	40,0	11,0	50,0	3,5	4,0	36,00
13	TH M5 S50 11 053/K	A	5,0	43,0	11,0	53,0	3,5	7,7	36,00
14	TH M5 S50 11 075/K	A	5,0	65,0	11,0	75,0	3,5	9,9	38,00
15	TH M5 S50 11 100/K	A	5,0	90,0	11,0	100,0	3,5	12,5	43,00
16	TH M5 S60 11 054/K	A	6,0	44,0	11,0	54,0	3,5	9,8	37,00
17	TH M5 S70 11 055/K	A	7,0	45,0	11,0	55,0	3,5	8,1	42,00
18	TH M5 S80 11 063/K	A	8,0	50,5	11,0	63,5	6,0	18,8	42,00
19	TH M5 S80 11 075/K	A	8,0	62,0	11,0	75,0	6,0	22,1	48,00
20	TH M5 S80 11 100/K	A	8,0	87,0	11,0	100,0	6,0	30,0	50,00
21	TH M5 S80 11 114/K	A	8,0	101,5	11,0	114,5	6,0	33,5	51,00
22	TH M5 S90 11 064/K	A	9,0	51,5	11,0	64,5	6,0	19,6	49,00
23	TH M5 S100 11 065/K	A	10,0	52,5	11,0	65,5	6,0	19,6	55,00
24	TH M5 S100 11 118/K	A	10,0	105,0	11,0	118,0	6,0	35,0	61,00
25	TH M5 S100 11 150/K	A	10,0	135,0	11,0	150,0	6,0	44,3	63,00
26	TH M5 S10 11 020/K	B	1,0	5,0/10,0	11,0	20,0	0,8/1,0	3,5	29,00
27	TH M5 S10 11 025/K	B	1,0	5,0/15,0	11,0	25,0	0,8/1,0	3,4	29,00
28	TH M5 S10 11 030/K	B	1,0	5,0/20,0	11,0	30,0	0,8/1,0	3,4	29,00
29	TH M5 S15 11 030/K	B	1,5	8,0/20,0	11,0	30,0	1,0/1,5	3,6	29,00



Variant A



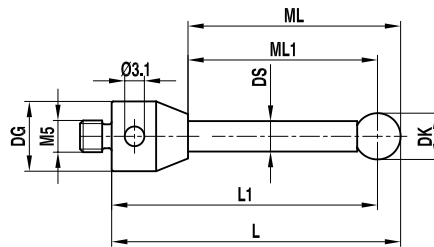
Variant B

**NOTE:** Cup mounted balls.

## Stylus (carbide) ruby DG 12,0

Titanium base, carbide stem, ruby ball

Pos.	itp Order No	DK	ML1/ML	DG	L1/L	DS	Weight (g)	Price/Piece (€)
1	TH M5 015 12 028	1,5	7,0/7,75	12,0	28,0/28,75	1,0	10,2	58,00
2	TH M5 015 12 040	1,5	19,0/19,75	12,0	40,0/40,75	1,0	10,0	65,00
3	TH M5 020 12 030	2,0	18,5/19,5	12,0	30,0/31,0	1,5	7,3	38,00
4	TH M5 020 12 035	2,0	23,5/24,5	12,0	35,0/36,0	1,5	7,5	39,00
5	TH M5 020 12 041	2,0	30,0/31,0	12,0	41,0/42,0	1,5	7,6	41,00
6	TH M5 020 12 060	2,0	39,5/40,5	12,0	60,0/61,0	1,5	11,6	59,00
7	TH M5 030 12 035	3,0	24,0/25,5	12,0	35,0/36,5	2,0	8,2	42,00
8	TH M5 030 12 050	3,0	39,0/40,5	12,0	50,0/51,5	2,0	8,8	44,00
9	TH M5 035 12 091	3,5	78,0/79,75	12,0	91,0/92,75	3,0	16,1	68,00
10	TH M5 040 12 055	4,0	42,0/44,0	12,0	55,0/57,0	3,0	12,5	58,00
11	TH M5 040 12 080	4,0	69,0/71,0	12,0	80,0/82,0	2,5	12,1	72,00
12	TH M5 050 12 060	5,0	49,0/51,5	12,0	60,0/62,5	3,5	14,1	59,00
13	TH M5 050 12 080	5,0	69,0/71,5	12,0	80,0/82,5	3,5	17,0	60,00
14	TH M5 080 12 068	8,0	50,0/54,0	12,0	68,0/72,0	3,0	16,4	72,00
15	TH M5 080 12 090	8,0	74,0/78,0	12,0	90,0/94,0	6,0	41,8	92,00
16	TH M5 080 12 125	8,0	109,0/113,0	12,0	125,0/129,0	6,0	59,0	95,00
17	TH M5 080 12 176	8,0	160,0/164,0	12,0	176,0/180,0	6,0	76,8	99,00

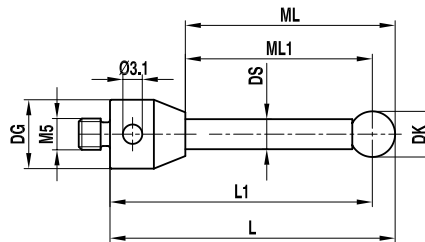


**NOTE:** Peg mounted balls.

## Stylus (carbide) silicon nitride DG 12,0

Titanium base, carbide stem, silicon nitride ball

Pos.	itp Order No	DK	ML1/ML	DG	L1/L	DS	Weight (g)	Price/Piece (€)
1	TH M5 S15 12 028	1,5	7,0/7,75	12,0	28,0/28,75	1,0	10,3	73,00
2	TH M5 S15 12 040	1,5	19,0/19,75	12,0	40,0/40,75	1,0	10,3	80,00
3	TH M5 S20 12 030	2,0	18,5/19,5	12,0	30,0/31,0	1,5	7,3	57,00
4	TH M5 S20 12 035	2,0	23,5/24,5	12,0	35,0/36,0	1,5	7,8	58,00
5	TH M5 S20 12 041	2,0	30,0/31,0	12,0	41,0/40,0	1,5	7,6	60,00
6	TH M5 S20 12 060	2,0	39,5/40,5	12,0	60,0/61,0	1,5	11,6	84,00
7	TH M5 S30 12 035	3,0	24,0/25,5	12,0	35,0/36,5	2,0	8,1	74,00
8	TH M5 S30 12 050	3,0	39,0/40,5	12,0	50,0/51,5	2,0	8,8	62,00
9	TH M5 S35 12 091	3,5	78,0/79,75	12,0	91,0/92,75	3,0	16,2	93,00
10	TH M5 S40 12 055	4,0	42,0/44,0	12,0	55,0/57,0	3,0	13,0	78,00
11	TH M5 S40 12 080	4,0	69,0/71,0	12,0	80,0/82,0	2,5	12,1	87,00
12	TH M5 S50 12 060	5,0	49,0/51,5	12,0	60,0/62,5	3,5	14,8	85,00
13	TH M5 S50 12 080	5,0	69,0/71,5	12,0	80,0/82,5	3,5	17,0	86,00
14	TH M5 S80 12 068	8,0	50,0/54,0	12,0	68,0/72,0	3,0	15,9	92,00
15	TH M5 S80 12 090	8,0	74,0/78,0	12,0	90,0/94,0	6,0	32,2	123,00
16	TH M5 S80 12 125	8,0	109,0/113,0	12,0	125,0/129,0	6,0	58,0	133,00
17	TH M5 S80 12 176	8,0	160,0/164,0	12,0	176,0/180,0	6,0	80,0	138,00

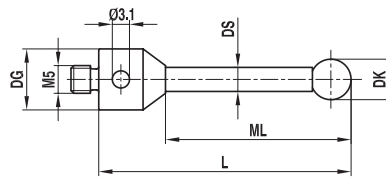


**NOTE:** Peg mounted balls.

## Stylus (carbide) ruby DG 19,0

Titanium base, carbide stem, ruby ball

Pos.	itp Order No	DK	ML1/ML	DG	L	DS1/DS	Weight (g)	Price/Piece (€)
1	TH M5 080 19 063	8,0	41,5	19,0	63,5	6,0	35,9	39,00
2	TH M5 080 19 114	8,0	92,5	19,0	114,5	6,0	56,8	47,00
3	TH M5 090 19 064	9,0	42,5	19,0	64,5	6,0	37,5	46,00
4	TH M5 100 19 065	10,0	43,5	19,0	65,5	6,0	36,5	65,00

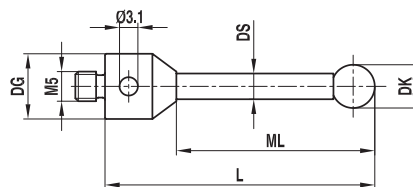


**NOTE:** Peg mounted balls.

## Stylus ScanMax (carbide) carbide

Titanium base, carbide stem and ball

Pos.	itp Order No	DK	ML	DG	L	DS	Weight (g)	Price/Piece (€)
1	TH M5 H30 11 033	3,0	23,5	11,0	33,5	2,0	4,5	65,00
2	TH M5 H50 11 105	5,0	95,0	11,0	105,0	3,5	17,2	75,00
3	TH M5 H80 11 063	8,0	50,5	11,0	63,5	6,0	28,8	75,00

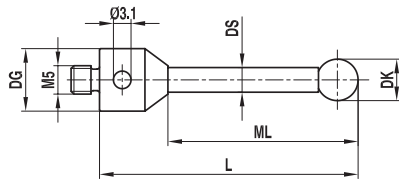


**NOTE:** Peg mounted balls.

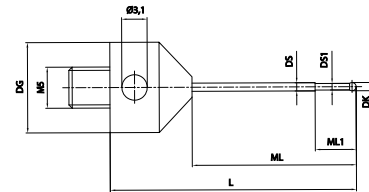
## Stylus ULTRA Scanning (carbide) diamond-coated

### Titanium base, carbide stem, diamond-coated ball

Pos.	itp Order No	Variant	DK	ML1/ML	DG	L	DS1/DS	Weight (g)	Price/Piece (€)
1	TH M5 DC15 11 040	A	1,5	30,0	11,0	40,0	1,0	3,6	479,00
2	TH M5 DC20 11 030	A	2,0	20,0	11,0	30,0	1,5	3,7	479,00
3	TH M5 DC20 11 040	A	2,0	30,0	11,0	40,0	1,5	4,0	479,00
4	TH M5 DC30 11 033	A	3,0	23,5	11,0	33,5	2,0	4,3	479,00
5	TH M5 DC30 11 050	A	3,0	40,0	11,0	50,0	2,0	5,1	479,00
6	TH M5 DC30 11 058	A	3,0	48,0	11,0	58,0	2,0	5,4	479,00
7	TH M5 DC40 11 064	A	4,0	54,0	11,0	64,0	2,0	5,7	479,00
8	TH M5 DC50 11 050	A	5,0	40,0	11,0	50,0	3,5	8,9	659,00
9	TH M5 DC50 11 053	A	5,0	43,0	11,0	53,0	3,5	9,2	659,00
10	TH M5 DC50 11 075	A	5,0	65,0	11,0	75,0	3,5	12,4	659,00
11	TH M5 DC80 11 063	A	8,0	50,5	11,0	63,5	6,0	18,8	749,00
12	TH M5 DC80 11 114	A	8,0	101,5	11,0	114,5	6,0	33,5	749,00
13	TH M5 DC100 11 065	A	10,0	52,5	11,0	65,5	6,0	19,6	749,00
14	TH M5 DC100 11 118	A	10,0	105,0	11,0	118,0	6,0	35,0	749,00
15	TH M5 DC10 11 030	B	1,0	5,0/20,0	11,0	30,0	0,8/1,0	3,4	479,00
16	TH M5 DC15 11 030	B	1,5	8,0/20,0	11,0	30,0	1,0/1,5	3,7	479,00



Variant A



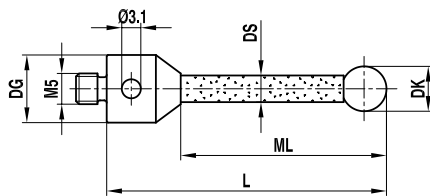
Variant B

**NOTE:** Balls actively brazed to the stem.

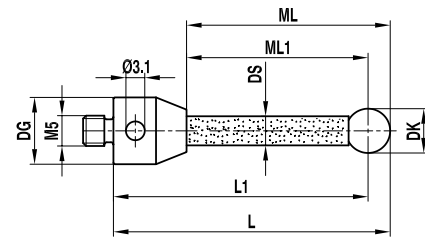
## Stylus (ceramic) ruby

### Titanium base, ceramic stem, ruby ball

Pos.	itp Order No	Variant	DK	ML1/ML	DG	L1/L	DS1/DS	Weight (g)	Price/Piece (€)
1	TK M5 050 11 053	A	5,0	43,0	11,0	53,0	3,5	4,4	29,00
2	TK M5 060 11 054	A	6,0	44,0	11,0	54,0	3,5	4,6	32,00
3	TK M5 070 11 055	A	7,0	45,0	11,0	55,0	3,5	4,9	36,00
4	TK M5 080 11 063	A	8,0	50,5	11,0	63,5	6,0	8,5	39,00
5	TK M5 080 11 114	A	8,0	101,5	11,0	114,5	6,0	12,9	45,00
6	TK M5 090 11 064	A	9,0	51,5	11,0	64,5	6,0	7,9	40,00
7	TK M5 100 11 065	A	10,0	52,5	11,0	65,5	6,0	9,6	45,00
8	TK M5 080 19 063	A	8,0	41,5	19,0	63,5	6,0	20,7	40,00
9	TK M5 080 19 114	A	8,0	92,5	19,0	114,5	6,0	24,6	46,00
10	TK M5 090 19 064	A	9,0	42,5	19,0	64,5	6,0	21,1	45,00
11	TK M5 100 19 065	A	10,0	43,5	19,0	65,5	6,0	23,0	49,00
12	TK M5 080 12 090	B	8,0	74,0/78,0	12,0	90,0/94,0	6,0	15,7	80,00
13	TK M5 080 12 125	B	8,0	109,0/113,0	12,0	125,0/129,0	6,0	18,8	88,00
14	TK M5 150 12 090	B	15,0	74,0/81,5	12,0	90,0/97,5	6,0	23,7	254,00



Variant A



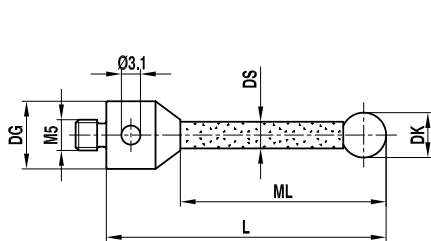
Variant B

**NOTE:** Cup mounted balls.

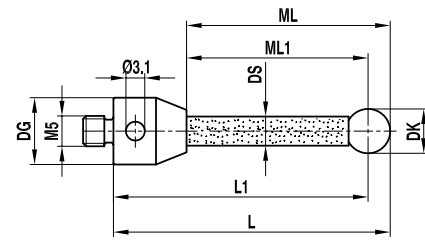
## Stylus (ceramic) silicon nitride

### Titanium base, ceramic stem, silicon nitride ball

Pos.	itp Order No	Variant	DK	ML1/ML	DG	L1/L	DS1/DS	Weight (g)	Price/Piece (€)
1	TK M5 S50 11 053	A	5,0	43,0	11,0	53,0	3,5	4,3	54,00
2	TK M5 S60 11 054	A	6,0	44,0	11,0	54,0	3,5	4,7	57,00
3	TK M5 S70 11 055	A	7,0	45,0	11,0	55,0	3,5	4,8	61,00
4	TK M5 S80 11 063	A	8,0	50,5	11,0	63,5	6,0	8,4	64,00
5	TK M5 S80 11 114	A	8,0	101,5	11,0	114,5	6,0	12,7	72,00
6	TK M5 S90 11 064	A	9,0	51,5	11,0	64,5	6,0	8,8	73,00
7	TK M5 S100 11 065	A	10,0	52,5	11,0	65,5	6,0	9,2	79,00
8	TK M5 S80 12 090	B	8,0	74,0/78,0	12,0	90,0/94,0	6,0	15,7	139,00
9	TK M5 S80 12 125	B	8,0	109,0/113,0	12,0	125,0/129,0	6,0	21,9	149,00



Variant A



Variant B

**NOTE:** Cup mounted balls.

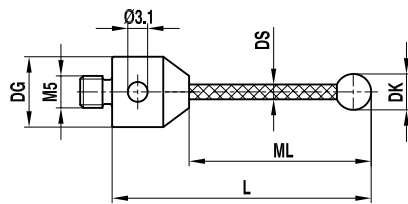
## Stylus (carbon fiber) ruby DG 10,0

### Titanium base, thermostable carbon fiber stem, ruby ball

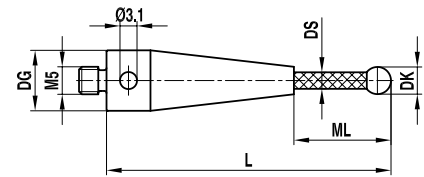
Pos.	itp Order No	Variant	DK	ML	DG	L	DS	Weight (g)	Price/Piece (€)
1	TC M5 025 10 051	A	2,5	42,25	10,0	51,25	2,0	2,7	51,00
2	TC M5 030 10 021	A	3,0	12,5	10,0	21,5	2,0	2,6	43,00
3	TC M5 030 10 031	A	3,0	22,5	10,0	31,5	2,0	2,6	46,00
4	TC M5 030 10 041	A	3,0	32,5	10,0	41,5	2,0	2,7	51,00
5	TC M5 030 10 051	A	3,0	42,5	10,0	51,5	2,0	2,7	54,00
6	TC M5 030 10 101	B	3,0	21,5	10,0	101,5	2,0	14,3	79,00
7	TC M5 040 10 022	A	4,0	13,0	10,0	22,0	2,0	2,6	34,00
8	TC M5 040 10 032	A	4,0	23,0	10,0	32,0	2,0	2,7	35,00
9	TC M5 040 10 052	A	4,0	43,0	10,0	52,0	2,0	2,8	45,00
10	TC M5 040 10 077	A	4,0	68,0	10,0	77,0	3,0	3,4	59,00
11	TC M5 040 50 102	B	4,0	52,0	10,0	102,0	3,0	10,7	85,00
12	TC M5 040 80 102	B	4,0	22,0	10,0	102,0	2,0	14,4	79,00
13	TC M5 050 10 022	A	5,0	13,5	10,0	22,5	3,0	2,8	46,00
14	TC M5 050 10 032	A	5,0	23,5	10,0	32,5	3,0	3,0	49,00
15	TC M5 050 10 052	A	5,0	43,5	10,0	52,5	3,0	3,2	59,00
16	TC M5 050 10 077	A	5,0	68,5	10,0	77,5	3,0	3,5	62,00



Pos.	itp Order No	Variant	DK	ML	DG	L	DS	Weight (g)	Price/Piece (€)
17	TC M5 050 10 102	A	5,0	93,5	10,0	102,5	3,0	3,8	85,00
18	TC M5 050 50 102	B	5,0	52,5	10,0	102,5	3,0	10,7	76,00
19	TC M5 060 10 053	A	6,0	42,0	10,0	53,0	4,0	4,1	40,00
20	TC M5 060 10 078	A	6,0	67,0	10,0	78,0	4,0	4,6	59,00
21	TC M5 060 10 103	A	6,0	92,0	10,0	103,0	4,0	5,2	89,00
22	TC M5 060 50 103	B	6,0	53,0	10,0	103,0	4,0	12,22	79,00
23	TC M5 060 10 153	A	6,0	138,0	10,0	153,0	4,0	7,0	128,00
24	TC M5 060 10 203	A	6,0	188,0	10,0	203,0	4,0	7,8	169,00
25	TC M5 060 10 303	A	6,0	288,0	10,0	303,0	4,0	10,0	175,00
26	TC M5 080 10 054	A	8,0	41,0	10,0	54,0	6,0	5,9	65,00
27	TC M5 080 10 079	A	8,0	66,0	10,0	79,0	6,0	7,2	89,00
28	TC M5 080 10 104	A	8,0	91,0	10,0	104,0	6,0	8,3	96,00
29	TC M5 080 50 104	B	8,0	54,0	10,0	104,0	6,0	15,6	92,00
30	TC M5 080 10 154	A	8,0	135,0	10,0	154,0	6,0	11,6	125,00
31	TC M5 080 10 204	A	8,0	185,0	10,0	204,0	6,0	14,2	189,00
32	TC M5 080 10 304	A	8,0	285,0	10,0	304,0	6,0	19,2	175,00
33	TC M5 100 10 055	A	10,0	42,0	10,0	55,0	6,0	6,9	82,00
34	TC M5 100 10 080	A	10,0	67,0	10,0	80,0	6,0	8,1	90,00
35	TC M5 100 10 105	A	10,0	92,0	10,0	105,0	6,0	9,2	102,00
36	TC M5 100 50 105	B	10,0	55,0	10,0	105,0	6,0	16,6	98,00
37	TC M5 100 10 155	A	10,0	136,0	10,0	155,0	6,0	12,6	125,00
38	TC M5 100 10 205	A	10,0	186,0	10,0	205,0	6,0	15,1	159,00
39	TC M5 100 10 305	A	10,0	286,0	10,0	305,0	6,0	20,3	198,00



Variant A



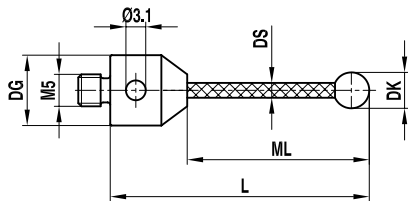
Variant B

**NOTE:** Peg mounted balls. Thermostable carbon fiber E-Modul about 450 GPa.

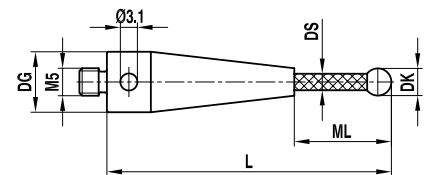
## Stylus (carbon fiber) silicon nitride DG 10,0

Titanium base, thermostable carbon fiber stem, silicon nitride ball

Pos.	itp Order No	Variant	DK	ML	DG	L	DS	Weight (g)	Price/Piece (€)
1	TC M5 S40 10 022	A	4,0	13,0	10,0	22,0	2,0	2,7	67,00
2	TC M5 S60 10 053	A	6,0	42,0	10,0	53,0	4,0	4,0	97,00
3	TC M5 S60 50 103	B	6,0	53,0	10,0	103,0	4,0	12,0	137,00



Variant A



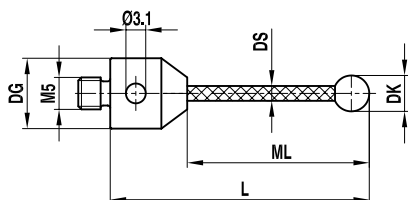
Variant B

**NOTE:** Peg mounted balls. Thermostable carbon fiber E-Modul about 450 GPa.

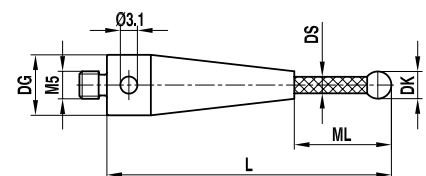
## Stylus (carbon fiber) zirconium oxide DG 10,0

Titanium base, thermostable carbon fiber stem, zirconium oxide ball

Pos.	itp Order No	Variant	DK	ML	DG	L	DS	Weight (g)	Price/Piece (€)
1	TC M5 Z40 10 022	A	4,0	13,0	10,0	22,0	2,0	2,8	67,00
2	TC M5 Z60 10 053	A	6,0	42,0	10,0	53,0	4,0	4,3	97,00
3	TC M5 Z60 50 103	B	6,0	53,0	10,0	103,0	4,0	12,4	137,00



Variant A



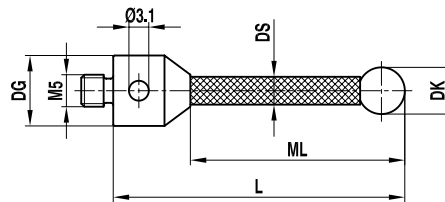
Variant B

**NOTE:** Peg mounted balls. Thermostable carbon fiber E-Modul about 450 GPa.

## Stylus (carbon fiber) ruby DG 11,0

Titanium base, thermostable carbon fiber stem, ruby ball

Pos.	itp Order No	DK	ML	DG	L	DS	Weight (g)	Price/Piece (€)
1	TC M5 030 11 025	3,0	15,0	11,0	25,0	2,0	3,3	39,00
2	TC M5 030 11 033	3,0	23,5	11,0	33,5	2,0	3,3	40,00
3	TC M5 030 11 050	3,0	40,0	11,0	50,0	2,0	3,4	41,00
4	TC M5 030 11 058	3,0	48,0	11,0	58,0	2,0	3,5	47,00
5	TC M5 040 11 033	4,0	23,5	11,0	33,5	2,0	3,4	43,00
6	TC M5 040 11 064	4,0	54,0	11,0	64,0	2,0	3,5	52,00
7	TC M5 050 11 050	5,0	40,0	11,0	50,0	3,5	4,0	48,00
8	TC M5 050 11 053	5,0	43,0	11,0	53,0	3,5	4,4	48,00
9	TC M5 050 11 075	5,0	65,0	11,0	75,0	3,5	4,3	49,00
10	TC M5 050 11 100	5,0	90,0	11,0	100,0	3,5	4,9	59,00
11	TC M5 060 11 054	6,0	44,0	11,0	54,0	3,5	4,6	51,00
12	TC M5 070 11 055	7,0	45,0	11,0	55,0	3,5	4,9	59,00
13	TC M5 080 11 063	8,0	50,5	11,0	63,5	6,0	6,9	63,00
14	TC M5 080 11 075	8,0	62,0	11,0	75,0	6,0	7,2	65,00
15	TC M5 080 11 100	8,0	87,0	11,0	100,0	6,0	8,8	68,00
16	TC M5 080 11 114	8,0	101,5	11,0	114,5	6,0	9,6	70,00
17	TC M5 080 11 150	8,0	137,0	11,0	150,0	6,0	11,4	89,00
18	TC M5 080 11 200	8,0	187,0	11,0	200,0	6,0	13,4	98,00
19	TC M5 090 11 064	9,0	51,5	11,0	64,5	6,0	7,4	66,00
20	TC M5 100 11 065	10,0	52,5	11,0	65,5	6,0	7,7	75,00
21	TC M5 100 11 118	10,0	105,0	11,0	118,0	6,0	10,7	85,00
22	TC M5 100 11 150	10,0	137,0	11,0	150,0	6,0	12,3	105,00
23	TC M5 100 11 200	10,0	187,0	11,0	200,0	6,0	13,6	116,00

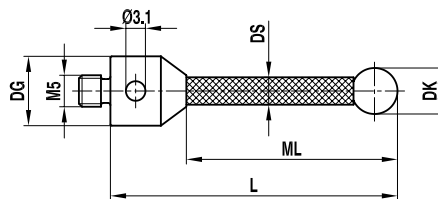


**NOTE:** Peg mounted balls. Thermostable carbon fiber E-Modul about 450 GPa.

## Stylus (carbon fiber) silicon nitride DG 11,0

Titanium base, thermostable carbon fiber stem, silicon nitride ball

Pos.	itp Order No	DK	ML	DG	L	DS	Weight (g)	Price/Piece (€)
1	TC M5 S30 11 025	3,0	15,0	11,0	25,0	2,0	4,0	54,00
2	TC M5 S30 11 033	3,0	23,5	11,0	33,5	2,0	4,2	55,00
3	TC M5 S30 11 050	3,0	40,0	11,0	50,0	2,0	3,4	56,00
4	TC M5 S30 11 058	3,0	48,0	11,0	58,0	2,0	3,4	62,00
5	TC M5 S40 11 033	4,0	23,5	11,0	33,5	2,0	4,2	65,00
6	TC M5 S40 11 064	4,0	54,0	11,0	64,0	2,0	3,5	67,00
7	TC M5 S50 11 050	5,0	40,0	11,0	50,0	3,5	3,9	63,00
8	TC M5 S50 11 053	5,0	43,0	11,0	53,0	3,5	3,9	63,00
9	TC M5 S50 11 075	5,0	65,0	11,0	75,0	3,5	4,3	64,00
10	TC M5 S50 11 100	5,0	90,0	11,0	100,0	3,5	4,8	74,00
11	TC M5 S60 11 054	6,0	44,0	11,0	54,0	3,5	4,2	66,00
12	TC M5 S70 11 055	7,0	45,0	11,0	55,0	3,5	4,4	74,00
13	TC M5 S80 11 063	8,0	50,5	11,0	63,5	6,0	6,9	79,00
14	TC M5 S80 11 075	8,0	62,0	11,0	75,0	6,0	7,4	80,00
15	TC M5 S80 11 100	8,0	87,0	11,0	100,0	6,0	8,2	83,00
16	TC M5 S80 11 114	8,0	101,5	11,0	114,5	6,0	9,4	85,00
17	TC M5 S80 11 150	8,0	137,0	11,0	150,0	6,0	11,2	104,00
18	TC M5 S80 11 200	8,0	187,0	11,0	200,0	6,0	13,7	113,00
19	TC M5 S90 11 064	9,0	51,5	11,0	64,5	6,0	7,2	81,00
20	TC M5 S100 11 065	10,0	52,5	11,0	65,5	6,0	7,5	90,00
21	TC M5 S100 11 118	10,0	105,0	11,0	118,0	6,0	10,2	100,00
22	TC M5 S100 11 150	10,0	137,0	11,0	150,0	6,0	11,9	120,00
23	TC M5 S100 11 200	10,0	187,0	11,0	200,0	6,0	14,4	131,00

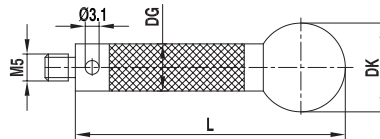


**NOTE:** Peg mounted balls until  $\varnothing$  6,0 mm larger  $\varnothing$  cup mounted balls. Thermostable carbon fiber E-Modul about 450 GPa.

## Stylus (carbon fiber) ceramic DG 11,0

Titanium base, thermostable carbon fiber stem, ceramic ball

Pos.	itp Order No	DK	DG	L	Weight (g)	Price/Piece (€)
1	TC M5 150 11 200	15,0	11,0	200,0	28,5	198,00
2	TC M5 150 11 300	15,0	11,0	300,0	37,1	259,00
3	TC M5 150 11 400	15,0	11,0	400,0	45,7	298,00
4	TC M5 150 11 500	15,0	11,0	500,0	54,3	348,00
5	TC M5 180 11 200	18,0	11,0	200,0	33,5	259,00
6	TC M5 180 11 300	18,0	11,0	300,0	42,1	298,00
7	TC M5 180 11 400	18,0	11,0	400,0	50,7	348,00
8	TC M5 180 11 500	18,0	11,0	500,0	59,3	379,00
9	TC M5 200 11 200	20,0	11,0	200,0	37,8	298,00
10	TC M5 200 11 300	20,0	11,0	300,0	47,1	359,00
11	TC M5 200 11 400	20,0	11,0	400,0	56,4	398,00
12	TC M5 200 11 500	20,0	11,0	500,0	65,7	438,00
13	TC M5 250 11 200	25,0	11,0	200,0	53,7	359,00
14	TC M5 250 11 300	25,0	11,0	300,0	63,8	398,00
15	TC M5 250 11 400	25,0	11,0	400,0 <td>73,1</td> <td>438,00</td>	73,1	438,00
16	TC M5 250 11 500	25,0	11,0	500,0	80,0	478,00

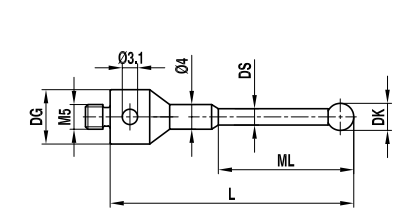


**NOTE:** Cup mounted balls brazed. Thermostable carbon fiber E-Modul about 450 GPa.

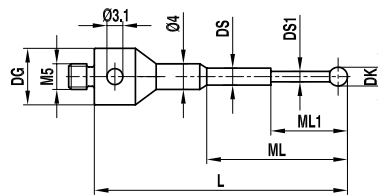
## Micro ball stylus (carbide) ruby

### Stainless steel base, carbide stem, ruby ball

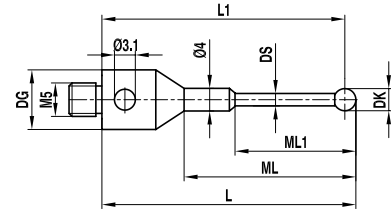
Pos.	itp Order No	Variant	DK	ML1/ML	DG	L1/L	DS1/DS	Weight (g)	Price/Piece (€)
1	FH M5 013 11 032	A	1,35	12,0	11,0	32,0	1,0	6,6	37,00
2	FH M5 013 11 044	A	1,35	19,0	11,0	44,0	1,0	7,2	39,00
3	FH M5 015 11 032	A	1,5	12,0	11,0	32,0	1,0	6,7	37,00
4	FH M5 015 11 044	A	1,5	19,0	11,0	44,0	1,0	7,2	39,00
5	FH M5 020 11 032	A	2,0	12,0	11,0	32,0	1,5	6,7	37,00
6	FH M5 020 11 044	A	2,0	19,0	11,0	44,0	1,5	7,6	39,00
7	FH M5 020 11 058	A	2,0	33,0	11,0	58,0	1,5	7,9	38,00
8	FH M5 025 11 032	A	2,5	12,0	11,0	32,0	1,5	6,8	37,00
9	FH M5 025 11 044	A	2,5	19,0	11,0	44,0	1,5	7,5	39,00
10	FH M5 025 11 058	A	2,5	33,0	11,0	58,0	1,5	8,0	41,00
11	FH M5 002 11 032	B	0,2	2,3/12,0	11,0	32,0	0,18/1,0	6,5	149,00
12	FH M5 0025 11 032	B	0,25	2,3/12,0	11,0	32,0	0,18/1,0	6,6	149,00
13	FH M5 003 11 032	B	0,3	2,3/12,0	11,0	32,0	0,2/1,0	6,6	98,00
14	FH M5 005 11 032	B	0,5	2,5/12,0	11,0	32,0	0,3/1,0	6,6	95,00
15	FH M5 006 11 032	B	0,6	4,6/12,0	11,0	32,0	0,4/1,0	6,6	92,00
16	FH M5 008 11 032	B	0,8	4,8/12,0	11,0	32,0	0,6/1,0	6,5	44,00
17	FH M5 010 11 032	B	1,0	5,0/12,0	11,0	32,0	0,8/1,0	6,5	38,00
18	FH M5 020 12 066	C	2,0	16,0/57,0	12,0	66,0/67,0	1,5	11,1	89,00



Variant A



Variant B



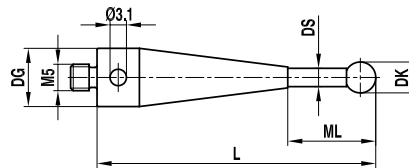
Variant C

**NOTE:** Peg mounted balls, Ø 0,3 brazed.

## Micro ball stylus (carbide) ruby

Titanium base, carbide stem, ruby ball

Pos.	itp Order No	DK	ML	DG	L	DS	Weight (g)	Price/Piece (€)
1	FT M5 010 11 055	1,0	5,0	11,0	55,0	0,8	10,2	79,00
2	FT M5 015 11 055	1,5	5,0	11,0	55,0	1,0	10,2	74,00
3	FT M5 020 11 055	2,0	5,0	11,0	55,0	1,5	12,0	72,00
4	FT M5 025 11 055	2,5	5,0	11,0	55,0	2,0	12,2	74,00
5	FT M5 035 11 055	3,5	10,0	11,0	55,0	2,5	11,3	74,00

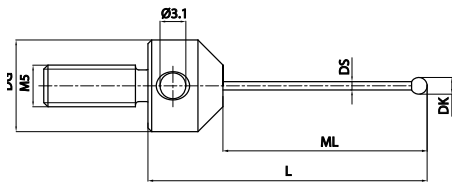


**NOTE:** Peg mounted balls.

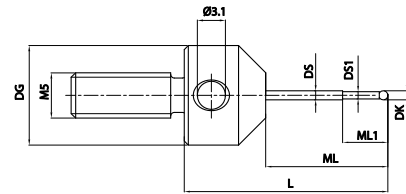
## Long thread stylus (carbide) ruby

Stainless steel base, carbide stem, ruby ball

Pos.	itp Order No	Variant	DK	ML1/ML	DG	L	DS1/DS	Weight (g)	Price/Piece (€)
1	LH M5 013 11 032	A	1,35	23,85	11,0	32,85	1,0	6,7	26,00
2	LH M5 015 11 033	A	1,5	24,0	11,0	33,0	1,0	6,8	26,00
3	LH M5 020 11 033	A	2,0	24,5	11,0	33,5	1,5	7,1	23,00
4	LH M5 025 11 034	A	2,5	25,0	11,0	34,0	1,5	7,1	24,00
5	LH M5 030 11 025	A	3,0	16,5	11,0	25,5	2,0	7,2	29,00
6	LH M5 050 11 034	A	5,0	25,5	11,0	34,5	3,5	9,7	32,00
7	LH M5 003 11 021	B	0,3	2,3/12,8	11,0	21,8	0,2/1,0	6,6	45,00
8	LH M5 005 11 022	B	0,5	2,5/13,0	11,0	22,0	0,3/1,0	6,6	36,00
9	LH M5 006 11 022	B	0,6	4,6/13,1	11,0	22,1	0,4/1,0	6,6	36,00
10	LH M5 008 11 022	B	0,8	4,8/13,3	11,0	22,3	0,6/1,0	6,6	35,00
11	LH M5 010 11 022	B	1,0	5,0/13,5	11,0	22,5	0,8/1,0	6,6	31,00
12	LH M5 030 19 034	A	3,0	16,5	19,0	34,5	2,0	20,6	31,00
13	LH M5 050 19 043	A	5,0	25,5	19,0	43,5	3,5	23,4	36,00



Variant A



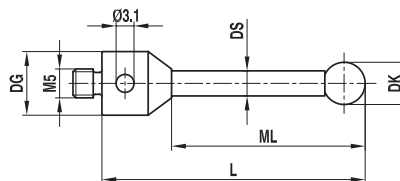
Variant B

**NOTE:** Peg mounted balls,  $\varnothing$  0,3 brazed. Thread length 12,5 mm. With DG 19, the thread length is 20,0 mm.

## Reference stylus (high-strength stainless steel) ruby

Base and stem high-strength stainless steel, ruby ball

Pos.	itp Order No	DK	ML	DG	L	DS	Weight (g)	Price/Piece (€)
1	TH M5 R80 11 063	8,0	50,5	11,0	63,5	6,0	18,0	60,00

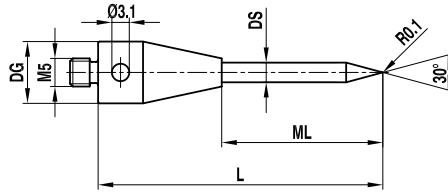




## Stylus pointer carbide

Titanium base, carbide stem

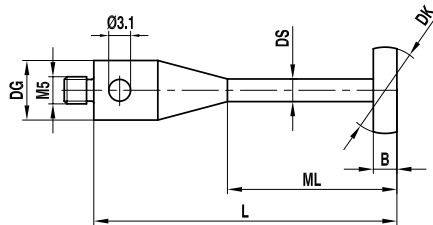
Pos.	itp Order No	DK	ML	DG	L	DS	Weight (g)	Price/Piece (€)
1	IH M5 030 11 061	30°	39,0	11,0	61,0	3,5	12,5	39,00



## Spherical disk stylus steel

Stainless steel base, carbide stem, high-strength steel disk

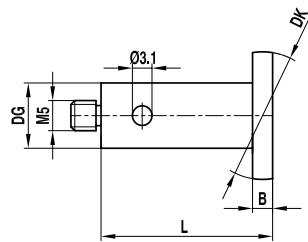
Pos.	itp Order No	DK	ML	DG	L	DS	B	Weight (g)	Price/Piece (€)
1	KH M5 080 12 056	8,0	46,0	12,0	57,0	2,5	1,0	10,8	154,00
2	KH M5 100 12 046	10,0	35,7	12,0	46,7	3,0	0,7	11,4	157,00
3	KH M5 160 12 057	16,0	49,5	12,0	60,5	3,5	2,5	17,9	163,00



## Spherical disk stylus steel

### Aluminium base, high-strength steel disk

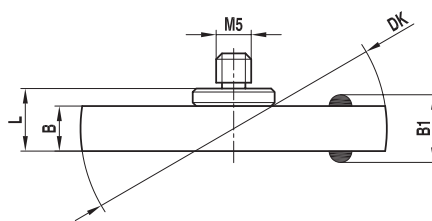
Pos.	itp Order No	DK	DG	L	B	Weight (g)	Price/Piece (€)
1	KI M5 100 07 021	10,0	7,0	21,5	1,5	3,5	94,00
2	KI M5 150 07 040	15,0	7,0	40,0	1,0	5,7	120,00
3	KI M5 200 07 060	20,0	7,0	60,0	1,0	8,9	140,00
4	KI M5 150 10 021	15,0	10,0	21,5	1,5	6,2	95,00



## Spherical disk stylus steel with 2 hemispherical rubies

### Stainless steel stem, high-strength steel disk

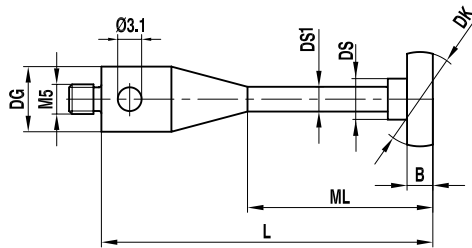
Pos.	itp Order No	DK	L	B1/B	Weight (g)	Price/Piece (€)
1	KI M5 030 12 M50	12,0	5,0	5,0/3,0	3,6	94,00
2	KI M5 030 21 M50	21,0	5,0	5,0/3,0	9,1	98,00
3	KI M5 050 35 M50	35,0	7,0	8,0/5,0	26,3	104,00
4	KI M5 050 63 M50	63,5	7,0	8,0/5,0	71,2	118,00



## Spherical disk stylus steel ScanMax

Stainless steel base, carbide stem, high-strength steel disk

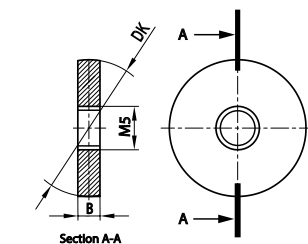
Pos.	itp Order No	DK	ML	DG	L	DS1/DS	B	Weight (g)	Price/Piece (€)
1	KI M5 100 11 065	10,0	55,0	11,0	65,0	3,5/5,5	1,0	12,2	154,00
2	KI M5 100 11 065/2	10,0	55,0	11,0	65,0	3,5/5,5	2,0	12,8	202,00
3	KI M5 150 11 065	15,0	55,0	11,0	65,0	3,5/5,5	1,0	13,0	157,00
4	KI M5 150 11 065/2	15,0	55,0	11,0	65,0	3,5/5,5	2,0	14,5	206,00
5	KI M5 200 11 065	20,0	55,0	11,0	65,0	3,5/5,5	1,0	14,0	242,00
6	KI M5 200 11 065/2	20,0	55,0	11,0	65,0	3,5/5,5	2,0	16,3	209,00
7	KI M5 250 11 065	25,0	55,0	11,0	65,0	3,5/10,0	1,0	17,7	171,00
8	KI M5 250 11 065/2	25,0	55,0	11,0	65,0	3,5/10,0	2,0	21,5	219,00
9	KI M5 300 11 065	30,0	55,0	11,0	65,0	3,5/10,0	2,0	25,3	205,00
10	KI M5 400 11 065	40,0	55,0	11,0	65,0	3,5/10,0	2,0	33,1	251,00



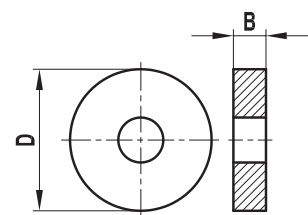
## Spherical disk steel

### High-strength steel

Pos.	itp Order No	Variant	DK	DG	Thread/Bore hole	B	Weight (g)	Price/Piece (€)
1	KI M5 040 15 M50	A	15,0		M5	4,0	4,8	76,00
2	KI M5 040 20 M50	A	20,0		M5	4,0	8,9	76,00
3	KI M5 040 30 M50	A	30,0		M5	4,0	15,7	77,00
4	KI M5 050 40 M50	A	40,0		M5	5,0	32,9	82,00
5	KI M5 050 50 M50	A	50,0		M5	5,0	38,9	82,00
6	KI M5 050 60 M50	A	60,0		M5	5,0	40,3	84,00
7	KI M5 020 20 080	A	20,0		8,0	2,0	4,0	78,00
8	KI M5 040 20 080	A	20,0		8,0	4,0	8,0	83,00
9	KI M5 040 30 080	A	30,0		8,0	4,0	14,7	78,00
10	KI M5 040 40 080	A	40,0		8,0	4,0	21,4	79,00
11	KI M5 050 50 080	A	50,0		8,0	5,0	35,9	87,00
12	KI M5 060 60 080	A	60,0		8,0	6,0	60,5	90,00
13	KI M5 000 11 015	B		11,0	5,0	1,5	0,8	8,00
14	KI M5 000 19 020	B		19,0	5,0	2,0	4,0	9,00



Variant A



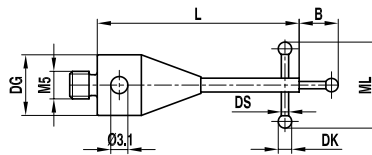
Variant B

**NOTE:** Variant B can only used with longthread stylus.

## Stylus for thread measuring (carbide) ruby

Stainless steel base, carbide stem, ruby ball

Pos.	itp Order No	DK	ML	DG	L	DS	B	Weight (g)	Price/Piece (€)
1	TI M5 005 11 040	0,5	3,5	11,0	40,0	0,4	1,9	11,4	309,00
2	TI M5 008 11 040	0,8	5,0	11,0	40,0	0,6	1,9	11,5	113,00
3	TI M5 013 11 040	1,35	9,0	11,0	40,0	1,0	2,0	11,6	58,00
4	TI M5 018 11 040	1,8	10,0	11,0	40,0	1,0	2,0	11,6	76,00
5	TI M5 023 11 040	2,3	12,0	11,0	40,0	1,0	2,5	11,6	70,00

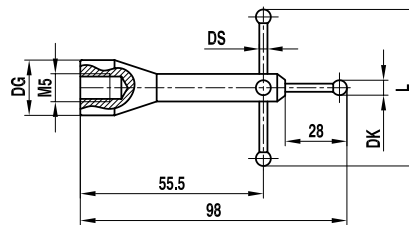


**NOTE:** Peg mounted balls.

## Star stylus (carbide) ruby

Aluminium base, carbide stems, ruby balls

Pos.	itp Order No	DK	DG	L	DS	Weight (g)	Price/Piece (€)
1	SA M5 050 19 080	5,0	19,0	80,0	3,5	62,5	248,00

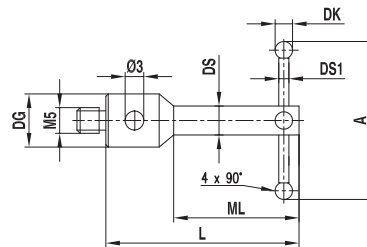


**NOTE:** Peg mounted balls.

## Star stylus (carbide) ruby

Stainless steel base, carbide stems, ruby balls

Pos.	itp Order No	DK	ML	DG	L	DS1/DS	A	Weight (g)	Price/Piece (€)
1	SI M5 006 11 040	0,6	30,0	11,0	40,0	0,4/4,0	8,0	9,1	398,00
2	SI M5 008 11 040	0,8	30,0	11,0	40,0	0,6/4,0	8,0	9,1	358,00
3	SI M5 010 11 040	1,0	30,0	11,0	40,0	0,8/4,0	8,0	9,1	325,00

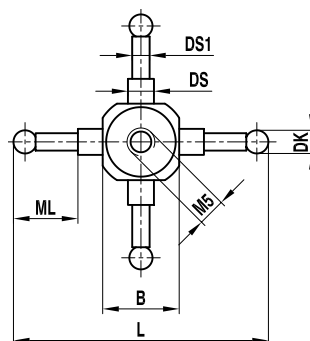


**NOTE:** Peg mounted balls.

## Cube star stylus (carbide) ruby

Titanium cube base, carbide stem, ruby balls

Pos.	itp Order No	DK	ML	DG	L	DS1/DS	Weight (g)	Price/Piece (€)
1	WT M5 010 15 045	1,0	7,0		45,0	0,8/2,0	15,8	108,00
2	WT M5 015 15 045	1,5	7,5		45,0	1,0/2,0	15,8	108,00
3	WT M5 020 15 045	2,0	7,5		45,0	1,5/2,0	17,3	108,00
4	WT M5 025 15 045	2,5	8,0		45,0	1,5/2,0	16,3	117,00
5	WT M5 035 15 045	3,5	15,0		45,0	2,0	17,0	126,00

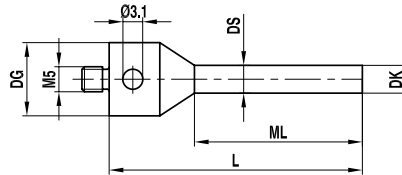


**NOTE:** Peg mounted balls.

## Cylinder stylus carbide

### Stainless steel base, carbide cylinder

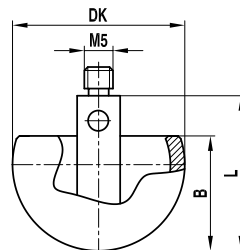
Pos.	itp Order No	DK	ML	DG	L	DS	Weight (g)	Price/Piece (€)
1	ZH M5 030 12 050	3,0	39,0	12,0	50,0	3,0	11,3	60,00



## Hollow ceramic hemisphere

### Stainless steel base, hollow ceramic hemisphere

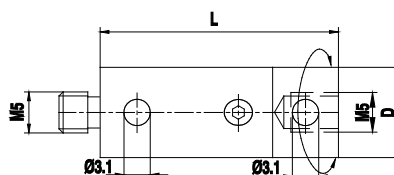
Pos.	itp Order No	DK	DG	L	B	Weight (g)	Price/Piece (€)
1	HK M5 160 10 019	16,0	10,0	19,5	10,0	9,6	229,00
2	HK M5 180 10 020	18,0	10,0	20,0	11,0	9,9	240,00
3	HK M5 220 10 020	22,0	10,0	20,0	13,0	14,4	298,00
4	HK M5 300 10 024	30,0	10,0	24,5	18,0	20,7	372,00



## Rotary adapter

### Titanium

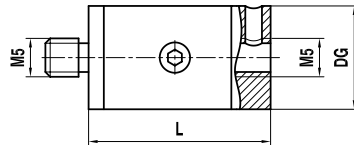
Pos.	itp Order No	DG	L	Weight (g)	Price/Piece (€)
1	DT M5 000 11 029	11,0	29,0	11,0	96,00
2	DT M5 000 18 030	18,0	30,0	31,7	96,00



## Rotary adapter

### Titanium

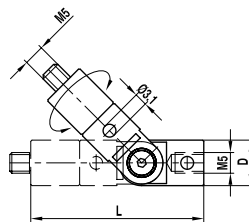
Pos.	itp Order No	DG	L	Weight (g)	Price/Piece (€)
1	DS M5 000 14 027	14,0	27,0	25,9	287,00



## Rotary knuckle

Titanium, slewing range 360°, swing range 180°

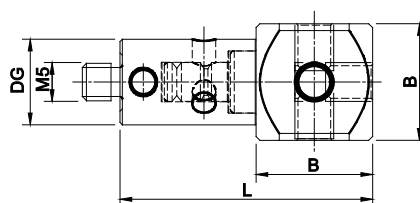
Pos.	itp Order No	DG	L	Weight (g)	Price/Piece (€)
1	DG M5 000 11 051	11,0	51,0	23,2	140,00
2	DG M5 000 18 058	18,0	58,0	71,4	165,00



## Rotary cube element

### Titanium

Pos.	itp Order No	DG	L	B	Weight (g)	Price/Piece (€)
1	DWT M5 000 15 032	11,0	32,5	15,0	18,9	124,00

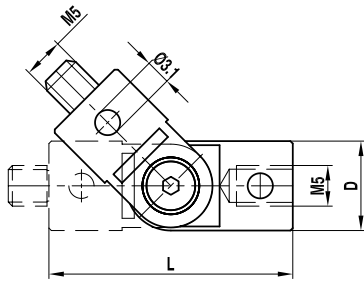




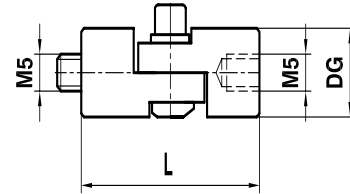
## Knuckle

### Titanium

Pos.	itp Order No	Variant	DG	L	Weight (g)	Price/Piece (€)
1	GT M5 000 11 030	A	11,0	30,0	11,5	69,00
2	GT M5 000 18 036	A	18,0	36,0	37,5	79,00
3	GT M5 000 12 034	B	12,0	34,0	16,5	98,00
4	GT M5 000 18 040	B	18,0	40,0	39,9	105,00



Variant A

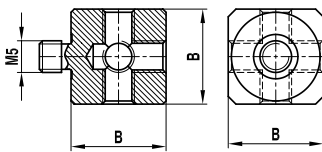


Variant B

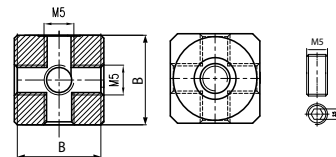
## Cube titanium

### Titanium

Pos.	itp Order No	Variant	B	Weight (g)	Price/Piece (€)
1	WT M5 000 15 000	A	15,0	12,0	28,00
2	WT M5 L00 15 000	A	15,0	12,3	65,00
3	WT M5 000 15 000 OZ	B	15,0	12,3	28,00
4	WT M5 000 20 000	A	20,0	30,0	34,00
5	WT M5 L00 20 000	A	20,0	29,7	70,00
6	WT M5 000 20 000 OZ	B	20,0	30,4	34,00



Variant A



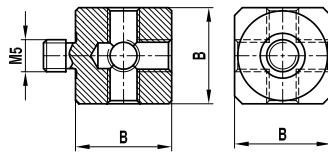
Variant B

**NOTE:** OZ = setscrew enclosed

## Cube aluminium

### Aluminium

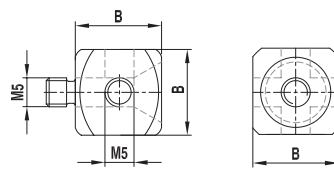
Pos.	itp Order No	B	Weight (g)	Price/Piece (€)
1	WA M5 000 15 000	15,0	7,7	39,00
2	WA M5 000 20 000	20,0	18,7	49,00



## Cube with countersunk screw

### Titanium

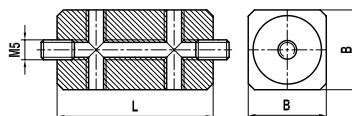
Pos.	itp Order No	B	Weight (g)	Price/Piece (€)
1	WT M5 S00 15 000	15,0	13,2	65,00



## Double cube

### Titanium

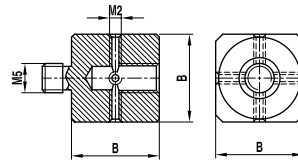
Pos.	itp Order No	L	B	Weight (g)	Price/Piece (€)
1	WT M5 000 20 040	40,0	20,0	61,3	61,00



## Cube adapter

Titanium, M2/M5

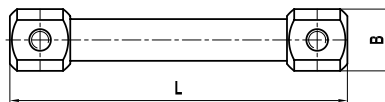
Pos.	itp Order No	B	Weight (g)	Price/Piece (€)
1	WT M5 0M2 15 000	15,0	13,4	61,00
2	WT M5 0M2 20 000	20,0	31,9	71,00



## Cube extension

Titanium

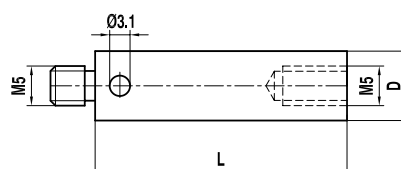
Pos.	itp Order No	L	B	Weight (g)	Price/Piece (€)
1	WT M5 000 20 120	120,0	20,0	74,5	150,00



## Extension steel

Stainless steel

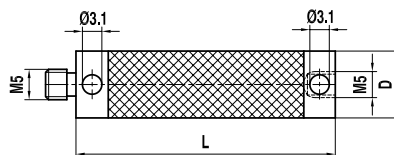
Pos.	itp Order No	DG	L	Weight (g)	Price/Piece (€)
1	VI M5 000 11 010	11,0	10,0	6,4	14,00
2	VI M5 000 11 015	11,0	15,0	9,5	14,00
3	VI M5 000 11 020	11,0	20,0	13,0	14,00
4	VI M5 000 11 030	11,0	30,0	20,6	14,00
5	VI M5 000 11 040	11,0	40,0	27,9	14,00
6	VI M5 000 11 050	11,0	50,0	35,4	15,00
7	VI M5 000 11 060	11,0	60,0	43,1	15,00
8	VI M5 000 11 080	11,0	80,0	57,9	16,00
9	VI M5 000 11 100	11,0	100,0	72,7	16,00



## Extension carbon fiber

### Thermostable carbon fiber, titanium ends

Pos.	itp Order No	DG	L	Weight (g)	Price/Piece (€)
1	VC M5 T20 11 040	11,0	40,0	7,8	89,00
2	VC M5 T20 11 050	11,0	50,0	8,5	90,00
3	VC M5 T20 11 060	11,0	60,0	9,5	92,00
4	VC M5 T20 11 070	11,0	70,0	10,3	94,00
5	VC M5 T20 11 080	11,0	80,0	11,5	96,00
6	VC M5 T20 11 090	11,0	90,0	12,3	103,00
7	VC M5 T20 11 100	11,0	100,0	13,1	106,00
8	VC M5 T20 11 120	11,0	120,0	14,7	108,00
9	VC M5 T20 11 150	11,0	150,0	17,5	110,00
10	VC M5 T20 11 180	11,0	180,0	20,6	118,00
11	VC M5 T20 11 200	11,0	200,0	22,1	125,00
12	VC M5 T20 11 250	11,0	250,0	26,3	135,00
13	VC M5 T20 11 300	11,0	300,0	30,7	159,00
14	VC M5 T20 11 400	11,0	400,0	41,2	189,00
15	VC M5 T20 20 040	20,0	40,0	25,1	87,00
16	VC M5 T20 20 050	20,0	50,0	26,8	90,00
17	VC M5 T20 20 060	20,0	60,0	28,3	92,00
18	VC M5 T20 20 080	20,0	80,0	32,1	96,00
19	VC M5 T20 20 100	20,0	100,0	36,4	109,00
20	VC M5 T20 20 120	20,0	120,0	39,2	115,00
21	VC M5 T20 20 150	20,0	150,0	44,2	121,00
22	VC M5 T20 20 180	20,0	180,0	50,0	130,00
23	VC M5 T20 20 200	20,0	200,0	53,9	135,00
24	VC M5 T20 20 250	20,0	250,0	62,7	151,00
25	VC M5 T20 20 300	20,0	300,0	71,9	169,00
26	VC M5 T20 20 400	20,0	400,0	89,4	198,00
27	VC M5 T20 20 500	20,0	500,0	107,6	238,00
28	VC M5 T20 20 600	20,0	600,0	126,6	259,00

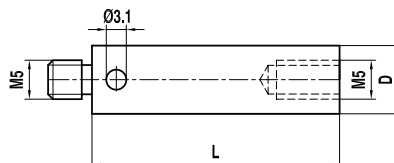


**NOTE:** Thermostable carbon fiber made from high-tech space technology fibers. E-Modul about 450 GPa.

## Extension titanium

### Titanium

Pos.	itp Order No	DG	L	Weight (g)	Price/Piece (€)
1	VT M5 000 11 010	11,0	10,0	3,7	17,00
2	VT M5 000 11 015	11,0	15,0	5,6	19,00
3	VT M5 000 11 020	11,0	20,0	7,5	20,00
4	VT M5 000 11 025	11,0	25,0	9,7	21,00
5	VT M5 000 11 030	11,0	30,0	12,1	28,00
6	VT M5 000 11 035	11,0	35,0	14,1	28,00
7	VT M5 000 11 040	11,0	40,0	16,4	22,00
8	VT M5 000 11 050	11,0	50,0	12,9	35,00
9	VT M5 000 11 060	11,0	60,0	14,0	36,00
10	VT M5 000 11 075	11,0	75,0	15,4	38,00
11	VT M5 000 11 080	11,0	80,0	16,1	41,00
12	VT M5 000 11 090	11,0	90,0	17,0	41,00
13	VT M5 000 11 100	11,0	100,0	17,9	41,00
14	VT M5 000 11 120	11,0	120,0	20,0	44,00
15	VT M5 000 11 150	11,0	150,0	23,2	48,00
16	VT M5 000 12 020	12,0 *	20,0	9,0	34,00
17	VT M5 000 12 040	12,0 *	40,0	18,9	49,00
18	VT M5 000 12 050	12,0 *	50,0	14,6	53,00
19	VT M5 000 12 070	12,0 *	70,0	16,6	64,00
20	VT M5 000 12 100	12,0 *	100,0	20,1	73,00
21	VT M5 000 18 020	18,0	20,0	21,6	34,00
22	VT M5 000 18 025	18,0	25,0	27,3	22,00
23	VT M5 000 18 040	18,0	40,0	44,4	27,00
24	VT M5 000 18 050	18,0	50,0	36,0	40,00
25	VT M5 000 18 060	18,0	60,0	38,7	42,00
26	VT M5 000 18 075	18,0	75,0	43,1	44,00
27	VT M5 000 18 080	18,0	80,0	44,5	45,00
28	VT M5 000 18 090	18,0	90,0	47,1	48,00
29	VT M5 000 18 100	18,0	100,0	50,5	50,00
30	VT M5 000 18 120	18,0	120,0	57,0	55,00
31	VT M5 000 18 150	18,0	150,0	64,9	60,00
32	VT M5 000 18 200	18,0	200,0	79,7	65,00
33	VT M5 000 18 250	18,0	250,0	96,0	72,00
34	VT M5 000 18 300	18,0	300,0	110,3	81,00

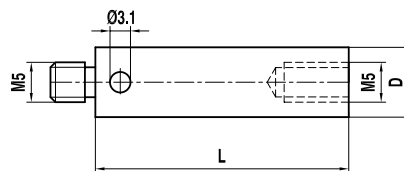


**NOTE:** \*For technical reasons is the  $\varnothing < 12$  mm.

## Extension aluminium

### Aluminium, stainless steel ends

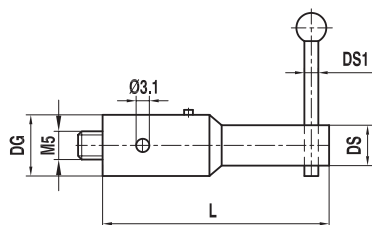
Pos.	itp Order No	DG	L	Weight (g)	Price/Piece (€)
1	VA M5 000 11 020	11,0	20,0	7,6	21,00
2	VA M5 000 11 040	11,0	40,0	11,5	22,00
3	VA M5 000 11 050	11,0	50,0		25,00
4	VA M5 000 11 060	11,0	60,0	14,5	23,00
5	VA M5 000 11 080	11,0	80,0	18,9	25,00
6	VA M5 000 11 100	11,0	100,0	24,1	26,00
7	VA M5 000 11 120	11,0	120,0	29,2	27,00
8	VA M5 000 20 040	20,0	40,0	32,4	38,00
9	VA M5 000 20 050	20,0	50,0	36,3	40,00
10	VA M5 000 20 060	20,0	60,0	38,7	40,00
11	VA M5 000 20 080	20,0	80,0	45,6	40,00
12	VA M5 000 20 100	20,0	100,0	51,2	41,00
13	VA M5 000 20 150	20,0	150,0	69,1	46,00
14	VA M5 000 20 200	20,0	200,0	84,7	52,00



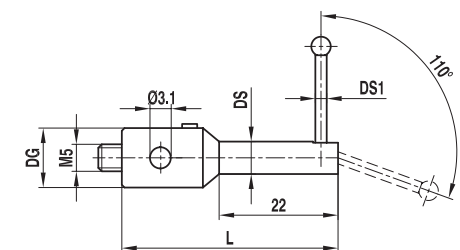
## Holder for stylus non threaded

### Stainless steel

Pos.	itp Order No	Variant	DG	L	DS1/DS	Weight (g)	Price/Piece (€)
1	KI M5 115 11 045	A	11,0	45,0	1,0-1,5/6,0	18,4	36,00
2	KI M5 022 11 040	B	11,0	40,0	1,0-1,5/6,0	15,6	45,00



Variant A holder 90 °



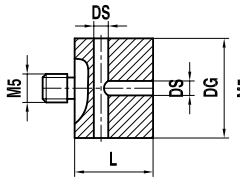
Variant B holder swiveling

**NOTE:** Applicable with KT M5 002 01 015 – KT M5 025 15 027.

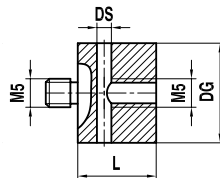
## Holder for stylus non threaded

### Titanium

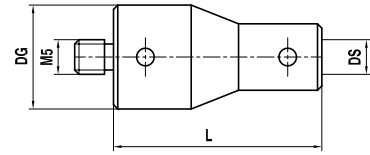
Pos.	itp Order No	Variant	DG	L	DS	Number of holes	Weight (g)	Price/Piece (€)
1	KH M5 000 15 020	A	15,0	10,0	2,0	5	6,6	59,00
2	KH M5 000 15 012	B	15,0	12,0	2,0	4 + M5	13,9	92,00
3	KH M5 000 12 021	C	12,0	21,0	2,0	1	14,0	56,00



Variant A



Variant B

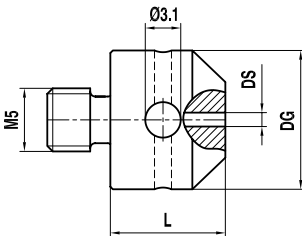


Variant C

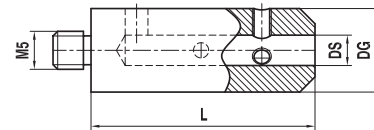
## 1-way holder for stylus non threaded

### Stainless steel

Pos.	itp Order No	Variant	DG	L	DS	Weight (g)	Price/Piece (€)
1	SH M5 000 11 010	A	11,0	10,0	1,0	6,0	42,00
2	KH M5 000 30 040	B	11,0	29,5	4,0	11,3	58,00



Variant A

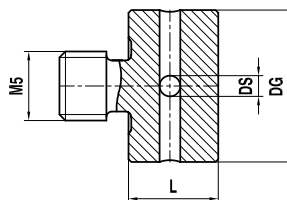


Variant B

## 2-way holder for stylus non threaded

### Stainless steel

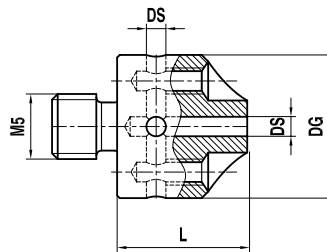
Pos.	itp Order No	DG	L	DS	Weight (g)	Price/Piece (€)
1	KH M5 000 20 010	10,0	6,0	1,0	4,1	42,00



## 5-way holder for stylus non threaded

### Stainless steel

Pos.	itp Order No	DG	L	DS	Weight (g)	Price/Piece (€)
1	KH M5 000 11 010	11,0	10,0	1,0	5,9	36,00
2	KH M5 000 11 015	11,0	10,0	1,5	5,5	36,00
3	KH M5 000 11 020	11,0	10,0	2,0	5,2	36,00

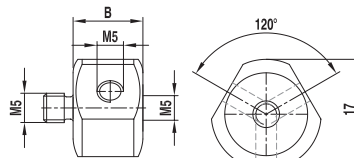


**NOTE:** Applicable with KT M5 002 01 015 – KT M5 030 20 038.

## Holder for stylus

### Titanium

Pos.	itp Order No	B	Weight (g)	Price/Piece (€)
1	WT M5 120 15 000	15,0	12,4	65,00

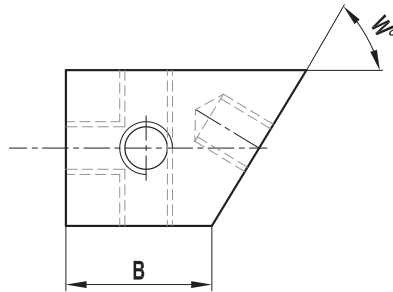




## Holder with angle

### Titanium

Pos.	itp Order No	W Grad	B	Weight (g)	Price/Piece (€)
1	WT M5 450 15 000	45,0	15,0	20,0	65,00
2	WT M5 475 15 000	47,5	15,0	20,0	65,00
3	WT M5 500 15 000	50,0	15,0	19,2	65,00
4	WT M5 525 15 000	52,5	15,0	18,9	65,00
5	WT M5 550 15 000	55,0	15,0	18,2	65,00
6	WT M5 575 15 000	57,5	15,0	17,7	65,00
7	WT M5 600 15 000	60,0	15,0	17,3	65,00
8	WT M5 625 15 000	62,5	15,0	16,9	65,00
9	WT M5 650 15 000	65,0	15,0	16,4	65,00
10	WT M5 675 15 000	67,5	15,0	16,0	65,00
11	WT M5 700 15 000	70,0	15,0	15,6	65,00
12	WT M5 725 15 000	72,5	15,0	15,1	65,00
13	WT M5 750 15 000	75,0	15,0	14,9	65,00
14	WT M5 775 15 000	77,5	15,0	14,6	65,00
15	WT M5 800 15 000	80,0	15,0	14,4	65,00
16	WT M5 825 15 000	82,5	15,0	14,3	65,00
17	WT M5 850 15 000	85,0	15,0	13,9	65,00
18	WT M5 875 15 000	87,5	15,0	13,5	65,00

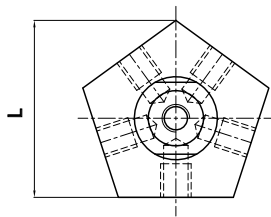


**NOTE:** Setscrew enclosed.

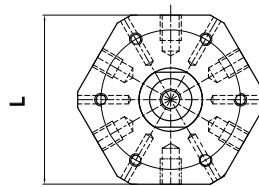
## Holder for multiple stylus

### Titanium

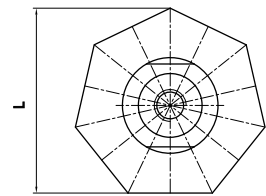
Pos.	itp Order No	Variant	Thickness	L	Number of styli	Weight (g)	Price/Piece (€)
1	KH M5 L05 13 021	A	13,0	32,0	5	45,2	159,00
2	KH M5 L06 13 021	B	13,0	40,0	6	78,9	225,00
3	KH M5 L07 13 021	C	13,0	29,0	7	38,0	180,00
4	KH M5 L08 13 021	D	13,0	42,0	8	81,9	225,00
5	KH M5 L08 06 017	E	17,0	88,0	8	142,0	327,00



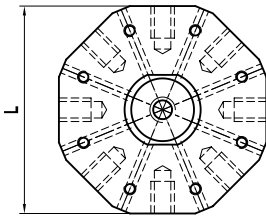
Variant A



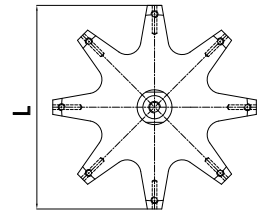
Variant B



Variant C



Variant D

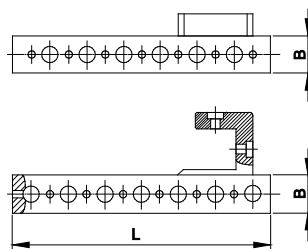


Variant E

## Multiple stylus adapter

### Titanium, adjustable

Pos.	itp Order No	L	B	Weight (g)	Price/Piece (€)
1	MA M5 000 20 100	100,0	20,0	213,6	449,00
2	MA M5 000 20 140	140,0	20,0	258,0	469,00
3	MA M5 000 20 200	200,0	20,0	323,0	498,00

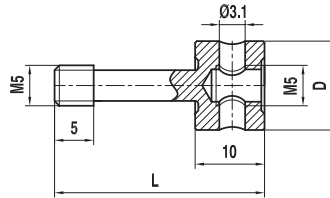


**NOTE:** Mountable to TP M5 MES SO 001.

## Mounting screw for cube

Titanium

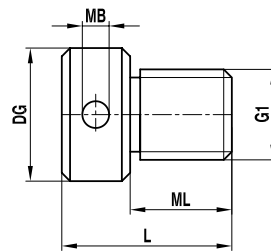
Pos.	itp Order No	DG	L	Weight (g)	Price/Piece (€)
1	VT M5 SGO 11 010	11,0	30,0	4,4	26,00



## Thread measuring gage

Stainless steel

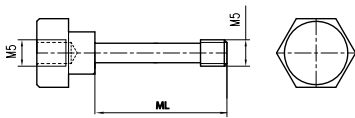
Pos.	itp Order No	ML	DG	L	MB	G1	Weight (g)	Price/Piece (€)
1	GW M4 000 10 016	10,0	10,0	16,0	1,8	M4	3,8	41,00
2	GW M5 000 10 016	10,0	10,0	16,0	1,8	M5	4,6	41,00
3	GW M6 000 12 018	12,0	12,0	18,0	1,8	M6	6,5	40,00
4	GW M8 000 15 020	12,0	15,0	20,0	3,0	M8	14,0	42,00
5	GW M1 000 18 025	15,0	18,0	25,0	3,0	M10	26,1	42,00
6	GW M1 200 20 025	15,0	20,0	25,0	3,0	M12	33,4	43,00



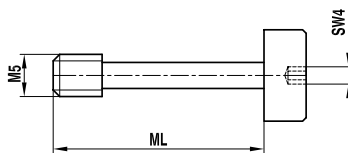
## Clamping screw for cube and disk

### Stainless steel

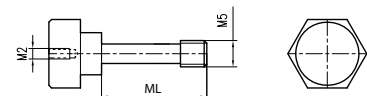
Pos.	itp Order No	Variant	ML	L	Weight (g)	Price/Piece (€)
1	SI M5 000 10 017	A	9,0	17,5	7,7	8,50
2	SI M5 000 21 030	A	21,0	30,0	8,7	9,50
3	SI M5 000 26 035	A	26,0	35,0	9,3	10,50
4	SI M5 000 21 000	B	21,0		3,4	5,00
5	SI M5 000 26 000	B	26,0		3,9	5,00
6	SI M5 0M2 20 030	C	20,0	30,0	10,0	10,00
7	SI M5 0M2 26 035	C	26,0	35,0	10,4	10,00



Variant A



Variant B

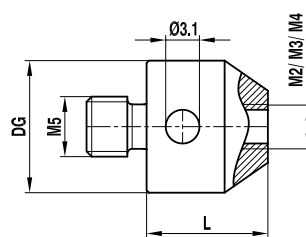


Variant C

## Reducing adapter

### Stainless steel

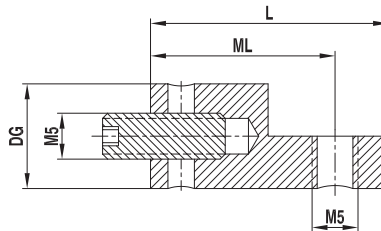
Pos.	itp Order No	DG	L	From to	Weight (g)	Price/Piece (€)
1	RT M5 200 11 010	11,0	10,0	M5/M2	6,1	11,00
2	RT M5 300 11 010	11,0	10,0	M5/M3	6,0	11,00
3	RT M5 400 11 010	11,0	10,0	M5/M4	6,2	11,00



## Angle adapter 90°

Titanium

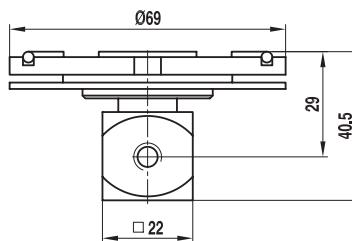
Pos.	itp Order No	ML	DG	L	Weight (g)	Price/Piece (€)
1	KH M5 000 11 022	17,0	11,0	22,5	6,3	30,00



## Adapter plate for VAST/MT

Aluminium, with active ID Chip and engraved 15° scale

Pos.	itp Order No	No of pieces	Weight (g)	Price/Piece (€)
1	TP M5 MES SO 001	1	158,3	250,00
2	TP M5 MES SO 002	2	317,2	500,00
3	TP M5 MES SO 001 OW*	1	132,6	250,00

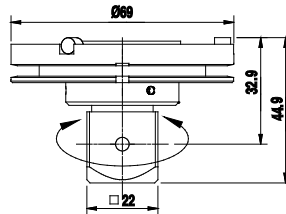


**NOTE:** Adapter plate instead of cube. Does not support the “FlyScan” and “QuickChange”.

## Adapter plate EASY! suitable for VAST/MT

Aluminium, with active ID Chip, rotating cube and engraved 15° scale

Pos.	itp Order No	No of pieces	Weight (g)	Price/Piece (€)
1	TP M5 MEASY 001	1	197,9	280,00
2	TP M5 MEASY 002	2	396,3	560,00




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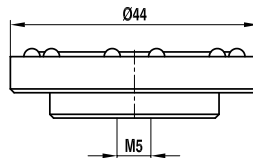
**NOTE:** "002" means dual pack. Does not support the "FlyScan" and "QuickChange".

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## Adapter plate for dynamic system (ST)

Aluminium

Pos.	itp Order No	No of pieces	Weight (g)	Price/Piece (€)
1	AT M5 SCH AL 001	1	73,5	170,00
2	AT M5 SCH AL 002	2	146,9	340,00




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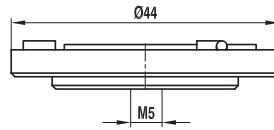
**NOTE:** "002" means dual pack. Does not support the "FlyScan" and "QuickChange".

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## Adapter plate for Prismo dynamic systems (ST)

### Aluminium

Pos.	itp Order No	No of pieces	Weight (g)	Price/Piece (€)
1	TP M5 SCH AL 001	1	72,1	170,00
2	TP M5 SCH AL 002	2	144,3	340,00




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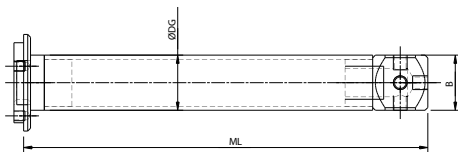
**NOTE:** "002" means dual pack. Does not support the "FlyScan" and "QuickChange".

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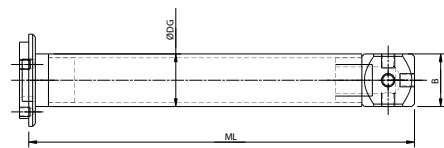
## Extension for adapter plate VAST/MT

Thermostable carbon fiber, titanium cube and plate adapter

Pos.	itp Order No	Variant	ML	DG	L	B	Weight (g)	Price/Piece (€)
1	TV M5 TZ1 15 025	A	66,5	11,0	25,0	15,0	44,3	147,00
2	TV M5 TZ1 15 040	A	81,5	11,0	40,0	15,0	45,3	151,00
3	TV M5 TZ1 15 050	A	91,5	11,0	50,0	15,0	46,1	155,00
4	TV M5 TZ1 15 060	A	101,5	11,0	60,0	15,0	46,8	160,00
5	TV M5 TZ1 15 080	A	121,5	11,0	80,0	15,0	48,3	169,00
6	TV M5 TZ1 15 100	A	141,5	11,0	100,0	15,0	49,8	175,00
7	TV M5 TZ1 15 120	A	161,5	11,0	120,0	15,0	51,3	182,00
8	TV M5 TZ1 15 150	A	191,5	11,0	150,0	15,0	53,5	205,00
9	TV M5 TZ1 15 200	A	241,5	11,0	200,0	15,0	57,2	212,00
10	TV M5 TZ2 15 025	A	66,5	20,0	25,0	15,0	58,0	157,00
11	TV M5 TZ2 15 040	A	81,5	20,0	40,0	15,0	60,1	161,00
12	TV M5 TZ2 15 050	A	91,5	20,0	50,0	15,0	61,6	165,00
13	TV M5 TZ2 15 060	A	101,5	20,0	60,0	15,0	63,1	170,00
14	TV M5 TZ2 15 080	A	121,5	20,0	80,0	15,0	66,1	180,00
15	TV M5 TZ2 15 100	A	141,5	20,0	100,0	15,0	69,1	190,00
16	TV M5 TZ2 15 120	A	161,5	20,0	120,0	15,0	72,1	198,00
17	TV M5 TZ2 15 150	A	191,5	20,0	150,0	15,0	76,6	213,00
18	TV M5 TZ2 15 200	A	241,5	20,0	200,0	15,0	83,8	237,00
19	TV M5 TZ2 20 025	B	71,5	20,0	25,0	20,0	69,3	158,00
20	TV M5 TZ2 20 040	B	86,5	20,0	40,0	20,0	71,5	161,00
21	TV M5 TZ2 20 050	B	96,5	20,0	50,0	20,0	73,0	166,00
22	TV M5 TZ2 20 060	B	106,5	20,0	60,0	20,0	74,5	171,00
23	TV M5 TZ2 20 080	B	126,5	20,0	80,0	20,0	77,5	181,00
24	TV M5 TZ2 20 100	B	146,5	20,0	100,0	20,0	80,5	191,00
25	TV M5 TZ2 20 120	B	166,5	20,0	120,0	20,0	83,5	198,00
26	TV M5 TZ2 20 150	B	196,5	20,0	150,0	20,0	88,0	213,00
27	TV M5 TZ2 20 200	B	246,5	20,0	200,0	20,0	95,5	237,00



Variant A



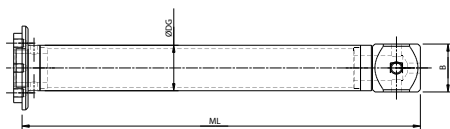
Variant B



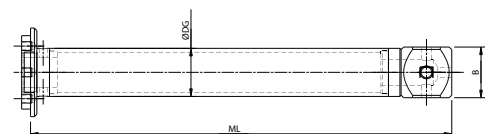
## Extension for adapter plate VAST/MT

Titanium, titanium cube and plate adapter

Pos.	itp Order No	Variant	ML	DG	L	B	Weight (g)	Price/Piece (€)
1	TV M5 011 15 025	A	66,5	11,0	25,0	15,0	47,0	98,00
2	TV M5 011 15 040	A	81,5	11,0	40,0	15,0	48,1	104,00
3	TV M5 011 15 050	A	91,5	11,0	50,0	15,0	48,9	109,00
4	TV M5 011 15 060	A	101,5	11,0	60,0	15,0	49,7	115,00
5	TV M5 011 15 080	A	121,5	11,0	80,0	15,0	51,2	127,00
6	TV M5 011 15 100	A	141,5	11,0	100,0	15,0	52,7	137,00
7	TV M5 011 15 120	A	161,5	11,0	120,0	15,0	54,2	145,00
8	TV M5 011 15 150	A	191,5	11,0	150,0	15,0	56,5	151,00
9	TV M5 018 15 025	A	66,5	18,0	25,0	15,0	64,0	89,00
10	TV M5 018 15 040	A	81,5	18,0	40,0	15,0	69,7	94,00
11	TV M5 018 15 050	A	91,5	18,0	50,0	15,0	73,5	104,00
12	TV M5 018 15 060	A	101,5	18,0	60,0	15,0	77,3	108,00
13	TV M5 018 15 080	A	121,5	18,0	80,0	15,0	84,9	115,00
14	TV M5 018 15 100	A	141,5	18,0	100,0	15,0	92,5	122,00
15	TV M5 018 15 120	A	161,5	18,0	120,0	15,0	100,1	129,00
16	TV M5 018 15 150	A	191,5	18,0	150,0	15,0	111,5	132,00
17	TV M5 018 15 200	A	241,5	18,0	200,0	15,0	130,5	140,00
18	TV M5 018 20 025	B	71,5	18,0	25,0	20,0	73,3	99,00
19	TV M5 018 20 040	B	86,5	18,0	40,0	20,0	78,8	104,00
20	TV M5 018 20 050	B	96,5	18,0	50,0	20,0	82,5	114,00
21	TV M5 018 20 060	B	106,5	18,0	60,0	20,0	86,2	118,00
22	TV M5 018 20 080	B	126,5	18,0	80,0	20,0	93,6	125,00
23	TV M5 018 20 100	B	146,5	18,0	100,0	20,0	101,0	132,00
24	TV M5 018 20 120	B	166,5	18,0	120,0	20,0	108,4	139,00
25	TV M5 018 20 150	B	196,5	18,0	150,0	20,0	119,5	142,00
26	TV M5 018 20 200	B	246,5	18,0	200,0	20,0	138,0	152,00



Variant A

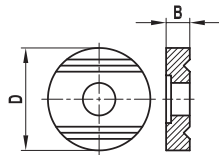


Variant B

## Grooved disk for star styli

### Stainless steel

Pos.	itp Order No	DG	B	Weight (g)	Price/Piece (€)
1	NI M5 000 11 020	11,0	2,0	1,0	26,00
2	NI M5 000 19 040	19,0	4,0	7,2	27,00



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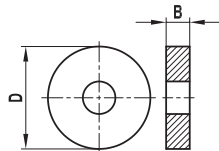
**NOTE:** To be used with long threaded stylus only.

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## Clamping disc for star styli

### Stainless steel

Pos.	itp Order No	DG	B	Weight (g)	Price/Piece (€)
1	KI M5 000 11 015	11,0	1,5	0,8	8,00
2	KI M5 000 19 020	19,0	2,0	4,0	9,00



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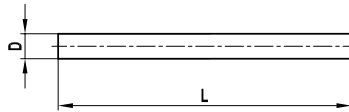
**NOTE:** To be used with long threaded stylus only

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## Pin for star stylus carbide

### Carbide

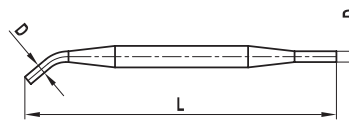
Pos.	itp Order No	DG	L	B	Weight (g)	Price/Piece (€)
1	SH M5 000 10 010	1,0	10,0	2,0	0,1	3,00
2	SH M5 000 15 010	1,5	10,0	4,0	0,3	3,00
3	SH M5 000 20 018	2,0	18,0		0,8	4,00
4	SH M5 000 35 018	3,5	18,0		2,5	4,00



## Wrench

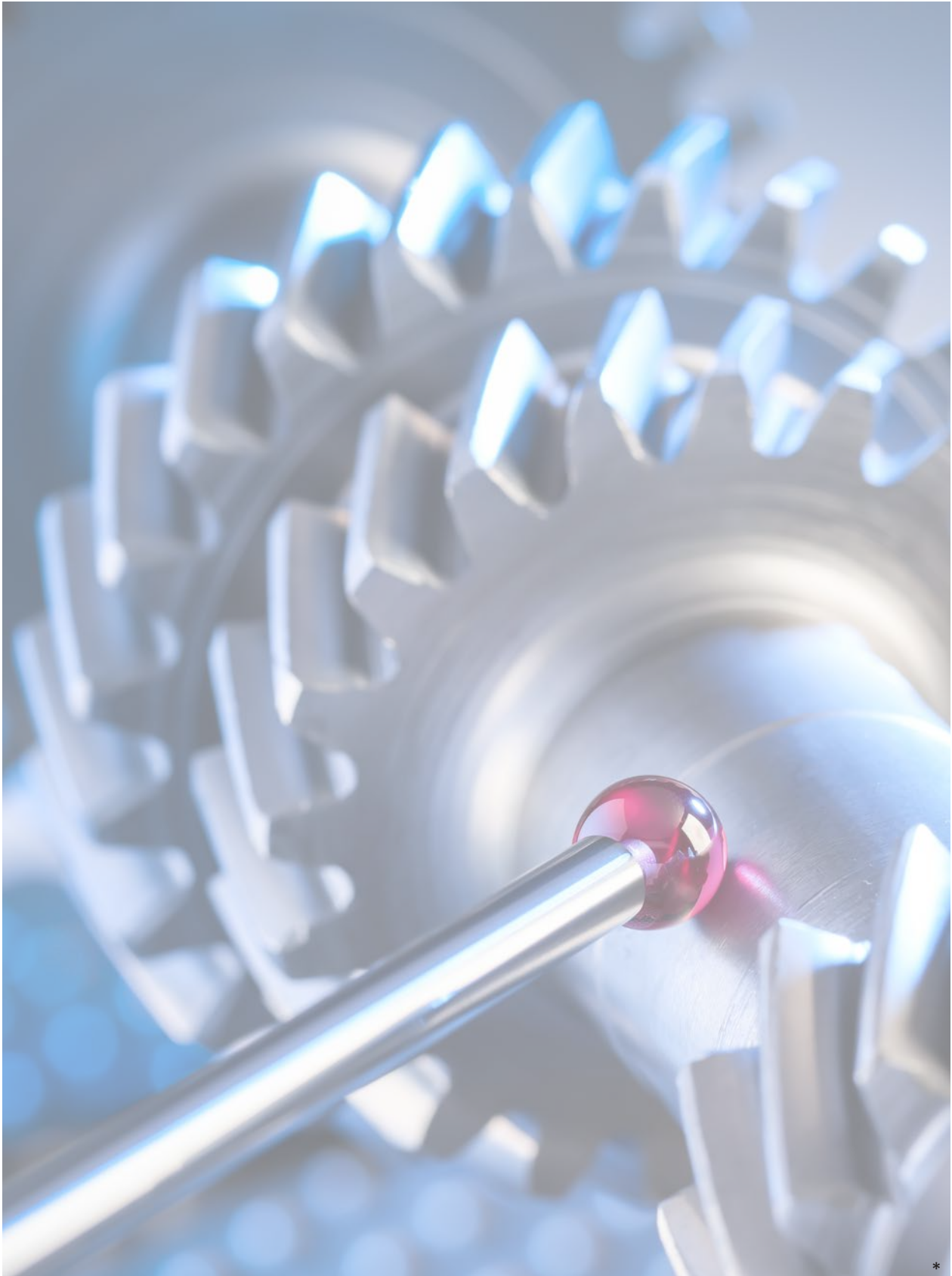
### Stainless steel

Pos.	itp Order No	DG	L	Weight (g)	Price/Piece (€)
1	MI MO 029 00 070	2,9	70,0	7,7	6,50
2	SS M5 002 08 596	2,9	70,0	15,5	13,00



**NOTE:** SS = Set of 2 keys MI MO 029 00 070

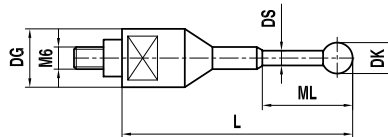
## Thread M6



## Stylus (carbide) carbide

Stainless steel base, carbide stem, carbide ball, SW 12

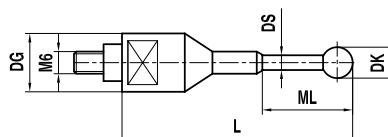
Pos.	itp Order No	DK	ML	DG	L	DS	Inch	Weight (g)	Price/Piece (€)
1	TH M6 H16 16 047	1,58	9,0	16,0	47,0	1,0	1/16"	37,3	60,00
2	TH M6 H08 16 100	3,175	62,0	16,0	100,0	2,0	1/8"	40,0	76,00
3	TH M6 H04 16 100	6,35	62,0	16,0	100,0	3,5	1/4"	45,1	117,00
4	TH M6 H516 16 049	7,93	11,0	16,0	49,0	3,5	5/16"	42,7	86,00
5	TH M6 H02 16 059	12,69	21,0	16,0	59,0	3,5	1/2"	55,6	134,00
6	TH M6 H160 16 059	16,0	21,0	16,0	59,0	3,5		71,2	82,00
7	TH M6 H180 16 059	18,0	21,0	16,0	59,0	3,5		84,6	75,00
8	TH M6 H200 16 059	20,0	21,0	16,0	59,0	3,5		101,3	82,00
9	TH M6 H10 16 069	25,4	31,0	16,0	69,0	3,5	1"	168,0	137,00



## Stylus (carbide) ruby

Stainless steel base, carbide stem, ruby ball, SW 12

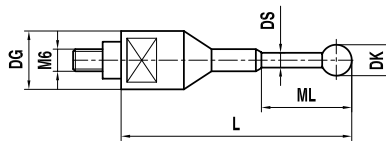
Pos.	itp Order No	DK	ML	DG	L	DS	Inch	Weight (g)	Price/Piece (€)
1	TH M6 R30 16 049	3,0	11,0	16,0	49,0	2,0		37,5	124,00
2	TH M6 R08 16 049	3,175	11,0	16,0	49,0	2,0	1/8"	38,3	125,00
3	TH M6 R60 16 049	6,0	11,0	16,0	49,0	2,0		37,8	169,00
4	TH M6 R04 16 049	6,35	11,0	16,0	49,0	2,0	1/4"	38,0	125,00
5	TH M6 R80 16 049	8,0	11,0	16,0	49,0	3,5		39,3	78,00
6	TH M6 R100 16 049	10,0	11,0	16,0	49,0	3,5		40,1	75,00
7	TH M6 R120 16 059	12,0	21,0	16,0	59,0	3,5		42,7	159,00



## Stylus (carbide) zirconium oxide

Stainless steel base, carbide stem, zirconium oxide ball, SW 12

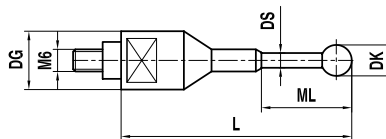
Pos.	itp Order No	DK	ML	DG	L	DS	Inch	Weight (g)	Price/Piece (€)
1	TH M6 Z30 16 049	3,0	11,0	16,0	49,0	2,0		37,5	124,00
2	TH M6 Z08 16 049	3,175	11,0	16,0	49,0	2,0	1/8"	38,3	139,00
3	TH M6 Z60 16 049	6,0	11,0	16,0	49,0	2,0		38,0	179,00
4	TH M6 Z04 16 049	6,35	11,0	16,0	49,0	2,0	1/4"	38,1	139,00



## Stylus (carbide) POM

Stainless steel base, carbide stem, POM ball, SW 12

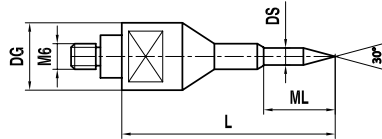
Pos.	itp Order No	DK	ML	DG	L	DS	Inch	Weight (g)	Price/Piece (€)
1	TH M6 D08 16 049	3,175	11,0	16,0	49,0	2,0	1/8"	38,2	64,00
2	TH M6 D08 16 100	3,175	62,0	16,0	100,0	2,0	1/8"	40,6	46,00
3	TH M6 D04 16 049	6,35	11,0	16,0	49,0	2,0	1/4"	37,5	89,00



## Stylus pointer carbide

### Stainless steel base

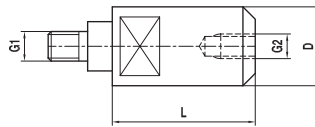
Pos.	itp Order No	DK	DG	L	DS	Weight (g)	Price/Piece (€)
1	IH M6 030 16 047	30°	16,0	47,0	2,0	37,5	59,00



## Reducing adapter

### Stainless steel

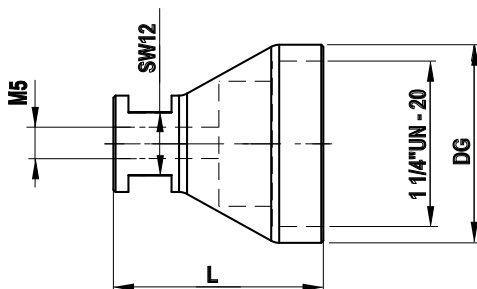
Pos.	itp Order No	DG	L	G1/G2	Weight (g)	Price/Piece (€)
1	RI M6 500 16 029	16,0	29,0	M6/M5	44,8	48,00
2	RI M6 400 16 029	16,0	29,0	M6/M4	45,1	48,00
3	RI M6 300 16 029	16,0	29,0	M6/M3	45,5	48,00
4	RI M6 200 16 029	16,0	29,0	M6/M2	45,7	48,00



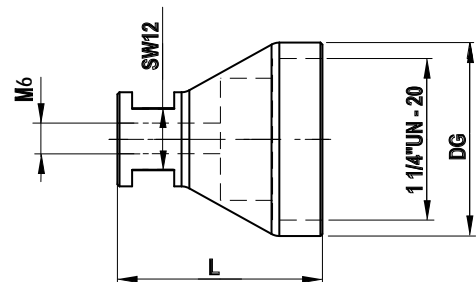
## Adapter for Faro Platin/Gold

### Stainless steel

Pos.	itp Order No	Variant	DG	L	G1/G2	Weight (g)	Price/Piece (€)
1	RIUN11/4M538039	A	38,0	39,0	1,25'/M5	103,9	79,00
2	RIUN11/4M638039	B	38,0	39,0	1,25'/M6	99,0	79,00

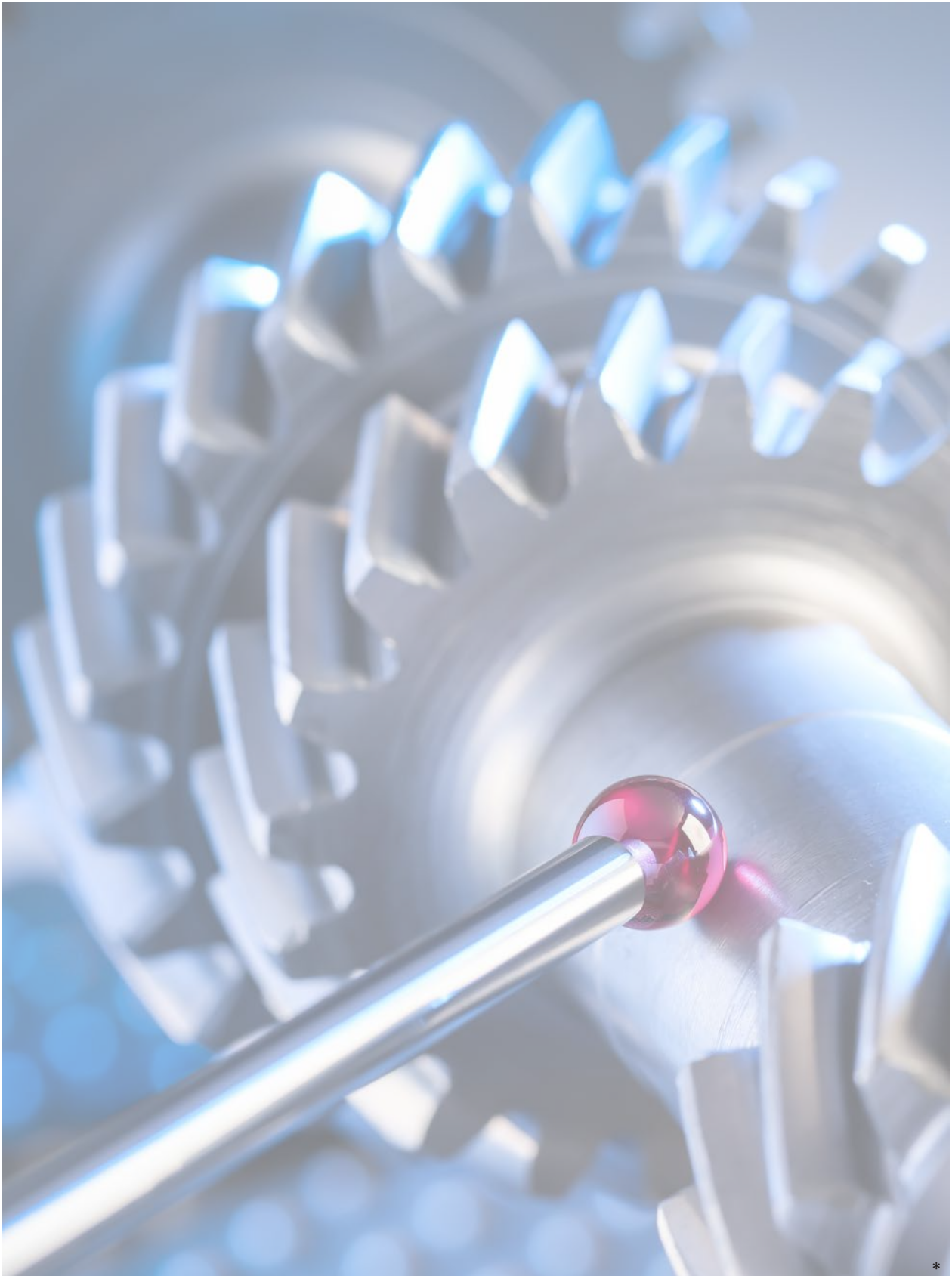


Variant A



Variant B

## Thread M8

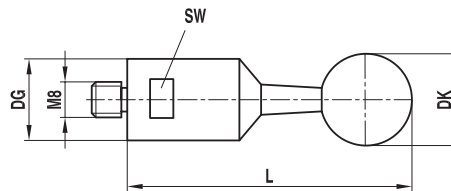




## Calibration sphere with stem

Stainless steel, ceramic ball, with stand 12,0

Pos.	itp Order No	DK	DG	L	SW	Weight (g)	Price/Piece (€)
1	KN M8 150 24 130	15,0	24,0	130,0	12,0	323,7	225,00
2	KN M8 200 24 135	20,0	24,0	135,0	12,0	332,5	285,00
3	KN M8 250 24 140	25,0	24,0	140,0	12,0	349,1	298,00
4	KN M8 300 24 145	30,0	24,0	145,0	12,0	372,0	312,00

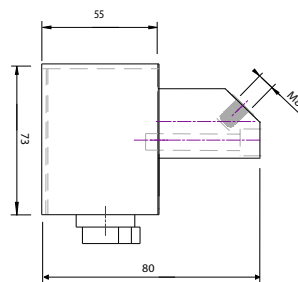


**NOTE:** Including certificate.

## Magnet base for calibration spheres

Base steel

Pos.	itp Order No	Weight (g)	Price/Piece (€)
1	MAGNETFUSS KNM8	1400,0	217,00



# Terms and Conditions

## General Sales and Delivery Terms

Version: February 2018

### 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 valueadded 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 seller 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 buyer 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.

#### **XIII. 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.

#### **XIV. 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.

#### **XV. Export checks**

If the customer intends to export or re-export an item after receipt from the contractor (including planned exports), the customer must request and obtain all of the licences required for use and/or export of the item. The contractor accepts no liability for compliance with the statutory regulations and/or ability to market the item outside the agreed delivery area.

#### **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. 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.

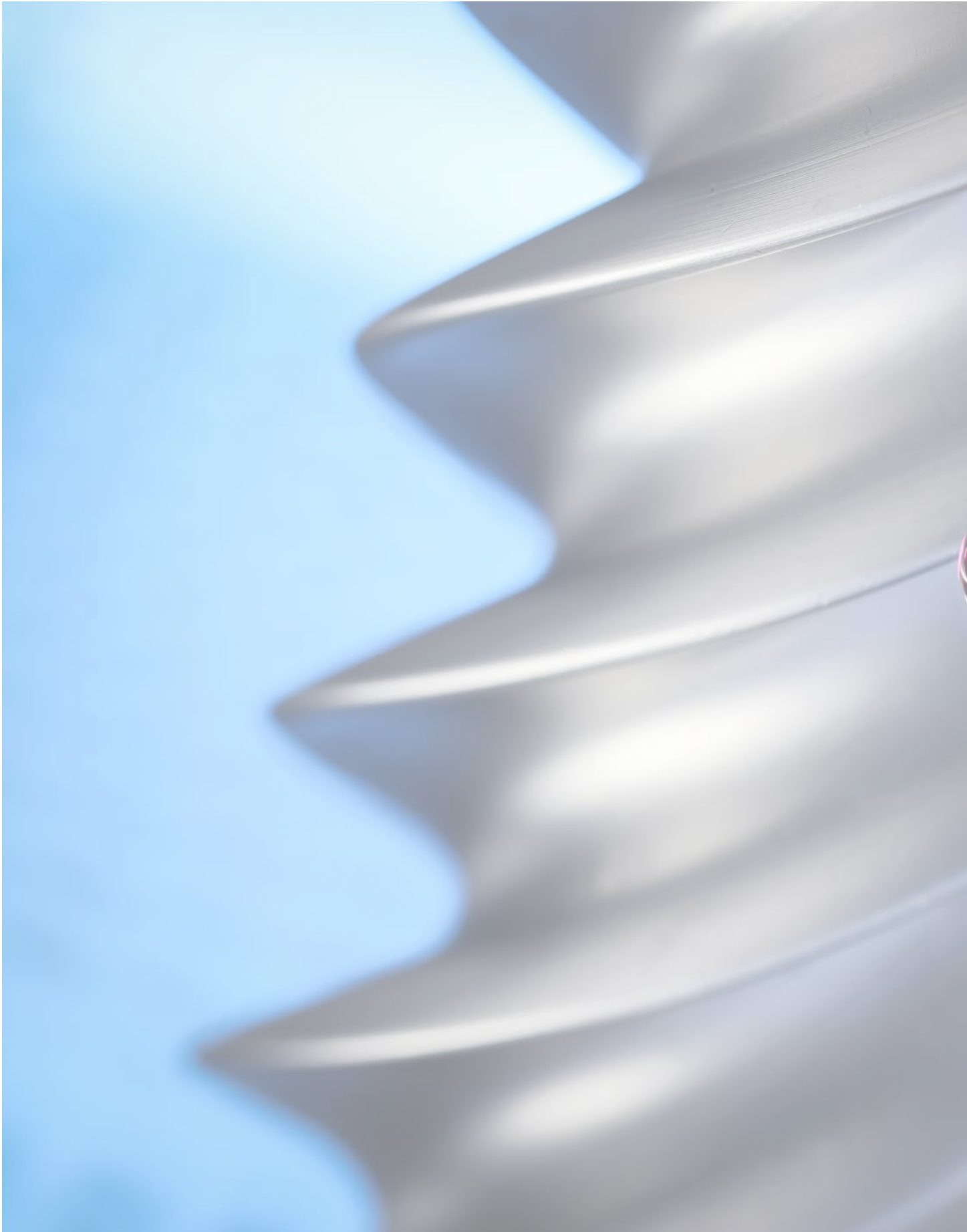


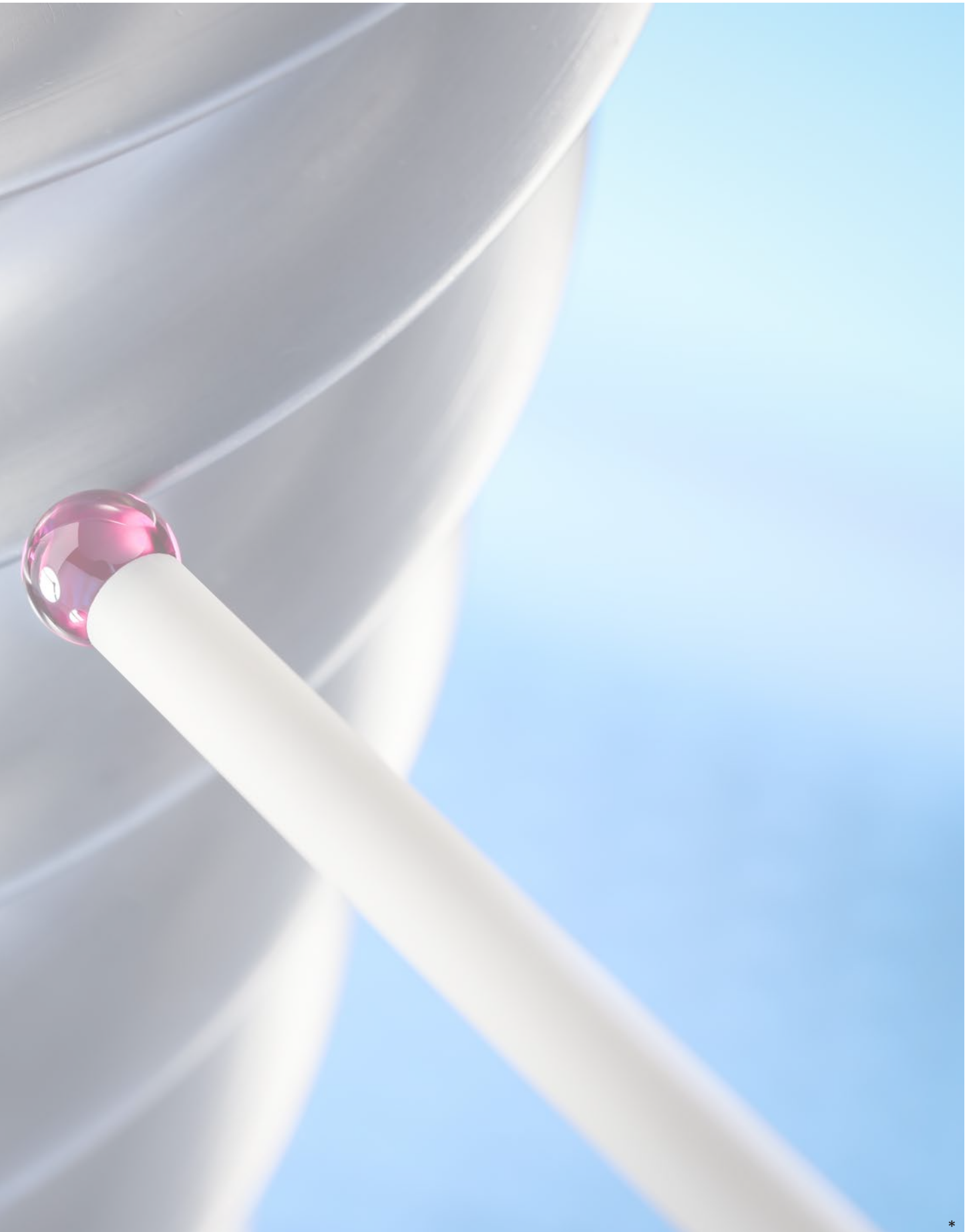
(2.) Only the laws of the Federal Republic of Germany apply. The United Nations Convention for the International Sale of Goods dated 11/04/1980 does not apply to this contract.

(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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