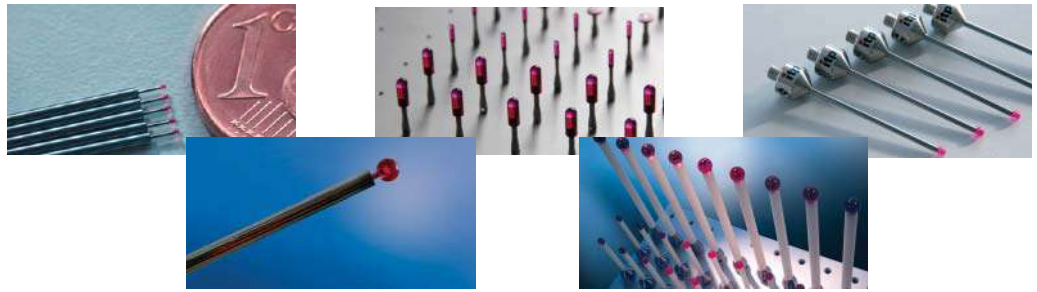


Replacement  
Styli



**itp**<sup>TM</sup>  
**styli**



### Adapter Plates and Adapter Plate Extensions

Adapter plates equivalent to Zeiss Vast and MT with active ID chip and individual plate code. Every plate is tested before shipping. Unbeatable price and ships same day.

Adapter plate extensions with or without cube offer integral components to maximize rigidity.



### Temp-Comp: Constant Length at Varying Temperatures

Temp-Comp thermal stable carbon fiber provides relatively low weight and the greatest temperature stability. When coupled with our unique titanium end cap design, thermal expansion is essentially zero on a 180 mm long extension.



### Custom Probe Tooling Solutions

Ask us about custom probe tooling solutions from design to delivery. Titanium holders with your unique angles are coupled with Temp-Comp thermal stable carbon fiber in rigid configurations designed to improve cycle time and measurement accuracy.

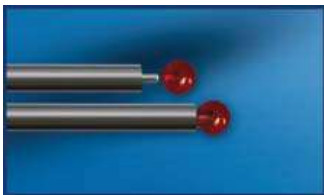
### itp Specials: Custom Styli Manufactured to Your Specifications



Whether it is a simple change in length or a more elaborate customization, itpstyli welcomes the opportunity to provide the solution you need.



### Best Quality



Peg mounted ruby spheres drilled in-house increase durability and accuracy on spheres up to 10mm in diameter. (Below 0.5mm, drilling is not possible)

### Visit us at [itpstyli.com](http://itpstyli.com)



Search by other manufacturer code or use the unique search filters to find what you need. Save your shopping list. View previous orders. And more.



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All prices are quoted in US dollars and are subject to change without notice.  
Prices exclude freight, tax, and insurance.



### Welcome to itpstyli

itpstyli is an independent American corporation located in St. Louis Missouri.

itpstyli was created with the sole mission of fulfilling the needs of CMM, machine tool and gear-measurement professionals throughout North America who are looking for a quick and easy method to find and purchase a diverse range of high quality replacement styli, accessories and custom solutions, at lower cost.



### Customer Service

The itpstyli customer service promise is simple: Provide customers a friendly, easy, accurate and knowledge-based method of selecting products.

Next day delivery is available when ordered by 3:00 PM CST. With over 7,000 items stocked in our centrally located warehouse we are likely to have what you need in your hands the next day.

In-house CMM professionals are prepared to help you with unique challenges you may face.

Customer service is available during normal business hours: 8 a.m. to 5 p.m. Central Time.

### Custom Solutions



Do you need creative solutions for finding the proper stylus for your specific application? itpstyli has experienced CMM operators available to answer your technical questions or to help design the custom stylus needed for your application. Basic "specials" can ship within 72 hours from receipt.



### Unconditional Guarantee

Be assured; if you are not happy with our service or product, we will fix the problem to your satisfaction or provide a full refund.

### Credit Terms



We accept all major credit cards. We will also accept purchase orders with Net 30 day terms. New customers with business entity addresses in the continental US can place orders up to \$600 credit limit. Credit references may be required at our discretion.



[www.itpstyli.com](http://www.itpstyli.com)

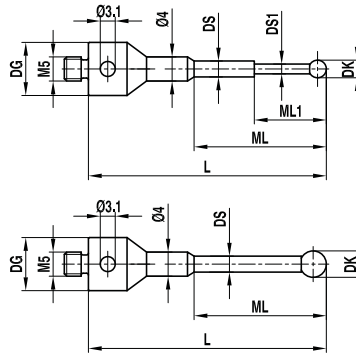
For those who prefer the convenience of e-commerce, itpstyli hosts a world-class Web site that provides several methods to search, find, and purchase the most appropriate stylus or accessory for your application around the clock. You can order and purchase online or easily generate a fax or purchase order to be sent at your convenience.

**itpstyli LLC**  
 1265 Research Blvd.  
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[sales@itpstyli.com](mailto:sales@itpstyli.com)  
[www.itpstyli.com](http://www.itpstyli.com)

**M5  
Ruby  
Carbide**



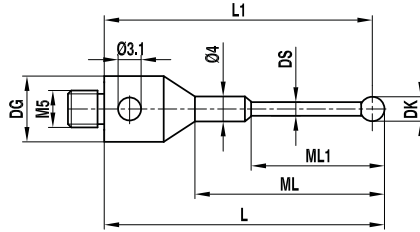
The first several items in this table are mini ruby styli, which are extremely fragile and require very low contact force. Please note how narrow the terminal stem is.

**Ball Range  
0.2-2.5 mm**

TN: 12 - O: 10800

DK	L	ML1 ML	DS1 DS	Weight g	Base/Stem Material	Price \$USD	Part Number
0.2	32.0	2.3/12.0	0.18/1.0	6.5	Stainless steel / Carbide	159.00	FH M5 002 11 032
0.25	32.0	2.3/12.0	0.18/1.0	6.5	Stainless steel / Carbide	141.00	FH M5 0025 11 032
0.3	32.0	2.3/12.0	0.2/1.0	6.5	Stainless steel / Carbide	131.00	FH M5 003 11 032
0.5	32.0	2.5/12.0	0.3/1.0	6.5	Stainless steel / Carbide	124.00	FH M5 005 11 032
0.6	32.0	4.6/12.0	0.4/1.0	6.5	Stainless steel / Carbide	86.00	FH M5 006 11 032
0.8	32.0	4.8/12.0	0.6/1.0	6.8	Stainless steel / Carbide	65.00	FH M5 008 11 032
1.0	32.0	5.0/12.0	0.8/1.0	6.8	Stainless steel / Carbide	65.00	FH M5 010 11 032
1.35	32.0	12.0	1.0	6.9	Stainless steel / Carbide	55.00	FH M5 013 11 032
1.35	44.0	19.0	1.0	7.5	Stainless steel / Carbide	55.00	FH M5 013 11 044
1.5	32.0	12.0	1.0	6.5	Stainless steel / Carbide	53.00	FH M5 015 11 032
1.5	44.0	19.0	1.0	7.5	Stainless steel / Carbide	53.00	FH M5 015 11 044
2.0	32.0	12.0	1.5	7.3	Stainless steel / Carbide	53.00	FH M5 020 11 032
2.0	44.0	19.0	1.5	8.0	Stainless steel / Carbide	53.00	FH M5 020 11 044
2.0	58.0	33.0	1.5	8.0	Stainless steel / Carbide	53.00	FH M5 020 11 058
2.5	32.0	12.0	1.5	7.3	Stainless steel / Carbide	53.00	FH M5 025 11 032
2.5	44.0	19.0	1.5	8.0	Stainless steel / Carbide	53.00	FH M5 025 11 044
2.5	58.0	33.0	1.5	8.0	Stainless steel / Carbide	53.00	FH M5 025 11 058

**M5  
Ruby  
Carbide**

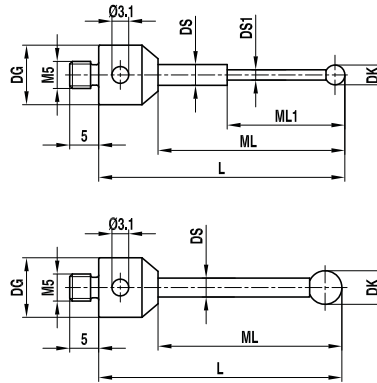


**Ball Range  
2.0 mm**

TN: 232 - O: 10900

DK	L L1	DG D	ML1 ML	DS1 DS	Weight g	Base/Stem Material	Price \$USD	Part Number
2.0	67.0 / 66.0	12.0	16.0 / 57.0	1.5	12.0	Stainless steel / Carbide	219.00	FH M5 020 12 066

## M5 Ruby Carbide

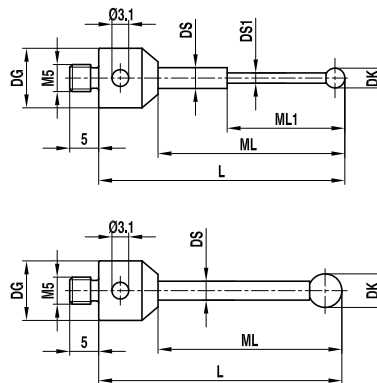


**Ball Range  
1.5-5.0 mm**

TN: 158 - O: 11000

DK	L	DG D	ML1 ML	DS1 DS	Weight g	Base/Stem Material	Price \$USD	Part Number
1.5	33.0	11.0	24.0	1.0	7.0	Stainless steel / Carbide	35.00	NH M5 015 11 033
1.5	33.0	11.0	7.0/24.0	1.0/1.5	7.0	Stainless steel / Carbide	51.00	NH M5 K15 11 033
2.0	33.5	11.0	24.5	1.0	7.0	Stainless steel / Carbide	41.00	NH M5 020 10 033
2.0	33.5	11.0	24.5	1.5	7.0	Stainless steel / Carbide	46.00	NH M5 020 11 033
2.5	34.0	11.0	25.0	1.0	7.0	Stainless steel / Carbide	48.00	NH M5 025 10 034
2.5	34.0	11.0	25.0	1.5	7.0	Stainless steel / Carbide	49.00	NH M5 025 11 034
3.0	25.5	11.0	16.5	2.0	9.0	Stainless steel / Carbide	57.00	NH M5 030 11 025
5.0	34.5	11.0	25.5	3.5	9.0	Stainless steel / Carbide	71.00	NH M5 050 11 034

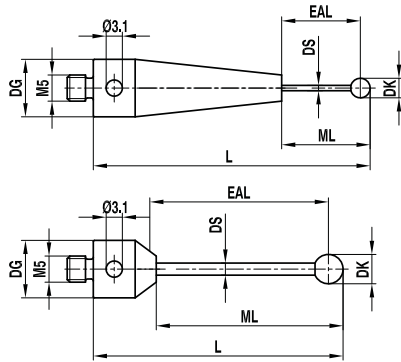
## M5 Mini Ruby Carbide



**Ball Range  
0.3-1.3 mm**

TN: 158 - O: 11100

DK	L	ML1 ML	DS1 DS	Weight g	Base/Stem Material	Price \$USD	Part Number
0.3	21.8	2.3/12.8	0.2/1.0	6.0	Stainless steel / Carbide	90.00	NH M5 003 11 021
0.5	22.0	2.5/13.0	0.3/1.0	6.0	Stainless steel / Carbide	71.00	NH M5 005 11 022
0.6	22.1	4.6/13.1	0.4/1.0	6.0	Stainless steel / Carbide	67.00	NH M5 006 11 022
0.8	22.3	4.8/13.3	0.6/1.0	6.0	Stainless steel / Carbide	63.00	NH M5 008 11 022
1.0	22.5	5.0/13.5	0.8/1.0	6.0	Stainless steel / Carbide	57.00	NH M5 010 11 022
1.35	32.85	23.85	1.0	6.0	Stainless steel / Carbide	35.00	NH M5 013 11 032



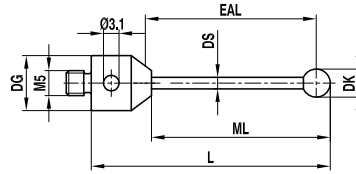
Note the difference between the lengths of the base in these two drawings. You will be able to identify if a particular stem has a long conical base by scanning the difference between the L and ML dimensions. In general, the items with short ML dimensions will have a long conical base as shown in the first drawing.

**Ball Range  
0.7-3.0 mm**

TN: 272 – O: 11200

DK	L	DG D	ML1 ML	DS1 DS	Weight g	Base/Stem Material	Price \$USD	Part Number
0.7	20.35	10.0	5.35	0.5	6.5	Titanium / Carbide	67.00	TH M5 007 10 020
0.7	30.35	10.0	5.35	0.5	9.0	Titanium / Carbide	73.00	TH M5 007 10 030
0.7	50.35	10.0	5.35	0.5	15.8	Titanium / Carbide	85.00	TH M5 007 10 050
0.7	75.35	10.0	5.35	0.5	23.9	Titanium / Carbide	98.00	TH M5 007 10 075
1.0	20.5	10.0	5.5	0.7	6.5	Titanium / Carbide	61.00	TH M5 010 10 020
1.0	30.5	10.0	5.5	0.7	9.0	Titanium / Carbide	66.00	TH M5 010 10 030
1.0	50.5	10.0	5.5	0.7	15.8	Titanium / Carbide	79.00	TH M5 010 10 050
1.0	75.5	10.0	5.5	0.7	23.8	Titanium / Carbide	91.00	TH M5 010 10 075
1.5	20.75	10.0	11.75	1.0	4.7	Titanium / Carbide	58.00	TH M5 015 10 020
1.5	30.75	10.0	12.75	1.0	7.3	Titanium / Carbide	65.00	TH M5 015 10 030
1.5	40.75	10.0	22.75	1.0	7.4	Titanium / Carbide	79.00	TH M5 015 10 040
1.5	50.75	10.0	5.75	1.0	14.8	Titanium / Carbide	88.00	TH M5 015 10 050
1.5	75.75	10.0	5.75	1.0	23.9	Titanium / Carbide	99.00	TH M5 015 10 075
2.0	21.0	10.0	12.0	1.0	4.7	Titanium / Carbide	49.00	TH M5 020 10 021
2.0	31.0	10.0	22.0	1.0	4.8	Titanium / Carbide	61.00	TH M5 020 10 031
2.0	41.0	10.0	32.0	1.0	4.9	Titanium / Carbide	70.00	TH M5 020 10 041
2.0	51.0	10.0	42.0	1.0	5.1	Titanium / Carbide	82.00	TH M5 020 10 051
2.0	51.0	10.0	6.0	1.0	14.9	Titanium / Carbide	73.00	TH M5 020 45 051
2.5	21.25	10.0	12.25	1.5	4.8	Titanium / Carbide	50.00	TH M5 025 10 021
2.5	31.25	10.0	22.25	1.5	5.1	Titanium / Carbide	62.00	TH M5 025 10 031
2.5	41.25	10.0	32.25	1.5	5.4	Titanium / Carbide	71.00	TH M5 025 10 041
2.5	51.25	10.0	6.25	1.5	14.9	Titanium / Carbide	77.00	TH M5 025 10 051
3.0	101.5	10.0	56.5	1.5	16.3	Titanium / Carbide	109.00	TH M5 030 10 101

**M5  
Ruby  
Carbide**

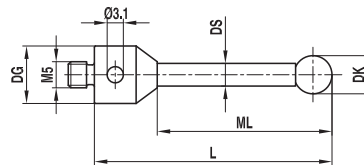


**Ball Range  
3.0-10.0 mm**

TN: 262 – O: 11300

DK	L	DG D	ML1 ML	DS1 DS	Weight g	Base/Stem Material	Price \$USD	Part Number
3.0	25.0	11.0	15.0	2.0	4.0	Titanium / Carbide	37.00	TH M5 030 11 025
3.0	33.5	11.0	23.5	2.0	4.5	Titanium / Carbide	39.00	TH M5 030 11 033
3.0	50.0	11.0	40.0	2.0	5.2	Titanium / Carbide	40.00	TH M5 030 11 050
3.0	58.0	11.0	48.0	2.0	5.5	Titanium / Carbide	44.00	TH M5 030 11 058
4.0	33.5	11.0	23.5	2.0	4.5	Titanium / Carbide	44.00	TH M5 040 11 033
4.0	64.0	11.0	54.0	2.0	5.9	Titanium / Carbide	50.00	TH M5 040 11 064
5.0	50.0	11.0	40.0	3.5	9.0	Titanium / Carbide	45.00	TH M5 050 11 050
5.0	75.0	11.0	65.0	3.5	12.5	Titanium / Carbide	59.00	TH M5 050 11 075
6.0	54.0	11.0	44.0	3.5	10.0	Titanium / Carbide	49.00	TH M5 060 11 054
7.0	55.0	11.0	45.0	3.5	10.0	Titanium / Carbide	51.00	TH M5 070 11 055
8.0	63.5	11.0	50.5	6.0	24.8	Titanium / Carbide	52.00	TH M5 080 11 063
8.0	100.0	11.0	87.0	6.0	40.0	Titanium / Carbide	65.00	TH M5 080 11 100
8.0	114.5	11.0	101.5	6.0	45.8	Titanium / Carbide	68.00	TH M5 080 11 114
9.0	64.5	11.0	51.5	6.0	26.3	Titanium / Carbide	90.00	TH M5 090 11 064
10.0	65.5	11.0	52.5	6.0	25.8	Titanium / Carbide	70.00	TH M5 100 11 065
10.0	118.0	11.0	105.0	6.0	47.3	Titanium / Carbide	78.00	TH M5 100 11 118

**M5  
Ruby  
Carbide**

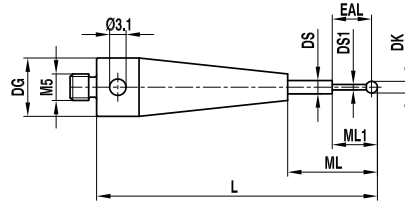


**Ball Range  
3.0-5.0 mm**

TN: 317 – O: 11400

DK	L	DG D	ML1 ML	DS1 DS	Weight g	Base/Stem Material	Price \$USD	Part Number
3.0	33.5	11.0	23.5	2.0	4.5	Titanium / Carbide	39.00	TH M5 030 11 033
5.0	53.0	11.0	43.0	3.5	9.8	Titanium / Carbide	60.00	TH M5 050 11 053





**Ball Range**  
0.2-0.5 mm

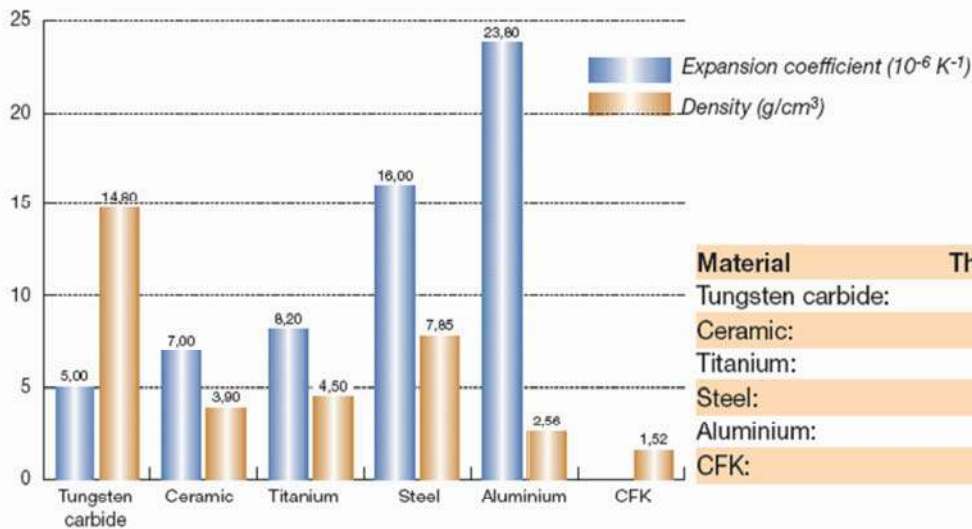
TN: 272 - O: 11500

DK	DS1 DS	DG D	ML1 ML	L	Weight g	Base/Stem Material	Price \$USD	Part Number
0.2	0.18/1.0	10.0	2.3/5.15	20.15	6.5	Titanium / Carbide	120.00	TH M5 002 10 020
0.25	0.18/1.0	10.0	2.3/5.15	20.15	6.5	Titanium / Carbide	125.00	TH M5 0025 10 020
0.3	0.2/0.7	10.0	3.15/5.15	20.15	6.5	Titanium / Carbide	78.00	TH M5 003 10 020
0.3	0.2/0.7	10.0	3.15/5.15	30.15	9.0	Titanium / Carbide	81.00	TH M5 003 10 030
0.3	0.2/0.7	10.0	3.15/5.15	50.15	15.8	Titanium / Carbide	105.00	TH M5 003 10 050
0.3	0.2/0.7	10.0	3.15/5.15	75.15	23.8	Titanium / Carbide	114.00	TH M5 003 10 075
0.5	0.4/0.7	10.0	4.25/5.25	20.25	6.5	Titanium / Carbide	68.00	TH M5 005 10 020
0.5	0.4/0.7	10.0	4.25/5.25	30.25	9.0	Titanium / Carbide	73.00	TH M5 005 10 030
0.5	0.4/0.7	10.0	4.25/5.25	50.25	15.8	Titanium / Carbide	98.00	TH M5 005 10 050
0.5	0.4/0.7	10.0	4.25/5.25	75.25	23.8	Titanium / Carbide	106.00	TH M5 005 10 075

### Chasing Microns? Consider Temperature and Material

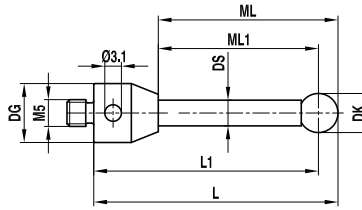
When you're **chasing microns**, temperature fluctuations and materials play a very significant role.

The charts below illustrate the length increase of a 200 mm extension associated with a temperature difference of one degree Kelvin (approximately one degree Celsius) for various materials. Note that Carbon Fiber (CFK) has dramatically lower expansion.



Material	Thermal Expansion	Density (g/cm <sup>3</sup> )
Tungsten carbide:	5.0 x 10 <sup>-6</sup> K <sup>-1</sup>	14.8
Ceramic:	7.0 x 10 <sup>-6</sup> K <sup>-1</sup>	3.9
Titanium:	5.5 x 10 <sup>-6</sup> K <sup>-1</sup>	4.5
Steel:	11.0 x 10 <sup>-6</sup> K <sup>-1</sup>	7.85
Aluminium:	23.8 x 10 <sup>-6</sup> K <sup>-1</sup>	2.56
CFK:	~ 0 x 10 <sup>-6</sup> K <sup>-1</sup>	1.52

**M5  
Ruby  
Carbide**



These styli are designed for Leitz probing systems and have a DG base diameter of 12 mm.

**Ball Range  
1.5-5.0 mm**      ITN: 98 – O: 11600

DK	L L1	DG D	ML1 ML	DS1 DS	Weight g	Base/Stem Material	Price \$USD	Part Number
1.5	40.75/40.0	12.0	19.0/19.75	1.0	11.0	Stainless steel / Carbide	107.00	TH M5 015 12 040
1.5	28.75/28.0	12.0	7.0/7.75	1.0	10.0	Stainless steel / Carbide	105.00	TH M5 015 12 028
2.0	31.0/30.0	12.0	18.5/19.5	1.5	7.0	Stainless steel / Carbide	116.00	TH M5 020 12 030
2.0	36.0/35.0	12.0	23.5/24.5	1.5	7.5	Stainless steel / Carbide	89.00	TH M5 020 12 035
2.0	42.0/41.0	12.0	30.0/31.0	1.5	8.0	Stainless steel / Carbide	181.00	TH M5 020 12 041
2.0	61.0/60.0	12.0	39.5/40.5	1.5	12.0	Stainless steel / Carbide	95.00	TH M5 020 12 060
3.0	36.5/35.0	12.0	24.0/25.5	2.0	9.0	Stainless steel / Carbide	95.00	TH M5 030 12 035
3.0	51.5/50.0	12.0	39.0/40.5	2.0	10.0	Stainless steel / Carbide	95.00	TH M5 030 12 050
3.5	92.75/91.0	12.0	78.0/79.75	3.0	18.0	Stainless steel / Carbide	111.00	TH M5 035 12 091
4.0	57.0/55.0	12.0	42.0/44.0	3.0	13.0	Stainless steel / Carbide	124.00	TH M5 040 12 055
4.0	82.0/80.0	12.0	69.0/71.0	2.5	16.0	Stainless steel / Carbide	138.00	TH M5 040 12 080
5.0	62.5/60.0	12.0	49.0/51.5	3.5	16.0	Stainless steel / Carbide	122.00	TH M5 050 12 060
5.0	82.5/80.0	12.0	69.0/71.5	3.5	19.0	Stainless steel / Carbide	163.00	TH M5 050 12 080

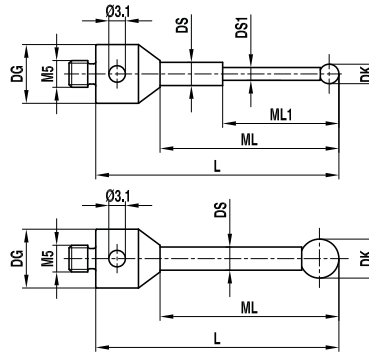
From concept to finished tooling, itpstyli and our metrology partners can design and manufacture complex tooling for fixed head applications. The benefits of these rigid assemblies include improved cycle time, lower costs, easier maintainability, and improved accuracy.



Static tooling systems are designed in 3D space to test functionality and identify possible interferences



Customized and affordable tooling systems provide maximum rigidity, enhanced thermal stability and require minimal maintenance and maximum repeatability.

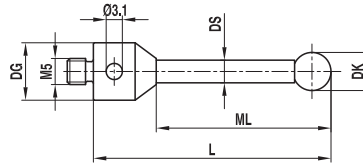


**Ball Range  
1.0-5.0 mm**

TN: 9 - 0: 11800

DK	L	DG D	ML1 ML	DS1 DS	Weight g	Base/Stem Material	Price \$USD	Part Number
1.0	20.0	11.0	5.0 / 10.0	0.8 / 1.0	6.0	Titanium / Carbide	66.00	TH M5 010 11 020
1.0	25.0	11.0	5.0 / 15.0	0.8 / 1.0	6.0	Titanium / Carbide	70.00	TH M5 010 11 025
1.0	30.0	11.0	5.0 / 20.0	0.8 / 1.0	6.0	Titanium / Carbide	72.00	TH M5 010 11 030
1.0	20.0	11.0	10.0	0.8	6.0	Titanium / Carbide	68.00	TH M5 010 11 020/0.8
1.0	30.0	11.0	20.0	0.8	6.0	Titanium / Carbide	74.00	TH M5 010 11 030/0.8
1.5	30.0	11.0	8.0 / 20.0	1.0 / 1.5	6.0	Titanium / Carbide	70.00	TH M5 015 11 030
2.0	20.0	11.0	10.0	1.0	6.0	Titanium / Carbide	45.00	TH M5 020 11 020
2.0	25.0	11.0	15.0	1.0	6.0	Titanium / Carbide	48.00	TH M5 020 11 025
2.0	30.0	11.0	20.0	1.5	7.0	Titanium / Carbide	51.00	TH M5 020 11 030
2.0	40.0	11.0	30.0	1.5	7.0	Titanium / Carbide	55.00	TH M5 020 11 040
3.0	25.0	11.0	15.0	2.0	4.0	Titanium / Carbide	37.00	TH M5 030 11 025
3.0	33.5	11.0	23.5	2.0	4.5	Titanium / Carbide	39.00	TH M5 030 11 033
3.0	50.0	11.0	40.0	2.0	5.2	Titanium / Carbide	40.00	TH M5 030 11 050
3.0	58.0	11.0	48.0	2.0	5.5	Titanium / Carbide	44.00	TH M5 030 11 058
3.5	58.0	11.0	48.0	2.0	6.0	Titanium / Carbide	44.00	TH M5 035 11 058
3.5	75.0	11.0	65.0	2.5	6.5	Titanium / Carbide	46.00	TH M5 035 11 075
3.5	100.0	11.0	85.0	2.5	7.0	Titanium / Carbide	48.00	TH M5 035 11 100
4.0	30.0	11.0	20.0	2.0	4.4	Titanium / Carbide	40.00	TH M5 040 11 030
4.0	33.5	11.0	23.5	2.0	4.5	Titanium / Carbide	44.00	TH M5 040 11 033
4.0	64.0	11.0	54.0	2.0	5.9	Titanium / Carbide	50.00	TH M5 040 11 064
4.5	53.0	11.0	43.0	3.5	8.0	Titanium / Carbide	44.00	TH M5 045 11 053
5.0	30.0	11.0	20.0	3.5	8.0	Titanium / Carbide	40.00	TH M5 050 11 030
5.0	100.0	11.0	90.0	3.5	15.0	Titanium / Carbide	62.00	TH M5 050 11 100
5.0	50.0	11.0	40.0	3.5	9.0	Titanium / Carbide	45.00	TH M5 050 11 050
5.0	53.0	11.0	43.0	3.5	9.8	Titanium / Carbide	60.00	TH M5 050 11 053
5.0	75.0	11.0	65.0	3.5	12.5	Titanium / Carbide	59.00	TH M5 050 11 075

## M5 Ruby Carbide



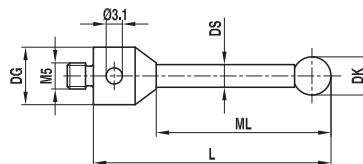
Take note of the DG dimension in this table. There are several items that have a DG base diameter of 19 mm.

### Ball Range 6.0-10.0 mm

TN: 9 - 0: 11900

DK	L	DG D	ML1 ML	DS1 DS	Weight g	Base/Stem Material	Price \$USD	Part Number
6.0	54.0	11.0	44.0	3.5	10.0	Titanium / Carbide	49.00	TH M5 060 11 054
7.0	55.0	11.0	45.0	3.5	10.0	Titanium / Carbide	51.00	TH M5 070 11 055
8.0	63.5	11.0	50.5	6.0	24.8	Titanium / Carbide	52.00	TH M5 080 11 063
8.0	63.5	19.0	41.5	6.0	36.7	Titanium / Carbide	63.00	TH M5 080 19 063
8.0	74.0	11.0	61.0	6.0	29.5	Titanium / Carbide	71.00	TH M5 080 11 074
8.0	75.0	11.0	62.0	6.0	30.0	Titanium / Carbide	63.00	TH M5 080 11 075
8.0	100.0	11.0	87.0	6.0	40.0	Titanium / Carbide	65.00	TH M5 080 11 100
8.0	114.5	11.0	101.5	6.0	45.8	Titanium / Carbide	68.00	TH M5 080 11 114
8.0	114.5	19.0	92.5	6.0	57.5	Titanium / Carbide	73.00	TH M5 080 19 114
8.0	150.0	11.0	137.0	6.0	60.0	Titanium / Carbide	75.00	TH M5 080 11 150
8.0	200.0	11.0	175.0	6.0	70.0	Titanium / Carbide	79.00	TH M5 080 11 200
9.0	64.5	11.0	51.5	6.0	26.3	Titanium / Carbide	90.00	TH M5 090 11 064
9.0	64.5	19.0	42.5	6.0	36.8	Titanium / Carbide	73.00	TH M5 090 19 064
10.0	65.5	11.0	52.5	6.0	25.8	Titanium / Carbide	70.00	TH M5 100 11 065
10.0	65.5	19.0	43.5	6.0	37.8	Titanium / Carbide	83.00	TH M5 100 19 065
10.0	118.0	11.0	105.0	6.0	47.3	Titanium / Carbide	78.00	TH M5 100 11 118
10.0	150.0	11.0	137.0	6.0	62.0	Titanium / Carbide	85.00	TH M5 100 11 150
10.0	200.0	11.0	175.0	6.0	75.0	Titanium / Carbide	95.00	TH M5 100 11 200

## M5 Ceramic Carbide

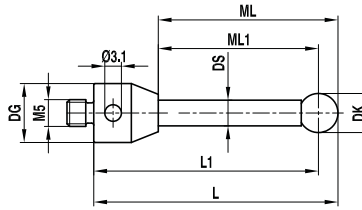


### Ball Range 12.0-15.0 mm

TN: 9 - 0: 11900

DK	L	DG D	ML1 ML	DS1 DS	Weight g	Base/Stem Material	Price \$USD	Part Number
12.0	65.5	11.0	52.5	6.0	28.0	Titanium / Carbide	93.00	TH M5 120 11 065
12.0	118.0	11.0	105.0	6.0	49.0	Titanium / Carbide	98.00	TH M5 120 11 118
12.0	200.0	11.0	175.0	6.0	76.0	Titanium / Carbide	109.00	TH M5 120 11 200
15.0	65.5	11.0	52.5	6.0	29.0	Titanium / Carbide	119.00	TH M5 150 11 065
15.0	118.0	11.0	105.0	6.0	50.0	Titanium / Carbide	129.00	TH M5 150 11 118
15.0	200.0	11.0	175.0	6.0	78.0	Titanium / Carbide	139.00	TH M5 150 11 200

**M5  
Ruby  
Carbide**



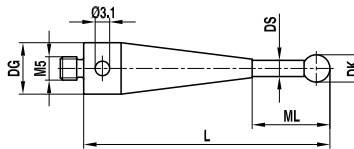
These styli are designed for Leitz probing systems and have a DG base diameter of 12 mm.

**Ball Range  
8.0 mm**

TN: 98 – O: 12000

DK	L L1	DG D	ML1 ML	DS1 DS	Weight g	Base/Stem Material	Price \$USD	Part Number
8.0	94.0/90.0	12.0	74.0/78.0	6.0	46.0	Stainless steel / Carbide	177.00	TH M5 080 12 090
8.0	129.0/125.0	12.0	109.0/113.0	6.0	61.0	Stainless steel / Carbide	186.00	TH M5 080 12 125
8.0	180.0/176.0	12.0	160.0/164.0	6.0	80.0	Stainless steel / Carbide	238.00	TH M5 080 12 176
8.0	72.0/68.0	12.0	50.0/54.0	3.0	32.0	Stainless steel / Carbide	150.00	TH M5 080 12 068

**M5  
Ruby  
Carbide**

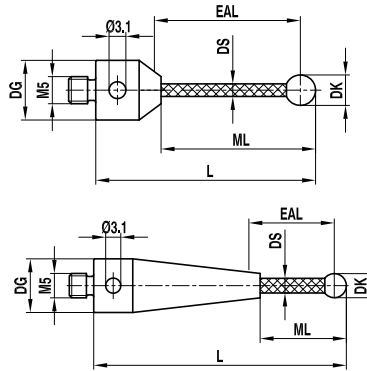


**Ball Range  
1.0-3.5 mm**

TN: 13 – O: 12200

DK	L	DG D	ML1 ML	DS1 DS	Weight g	Base/Stem Material	Price \$USD	Part Number
1.0	55.0	11.0	5.0	0.8	11.9	Titanium / Carbide	71.00	FT M5 010 11 055
1.5	55.0	11.0	5.0	1.0	11.9	Titanium / Carbide	75.00	FT M5 015 11 055
2.0	55.0	11.0	5.0	1.5	11.9	Titanium / Carbide	75.00	FT M5 020 11 055
2.5	55.0	11.0	5.0	2.0	11.9	Titanium / Carbide	75.00	FT M5 025 11 055
3.5	55.0	11.0	10.0	2.5	11.9	Titanium / Carbide	75.00	FT M5 035 11 055

**M5  
Ruby  
Carbon Fiber**

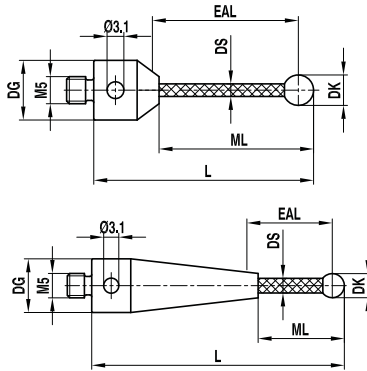


Note the difference between the lengths of the bases in the two sets of drawings on these two pages. You will be able to identify if a particular item has a long conical base by scanning the difference between the L and ML dimensions. L minus ML = the length of the base.

**Ball Range  
2.5-4.0 mm**

TN: 273 - O: 12300

DK	L	DG D	ML1 ML	DS1 DS	Weight g	Base/Stem Material	Price \$USD	Part Number
2.5	51.25	10.0	42.25	2.0	4.7	Titanium / Carbon fiber	77.00	TC M5 025 10 051
3.0	21.5	10.0	12.5	2.0	4.6	Titanium / Carbon fiber	52.00	TC M5 030 10 021
3.0	31.5	10.0	22.5	2.0	4.6	Titanium / Carbon fiber	57.00	TC M5 030 10 031
3.0	41.5	10.0	32.5	2.0	4.7	Titanium / Carbon fiber	73.00	TC M5 030 10 041
3.0	51.5	10.0	42.5	2.0	4.7	Titanium / Carbon fiber	79.00	TC M5 030 10 051
3.0	101.5	10.0	21.5	2.0	24.8	Titanium / Carbon fiber	101.00	TC M5 030 10 101
4.0	22.0	10.0	13.0	2.0	4.7	Titanium / Carbon fiber	57.00	TC M5 040 10 022
4.0	32.0	10.0	23.0	2.0	4.7	Titanium / Carbon fiber	64.00	TC M5 040 10 032
4.0	52.0	10.0	43.0	2.0	4.8	Titanium / Carbon fiber	77.00	TC M5 040 10 052
4.0	77.0	10.0	68.0	3.0	5.3	Titanium / Carbon fiber	86.00	TC M5 040 10 077
4.0	102.0	10.0	22.0	2.0	24.8	Titanium / Carbon fiber	109.00	TC M5 040 80 102

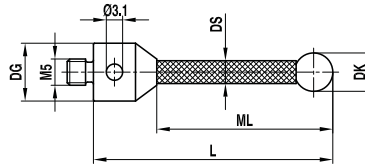


Note the difference between the lengths of the bases in the two sets of drawings on these two pages. You will be able to identify if a particular item has a long conical base by scanning the difference between the L and ML dimensions. L minus ML = the length of the base.

**Ball Range  
4.0-10.0 mm** TN: 273 – O: 12400

DK	L	DG D	ML1 ML	DS1 DS	Weight g	Base/Stem Material	Price \$USD	Part Number
4.0	22.0	10.0	13.0	2.0	4.7	Titanium / Carbon fiber	57.00	TC M5 040 10 022
4.0	32.0	10.0	23.0	2.0	4.7	Titanium / Carbon fiber	64.00	TC M5 040 10 032
4.0	52.0	10.0	43.0	2.0	4.8	Titanium / Carbon fiber	77.00	TC M5 040 10 052
4.0	77.0	10.0	68.0	3.0	5.3	Titanium / Carbon fiber	86.00	TC M5 040 10 077
4.0	102.0	10.0	22.0	2.0	24.8	Titanium / Carbon fiber	109.00	TC M5 040 80 102
5.0	22.5	10.0	13.5	3.0	4.8	Titanium / Carbon fiber	60.00	TC M5 050 10 022
5.0	32.5	10.0	23.5	3.0	4.9	Titanium / Carbon fiber	71.00	TC M5 050 10 032
5.0	52.5	10.0	43.5	3.0	5.1	Titanium / Carbon fiber	81.00	TC M5 050 10 052
5.0	77.5	10.0	68.5	3.0	5.4	Titanium / Carbon fiber	91.00	TC M5 050 10 077
5.0	102.5	10.0	52.5	3.0	18.2	Titanium / Carbon fiber	108.00	TC M5 050 50 102
5.0	102.5	10.0	93.5	3.0	5.7	Titanium / Carbon fiber	108.00	TC M5 050 10 102
6.0	53.0	10.0	42.0	4.0	6.1	Titanium / Carbon fiber	78.00	TC M5 060 10 053
6.0	78.0	10.0	67.0	4.0	6.6	Titanium / Carbon fiber	96.00	TC M5 060 10 078
6.0	103.0	10.0	53.0	4.0	19.7	Titanium / Carbon fiber	122.00	TC M5 060 50 103
6.0	103.0	10.0	92.0	4.0	7.1	Titanium / Carbon fiber	117.00	TC M5 060 10 103
6.0	153.0	10.0	138.0	4.0	9.1	Titanium / Carbon fiber	203.00	TC M5 060 10 153
6.0	203.0	10.0	188.0	4.0	10.1	Titanium / Carbon fiber	293.00	TC M5 060 10 203
6.0	303.0	10.0	288.0	4.0	12.0	Titanium / Carbon fiber	380.00	TC M5 060 10 303
8.0	54.0	10.0	41.0	6.0	8.0	Titanium / Carbon fiber	93.00	TC M5 080 10 054
8.0	79.0	10.0	66.0	6.0	9.1	Titanium / Carbon fiber	105.00	TC M5 080 10 079
8.0	104.0	10.0	54.0	6.0	23.0	Titanium / Carbon fiber	147.00	TC M5 080 50 104
8.0	104.0	10.0	91.0	6.0	10.2	Titanium / Carbon fiber	141.00	TC M5 080 10 104
8.0	154.0	10.0	135.0	6.0	13.7	Titanium / Carbon fiber	221.00	TC M5 080 10 154
8.0	204.0	10.0	185.0	6.0	15.9	Titanium / Carbon fiber	297.00	TC M5 080 10 204
8.0	304.0	10.0	285.0	6.0	20.3	Titanium / Carbon fiber	386.00	TC M5 080 10 304
10.0	55.0	10.0	42.0	6.0	8.9	Titanium / Carbon fiber	101.00	TC M5 100 10 055
10.0	80.0	10.0	67.0	6.0	10.0	Titanium / Carbon fiber	118.00	TC M5 100 10 080
10.0	105.0	10.0	55.0	6.0	23.9	Titanium / Carbon fiber	138.00	TC M5 100 50 105
10.0	105.0	10.0	92.0	6.0	11.1	Titanium / Carbon fiber	131.00	TC M5 100 10 105
10.0	155.0	10.0	136.0	6.0	14.7	Titanium / Carbon fiber	239.00	TC M5 100 10 155
10.0	205.0	10.0	186.0	6.0	16.9	Titanium / Carbon fiber	308.00	TC M5 100 10 205
10.0	305.0	10.0	286.0	6.0	21.3	Titanium / Carbon fiber	402.00	TC M5 100 10 305
4.0	102.0	10.0	52.0	3.0	18.0	Titanium / Carbon fiber	122.00	TC M5 040 50 102

**M5  
Ruby  
Carbon Fiber**

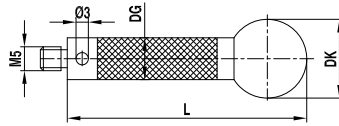


**Ball Range  
3.0-10.0 mm**

TN: 184 – O: 12500

DK	L	DG D	ML1 ML	DS1 DS	Weight g	Base/Stem Material	Price \$USD	Part Number
3.0	25.0	11.0	15.0	2.0	4.0	Titanium / Carbon fiber	46.00	TC M5 030 11 025
3.0	33.5	11.0	23.5	2.0	4.2	Titanium / Carbon fiber	52.00	TC M5 030 11 033
3.0	50.0	11.0	40.0	2.0	4.5	Titanium / Carbon fiber	57.00	TC M5 030 11 050
3.0	58.0	11.0	48.0	2.0	4.9	Titanium / Carbon fiber	59.00	TC M5 030 11 058
4.0	33.5	11.0	23.5	2.0	4.2	Titanium / Carbon fiber	55.00	TC M5 040 11 033
4.0	64.0	11.0	54.0	2.0	4.6	Titanium / Carbon fiber	61.00	TC M5 040 11 064
5.0	50.0	11.0	40.0	3.5	4.8	Titanium / Carbon fiber	51.00	TC M5 050 11 050
5.0	53.0	11.0	43.0	3.5	4.9	Titanium / Carbon fiber	55.00	TC M5 050 11 053
5.0	75.0	11.0	65.0	3.5	5.0	Titanium / Carbon fiber	61.00	TC M5 050 11 075
5.0	100.0	11.0	90.0	3.5	5.4	Titanium / Carbon fiber	93.00	TC M5 050 11 100
6.0	54.0	11.0	44.0	3.5	4.9	Titanium / Carbon fiber	58.00	TC M5 060 11 054
7.0	55.0	11.0	45.0	3.5	4.9	Titanium / Carbon fiber	67.00	TC M5 070 11 055
8.0	63.5	11.0	50.5	6.0	7.0	Titanium / Carbon fiber	65.00	TC M5 080 11 063
8.0	75.0	11.0	62.0	6.0	7.3	Titanium / Carbon fiber	70.00	TC M5 080 11 075
8.0	100.0	11.0	87.0	6.0	7.5	Titanium / Carbon fiber	84.00	TC M5 080 11 100
8.0	114.5	11.0	101.5	6.0	9.5	Titanium / Carbon fiber	81.00	TC M5 080 11 114
8.0	150.0	11.0	137.0	6.0	11.0	Titanium / Carbon fiber	109.00	TC M5 080 11 150
8.0	200.0	11.0	187.0	6.0	13.0	Titanium / Carbon fiber	142.00	TC M5 080 11 200
9.0	64.5	11.0	51.5	6.0	7.2	Titanium / Carbon fiber	71.00	TC M5 090 11 064
10.0	65.5	11.0	52.5	6.0	8.0	Titanium / Carbon fiber	82.00	TC M5 100 11 065
10.0	118.0	11.0	105.0	6.0	14.5	Titanium / Carbon fiber	97.00	TC M5 100 11 118
10.0	150.0	11.0	137.0	6.0	16.0	Titanium / Carbon fiber	139.00	TC M5 100 11 150
10.0	200.0	11.0	187.0	6.0	19.0	Titanium / Carbon fiber	196.00	TC M5 100 11 200



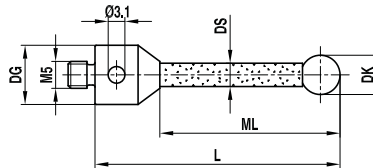


**Ball Range  
15.0-25.0 mm**

TN: 342 - O: 12600

DK	L	DG D	Weight g	Base/Stem Material	Price \$USD	Part Number
15.0	200.0	11.0	35.0	Titanium / Carbon fiber	206.00	TC M5 150 11 200
15.0	300.0	11.0	42.0	Titanium / Carbon fiber	216.00	TC M5 150 11 300
15.0	400.0	11.0	48.0	Titanium / Carbon fiber	226.00	TC M5 150 11 400
15.0	500.0	11.0	55.0	Titanium / Carbon fiber	236.00	TC M5 150 11 500
18.0	200.0	11.0	42.0	Titanium / Carbon fiber	246.00	TC M5 180 11 200
18.0	300.0	11.0	49.0	Titanium / Carbon fiber	256.00	TC M5 180 11 300
18.0	400.0	11.0	55.0	Titanium / Carbon fiber	266.00	TC M5 180 11 400
18.0	500.0	11.0	62.0	Titanium / Carbon fiber	276.00	TC M5 180 11 500
20.0	200.0	11.0	46.0	Titanium / Carbon fiber	286.00	TC M5 200 11 200
20.0	300.0	11.0	53.0	Titanium / Carbon fiber	296.00	TC M5 200 11 300
20.0	400.0	11.0	59.0	Titanium / Carbon fiber	306.00	TC M5 200 11 400
20.0	500.0	11.0	66.0	Titanium / Carbon fiber	316.00	TC M5 200 11 500
25.0	200.0	11.0	62.0	Titanium / Carbon fiber	326.00	TC M5 250 11 200
25.0	300.0	11.0	69.0	Titanium / Carbon fiber	336.00	TC M5 250 11 300
25.0	400.0	11.0	75.0	Titanium / Carbon fiber	346.00	TC M5 250 11 400
25.0	500.0	11.0	82.0	Titanium / Carbon fiber	356.00	TC M5 250 11 500

**M5  
Ruby  
Ceramic**

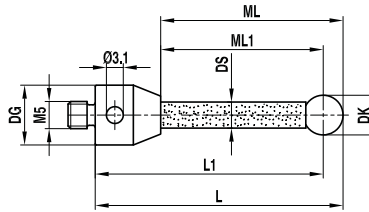


**Ball Range  
5.0-10.0 mm**

TN: 11 - O: 12900

DK	L	DG D	ML1 ML	DS1 DS	Weight g	Base/Stem Material	Price \$USD	Part Number
5.0	53.0	11.0	43.0	3.5	4.6	Titanium / Ceramic	50.00	TK M5 050 11 053
6.0	54.0	11.0	44.0	3.5	4.7	Titanium / Ceramic	51.00	TK M5 060 11 054
7.0	55.0	11.0	45.0	3.5	5.0	Titanium / Ceramic	65.00	TK M5 070 11 055
8.0	63.5	11.0	50.5	6.0	8.3	Titanium / Ceramic	67.00	TK M5 080 11 063
8.0	63.5	19.0	41.5	6.0	33.0	Titanium / Ceramic	54.00	TK M5 080 19 063
8.0	114.5	11.0	101.5	6.0	11.8	Titanium / Ceramic	71.00	TK M5 080 11 114
8.0	114.5	19.0	92.5	6.0	38.0	Titanium / Ceramic	67.00	TK M5 080 19 114
9.0	64.5	11.0	51.5	6.0	8.4	Titanium / Ceramic	74.00	TK M5 090 11 064
9.0	64.5	19.0	42.5	6.0	21.0	Titanium / Ceramic	81.00	TK M5 090 19 064
10.0	65.5	11.0	52.5	6.0	9.0	Titanium / Ceramic	86.00	TK M5 100 11 065
10.0	65.5	19.0	43.5	6.0	38.0	Titanium / Ceramic	90.00	TK M5 100 19 065

**M5  
Ruby  
Ceramic**

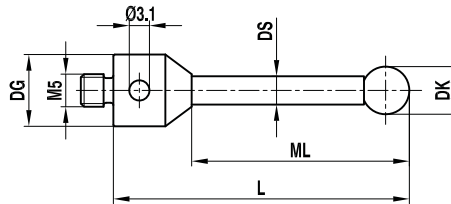


**Ball Range  
8.0-15.0 mm**

TN: 99 - O: 13000

DK	L L1	DG D	ML1 ML	DS1 DS	Weight g	Base/Stem Material	Price \$USD	Part Number
8.0	94.0/90.0	12.0	74.0/78.0	6.0	16.0	Stainless steel / Ceramic	189.00	TK M5 080 12 090
8.0	129.0/125.0	12.0	109.0/113.0	6.0	20.0	Stainless steel / Ceramic	196.00	TK M5 080 12 125
15.0	97.5/90.0	12.0	74.0/81.5	6.0	51.0	Stainless steel / Ceramic	399.00	TK M5 150 12 090

**M5  
Ruby  
Stainless Steel**

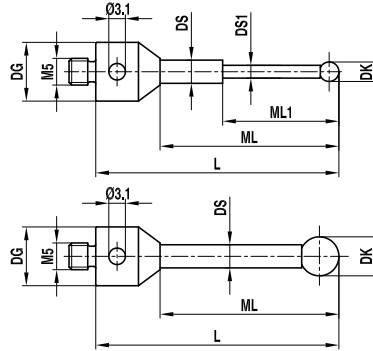


**Ball Range  
3.0-8.0 mm**

TN: 183 - O: 13100

DK	L	DG D	ML1 ML	DS1 DS	Weight g	Base/Stem Material	Price \$USD	Part Number
3.0	33.5	11.0	23.5	2.0	6.0	Stainless steel	52.00	TI M5 030 11 033
3.0	50.0	11.0	40.0	2.0	6.5	Stainless steel	57.00	TI M5 030 11 050
5.0	50.0	11.0	40.0	3.5	8.7	Stainless steel	62.00	TI M5 050 11 050
5.0	53.0	11.0	43.0	3.5	8.9	Stainless steel	64.00	TI M5 050 11 053
5.0	75.0	11.0	65.0	3.5	10.2	Stainless steel	67.00	TI M5 050 11 075
8.0	63.5	11.0	50.5	6.0	17.5	Stainless steel	71.00	TI M5 080 11 063
8.0	75.0	11.0	62.0	6.0	21.0	Stainless steel	73.00	TI M5 080 11 075
8.0	100.0	11.0	87.0	6.0	29.0	Stainless steel	78.00	TI M5 080 11 100
8.0	114.5	11.0	101.5	6.0	33.0	Stainless steel	80.00	TI M5 080 11 114

**M5  
Silicon Nitride  
Carbide**



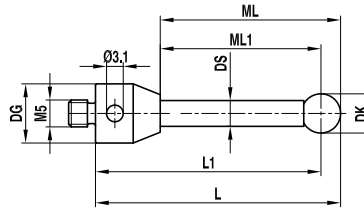
Silicon nitride is similar to but not quite as hard as ruby, and can be made into high-precision spheres. It is ideal for scanning aluminum parts. It is not suited to scanning steel surfaces because of abrasive wear. Please see the appendix to assess the best materials for your applications.

**Ball Range  
1.0-3.0 mm**

TN: 196 – O: 13400

DK	L	DG D	ML1 ML	DS1 DS	Weight g	Base/Stem Material	Price \$USD	Part Number
1.0	20.0	11.0	5.0 / 10.0	0.8 / 1.0	3.5	Titanium / Carbide	86.00	TH M5 S10 11 020
1.0	25.0	11.0	5.0 / 15.0	0.8 / 1.0	3.5	Titanium / Carbide	86.00	TH M5 S10 11 025
1.0	30.0	11.0	5.0 / 20.0	0.8 / 1.0	3.8	Titanium / Carbide	90.00	TH M5 S10 11 030
1.5	30.0	11.0	8.0 / 20.0	1.0 / 1.5	3.5	Titanium / Carbide	90.00	TH M5 S15 11 030
2.0	20.0	11.0	10.0	1.0	3.5	Titanium / Carbide	68.00	TH M5 S20 11 020
2.0	25.0	11.0	15.0	1.0	3.5	Titanium / Carbide	78.00	TH M5 S20 11 025
2.0	30.0	11.0	20.0	1.5	3.8	Titanium / Carbide	81.00	TH M5 S20 11 030
2.0	40.0	11.0	30.0	1.5	4.0	Titanium / Carbide	84.00	TH M5 S20 11 040
3.0	25.0	11.0	15.0	2.0	4.0	Titanium / Carbide	81.00	TH M5 S30 11 025
3.0	33.5	11.0	23.5	2.0	4.5	Titanium / Carbide	86.00	TH M5 S30 11 033
3.0	50.0	11.0	40.0	2.0	5.3	Titanium / Carbide	88.00	TH M5 S30 11 050
3.0	58.0	11.0	48.0	2.0	5.5	Titanium / Carbide	90.00	TH M5 S30 11 058

**M5  
Silicon Nitride  
Carbide**

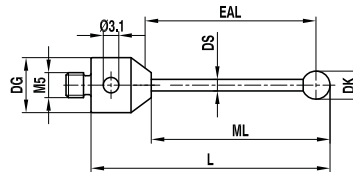


These styli are designed for Leitz probing systems and have a DG base diameter of 12 mm.

**Ball Range  
1.5-3.5 mm** TN: 208 - O: 13500

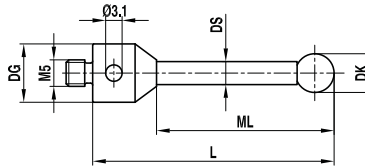
DK	L L1	DG D	ML1 ML	DS1 DS	Weight g	Base/Stem Material	Price \$USD	Part Number
1.5	28.75/28.0	12.0	7.0/7.75	1.0	10.0	Stainless steel / Carbide	133.00	TH M5 S15 12 028
1.5	40.75/40	12.0	19.0/19.75	1.0	11.0	Stainless steel / Carbide	136.00	TH M5 S15 12 040
2.0	31.0/30.0	12.0	18.5/19.5	1.5	7.0	Stainless steel / Carbide	144.00	TH M5 S20 12 030
2.0	36.0/35.0	12.0	23.5/24.5	1.5	7.5	Stainless steel / Carbide	178.00	TH M5 S20 12 035
2.0	42.0/41.0	12.0	30.0/31.0	1.5	8.0	Stainless steel / Carbide	209.00	TH M5 S20 12 041
2.0	61.0/60.0	12.0	39.5/40.5	1.5	12.0	Stainless steel / Carbide	138.00	TH M5 S20 12 060
3.0	36.5/35.0	12.0	24.0/25.5	2.0	9.0	Stainless steel / Carbide	124.00	TH M5 S30 12 035
3.0	51.5/50.0	12.0	39.0/40.5	2.0	10.0	Stainless steel / Carbide	173.00	TH M5 S30 12 050
3.5	92.75/91.0	12.0	78.0/79.75	3.0	18.0	Stainless steel / Carbide	140.00	TH M5 S35 12 091

**M5  
Silicon Nitride  
Carbide**



**Ball Range  
2.0 mm** TN: 287 - O: 13600

DK	L	DG D	ML1 ML	DS1 DS	Weight g	Base/Stem Material	Price \$USD	Part Number
2.0	21.0	10.0	12.0	1.0	4.7	Titanium / Carbide	74.00	TH M5 S20 10 021

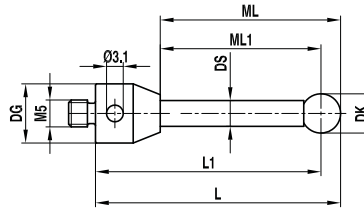


**Ball Range  
4.0-10.0 mm**

TN: 196 – O: 13700

DK	L	DG D	ML1 ML	DS1 DS	Weight g	Base/Stem Material	Price \$USD	Part Number
4.0	33.5	11.0	23.5	2.0	4.5	Titanium / Carbide	93.00	TH M5 S40 11 033
4.0	64.0	11.0	54.0	2.0	5.9	Titanium / Carbide	94.00	TH M5 S40 11 064
5.0	50.0	11.0	40.0	3.5	9.0	Titanium / Carbide	90.00	TH M5 S50 11 050
5.0	53.0	11.0	43.0	3.5	9.8	Titanium / Carbide	93.00	TH M5 S50 11 053
5.0	75.0	11.0	65.0	3.5	12.5	Titanium / Carbide	95.00	TH M5 S50 11 075
5.0	30.0	11.0	20.0	3.5	8.0	Titanium / Carbide	90.00	TH M5 S50 11 030
5.0	100.0	11.0	90.0	3.5	18.0	Titanium / Carbide	100.00	TH M5 S50 11 100
6.0	54.0	11.0	44.0	3.5	10.0	Titanium / Carbide	100.00	TH M5 S60 11 054
7.0	55.0	11.0	45.0	3.5	10.0	Titanium / Carbide	100.00	TH M5 S70 11 055
8.0	63.5	11.0	50.5	6.0	36.6	Titanium / Carbide	105.00	TH M5 S80 11 063
8.0	75.0	11.0	62.0	6.0	29.4	Titanium / Carbide	106.00	TH M5 S80 11 075
8.0	100.0	11.0	87.0	6.0	39.9	Titanium / Carbide	109.00	TH M5 S80 11 100
8.0	114.5	11.0	101.5	6.0	45.7	Titanium / Carbide	114.00	TH M5 S80 11 114
9.0	64.5	11.0	51.5	6.0	26.3	Titanium / Carbide	128.00	TH M5 S90 11 064
10.0	65.5	11.0	52.5	6.0	25.8	Titanium / Carbide	135.00	TH M5 S100 11 065
10.0	118.0	11.0	105.0	6.0	47.3	Titanium / Carbide	142.00	TH M5 S100 11 118
10.0	150.0	11.0	137.0	6.0	60.0	Titanium / Carbide	176.00	TH M5 S100 11 150

**M5  
Silicon Nitride  
Carbide**



These styli are designed for Leitz probing systems and have a DG base diameter of 12 mm.

**Ball Range  
4.0-8.0 mm** ITN: 208 - O: 13800

DK	L L1	DG D	ML1 ML	DS1 DS	Weight g	Base/Stem Material	Price \$USD	Part Number
4.0	57.0/55.0	12.0	42.0/44.0	3.0	13.0	Stainless steel / Carbide	156.00	TH M5 S40 12 055
4.0	82.0/80.0	12.0	69.0/71.0	2.5	16.0	Stainless steel / Carbide	166.00	TH M5 S40 12 080
5.0	62.5/60.0	12.0	49.0/51.5	3.5	16.0	Stainless steel / Carbide	187.00	TH M5 S50 12 060
5.0	82.5/80.0	12.0	69.0/71.5	3.5	19.0	Stainless steel / Carbide	192.00	TH M5 S50 12 080
8.0	94.0/90.0	12.0	74.0/78.0	6.0	46.0	Stainless steel / Carbide	205.00	TH M5 S80 12 090
8.0	129.0/125.0	12.0	109.0/113.0	6.0	61.0	Stainless steel / Carbide	215.00	TH M5 S80 12 125
8.0	180.0/176.0	12.0	160.0/164.0	6.0	80.0	Stainless steel / Carbide	281.00	TH M5 S80 12 176
8.0	72.0/68.0	12.0	50.0/54.0	3.0	32.0	Stainless steel / Carbide	175.00	TH M5 S80 12 068

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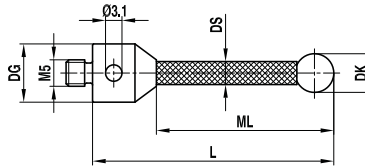
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<p><b>Straight stylus:</b> Styli in all sizes and range; Straight, mini, stepped, high accuracy available in all thread sizes M2-M6 Styli for the major probing systems; ...</p>	<p><b>Extensions:</b> Extensions in all materials; stainless steel, titanium, aluminum, ceramic and our EXCLUSIVE thermally stable construction;...</p>
<p><b>Star stylus:</b> Star styli in every major configuration for all Renishaw and Zeiss probing systems.</p>	<p><b>Holders:</b> Holders in all major thread sizes M2-M5 in Stainless and Titanium.</p>
<p><b>Cylinder stylus:</b> Cylinder styli in ruby, ceramic and carbide construction help maximize dimensional collection for sheet metal applications.</p>	<p><b>Accessories:</b> Accessories including assembly wrenches, adapter plates (Zeiss style), cubes, knuckles, screws, etc... for all of your assembly requirements.</p>
<p><b>Disk stylus:</b> Disk stylus to fit all the major brands of probing systems. Ceramic, ruby and steel disks in a wide range of sizes and thickness.</p>	<p><b>Adapters:</b> Adapters to convert from one thread size to another, for all thread combinations from M2 through M6.</p>
<p><b>Spherical stylus:</b> Precision spherical styli in high quality ceramic construction.</p>	<p><b>Kits:</b> Kits are the best way to maximize your stylus library. M2-M5 kits contain a broad assortment of commonly styli and accessories for all CMM systems.</p>

**Or select the general category of stylus or accessory (as shown above). After selecting thread size, ball size, length and material, a filtered list of items appears. Each item can then be viewed in detail and ordered online.**

**M5  
Silicon Nitride  
Carbon Fiber**

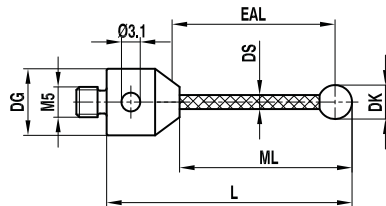


**Ball Range  
3.0-10.0 mm**

TN: 195 – O: 14100

DK	L	DG D	ML1 ML	DS1 DS	Weight g	Base/Stem Material	Price \$USD	Part Number
3.0	25.0	11.0	15.0	2.0	4.0	Titanium / Carbon fiber	73.00	TC M5 S30 11 025
3.0	33.5	11.0	23.5	2.0	4.2	Titanium / Carbon fiber	73.00	TC M5 S30 11 033
3.0	50.0	11.0	40.0	2.0	4.5	Titanium / Carbon fiber	82.00	TC M5 S30 11 050
3.0	58.0	11.0	48.0	2.0	4.9	Titanium / Carbon fiber	84.00	TC M5 S30 11 058
4.0	33.5	11.0	23.5	2.0	4.2	Titanium / Carbon fiber	86.00	TC M5 S40 11 033
4.0	64.0	11.0	54.0	2.0	4.6	Titanium / Carbon fiber	87.00	TC M5 S40 11 064
5.0	50.0	11.0	40.0	3.5	4.8	Titanium / Carbon fiber	84.00	TC M5 S50 11 050
5.0	53.0	11.0	43.0	3.5	4.9	Titanium / Carbon fiber	84.00	TC M5 S50 11 053
5.0	75.0	11.0	65.0	3.5	5.0	Titanium / Carbon fiber	85.00	TC M5 S50 11 075
5.0	100.0	11.0	90.0	3.5	5.4	Titanium / Carbon fiber	118.00	TC M5 S50 11 100
6.0	54.0	11.0	44.0	3.5	4.9	Titanium / Carbon fiber	91.00	TC M5 S60 11 054
7.0	55.0	11.0	45.0	3.5	4.9	Titanium / Carbon fiber	101.00	TC M5 S70 11 055
8.0	63.5	11.0	50.5	6.0	7.0	Titanium / Carbon fiber	98.00	TC M5 S80 11 063
8.0	75.0	11.0	62.0	6.0	7.3	Titanium / Carbon fiber	98.00	TC M5 S80 11 075
8.0	100.0	11.0	87.0	6.0	7.5	Titanium / Carbon fiber	100.00	TC M5 S80 11 100
8.0	114.5	11.0	101.5	6.0	9.5	Titanium / Carbon fiber	107.00	TC M5 S80 11 114
8.0	150.0	11.0	137.0	6.0	11.0	Titanium / Carbon fiber	135.00	TC M5 S80 11 150
8.0	200.0	11.0	187.0	6.0	13.0	Titanium / Carbon fiber	167.00	TC M5 S80 11 200
9.0	64.5	11.0	51.5	6.0	7.2	Titanium / Carbon fiber	100.00	TC M5 S90 11 064
10.0	65.5	11.0	52.5	6.0	8.0	Titanium / Carbon fiber	109.00	TC M5 S100 11 065
10.0	118.0	11.0	105.0	6.0	14.5	Titanium / Carbon fiber	121.00	TC M5 S100 11 118
10.0	150.0	11.0	137.0	6.0	16.0	Titanium / Carbon fiber	164.00	TC M5 S100 11 150
10.0	200.0	11.0	187.0	6.0	19.0	Titanium / Carbon fiber	221.00	TC M5 S100 11 200

**M5  
Silicon Nitride  
Carbon fiber**

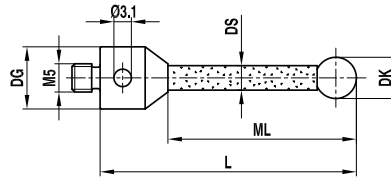


**Ball Range  
4.0-6.0 mm**

TN: 390 – O: 14150

DK	ML1 ML	DG D	L	DS1 DS	EAL B	Weight g	Body Material	Price \$USD	Part Number
4.0	13.0	10.0	22.0	2.0	11.0	5.0	Titanium / Carbon fiber	86.00	TC M5 S40 10 022
6.0	42.0	10.0	53.0	4.0	39.0	7.0	Titanium / Carbon fiber	124.00	TC M5 S60 10 053
6.0	53.0	10.0	103.0	4.0	50.0	20.7	Titanium / Carbon fiber	175.00	TC M5 S60 50 103

**M5  
Silicon Nitride  
Ceramic**

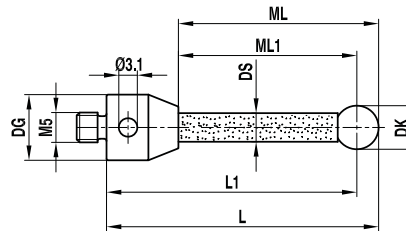


**Ball Range  
5.0-10.0 mm**

TN: 197 – O: 14200

DK	L	DG D	ML1 ML	DS1 DS	Weight g	Base/Stem Material	Price \$USD	Part Number
5.0	53.0	11.0	43.0	3.5	4.6	Titanium / Ceramic	81.00	TK M5 S50 11 053
6.0	54.0	11.0	44.0	3.5	4.7	Titanium / Ceramic	90.00	TK M5 S60 11 054
7.0	55.0	11.0	45.0	3.5	5.0	Titanium / Ceramic	98.00	TK M5 S70 11 055
8.0	63.5	11.0	50.5	6.0	8.3	Titanium / Ceramic	102.00	TK M5 S80 11 063
8.0	114.5	11.0	101.5	6.0	11.8	Titanium / Ceramic	106.00	TK M5 S80 11 114
9.0	64.5	11.0	51.5	6.0	8.4	Titanium / Ceramic	99.00	TK M5 S90 11 064
10.0	65.5	11.0	52.5	6.0	9.0	Titanium / Ceramic	137.00	TK M5 S100 11 065

**M5  
Silicon Nitride  
Ceramic**

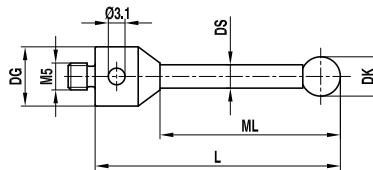


**Ball Range  
8.0 mm**

TN: 210 – O: 14300

DK	L L1	DG D	ML1 ML	DS1 DS	Weight g	Base/Stem Material	Price \$USD	Part Number
8.0	94.0/90.0	12.0	74.0/78.0	6.0	16.0	Stainless steel / Ceramic	222.00	TK M5 S80 12 090
8.0	129.0/125.0	12.0	109.0/113.0	6.0	20.0	Stainless steel / Ceramic	229.00	TK M5 S80 12 125

**M5  
Silicon Nitride  
Stainless Steel**



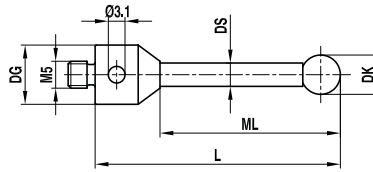
**Ball Range  
3.0 mm**

TN: 193 – O: 14400

DK	L	DG D	ML1 ML	DS1 DS	Weight g	Base/Stem Material	Price \$USD	Part Number
3.0	33.5	11.0	23.5	2.0	6.0	Stainless steel	78.00	T1 M5 S30 11 033
3.0	50.0	11.0	40.0	2.0	6.5	Stainless steel	84.00	T1 M5 S30 11 050



**M5  
Silicon Nitride  
Stainless Steel**



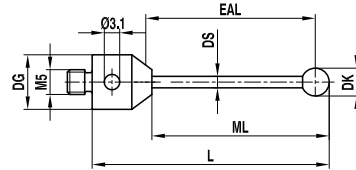
**Ball Range  
5.0-8.0 mm**

TN: 193 – O: 14500

DK	L	DG D	ML1 ML	DS1 DS	Weight g	Base/Stem Material	Price \$USD	Part Number
5.0	50.0	11.0	40.0	3.5	8.7	Stainless steel	89.00	<b>TI M5 S50 11 050</b>
5.0	53.0	11.0	43.0	3.5	8.9	Stainless steel	91.00	<b>TI M5 S50 11 053</b>
5.0	75.0	11.0	65.0	3.5	10.2	Stainless steel	96.00	<b>TI M5 S50 11 075</b>
8.0	63.5	11.0	50.5	6.0	17.5	Stainless steel	101.00	<b>TI M5 S80 11 063</b>
8.0	75.0	11.0	62.0	6.0	21.0	Stainless steel	103.00	<b>TI M5 S80 11 075</b>
8.0	100.0	11.0	87.0	6.0	29.0	Stainless steel	108.00	<b>TI M5 S80 11 100</b>
8.0	114.5	11.0	101.5	6.0	33.0	Stainless steel	110.00	<b>TI M5 S80 11 114</b>

**M5  
Zirconium Oxide  
Carbide**

Zirconium oxide has surface features comparable to ruby. It is ideal for scanning cast iron parts. Please see the appendix to assess the best materials for your applications.

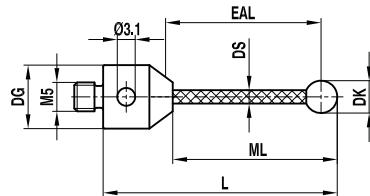


**Ball Range  
2.0 mm**

TN: 288 – O: 14600

DK	EAL B	ML1 ML	DG D	L	Base/Stem Material	Price \$USD	Part Number
2.0	11.0	12.0	10.0	21.0	Titanium / Carbide	74.00	<b>TH M5 Z20 10 021</b>

**M5  
Zirconium Oxide  
Carbon Fiber**

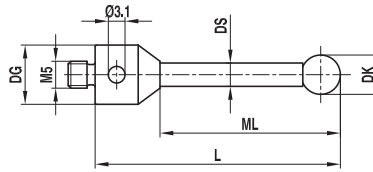


**Ball Range  
4.0-6.0 mm**

TN: 290 – O: 14650

DK	L	DG D	ML1 ML	DS1 DS	Weight g	Base/Stem Material	Price \$USD	Part Number
4.0	22.0	10.0	13.0	2.0	5.0	Titanium / Carbon fiber	82.00	<b>TC M5 Z40 10 022</b>
6.0	53.0	10.0	42.0	4.0	7.0	Titanium / Carbon fiber	116.00	<b>TC M5 Z60 10 053</b>
6.0	103.0	10.0	53.0	4.0	20.7	Titanium / Carbon fiber	154.00	<b>TC M5 Z60 50 103</b>

**M5  
Carbide  
Carbide**

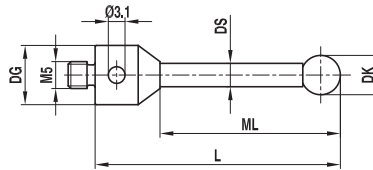


Tungsten Carbide is a low-weight option normally used on articulated arms. It has better shock absorption, but surface features are lower than ruby, and it is not suited to ball sizes smaller than 1 mm. See the appendix to assess the best materials.

**Ball Range  
3.0-8.0 mm** TN: 356 - O: 14700

DK	L	DG D	ML1 ML	DS1 DS	Weight g	Base/Stem Material	Price \$USD	Part Number
3.0	33.5	11.0	23.5	2.0	4.5	Titanium / Carbide	108.00	TH M5 H30 11 033
5.0	105.0	11.0	95.0	3.5	15.0	Titanium / Carbide	118.00	TH M5 H50 11 105
8.0	63.5	11.0	50.5	6.0	25.0	Titanium / Carbide	128.00	TH M5 H80 11 063

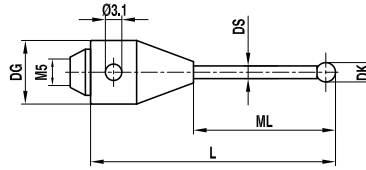
**M5  
Master Probe  
Stainless Steel**



**Ball Range  
8.0 mm** TN: 335 - O: 14800

DK	L	DG D	ML1 ML	DS1 DS	Weight g	Base/Stem Material	Price \$USD	Part Number
8.0	63.5	11.0	50.5	6.0	24.8	Stainless steel	138.00	TH M5 R80 11 063

## M5 Conic Fitting Ruby Carbide



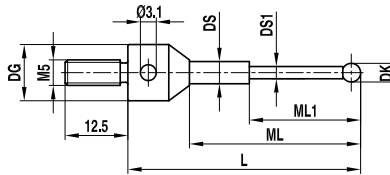
These Conic fitting styli are for the old Zeiss and Mauser machines that do not use adapter plates. For more options, consider using the M5 adapter (AT KO 000 18 010) described on page 92.

### Ball Range 3.0-8.0 mm

TN: 10 – O: 14900

DK	L	DG D	ML1 ML	DS1 DS	Weight g	Base/Stem Material	Price \$USD	Part Number
3.0	50.0	19.0	21.5	2.0	23.0	Titanium / Carbide	86.00	TH KO 030 19 050
3.0	75.0	19.0	35.0	2.0	30.0	Titanium / Carbide	95.00	TH KO 030 40 075
3.0	75.0	19.0	50.0	2.0	22.0	Titanium / Carbide	95.00	TH KO 030 25 075
3.0	115.0	19.0	18.0	2.0	56.0	Titanium / Carbide	86.00	TH KO 030 19 115
5.0	75.0	19.0	35.0	3.5	34.0	Titanium / Carbide	105.00	TH KO 050 40 075
5.0	75.0	19.0	50.0	3.5	28.0	Titanium / Carbide	105.00	TH KO 050 25 075
5.0	100.0	19.0	60.0	3.5	38.0	Titanium / Carbide	100.00	TH KO 050 19 100
8.0	80.0	19.0	57.0	6.0	45.0	Titanium / Carbide	86.00	TH KO 080 19 080
8.0	100.0	19.0	60.0	6.0	57.0	Titanium / Carbide	90.00	TH KO 080 19 100
8.0	115.0	19.0	56.5	6.0	68.0	Titanium / Carbide	93.00	TH KO 080 19 115
8.0	140.0	19.0	100.0	6.0	74.0	Titanium / Carbide	105.00	TH KO 080 19 140

## M5 Extended Thread Ruby Carbide



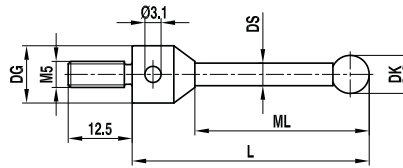
These extended thread styli are designed to be used with the threaded disks described on page 82.

### Ball Range 0.3-1.0 mm

TN: 16 – O: 15000

DK	L	ML1 ML	DS1 DS	Weight g	Base/Stem Material	Price \$USD	Part Number
0.3	21.8	2.3 / 12.8	0.2 / 1.0	6.0	Stainless steel / Carbide	52.00	LH M5 003 11 021
0.5	22.0	2.5 / 13.0	0.3 / 1.0	6.0	Stainless steel / Carbide	49.00	LH M5 005 11 022
0.6	22.1	4.6 / 13.1	0.4 / 1.0	6.0	Stainless steel / Carbide	49.00	LH M5 006 11 022
0.8	22.3	4.8 / 13.3	0.6 / 1.0	6.0	Stainless steel / Carbide	47.00	LH M5 008 11 022
1.0	22.5	5.0 / 13.5	0.8 / 1.0	6.0	Stainless steel / Carbide	46.00	LH M5 010 11 022

**M5  
Extended Thread  
Ruby  
Carbide**



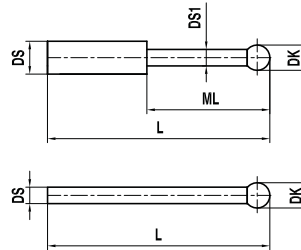
These extended thread styli are designed to be used with the threaded disks described on page 82.

**Ball Range  
1.3-5.0 mm**

TN: 16 – O: 15100

DK	L	ML1 ML	DS1 DS	Weight g	Base/Stem Material	Price \$USD	Part Number
1.35	32.85	23.85	1.0	6.0	Stainless steel / Carbide	46.00	LH M5 013 11 032
1.5	33.0	24.0	1.0	7.0	Stainless steel / Carbide	44.00	LH M5 015 11 033
2.0	33.5	24.5	1.5	7.0	Stainless steel / Carbide	45.00	LH M5 020 11 033
2.5	34.0	25.0	1.5	7.0	Stainless steel / Carbide	46.00	LH M5 025 11 034
3.0	25.5	16.5	2.0	7.0	Stainless steel / Carbide	37.00	LH M5 030 11 025
3.0	34.5	16.5	2.0	20.0	Stainless steel / Carbide	43.00	LH M5 030 19 034
5.0	34.5	25.5	3.5	9.0	Stainless steel / Carbide	76.00	LH M5 050 11 034
5.0	43.5	25.5	3.5	23.0	Stainless steel / Carbide	48.00	LH M5 050 19 043

**M5  
Ruby  
Carbide**

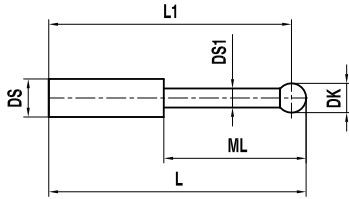


**Styli w/o Thread  
Ball Range  
0.2-5.0 mm**

TN: 22 – O: 15200

DK	L	ML1 ML	DS1 DS	Weight g	Stem	Price \$USD	Part Number
0.2	15.2	2.3	0.18 / 1.0	1.0	Carbide	129.00	KT M5 002 01 015
0.25	15.25	2.35	0.18 / 1.0	1.0	Carbide	129.00	KT M5 0025 01 015
0.3	15.3	2.3	0.2 / 1.0	1.0	Carbide	44.00	KT M5 003 01 015
0.4	15.5	2.5	0.3 / 1.0	1.0	Carbide	69.00	KT M5 004 01 015
0.5	15.5	2.5	0.3 / 1.0	1.0	Carbide	42.00	KT M5 005 01 015
0.6	15.6	4.6	0.4 / 1.0	1.0	Carbide	41.00	KT M5 006 01 015
0.7	15.7	4.6	0.4 / 1.0	1.0	Carbide	32.00	KT M5 007 01 015
0.8	15.8	4.8	0.6 / 1.0	1.0	Carbide	39.00	KT M5 008 01 015
1.0	16.0	5.0	0.8 / 1.0	1.0	Carbide	38.00	KT M5 010 01 016
1.35	26.35	-	1.0	1.0	Carbide	38.00	KT M5 013 10 026
1.5	26.5	-	1.0	1.0	Carbide	29.00	KT M5 015 10 026
2.0	27.0	-	1.0	1.0	Carbide	29.00	KT M5 020 10 027
2.0	27.0	-	1.5	1.0	Carbide	29.00	KT M5 020 15 027
2.5	27.5	-	1.0	1.0	Carbide	42.00	KT M5 025 10 027
2.5	27.5	-	1.5	1.0	Carbide	29.00	KT M5 025 15 027
3.0	38.0	-	2.0	2.0	Carbide	29.00	KT M5 030 20 038
5.0	45.0	-	3.5	6.0	Carbide	34.00	KT M5 050 35 045

**M5  
Ruby  
Carbide**

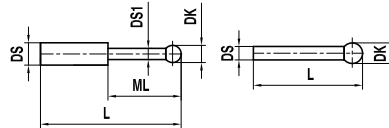


**Styli w/o Thread  
Ball Range  
0.3-2.0 mm**

TN: 186 - O: 15300

DK	L L1	ML1 ML	DS1 DS	Weight g	Stem	Price \$USD	Part Number
0.3	22.15 / 22.0	4.15	0.2 / 2.0	1.0	Carbide	114.00	KT M5 003 02 022
0.5	22.25 / 22.0	4.25	0.3 / 2.0	1.0	Carbide	124.00	KT M5 005 02 022
0.8	22.4 / 22.0	4.4	0.6 / 2.0	1.0	Carbide	133.00	KT M5 008 02 022
1.0	22.5 / 22.0	4.5	0.8 / 2.0	1.0	Carbide	135.00	KT M5 010 02 022
1.0	34.5 / 34.0	14.5	0.8 / 2.0	1.0	Carbide	137.00	KT M5 010 02 034
1.5	22.75 / 22.0	10.35	1.2 / 2.0	1.0	Carbide	130.00	KT M5 015 02 022
2.0	23.0 / 22.0	10.6	1.5 / 2.0	1.0	Carbide	89.00	KT M5 020 02 022

**M5  
Ruby  
Carbide**



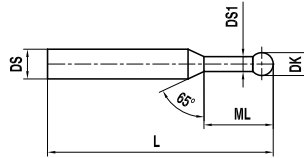
**Styli w/o Thread  
Ball Range  
1.0-10.0 mm**

TN: 173 - O: 15400

DK	L	ML1 ML	DS1 DS	Weight g	Stem	Price \$USD	Part Number
1.0	16.0	5.0	0.8 / 1.0	1.0	Carbide	38.00	KT M5 010 01 016
1.5	16.0	-	1.0	1.0	Carbide	37.00	KT SO 015 10 016
2.0	16.0	-	1.0	1.0	Carbide	37.00	KT SO 020 10 016
5.0	37.5	12.5	3.0 / 4.0	3.0	Carbide	52.00	KT M5 050 04 037
5.0	62.5	-	4.0	8.0	Carbide	55.00	KT M5 050 04 062
7.0	38.5	-	4.0	6.0	Carbide	55.00	KT M5 070 04 038
10.0	40.0	-	4.0	6.0	Carbide	61.00	KT M5 100 04 040

We offer several holders designed to be used with these threadless styli. Refer to the following pages:  
M2: pages 16-18  
M3: page 32  
M5: pages 87-91

**M5  
Ruby  
Carbide**

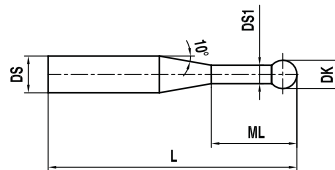


**Styli w/o Thread  
65° Taper Angle  
Ball Range  
0.3-0.5 mm**

TIN: 174 – O: 15500

DK	L	ML1 ML	DS1 DS	Weight g	Stem	Price \$USD	Part Number
0.3	15.3	2.3	0.2 / 1.0	1.0	Carbide	124.00	KT M5 003 01 015/65°
0.5	15.5	2.5	0.3 / 1.0	1.0	Carbide	100.00	KT M5 005 01 015/65°

**M5  
Ruby  
Carbide**

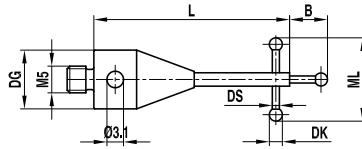


**Styli w/o Thread  
10° Taper Angle  
Ball Range  
0.5-3.0 mm**

TIN: 172 – O: 15600

DK	L	ML1 ML	DS1 DS	Weight g	Stem	Price \$USD	Part Number
0.5	35.25	2.75 / 4.75	0.3/1.0/4.0	3.0	Carbide	114.00	KT M5 005 04 035
0.8	35.4	4.9	0.6 / 4.0	3.0	Carbide	124.00	KT M5 008 04 035
1.0	35.5	5.0	0.8 / 4.0	3.0	Carbide	137.00	KT M5 010 04 035
1.0	60.5	5.0	0.8 / 4.0	7.0	Carbide	105.00	KT M5 010 04 060
1.5	35.75	5.25	1.0 / 4.0	3.0	Carbide	99.00	KT M5 015 04 035
1.5	60.75	5.25	1.0 / 4.0	7.0	Carbide	105.00	KT M5 015 04 060
2.0	36.0	5.5	1.2 / 4.0	3.0	Carbide	70.00	KT M5 020 04 036
2.0	61.0	8.5	1.2 / 4.0	8.0	Carbide	77.00	KT M5 020 04 061
3.0	36.5	9.0	1.8 / 4.0	3.0	Carbide	71.00	KT M5 030 04 036
3.0	61.5	11.5	1.8 / 4.0	8.0	Carbide	78.00	KT M5 030 04 061

**M5  
Ruby Star Styli  
Stainless Steel**

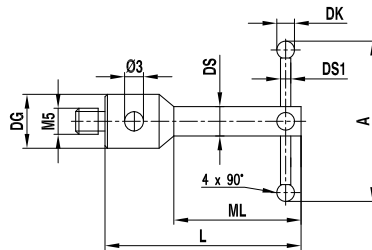


These styli are fixed.

**Ball Range  
0.5-2.3 mm** TN: 18 – O: 15700

DK	L	ML1 ML	EAL B	DG D	DS1 DS	Weight g	Base/Stem Material	Price \$USD	Part Number
0.5	40.0	3.5	1.9	11.0	0.4	7.0	Stainless steel	276.00	TI M5 005 11 040
0.8	40.0	5.0	1.9	11.0	0.6	7.0	Stainless steel	185.00	TI M5 008 11 040
1.35	40.0	9.0	2.0	11.0	1.0	11.0	Stainless steel	121.00	TI M5 013 11 040
1.8	40.0	10.0	2.0	11.0	1.0	12.0	Stainless steel	124.00	TI M5 018 11 040
2.3	40.0	12.0	2.5	11.0	1.0	13.0	Stainless steel	114.00	TI M5 023 11 040

**M5  
Ruby Star Styli  
Stainless Steel**

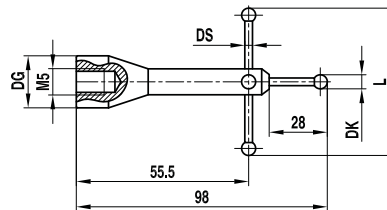


These styli are fixed.

**Ball Range  
0.6-1.0 mm** TN: 343 – O: 15800

DK	L	ML1 ML	DS1 DS	A	Weight g	Base/Stem Material	Price \$USD	Part Number
0.6	40.0	30.0	0.4/4.0	8.0	9.0	Stainless steel	296.00	SI M5 006 11 040
0.8	40.0	30.0	0.6/4.0	8.0	9.0	Stainless steel	276.00	SI M5 008 11 040
1.0	40.0	30.0	0.8/4.0	8.0	9.0	Stainless steel	398.00	SI M5 010 11 040

**M5  
Ruby Star Styli  
Carbide**



These styli are fixed.

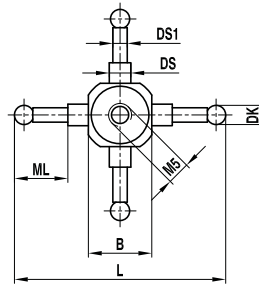
**Ball Range  
5.0 mm** TN: 21 – O: 15900

DK	L	ML1 ML	DS1 DS	Weight g	Base/Stem Material	Price \$USD	Part Number
5.0	80.0	-	3.5	70.0	Aluminum / Carbide	315.00	SA M5 050 19 080

## M5 Ruby Star Styli Carbide



Star styli allow the use of up to five styli in one piece. They offer greater flexibility because they can measure many features without changing styli. This configuration allows the horizontal arms to be clocked.



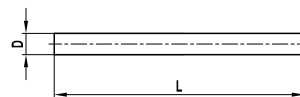
This piece is non-clocking, and the four styli are fixed. There is one empty M5 thread on the bottom of the cube.

**Ball Range**  
1.0-3.5 mm

TN: 15 - O: 16000

DK	L	ML1 ML	DS1 DS	Weight g	Base/Stem Material	Price \$USD	Part Number
1.0	45.0	7.0	0.8 / 2.0	17.3	Titanium / Carbide	219.00	WT M5 010 15 045
1.5	45.0	7.5	1.0 / 2.0	17.3	Titanium / Carbide	219.00	WT M5 015 15 045
2.0	45.0	7.5	1.5 / 2.0	17.3	Titanium / Carbide	219.00	WT M5 020 15 045
2.5	45.0	8.0	1.5 / 2.0	17.3	Titanium / Carbide	219.00	WT M5 025 15 045
3.5	45.0	15.0	2.0	17.3	Titanium / Carbide	219.00	WT M5 035 15 045

## M5 Pin for Star Styli Carbide



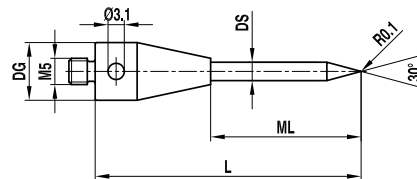
Use with Grooved Washer and Locking Disc on page 104.

**Pin for star styli**

TN: 45 - O: 16100

DG D	L	Weight g	Material	Price \$USD	Part Number
1.0	10.0	1.0	Carbide	10.00	SH M5 000 10 010
1.5	10.0	1.0	Carbide	10.00	SH M5 000 15 010
2.0	18.0	1.0	Carbide	10.00	SH M5 000 20 018
3.5	18.0	3.0	Carbide	10.00	SH M5 000 35 018

## M5 Pointer Styli Carbide



Pointer styli are designed for the measurement of thread forms, specific points and scribed lines. They should not be used for conventional XY probing.

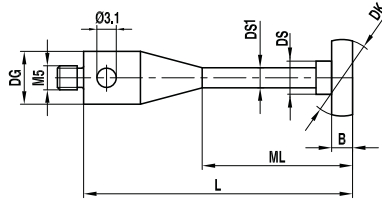
**Angle**  
30°

TN: 20 - O: 16200

DK	L	ML1 ML	DS1 DS	Weight g	Base/Stem Material	Price \$USD	Part Number
30°	61.0	39.0	3.5	12.0	Titanium / Carbide	51.00	IH M5 030 11 061



**M5  
Disks  
Stainless Steel**



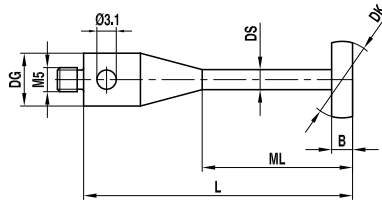
Disc styli are useful for measuring undercuts and grooves. Some have balls on one or both sides to allow measuring in X, Y and Z directions.

**Disk Range  
10.0-40.0 mm**

TN: 355 - O: 16400

DK	L	EAL B	ML1 ML	DG D	Weight g	Body/Disk Material	Price \$USD	Part Number
10.0	65.0	1.0	55.0	11.0	11.0	Aluminium / Stainless steel	137.00	KI M5 100 11 065
10.0	65.0	2.0	55.0	11.0	17.0	Aluminium / Stainless steel	167.00	KI M5 100 11 065/2
15.0	65.0	2.0	55.0	11.0	20.0	Aluminium / Stainless steel	178.00	KI M5 150 11 065/2
15.0	65.0	1.0	55.0	11.0	18.0	Aluminium / Stainless steel	138.00	KI M5 150 11 065
20.0	65.0	1.0	55.0	11.0	19.0	Aluminium / Stainless steel	236.00	KI M5 200 11 065
20.0	65.0	2.0	55.0	11.0	25.0	Aluminium / Stainless steel	245.00	KI M5 200 11 065/2
25.0	65.0	2.0	55.0	11.0	32.0	Aluminium / Stainless steel	255.00	KI M5 250 11 065/2
25.0	65.0	1.0	55.0	11.0	22.0	Aluminium / Stainless steel	225.00	KI M5 250 11 065
30.0	65.0	2.0	55.0	11.0	39.0	Aluminium / Stainless steel	265.00	KI M5 300 11 065
40.0	65.0	2.0	55.0	11.0	57.0	Aluminium / Stainless steel	285.00	KI M5 400 11 065

**M5  
Disks  
Carbide**

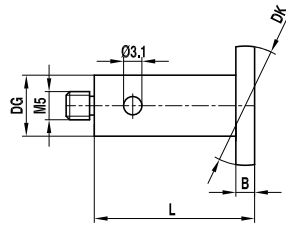


**Disk Range  
8.0-16.0 mm**

TN: 264 - O: 16450

DK	ML1 ML	DG D	L	DS1 DS	EAL B	Weight g	Body/Disk Material	Price \$USD	Part Number
8.0	46.0	12.0	57.0	2.5	1.0	12.0	Stainless steel / Carbide	257.00	KH M5 080 12 056
10.0	35.7	12.0	46.7	3.0	0.7	13.0	Stainless steel / Carbide	271.00	KH M5 100 12 046
16.0	49.5	12.0	60.5	3.5	2.5	18.0	Stainless steel / Carbide	276.00	KH M5 160 12 057

**M5  
Disks  
Stainless Steel**

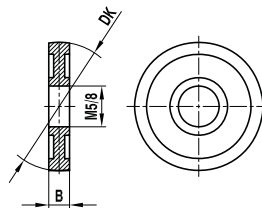


**Disk Range  
10.0-20.0 mm**

TN: 19 – O: 16500

DK	L	DG D	EAL B	Weight g	Body/Disk Material	Price \$USD	Part Number
10.0	21.5	7.0	1.5	3.0	Aluminium / Stainless steel	107.00	<b>KI M5 100 07 021</b>
15.0	21.5	10.0	1.5	6.0	Aluminium / Stainless steel	108.00	<b>KI M5 150 10 021</b>
15.0	40.0	7.0	1.0	5.0	Aluminium / Stainless steel	176.00	<b>KI M5 150 07 040</b>
20.0	60.0	7.0	1.0	8.0	Aluminium / Stainless steel	206.00	<b>KI M5 200 07 060</b>

**M5  
Disks  
Stainless Steel**



The M designation in the third-to-last position of the part number denotes that the center hole is threaded to accept the respective thread or is bored to a diameter as listed in column 3, Thread/Bore Hole. Unthreaded bores are to be used with the SI parts on page 98.

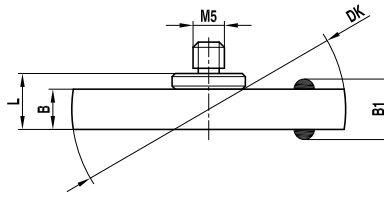
**Disk Range  
10.0-60.0 mm**

TN: 41 – O: 16600

DK	EAL B	Thread/ Bore hole	Weight g	Body Material	Price \$USD	Part Number
15.0	4.0	M5	5.0	Stainless steel	89.00	<b>KI M5 040 15 M50</b>
15.0	4.0	8.0	4.0	Stainless steel	113.00	<b>KI M5 040 15 080</b>
20.0	4.0	8.0	8.0	Stainless steel	89.00	<b>KI M5 040 20 080</b>
20.0	2.0	8.0	4.0	Stainless steel	88.00	<b>KI M5 020 20 080</b>
20.0	4.0	M5	9.0	Stainless steel	89.00	<b>KI M5 040 20 M50</b>
30.0	4.0	M5	21.0	Stainless steel	90.00	<b>KI M5 040 30 M50</b>
30.0	4.0	8.0	10.0	Stainless steel	90.00	<b>KI M5 040 30 080</b>
40.0	4.0	8.0	21.0	Stainless steel	94.00	<b>KI M5 040 40 080</b>
40.0	5.0	M5	42.0	Stainless steel	93.00	<b>KI M5 050 40 M50</b>
50.0	5.0	M5	64.0	Stainless steel	94.00	<b>KI M5 050 50 M50</b>
50.0	5.0	8.0	36.0	Stainless steel	98.00	<b>KI M5 050 50 080</b>
60.0	6.0	8.0	59.0	Stainless steel	101.00	<b>KI M5 060 60 080</b>
60.0	5.0	M5	89.0	Stainless steel	95.00	<b>KI M5 050 60 M50</b>

The disks above with part numbers that end in M50 can be used with the M5 extended thread styli described on pages 75 & 76.

**M5  
Disks  
Stainless Steel**

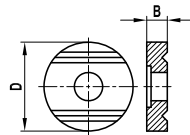


**Disk Range  
12.0-63.5 mm**

TN: 295 – O: 16700

DK	B1 B	L	Weight g	Base/Stem/Disk Material	Price \$USD	Part Number
12.0	5.0 / 3.0	5.0	2.6	Stainless steel	118.00	KI M5 030 12 M50
21.0	5.0 / 3.0	5.0	5.3	Stainless steel	127.00	KI M5 030 21 M50
35.0	8.0 / 5.0	7.0	14.0	Stainless steel	136.00	KI M5 050 35 M50
63.5	8.0 / 5.0	7.0	51.0	Stainless steel	155.00	KI M5 050 63 M50

**M5  
Disks  
Stainless Steel**



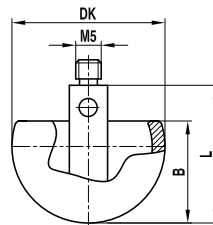
Use with Locking Disc on page 104 and Pin on page 80.

**Grooved Disk  
11.0-19.0 mm**

TN: 44 – O: 16800

DG D	EAL B	Weight g	Body Material	Price \$USD	Part Number
11.0	2.0	1.0	Stainless steel	48.00	NI M5 000 11 020
19.0	4.0	7.0	Stainless steel	52.00	NI M5 000 19 040

**M5  
Spherical Styli  
Ceramic**



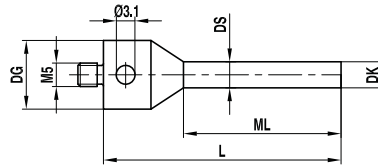
Hemispherical styli provide a greater measuring surface with low weight. They are ideal for deep features and bores. The large area is better for rough surfaces.

**Hollow Sphere  
16.0-30.0 mm**

TN: 291 – O: 16900

DK	EAL B	L	Weight g	Base/Body Material	Price \$USD	Part Number
16.0	10.0	19.5	7.0	Stainless steel / Ceramic	290.00	HK M5 160 10 019
18.0	12.0	20.0	7.0	Stainless steel / Ceramic	300.00	HK M5 180 10 020
22.0	13.0	20.0	10.0	Stainless steel / Ceramic	340.00	HK M5 220 10 020
30.0	18.0	24.5	18.0	Stainless steel / Ceramic	520.00	HK M5 300 10 024

## M5 Cylinder Carbide



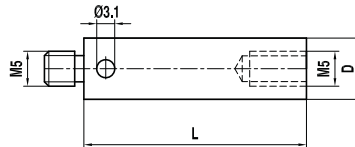
Cylinder styli are useful for measuring sheet metal and thin pieces. They are also applicable for measuring threaded features.

### Cylinder 3.0 mm

TN: 101 -- O: 17000

DK	L	DG D	ML1 ML	DS1 DS	Weight g	Base/Cylinder Material	Price \$USD	Part Number
3.0	50.0	12.0	39.0	3.0	14.0	Stainless steel / Carbide	105.00	ZH M5 030 12 050

## M5 Extensions Aluminum



### Length Range 20.00-200.00 mm

TN: 28 -- O: 17100

L	DG D	Weight g	Body Material	Price \$USD	Part Number
20.0	11.0	5.7	Aluminium	25.00	VA M5 000 11 020
40.0	11.0	10.3	Aluminium	26.00	VA M5 000 11 040
40.0	20.0	29.0	Aluminium	40.00	VA M5 000 20 040
50.0	20.0	33.3	Aluminium	51.00	VA M5 000 20 050
60.0	20.0	37.7	Aluminium	40.00	VA M5 000 20 060
60.0	11.0	15.4	Aluminium	27.00	VA M5 000 11 060
80.0	11.0	20.6	Aluminium	28.00	VA M5 000 11 080
80.0	20.0	44.8	Aluminium	41.00	VA M5 000 20 080
80.0	11.0	20.6	Aluminium	28.00	VA M5 000 11 080
100.0	11.0	25.6	Aluminium	30.00	VA M5 000 11 100
100.0	20.0	50.7	Aluminium	42.00	VA M5 000 20 100
120.0	11.0	30.9	Aluminium	31.00	VA M5 000 11 120
150.0	20.0	67.4	Aluminium	45.00	VA M5 000 20 150
200.0	20.0	84.7	Aluminium	47.00	VA M5 000 20 200

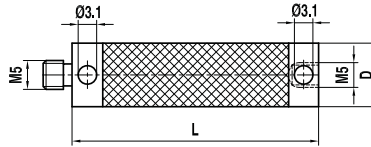
## Adapter Plates & Adapter Plate Extensions

### For Zeiss Vast and MT systems

We manufacture our own adapter plates to be used with the Zeiss Vast and MT systems. They come with an active ID chip and plate code. Unconditionally guaranteed - EVERY plate is tested before it goes out the door.

Adapter Plate extensions are permanently affixed to the plate disk and a cube to maximize rigidity and repeatability. Extensions and plates are separately. See Pages 99-102.






**Length Range  
40.00-600.00 mm**

TN: 167 -- O: 17690

L	DG D	Weight g	Body Material	End Material	Price \$USD	Part Number
40.0	11.0	9.0	Carbon fiber	Titanium	109.00	VC M5 TZO 11 040
40.0	20.0	26.0	Carbon fiber	Titanium	114.00	VC M5 TZO 20 040
50.0	11.0	10.0	Carbon fiber	Titanium	112.00	VC M5 TZO 11 050
50.0	20.0	28.0	Carbon fiber	Titanium	118.00	VC M5 TZO 20 050
60.0	11.0	11.0	Carbon fiber	Titanium	114.00	VC M5 TZO 11 060
60.0	20.0	29.0	Carbon fiber	Titanium	122.00	VC M5 TZO 20 060
70.0	11.0	11.0	Carbon fiber	Titanium	116.00	VC M5 TZO 11 070
80.0	11.0	12.0	Carbon fiber	Titanium	118.00	VC M5 TZO 11 080
80.0	20.0	32.0	Carbon fiber	Titanium	124.00	VC M5 TZO 20 080
90.0	11.0	13.0	Carbon fiber	Titanium	120.00	VC M5 TZO 11 090
100.0	11.0	14.0	Carbon fiber	Titanium	122.00	VC M5 TZO 11 100
100.0	20.0	34.0	Carbon fiber	Titanium	128.00	VC M5 TZO 20 100
120.0	11.0	15.0	Carbon fiber	Titanium	125.00	VC M5 TZO 11 120
120.0	20.0	37.0	Carbon fiber	Titanium	135.00	VC M5 TZO 20 120
150.0	11.0	17.0	Carbon fiber	Titanium	128.00	VC M5 TZO 11 150
150.0	20.0	41.0	Carbon fiber	Titanium	143.00	VC M5 TZO 20 150
180.0	11.0	19.0	Carbon fiber	Titanium	140.00	VC M5 TZO 11 180
180.0	20.0	45.0	Carbon fiber	Titanium	150.00	VC M5 TZO 20 180
200.0	11.0	21.0	Carbon fiber	Titanium	148.00	VC M5 TZO 11 200
200.0	20.0	48.0	Carbon fiber	Titanium	161.00	VC M5 TZO 20 200
250.0	20.0	55.0	Carbon fiber	Titanium	176.00	VC M5 TZO 20 250
250.0	11.0	24.0	Carbon fiber	Titanium	162.00	VC M5 TZO 11 250
300.0	20.0	62.0	Carbon fiber	Titanium	192.00	VC M5 TZO 20 300
300.0	11.0	27.0	Carbon fiber	Titanium	186.00	VC M5 TZO 11 300
400.0	11.0	34.0	Carbon fiber	Titanium	219.00	VC M5 TZO 11 400
400.0	20.0	75.0	Carbon fiber	Titanium	233.00	VC M5 TZO 20 400
500.0	20.0	89.0	Carbon fiber	Titanium	259.00	VC M5 TZO 20 500
600.0	20.0	103.0	Carbon fiber	Titanium	304.00	VC M5 TZO 20 600



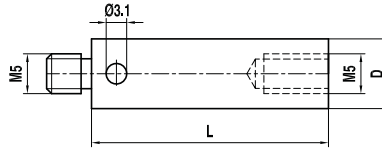
### Temp-Comp Thermal Stable Carbon Fiber Extensions

This high-tech material is especially ideal for longer extensions operating in uncontrolled environments.

These M5 threaded extensions come in 11 mm or 20 mm diameters. The combination of double wound carbon fiber and titanium end caps provide offsetting contraction and expansion and which yields very little (near zero) net expansion between 59 and 104 degrees Fahrenheit.

Technical specifications can be found in the appendix.

**M5  
Extensions  
Titanium**

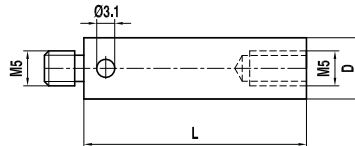


**Length Range  
20.00-60.00 mm**

TN: 105 -- O: 18000

L	DG D	Weight g	Body Material	Price \$USD	Part Number
20.0	12.0 *	15.0	Titanium	66.00	VT M5 000 12 020
40.0	12.0 *	18.0	Titanium	71.00	VT M5 000 12 040
50.0	12.0 *	15.0	Titanium	77.00	VT M5 000 12 050
70.0	12.0 *	17.0	Titanium	78.00	VT M5 000 12 070
100.0	12.0 *	24.0	Titanium	112.00	VT M5 000 12 100

**M5  
Extensions  
Titanium**

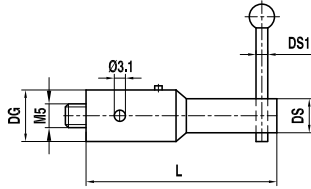


**Length Range  
10.00-300.00 mm**

TN: 30 -- O: 18100

L	DG D	Weight g	Body Material	Price \$USD	Part Number
10.0	11.0	3.9	Titanium	25.00	VT M5 000 11 010
15.0	11.0	5.7	Titanium	25.00	VT M5 000 11 015
20.0	11.0	7.5	Titanium	26.00	VT M5 000 11 020
20.0	18.0	20.0	Titanium	29.00	VT M5 000 18 020
25.0	11.0	9.5	Titanium	26.00	VT M5 000 11 025
25.0	18.0	24.6	Titanium	29.00	VT M5 000 18 025
30.0	11.0	9.8	Titanium	26.00	VT M5 000 11 030
35.0	11.0	10.0	Titanium	26.00	VT M5 000 11 035
40.0	18.0	31.5	Titanium	34.00	VT M5 000 18 040
40.0	11.0	12.6	Titanium	27.00	VT M5 000 11 040
50.0	11.0	13.2	Titanium	36.00	VT M5 000 11 050
50.0	18.0	33.3	Titanium	41.00	VT M5 000 18 050
60.0	18.0	35.1	Titanium	50.00	VT M5 000 18 060
60.0	11.0	14.2	Titanium	43.00	VT M5 000 11 060
75.0	11.0	15.3	Titanium	40.00	VT M5 000 11 075
75.0	18.0	37.9	Titanium	54.00	VT M5 000 18 075
80.0	18.0	38.8	Titanium	54.00	VT M5 000 18 080
80.0	11.0	15.6	Titanium	42.00	VT M5 000 11 080
90.0	11.0	16.5	Titanium	42.00	VT M5 000 11 090
90.0	18.0	40.6	Titanium	55.00	VT M5 000 18 090
100.0	18.0	42.5	Titanium	56.00	VT M5 000 18 100
100.0	11.0	17.2	Titanium	42.00	VT M5 000 11 100
120.0	11.0	19.8	Titanium	46.00	VT M5 000 11 120
120.0	18.0	46.1	Titanium	59.00	VT M5 000 18 120
150.0	18.0	51.6	Titanium	61.00	VT M5 000 18 150
150.0	11.0	22.5	Titanium	61.00	VT M5 000 11 150
200.0	18.0	61.0	Titanium	89.00	VT M5 000 18 200
250.0	18.0	70.0	Titanium	97.00	VT M5 000 18 250
300.0	18.0	79.0	Titanium	107.00	VT M5 000 18 300

**M5 Holders  
Stainless Steel**

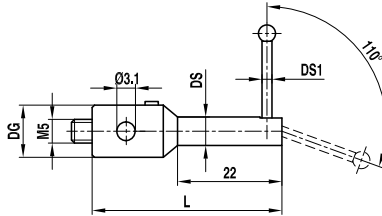


Styli are not included with this holder. Use with non-threaded styli on pages 76-78.

**90° Holder for Styli** TN: 31 -- O: 18200

DS1 DS	L	DG D	Weight g	Material	Price \$USD	Part Number
1.0-1.5 / 6.0	45.0	11.0	16.0	Stainless steel	51.00	<b>KI M5 115 11 045</b>

**M5 Holders  
Stainless Steel**

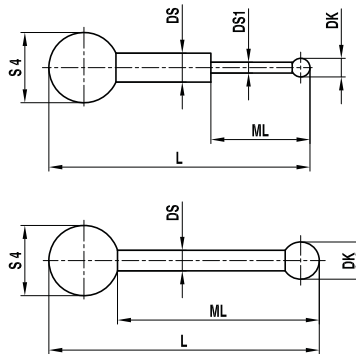


Use with swiveling styli KK M5 010 10 017 or KK M5 020 15 028 below.

**Holder for Swiveling Stylus** TN: 27 -- O: 18300

DS1 DS	L	DG D	Weight g	Material	Price \$USD	Part Number
1.0-1.5 / 6.0	40.0	11.0	15.0	Stainless steel	60.00	<b>KI M5 022 11 040</b>

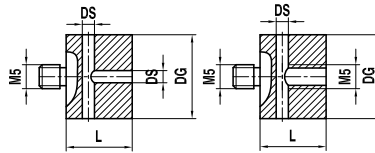
**M5 Swiveling Styli  
Carbide**



**Stylus for Holder KI M5 022 11 040** TN: 24 -- O: 18400

DK	L	ML1 ML	DS1 DS	Weight g	Stem	Price \$USD	Part Number
1.0	17.5	5.0	0.8 / 1.0	1.0	Stainless steel / Carbide	56.00	<b>KK M5 010 10 017</b>
2.0	28.5	24.5	1.5	1.0	Stainless steel / Carbide	52.00	<b>KK M5 020 15 028</b>

**M5  
5-Way Holders  
Titanium**

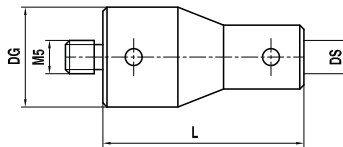


Use with non-threaded styli with 2.0 DS on pages 76-78.

**For Non-Threaded Styli** TN: 244 -- O: 18500

DG D	L	DS1 DS	Weight g	Description	Price \$USD	Part Number
15.0	10.0	2.0	13.0	Titanium	143.00	<b>KH M5 000 15 020</b>
15.0	12.0	2.0	13.0	Titanium	283.00	<b>KH M5 000 15 012</b>

**M5  
Holders  
Titanium**

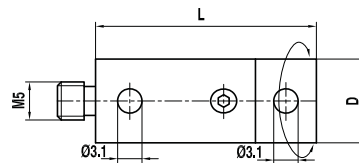


Use with non-threaded styli with 2.0 DS on pages 76-78.

**For Non-Threaded Styli 2.0 mm** TN: 245 -- O: 18600

L	DG D	DS1 DS	Weight g	Material	Price \$USD	Part Number
21.0	12.0	2.0	14.0	Titanium	158.00	<b>KH M5 000 12 021</b>

**M5  
Rotary Holders  
Titanium**

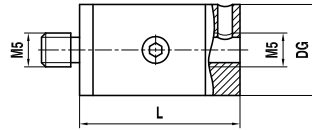


**Rotary Holder** TN: 39 -- O: 18700

L	DG D	Weight g	Material	Price \$USD	Part Number
30.0	18.0	43.0	Titanium	121.00	<b>DT M5 000 18 030</b>
29.0	11.0	13.0	Titanium	124.00	<b>DT M5 000 11 029</b>



**M5  
Rotary Holders  
Titanium**

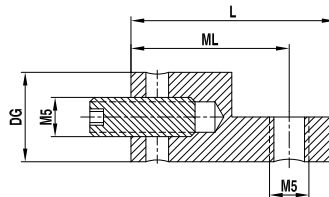


**Rotary Holder**

TN: 246 -- O: 18800

DG D	L	Weight g	Material	Price \$USD	Part Number
14.0	27.0	26.0	Titanium	352.00	DS M5 000 14 027

**M5  
Angle for Stylus  
Titanium**

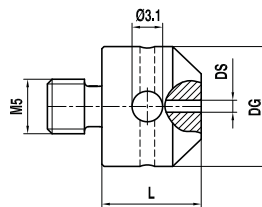


**Angle 90°**

TN: 341 -- O: 19000

DG D	L	ML1 ML	Weight g	Body Material	Price \$USD	Part Number
11.0	22.5	17.0	6.0	Titanium	51.00	KH M5 000 11 022

**M5  
Holders  
Stainless Steel**

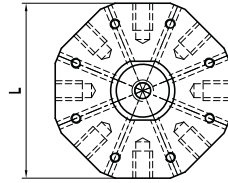


**1-Way Holder**

TN: 249 -- O: 19100

DG D	L	DS1 DS	Weight g	Material	Price \$USD	Part Number
11.0	10.0	1.0	3.2	Stainless steel	28.00	SH M5 000 11 010

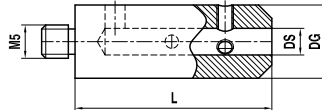
**M5  
Holders  
Titanium**



**Holder for Multiple  
Styli** ITN: 254 -- O: 19300

Number of styli	L	Thread	Thickness	Weight g	Material	Price \$USD	Part Number
5	32.0	Threaded	13.0	40.0	Titanium	228.00	<b>KH M5 L05 13 021</b>
6	40.0	Threaded	13.0	80.0	Titanium	323.00	<b>KH M5 L06 13 021</b>
7	29.0	Unthreaded	13.0	57.0	Titanium	258.00	<b>KH M5 L07 13 021</b>
8	42.0	Threaded	13.0	78.0	Titanium	469.00	<b>KH M5 L08 13 021</b>
8	88.0	Unthreaded	17.0	250.0	Titanium	323.00	<b>KH M5 L08 06 017</b>

**M5  
Holders  
Titanium**

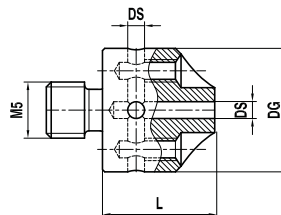


Use with non-threaded styli with 4.0 DS on pages 76-78.

**Holder for Non-Threaded Styli** ITN: 247 -- O: 19400

DG D	L	DS1 DS	Weight g	Body Material	Price \$USD	Part Number
11.0	29.5	4.0	23.0	Titanium	63.00	<b>KH M5 000 30 040</b>

**M5  
5-Way Holders  
Stainless Steel**

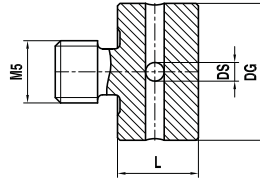


Use with non-threaded styli with matching DS on pages 76-78.

**5-way Star Center** ITN: 25 -- O: 19500

DG D	L	DS1 DS	Weight g	Material	Price \$USD	Part Number
11.0	10.0	1.0	3.2	Stainless steel	46.00	<b>KH M5 000 11 010</b>
11.0	10.0	1.5	3.2	Stainless steel	46.00	<b>KH M5 000 11 015</b>
11.0	10.0	2.0	3.2	Stainless steel	46.00	<b>KH M5 000 11 020</b>

**M5  
2-Way Holders  
Stainless Steel**

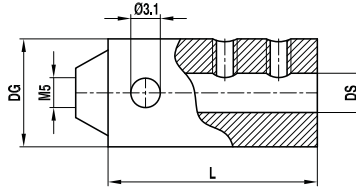


Use with non-threaded styli with 1.0 DS on pages 76-78.

**Holder**      TN: 248 -- O: 19600

DG D	L	DS1 DS	Weight g	Body Material	Price \$USD	Part Number
10.0	6.0	1.0	3.0	Stainless steel	46.00	KH M5 000 20 010

**M5  
Conical Fitting  
Holder  
Stainless Steel**

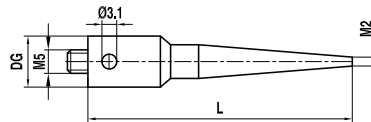


This holder is used with the older conic-fitting Zeiss and Mauser machines that do not use adapter plates.

**Conical Fitting  
Holder**      TN: 26 -- O: 19800

DG D	L	DS1 DS	Weight g	Body Material	Price \$USD	Part Number
19.0	24.0	2.0	29.0	Stainless steel	49.00	KH KO 020 19 024
19.0	24.0	3.5	29.0	Stainless steel	49.00	KH KO 035 19 024
19.0	24.0	6.0	29.0	Stainless steel	49.00	KH KO 060 19 024

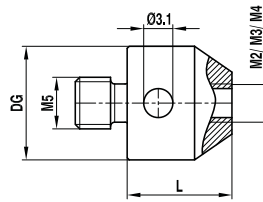
**M5  
Adapters  
Stainless Steel**



**Adapter for  
Scanning**      TN: 60 -- O: 19900

Thread	L	DG D	Weight g	Material	Price \$USD	Part Number
M2	119.0	15.81	126.0	Stainless steel	223.00	DA M5 M2 15 119
M2	127.0	9.52	87.0	Stainless steel	200.00	DA M5 M2 09 127

## M5 Adapters Titanium

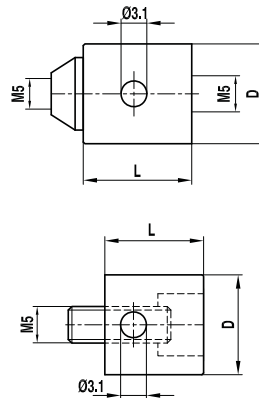


### Adapter

TN: 59 -- O: 20000

L	DG D	from to	Weight g	Material	Price \$USD	Part Number
10.0	11.0	M5 / M2	5.2	Titanium	16.00	RT M5 200 11 010
10.0	11.0	M5 / M3	5.2	Titanium	16.00	RT M5 300 11 010
10.0	11.0	M5 / M4	5.2	Titanium	23.00	RT M5 400 11 010

## M5 Adapters Titanium



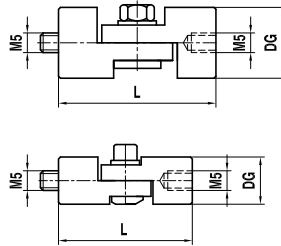
The adapter AT KO 000 18 010 (top drawing) allows standard M5 threaded tooling to be used with the older conic-fitting Zeiss and Mauser machines that do not use adapter plates.

### Adapter

TN: 46 -- O: 20100

L	DG D	Weight g	Body Material	Price \$USD	Part Number
12.0	18.0	10.0	Titanium	29.00	AT M5 000 18 010
10.0	18.0	12.0	Titanium	30.00	AT KO 000 18 010

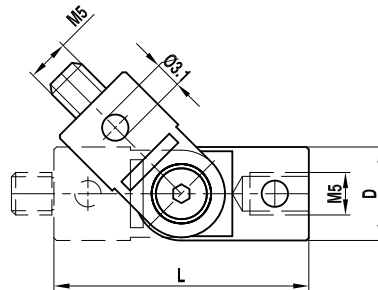
**M5  
Knuckles  
Titanium**



**Knuckle** TN: 243 -- O: 20300

DG D	L	Weight g	Body Material	Price \$USD	Part Number
18.0	40.0	39.0	Titanium	266.00	GT M5 000 18 040
12.0	34.0	14.0	Titanium	95.00	GT M5 000 12 034

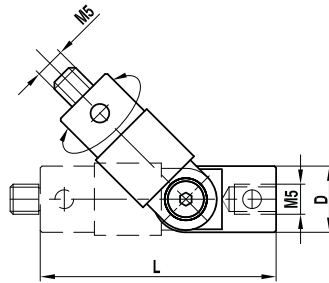
**M5  
Knuckles  
Titanium**



**Knuckle** TN: 37 -- O: 20400

DG D	L	Weight g	Body Material	Price \$USD	Part Number
11.0	30.0	11.2	Titanium	76.00	GT M5 000 11 030
18.0	36.0	37.2	Titanium	76.00	GT M5 000 18 036

**M5  
Knuckle  
Titanium**

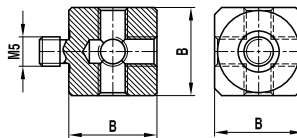


**Rotary Knuckle**

TN: 270 -- O: 20450

L	DG D	Weight g	Body Material	Price \$USD	Part Number
51.0	11.0	19.0	Titanium	228.00	DG M5 000 11 051
58.0	18.0	58.0	Titanium	245.00	DG M5 000 18 058

**M5  
Cube  
Aluminium**

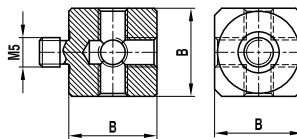


**Cube**

TN: 305 -- O: 20500

EAL B	Weight g	Material	Price \$USD	Part Number
15.0	7.5	Aluminium	46.00	WA M5 000 15 000
20.0	20.0	Aluminium	57.00	WA M5 000 20 000

**M5  
Cube  
Titanium**



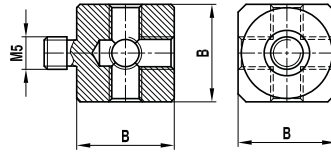
\*OZ in the part number indicates that the M5 thread is a loose set screw that allows the cube to be clocked.

**Cube**

TN: 34 -- O: 20600

EAL B	Weight g	Material	Price \$USD	Part Number
15.0	12.6	Titanium	48.00	WT M5 000 15 000
20.0	31.5	Titanium	55.00	WT M5 000 20 000
25.0	40.0	Titanium	65.00	WT M5 000 25 000
15.0	12.6	Titanium	48.00	WT M5 000 15 000 OZ
20.0	31.5	Titanium	55.00	WT M5 000 20 000 OZ

## M5 Cube Titanium

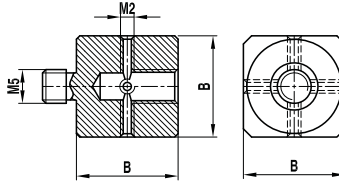


These cubes are of original Leitz design which allows the external M5 thread to be adjusted with a hex wrench to allow clocking.

**Cube**      TN: 109 -- O: 20700

EAL B	Weight g	Material	Price \$USD	Part Number
15.0	13.0	Titanium	95.00	WT M5 L00 15 000
20.0	31.5	Titanium	101.00	WT M5 L00 20 000

## M5 Cube Titanium



These cubes have an external M5 thread and **internal M2 threads** for adaptability.

**Cube**      TN: 279 -- O: 20800

EAL B	Weight g	Material	Price \$USD	Part Number
15.0	13.8	Titanium	48.00	WT M5 0M2 15 000
20.0	35.2	Titanium	55.00	WT M5 0M2 20 000

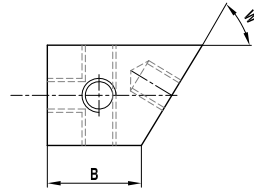
**Holders – Knuckles – Adapters**

With options available for every thread size, unique configurations can be developed to provide contact point access where you need it.

Materials include titanium and stainless steel. The quality and precision of these machined parts is unsurpassed.

Refer to the table of contents to find the location of the thread size and accessory you need.

**M5  
Cube  
Titanium**

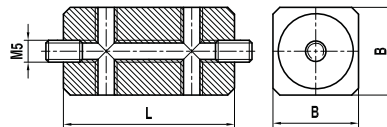


**Cube With Angle**

TN: 345 -- O: 20900

EAL B	W Grad	Weight g	Material	Price \$USD	Part Number
15.0	87.5	13.0	Titanium	85.00	WT M5 875 15 000
15.0	85.0	13.4	Titanium	85.00	WT M5 850 15 000
15.0	82.5	13.8	Titanium	85.00	WT M5 825 15 000
15.0	80.0	14.2	Titanium	85.00	WT M5 800 15 000
15.0	77.5	14.6	Titanium	85.00	WT M5 775 15 000
15.0	75.0	15.0	Titanium	85.00	WT M5 750 15 000
15.0	72.5	15.4	Titanium	85.00	WT M5 725 15 000
15.0	70.0	15.8	Titanium	85.00	WT M5 700 15 000
15.0	67.5	16.2	Titanium	85.00	WT M5 675 15 000
15.0	65.0	16.6	Titanium	85.00	WT M5 650 15 000
15.0	62.5	17.0	Titanium	85.00	WT M5 625 15 000
15.0	60.0	17.4	Titanium	85.00	WT M5 600 15 000
15.0	57.5	17.8	Titanium	85.00	WT M5 575 15 000
15.0	55.0	18.2	Titanium	85.00	WT M5 550 15 000
15.0	52.5	18.6	Titanium	85.00	WT M5 525 15 000
15.0	50.0	19.0	Titanium	85.00	WT M5 500 15 000
15.0	47.5	19.4	Titanium	85.00	WT M5 475 15 000
15.0	45.0	19.8	Titanium	85.00	WT M5 450 15 000

**M5  
Cube  
Titanium**



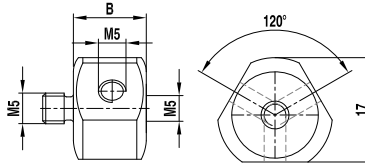
**Double Cube**

TN: 35 -- O: 21000

EAL B	L	Weight g	Material	Price \$USD	Part Number
20.0	40.0	64.0	Titanium	128.00	WT M5 000 20 040



**M5  
Cube  
Titanium**

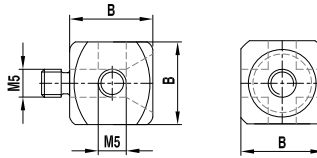


**4-Way Cube** TN: 337 -- O: 21100

EAL B	Weight g	Material	Price \$USD	Part Number
15.0	13.0	Titanium	85.00	WT M5 120 15 000

4-way cube with countersunk M5 threaded bolt provides clocking while minimizing bottom side interference.

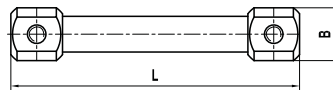
**M5  
Cube  
Titanium**



**Cube With  
Countersunk Screw** TN: 336 -- O: 21200

EAL B	Weight g	Material	Price \$USD	Part Number
15.0	13.0	Titanium	75.00	WT M5 S00 15 000

**M5  
Cube Extensions  
Titanium**

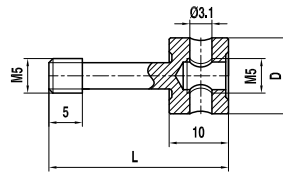


**Extension for Cube** TN: 36 -- O: 21300

EAL B	L	Material	Price \$USD	Part Number
20.0	120.0	Titanium	228.00	WT M5 000 20 120

Using a threaded SI screw from page 98, as above, more complex configurations can be created. Any piece with a male M5 thread can be used with the screw, including extensions, knuckles and adapters, and styli can be screwed into most cubes. M5 cubes can be found on page 94.

**M5  
Accessories for  
Cubes  
Titanium**

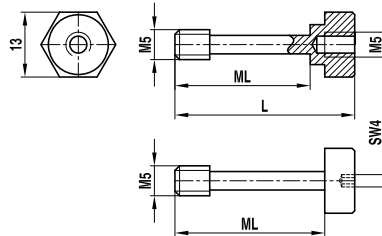


**Special Extensions  
with Thread for  
Cube**

TN: 234 -- O: 21400

DG D	L	Weight g	Body Material	Price \$USD	Part Number
11.0	30.0	4.5	Titanium	53.00	VT M5 SGO 11 010

**M5  
Accessories for  
Cubes  
Stainless Steel**

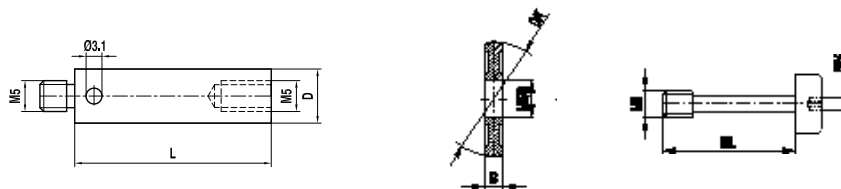


This part is used with the flat disks on page 82.

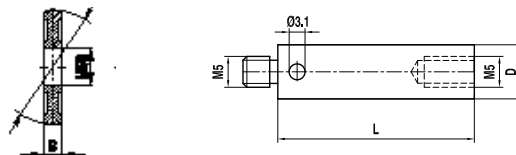
**Screw for Spherical  
Disk and Cube**

TN: 50 -- O: 2150

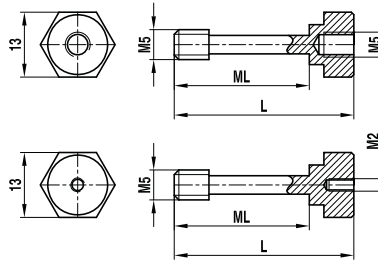
L	ML1 ML	Weight g	Body Material	Price \$USD	Part Number
35.0	26.0	9.0	Stainless steel	14.00	SI M5 000 26 035
30.0	21.0	9.0	Stainless steel	12.00	SI M5 000 21 030
17.5	10.0	7.0	Stainless steel	10.00	SI M5 000 10 017
	26.0	4.0	Stainless steel	9.00	SI M5 000 26 000
	21.0	3.0	Stainless steel	9.00	SI M5 000 21 000



The KI disks on page 82 are spheric, cut from a sphere, and can therefore be used as part of a configuration. The unthreaded disk is used in the configuration above, and the threaded disk can be used with an extension only, as seen below. The SI screws on page 98 have two types of heads – one hexagonal with an M5 female thread, and one rounded with a female seat for a hexagonal Allen key to lock the screw to the extension. Any M5 extension will work with these two configurations.



**M5  
Screws  
Stainless Steel**

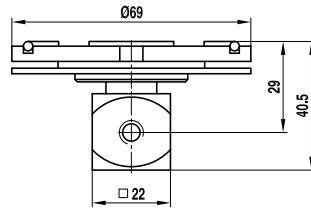
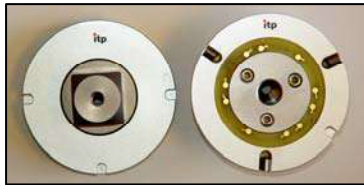


This part is used with the flat disks on page 82.

**Screw for Spherical Disk and Cube** TN: 268 -- O: 21600

ML1 ML	L	Weight g	Material	Price \$USD	Part Number
26.0	35.0	9.0	Stainless steel	14.00	SI M5 000 26 035
21.0	30.0	9.0	Stainless steel	12.00	SI M5 000 21 030
20.0	30.0	6.7	Stainless steel	17.00	SI M5 0M2 20 030
26.0	35.0	7.1	Stainless steel	17.00	SI M5 0M2 26 035

**M5  
Adapter Plates  
Aluminum**

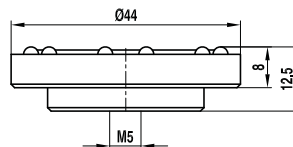


\*OW in the part number indicates that the plate comes without a cube. It is otherwise referred to as a "flat back."

**System "MT" Fits Zeiss Vast Head** TN: 63 -- O: 21700

No of Pieces	Weight g	Material Description	Price \$USD	Part Number
1	153.0	Aluminium	290.00	TP M5 MES SO 001
2	306.0	Aluminium	550.00	TP M5 MES SO 002
1	130.0	Aluminium	255.00	TP M5 MES SO 001 OW*

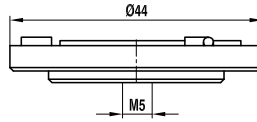
**M5  
Adapter Plates  
Aluminum**



**System "ST" Fits Zeiss ST2 Head** TN: 62 -- O: 21900

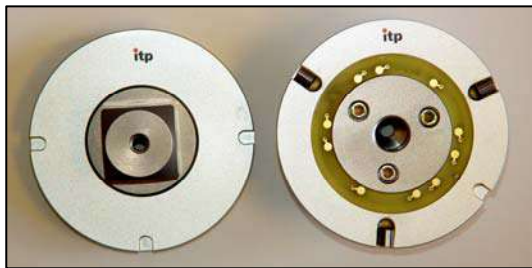
No of Pieces	Weight g	Material Description	Price \$USD	Part Number
1	72.0	Aluminium	220.00	AT M5 SCH AL 001
2	144.0	Aluminium	380.00	AT M5 SCH AL 002

# M5 Adapter Plates Aluminum



**System Prismo "ST"** TN: 64 – O: 22000  
**Fits Zeiss ST3 Head**

No of Pieces	Weight g	Material Description	Price \$USD	Part Number
1	72.0	Aluminium	220.00	TP M5 SCH AL 001
2	144.0	Aluminium	380.00	TP M5 SCH AL 002



M5 - Adapter Plate for MT Probe Head Prismo Vast (MT) - Aluminum, with ID-Chip, three cylindrical contact points seat with head. Unique embedded code. Diameter 69 mm.

**TP M5 MES SO 001 and TP M5 MES SO 002**  
**TP M5 MES SO 001 OW (OW is without cube)**  
**Zeiss: 600667-9611-000 (two pack)**  
**Zeiss: 600667-9601-000 (one pack)**



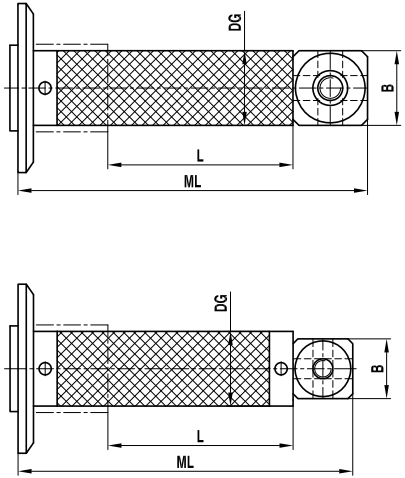
M5 - Adapter plate for Zeiss dynamic systems (ST) - Aluminum - six (6) balls make contact with the head. No cube. Diameter 44 mm.

**AT M5 SCH AL 001 and AT M5 SCH AL 002**  
**Zeiss 600660-8251-000**



M5 - Adapter plate for Zeiss Prismo dynamic systems (ST) - Aluminum - Three (3) cylindrical contact points seat with the head. Diameter 44 mm.

**TP M5 SCH AL 001 and TP M5 SCH AL 002**  
**Zeiss: 620660-8251-000**



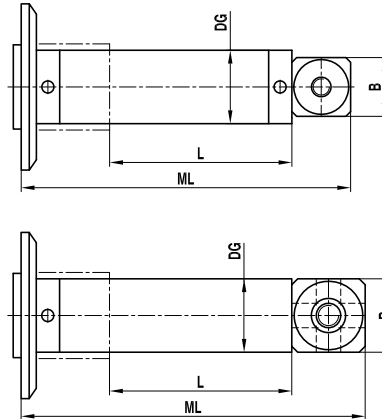
Adapter plate extensions provide maximum rigidity and thermal stability. The Temp-Comp double-wound carbon fiber extension is fully integrated with both the adapter plate disk and the cube. It does not include a complete adapter plate – only the flat back disk, which is screwed to the adapter plate TP M5 MES SO 001 OW.

**Extension for  
Adapter Plate**

TN: 302 – O: 22400

DG D	L	ML1 ML	EAL B	Weight g	Material Description	Price \$USD	Part Number
20.0	25.0	66.5	15.0	60.0	Carbon fiber	210.00	TV M5 TZ2 15 025
20.0	40.0	81.5	15.0	62.0	Carbon fiber	215.00	TV M5 TZ2 15 040
20.0	50.0	91.5	15.0	64.0	Carbon fiber	221.00	TV M5 TZ2 15 050
20.0	60.0	101.5	15.0	66.0	Carbon fiber	228.00	TV M5 TZ2 15 060
20.0	80.0	121.5	15.0	68.0	Carbon fiber	240.00	TV M5 TZ2 15 080
20.0	100.0	141.5	15.0	70.0	Carbon fiber	254.00	TV M5 TZ2 15 100
20.0	120.0	161.5	15.0	72.0	Carbon fiber	265.00	TV M5 TZ2 15 120
20.0	150.0	191.5	15.0	77.0	Carbon fiber	285.00	TV M5 TZ2 15 150
20.0	200.0	241.5	15.0	84.0	Carbon fiber	316.00	TV M5 TZ2 15 200
20.0	25.0	71.5	20.0	74.0	Carbon fiber	210.00	TV M5 TZ2 20 025
20.0	40.0	86.5	20.0	76.0	Carbon fiber	215.00	TV M5 TZ2 20 040
20.0	50.0	96.5	20.0	78.0	Carbon fiber	221.00	TV M5 TZ2 20 050
20.0	60.0	106.5	20.0	80.0	Carbon fiber	228.00	TV M5 TZ2 20 060
20.0	80.0	126.5	20.0	82.0	Carbon fiber	240.00	TV M5 TZ2 20 080
20.0	100.0	146.5	20.0	84.0	Carbon fiber	254.00	TV M5 TZ2 20 100
20.0	120.0	166.5	20.0	86.0	Carbon fiber	265.00	TV M5 TZ2 20 120
20.0	150.0	196.5	20.0	91.0	Carbon fiber	285.00	TV M5 TZ2 20 150
20.0	200.0	246.5	20.0	98.0	Carbon fiber	316.00	TV M5 TZ2 20 200
11.0	25.0	66.5	15.0	60.0	Carbon fiber	198.00	TV M5 TZ1 15 025
11.0	40.0	81.5	15.0	62.0	Carbon fiber	202.00	TV M5 TZ1 15 040
11.0	50.0	91.5	15.0	64.0	Carbon fiber	211.00	TV M5 TZ1 15 050
11.0	60.0	101.5	15.0	66.0	Carbon fiber	215.00	TV M5 TZ1 15 060
11.0	80.0	121.5	15.0	68.0	Carbon fiber	230.00	TV M5 TZ1 15 080
11.0	100.0	141.5	15.0	70.0	Carbon fiber	244.00	TV M5 TZ1 15 100
11.0	120.0	161.5	15.0	72.0	Carbon fiber	250.00	TV M5 TZ1 15 120
11.0	150.0	191.5	15.0	77.0	Carbon fiber	272.00	TV M5 TZ1 15 150
11.0	200.0	241.5	15.0	84.0	Carbon fiber	289.00	TV M5 TZ1 15 200

**M5  
Extension For  
Adapter Plate  
Titanium**

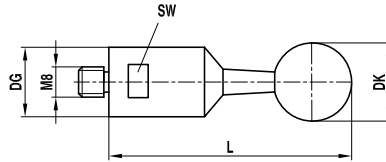


**Extension for  
Adapter Plate**

TN: 304 - O: 22500

DG D	L	ML1 ML	EAL B	Weight g	Material Description	Price \$USD	Part Number
18.0	25.0	66.5	15.0	65.0	Titanium	99.00	TV M5 018 15 025
18.0	40.0	81.5	15.0	67.0	Titanium	104.00	TV M5 018 15 040
18.0	50.0	91.5	15.0	70.0	Titanium	114.00	TV M5 018 15 050
18.0	60.0	101.5	15.0	72.0	Titanium	118.00	TV M5 018 15 060
18.0	80.0	121.5	15.0	74.0	Titanium	125.00	TV M5 018 15 080
18.0	100.0	141.5	15.0	76.0	Titanium	132.00	TV M5 018 15 100
18.0	120.0	161.5	15.0	78.0	Titanium	139.00	TV M5 018 15 120
18.0	150.0	191.5	15.0	85.0	Titanium	142.00	TV M5 018 15 150
18.0	200.0	241.5	15.0	92.0	Titanium	150.00	TV M5 018 15 200
18.0	25.0	71.5	20.0	84.0	Titanium	109.00	TV M5 018 20 025
18.0	40.0	86.5	20.0	84.0	Titanium	114.00	TV M5 018 20 040
18.0	50.0	96.5	20.0	87.0	Titanium	124.00	TV M5 018 20 050
18.0	60.0	106.5	20.0	90.0	Titanium	128.00	TV M5 018 20 060
18.0	80.0	126.5	20.0	92.0	Titanium	135.00	TV M5 018 20 080
18.0	100.0	146.5	20.0	95.0	Titanium	142.00	TV M5 018 20 100
18.0	120.0	166.5	20.0	98.0	Titanium	149.00	TV M5 018 20 120
18.0	150.0	196.5	20.0	105.0	Titanium	152.00	TV M5 018 20 150
18.0	200.0	246.5	20.0	114.0	Titanium	162.00	TV M5 018 20 200
11.0	25.0	66.5	15.0	65.0	Titanium	108.00	TV M5 011 15 025
11.0	40.0	81.5	15.0	67.0	Titanium	114.00	TV M5 011 15 040
11.0	50.0	91.5	15.0	70.0	Titanium	119.00	TV M5 011 15 050
11.0	60.0	101.5	15.0	72.0	Titanium	125.00	TV M5 011 15 060
11.0	80.0	121.5	15.0	74.0	Titanium	137.00	TV M5 011 15 080
11.0	100.0	141.5	15.0	76.0	Titanium	147.00	TV M5 011 15 100
11.0	120.0	161.5	15.0	78.0	Titanium	155.00	TV M5 011 15 120
11.0	150.0	191.5	15.0	85.0	Titanium	161.00	TV M5 011 15 150

**M8  
Calibration  
Sphere  
Stainless Steel**



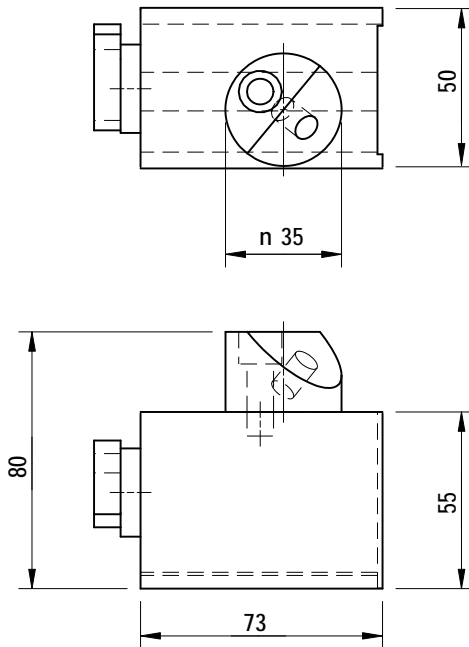
Calibration spheres come with certification.

**Calibration Sphere  
With Stand  
Ball Range  
15.0-30.0 mm**

TN: 303 - O: 22505

DK	L	DG D	SW	Material	Price \$USD	Part Number
15.0	130.0	24.0	22.0	Stainless steel	245.00	KN M8 150 24 130
20.0	135.0	24.0	22.0	Stainless steel	298.00	KN M8 200 24 135
25.0	140.0	24.0	22.0	Stainless steel	328.00	KN M8 250 24 140
30.0	145.0	24.0	22.0	Stainless steel	349.00	KN M8 300 24 145

**M8  
Magnet Base for  
Reference Sphere  
Stainless steel**

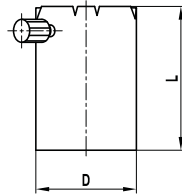


**Calibration on 45°**

TN: 415 - O: 22510

Body material	Price \$USD	Part Number
Stainless steel	278.00	MAGNETFUSS KNM8

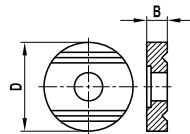
**M5  
Assembly Tools  
Aluminum**



**Assembly Tool for  
Star Styli** TN: 48 – O: 22520

DG D	L	for DG	Weight g	Material	Price \$USD	Part Number
35.0	50.0	11.0	130.0	Aluminium	94.00	MA M5 011 35 050
45.0	85.0	19.0	317.0	Aluminium	114.00	MA M5 019 45 085

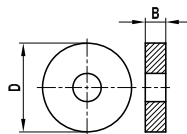
**M5  
Washers  
Stainless Steel**



**Grooved Washer for  
Star Styli** TN: 44 – O: 22530

DG D	EAL B	Weight g	Body Material	Price \$USD	Part Number
11.0	2.0	1.0	Stainless steel	48.00	NI M5 000 11 020
19.0	4.0	7.0	Stainless steel	52.00	NI M5 000 19 040

**M5  
Locking Disc  
Washer  
Stainless Steel**

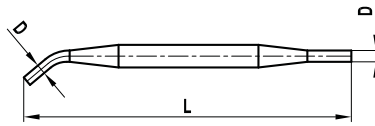


**For Star Styli** TN: 43 – O: 22540

DG D	EAL B	Weight g	Material Description	Price \$USD	Part Number
11.0	1.5	1.0	Stainless steel	24.00	KI M5 000 11 015
19.0	2.0	4.0	Stainless steel	27.00	KI M5 000 19 020



**M5  
Wrenches  
Stainless Steel**



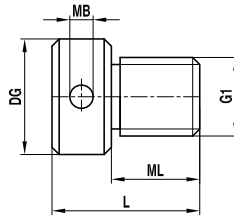
SS = Set of 2 MI MO 029 00 70.

**Pin-Type Wrench**

TN: 236 – O: 22555

DG D	L	Body Material	Price \$USD	Part Number
1.7	49.0	Stainless steel	9.00	MI MO 017 00 049
2.9	70.0	Stainless steel	9.00	MI MO 029 00 070
2.9	70.0	Stainless steel	17.00	SS M5 002 08 596

**M5  
Thread Measuring  
Gage  
Stainless Steel**



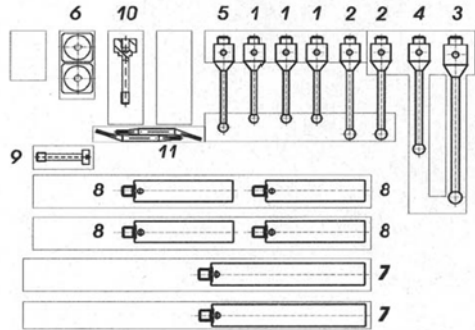
**Thread Measuring  
Gage**

TN: 42 – O: 22570

G1	L	DG D	ML1 ML	MB	Weight g	Material	Price \$USD	Part Number
M4	16.0	10.0	10.0	1.8	4.0	Stainless steel	52.00	GW M4 000 10 016
M5	16.0	10.0	10.0	1.8	4.0	Stainless steel	52.00	GW M5 000 10 016
M6	18.0	12.0	12.0	1.8	7.0	Stainless steel	52.00	GW M6 000 12 018
M8	20.0	15.0	12.0	3.0	13.0	Stainless steel	53.00	GW M8 000 15 020
M10	25.0	18.0	15.0	3.0	25.0	Stainless steel	53.00	GW M1 000 18 025
M12	25.0	20.0	15.0	3.0	33.0	Stainless steel	54.00	GW M1 200 20 025



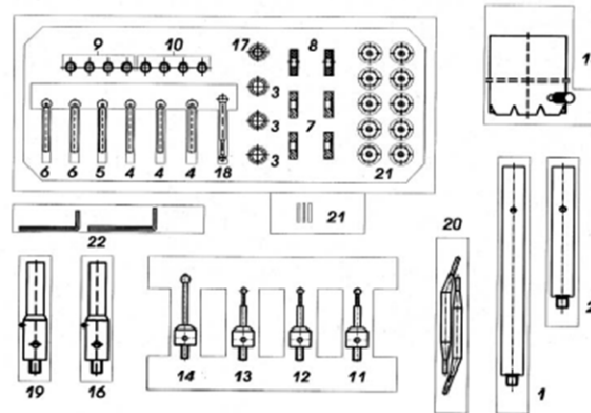
**M5  
Styli Kit  
19 Pieces  
Small Kit**



**TB M5 018 09 901**  
**Price: \$705.00**

Part Number	Description	Quantity	Position
TH M5 030 11 033	M5 straight stylus, carbide – $\varnothing=3.0$ L=33.5	3	1
TH M5 030 11 050	M5 straight stylus, carbide – $\varnothing=3.0$ L=50.0	1	5
TH M5 050 11 053	M5 straight stylus, carbide – $\varnothing=5.0$ L=53.0	2	2
TH M5 080 11 063	M5 straight stylus, carbide – $\varnothing=8.0$ L=63.5	1	4
TH M5 080 11 114	M5 straight stylus, carbide – $\varnothing=8.0$ L=114.5	1	3
VA M5 000 11 060	M5 extension, aluminum – body $\varnothing=11$ L=60	4	8
VA M5 000 11 120	M5 extension, aluminum – body $\varnothing=11$ L=120	2	7
WT M5 000 15 000	M5 cube, titanium – L=15	2	6
SI M5 000 21 000	M5 screw for cube and spheric disk – L=21	1	9
SI M5 000 21 030	M5 screw for cube and spheric disk – L=30	1	10
SS M5 002 08 596	Set of 2 pin-type wrenches	1	10
Box		1	11

**M5  
Styli Kits  
38 Pieces  
Kit for Small  
Parts**

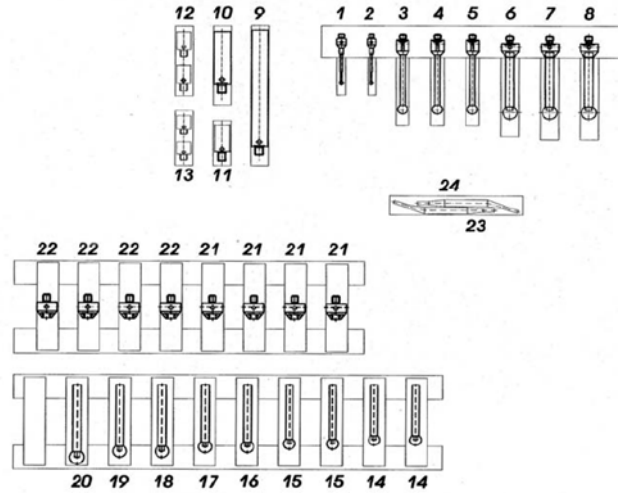


**TB M5 036 09 021**  
**Price: \$1216.00**

Part Number	Description	Quantity	Position
SH M5 000 15 010	M5 clamping pin for star probe, carbide – $\varnothing=1.5$	4	10
LH M5 005 11 022	M5 straight stylus, carbide – $\varnothing=0.5$ L=22.0	1	11
LH M5 008 11 022	M5 straight stylus, carbide – $\varnothing=1.0$ L=22.3	1	12
LH M5 010 11 022	M5 straight stylus, carbide – $\varnothing=1.0$ L=22.5	1	13
LH M5 020 11 033	M5 straight stylus, carbide – $\varnothing=2.0$ L=33.5	1	14
VA M5 000 11 060	M5 extension, aluminum L=60.0 mm $\varnothing=11.0$	1	2
VA M5 000 11 100	M5 extension, aluminum L=100 $\varnothing=11.0$	1	1
MA M5 011 35 050	M5 tool for star probe mounting	1	15
KI M5 000 11 015	M5 flat washer for star probe locking	2	8
SH M5 000 10 010	M5 clamping pin for star probe, carbide – $\varnothing=1.0$	4	9
NI M5 000 11 020	M5 grooved washer for star probe locking	4	7
KI M5 115 11 045	M5 right angle stylus holder $\varnothing=1.0$ and $\varnothing=1.5$	1	16
KI M5 022 11 040	M5 holder for swiveling stylus $\varnothing=1.0$ and $\varnothing=1.5$	1	19
KK M5 010 10 017	M5 stylus for swiveling holder, carbide – $\varnothing=1.0$ L=17.5	1	17
KK M5 020 15 028	M5 stylus for swiveling holder, carbide – $\varnothing=2.0$ L=28.5	1	18
KT M5 010 01 016	M5 threadless stylus, titanium – $\varnothing=1.0$ L=16.0	3	3
KT M5 015 10 026	M5 threadless stylus, titanium – $\varnothing=1.5$ L=26.5	3	4
KT M5 020 15 027	M5 threadless stylus, titanium – $\varnothing=2.0$ L=27.0	1	5
KT M5 025 15 027	M5 threadless stylus, titanium – $\varnothing=2.5$ L=27.5	2	6
SS M5 002 08 596	Set of tools	1	20
SS OR T10 08 590	Set of bolts	1	21
WS DD 911 SW 025	Screwdriver DIN 911 – $\varnothing=2.0$	1	22
WS DD 911 SW 020	Screwdriver DIN 911 – $\varnothing=2.5$	1	22
Box		1	



**M5  
Styli Kit  
34 Pieces  
Kit for Gear  
Measurement**



**TB M5 035 09 041**  
**Price: \$1362.00**

Part Number	Description	Quantity	Position
TH M5 030 11 033	M5 straight stylus, carbide – Ø=3.0 L=33.5	1	1
TH M5 040 11 033	M5 straight stylus, carbide – Ø=4.0 L=33.5	1	2
TK M5 050 11 053	M5 straight stylus, ceramic – Ø=5.0 L=53.0	1	3
TK M5 060 11 054	M5 straight stylus, ceramic – Ø=6.0 L=54.0	1	4
TK M5 070 11 055	M5 straight stylus, ceramic – Ø=7.0 L=55.0	1	5
TK M5 080 11 063	M5 straight stylus, ceramic – Ø=8.0 L=63.5	1	6
TK M5 090 11 064	M5 straight stylus, ceramic – Ø=9.0 L=64.5	1	7
TK M5 100 11 065	M5 straight stylus, ceramic – Ø=10.0 L=65.5	1	8
VI M5 000 11 080	M5 extension, steel – L=80.0	1	9
VI M5 000 11 040	M5 extension, steel – L=40.0	1	10
VI M5 000 11 020	M5 extension, steel – L=20.0	1	11
VI M5 000 11 015	M5 extension, steel – L=15.0	2	12
VI M5 000 11 010	M5 extension, steel – L=10.0	2	13
KT M5 008 01 015	M5 threadless stylus, titanium – Ø=0.8 L=15.0	2	14
KT M5 010 01 016	M5 threadless stylus, titanium – Ø=1.0 L=16.0	2	15
KT M5 015 10 026	M5 threadless stylus, titanium – Ø=1.5 L=26.5	1	16
KT M5 020 15 027	M5 threadless stylus, titanium – Ø=2.0 L=27.0	1	17
KT M5 025 15 027	M5 threadless stylus, titanium – Ø=2.5 L=27.5	1	18
KT M5 030 20 038	M5 threadless stylus, titanium – Ø=3.0 L=38.0	1	19
KT M5 050 35 045	M5 threadless stylus, titanium – Ø=5.0 L=45.0	1	20
KH M5 000 11 010	M5 5-way holder for styli Ø=1.0	4	21
KH M5 000 11 015	M5 5-way holder for styli Ø=1.5	4	22
SS M5 002 08 596	Set of two pin type wrenches	1	23/24
Box		1	

## Vision Fixturing Systems

High quality components, affordable costs, effective solutions

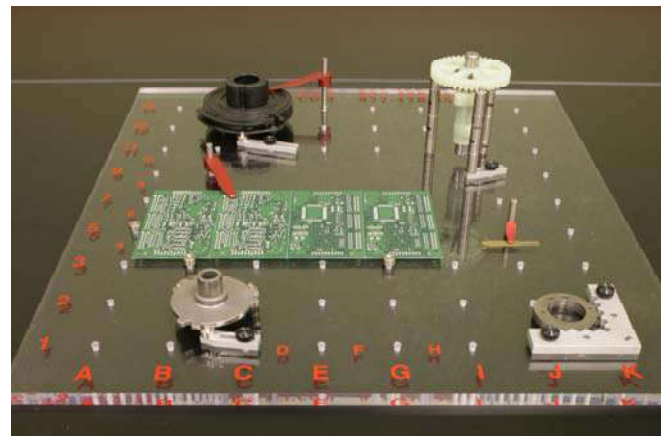
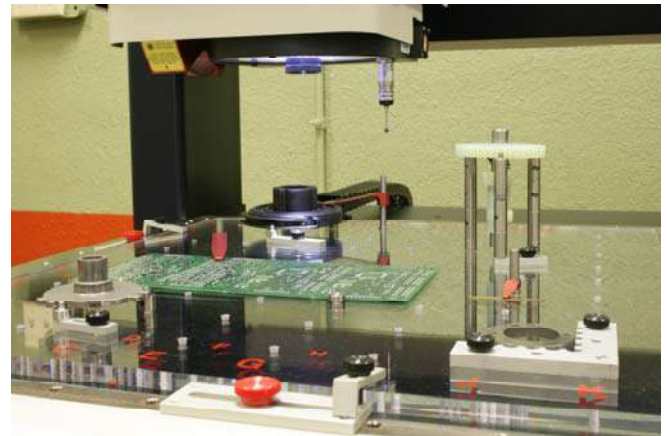
*Why purchase an*



*Vision Fixture System?*

- Simplify multiple part inspections
- Improved location and orientation accuracy
- Transfer fixturing set-up information to other operators with grid identification
- Faster setup and cycle time
- Improved measurement repeatability
- Ideal for Quality Certification Processes
- Can be used with literally any vision or multi-sensor machine
- Best value available
- Same-day shipping available
- Pre-configured kits make it easy to start
- All parts available as individual items with no minimum orders

[sales@itpstyli.com](mailto:sales@itpstyli.com) ● [www.itpstyli.com](http://www.itpstyli.com)



### *Acrylic Plates*

- VP 150 – 6 x 6 in. (152x152 mm) - \$225.00
- VP 200 HFC – 8 x 8 in. (203x203 mm) - \$335.00
- VP 500 HFC – 18 x 20 in. (457x508 mm) - \$415.00

## Pre-Configured Vision Fixture Kits

<b>Quantities Included per Kit</b>			
	<b><u>Kit 150</u></b>	<b><u>Kit 200</u></b>	<b><u>Kit 500</u></b>
<b>Acrylic Plate</b> <i>Hole Free Center*</i>	1, 6 x 6in. (152 x 152 mm)	1, 8 x 8in. (203 x 203 mm)	1, 18 x 20in. (457 x 508 mm)
<b>Spring Clamp</b> (two sizes)	(3 of each) 6 Total	(5 of each) 10 Total	(7 of each) 14 Total
<b>Spring Post</b> (two sizes)	(3 of each) 6 Total	(5 of each) 10 Total	(7 of each) 14 Total
<b>Extension</b> (three sizes)	(3 of each) 9 Total	(5 of each) 15 Total	(7 of each) 21 Total
<b>Adjustable Extension</b> (two sizes)	(1 of each) 2 Total	(2 of each) 4 Total	(3 of each) 6 Total
<b>Locator Pin</b> (three sizes)	(4 ea, 2 sizes) 8 Total	(5 of each) 15 Total	(7 of each) 21 Total
<b>Radius Locator</b>	4 Total	5 Total	7 Total
<b>Adjustable Base</b> (two sizes)	1 small	(2 sm, 1 lg) 3 Total	(3 sm, 3 lg) 6 Total
<b>Corner Bracket</b>	1 Total	1 Total	1 Total
<b>Plate Locator Kit</b>	1 small	1 small	1 large
<b>Organizer Box</b>	1 small	1 large	1 large
<b>Total Pieces</b>	40 pcs.	65 pcs.	93 pcs.
<b>Price US\$ (+ ship)</b>	\$860	\$1,275	\$1,750

Can be purchased by individual item or by the preconfigured kit



### Spring Clamp

Slips over spring post for variable clamping of work-piece.

S SH 025 - Small – 25 mm Length - \$9.00  
S SH 055 - Large – 50 mm Length - \$10.00



### Spring Post

Used with spring clamp to hold down work-piece. Two (2) lengths (L) available.

# S HT M4 000 80 025, L 25 mm, \$13.00  
# S HT M4 000 80 050, L 50 mm, \$14.00



### Locator Pin

Work-piece rests against pin in a stand-off position. Three (3) lengths (L) available.

# S HT M4 000 10 005, L 5 mm, \$13.00  
# S HT M4 000 10 010, L 10 mm, \$14.00  
# S HT M4 000 10 025, L 20 mm, \$15.00



### Radius Locator

Use with base plate or extensions to locate irregular or radius work-pieces.

# S HK M4 100 10 007, 5 mm Radius, \$10.00



### Adjustable Extension

Provides variable height adjustment.

# S VI M4 000 10 022  
Adjusts from 22 to 30 mm, \$35.00

# S VI M4 000 10 035  
Adjusts from 35 to 50 mm, \$38.00



### Adjustable Base

Locate all tooling outside of the M4 plate gride to obtain more location flexibility. Two (2) lengths (L) available.

# S VS AB M4 010 040, L 40 mm, \$26.00

# S VS AB M4 010 060, L 60 mm, \$29.00



### Extension

Accepts locator pin, other extensions, and radius locator. Three (3) lengths (L) available.

# S VT M4 000 10 010, L 10mm, \$11.00

# S VT M4 000 10 020, L 20mm, \$12.00

# S VT M4 000 10 215, L 25mm, \$13.00



### Corner Bracket

Quick and easy work piece positioning while maintaining clear edge view.

73.0 mm x 73 mm, Contains two M4 thumb screws.

# S WS 000 73 19 073, 73 mm, \$40.00



### Plate Locator Kit

Secures acrylic plate to table top.

Two (2) Kits available: Large and Small. Includes three (3) sets of: Plate, clamp, M6 and M4 thumb screws.

VLP-Kit SM 150-200, 12 pcs, Small \$160.00

VLP-Kit LG 500, 12 pcs, Large \$160.00

# TEMP-COMP

## Constant Length at Varying Temperatures

Coordinate Measuring Machines are being introduced directly to the production area, thus reducing and eliminating delays in obtaining corrective values for production machines and making process control more efficient.

However, in order to obtain maximum performance in shop floor measurements, several challenging requirements must be met:

- ↔ **Minimize thermal expansion** to preserve accuracy, especially at high temperature gradients on the manufacturing floor.
- ↔ **High mechanical rigidity**, which has a decisive influence on the accuracy of the measurement
- ↔ **Low weight**, enabling usage of long stylus combinations.

**itpstyli** manufactures a new generation of carbon fiber **styli** and **extensions** to help obtain accurate measurement in your production area. Engineered to meet the harsh environments of space and aviation, **TEMP-COMP** addresses the thermal expansion, rigidity, and low weight requirements needed to obtain accurate measurements.

Initially developed for aerospace applications, unique carbon fiber materials are used in **TEMP-COMP** styli and extensions. These carbon fibers are coiled at high density, in several layers and directions, which allows for exceptionally high bending and torsion rigidity.

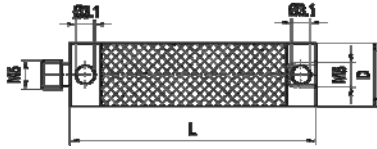
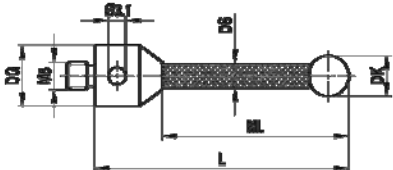
Most importantly, this technology provides a consistent thermal expansion coefficient.

**TEMP-COMP** products combine **titanium** fittings and a proprietary manufacturing technology that produces a thermally stable and rigid component unmatched in the CMM metrology market.

The following performance data (as illustrated in Table 1) highlights the unique **TEMP-COMP** advantages:

- An E-module of approximately 450 Gpa (Giga-pascal). Compare this to a normal rate of 250 Gpa on other carbon fiber extensions.
- Extremely low thermal expansion coefficients.
- Linear expansion of - 0.00002 mm per degree Kelvin with an extension of 200 mm.
- Linear expansion of + 0.000118 with an extension of 100 mm per degree Kelvin

Table 1: Coefficients of Thermal Expansion for TEMP-COMP Extensions and Styli

<b><u>Extensions</u></b>			
Special carbon fiber body, titanium fittings			
Diameter (D, mm)	Length (L, mm)	Thermal Expansion Coefficient (mm/1°K)	
11	100	0.000148	
11	120	0.000124	
11	150	0.000088	
11	200	0.000028	
20	100	0.000118	
20	150	0.000058	
20	180	0.000002	
20	200	-0.000002	
<b><u>Styli</u></b>			
Special carbon fiber stem, titanium fittings			
Stem Diameter DS (mm)	Length L (mm)	Thermal Expansion Coefficient (mm/1°K)	
2	33	0.000057	
2	58	0.000015	
3	53	0.000030	
3.5	53	0.000015	
3.5	75	-0.000003	
4	103	-0.000012	
6	100	-0.000038	



## CHOOSE THE MOST SUITABLE MATERIAL FOR YOUR APPLICATION

<b>BEST</b>	<b>Recommended choice (best available)</b>
<b>OK</b>	<b>Acceptable alternative (not ideal)</b>
<b>NO</b>	<b>Not recommended (or not applicable)</b>

### THREADED BASE MATERIAL

Thread	STAINLESS STEEL	TITANIUM	ALUMINUM
M2 M3 M4 M6	BEST	OK	NO
M5	OK	BEST	NO

### BALL MATERIAL

Application	RUBY	SILICON NITRIDE	CARBIDE	ZYRCONIA
Point-to-Point measurements on all materials	BEST	OK	NO	OK
Scanning on ALUMINUM parts	OK (frequent cleaning required)	BEST	NO	OK
Scanning on CAST IRON	OK (rapid wear )	OK	NO	BEST
Portable CMMs	BEST	NO	NO	OK

### STEM or EXTENSION

Application	STAINLESS STEEL	HIGH GRADE STAINLESS STEEL	CARBIDE TUBULAR STEM	CARBIDE FULL STEM	CERAMIC	CARBON FIBER
Point to Point (L < 80)	BEST	OK	OK	OK	OK	OK
Scanning with high stiffness	NO	BEST	OK	OK	OK	NO
Small ball diameters (Ø < 1 mm)	NO	NO	NO	BEST	NO	NO
Reduced weight	NO	NO	NO	NO	OK	BEST
Reduced weight + high stiffness	NO	OK	BEST	OK	OK	NO
Long stylus (L > 150 mm) Ø ball > 4 mm MAX. STIFFNESS	NO	NO	BEST	NO	OK	NO
Long stylus (L > 150 mm) Ø ball < 4 mm MAX. STIFFNESS	NO	NO	NO	BEST	OK	NO
Anticrash	NO	NO	NO	NO	BEST	NO

### STEM AND BASE MATERIAL TECHNICAL SPECIFICATIONS

	MATERIAL	HARDNESS	DENSITY
TITANIUM	3.7035 Grade 2	150 Brinell	4.5 g/cm <sup>3</sup>
STAINLESS STEEL	1.4035	300 Vickers	7.95 g/cm <sup>3</sup>
TUNGSTEN CARBIDE	DK 120	1700 Vickers	15.0 g/cm <sup>3</sup>
CERAMIC	Alsint 99.7	9 nach Mohs	3.85 g/cm <sup>3</sup>
CARBON FIBER	Bending Strength > 450 GPa CTE (Coefficient of Thermal Expansion) – 0.4x10 <sup>-6</sup> K <sup>-1</sup>		

### BALL MATERIAL TECHNICAL SPECIFICATIONS

	RUBY BALLS	CERAMIC BALLS	SILICON NITRIDE BALLS	ZIRCONIA OXIDE BALLS
<b>MATERIAL</b>	Synthetic Ruby Monocrystal Al <sub>2</sub> O <sub>3</sub>	Aluminum Oxide Polychrystal >99.9 Al <sub>2</sub> O <sub>3</sub>	Silicon Nitride Polychrystal Si <sub>3</sub> N <sub>4</sub>	Zirconia Oxide Polychrystal ZrO <sub>2</sub>
<b>FORM DEVIATION</b>	0.08µm - 0.13µm	0.08µm - 0.13µm	0.08µm - 0.13µm	0.08µm - 0.13µm
<b>DIAMETER DEVIATION</b>	0.08µm - 0.13µm	0.08µm - 0.13µm	0.08µm - 0.13µm	0.08µm - 0.13µm
<b>ROUGHNESS Ra</b>	0.007µm - 0.008µm	0.007µm - 0.008µm	0.004µm - 0.005µm	0.007µm - 0.008µm
<b>HARDNESS</b>	2400 Vickers	2100 Vickers	1600 Vickers	1200 Vickers
<b>DENSITY</b>	3.99 g/cm <sup>3</sup>	3.85 g/cm <sup>3</sup>	3.20 g/cm <sup>3</sup>	6.05 g/cm <sup>3</sup>
<b>THERMAL EXPANSION</b>	5.4•10 <sup>-6</sup> K <sup>-1</sup>	8.0•10 <sup>-6</sup> K <sup>-1</sup>	2.9•10 <sup>-6</sup> K <sup>-1</sup>	10.5•10 <sup>-6</sup> K <sup>-1</sup>
<b>COMPRESSION STRENGTH (MPa)</b>	2100	3800	3000	2000
<b>BENDING STRENGTH</b>	400	470	>1000	700-1100
<b>FRACTURE TOUGHNESS (MN/m<sup>3/2</sup>)</b>	1	4	>6.5	10

## CHOOSING THE RIGHT MATERIAL – BENEFITS AND LIMITATIONS

THREADED BASE	BENEFITS	LIMITATIONS								
<b>Stainless Steel</b>	<ul style="list-style-type: none"> <li>- Very good ratio stiffness/weight</li> <li>- Low wear</li> <li>- Medium-low cost</li> <li>- Always used with M2, M3, and M4 threads. Often used with M5</li> </ul>	<ul style="list-style-type: none"> <li>- Thermal coefficient medium-high</li> </ul>								
<b>Titanium</b>	<ul style="list-style-type: none"> <li>- <b><u>Best ratio stiffness/weight</u></b></li> <li>- Lower thermal coefficient</li> <li>- Minimum wear</li> <li>- Used on some M5 styli</li> <li>- Preferable to Ceramic extension body (slightly higher weight, crash-proof, excellent stiffness)</li> </ul>	<ul style="list-style-type: none"> <li>- Higher cost</li> <li>- More difficult machining</li> </ul>								
<b>STEM / EXTENSION</b>										
<b>Stainless Steel</b>	<ul style="list-style-type: none"> <li>- Very good ratio stiffness/weight</li> <li>- Reduced cost</li> <li>- Good for diameters over 0.7 mm</li> <li>- Perfect electrical conductivity</li> </ul> <table style="margin-left: auto; margin-right: auto;"> <tr> <td style="text-align: center;">Stem diameter</td> <td style="text-align: center;">Max length</td> </tr> <tr> <td style="text-align: center;">0.7 - 1</td> <td style="text-align: center;">20</td> </tr> <tr> <td style="text-align: center;">1.5 - 3</td> <td style="text-align: center;">40</td> </tr> <tr> <td style="text-align: center;">4 - 6</td> <td style="text-align: center;">80</td> </tr> </table>	Stem diameter	Max length	0.7 - 1	20	1.5 - 3	40	4 - 6	80	<ul style="list-style-type: none"> <li>- Under 0.7 mm diameter, the stem bending is not acceptable</li> </ul>
Stem diameter	Max length									
0.7 - 1	20									
1.5 - 3	40									
4 - 6	80									
<b>High Grade Stainless Steel (used in Aerospace industry) high stiffness</b>	<ul style="list-style-type: none"> <li>- <b><u>Base and stem machined from one single steel part (integral)</u></b></li> <li>- Higher stiffness</li> <li>- Better ratio stiffness/weight</li> <li>- <b><u>Ideal for scanning (M5)</u></b></li> </ul>	<ul style="list-style-type: none"> <li>- Higher cost</li> <li>- Available only for M5 range</li> </ul>								
<b>Tungsten Carbide solid stem</b>	<ul style="list-style-type: none"> <li>- <b><u>Best stiffness vs. metal stems</u></b></li> <li>- Necessary for diameters under 0.7 mm.</li> <li>- <b><u>Necessary for balls under 1 mm diameter</u></b></li> </ul>	<ul style="list-style-type: none"> <li>- Highest density = highest weight for same diameter and length</li> <li>- Higher cost vs. stainless steel</li> </ul>								
<b>Tungsten Carbide tube stem</b>	<ul style="list-style-type: none"> <li>- <b><u>Lighter than solid carbide stem for same diameter</u></b></li> <li>- Lengths from 50 to 118 mm</li> <li>- Ball size from 5 to 10 mm</li> <li>- Ideal for lengths over 80 mm</li> </ul>	<ul style="list-style-type: none"> <li>- Not available for ball diameters smaller than 5 mm</li> <li>- Higher cost</li> <li>- Available only for M5</li> <li>- Adhered ball</li> </ul>								
<b>STEM / EXTENSION</b>										
<b>Standard Carbon Fiber</b>	<ul style="list-style-type: none"> <li>- Low weight and resistant to crashes</li> <li>- Minimal thermal coefficient</li> <li>- Good for styli over 100 mm lengths with stem size over 6 mm</li> <li>- Ideal for extensions over 200 mm</li> </ul> <table style="margin-left: auto; margin-right: auto;"> <tr> <td style="text-align: center;">stem length</td> <td style="text-align: center;">diameter</td> </tr> <tr> <td style="text-align: center;">20 – 40</td> <td style="text-align: center;">3</td> </tr> <tr> <td style="text-align: center;">40 – 70</td> <td style="text-align: center;">4</td> </tr> <tr> <td style="text-align: center;">75 – 100</td> <td style="text-align: center;">8</td> </tr> </table>	stem length	diameter	20 – 40	3	40 – 70	4	75 – 100	8	<ul style="list-style-type: none"> <li>- Lower stiffness vs. ceramic</li> <li>- Not to be used for stems under 3 mm diameter</li> <li>- Higher cost</li> </ul>
stem length	diameter									
20 – 40	3									
40 – 70	4									
75 – 100	8									

## CHOOSING THE RIGHT MATERIAL – BENEFITS AND LIMITATIONS

<p><b>TEMP-COMP Carbon Fiber (new)</b></p>	<ul style="list-style-type: none"> <li>- <b><u>Best absolute ratio stiffness / weight (E-module &gt; 450 GPa)</u></b></li> <li>- <b><u>The lowest total thermal coefficient (body + base or fittings) due to mutual compensation between metal and fiber parts (negative coefficient of the fiber, positive of the base/fittings)</u></b></li> <li>- Used on high-end CMMs used on shop floor</li> </ul> <table style="margin-left: auto; margin-right: auto; border: none;"> <tr> <td style="padding: 0 10px;">stem length</td> <td style="padding: 0 10px;">diameter</td> </tr> <tr> <td style="padding: 0 10px;">20 – 40</td> <td style="padding: 0 10px;">2</td> </tr> <tr> <td style="padding: 0 10px;">40 – 80</td> <td style="padding: 0 10px;">3.5</td> </tr> <tr> <td style="padding: 0 10px;">90 – 100</td> <td style="padding: 0 10px;">6</td> </tr> </table>	stem length	diameter	20 – 40	2	40 – 80	3.5	90 – 100	6	<ul style="list-style-type: none"> <li>- Higher cost than traditional Carbon Fiber</li> <li>- Stem diameters are available in sizes 2 mm and above</li> <li>- Extension diameters are 11 mm and 20 mm only</li> </ul>
stem length	diameter									
20 – 40	2									
40 – 80	3.5									
90 – 100	6									
<p style="text-align: center;"><b>Ceramic</b></p>	<ul style="list-style-type: none"> <li>- Low weight</li> <li>- Best stiffness for same weight and diameter size</li> <li>- Low thermal coefficient</li> <li>- Good for styli over 100 mm lengths with stem size over 4 mm</li> <li>- <b><u>Ideal for protection of probe head against crashes (e. g. CNC machining centres)</u></b></li> <li>- Adhered balls with stem size over 3.5 mm</li> <li>- Drilled balls for stems under 3.5 mm</li> </ul>	<ul style="list-style-type: none"> <li>- Fragile</li> <li>- <b><u>Not to be used under 2 mm stem size</u></b></li> </ul>								
<p style="text-align: center;"><b>BALL MATERIAL</b></p>										
<p><b>Ruby (AL<sub>2</sub>O<sub>3</sub> / Cr<sub>2</sub>O<sub>3</sub>)</b></p>	<ul style="list-style-type: none"> <li>- <b><u>Best ratio features/price</u></b></li> <li>- Diamond-like hardness (9 for Ruby, 10 for diamond on Mohs scale)</li> <li>- Very high roundness/roughness features for very small sizes (down to 0.3 mm)</li> <li>- Excellent resistance to wear</li> <li>- Ideal for point to point and scanning on steel parts</li> </ul>	<ul style="list-style-type: none"> <li>- <b><u>Attracts Aluminum particles for continuous scanning applications (heavy and repeated cleaning procedures)</u></b></li> <li>- Available sizes up to 13 mm</li> </ul>								
<p><b>Silicon Nitride (Si<sub>3</sub>N<sub>4</sub>)</b></p>	<ul style="list-style-type: none"> <li>- Smoother surface (lower friction)</li> <li>- <b><u>Ideal for scanning on Aluminum parts (no build up of material particles)</u></b></li> </ul>	<ul style="list-style-type: none"> <li>- Higher cost</li> <li>- Diameters sizes limited (from 1 to 10 mm only as standard, larger diameters are possible under request)</li> </ul>								
<p style="text-align: center;"><b>Tungsten Carbide</b></p>	<ul style="list-style-type: none"> <li>- Low weight</li> <li>- Possible to obtain the ball from stem machining</li> <li>- Better shock absorption</li> <li>- Normally used on articulated arms</li> </ul>	<ul style="list-style-type: none"> <li>- Surface and dimensional features lower than Ruby</li> <li>- rapid loss of dimensional tolerances</li> <li>- very low roundness and roughness for ball sizes under 1 mm diameter</li> </ul>								
<p><b>Zirconium Oxide (Zr O<sub>2</sub>)</b></p>	<ul style="list-style-type: none"> <li>- Very good surface features (comparable to Ruby)</li> <li>- <b><u>Ideal for scanning on Cast Iron parts (lower friction, lower wear)</u></b></li> </ul>	<ul style="list-style-type: none"> <li>- Higher cost than ruby</li> </ul>								



### Design Your Own Custom Stylus

The extensive **itpstyli** product line will address many of your application needs, but not all of them. As such, **itpstyli** has developed business and manufacturing processes to make it easy and affordable for you to design and receive your custom stylus.

Your design will fall into one of two categories: special or exotic. A special design is a unique configuration that utilizes standard components, such as M2 thread, titanium base, ceramic stem and a ruby ball. The dimensional requirements and combination of materials are what make it special.

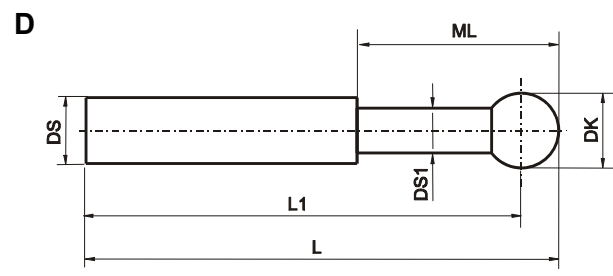
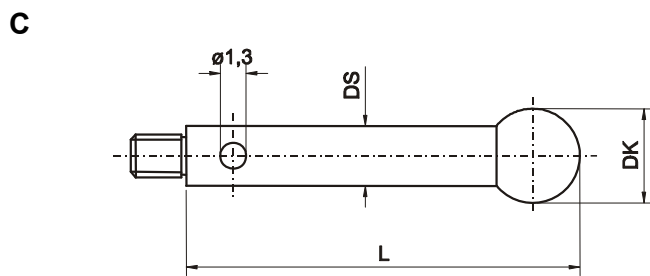
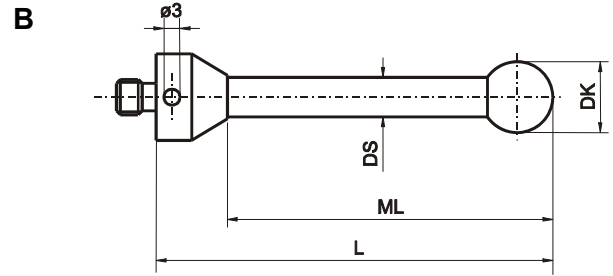
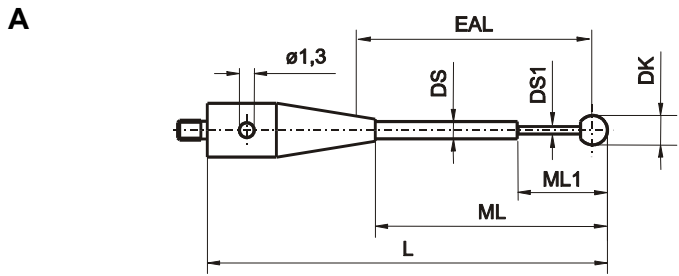
An exotic design is one that has a component or feature that cannot be found in our catalog, such as a 0.2 mm ruby ball attached to a 7 mm stem and base.

#### Custom styli cost and turnaround time:

- *Special* styli will ship within 72 hours from receipt of order, and your cost will be reasonably similar to that of the closest item that we offer in our standard line.
- *Exotic* styli, which require more time to estimate manufacturing cost and delivery time, will be quoted within 48 hours.

### THREAD SIZE GUIDE FOR PROBE HEADS

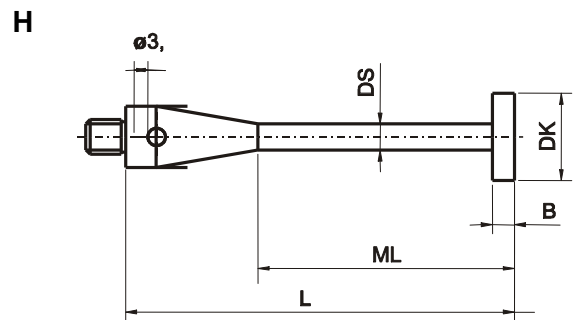
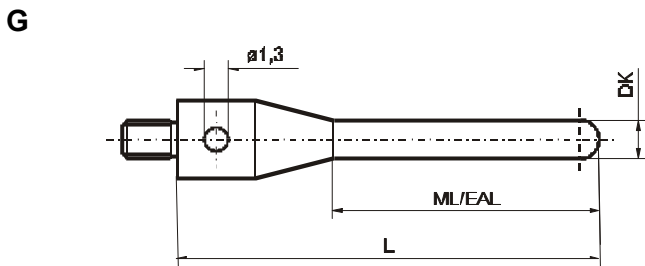
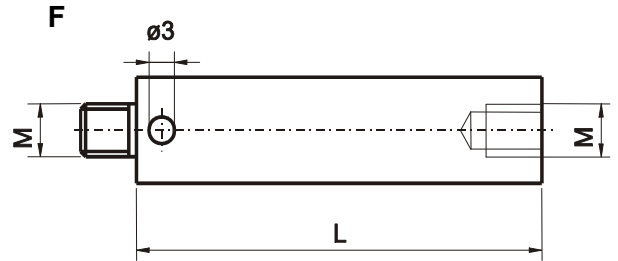
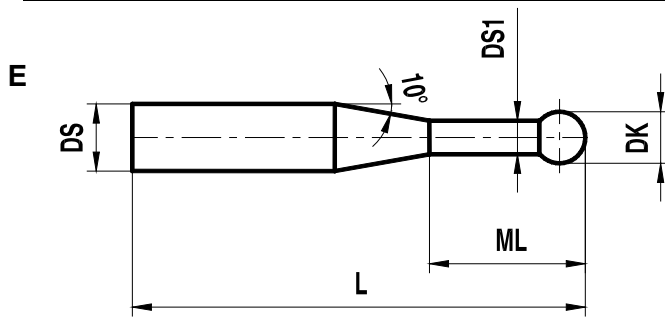
M2	M3	M4		M5	M6
MH20i	MIP	CYCLONE	MP16	LEITZ TRAX	FARO
P1-5A	SP25	CP1	MP18	DT	
P1-5BS	SP25M	DEA TF8	MP700	LSP-X3	
TP2	TESA	LP2	MP700E	LSP-X5	
TP20	TESASTAR	LP2DD	OMP40	RST-P	
TP200	TP1	LP2H	RMP60	SiP-3D	
TP200B	TP1SM	MP1	RP1	SP2	
TP200 NI	TP-50	MP3	RP1DD	SP2-1	
	TP6	MP4	RP2	SP80	
	TP6A	MP6	RP2DD	ST2	
	TPES	MP7	RP3	ST3	
	VAST XXT	MP8	SP600	UNIVERSAL 3D	
		MP9	SP600M	VAST GOLD	
		MP10	SP620	VAST NAVIGATOR	
		MP10E	TP7	VAST XT	
		MP11	TP7M	ZEISS	
		MP12	TP800		
		MP15	TS27R		



<b>Styli Type (A-B-C-D)</b>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Thread (M2, 3, 4, 5, or none)	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Ball Material – Ruby ( <b>R</b> ) Silicon ( <b>S</b> ) Ceramic ( <b>C</b> ) Zirconia ( <b>Z</b> )				
Ball Diameter (mm) – <b>DK</b>				
Measure length (mm) – <b>ML</b>				
Total length (mm) – <b>L</b>				
Stem Diameter (mm) – <b>DS, DS1</b> (if required)				
<b>Stem Material</b>				
Stainless Steel				
Carbide				
Ceramic				
Temp-Comp Carbon Fiber				
<b>Quantity</b>	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
<b>Name:</b>	<input type="text"/>	<b>Phone:</b>	<input type="text"/>	
<b>Company:</b>	<input type="text"/>	<b>Fax:</b>	<input type="text"/>	
<b>Email:</b>	<input type="text"/>			

**RETURN FAX 314-432-3107**

**You may also request a quote at [itpstyli.com](http://itpstyli.com) by following the link to Design Your Own.**



Styli Type (E-F-G-H)				
Thread (M2, 3, 4, 5 or none)	<u>M</u> [ ] [ ] [ ] [ ] [ ]	<u>M</u> [ ] [ ] [ ] [ ] [ ]	<u>M</u> [ ] [ ] [ ] [ ] [ ]	<u>M</u> [ ] [ ] [ ] [ ] [ ]
Ball Material – Ruby (R) Silicone (S) Ceramic (C) Carbide (CB) Zirconia (Z)				
Ball Diameter (mm) – DK				
Measure length (mm) – ML				
Total length (mm) – L				
Stem Diameter (mm) – DS, DS1 (if required)				
Stem Material				
Stainless Steel				
Carbide				
Ceramic				
Temp-Comp Carbon Fiber				
Quantity	[ ] [ ] [ ] [ ] [ ]	[ ] [ ] [ ] [ ] [ ]	[ ] [ ] [ ] [ ] [ ]	[ ] [ ] [ ] [ ] [ ]
Name:			Phone:	
Company:			Fax:	
Email:				

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## Order Form

Please copy, complete and return via fax or mail.

**BILL TO:**

<b>Name:</b>	
<b>Company:</b>	
Address:	
Address:	
City, State Zip:	
Phone:	
Fax:	E-mail:

**SHIP TO:**

<b>Name:</b>	
<b>Company:</b>	
Address:	
Address:	
City, State Zip:	
Phone:	
Fax:	

**P.O. Number** (required) \_\_\_\_\_

itp Item Number	Quantity	Cost Each	Total

Select Shipping Charge: Surface \$9.00 \_\_\_ Second Day Air: \$19.00 \_\_\_ Next Day: \$33.00 \_\_\_

Credit Cards Accepted - Please call if you would like to use MasterCard or Visa.

<b>Sub-total</b>	
<b>Tax</b>	
<b>Shipping</b>	
<b>TOTAL</b>	

**RETURN FAX 314-432-3107**



# Quick Reference Conversion Chart

TO CONVERT inch TO mm:

MULTIPLY INCHES by 25.4

TO CONVERT mm TO inch:

MULTIPLY mm by 0.03937  
OR  
DIVIDE mm BY 25.4

inch	inch	mm
1/64	0.016	0.397
1/32	0.031	0.794
3/64	0.047	1.191
1/16	0.063	1.588
5/64	0.078	1.984
3/32	0.094	2.381
7/64	0.109	2.778
<b>1/8</b>	<b>0.125</b>	<b>3.175</b>
9/64	0.141	3.572
5/32	0.156	3.969
11/64	0.172	4.366
3/16	0.188	4.763
13/64	0.203	5.159
7/32	0.219	5.556
15/64	0.234	5.953
<b>1/4</b>	<b>0.250</b>	<b>6.35</b>
17/64	0.266	6.747
9/32	0.281	7.144
19/64	0.297	7.541
5/16	0.313	7.938
21/64	0.328	8.334
11/32	0.344	8.731
23/64	0.359	9.128
<b>3/8</b>	<b>0.375</b>	<b>9.525</b>
25/64	0.391	9.922
13/32	0.406	10.319
27/64	0.422	10.716
7/16	0.438	11.113
29/64	0.453	11.509
15/32	0.469	11.906
31/64	0.484	12.303

inch	inch	mm
<b>1/2</b>	0.500	<b>12.7</b>
33/64	0.516	13.097
17/32	0.531	13.494
35/64	0.547	13.891
9/16	0.563	14.288
37/64	0.578	14.684
19/32	0.594	15.081
39/64	0.609	15.478
<b>5/8</b>	<b>0.625</b>	<b>15.875</b>
41/64	0.641	16.272
21/32	0.656	16.669
43/64	0.672	17.066
11/16	0.688	17.463
45/64	0.703	17.859
23/32	0.719	18.256
<b>3/4</b>	<b>0.750</b>	<b>19.05</b>
49/64	0.766	19.447
25/32	0.781	19.844
51/64	0.797	20.241
13/16	0.813	20.638
27/32	0.844	21.431
55/64	0.859	21.828
<b>7/8</b>	<b>0.875</b>	<b>22.225</b>
57/64	0.891	22.622
29/32	0.906	23.019
59/64	0.922	23.416
15/16	0.938	23.813
61/64	0.953	24.209
31/32	0.969	24.606
63/64	0.984	25.003
<b>1</b>	1.000	<b>25.4</b>

mm	inch
0.3	0.012
0.5	0.020
0.8	0.031
1.0	0.039
1.5	0.059
2.0	0.079
2.5	0.098
3.0	0.118
3.5	0.138
4.0	0.157
4.5	0.177
5.0	0.197
5.5	0.217
6.0	0.236
6.5	0.256
7.0	0.276
7.5	0.295
8.0	0.315
8.5	0.335
9.0	0.354
9.5	0.374
10.0	0.394
10.5	0.413
11.0	0.433
11.5	0.453
12.0	0.472
12.5	0.492
13.0	0.512
13.5	0.531
14.0	0.551
14.5	0.571

