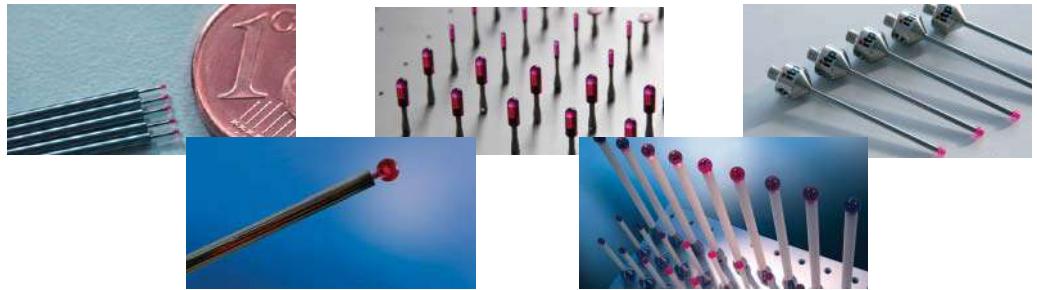


Replacement
Styli



itpTM
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.

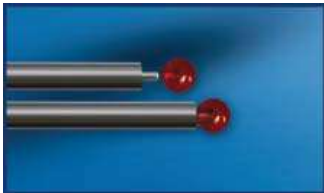
itp Specials: Custom Styli Manufactured to Your Specifications



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)

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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.

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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.



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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.

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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.



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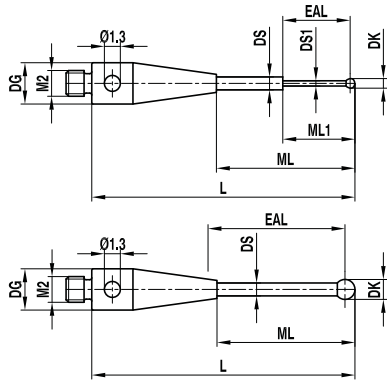
For those who prefer the convenience of e-commerce, itpstyli hosts a world-class Web site that provides several methods to search, find, and purchase the most appropriate stylus or accessory for your application around the clock. You can order and purchase online or easily generate a fax or purchase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

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 St. Louis, MO 63132

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**M2
Mini Ruby
Carbide**



Ruby spheres with a DK diameter below 0.5 mm are "cup" mounted.

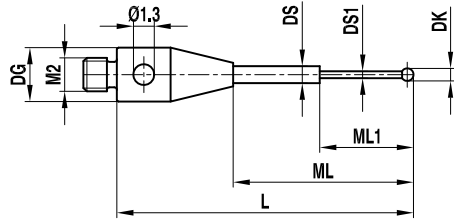
These mini ruby styli are extremely fragile and require very low contact force. Please note how narrow the terminal stem is.

**Ball Range
0.2-0.5 mm**

TN: 112 -- O: 100

DK	L	ML1 ML	DS1 DS	Weight g	Base/Stem Material	Price \$USD	Part Number
0.2	10.15	2.3/4.15	0.18/1.0	0.3	Stainless steel / Carbide	130.00	TH M2 002 03 010
0.25	10.15	2.3/4.15	0.18/1.0	0.3	Stainless steel / Carbide	140.00	TH M2 0025 03 010
0.3	10.15	2.15/4.15	0.2/0.7	0.3	Stainless steel / Carbide	79.00	TH M2 003 03 010
0.5	10.25	3.25/4.25	0.4/0.7	0.3	Stainless steel / Carbide	71.00	TH M2 005 03 010
0.5	20.25	7.25	0.3	0.3	Stainless steel / Carbide	100.00	TH M2 005 03 020

**M2
Mini Ruby
Carbide**



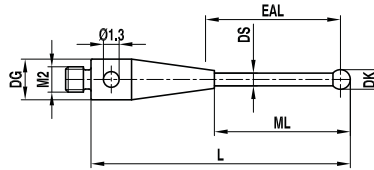
Ruby spheres with a DK diameter below 0.5 mm are "cup" mounted.

**Ball Range
0.2-0.8 mm**

TN: 78 -- O: 200

DK	L	ML1 ML	DS1 DS	Weight g	Base/Stem Material	Price \$USD	Part Number
0.2	17.0	2.3/12.5	0.18/1.0	0.4	Stainless steel / Carbide	135.00	TH M2 002 03 017
0.25	17.0	2.3/12.5	0.18/1.0	0.4	Stainless steel / Carbide	145.00	TH M2 0025 03 017
0.3	18.0	2.3/13.5	0.2/1.0	0.4	Stainless steel / Carbide	90.00	TH M2 003 03 018
0.5	18.0	2.5/13.5	0.3/1.0	0.4	Stainless steel / Carbide	81.00	TH M2 005 03 018
0.6	18.3	4.6/13.8	0.4/1.0	0.4	Stainless steel / Carbide	81.00	TH M2 006 03 018
0.8	18.3	4.8/13.8	0.6/1.0	0.4	Stainless steel / Carbide	67.00	TH M2 008 03 018

**M2
Ruby
Carbide**



The threaded base of these styli represents a larger proportion of the total length as compared to conventional styli. This longer, more conical base provides more "footing" for the stem.

**Ball Range
0.7-3.0 mm**

TN: 112 -- O: 300

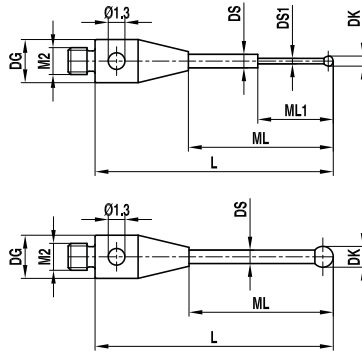
DK	L	ML1 ML	EAL B	DS1 DS	Weight g	Base/Stem Material	Price \$USD	Part Number
0.7	10.35	4.35	4.0	0.5	0.3	Stainless steel / Carbide	67.00	TH M2 007 03 010
0.7	20.35	12.35	12.0	0.5	0.3	Stainless steel / Carbide	97.00	TH M2 007 03 020
1.0	10.5	4.5	4.0	0.7	0.3	Stainless steel / Carbide	27.00	TH M2 010 R3 010
1.0	20.5	7.5	7.0	0.7	0.6	Stainless steel / Carbide	27.00	TH M2 010 03 020
1.0	20.5	13.0	12.5	0.8	0.4	Stainless steel / Carbide	36.00	TH M2 010 03 021
1.0	27.5	20.5	20.5	0.7	0.4	Stainless steel / Carbide	38.00	TH M2 010 03 027
1.5	20.75	13.25	12.5	1.0	0.5	Stainless steel / Carbide	29.00	TH M2 015 03 021
1.5	30.75	23.25	22.5	1.0	0.6	Stainless steel / Carbide	34.00	TH M2 015 03 031
2.0	31.0	23.5	22.5	1.5	1.0	Stainless steel / Carbide	32.00	TH M2 020 03 031
2.0	41.0	33.5	35.0	1.5	1.3	Stainless steel / Carbide	32.00	TH M2 020 03 041
2.0	21.0	13.0	12.0	1.0	0.5	Stainless steel / Carbide	25.00	TH M2 020 R3 021
2.5	21.25	13.75	15.5	1.0	0.5	Stainless steel / Carbide	30.00	TH M2 025 03 021
2.5	31.25	23.75	25.0	2.0	1.5	Stainless steel / Carbide	33.00	TH M2 025 03 031
2.5	41.25	33.75	35.0	2.0	2.0	Stainless steel / Carbide	33.00	TH M2 025 03 041
3.0	31.5	24.0	25.0	2.0	1.5	Stainless steel / Carbide	24.00	TH M2 030 03 032
3.0	41.5	34.0	35.0	2.0	2.0	Stainless steel / Carbide	29.00	TH M2 030 03 042
3.0	51.5	44.0	42.5	2.0	2.5	Stainless steel / Carbide	32.00	TH M2 030 03 051
3.0	21.5	15.5	20.0	1.5	0.8	Stainless steel / Carbide	23.00	TH M2 030 03 021

**General Rule for estimating
maximum Stem Length**



Your selection of styli should always maximize the size of the sphere and stem diameter while minimizing overall length. If your application requires mini styli in the very low DK range, realize that the stem diameter will dictate the effective length. As a **general rule**, the maximum stem length will be 10 times the diameter of the sphere. For example, a 0.5 mm sphere (likely to have a 0.3 mm stem) can be mounted on a stem no longer than 5.0 mm.

**M2
Ruby
Carbide**

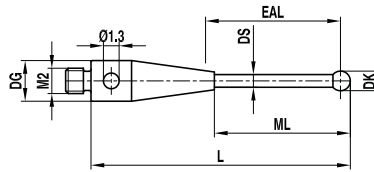


**Ball Range
1.0-4.0 mm**

TN: 78 -- O: 400

DK	L	ML1 ML	DS1 DS	Weight g	Base/Stem Material	Price \$USD	Part Number
1.0	10.5	6.5	0.8	0.3	Stainless steel / Carbide	27.00	TH M2 010 03 010
1.0	15.5	11.5	0.8	0.3	Stainless steel / Carbide	38.00	TH M2 010 03 015
1.0	18.5	5.0/14.0	0.8/1.0	0.4	Stainless steel / Carbide	40.00	TH M2 010 03 018
2.0	11.0	7.0	1.0	1.0	Stainless steel / Carbide	19.00	TH M2 020 03 011
2.0	11.0	5.0	1.0	1.0	Stainless steel / Carbide	32.00	TH M2 020 63 011
2.0	16.0	12.0	1.0	1.0	Stainless steel / Carbide	22.00	TH M2 020 03 016
2.0	21.0	15.0	1.0	1.0	Stainless steel / Carbide	20.00	TH M2 020 03 021
2.5	12.0	6.0	1.5	1.0	Stainless steel / Carbide	24.00	TH M2 025 03 012
3.0	12.0	6.0	2.0	1.0	Stainless steel / Carbide	31.00	TH M2 030 03 012
3.0	21.5	15.5	1.5	1.0	Stainless steel / Carbide	23.00	TH M2 030 03 021
4.0	12.0	8.0	2.5	1.0	Stainless steel / Carbide	23.00	TH M2 040 03 012
4.0	22.0	18.0	2.5	1.0	Stainless steel / Carbide	29.00	TH M2 040 03 022

**M2
Ruby
Carbide**

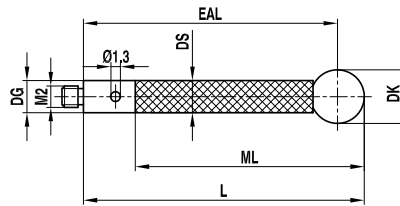


**Ball Range
4.0-5.0 mm**

TN: 112 -- O: 500

DK	L	ML1 ML	EAL B	DS1 DS	Weight g	Base/Stem Material	Price \$USD	Part Number
4.0	32.0	24.5	30.0	2.0	1.6	Stainless steel / Carbide	29.00	TH M2 040 03 032
4.0	42.0	34.5	40.0	2.0	2.1	Stainless steel / Carbide	30.00	TH M2 040 03 042
4.0	52.0	44.5	50.0	2.0	2.5	Stainless steel / Carbide	33.00	TH M2 040 03 052
4.0	24.0	17.0	22.0	2.0	1.2	Stainless steel / Carbide	64.00	TH M2 040 03 024
5.0	22.5	16.5	20.0	2.0	2.0	Stainless steel / Carbide	34.00	TH M2 050 03 022
5.0	32.5	25.0	30.0	2.5	2.6	Stainless steel / Carbide	40.00	TH M2 050 03 032
5.0	42.5	35.0	40.0	2.5	3.2	Stainless steel / Carbide	39.00	TH M2 050 03 042
5.0	52.5	45.0	50.0	2.5	3.8	Stainless steel / Carbide	37.00	TH M2 050 03 052

M2 Ruby Carbon Fiber



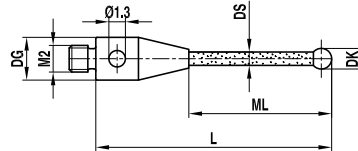
* These styli have a threaded end-cap DG dimension of 3mm which "steps" down to a 2mm DS carbon fiber stem.

Ball Range
3.0-6.0 mm

TN: 116 -- O: 600

DK	L	EAL B	DS1 DS	Weight g	Base/Stem Material	Price \$USD	Part Number
3.0	31.5	27.0	2.0	0.4	Stainless steel / Carbon fiber	51.00	TC M2 030 03 031*
3.0	41.5	36.0	2.0	0.5	Stainless steel / Carbon fiber	59.00	TC M2 030 03 041*
4.0	52.0	50.0	3.0	1.0	Stainless steel / Carbon fiber	64.00	TC M2 040 03 052
4.0	32.0	30.0	2.0	0.6	Stainless steel / Carbon fiber	53.00	TC M2 040 03 032*
4.0	77.0	75.0	3.0	0.8	Stainless steel / Carbon fiber	75.00	TC M2 040 03 077
4.0	102.0	100.0	3.0	1.5	Stainless steel / Carbon fiber	85.00	TC M2 040 03 102
5.0	32.5	30.0	3.0	0.8	Stainless steel / Carbon fiber	85.00	TC M2 050 03 032
5.0	77.5	75.0	3.0	1.3	Stainless steel / Carbon fiber	98.00	TC M2 050 03 077
5.0	102.5	100.0	3.0	1.6	Stainless steel / Carbon fiber	118.00	TC M2 050 03 102
5.0	52.5	50.0	3.0	1.1	Stainless steel / Carbon fiber	95.00	TC M2 050 03 052
6.0	53.0	50.0	3.0	1.2	Stainless steel / Carbon fiber	95.00	TC M2 060 03 053
6.0	33.0	30.0	3.0	1.0	Stainless steel / Carbon fiber	78.00	TC M2 060 03 033
6.0	78.0	75.0	3.0	1.5	Stainless steel / Carbon fiber	110.00	TC M2 060 03 078
6.0	103.0	100.0	3.0	1.8	Stainless steel / Carbon fiber	135.00	TC M2 060 03 103

M2 Ruby Ceramic



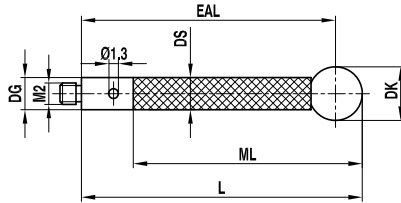
You will be able to identify if a particular stem has a long conical base by scanning the difference between the L and ML dimensions. In general, the items with short ML dimensions will have a long conical base.

Ball Range
4.0-6.0 mm

TN: 79 -- O: 700

DK	L	ML1 ML	DS1 DS	Weight g	Base/Stem Material	Price \$USD	Part Number
4.0	16.0	12.0	2.0	0.8	Stainless steel / Ceramic	30.00	TK M2 040 03 016
4.0	36.0	30.0	2.0	1.0	Stainless steel / Ceramic	34.00	TK M2 040 03 036
5.0	14.0	10.0	2.0	0.8	Stainless steel / Ceramic	43.00	TK M2 050 03 014
5.0	38.0	32.0	2.0	1.0	Stainless steel / Ceramic	57.00	TK M2 050 03 038
5.0	22.5	16.5	2.0	1.0	Stainless steel / Ceramic	50.00	TK M2 050 03 022
6.0	13.0	9.0	2.0	1.0	Stainless steel / Ceramic	30.00	TK M2 060 03 013

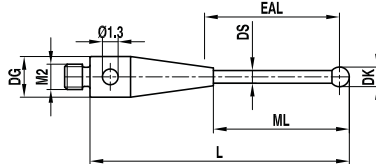
**M2
Ruby
Ceramic**



**Ball Range
3.0-6.0 mm** TN: 115 -- O: 800

DK	L	ML1 ML	EAL B	DS1 DS	Weight g	Base/Stem Material	Price \$USD	Part Number
3.0	31.5	24.0	27.5	2.0	0.4	Stainless steel / Ceramic	31.00	TK M2 030 03 031
3.0	51.5	44.0	42.5	2.0	0.8	Stainless steel / Ceramic	33.00	TK M2 030 03 051
4.0	52.0	44.5	50.0	2.0	0.9	Stainless steel / Ceramic	35.00	TK M2 040 03 052
4.0	32.0	24.5	30.0	2.0	0.7	Stainless steel / Ceramic	33.00	TK M2 040 03 032
5.0	32.5	25.0	30.0	2.5	0.9	Stainless steel / Ceramic	53.00	TK M2 050 03 032
5.0	52.5	45.0	50.0	2.5	1.0	Stainless steel / Ceramic	36.00	TK M2 050 03 053
6.0	33.0	25.5	30.0	2.5	1.1	Stainless steel / Ceramic	61.00	TK M2 060 03 033
6.0	53.0	45.5	50.0	2.5	1.5	Stainless steel / Ceramic	64.00	TK M2 060 03 053

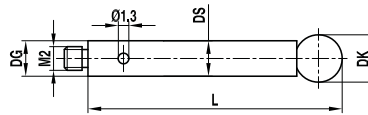
**M2
Ruby
Stainless Steel**



**Ball Range
1.0-8.0 mm** TN: 114 -- O: 900

DK	L	ML1 ML	EAL B	DS1 DS	Weight g	Base/Stem Material	Price \$USD	Part Number
1.0	10.5	5.0	4.5	0.7	0.3	Stainless steel	17.00	TI M2 010 03 010
1.5	10.75	5.0	4.5	0.7	0.3	Stainless steel	17.00	TI M2 015 03 011
2.0	11.0	6.0	6.0	1.0	0.3	Stainless steel	16.00	TI M2 020 03 011
2.0	21.0	14.5	14.0	1.4	0.4	Stainless steel	16.00	TI M2 020 03 021
2.5	11.25	6.5	6.0	1.0	0.3	Stainless steel	19.00	TI M2 025 03 011
2.5	21.25	15.0	14.0	1.4	0.4	Stainless steel	19.00	TI M2 025 03 021
3.0	11.5	6.0	7.5	1.5	0.4	Stainless steel	18.00	TI M2 030 03 011
3.0	21.5	15.0	17.5	1.5	0.5	Stainless steel	18.00	TI M2 030 03 021
4.0	12.0	7.0	10.0	1.5	0.4	Stainless steel	21.00	TI M2 040 03 012
4.0	22.0	15.0	20.0	1.5	0.6	Stainless steel	22.00	TI M2 040 03 022
5.0	12.5	8.5	10.0	2.5	0.7	Stainless steel	27.00	TI M2 050 03 012
6.0	13.0	9.0	10.0	2.5	0.9	Stainless steel	37.00	TI M2 060 R3 013
8.0	15.0	11.0	11.0	2.5	1.5	Stainless steel	42.00	TI M2 080 03 015

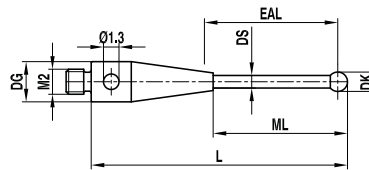
**M2
Ruby
Stainless Steel**



**Ball Range
4.0-8.0 mm** TN: 80 -- O: 1000

DK	L	ML1 ML	DS1 DS	Weight g	Base/Stem Material	Price \$USD	Part Number
4.0	32.0	32.0	3.0	1.7	Stainless steel	29.00	TI M2 040 03 032
4.0	42.0	42.0	3.0	2.4	Stainless steel	31.00	TI M2 040 03 042
4.0	52.0	52.0	3.0	2.9	Stainless steel	34.00	TI M2 040 03 052
5.0	22.0	22.0	3.0	1.3	Stainless steel	33.00	TI M2 050 03 022
5.0	32.0	32.0	3.0	1.9	Stainless steel	36.00	TI M2 050 03 032
5.0	42.5	42.5	3.0	2.5	Stainless steel	40.00	TI M2 050 03 042
5.0	52.5	52.5	3.0	3.1	Stainless steel	44.00	TI M2 050 03 052
6.0	13.0	13.0	3.0	0.9	Stainless steel	29.00	TI M2 060 03 013
6.0	28.0	28.0	3.0	1.8	Stainless steel	29.00	TI M2 060 03 028
8.0	13.0	13.0	3.0	2.0	Stainless steel	46.00	TI M2 080 03 013

**M2
Silicon Nitride
Carbide**

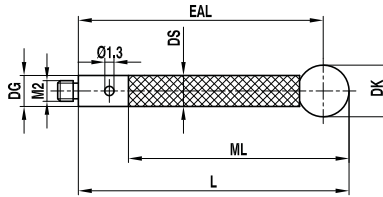


Silicon nitride is similar to but not quite as hard as ruby, and can be made into high-precision spheres. It is ideal for scanning aluminum parts. It is not suited to scanning steel surfaces because of abrasive wear. Please see the appendix to assess the best materials for your applications.

**Ball Range
1.0-5.0 mm** TN: 198 -- O: 1100

DK	L	ML1 ML	EAL B	DS1 DS	Weight g	Base/Stem Material	Price \$USD	Part Number
1.0	20.5	7.5	7.0	0.7	0.6	Stainless steel / Carbide	55.00	TH M2 S10 03 020
1.0	20.5	13.0	12.5	0.8	0.4	Stainless steel / Carbide	55.00	TH M2 S10 03 021
1.0	27.5	20.5	20.5	0.7	0.4	Stainless steel / Carbide	57.00	TH M2 S10 03 027
1.5	20.75	13.25	15.0	1.0	0.5	Stainless steel / Carbide	56.00	TH M2 S15 03 021
1.5	30.75	23.25	25.0	1.0	0.6	Stainless steel / Carbide	53.00	TH M2 S15 03 031
2.0	31.0	23.5	25.0	1.5	1.0	Stainless steel / Carbide	51.00	TH M2 S20 03 031
2.0	41.0	33.5	35.0	1.5	1.3	Stainless steel / Carbide	51.00	TH M2 S20 03 041
2.5	31.25	23.75	25.0	2.0	1.5	Stainless steel / Carbide	52.00	TH M2 S25 03 031
2.5	41.25	33.75	35.0	2.0	2.0	Stainless steel / Carbide	52.00	TH M2 S25 03 041
3.0	31.5	24.0	25.0	2.0	1.5	Stainless steel / Carbide	43.00	TH M2 S30 03 032
3.0	41.5	34.0	35.0	2.0	2.0	Stainless steel / Carbide	50.00	TH M2 S30 03 042
3.0	51.5	44.0	42.5	2.0	2.5	Stainless steel / Carbide	51.00	TH M2 S30 03 051
4.0	32.0	24.5	30.0	2.0	1.6	Stainless steel / Carbide	48.00	TH M2 S40 03 032
4.0	42.0	34.5	40.0	2.0	2.1	Stainless steel / Carbide	49.00	TH M2 S40 03 042
4.0	52.0	44.5	50.0	2.0	2.5	Stainless steel / Carbide	52.00	TH M2 S40 03 052
5.0	22.5	16.5	20.0	2.0	2.0	Stainless steel / Carbide	61.00	TH M2 S50 03 022
5.0	32.5	25.0	30.0	2.5	2.6	Stainless steel / Carbide	59.00	TH M2 S50 03 032
5.0	42.5	35.0	40.0	2.5	3.2	Stainless steel / Carbide	58.00	TH M2 S50 03 042
5.0	52.5	45.0	50.0	2.5	3.8	Stainless steel / Carbide	56.00	TH M2 S50 03 052

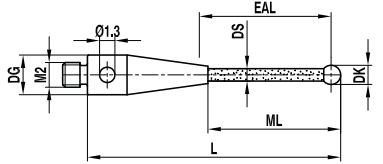
**M2
Silicon Nitride
Carbon Fiber**



**Ball Range
4.0-6.0 mm** TN: 201 -- O: 1200

DK	L	ML1 ML	EAL B	DS1 DS	Weight g	Base/Stem Material	Price \$USD	Part Number
4.0	52.0	44.0	50.0	3.0	1.0	Stainless steel / Carbon fiber	83.00	TC M2 S40 03 052
5.0	52.5	44.5	50.0	3.0	1.1	Stainless steel / Carbon fiber	99.00	TC M2 S50 03 052
6.0	53.0	45.0	50.0	3.0	1.2	Stainless steel / Carbon fiber	114.00	TC M2 S60 03 053

**M2
Silicon Nitride
Ceramic**



**Ball Range
3.0-5.0 mm** TN: 199 -- O: 1300

DK	L	ML1 ML	EAL B	DS1 DS	Weight g	Base/Stem Material	Price \$USD	Part Number
3.0	51.5	44.0	42.5	2.0	0.8	Stainless steel / Ceramic	58.00	TK M2 S30 03 051
4.0	52.0	44.5	50.0	2.0	0.9	Stainless steel / Ceramic	60.00	TK M2 S40 03 052
5.0	52.5	45.0	50.0	2.5	1.0	Stainless steel / Ceramic	61.00	TK M2 S50 03 053

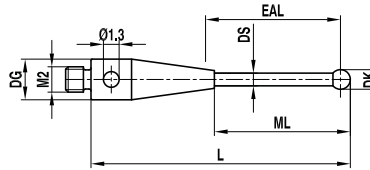
Holders – Knuckles – Adapters

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.

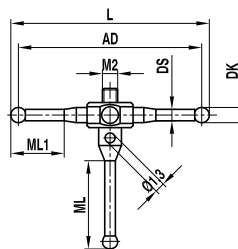
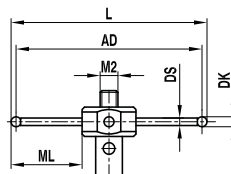
**M2
Silicon Nitride
Stainless Steel**



**Ball Range
1.0-8.0 mm** TN: 200 -- O: 1400

DK	L	ML1 ML	EAL	DS1 DS	Weight g	Base/Stem Material	Price \$USD	Part Number
1.0	10.5	5.0	4.5	0.7	0.3	Stainless steel	36.00	TI M2 S10 03 010
1.5	10.75	5.0	4.5	0.7	0.3	Stainless steel	36.00	TI M2 S15 03 011
2.0	11.0	6.0	6.0	1.0	0.3	Stainless steel	35.00	TI M2 S20 03 011
2.0	21.0	14.5	14.0	1.4	0.4	Stainless steel	35.00	TI M2 S20 03 021
2.5	11.25	6.5	6.0	1.0	0.3	Stainless steel	38.00	TI M2 S25 03 011
2.5	21.25	15.0	14.0	1.4	0.4	Stainless steel	38.00	TI M2 S25 03 021
3.0	11.5	6.0	7.5	1.5	0.4	Stainless steel	37.00	TI M2 S30 03 011
3.0	21.5	15.0	17.5	1.5	0.5	Stainless steel	37.00	TI M2 S30 03 021
4.0	12.0	7.0	10.0	1.5	0.4	Stainless steel	40.00	TI M2 S40 03 012
4.0	22.0	15.0	20.0	1.5	0.6	Stainless steel	41.00	TI M2 S40 03 022
5.0	12.5	8.5	10.0	2.5	0.7	Stainless steel	46.00	TI M2 S50 03 012
6.0	13.0	9.0	10.0	2.5	0.9	Stainless steel	48.00	TI M2 S60 R3 013
8.0	15.0	11.0	11.0	2.5	1.5	Stainless steel	61.00	TI M2 S80 03 015

**M2
Ruby
Star Styli
Stainless Steel**



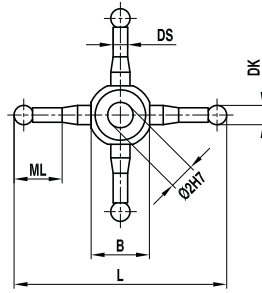
The center hub of the 4-armed stars will accept an M2-threaded stylus and allows for clocking. Note that the horizontal arms are fixed. Threaded options can be found pages 18 & 19.

* 4 way arms
** 5 way arms

**Ball Range
0.5-2.0 mm** TN: 117 -- O: 1500

DK	L	AD	ML1 ML	DS1 DS	Weight g	Base/Stem Material	Price \$USD	Part Number
0.5	10.5	10.0	2.75	0.3	0.7	Stainless steel	236.00	SI M2 005 05 010 *
0.5	20.5	20.0	7.75	0.3	0.7	Stainless steel	200.00	SI M2 005 05 020 *
1.0	21.0	20.0	8.0	0.7	0.9	Stainless steel	210.00	SI M2 010 05 021 *
1.0	11.0	10.0	3.0	0.7	0.8	Stainless steel	124.00	SI M2 010 05 011 *
2.0	22.0	20.0	4.5 / 13.5	1.4	1.3	Stainless steel	122.00	SI M2 020 05 022 **
2.0	32.0	30.0	9.5 / 13.5	1.4	1.8	Stainless steel	125.00	SI M2 020 05 032 **

**M2
Ruby
Star Styli
Stainless Steel**



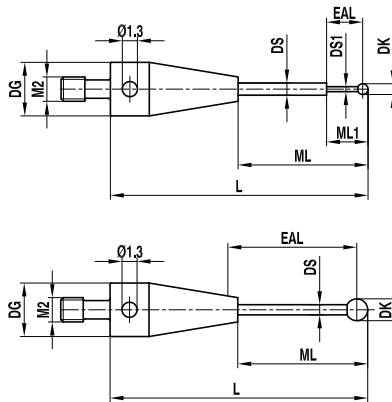
This configuration allows the horizontal arms to be clocked by vertically inserting one of the 5 star styli shown below. Vertical styli sold separately. Horizontal arms are permanently fixed.

**Ball Range
2.0 mm**

TN: 82 -- O: 1600

DK	L	ML1 ML	DS1 DS	Weight g	Base/Stem Material	Price \$USD	Part Number
2.0	22.0	4.5	1.4	1.0	Stainless steel	88.00	SI M2 020 06 022
2.0	32.0	9.5	1.4	1.0	Stainless steel	91.00	SI M2 020 06 032

**M2
Ruby
Star Styli
Carbide**



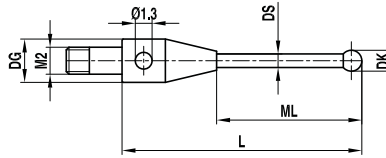
These styli have extended threads and are to be used with SI M2 020 06 022 and SI M2 020 06 032.

**Ball Range
0.5-2.0 mm**

TN: 296 -- O: 1700

DK	L	ML1 ML	DS1 DS	Weight g	Base/Stem Material	Price \$USD	Part Number
0.5	19.0	7.0 / 11.5	0.4 / 0.7	0.4	Stainless steel / Carbide	132.00	TH M2 005 03 019
1.0	9.5	4.5	0.7	0.3	Stainless steel / Carbide	104.00	TH M2 010 03 009
1.0	19.0	11.5	0.7	0.5	Stainless steel / Carbide	101.00	TH M2 010 03 019
2.0	17.5	12.0	1.4	0.4	Stainless steel / Carbide	52.00	TH M2 020 03 017

**M2
Ruby
Star Styli
Stainless Steel**



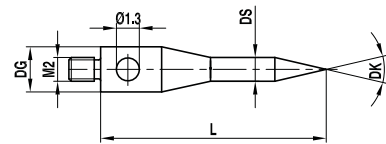
These styli have extended threads and are to be used with SI M2 020 06 022 and SI M2 020 06 032.

Ball Range
2.0 mm

TN: 83 -- O: 1800

DK	L	ML1 ML	DS1 DS	Weight g	Base/Stem Material	Price \$USD	Part Number
2.0	19.5	13.5	1.5	1.0	Stainless steel	32.00	SI M2 020 03 019

**M2
Pointer Styli
Carbide**



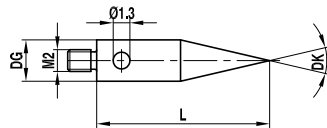
Pointer styli are designed for the measurement of thread forms, specific points and scribed lines. They should not be used for conventional XY probing.

Angle Range
30°-60°

TN: 90 -- O: 1900

DK	L	DG D	DS1 DS	Weight g	Base/Tip Material	Price \$USD	Part Number
30°	10.0	3.0	1.5	1.0	Stainless steel / Carbide	27.00	IH M2 030 03 010
60°	10.0	3.0	1.5	1.0	Stainless steel / Carbide	29.00	IH M2 060 03 010

**M2
Pointer Styli
Carbide**

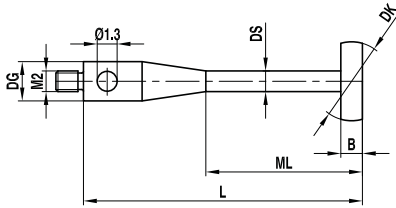


Angle Range
30°

TN: 124 -- O: 2000

DK	L	DG D	DS1 DS	Weight g	Base/Tip Material	Price \$USD	Part Number
30°	15.0	3.0	3.0	0.7	Stainless steel / Carbide	21.00	II M2 030 03 015

M2 Disks Ceramic

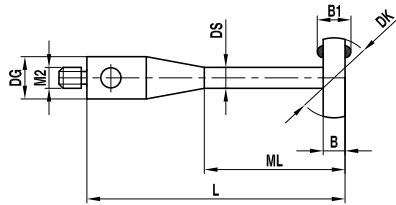


Disc styli are useful for measuring undercuts and grooves. Some have balls on one or both sides to allow measuring in X, Y and Z directions.

Disk Range 4.0-8.0 mm TN: 84 -- O: 2100

DK	L	ML1 ML	DS1 DS	EAL B	Weight g	Base/Stem Material	Disk Material	Price \$USD	Part Number
4.0	32.0	19.0	1.0	1.0	1.0	Stainless steel / Carbide	Ceramic	67.00	KK M2 040 03 032
8.0	32.0	19.0	1.5	1.5	1.0	Stainless steel / Carbide	Ceramic	78.00	KK M2 080 03 032

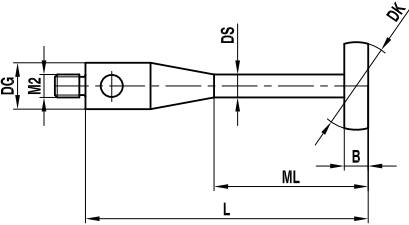
M2 Disks Ruby



Disk Range 6.0 mm TN: 191 -- O: 2200

DK	DS1 DS	DG D	ML1 ML	B1 B	Weight g	Base/Stem Material	Disk Material	Price \$USD	Part Number
6.0	2.0	3.0		2.0/1.2	0.6	Stainless steel	Ruby	66.00	KR M2 060 03 010
6.0	2.0	3.0	6.0	2.0/1.5	1.0	Stainless steel	Ruby	85.00	KI M2 060 03 010

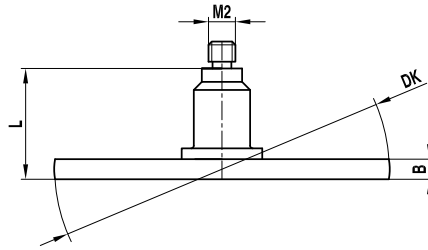
M2 Disks Stainless Steel



Disk Range 5.0-12.0 mm TN: 350 -- O: 2300

DK	L	ML1 ML	DS1 DS	EAL B	Weight g	Stem/Disk Material	Price \$USD	Part Number
5.0	15.0	11.0	1.5	0.5	0.8	Stainless steel	82.00	KI M2 050 03 015
6.0	10.0	6.0	2.0	0.8	0.8	Stainless steel	80.00	KI M2 060 03 010/0.8
8.0	20.0	16.0	2.0	0.5	1.1	Stainless steel	82.00	KI M2 080 03 020
10.0	20.0	16.0	2.0	0.5	1.2	Stainless steel	83.00	KI M2 100 03 020
10.0	20.0	16.0	2.0	0.8	1.2	Stainless steel	83.00	KI M2 100 03 020/0.8
12.0	20.0	16.0	2.0	0.8	1.3	Stainless steel	79.00	KI M2 120 03 020

**M2
Disks
Stainless Steel**

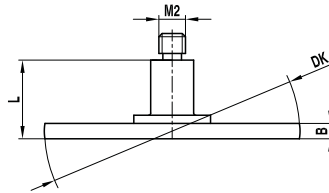


**Disk Range
18.0-25.0 mm**

TN: 316 -- O: 2400

DK	L	EAL B	Weight g	Disk Material	Price \$USD	Part Number
18.0	2.0	0.5	2.5	Stainless steel	89.00	KI M2 005 18 002
18.0	2.0	0.8	2.6	Stainless steel	92.00	KI M2 008 18 002
25.0	4.0	3.0	11.4	Stainless steel	93.00	KI M2 030 25 M20

**M2
Disks
Stainless Steel**

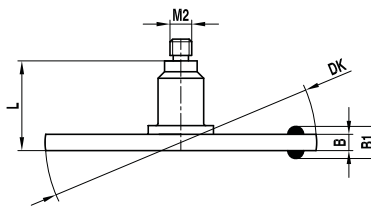


**Disk Range
14.0-20.0 mm**

TN: 85 -- O: 2500

DK	L	EAL B	Weight g	Disk Material	Price \$USD	Part Number
14.0	5.5	2.0	1.0	Stainless steel	63.00	KI M2 140 20 005
20.0	5.5	2.5	3.0	Stainless steel	118.00	KI M2 200 25 005

**M2
Disks
Stainless Steel**

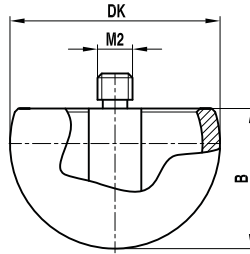


**Disk Range
18.0-25.0 mm**

TN: 190 -- O: 2600

DK	L	B B1	Weight g	Disk/Ball Material	Price \$USD	Part Number
18.0	3.7	2.2 / 3.0	2.7	Stainless steel/Ruby	74.00	KI M2 022 18 M20
18.0	8.25	1.5/2.0	3.5	Stainless steel/Ruby	81.00	KI M2 015 18 008
18.0	4.0	3.0/4.0	3.8	Stainless steel/Ruby	75.00	KI M2 030 18 004
18.0	8.25	1.5 / 2.5	3.0	Stainless steel/Ruby	77.00	KI M2 015 18 M20
25.0	8.25	1.5 / 2.5	4.0	Stainless steel/Ruby	79.00	KI M2 015 25 M20
25.0	8.25	1.5/2.0	4.0	Stainless steel/Ruby	81.00	KI M2 015 25 008
25.0	4.0	3.0/4.0	4.5	Stainless steel/Ruby	77.00	KI M2 030 25 004

**M2
Spherical Styli
Ceramic**

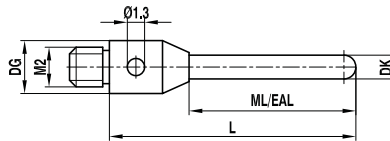


Hemispherical styli provide a greater measuring surface with low weight. They are ideal for deep features and bores. The large area is better for rough surfaces.

**Hollow Sphere
18.0-30.0 mm** TN: 192 -- O: 2700

DK	EAL B	Weight g	Stem/Body Material	Price \$USD	Part Number
18.0	12.0	3.3	Stainless steel / Ceramic	300.00	HK M2 180 03 012
30.0	18.0	18.0	Stainless steel / Ceramic	520.00	HK M2 300 03 018

**M2
Cylinder
Carbide**

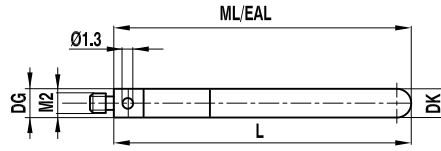


**Cylinder
1.5-2.0 mm** TN: 188 -- O: 2800

DK	L	ML1 ML	EAL B	Weight g	Base/Cylinder Material	Price \$USD	Part Number
1.5	15.8	8.3	8.3	0.7	Stainless steel / Carbide	45.00	ZH M2 015 03 016
2.0	16.0	8.5	8.5	0.8	Stainless steel / Carbide	45.00	ZH M2 020 03 016
2.0	40.0	32.0	32.0	2.0	Stainless steel / Carbide	45.00	ZH M2 020 03 040
2.0	40.0	7.0	7.0	1.9	Stainless steel / Carbide	152.00	ZH M2 020 03 A40

**M2
Cylinder
Carbide**

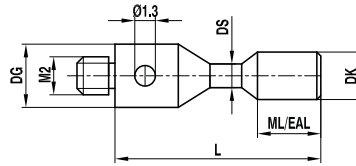
Cylinder styli are useful for measuring sheet metal and thin pieces. They are also applicable for measuring threaded features.



**Cylinder
3.0 mm** TN: 188 -- O: 2900

DK	L	ML1 ML	EAL B	Weight g	Base/Cylinder Material	Price \$USD	Part Number
3.0	22.5	22.5	22.5	2.0	Stainless steel / Carbide	104.00	ZH M2 030 03 022

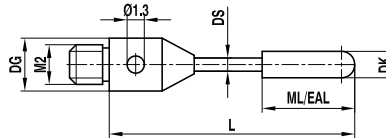
**M2
Cylinder
Carbide**



Cylinder TN: 119 -- O: 3010
1.5-3.0 mm

DK	ML1 ML	EAL B	DG D	L	DS1 DS	Base/Cylinder Material	Price \$USD	Part Number
1.5	1.5	1.5	3.0	11.0	1.0	Stainless steel / Carbide	18.00	ZH M2 015 03 011
3.0	4.0	4.0	3.0	13.0	1.5	Stainless steel / Carbide	18.00	ZH M2 030 03 013

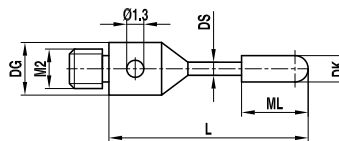
**M2
Cylinder
Ruby**



Cylinder TN: 189 -- O: 3100
4.0 mm

DK	L	ML1 ML	EAL B	DS1 DS	Weight g	Base/Cylinder Material	Price \$USD	Part Number
2.0	20.0	7.0	7.0	1.5	0.5	Stainless steel/Ruby	67.00	ZR M2 020 03 020
4.0	22.0	10.5	10.5	2.0	0.9	Stainless steel/Ruby	81.00	ZR M2 040 03 022

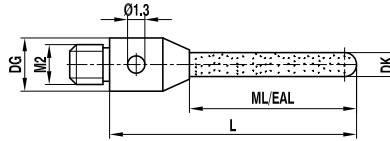
**M2
Cylinder
Ruby**



Cylinder TN: 310 -- O: 3200
2.0 mm

DK	L	ML1 ML	DS1 DS	Weight g	Base/Cylinder Material	Price \$USD	Part Number
2.0	20.0	7.0	1.5	0.6	Stainless steel/Ruby	67.00	ZR M2 020 03 020

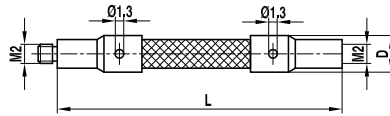
**M2
Cylinder
Zirconium Oxide**



**Cylinder
1.0-1.5 mm** TN: 315 -- O: 3300

DK	L	ML1 ML	EAL B	Weight g	Base/Cylinder Material	Price \$USD	Part Number
1.0	15.0	8.0	8.0	0.3	Stainless steel/Zirconium	81.00	ZR M2 010 03 015
1.5	15.0	8.0	8.0	0.3	Stainless steel/Zirconium	71.00	ZR M2 015 03 015

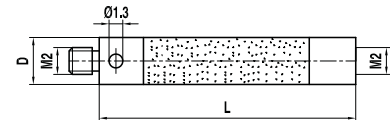
**M2
Extensions
Carbon Fiber**



**Length Range
40.00-90.00 mm** TN: 123 -- O: 3400

L	DG D	Weight g	Body Material	End Material	Price \$USD	Part Number
40.0	3.5	0.9	Carbon fiber	Stainless Steel	51.00	VC M2 000 03 040
50.0	3.5	1.0	Carbon fiber	Stainless Steel	57.00	VC M2 000 03 050
70.0	3.5	1.3	Carbon fiber	Stainless Steel	58.00	VC M2 000 03 070
90.0	3.5	1.5	Carbon fiber	Stainless Steel	65.00	VC M2 000 03 090

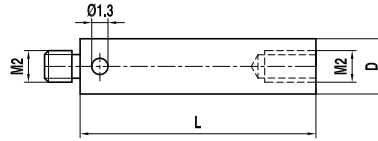
**M2
Extensions
Ceramic**



**Length Range
30.00-60.00 mm** TN: 122 -- O: 3500

L	DG D	Weight g	Body Material	End Material	Price \$USD	Part Number
30.0	3.0	1.0	Ceramic	Stainless Steel	32.00	VK M2 000 03 030
40.0	3.0	1.3	Ceramic	Stainless Steel	34.00	VK M2 000 03 040
50.0	3.0	1.5	Ceramic	Stainless Steel	36.00	VK M2 000 03 050
60.0	3.0	1.7	Ceramic	Stainless Steel	43.00	VK M2 000 03 060

**M2
Extensions
Stainless Steel**

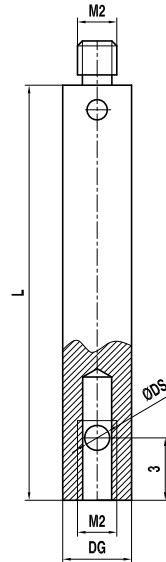


**Length Range
5.00-50.00 mm**

TN: 81 -- O: 3600

L	DG D	Weight g	Body Material	Price \$USD	Part Number
5.0	3.0	0.2	Stainless steel	10.00	VI M2 000 03 005
10.0	3.0	0.5	Stainless steel	10.00	VI M2 000 03 010
20.0	3.0	1.0	Stainless steel	11.00	VI M2 000 03 020
30.0	3.0	1.4	Stainless steel	11.00	VI M2 000 03 030
35.0	3.0	1.8	Stainless steel	11.00	VI M2 000 03 035
40.0	3.0	2.2	Stainless steel	12.00	VI M2 000 03 040
50.0	3.0	2.7	Stainless steel	12.00	VI M2 000 03 050

**M2
Holders
Stainless Steel**



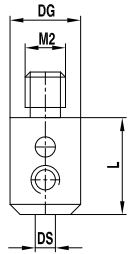
Use with non-threaded styli with matching DS on pages 76-78.

1-Way Holder

TN: 348 -- O: 3700

DS1 DS	DG D	L	Weight g	Body Material	Price \$USD	Part Number
1.0	3.0	30.0	2.9	Stainless steel	54.00	KH M2 010 03 030
1.5	3.0	30.0	2.9	Stainless steel	56.00	KH M2 015 03 030

**M2 Holders
Stainless steel**



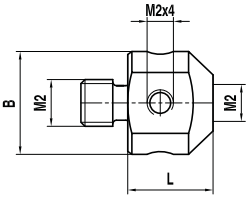
Use with non-threaded styli with matching DS on pages 76-78.

Holder TN: 338 -- O: 3810

DG D	L	DS1 DS	Weight g	Body Material	Price \$USD	Part Number
6.0	8.0	1.0	1.0	Stainless steel	32.00	KH M2 010 06 008
6.0	8.0	1.5	1.0	Stainless steel	35.00	KH M2 015 06 008
6.0	8.0	2.0	1.0	Stainless steel	38.00	KH M2 020 06 008

**M2 Holders
Stainless Steel**

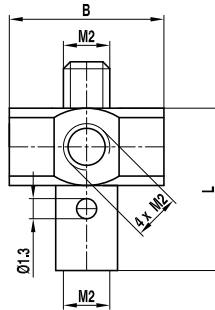
HI M2 000 07 005 is a one-piece construction that cannot be clocked. HI M2 000 10 009 can be clocked by loosening the set screws with a standard 0.9 mm hex wrench (WS DD 911 SW 009).



5-Way Holder TN: 93 -- O: 3900

EAL B	L	Weight g	Body Material	Price \$USD	Part Number
7.0	5.4	1.0	Stainless steel	27.50	HI M2 000 07 005
10.5	9.1	3.4	Stainless steel	47.00	HI M2 000 10 009

**M2
Holders
Stainless Steel**



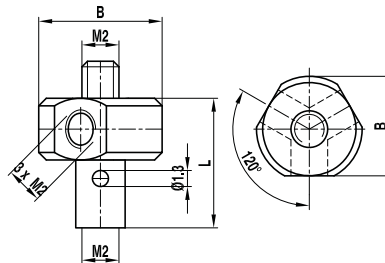
Both holders on this page are two-piece constructions to allow for clocking. Stylus not included.

**5-Way Rotary
Holder
7.00 mm**

TN: 89 -- O: 4000

EAL B	L	Weight g	Body Material	Price \$USD	Part Number
7.0	7.5	1.2	Stainless steel	33.00	HI M2 000 07 008

**M2
Holders
Stainless Steel**

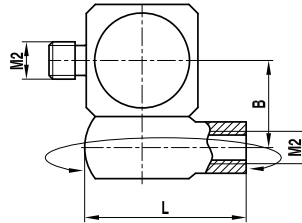


**4-Way Rotary
Holder
7.50 mm**

TN: 128 -- O: 4100

EAL B	L	Weight g	Body Material	Price \$USD	Part Number
7.5	7.5	1.2	Stainless steel	35.00	HI M2 000 07 007

**M2
Rotary Adapters
Stainless Steel**

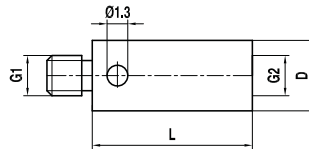


Rotary Adapter

TN: 87 -- O: 4200

EAL B	L	Weight g	Body Material	Price \$USD	Part Number
4.5	8.0	2.0	Stainless steel	49.00	DI M2 000 04 008

**M2
Adapters
Stainless Steel**

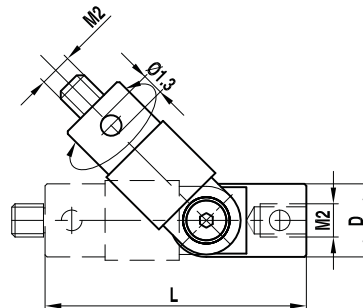


M2 - M3 Adapter

TN: 140 -- O: 4300

G1 G2	DG D	L	Weight g	Material	Price \$USD	Part Number
M2/M3	4.0	7.0	0.5	Stainless steel	10.00	RI M2 000 04 007
M3/M2	4.0	5.0	0.5	Stainless steel	10.00	RI M3 000 04 005
M2/M3	4.0	5.0	0.5	Stainless steel	10.00	RI M2 000 04 005

**M2
Rotary Knuckle
Stainless Steel**



Rotary Knuckle

TN: 86 -- O: 4400

DG D	L	Weight g	Body Material	Price \$USD	Part Number
4.0	16.5	1.5	Stainless steel	60.00	GI M2 000 04 016

**M2
Styli Kits
15 Pieces**



The configuration pictured is not intended to reflect actual contents.

TB M2 015 RE 201
Price: \$475.00

Part Number	Description	Quantity
T1 M2 010 03 010	M2 straight stylus, steel – Ø=1.0 L=10.5	1
T1 M2 020 03 011	M2 straight stylus, steel – Ø=2.0 L=11.0	1
T1 M2 020 03 021	M2 straight stylus, steel – Ø=2.0 L=21.0	1
T1 M2 030 03 011	M2 straight stylus, steel – Ø=3.0 L=11.5	1
T1 M2 030 03 021	M2 straight stylus, steel – Ø=3.0 L=21.5	1
SI M2 020 05 032	M2 star stylus, steel – Ø=2.0 L=32.0	1
VI M2 000 03 010	M2 extension, steel – L=10.0	2
KR M2 060 03 010	M2 disk stylus, ruby – Ø=6.0 L=10.0	1
KI M2 015 18 M20	M2 disk stylus, steel – Ø=18.0 L=8.25	1
DI M2 000 04 008	M2 adjustable knuckle	1
WS DD 911 SW 015	Screwdriver DIN 911 – Ø=2.5	1
MI MO 012 00 023	Pin type wrench	2
Box		1



**M2
Styli Kit
30 Pieces**



The configuration pictured is not intended to reflect actual contents.

TB M2 030 RE 204
Price: \$995.00

Part Number	Description	Quantity
T1 M2 010 03 010	M2 straight stylus, steel – Ø=1.0 L=10.5	1
T1 M2 020 03 011	M2 straight stylus, steel – Ø=2.0 L=11.0	1
T1 M2 020 03 021	M2 straight stylus, steel – Ø=2.0 L=21.0	1
T1 M2 030 03 011	M2 straight stylus, steel – Ø=3.0 L=11.5	1
T1 M2 030 03 021	M2 straight stylus, steel – Ø=3.0 L=21.5	1
T1 M2 040 03 012	M2 straight stylus, steel – Ø=4.0 L=12.0	1
T1 M2 040 03 022	M2 straight stylus, steel – Ø=4.0 L=22.0	1
T1 M2 050 03 012	M2 straight stylus, steel – Ø=5.0 L=12.5	1
T1 M2 060 R3 013	M2 straight stylus, steel – Ø=6.0 L=13.0	1
T1 M2 080 03 015	M2 straight stylus, steel – Ø=8.0 L=15.0	1
HK M2 180 03 012	M2 spherical stylus, ceramic – Ø=18.0 L=11.0	1
VI M2 000 03 010	M2 extension, steel – L=10.0	2
VI M2 000 03 020	M2 extension, steel – L=20.0	2
VI M2 000 03 030	M2 extension, steel – L=30.0	2
II M2 030 03 015	M2 pointer stylus, carbide – 30 degrees	1
ZH M2 015 03 011	M2 cylinder stylus, carbide – Ø=1.5 L=11.0	1
ZH M2 030 03 013	M2 cylinder stylus, carbide – Ø=3.0 L=13.0	1
KR M2 060 03 010	M2 disk stylus, ruby – Ø=6.0 L=10.0	1
K1 M2 015 18 M20	M2 disk stylus, steel – Ø=18.0 L=8.25	1
K1 M2 015 25 M20	M2 disk stylus, steel – Ø=25.0 L=8.25	1
DI M2 000 04 008	M2 adjustable knuckle	1
HI M2 000 07 008	M2 star center	1
RI M3 000 04 005	M3/M2 adapter	1
WS DD 911 SW 015	Screwdriver DIN 911 – Ø=2.5	1
MI MO 012 00 023	Pin type wrench	2
Box		1

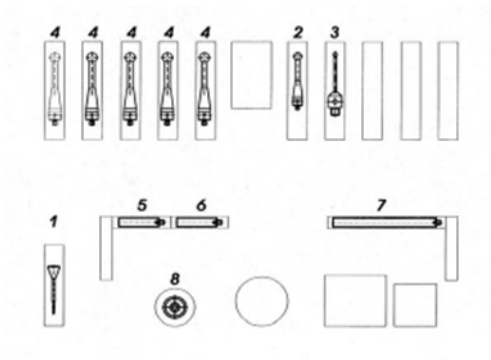
**M2
Styli Kits
55 Pieces**



The configuration pictured is not intended to reflect actual contents.

**TB M2 055 RE 206
Price: \$1475.00**

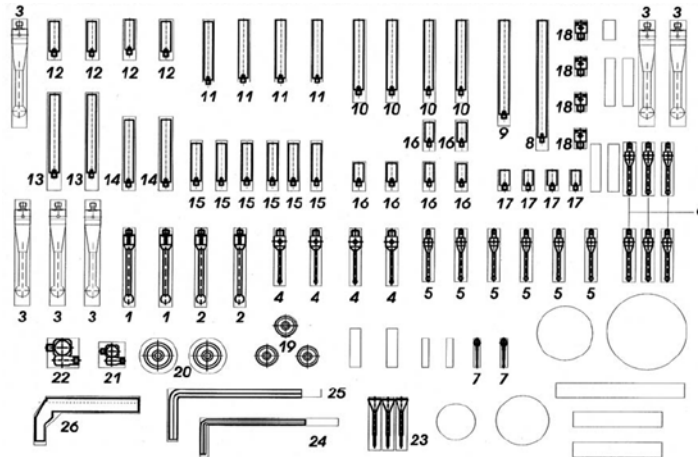
Part Number	Description	Quantity
TI M2 010 03 010	M2 straight stylus, steel – Ø=1.0 L=10.5	5
TI M2 020 03 011	M2 straight stylus, steel – Ø=2.0 L=11.0	3
TI M2 020 03 021	M2 straight stylus, steel – Ø=2.0 L=21.0	5
TI M2 030 03 011	M2 straight stylus, steel – Ø=3.0 L=11.5	5
TI M2 030 03 021	M2 straight stylus, steel – Ø=3.0 L=21.5	3
TI M2 040 03 012	M2 straight stylus, steel – Ø=4.0 L=12.0	3
TI M2 040 03 022	M2 straight stylus, steel – Ø=4.0 L=22.0	3
TI M2 050 03 012	M2 straight stylus, steel – Ø=5.0 L=12.5	2
TI M2 060 R3 013	M2 straight stylus, steel – Ø=6.0 L=13.0	2
TI M2 080 03 015	M2 straight stylus, steel – Ø=8.0 L=15.0	1
HK M2 180 03 012	M2 spherical stylus, ceramic – Ø=18.0 L=11.0	1
VI M2 000 03 010	M2 extension, steel – L=10.0	3
VI M2 000 03 020	M2 extension, steel – L=20.0	2
VI M2 000 03 030	M2 extension, steel – L=30.0	2
II M2 030 03 015	M2 pointer stylus, carbide – 30 degrees	1
ZH M2 015 03 011	M2 cylinder stylus, carbide – Ø=1.5 L=11.0	1
ZH M2 030 03 013	M2 cylinder stylus, carbide – Ø=3.0 L=13.0	1
KR M2 060 03 010	M2 disk stylus, ruby – Ø=6.0 L=10.0	1
KI M2 015 18 M20	M2 disk stylus, steel – Ø=18.0 L=8.25	1
KI M2 015 25 M20	M2 disk stylus, steel – Ø=25.0 L=8.25	1
DI M2 000 04 008	M2 adjustable knuckle	1
HI M2 000 07 008	M2 star center	3
RI M3 000 04 005	M3/M2 adapter	1
WS DD 911 SW 015	Screwdriver DIN 911 – Ø=2.5	1
MI MO 012 00 023	Pin type wrench	2
Box		1



TB M2 013 09 251
Price: \$277.00

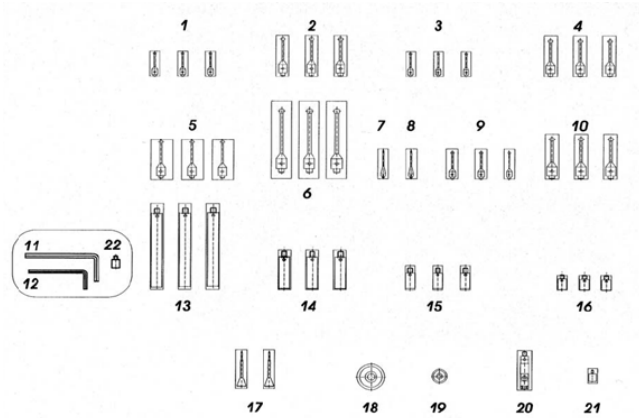
Part Number	Description	Quantity	Position
MI MO 012 00 023	Pin type wrench	1	1
TK M2 060 03 013	M2 straight stylus, ceramic – Ø=6.0 L=13.0	1	2
TH M2 030 03 021	M2 straight stylus, carbide – Ø=3.0 L=21.0	1	3
TH M2 020 03 021	M2 straight stylus, carbide – Ø=2.0 L=21.0	5	4
VI M2 000 03 005	M2 extension, steel – L=5.0	1	5
VI M2 000 03 010	M2 extension, steel – L=10.0	1	6
VI M2 000 03 020	M2 extension, steel – L=20	1	7
HI M2 000 07 008	M2 star center rotary 5-ways, steel	1	8
Box		1	

**M2
Styli Kits
79 Pieces
Large Kit**



TB M2 079 09 232
Price: \$1607.00

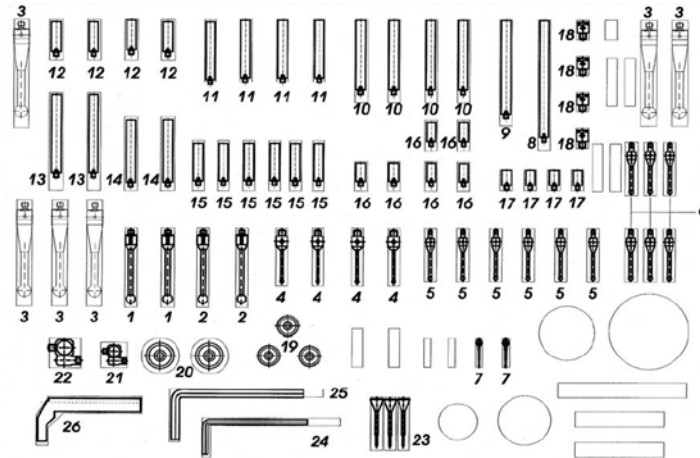
Part Number	Description	Quantity	Position
TK M3 050 04 032	M3 straight stylus, ceramic – Ø=5.0 L=32.0	2	1
TK M3 040 04 032	M3 straight stylus, ceramic – Ø=4.0 L=32.0	2	2
TH M3 K30 05 040	M3 straight stylus, carbide – Ø=3.0 L=40.0	6	3
TH M3 020 04 022	M3 straight stylus, carbide – Ø=2.0 L=22.0 ML=9.0	4	4
TH M2 020 03 021	M2 straight stylus, carbide – Ø=2.0 L=21.0	6	5
TH M2 030 03 021	M2 straight stylus, carbide – Ø=3.0 L=21.0	6	6
TH M2 020 63 011	M2 straight stylus, carbide – Ø=2.0 L=11.0 ML=5.0	2	7
VI M3 000 04 050	M3 extension, steel – L=50.0	1	8
VI M3 000 04 040	M3 extension, steel – L=40.0	1	9
VI M3 000 04 030	M3 extension, steel – L=30.0	4	10
VI M3 000 04 020	M3 extension, steel – L=20.0	4	11
VI M3 000 04 010	M3 extension, steel – L=10.0	4	12
VI M2 000 03 040	M2 extension, steel – L=40.0	2	13
VI M2 000 03 030	M2 extension, steel – L=30.0	2	14
VI M2 000 03 020	M2 extension, steel – L=20.0	6	15
VI M2 000 03 010	M2 extension, steel – L=10.0	6	16
VI M2 000 03 005	M2 extension, steel – L=5.0	4	17
RI M3 000 04 005	M3/M2 adapter	4	18
HI M2 000 07 008	M2 star center rotary 5-ways	3	19
HI M3 000 12 011	M3 star center	2	20
DI M2 000 04 008	M2 adjustable knuckle	1	21
DI M3 000 06 012	M3 adjustable knuckle	1	22
MI MO 012 00 023	Pin type wrench	3	23
WS DD 911 SW 015	Screwdriver DIN 911 – Ø=1.5	1	24
WS DD 911 SW 025	Screwdriver DIN 911 – Ø=2.5	1	25
RST probe head wrench		1	
Box		1	



TB M2 049 09 254
Price: \$1200.00

Part Number	Description	Quantity	Position
TH M2 010 03 010	M2 straight stylus, carbide – Ø=1.0 L=10.5	3	1
TH M2 010 03 015	M2 straight stylus, carbide – Ø=1.0 L=15.5	3	2
TH M2 020 03 011	M2 straight stylus, carbide – Ø=2.0 L=11.0	3	3
TH M2 020 03 016	M2 straight stylus, carbide – Ø=2.0 L=16.0	3	4
TI M2 060 03 013	M2 straight stylus, steel – Ø=6.0 L=13.0	3	5
TI M2 060 03 028	M2 straight stylus, steel – Ø=6.0 L=28.0	3	6
IH M2 030 03 010	M2 pointer stylus, steel – 30 degrees	1	7
IH M2 060 03 010	M2 pointer stylus, steel – 60 degrees	1	8
TH M2 040 03 012	M2 straight stylus, carbide – Ø=4.0 L=12.0	3	9
TH M2 040 03 022	M2 straight stylus, carbide – Ø=4.0 L=22.0	3	10
WS DD 911 SW 009	Spring lock washer	1	11
WS DD 911 SW 015	Spring lock washer	1	12
VI M2 000 03 040	M2 extension, steel – L=40.0	3	13
VI M2 000 03 020	M2 extension, steel – L=20.0	3	14
VI M2 000 03 010	M2 extension, steel – L=10.0	3	15
VI M2 000 03 005	M2 extension, steel – L=5.0	3	16
MI MO 012 00 023	Pin type wrench	2	17
HI M2 000 10 009	M2 star center – Ø=7.0 L=5.4	1	18
HI M2 000 07 005	M2 star center – Ø=10.5 L=9.1	1	19
GI M2 000 04 016	M2 adjustable knuckle	1	20
RI M3 000 04 005	M3/M2 adapter	1	21
RI M2 000 04 005	M2/M3 adapter	1	22
Box		1	

**M2
Styli Kits
37 Pieces
M2-M3 Kit**



TB M2 038 09 231
Price: \$862.00

Part Number	Description	Quantity	Position
TK M3 050 04 032	M3 straight stylus, ceramic – Ø=5.0 L=32.0	2	1
TK M3 040 04 032	M3 straight stylus, ceramic – Ø=4.0 L=32.0	2	2
TH M3 020 04 022	M3 straight stylus, carbide – Ø=2.0 L=22.0	6	3
TH M2 020 03 021	M3 straight stylus, carbide – Ø=2.0 L=21.0	4	4
TH M2 030 03 021	M2 straight stylus, carbide – Ø=3.0 L=21.0	6	5
TK M2 050 03 022	M2 straight stylus, ceramic – Ø=5.0 L=22.0	6	6
TK M2 060 03 013	M2 straight stylus, ceramic – Ø=6.0 L=13.0	2	7
TH M2 020 63 011	M2 straight stylus, carbide – Ø=2.0 L=11.0	1	8
VI M3 000 04 050	M3 extension, steel – L=50.0	1	9
VI M3 000 04 040	M3 extension, steel – L=40.0	4	10
VI M3 000 04 030	M3 extension, steel – L=30.0	4	11
VI M3 000 04 020	M3 extension, steel – L=20.0	4	12
VI M3 000 04 010	M3 extension, steel – L=10.0	2	13
VI M2 000 03 040	M2 extension, steel – L=40.0	2	14
VI M2 000 03 030	M2 extension, steel – L=30.0	6	15
VI M2 000 03 020	M2 extension, steel – L=20.0	6	16
VI M2 000 03 010	M2 extension, steel – L=10.0	4	17
RI M3 000 04 005	M3/M2 adapter	4	18
HI M2 000 12 011	M2 star center rotary 5-ways	3	19
HI M3 000 12 011	M3 star center	2	20
DI M2 000 04 008	M2 adjustable knuckle	1	21
DI M3 000 06 012	M3 adjustable knuckle	1	22
MI MO 012 00 023	Pin type wrench	3	23
WS DD 911 SW 015	Screwdriver DIN 911 – Ø=1.5	1	24
WS DD 911 SW 025	Screwdriver DIN 911 – Ø=2.5	1	25
RST probe head wrench		1	26
Box		1	

Vision Fixturing Systems

High quality components, affordable costs, effective solutions

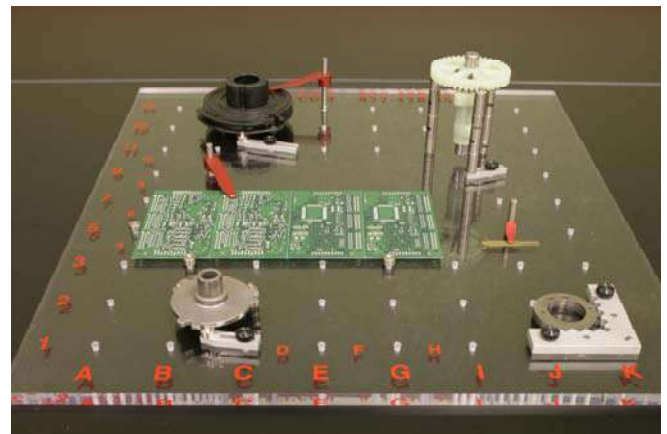
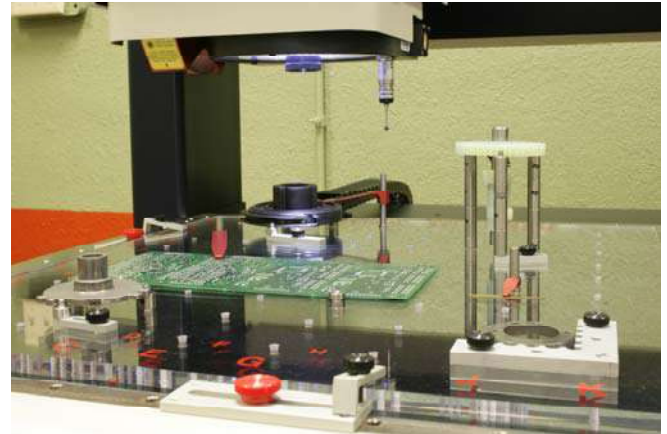
Why purchase an



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 ● 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

Quantities Included per Kit			
	<i>Kit 150</i>	<i>Kit 200</i>	<i>Kit 500</i>
Acrylic Plate <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)
Spring Clamp (two sizes)	(3 of each) 6 Total	(5 of each) 10 Total	(7 of each) 14 Total
Spring Post (two sizes)	(3 of each) 6 Total	(5 of each) 10 Total	(7 of each) 14 Total
Extension (three sizes)	(3 of each) 9 Total	(5 of each) 15 Total	(7 of each) 21 Total
Adjustable Extension (two sizes)	(1 of each) 2 Total	(2 of each) 4 Total	(3 of each) 6 Total
Locator Pin (three sizes)	(4 ea, 2 sizes) 8 Total	(5 of each) 15 Total	(7 of each) 21 Total
Radius Locator	4 Total	5 Total	7 Total
Adjustable Base (two sizes)	1 small	(2 sm, 1 lg) 3 Total	(3 sm, 3 lg) 6 Total
Corner Bracket	1 Total	1 Total	1 Total
Plate Locator Kit	1 small	1 small	1 large
Organizer Box	1 small	1 large	1 large
Total Pieces	40 pcs.	65 pcs.	93 pcs.
Price US\$ (+ ship)	\$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.

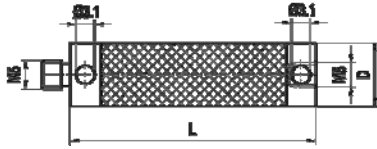
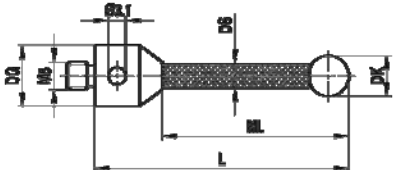
Most importantly, this technology provides a consistent thermal expansion coefficient.

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

<u>Extensions</u>			
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	
<u>Styli</u>			
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

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

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 ³
STAINLESS STEEL	1.4035	300 Vickers	7.95 g/cm ³
TUNGSTEN CARBIDE	DK 120	1700 Vickers	15.0 g/cm ³
CERAMIC	Alsint 99.7	9 nach Mohs	3.85 g/cm ³
CARBON FIBER	Bending Strength > 450 GPa CTE (Coefficient of Thermal Expansion) – 0.4x10 ⁻⁶ K ⁻¹		

BALL MATERIAL TECHNICAL SPECIFICATIONS

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

CHOOSING THE RIGHT MATERIAL – BENEFITS AND LIMITATIONS

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

CHOOSING THE RIGHT MATERIAL – BENEFITS AND LIMITATIONS

<p>TEMP-COMP Carbon Fiber (new)</p>	<ul style="list-style-type: none"> - <u>Best absolute ratio stiffness / weight (E-module > 450 GPa)</u> - <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> - Used on high-end CMMs used on shop floor <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"> - Higher cost than traditional Carbon Fiber - Stem diameters are available in sizes 2 mm and above - Extension diameters are 11 mm and 20 mm only
stem length	diameter									
20 – 40	2									
40 – 80	3.5									
90 – 100	6									
<p style="text-align: center;">Ceramic</p>	<ul style="list-style-type: none"> - Low weight - Best stiffness for same weight and diameter size - Low thermal coefficient - Good for styli over 100 mm lengths with stem size over 4 mm - <u>Ideal for protection of probe head against crashes (e. g. CNC machining centres)</u> - Adhered balls with stem size over 3.5 mm - Drilled balls for stems under 3.5 mm 	<ul style="list-style-type: none"> - Fragile - <u>Not to be used under 2 mm stem size</u> 								
<p style="text-align: center;">BALL MATERIAL</p>										
<p>Ruby (AL₂O₃ / Cr₂O₃)</p>	<ul style="list-style-type: none"> - <u>Best ratio features/price</u> - Diamond-like hardness (9 for Ruby, 10 for diamond on Mohs scale) - Very high roundness/roughness features for very small sizes (down to 0.3 mm) - Excellent resistance to wear - Ideal for point to point and scanning on steel parts 	<ul style="list-style-type: none"> - <u>Attracts Aluminum particles for continuous scanning applications (heavy and repeated cleaning procedures)</u> - Available sizes up to 13 mm 								
<p>Silicon Nitride (Si₃N₄)</p>	<ul style="list-style-type: none"> - Smoother surface (lower friction) - <u>Ideal for scanning on Aluminum parts (no build up of material particles)</u> 	<ul style="list-style-type: none"> - Higher cost - Diameters sizes limited (from 1 to 10 mm only as standard, larger diameters are possible under request) 								
<p style="text-align: center;">Tungsten Carbide</p>	<ul style="list-style-type: none"> - Low weight - Possible to obtain the ball from stem machining - Better shock absorption - Normally used on articulated arms 	<ul style="list-style-type: none"> - Surface and dimensional features lower than Ruby - rapid loss of dimensional tolerances - very low roundness and roughness for ball sizes under 1 mm diameter 								
<p>Zirconium Oxide (Zr O₂)</p>	<ul style="list-style-type: none"> - Very good surface features (comparable to Ruby) - <u>Ideal for scanning on Cast Iron parts (lower friction, lower wear)</u> 	<ul style="list-style-type: none"> - Higher cost than ruby 								



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.

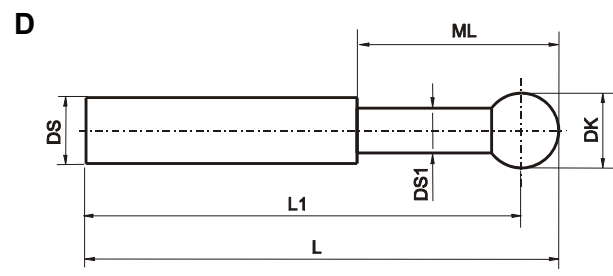
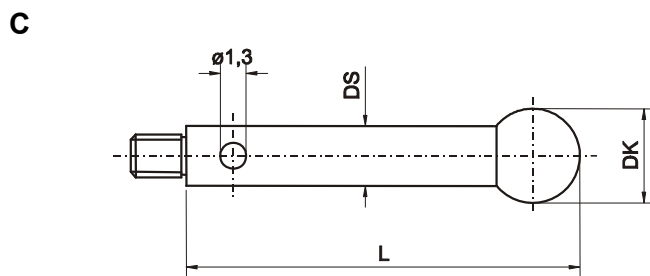
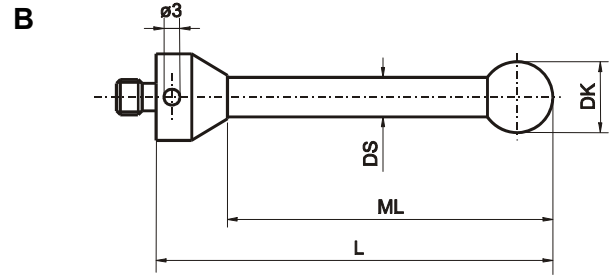
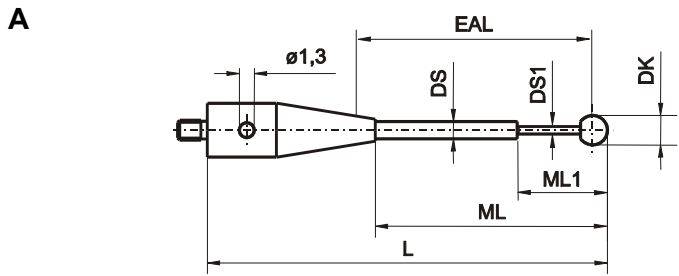
An exotic design is one that has a component or feature that cannot be found in our catalog, such as a 0.2 mm ruby ball attached to a 7 mm stem and base.

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

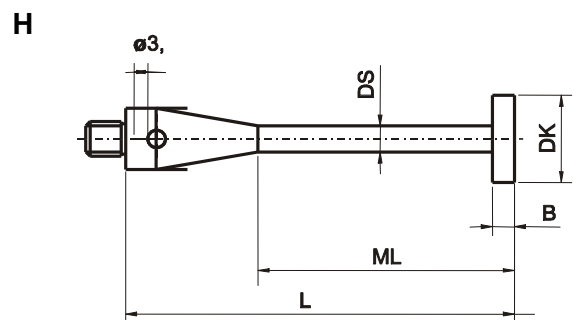
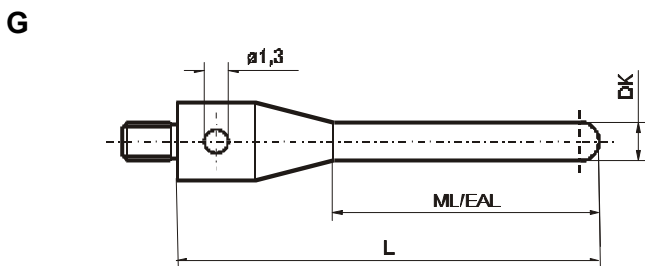
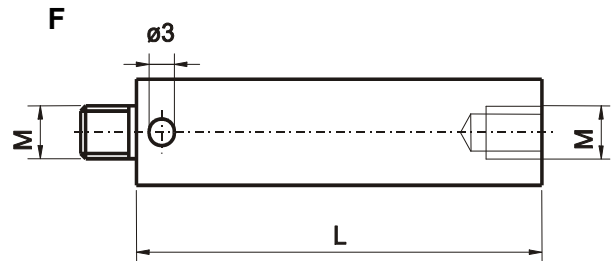
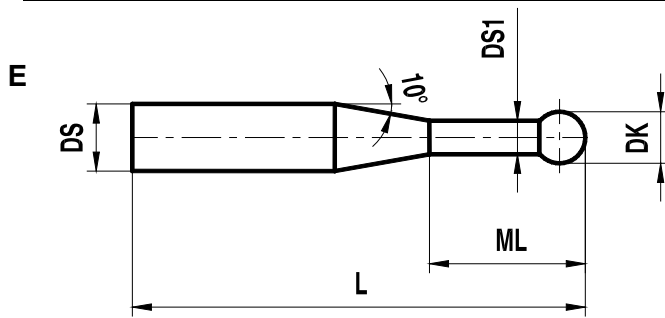
M2	M3	M4		M5	M6
MH20i	MIP	CYCLONE	MP16	LEITZ TRAX	FARO
P1-5A	SP25	CP1	MP18	DT	
P1-5BS	SP25M	DEA TF8	MP700	LSP-X3	
TP2	TESA	LP2	MP700E	LSP-X5	
TP20	TESASTAR	LP2DD	OMP40	RST-P	
TP200	TP1	LP2H	RMP60	SiP-3D	
TP200B	TP1SM	MP1	RP1	SP2	
TP200 NI	TP-50	MP3	RP1DD	SP2-1	
	TP6	MP4	RP2	SP80	
	TP6A	MP6	RP2DD	ST2	
	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		



Styli Type (A-B-C-D)	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Thread (M2, 3, 4, 5, or none)	<u>M</u> <input type="text"/>	<u>M</u> <input type="text"/>	<u>M</u> <input type="text"/>	<u>M</u> <input type="text"/>
Ball Material – Ruby (R) Silicon (S) Ceramic (C) 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	<input type="text"/>	<input type="text"/>	<input type="text"/>	<input type="text"/>
Name:	<input type="text"/>		Phone:	<input type="text"/>
Company:	<input type="text"/>		Fax:	<input type="text"/>
Email:	<input type="text"/>			

RETURN FAX 314-432-3107

You may also request a quote at 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:				

RETURN FAX 314-432-3107

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Order Form

Please copy, complete and return via fax or mail.

BILL TO:

Name:	
Company:	
Address:	
Address:	
City, State Zip:	
Phone:	
Fax:	E-mail:

SHIP TO:

Name:	
Company:	
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.

Sub-total	
Tax	
Shipping	
TOTAL	

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
1/8	0.125	3.175
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
1/4	0.250	6.35
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
3/8	0.375	9.525
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
1/2	0.500	12.7
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
5/8	0.625	15.875
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
3/4	0.750	19.05
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
7/8	0.875	22.225
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
1	1.000	25.4

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

