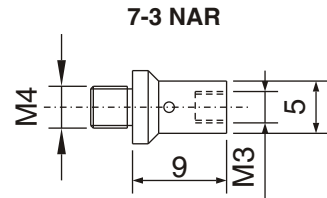
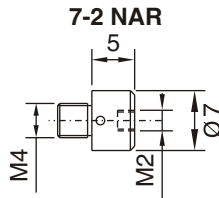
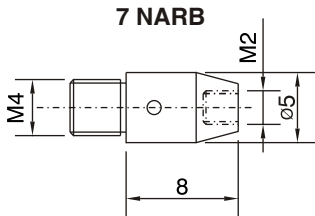
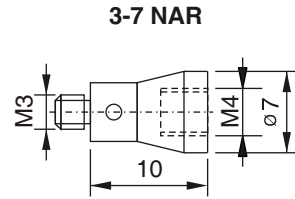
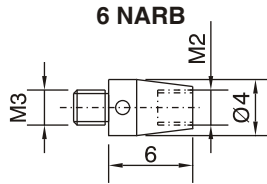
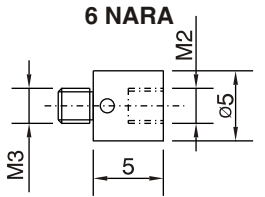
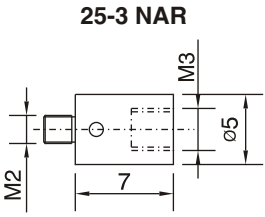
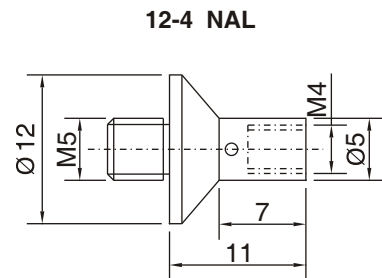
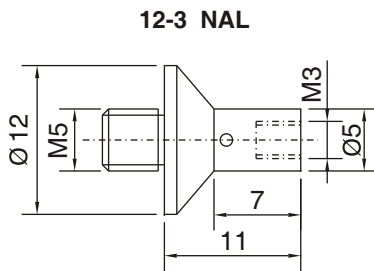
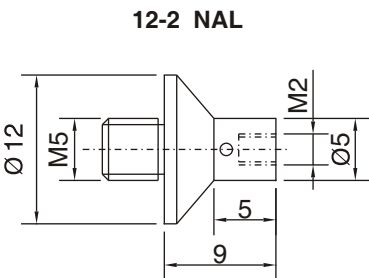
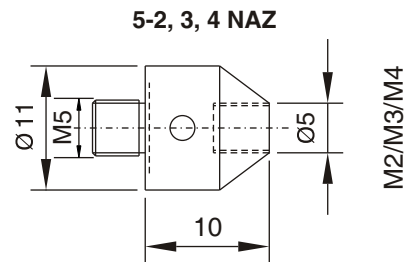
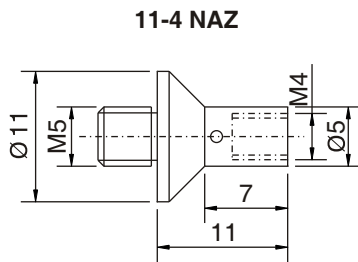
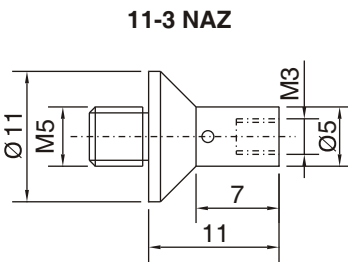
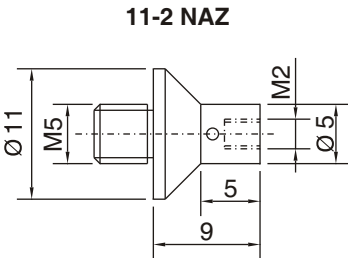


# ADAPTORS

Adaptors for probe and styli	Order No.	Suitable for probe	Material	wt
Adaptors for Renishaw	25-3 NAR	M2 / M3	Steel	1.0g
	6 NARA	M3 / M2	Steel	0.8g
	6 NARB	M3 / M2	Steel	0.8g
	3-7 NAR	M3 / M4	Steel	1.6g
	7 NARB	M4 / M2	Steel	1.1g
	7-2 NAR	M4 / M2	Steel	1.4g
	7-3 NAR	M4 / M3	Steel	1.1g



Adaptors for M5 Thread (Zeiss / Leitz)	Order No.	Suitable for probe	Material	wt
	11-2 NAZ	M5 / M2	Steel	3.1g
	11-3 NAZ	M5 / M3	Steel	3.2g
	11-4 NAZ	M5 / M4	Steel	3.2g
	5-2 NAZ	M5 / M2	Steel	5.7g
	5-3 NAZ	M5 / M3	Steel	5.7g
	5-4 NAZ	M5 / M4	Steel	5.7g
	12-2 NAL	M5 / M2	Steel	3.1g
	12-3 NAL	M5 / M3	Steel	3.2g
	12-4 NAL	M5 / M4	Steel	3.2g

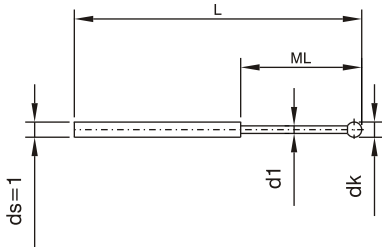


# MICRO-STYLI

## Unthreaded Micro Stylus

### Styli (Type FM)

Ball : Tungsten Carbide  
Shaft : Tungsten Carbide

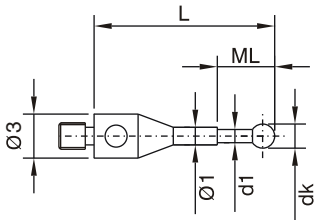


Order No.	wt	dk mm	d1 mm	L mm	ML mm
0.07-17.5-1 NTFM	0.2g	0.07	0.05	17.5	0.7
0.09-17.5-1 NTFM	0.2g	0.09	0.06	17.5	1.0
0.11-17.5-1 NTFM	0.2g	0.11	0.08	17.5	1.2
0.13-17.5-1 NTFM	0.2g	0.13	0.09	17.5	1.5
0.15-17.5-1 NTFM	0.2g	0.15	0.10	17.5	1.5
0.18-17.5-1 NTFM	0.2g	0.18	0.13	17.5	1.5

## M2 Thread Styli

### Styli (Type AM)

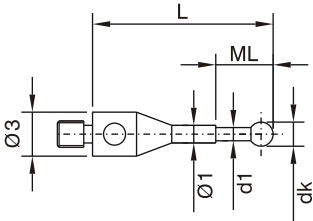
Ball : Tungsten Carbide  
Shaft : Tungsten Carbide



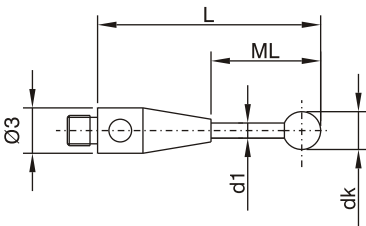
Order No.	wt	dk mm	d1 mm	L mm	ML mm
0.07-20-2 NTAM	0.7g	0.07	0.05	20.0	0.7
0.09-20-2 NTAM	0.7g	0.09	0.06	20.0	1.0
0.11-20-2 NTAM	0.7g	0.11	0.08	20.0	1.2
0.13-20-2 NTAM	0.7g	0.13	0.09	20.0	1.5
0.15-20-2 NTAM	0.7g	0.15	0.10	20.0	1.5
0.18-20-2 NTAM	0.7g	0.18	0.13	20.0	1.5

# M2

M2 Thread Styli	Order No.	Shaft	Ball	wt	dk mm	d1 mm	L mm	ML mm
<b>Styli (Type A)</b>	0.2-10-2 NTA	TC	Ruby	0.3g	0.2	0.15	10.0	1.5
	0.25-10-2 NTA	TC	Ruby	0.3g	0.25	0.2	10.0	2.5
	0.3-10-2 NTA	TC	Ruby	0.3g	0.3	0.2	10.0	2.5
	0.4-10-2 NTA	TC	Ruby	0.3g	0.4	0.3	10.0	2.5
	0.5-10-2 NTA	TC	Ruby	0.3g	0.5	0.3	10.0	2.5
	0.6-10-2 NTA	TC	Ruby	0.3g	0.6	0.4	10.0	2.5
	0.6-12-2 NTA	TC	Ruby	0.3g	0.6	0.4	12.0	4.5
	0.7-10-2 NTA	TC	Ruby	0.3g	0.7	0.4	10.0	2.5
	0.7-12-2 NTA	TC	Ruby	0.3g	0.7	0.4	12.0	4.5
	0.8-10-2 NTA	TC	Ruby	0.3g	0.8	0.6	10.0	2.5
	0.8-12-2 NTA	TC	Ruby	0.3g	0.8	0.6	12.0	4.5
	0.9-10-2 NTA	TC	Ruby	0.3g	0.9	0.6	10.0	2.5
	0.9-12-2 NTA	TC	Ruby	0.3g	0.9	0.6	12.0	4.5
	1.0-10-2 NTA	TC	Ruby	0.3g	1.0	0.8	10.0	2.5
	1.0-12-2 NTA	TC	Ruby	0.3g	1.0	0.8	12.0	4.5



Styli (Type B)	Order No.	Shaft	Ball	wt	dk mm	d1 mm	L mm	ML mm
<b>Styli (Type B)</b>	0.7-20-2 NTB	TC	Ruby	0.5g	0.7	0.5	20.0	12.0
	1.0-10.5-2 NTB	TC	Ruby	0.3g	1.0	0.7	10.5	5.5
	1.0-15.5-2 NTB	TC	Ruby	0.3g	1.0	0.7	15.5	10.5
	1.0-20.5-2 NTB	TC	Ruby	0.3g	1.0	0.7	20.5	15.5
	1.0-27.5-2 NTB	TC	Ruby	0.4g	1.0	0.7	27.5	20.5
	1.0-30.5-2 NTB	TC	Ruby	0.4g	1.0	0.7	30.5	23.5
	1.5-11-2 NTB	TC	Ruby	0.3g	1.5	0.7	11.0	6.0
	1.5-16-2 NTB	TC	Ruby	0.3g	1.5	0.7	16.0	11.0
	1.5-21-2 NTB	TC	Ruby	0.3g	1.5	0.7	21.0	16.0
	1.5-31-2 NTB	TC	Ruby	0.3g	1.5	0.7	31.0	24.0
	2.0-11-2 NTB	TC	Ruby	0.4g	2.0	1.0	11.0	6.0
	2.0-16-2 NTB	TC	Ruby	0.4g	2.0	1.0	16.0	9.0
	2.0-21-2 NTB	TC	Ruby	0.4g	2.0	1.0	21.0	14.0
	2.0-26-2 NTB	TC	Ruby	0.5g	2.0	1.0	26.0	19.0
	2.0-31-2 NTB	TC	Ruby	0.5g	2.0	1.0	31.0	24.0
	2.0-36-2 NTB	TC	Ruby	0.6g	2.0	1.0	36.0	29.0
	2.0-41-2 NTB	TC	Ruby	0.6g	2.0	1.0	41.0	34.0
	2.5-11-2 NTB	TC	Ruby	0.3g	2.5	1.0	11.0	4.0
	2.5-16-2 NTB	TC	Ruby	0.4g	2.5	1.0	16.0	9.0
	2.5-21-2 NTB	TC	Ruby	0.4g	2.5	1.0	21.0	14.0
	2.5-31-2 NTB	TC	Ruby	1.0g	2.5	1.5	31.0	24.0
	2.5-41-2 NTB	TC	Ruby	1.2g	2.5	1.5	41.0	34.0
	3.0-11.5-2 NTB	TC	Ruby	0.7g	3.0	1.5	11.5	6.5
	3.0-21.5-2 NTB	TC	Ruby	0.9g	3.0	1.5	21.5	14.5
	3.0-31.5-2 NTB	TC	Ruby	1.1g	3.0	1.5	31.5	24.5
	3.0-36.5-2 NTB	TC	Ruby	1.2g	3.0	1.5	36.5	29.5
	3.0-41.5-2 NTB	TC	Ruby	1.3g	3.0	1.5	41.5	31.5
	3.0-46.5-2 NTB	TC	Ruby	1.5g	3.0	1.5	46.5	36.5
	3.0-51.5-2 NTB	TC	Ruby	1.6g	3.0	1.5	51.5	41.5



TC = Tungsten Carbide

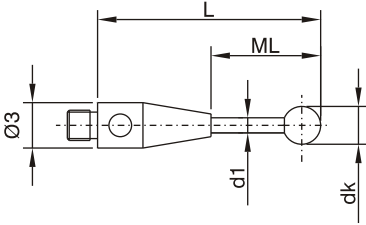
Styli Type B Contd. Page 5

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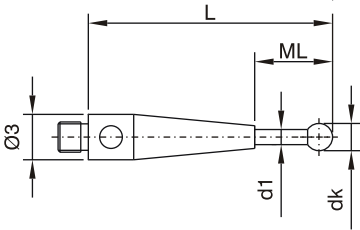
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# M2

M2 Thread Styli	Order No.	Shaft	Ball	wt	dk mm	d1 mm	L mm	ML mm
<b>Styli (Type B)</b>	4.0-22-2 NTB	TC	Ruby	1.1g	4.0	2.0	22.0	12.0
	4.0-32-2 NTB	TC	Ruby	1.6g	4.0	2.0	32.0	22.0
	4.0-37-2 NTB	TC	Ruby	1.8g	4.0	2.0	37.0	27.0
	4.0-42-2 NTB	TC	Ruby	2.1g	4.0	2.0	42.0	32.0
	4.0-47-2 NTB	TC	Ruby	2.3g	4.0	2.0	47.0	37.0
	4.0-52-2 NTB	TC	Ruby	2.5g	4.0	2.0	52.0	42.0
	5.0-22.5-2 NTB	TC	Ruby	1.3g	5.0	2.0	22.5	12.5
	5.0-32.5-2 NTB	TC	Ruby	1.7g	5.0	2.0	32.5	22.5
	5.0-37.5-2 NTB	TC	Ruby	2.0g	5.0	2.0	37.5	27.5
	5.0-42.5-2 NTB	TC	Ruby	2.2g	5.0	2.0	42.5	32.5
	5.0-47.5-2 NTB	TC	Ruby	2.4g	5.0	2.0	47.5	37.5
	5.0-52.5-2 NTB	TC	Ruby	2.6g	5.0	2.0	52.5	42.5
	6.0-33-2 NTB	TC	Ruby	1.9g	6.0	2.0	33.0	23.0
	6.0-38-2 NTB	TC	Ruby	2.1g	6.0	2.0	38.0	28.0
	6.0-43-2 NTB	TC	Ruby	2.4g	6.0	2.0	43.0	33.0
	6.0-48-2 NTB	TC	Ruby	2.6g	6.0	2.0	48.0	38.0
	6.0-53-2 NTB	TC	Ruby	2.8g	6.0	2.0	53.0	43.0

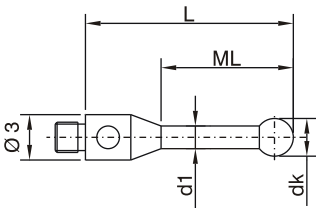


Styli (Type BS)	Order No.	Shaft	Ball	wt	dk mm	d1 mm	L mm	ML mm
<b>Styli (Type BS)</b>	0.5-20-2 NTBS	TC	Ruby	0.5g	0.5	0.3	20.0	7.0
	0.5-21-2 NTBS	TC	Ruby	0.6g	0.5	0.3	21.0	2.5
	1.0-20.5-2 NTBS	TC	Ruby	0.6g	1.0	0.7	20.5	6.5
	1.5-21-2 NTBS	TC	Ruby	0.6g	1.5	0.7	21.0	7.0
	2.0-21-2 NTBS	TC	Ruby	0.7g	2.0	1.0	21.0	7.0

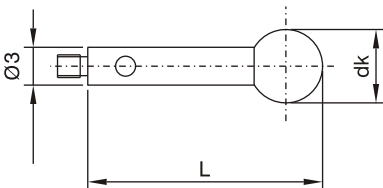


TC = Tungsten Carbide

Styli (Type C)	Order No.	Shaft	Ball	wt	dk mm	d1 mm	L mm	ML mm
<b>Styli (Type C)</b>	1.0-10.5-2 NTC	Steel	Ruby	0.3g	1.0	0.7	10.5	5.0
	1.5-11-2 NTC	Steel	Ruby	0.3g	1.5	1.0	11.0	6.0
	2.0-11-2 NTC	Steel	Ruby	0.3g	2.0	1.2	11.0	7.0
	2.0-16-2 NTC	Steel	Ruby	0.3g	2.0	1.2	16.0	12.0
	2.0-21-2 NTC	Steel	Ruby	0.3g	2.0	1.4	21.0	15.0
	2.5-11-2 NTC	Steel	Ruby	0.3g	2.5	1.5	11.0	7.0
	2.5-21-2 NTC	Steel	Ruby	0.4g	2.5	1.5	21.0	17.0
	3.0-11.5-2 NTC	Steel	Ruby	0.4g	3.0	2.0	11.5	8.0
	3.0-21.5-2 NTC	Steel	Ruby	0.6g	3.0	2.0	21.5	18.0
	4.0-12-2 NTC	Steel	Ruby	0.5g	4.0	2.4	12.0	9.0
	4.0-22-2 NTC	Steel	Ruby	0.9g	4.0	2.4	22.0	19.0



Styli (Type D)	Order No.	Shaft	Ball	wt	dk mm	L mm
<b>Styli (Type D)</b>	5.0-12.5-2 NTD	Steel	Ruby	0.7g	5.0	12.5
	5.0-27.5-2 NTD	Steel	Ruby	1.6g	5.0	27.5
	6.0-13-2 NTD	Steel	Ruby	0.9g	6.0	13.0
	6.0-28-2 NTD	Steel	Ruby	1.7g	6.0	28.0
	8.0-14-2 NTD	Steel	Ruby	1.3g	8.0	14.0
	8.0-29-2 NTD	Steel	Ruby	1.9g	8.0	29.0



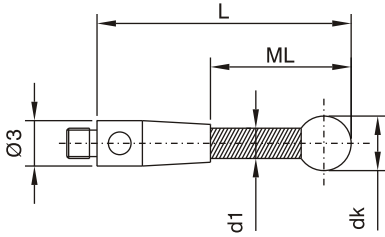
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# M2

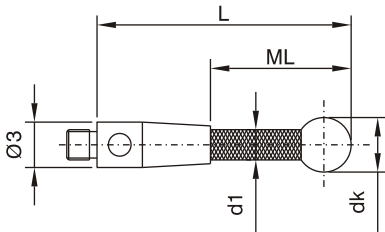
## M2 Thread Styli

### Styli (Type K), Ceramic



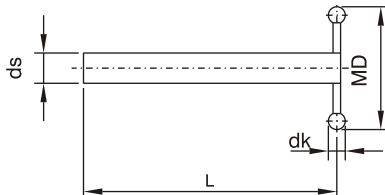
Order No.	Shaft	Ball	wt	dk mm	d1 mm	L mm	ML mm
3.0-31.5-2 NTKE	Ceramic	Ruby	0.7g	3.0	2.0	31.5	21.5
3.0-51.5-2 NTKE	Ceramic	Ruby	0.9g	3.0	2.0	51.5	41.5
4.0-32-2 NTKE	Ceramic	Ruby	1.4g	4.0	2.0	32.0	22.0
4.0-42-2 NTKE	Ceramic	Ruby	1.5g	4.0	2.0	42.0	32.0
4.0-52-2 NTKE	Ceramic	Ruby	1.6g	4.0	2.0	52.0	42.0
5.0-32.5-2 NTKE	Ceramic	Ruby	1.5g	5.0	2.0	32.5	22.5
5.0-42.5-2 NTKE	Ceramic	Ruby	1.6g	5.0	2.0	42.5	32.5
5.0-52.5-2 NTKE	Ceramic	Ruby	1.6g	5.0	2.0	52.5	42.5
6.0-13-2 NTKE	Ceramic	Ruby	1.4g	6.0	2.0	13.0	7.0
6.0-33-2 NTKE	Ceramic	Ruby	1.6g	6.0	2.0	33.0	23.0
6.0-43-2 NTKE	Ceramic	Ruby	1.8g	6.0	2.0	43.0	33.0
6.0-53-2 NTKE	Ceramic	Ruby	1.8g	6.0	2.0	53.0	43.0

## Styli (Type), Carbon Fiber



Order No.	Shaft	Ball	wt	dk mm	d1 mm	L mm	ML mm
3.0-31.5-2 NTCA	Carbon Fiber	Ruby	0.5g	3.0	2.0	31.5	21.5
3.0-51.5-2 NTCA	Carbon Fiber	Ruby	0.6g	3.0	2.0	51.5	41.5
4.0-32-2 NTCA	Carbon Fiber	Ruby	0.6g	4.0	3.0	32.0	21.0
4.0-42-2 NTCA	Carbon Fiber	Ruby	0.7g	4.0	3.0	42.0	31.0
4.0-52-2 NTCA	Carbon Fiber	Ruby	0.7g	4.0	3.0	52.0	41.0
4.0-77-2 NTCA	Carbon Fiber	Ruby	1.0g	4.0	3.0	77.0	66.0
4.0-102-2 NTCA	Carbon Fiber	Ruby	1.3g	4.0	3.0	102.0	91.0
5.0-32.5-2 NTCA	Carbon Fiber	Ruby	0.7g	5.0	3.0	32.5	21.5
5.0-42.5-2 NTCA	Carbon Fiber	Ruby	0.7g	5.0	3.0	42.5	31.5
5.0-52.5-2 NTCA	Carbon Fiber	Ruby	0.9g	5.0	3.0	52.5	41.5
5.0-77.5-2 NTCA	Carbon Fiber	Ruby	1.2g	5.0	3.0	77.5	66.5
5.0-102.5-2 NTCA	Carbon Fiber	Ruby	1.4g	5.0	3.0	102.5	91.5
6.0-33-2 NTCA	Carbon Fiber	Ruby	0.9g	6.0	3.0	33.0	22.0
6.0-43-2 NTCA	Carbon Fiber	Ruby	1.0g	6.0	3.0	43.0	32.0
6.0-53-2 NTCA	Carbon Fiber	Ruby	1.0g	6.0	3.0	53.0	42.0
6.0-78-2 NTCA	Carbon Fiber	Ruby	1.3g	6.0	3.0	78.0	67.0
6.0-103-2 NTCA	Carbon Fiber	Ruby	1.6g	6.0	3.0	103.0	92.0

## T-Styli (Type H)



Order No.	Shaft	Ball	wt	dk mm	ds mm	MD mm	L mm
1.0-50-2 NTTH	TC	Ruby	3g	1.0	2.0	10.0	50.0
1.0-100-2 NTTH	TC	Ruby	5g	1.0	2.0	10.0	100.0
2.0-50-2 NTTH	TC	Ruby	3g	2.0	2.0	20.0	50.0
2.0-100-2 NTTH	TC	Ruby	5g	2.0	2.0	20.0	100.0

For use with **Adaptors for styli** (Page 15, 28, 37).

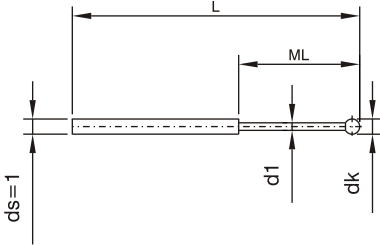
TC = Tungsten Carbide

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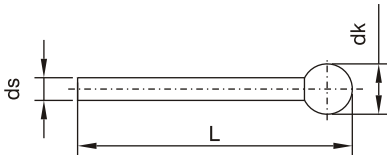
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# M2

M2 Thread Styli	Order No.	Shaft	Ball	wt	dk mm	d1 mm	L mm	ML mm
<b>Styli (Type F)</b>	0.13-15.1-1 NTF	TC	TC	0.2g	0.13	0.08	15.1	1.0
	0.2-15.2-1 NTF	TC	Ruby	0.2g	0.2	0.15	15.2	1.5
	0.25-15.3-1 NTF	TC	Ruby	0.2g	0.25	0.2	15.3	2.5
	0.3-15.3-1 NTF	TC	Ruby	0.2g	0.3	0.2	15.3	2.5
	0.4-15.4-1 NTF	TC	Ruby	0.2g	0.4	0.3	15.4	2.5
	0.5-15.5-1 NTF	TC	Ruby	0.2g	0.5	0.3	15.5	2.5
	0.6-15.6-1 NTF	TC	Ruby	0.3g	0.6	0.4	15.6	4.5
	0.7-15.7-1 NTF	TC	Ruby	0.3g	0.7	0.4	15.7	4.5
	0.8-15.8-1 NTF	TC	Ruby	0.3g	0.8	0.6	15.8	4.5
	0.9-15.9-1 NTF	TC	Ruby	0.3g	0.9	0.6	15.9	4.5
1.0-16-1 NTF	TC	Ruby	0.4g	1.0	0.8	16.0	4.5	



Styli (Type N)	Order No.	Shaft	Ball	wt	dk mm	ds mm	L mm
<b>Styli (Type N)</b>	1.35-26.4-1 NTN	TC	Ruby	0.3g	1.35	1.0	26.4
	1.5-26.5-1 NTN	TC	Ruby	0.3g	1.5	1.0	26.5
	2.0-26-1 NTN	TC	Ruby	0.3g	2.0	1.0	26.0
	2.0-27-1.5 NTN	TC	Ruby	0.6g	2.0	1.5	27.0
	2.0-45-1 NTN	TC	Ruby	0.5g	2.0	1.0	45.0
	2.0-61-1 NTN	TC	Ruby	0.7g	2.0	1.0	61.0
	2.0-81-1 NTN	TC	Ruby	1.0g	2.0	1.0	81.0
	2.0-101-1 NTN	TC	Ruby	1.3g	2.0	1.0	101.0
	2.5-27.5-1.5 NTN	TC	Ruby	0.6g	2.5	1.5	27.5
	3.0-26.5-1.5 NTN	TC	Ruby	0.7g	3.0	1.5	26.5
	3.0-38-2 NTN	TC	Ruby	2.0g	3.0	2.0	38.0
	3.0-45-1.5 NTN	TC	Ruby	1.0g	3.0	1.5	45.0
	3.0-61.5-1.5 NTN	TC	Ruby	1.6g	3.0	1.5	61.5
	3.0-81.5-1.5 NTN	TC	Ruby	2.2g	3.0	1.5	81.5
	3.0-101.5-1.5 NTN	TC	Ruby	2.8g	3.0	1.5	101.5
	4.0-27-2 NTN	TC	Ruby	1.3g	4.0	2.0	27.0
	4.0-45-2 NTN	TC	Ruby	2.1g	4.0	2.0	45.0
	4.0-62-2 NTN	TC	Ruby	2.9g	4.0	2.0	62.0
	4.0-82-2 NTN	TC	Ruby	3.9g	4.0	2.0	82.0
	4.0-102-2 NTN	TC	Ruby	4.9g	4.0	2.0	102.0
	5.0-27.5-2 NTN	TC	Ruby	1.4g	5.0	2.0	27.5
	5.0-42.5-2 NTN	TC	Ruby	2.3g	5.0	2.0	42.5
	5.0-62.5-2 NTN	TC	Ruby	3.1g	5.0	2.0	62.5
	5.0-82.5-2 NTN	TC	Ruby	4.0g	5.0	2.0	82.5
	5.0-102.5-2 NTN	TC	Ruby	5.0g	5.0	2.0	102.5
	6.0-28-2 NTN	TC	Ruby	1.6g	6.0	2.0	28.0
	6.0-43-2 NTN	TC	Ruby	2.2g	6.0	2.0	43.0
	6.0-63-2 NTN	TC	Ruby	3.2g	6.0	2.0	63.0
	6.0-83-2 NTN	TC	Ruby	4.2g	6.0	2.0	83.0
	6.0-103-2 NTN	TC	Ruby	4.9g	6.0	2.0	103.0
	8.0-29-2 NTN	TC	Ruby	2.0g	8.0	2.0	29.0
	8.0-64-2 NTN	TC	Ruby	3.6g	8.0	2.0	64.0
	8.0-84-2 NTN	TC	Ruby	4.5g	8.0	2.0	84.0



All the above for use with **Adaptors for styli** (Page 15, 28, 37).

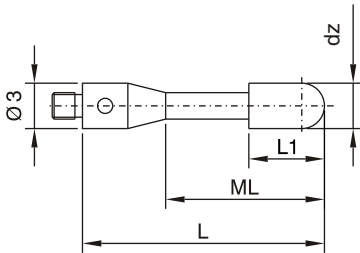
TC = Tungsten Carbide

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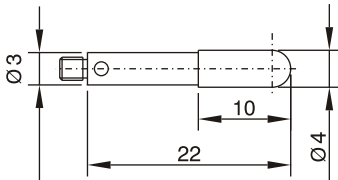
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# M2

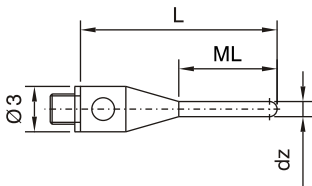
M2 Thread Styli	Order No.	Shaft	Cylinder	wt	dz mm	L1 mm	L mm	ML mm
<b>Cylinder Styli (Type A)</b>	2.0-16-2 NZRA	Steel	Ruby	0.4g	2.0	5.0	16.0	12.0
	2.0-21-2 NZRA	Steel	Ruby	0.4g	2.0	5.0	21.0	17.0
	3.0-22-2 NZRA	Steel	Ruby	0.6g	3.0	10.0	22.0	18.0



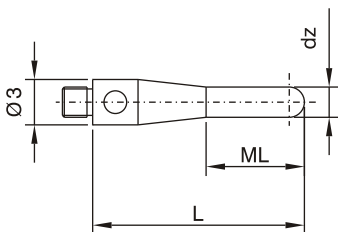
Cylinder Styli (Type B)	Order No.	Shaft	Cylinder	wt
	4.0-22-2 NZRB	Steel	Ruby	1.2g



Cylinder Styli (Type C)	Order No.	Cylinder	wt	dz mm	L mm	ML mm
	1.0-15-2 NZRC	Ruby	0.3g	1.0	15.0	8.0

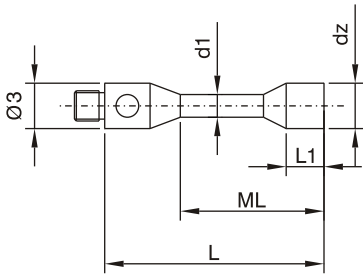


Cylinder Styli (Type D)	Order No.	Cylinder	wt	dz mm	L mm	ML mm
	0.3-10-2 NZHD	TC	0.3g	0.3	10.0	3.0
	0.5-15-2 NZHD	TC	0.3g	0.5	15.0	8.0
	1.0-20-2 NZHD	TC	0.4g	1.0	20.0	13.0
	1.0-35.5-2 NZHD	TC	0.4g	1.0	35.5	28.5
	1.0-40-2 NZHD	TC	0.7g	1.0	40.0	33.0
	1.5-15.8-2 NZHD	TC	0.7g	1.5	15.8	8.8
	1.5-20-2 NZHD	TC	0.8g	1.5	20.0	10.0
	1.5-40-2 NZHD	TC	1.3g	1.5	40.0	30.0
	2.0-16-2 NZHD	TC	0.6g	2.0	16.0	9.0
	2.0-20-2 NZHD	TC	0.7g	2.0	20.0	10.0
	2.0-40-2 NZHD	TC	1.3g	2.0	40.0	30.0
	3.0-22.5-2 NZHD	TC	2.0g	3.0	22.5	15.5
	1.0-20-2 NZSD	Steel	0.4g	1.0	20.0	13.0
	1.0-40-2 NZSD	Steel	0.7g	1.0	40.0	33.0
	1.5-20-2 NZSD	Steel	0.5g	1.5	20.0	10.0
	1.5-40-2 NZSD	Steel	1.0g	1.5	40.0	30.0
	2.0-20-2 NZSD	Steel	0.6g	2.0	20.0	10.0
	2.0-40-2 NZSD	Steel	1.2g	2.0	40.0	30.0

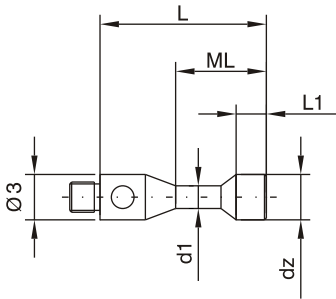


# M2

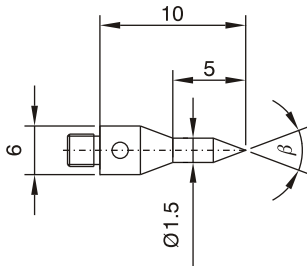
M2 Thread Styli	Order No.	Shaft / Cylinder	wt	dz mm	d1 mm	L mm	ML mm	L1 mm
<b>Cylinder Styli (Type H)</b>	1.5-14-2 NZTH	TC	0.4g	1.5	1.0	14.0	7.0	2.5
	2.0-16-2 NZTH	TC	0.5g	2.0	2.0	16.0	9.0	9.0
	3.0-16-2 NZTH	TC	0.6g	3.0	1.5	16.0	9.0	3.5



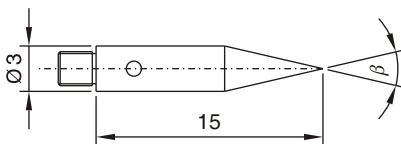
Cylinder Styli (Type S)	Order No.	Shaft / Cylinder	wt	dz mm	d1 mm	L mm	ML mm	L1 mm
<b>Cylinder Styli (Type S)</b>	1.5-11-2 NZTS	Steel	0.3g	1.5	1.0	11.0	4.0	1.5
	2.0-11-2 NZTS	Steel	0.3g	2.0	1.5	11.0	4.0	2.0
	2.5-13-2 NZTS	Steel	0.5g	2.5	1.7	13.0	5.5	2.5
	3.0-13-2 NZTS	Steel	0.5g	3.0	2.0	13.0	5.5	4.0



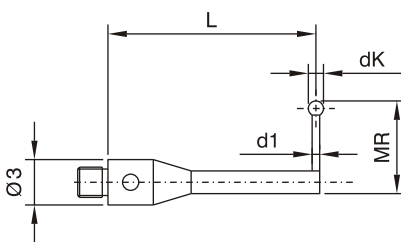
Pointed Styli	Order No.	Point	wt	$\beta$
<b>Pointed Styli</b>	30-10-2 NTS	TC	0.3g	30°
	60-10-2 NTS	TC	0.3g	60°



Pointed Styli	Order No.	Point	wt	$\beta$
<b>Pointed Styli</b>	30-15-2 NTS	Steel	0.6g	30°



L-Styli	Order No.	Shaft	Ball	wt	dk mm	d1 mm	MR mm	L mm
<b>L-Styli</b>	1.0-6-2 NLT	TC	Ruby	0.4g	1.0	0.6	6.0	15.0
	2.0-12-2 NLT	TC	Ruby	0.9g	2.0	1.0	12.0	20.0



TC = Tungsten Carbide

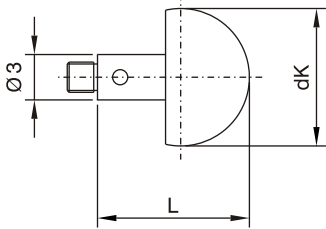
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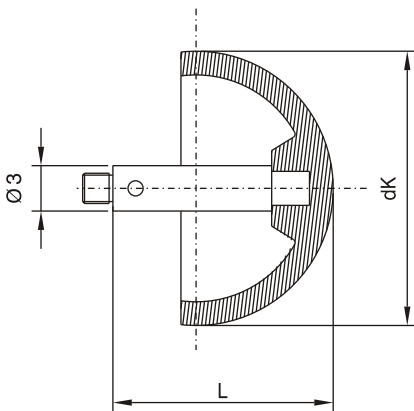


# M2

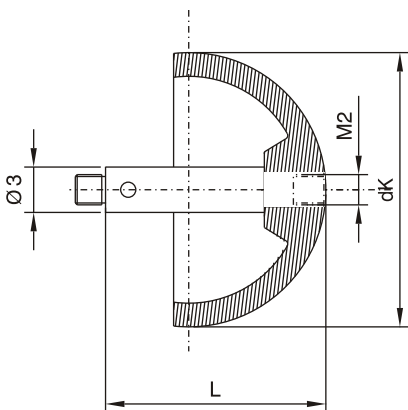
M2 Thread Styli	Order No.	Shaft	Ball	wt	dk mm	L mm
<b>Ceramic Ball styli</b>	8.0-10-2 NKK	Steel	Ceramic	1.2g	8.0	10.0
	10.0-11-2 NKK	Steel	Ceramic	1.7g	10.0	11.0



Hollow Ceramic Ball styli (Type E)	Order No.	Shaft	Ball	wt	dk mm	L mm
	18.0-16-2 NHKE	Steel	Ceramic	4.6g	18.0	16.0
	24.0-19-2 NHKE	Steel	Ceramic	8.9g	24.0	19.0
	30.0-22-2 NHKE	Steel	Ceramic	13.1g	30.0	22.0



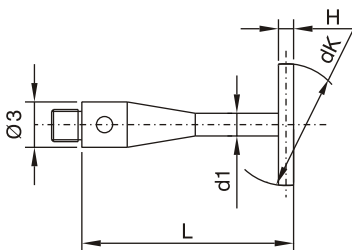
Hollow Ceramic Ball styli (Type Z)	Order No.	Shaft	Ball	wt	dk mm	L mm
	18.0-7-2 NHKZ	Steel	Ceramic	4.6g	18.0	16.0
	30.0-7-2 NHKZ	Steel	Ceramic	13.1g	30.0	22.0



M2 thread stylus may be used.



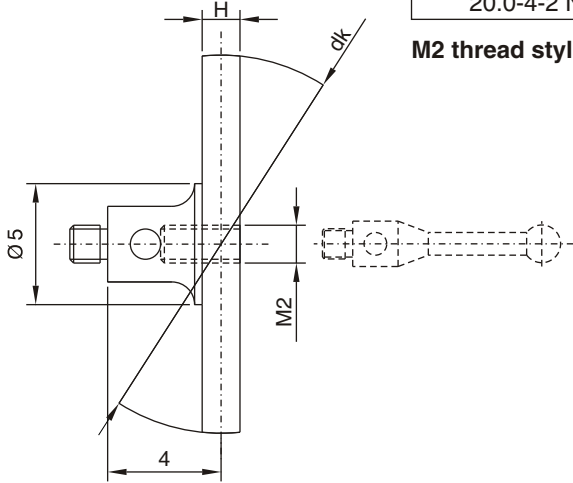
Ball Disc styli	Order No.	Shaft	Disc	wt	dk mm	d1 mm	L mm	H mm
	5.0-20-2 NKS	TC	Ceramic	0.7g	5.0	1.5	20.0	0.5
	10.0-25-2 NKS	TC	Ceramic	1.4g	10.0	2.0	25.0	0.8
	14.0-25-2 NKS	TC	Ceramic	1.8g	14.0	2.0	25.0	1.0



TC = Tungsten Carbide

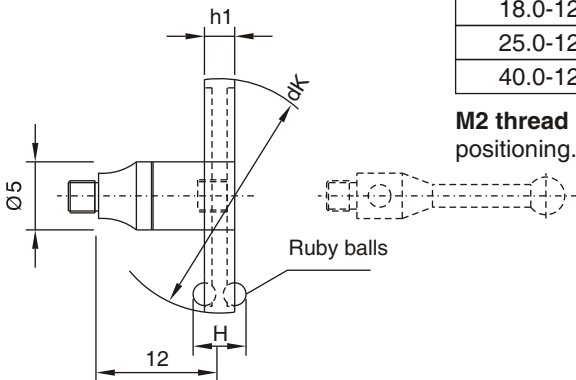
# M2

M2 Thread Styli	Order No.	Shaft	Disc	wt	dk mm	H mm
<b>Ball Disc styli</b>	15.0-4-2 NKSE	Steel	Ceramic	0.9g	15.0	1.0
	20.0-4-2 NKSE	Steel	Ceramic	1.4g	20.0	1.0



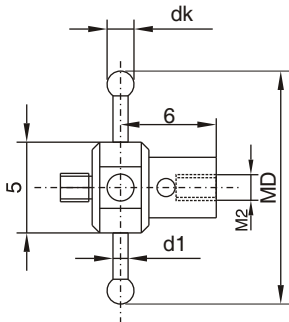
M2 thread stylus may be used.

Ball Disc styli rotary	Order No.	Shaft	Disc	wt	dk mm	H mm	h1 mm
	18.0-12-2 NKSD	Steel	Steel	2.8g	18.0	4.0	2.5
	25.0-12-2 NKSD	Steel	Steel	3.9g	25.0	4.0	2.5
	40.0-12-2 NKSD	Steel	Steel	11.0g	40.0	6.0	4.0



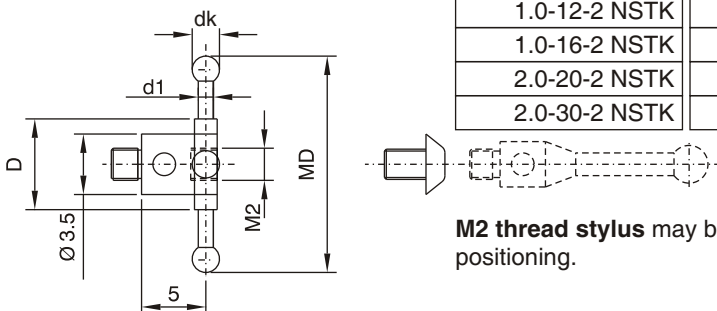
M2 thread stylus may be used. A built-in rotating adaptor allows stylus positioning.

Star styli rotary (Type F)	Order No.	Shaft	Ball	wt	dk mm	d1 mm	MD mm
	0.5-10.5-2 NSTF	TC	Ruby	0.9g	0.5	0.3	10.5
	0.5-20.5-2 NSTF	TC	Ruby	1.0g	0.5	0.3	20.5
	1.0-11-2 NSTF	TC	Ruby	1.2g	1.0	0.7	11.0
	1.0-21-2 NSTF	TC	Ruby	1.4g	1.0	0.7	21.0



M2 thread stylus may be used. A built-in rotating adaptor allows stylus positioning.

Star Styli Rotary (Type K)	Order No.	Shaft	Ball	wt	dk mm	d1 mm	MD mm	D mm
	1.0-12-2 NSTK	TC	Ruby	0.5g	1.0	0.6	12.0	6.0
	1.0-16-2 NSTK	TC	Ruby	0.6g	1.0	0.6	16.0	6.0
	2.0-20-2 NSTK	TC	Ruby	1.1g	2.0	1.0	20.0	8.0
	2.0-30-2 NSTK	TC	Ruby	1.2g	2.0	1.0	30.0	8.0



M2 thread stylus may be used. A built-in rotating adaptor allows stylus positioning.

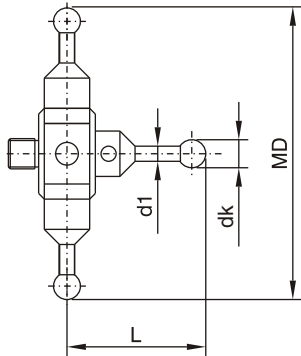
TC = Tungsten Carbide

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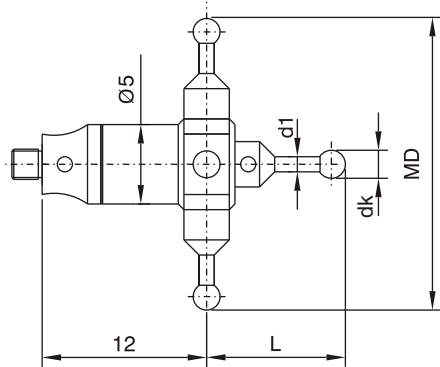
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# M2

M2 Thread Styli	Order No.	Shaft	Ball	wt	dk mm	d1 mm	MD mm	L mm
<b>Star Styli (Type A, Type C)</b>	2.0-28-2 NSTA	Steel	Ruby	2.2g	2.0	1.2	28.0	11.0
	2.0-28-2 NSTC	Steel	Ruby	2.5g	2.0	1.2	28.0	18.0
	2.0-38-2 NSTA	Steel	Ruby	2.2g	2.0	1.2	38.0	11.0
	2.0-38-2 NSTC	Steel	Ruby	2.6g	2.0	1.2	38.0	23.0

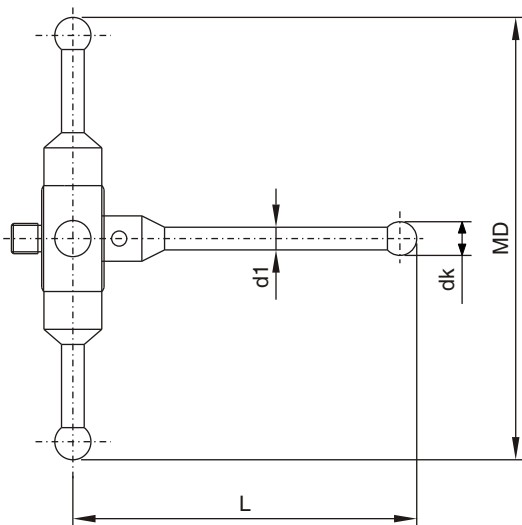


Star Styli rotary (Type B, Type D)	Order No.	Shaft	Ball	wt	dk mm	d1 mm	MD mm	L mm
	2.0-28-2 NSTB	Steel	Ruby	3.2g	2.0	1.2	28.0	11.0
	2.0-28-2 NSTD	Steel	Ruby	3.5g	2.0	1.2	28.0	18.0
	2.0-38-2 NSTB	Steel	Ruby	3.2g	2.0	1.2	38.0	11.0
	2.0-38-2 NSTD	Steel	Ruby	3.6g	2.0	1.2	38.0	23.0



A built-in rotating adaptor allows stylus positioning.

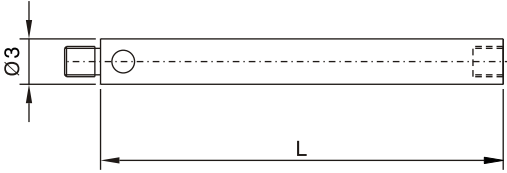
Star Styli Rotary (Type E)	Order No.	Shaft	Ball	wt	dk mm	d1 mm	MD mm	L mm
	2.0-22-2 NSTE	Steel	Ruby	2.2g	2.0	1.4	22.0	21.0
	2.0-32-2 NSTE	Steel	Ruby	2.5g	2.0	1.4	32.0	21.0



A built-in rotating adaptor allows stylus positioning.

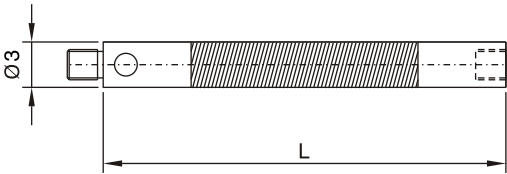
# M2

## M2 Thread Styli Extensions, Steel



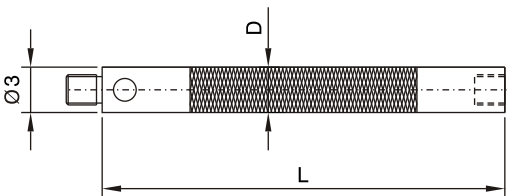
Order No.	Material	wt	L mm
5-2 NV	Steel	0.2g	5.0
10-2 NV	Steel	0.4g	10.0
20-2 NV	Steel	0.9g	20.0
30-2 NV	Steel	1.5g	30.0
40-2 NV	Steel	2.0g	40.0
50-2 NV	Steel	2.6g	50.0
60-2 NV	Steel	3.2g	60.0
70-2 NV	Steel	3.7g	70.0
80-2 NV	Steel	4.3g	80.0
90-2 NV	Steel	4.8g	90.0
100-2 NV	Steel	5.4g	100.0

## Extensions, Light weight Ceramic



Order No.	Material	wt	L mm
30-2 NVK	Ceramic	1.3g	30.0
40-2 NVK	Ceramic	1.5g	40.0
50-2 NVK	Ceramic	1.6g	50.0
60-2 NVK	Ceramic	1.7g	60.0
70-2 NVK	Ceramic	2.0g	70.0
80-2 NVK	Ceramic	2.2g	80.0
90-2 NVK	Ceramic	2.4g	90.0
100-2 NVK	Ceramic	2.6g	100.0

## Extensions, Light-weight Carbon Fiber

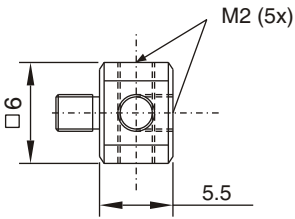


Order No.	Material	wt	L mm	D mm
30-2 NVCA	CF	0.7g	30.0	3.0
40-2 NVCA	CF	0.8g	40.0	3.0
50-2 NVCA	CF	0.9g	50.0	3.0
60-2 NVCA	CF	1.0g	60.0	3.0
70-2 NVCA	CF	1.1g	70.0	3.0
80-2 NVCA	CF	1.2g	80.0	4.0
90-2 NVCA	CF	1.3g	90.0	4.0
100-2 NVCA	CF	1.4g	100.0	4.0

CF = Carbon Fiber

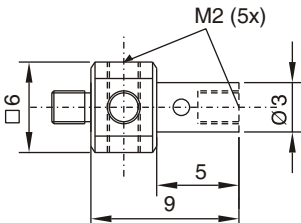
# M2

M2 Thread Styli	Order No.	Material	wt
<b>Adaptor for styli (Type D) 5-Way</b>	6.0-5.5-2 NTHD	Steel	0.9g



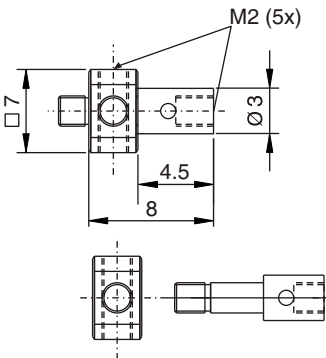
For use with **M2 thread styli**.

<b>Adaptor for styli (Type A) 5-Way</b>	Order No.	Material	wt
	6.0-9-2 NTHA	Steel	1.0g



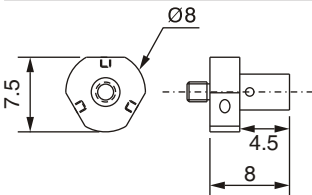
For use with **M2 thread styli**.

<b>Adaptor for styli rotary (Type F) 5-Way</b>	Order No.	Material	wt
	7.0-8-2 NTHF	Steel	1.0g



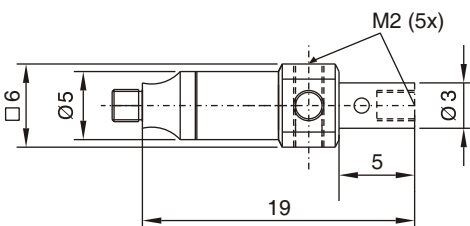
For use with **M2 thread styli**. A built-in rotating adaptor allows stylus positioning

<b>Adaptor for styli rotary (Type G) 4-Way</b>	Order No.	Material	wt
	7.5-8-2 NTHG	Steel	1.0g



For use with **M2 thread styli**. A built-in rotating adaptor allows stylus positioning

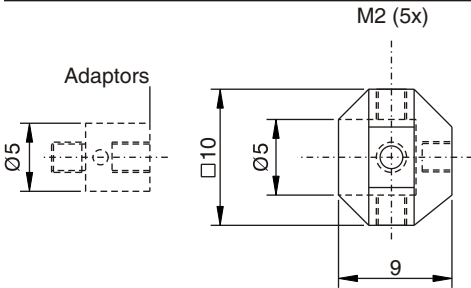
<b>Adaptor for styli rotary (Type B) 5-Way</b>	Order No.	Material	wt
	6.0-19-2 NTHB	Steel	2.0g



For use with **M2 thread styli**. A built-in rotating adaptor allows stylus positioning

# M2

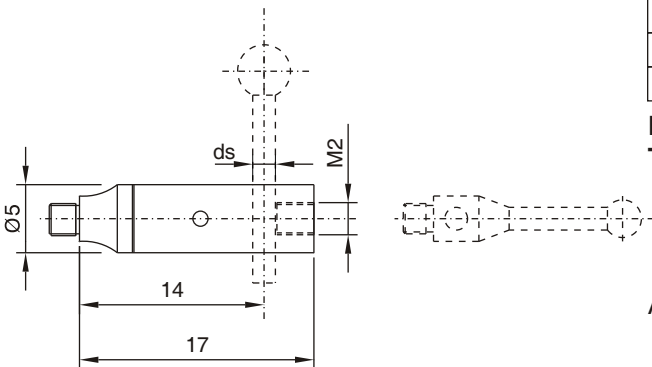
M2 Thread Styli	Order No.	Material	wt
<b>Adaptor for styli rotary (Type C) 5-Way</b>	10.0-9-2 NTHC	Steel	2.8g



For use with **M2 thread styli**. Adaptor allows stylus positioning

Use only **Adaptors** with  $\varnothing 5\text{mm}$  (Page 2+3).

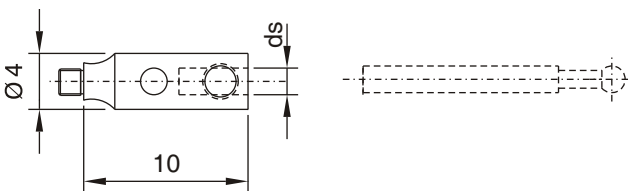
<b>Adaptor for styli rotary (Type E)</b>	Order No.	Material	wt	ds mm
	1.0-2 NHED	Steel	2.0g	1.0
	1.5-2 NHED	Steel	2.0g	1.5
	2.0-2 NHED	Steel	1.9g	2.0



For use with **Styli (Type F), (Type N)** (Page 7), **T-Styli (Type H)** (Page 6) and **M2 thread styli**.

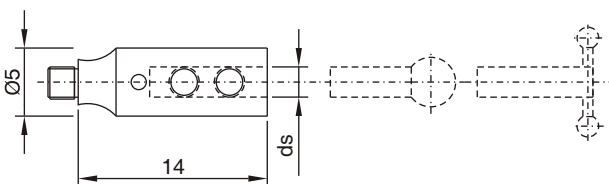
A built-in rotating adaptor allows stylus positioning.

<b>Adaptor for styli (Type ZK)</b>	Order No.	Material	wt	ds mm
	1.0-2 NHZK	Steel	0.8g	1.0



For use with **Styli (Type F), (Type N)** (Page 7), **T-Styli (Type H)** (Page 6).

<b>Adaptor for styli (Type Z)</b>	Order No.	Material	wt	ds mm
	1.0-2 NHZ	Steel	1.7g	1.0
	1.5-2 NHZ	Steel	1.7g	1.5
	2.0-2 NHZ	Steel	1.6g	2.0



For use with **Styli (Type F), (Type N)** (Page 7), **T-Styli (Type H)** (Page 6).

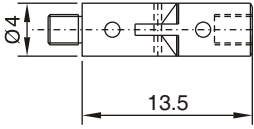
TC = Tungsten Carbide

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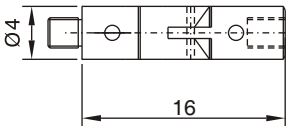
TEL : +91 80 23406723, +91 80 23377556, MOBILE : +91 94482 89260, +91 94482 89262, E-mail : info@indoservices.net

# M2

M2 Thread Styli	Order No.	Material	wt
<b>Knuckle joint (Type A)</b>	4.0-13.5-2 NGA	Steel	1.1g

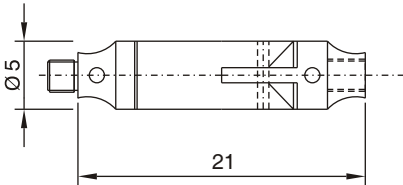


<b>Knuckle joint rotary (Type B)</b>	Order No.	Material	wt
	4.0-16-2 NGBD	Steel	1.4g



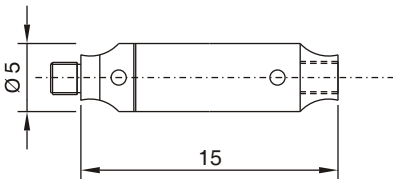
A built-in rotating adaptor allows stylus positioning.

<b>Knuckle joint rotary (Type C)</b>	Order No.	Material	wt
	5.0-21-2 NGCD	Steel	2.3g



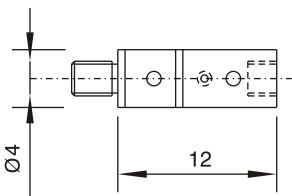
A built-in rotating adaptor allows stylus positioning.

<b>Rotating adaptor</b>	Order No.	Material	wt
	5.0-15-2 NDS	Steel	1.4g



Rotating adaptor allows stylus positioning.

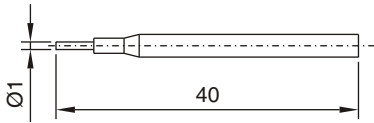
<b>Rotating adaptor</b>	Order No.	Material	wt
	4.0-12-2 NDS	Steel	1.0g



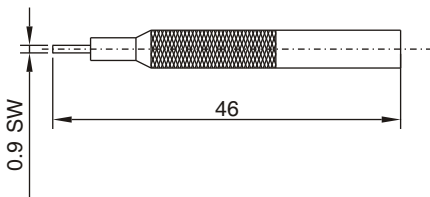
Rotating adaptor allows stylus positioning.

# M2 TOOLS

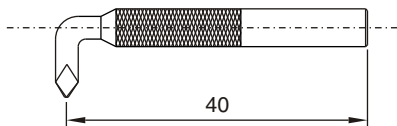
M2 Tools	Order No.	Description
<b>Pin key</b>	1.0 NWST	Ø1.0 mm for M2 thread components



<b>Hexagon key</b>	Order No.	Description
	0.9 NWSE	SW 0.9 mm



<b>Cross-point key</b>	Order No.	Description
	2.5 NWKR	2.5 mm





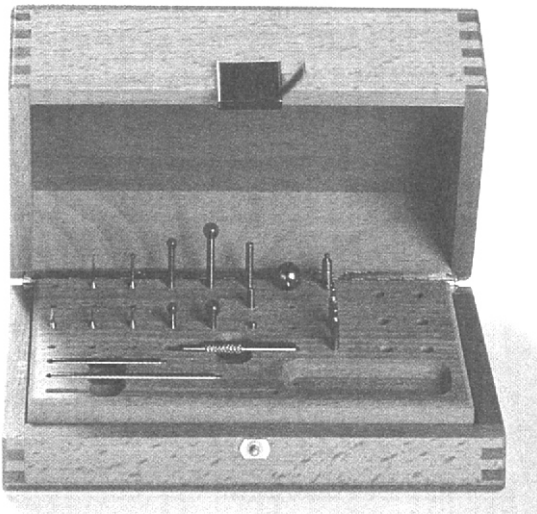
# M2 SETS

M2 thread stylus sets	Order No.	Contents
<b>M2 thread stylus set (Type A)</b>	20-2 NTBA	20 parts

Styli and accessories are available in stylus sets. This small set is stocked with the most common styli and accessories needed to perform simple measurements successfully.

The empty spaces offer the possibility of enlarging your set at any time with the components needed for even the most specialized measurement requirements.

The sturdy wooden case protects your styli from dust or damage.



Supplied Equipment:			Drawing
1 Pc	Stylus	1.0-10.5-2 NTB	Page 4
1 Pc	Stylus	1.0-15.5-2 NTB	Page 4
1 Pc	Stylus	2.0-11-2 NTC	Page 5
1 Pc	Stylus	2.0-16-2 NTC	Page 5
1 Pc	Stylus	4.0-12-2 NTC	Page 5
1 Pc	Stylus	4.0-22-2 NTC	Page 5
1 Pc	Stylus	6.0-13-2 NTD	Page 5
1 Pc	Stylus	6.0-28-2 NTD	Page 5
1 Pc	Extension	5-2 NV	Page 13
1 Pc	Extension	10-2 NV	Page 13
1 Pc	Extension	20-2 NV	Page 13
1 Pc	Extension	40-2 NV	Page 13
1 Pc	Extension	60-2 NV	Page 13
1 Pc	Pointed stylus	30-10-2 NTS	Page 9
1 Pc	Knuckle joint rot.	4-16-2 NGBD	Page 16
1 Pc	Hexagon key	0.9 NWSE	Page 17
2 Pc	Pin key	1.0 NWST	Page 17
1 Pc	Cross-point key	2.5 NWKR	Page 17
1 Pc	Adaptor rotary	7.0-8-2 NTHF	Page 14

# M2 SETS

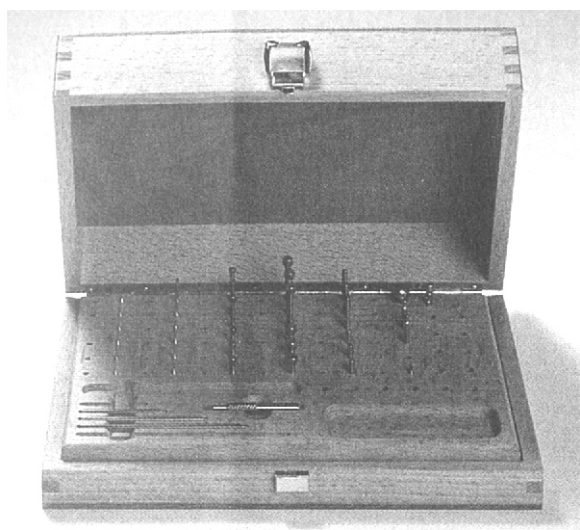
M2 thread stylus sets	Order No.	Contents
<b>M2 thread stylus set (Type B)</b>	40-2 NTBB	40 parts

Styli and accessories are available in stylus sets. This medium-sized set contains the most common styli and accessories needed to perform simple and complicated measurements successfully.

The empty spaces offer the possibility of enlarging your set at any time with the components needed to carry out even the most complicated measurement.

The sturdy wooden case protects your styli from dust or damage.

Supplied Equipment:			Drawing
3 Pc	Stylus	1.0-10.5-2 NTB	Page 4
3 Pc	Stylus	1.0-15.5-2 NTB	Page 4
3 Pc	Stylus	2.0-11-2 NTC	Page 5
3 Pc	Stylus	2.0-16-2 NTC	Page 5
3 Pc	Stylus	4.0-12-2 NTC	Page 5
3 Pc	Stylus	4.0-22-2 NTC	Page 5
3 Pc	Stylus	6.0-13-2 NTD	Page 5
3 Pc	Stylus	6.0-28-2 NTD	Page 5
3 Pc	Extension	10-2 NV	Page 13
3 Pc	Extension	20-2 NV	Page 13
1 Pc	Extension	40-2 NV	Page 13
1 Pc	Extension	60-2 NV	Page 13
1 Pc	Extension	80-2 NV	Page 13
1 Pc	Pointed stylus	30-10-2 NTS	Page 9
1 Pc	Knuckle joint rot.	4-16-2 NGBD	Page 16
1 Pc	Hexagon key	0.9 NWSE	Page 17
2 Pc	Pin key	1.0 NWST	Page 17
1 Pc	Cross-point key	2.5 NWKR	Page 17
1 Pc	Adaptor rotary	7.0-8-2 NTHF	Page 14



# M2 SETS

M2 thread stylus sets	Order No.	Contents
<b>M2 thread stylus set (Type C)</b>	63-2 NTBC	63 parts

Styli and accessories are available in stylus sets. This medium-sized set contains the most common styli and accessories needed to perform simple and complicated measurements successfully.

The empty spaces offer the possibility of enlarging your set at any time with the components needed to carry out even the most complicated measurement.

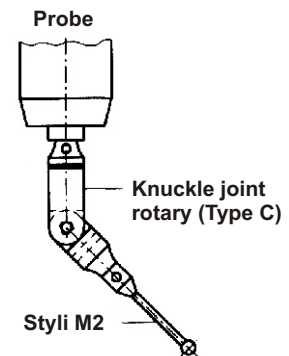
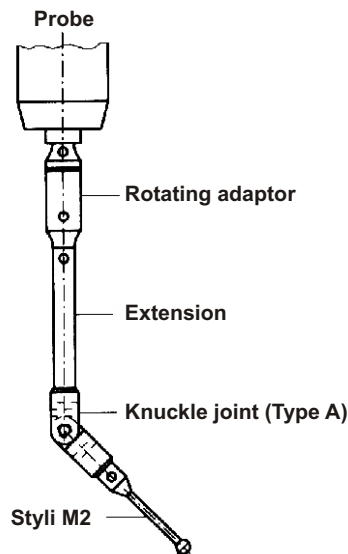
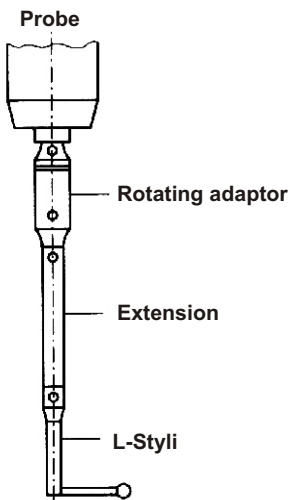
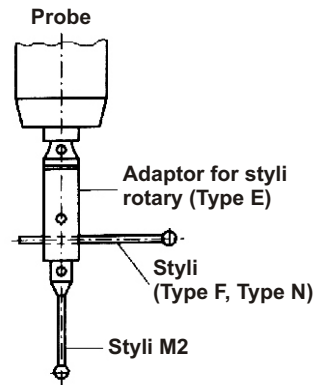
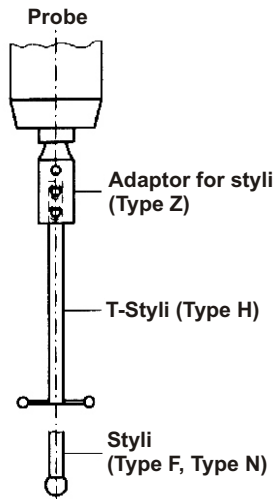
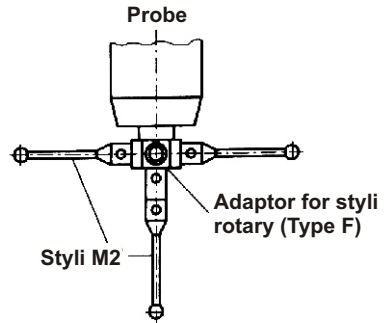
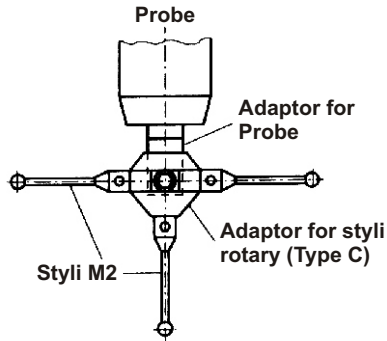
The sturdy wooden case protects your styli from dust or damage.



Supplied Equipment:			Drawing
1 Pc	Stylus	0.5-10-2 NTA	Page 4
4 Pc	Stylus	1.0-10.5-2 NTB	Page 4
4 Pc	Stylus	1.0-15.5-2 NTB	Page 4
1 Pc	Stylus	1.5-16-2 NTB	Page 4
1 Pc	Stylus	2.5-21-2 NTB	Page 4
4 Pc	Stylus	2.0-11-2 NTC	Page 5
4 Pc	Stylus	2.0-16-2 NTC	Page 5
1 Pc	Stylus	3.0-21.5-2 NTC	Page 5
4 Pc	Stylus	4.0-12-2 NTC	Page 5
4 Pc	Stylus	4.0-22-2 NTC	Page 5
1 Pc	Stylus	5.0-27.5-2 NTD	Page 5
4 Pc	Stylus	6.0-13-2 NTD	Page 5
4 Pc	Stylus	6.0-28-2 NTD	Page 5
1 Pc	Cylinder styli	4.0-22-2 NZRB	Page 8
1 Pc	Cylinder styli	1.5-14-2 NZTH	Page 9
1 Pc	Ball disc styli	10.0-25-2 NKSK	Page 10
1 Pc	Ball disc styli	25.0-12-2 NKSD	Page 11
1 Pc	Star styli	1.0-12-2 NSTK	Page 11
1 Pc	Star styli	2.0-28-2 NSTB	Page 12
4 Pc	Extension	10-2 NV	Page 13
4 Pc	Extension	20-2 NV	Page 13
1 Pc	Extension	30-2 NV	Page 13
1 Pc	Extension	40-2 NV	Page 13
1 Pc	Extension	60-2 NV	Page 13
1 Pc	Extension	80-2 NV	Page 13
1 Pc	Extension	100-2 NV	Page 13
1 Pc	Pointed stylus	30-10-2 NTS	Page 9
1 Pc	Adaptor rotary	6.0-19-2 NTHB	Page 14
1 Pc	Knuckle joint rot.	5.0-21-2 NGCD	Page 16
1 Pc	Rotating adaptor	5.0-15-2 NDS	Page 16
2 Pc	Pin key	1.0 NWST	Page 17
1 Pc	Cross-point key	2.5 NWKR	Page 17

# M2 COMBINATIONS

Combinations for components with M2 thread



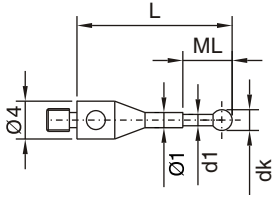
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# M3 (Ø 4 mm)

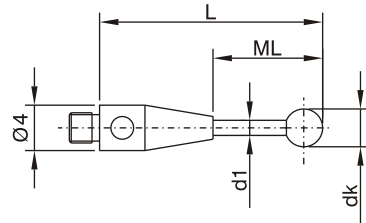
## M3 Thread Styli

### Styli (Type A)



Order No.	Shaft	Ball	wt	dk mm	d1 mm	L mm	ML mm
0.2-11-3 NTA	TC	Ruby	0.4g	0.2	0.15	11.0	1.5
0.25-11-3 NTA	TC	Ruby	0.4g	0.25	0.2	11.0	2.5
0.3-11-3 NTA	TC	Ruby	0.4g	0.3	0.2	11.0	2.5
0.4-11-3 NTA	TC	Ruby	0.4g	0.4	0.3	11.0	2.5
0.5-11-3 NTA	TC	Ruby	0.4g	0.5	0.3	11.0	2.5
0.6-11-3 NTA	TC	Ruby	0.4g	0.6	0.4	11.0	2.5
0.6-13-3 NTA	TC	Ruby	0.4g	0.6	0.4	13.0	4.5
0.7-11-3 NTA	TC	Ruby	0.4g	0.7	0.4	11.0	2.5
0.7-13-3 NTA	TC	Ruby	0.4g	0.7	0.4	13.0	4.5
0.8-11-3 NTA	TC	Ruby	0.4g	0.8	0.6	11.0	2.5
0.8-13-3 NTA	TC	Ruby	0.4g	0.8	0.6	13.0	4.5
0.9-11-3 NTA	TC	Ruby	0.4g	0.9	0.6	11.0	2.5
0.9-13-3 NTA	TC	Ruby	0.4g	0.9	0.6	13.0	4.5
1.0-11-3 NTA	TC	Ruby	0.4g	1.0	0.8	11.0	2.5
1.0-13-3 NTA	TC	Ruby	0.4g	1.0	0.8	13.0	4.5

### Styli (Type B)



Order No.	Shaft	Ball	wt	dk mm	d1 mm	L mm	ML mm
1.0-10.5-3 NTB	TC	Ruby	0.7g	1.0	0.7	10.5	4.5
1.0-15.5-3 NTB	TC	Ruby	0.7g	1.0	0.7	15.5	7.5
1.0-20.5-3 NTB	TC	Ruby	0.7g	1.0	0.7	20.5	12.5
1.0-30.5-3 NTB	TC	Ruby	0.7g	1.0	0.7	30.5	22.5
1.5-16-3 NTB	TC	Ruby	0.6g	1.5	0.7	16.0	8.0
1.5-21-3 NTB	TC	Ruby	0.6g	1.5	0.7	21.0	13.0
1.5-31-3 NTB	TC	Ruby	1.0g	1.5	1.0	31.0	23.0
2.0-16-3 NTB	TC	Ruby	0.7g	2.0	1.0	16.0	8.0
2.0-21-3 NTB	TC	Ruby	0.7g	2.0	1.0	21.0	13.0
2.0-26-3 NTB	TC	Ruby	0.8g	2.0	1.0	26.0	18.0
2.0-31-3 NTB	TC	Ruby	0.9g	2.0	1.0	31.0	23.0
2.0-36-3 NTB	TC	Ruby	0.9g	2.0	1.0	36.0	28.0
2.0-41-3 NTB	TC	Ruby	1.0g	2.0	1.0	41.0	33.0
2.5-16-3 NTB	TC	Ruby	0.7g	2.5	1.0	16.0	8.0
2.5-21-3 NTB	TC	Ruby	0.7g	2.5	1.0	21.0	13.0
2.5-31-3 NTB	TC	Ruby	1.3g	2.5	1.5	31.0	23.0
2.5-41-3 NTB	TC	Ruby	1.5g	2.5	1.5	41.0	33.0
3.0-21.5-3 NTB	TC	Ruby	1.2g	3.0	1.5	21.5	13.5
3.0-31.5-3 NTB	TC	Ruby	1.4g	3.0	1.5	31.5	23.5
3.0-36.5-3 NTB	TC	Ruby	1.5g	3.0	1.5	36.5	28.5
3.0-41.5-3 NTB	TC	Ruby	1.6g	3.0	1.5	41.5	33.5
3.0-46.5-3 NTB	TC	Ruby	1.8g	3.0	1.5	46.5	38.5
3.0-51.5-3 NTB	TC	Ruby	1.9g	3.0	1.5	51.5	43.5
4.0-22-3 NTB	TC	Ruby	1.5g	4.0	2.0	22.0	12.0
4.0-32-3 NTB	TC	Ruby	1.9g	4.0	2.0	32.0	22.0
4.0-37-3 NTB	TC	Ruby	2.1g	4.0	2.0	37.0	27.0
4.0-42-3 NTB	TC	Ruby	2.4g	4.0	2.0	42.0	32.0
4.0-47-3 NTB	TC	Ruby	2.6g	4.0	2.0	47.0	37.0
4.0-52-3 NTB	TC	Ruby	2.8g	4.0	2.0	52.0	42.0
5.0-22.5-3 NTB	TC	Ruby	1.6g	5.0	2.0	22.5	12.5
5.0-32.5-3 NTB	TC	Ruby	2.0g	5.0	2.0	32.5	22.5
5.0-37.5-3 NTB	TC	Ruby	2.3g	5.0	2.0	37.5	27.5
5.0-42.5-3 NTB	TC	Ruby	2.5g	5.0	2.0	42.5	32.5
5.0-47.5-3 NTB	TC	Ruby	2.7g	5.0	2.0	47.5	37.5
5.0-52.5-3 NTB	TC	Ruby	2.9g	5.0	2.0	52.5	42.5

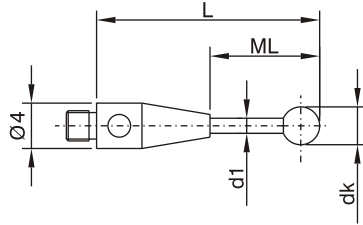
TC = Tungsten Carbide

Styli Type B Contd. in Page 23.

# M3 (Ø 4 mm)

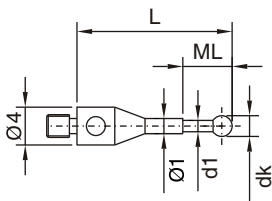
## M3 Thread Styli

### Styli (Type B)



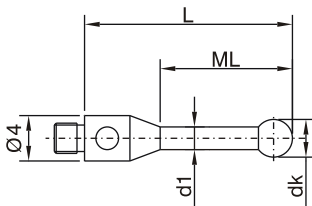
Order No.	Shaft	Ball	wt	dk mm	d1 mm	L mm	ML mm
6.0-23-3 NTB	TC	Ruby	1.8g	6.0	2.0	23.0	13.0
6.0-33-3 NTB	TC	Ruby	2.2g	6.0	2.0	33.0	23.0
6.0-38-3 NTB	TC	Ruby	2.4g	6.0	2.0	38.0	28.0
6.0-43-3 NTB	TC	Ruby	2.7g	6.0	2.0	43.0	33.0
6.0-48-3 NTB	TC	Ruby	2.9g	6.0	2.0	48.0	38.0
6.0-53-3 NTB	TC	Ruby	3.1g	6.0	2.0	53.0	43.0

### Styli (Type BS)



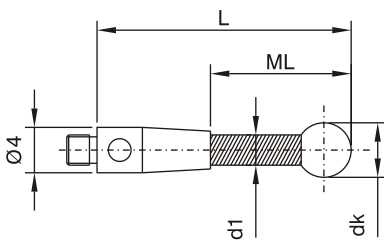
Order No.	Shaft	Ball	wt	dk mm	d1 mm	L mm	ML mm
0.5-21-3 NTBS	TC	Ruby	1.0g	0.5	0.3	21.0	2.5

### Styli (Type C)



Order No.	Shaft	Ball	wt	dk mm	d1 mm	L mm	ML mm
1.0-21.5-3 NTC	Steel	Ruby	1.0g	1.0	0.7	21.5	5.0
2.0-11-3 NTC	Steel	Ruby	0.6g	2.0	1.2	11.0	5.0
2.0-16-3 NTC	Steel	Ruby	0.6g	2.0	1.2	16.0	10.0
2.0-22-3 NTC	Steel	Ruby	1.0g	2.0	1.4	22.0	8.0
2.5-21-3 NTC	Steel	Ruby	0.6g	2.5	1.5	21.0	15.0
3.0-11.5-3 NTC	Steel	Ruby	0.7g	3.0	2.0	11.5	5.5
3.0-21.5-3 NTC	Steel	Ruby	0.8g	3.0	2.0	21.5	15.5
3.0-22.5-3 NTC	Steel	Ruby	0.8g	3.0	2.0	22.5	16.5
4.0-12-3 NTC	Steel	Ruby	0.8g	4.0	2.4	12.0	6.0
4.0-22-3 NTC	Steel	Ruby	1.1g	4.0	2.4	22.0	16.0
4.0-23-3 NTC	Steel	Ruby	1.1g	4.0	2.4	23.0	17.0
4.0-33-3 NTC	Steel	Ruby	1.4g	4.0	2.4	33.0	27.0
5.0-23.5-3 NTC	Steel	Ruby	1.5g	5.0	3.0	23.5	17.5
5.0-33.5-3 NTC	Steel	Ruby	2.5g	5.0	3.0	33.5	29.5
6.0-13-3 NTC	Steel	Ruby	1.2g	6.0	2.8	13.0	7.0
6.0-28-3 NTC	Steel	Ruby	2.0g	6.0	3.0	28.0	22.0

### Styli (Type K) Ceramic



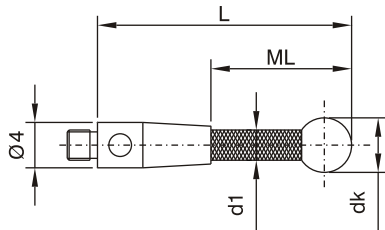
Order No.	Shaft	Ball	wt	dk mm	d1 mm	L mm	ML mm
3.0-51.5-3 NTKE	Ceramic	Ruby	1.2g	3.0	2.0	51.5	41.5
4.0-32-3 NTKE	Ceramic	Ruby	1.7g	4.0	2.0	32.0	22.0
4.0-42-3 NTKE	Ceramic	Ruby	1.8g	4.0	2.0	42.0	32.0
4.0-52-3 NTKE	Ceramic	Ruby	1.9g	4.0	2.0	52.0	42.0
5.0-42.5-3 NTKE	Ceramic	Ruby	2.2g	5.0	3.0	42.5	32.5
5.0-52.5-3 NTKE	Ceramic	Ruby	2.5g	5.0	3.0	52.5	42.5
5.0-62.5-3 NTKE	Ceramic	Ruby	2.7g	5.0	3.0	62.5	52.5
6.0-43-3 NTKE	Ceramic	Ruby	2.5g	6.0	3.0	43.0	33.0
6.0-53-3 NTKE	Ceramic	Ruby	2.7g	6.0	3.0	53.0	43.0
6.0-63-3 NTKE	Ceramic	Ruby	3.0g	6.0	3.0	63.0	53.0

TC = Tungsten Carbide

# M3 (Ø 4 mm)

## M3 Thread Styli

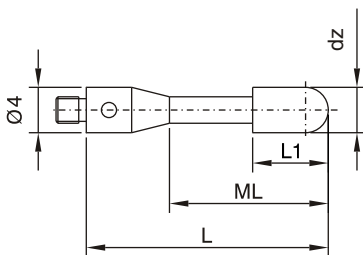
### Styli (Type CA) Carbon Fiber



Order No.	Shaft	Ball	wt	dk mm	d1 mm	L mm	ML mm
4.0-32-3 NTCA	CF	Ruby	1.1g	4.0	3.0	32.0	22.0
4.0-42-3 NTCA	CF	Ruby	1.2g	4.0	3.0	42.0	32.0
4.0-52-3 NTCA	CF	Ruby	1.2g	4.0	3.0	52.0	42.0
5.0-42.5-3 NTCA	CF	Ruby	1.4g	5.0	3.0	42.5	32.5
5.0-52.5-3 NTCA	CF	Ruby	1.5g	5.0	3.0	52.5	42.5
5.0-62.5-3 NTCA	CF	Ruby	1.6g	5.0	3.0	62.5	52.5
6.0-43-3 NTCA	CF	Ruby	1.6g	6.0	3.0	43.0	33.0
6.0-53-3 NTCA	CF	Ruby	1.7g	6.0	3.0	53.0	43.0
6.0-63-3 NTCA	CF	Ruby	1.8g	6.0	3.0	63.0	53.0
6.0-78-3 NTCA	CF	Ruby	2.5g	6.0	4.0	78.0	67.0
6.0-103-3 NTCA	CF	Ruby	2.9g	6.0	4.0	103.0	92.0

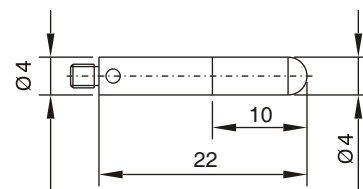
CF = Carbon Fiber

## Cylinder styli (Type A)



Order No.	Shaft	Cylinder	wt	dz mm	L1 mm	L mm	ML mm
2.0-16-3 NZRA	Steel	Ruby	0.7g	2.0	5.0	16.0	8.0
3.0-22-3 NZRA	Steel	Ruby	0.9g	3.0	10.0	22.0	14.0

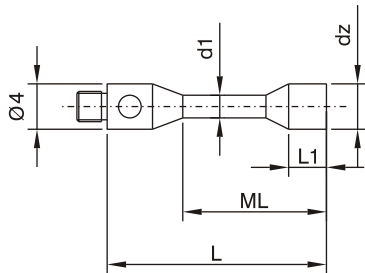
## Cylinder styli (Type B)



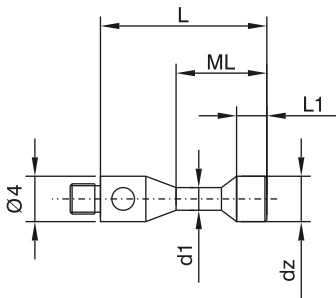
Order No.	Shaft	Cylinder	wt
4.0-22-3 NZRB	Steel	Ruby	1.6g

# M3 (Ø 4 mm)

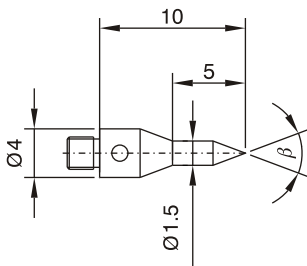
M3 Thread Styli	Order No.	Shaft/ Cylinder	wt	dz mm	d1 mm	L1 mm	L mm	ML mm
<b>Cylinder styli (Type H)</b>	1.5-14-3 NZTH	TC	0.9g	1.5	1.0	2.5	14.0	6.0
	3.0-16-3 NZTH	TC	1.1g	3.0	1.5	3.5	16.0	8.0



Cylinder styli (Type S)	Order No.	Shaft/ Cylinder	wt	dz mm	d1 mm	L1 mm	L mm	ML mm
<b>Cylinder styli (Type S)</b>	1.5-13-3 NZTS	Steel	0.7g	1.5	1.0	1.5	13.0	4.0
	2.0-13-3 NZTS	Steel	0.8g	2.0	1.5	2.0	13.0	4.0
	2.5-15-3 NZTS	Steel	0.9g	2.5	1.7	2.5	15.0	5.5
	3.0-15-3 NZTS	Steel	1.0g	3.0	2.0	4.0	15.0	5.5



Pointed styli	Order No.	Shaft	wt	$\beta$
<b>Pointed styli</b>	30-13-3 NTS	TC	0.7g	30°
	60-13-3 NTS	TC	0.7g	60°



TC = Tungsten Carbide

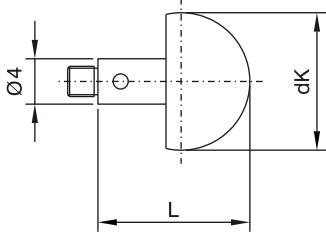
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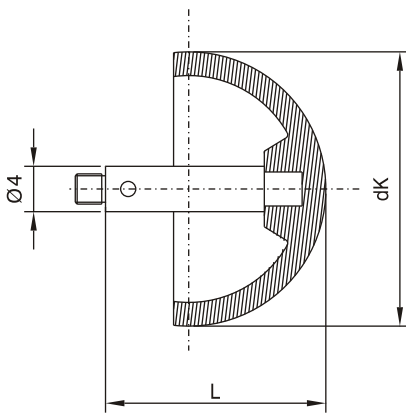


# M3 (Ø 4 mm)

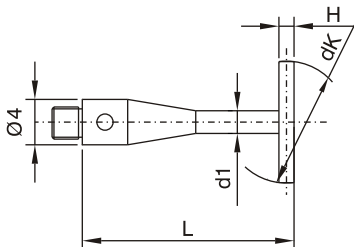
M3 Thread Styli	Order No.	Shaft	Ball	wt	dk mm	L mm
<b>Ceramic ball styli</b>	8.0-10-3 NKK	Steel	Ceramic	1.4g	8.0	10.0
	10.0-11-3 NKK	Steel	Ceramic	2.0g	10.0	11.0



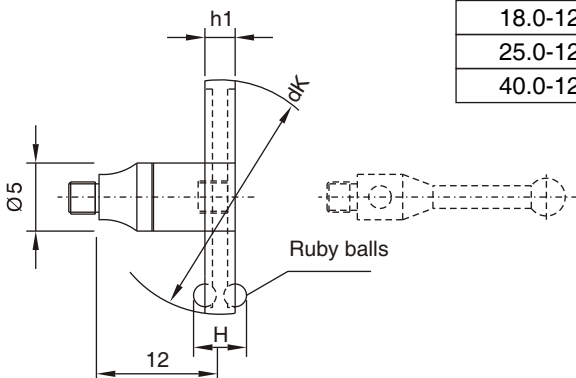
Hollow Ceramic ball styli (Type E)	Order No.	Shaft	Ball	wt	dk mm	L mm
	18.0-16-3 NHKE	Steel	Ceramic	4.9g	18.0	16.0
	24.0-19-3 NHKE	Steel	Ceramic	9.2g	24.0	19.0
	30.0-22-3 NHKE	Steel	Ceramic	13.4g	30.0	22.0



Ball disc styli	Order No.	Shaft	Disc	wt	dk mm	d1 mm	L mm	H mm
	5.0-20-3 NKSK	TC	Ceramic	0.9g	5.0	1.5	20.0	0.5
	10.0-25-3 NKSK	TC	Ceramic	1.8g	10.0	2.0	25.0	0.8
	14.0-25-3 NKSK	TC	Ceramic	3.3g	14.0	2.0	25.0	1.0



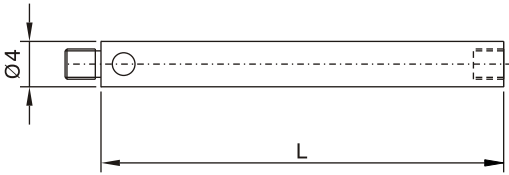
Ball disc styli rotary	Order No.	Shaft	Disc	wt	dk mm	H mm	h1 mm
	18.0-12-3 NKSD	Steel	Steel	3.1g	18.0	4.0	2.5
	25.0-12-3 NKSD	Steel	Steel	4.2g	25.0	4.0	2.5
	40.0-12-3 NKSD	Steel	Steel	11.3g	40.0	6.0	4.0



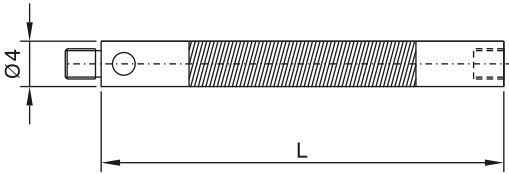
M3 thread stylus may be used. A built-in rotating adaptor allows stylus positioning.

# M3 (Ø 4 mm)

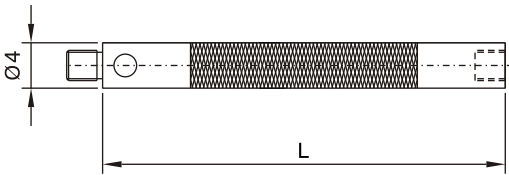
M3 Thread Styli	Order No.	Material	wt	L mm
<b>Extensions, Steel</b>	10-3 NV	Steel	0.7g	10.0
	20-3 NV	Steel	1.3g	20.0
	30-3 NV	Steel	1.8g	30.0
	35-3 NV	Steel	2.2g	35.0
	40-3 NV	Steel	2.4g	40.0
	50-3 NV	Steel	2.9g	50.0



Extensions, Light-weight Ceramic	Order No.	Material	wt	L mm
<b>Extensions, Light-weight Ceramic</b>	40-3 NVK	Ceramic	3.4g	40.0
	50-3 NVK	Ceramic	3.6g	50.0
	60-3 NVK	Ceramic	4.1g	60.0
	70-3 NVK	Ceramic	4.4g	70.0
	80-3 NVK	Ceramic	4.6g	80.0
	90-3 NVK	Ceramic	5.6g	90.0
	100-3 NVK	Ceramic	7.1g	100.0

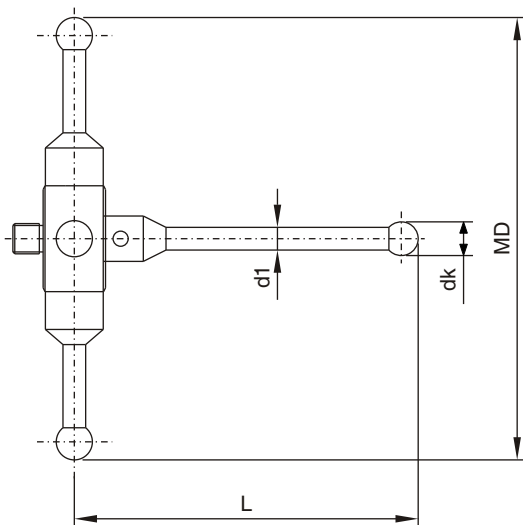


Extensions, Light-weight Carbon Fiber	Order No.	Material	wt	L mm
<b>Extensions, Light-weight Carbon Fiber</b>	40-3 NVCA	CF	1.4g	40.0
	50-3 NVCA	CF	1.7g	50.0
	60-3 NVCA	CF	1.8g	60.0
	70-3 NVCA	CF	2.1g	70.0
	75-3 NVCA	CF	2.1g	75.0
	80-3 NVCA	CF	2.2g	80.0
	90-3 NVCA	CF	2.3g	90.0
	100-3 NVCA	CF	2.5g	100.0



CF = Carbon Fiber

Star Styli Rotary (Type E)	Order No.	Shaft	Ball	wt	dk mm	d1 mm	MD mm	L mm
	2.0-32-3 NSTE	Steel	Ruby	7.8g	2.0	1.4	32.0	21.0
	2.0-52-3 NSTE	Steel	Ruby	8.4g	2.0	1.4	52.0	31.0

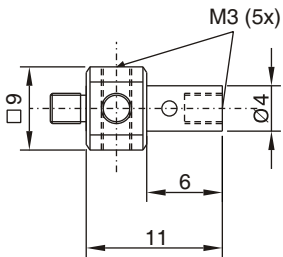


A built-in rotating adaptor allows stylus positioning.

# M3 (Ø 4 mm)

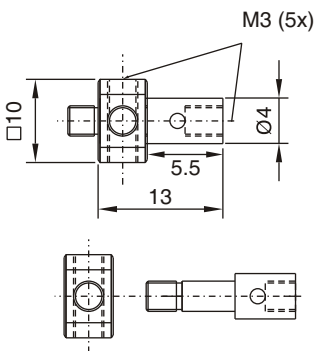
M3 Thread Styli	Order No.	Material	wt
<b>Adaptor for styli (Type A) 5- way</b>	9.0-11-3 NTHA	Steel	2.6g

For use with **M3 thread styli**.



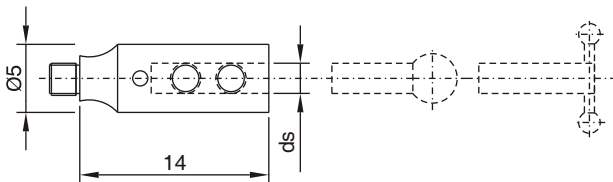
<b>Adaptor for styli rotary (Type F) 5-Way</b>	Order No.	Material	wt
	10.0-13-3 NTHF	Steel	3.3g

For use with **M3 thread styli**. A built in rotating adaptor allows stylus positioning.



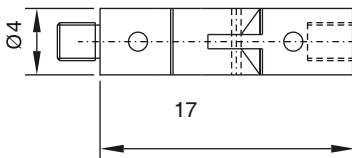
<b>Adaptor for styli (Type Z)</b>	Order No.	Material	wt	ds mm
	1.0-3 NHZ	Steel	1.7g	1.0
	1.5-3 NHZ	Steel	1.7g	1.5
	2.0-3 NHZ	Steel	1.6g	2.0

For use with **Styli (Type F), (Type N)** (Page 7), **T-Styli (Type H)** (Page 6).



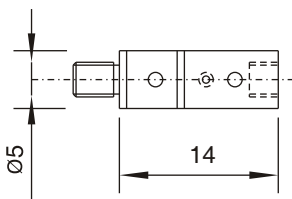
<b>Knuckle joint rotary (Type B)</b>	Order No.	Material	wt
	4.0-17-3 NGBD	Steel	1.5g

A built-in rotating adaptor allows stylus positioning.



<b>Rotating adaptor</b>	Order No.	Material	wt
	5.0-14-3 NDS	Steel	1.8g

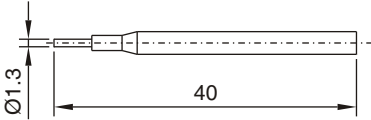
Rotating adaptor allows stylus positioning.



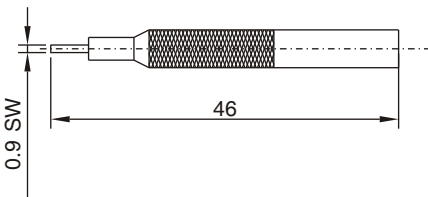
# M3 TOOLS

Tools for components with M3 thread styli	<b>Order No.</b>	<b>Description</b>
	1.3 NWST	Ø1.3 mm for M3 thread components

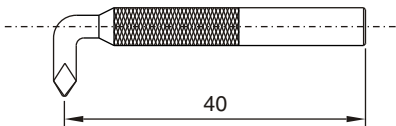
## Pin key



Hexagon key	<b>Order No.</b>	<b>Description</b>
	0.9 NWSE	SW 0.9 mm



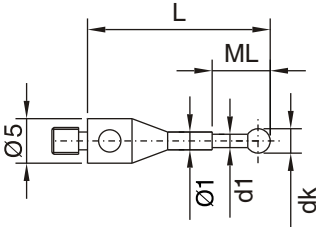
Cross-point key	<b>Order No.</b>	<b>Description</b>
	2.5 NWKR	2.5 mm



# M3 (Ø 5 mm)

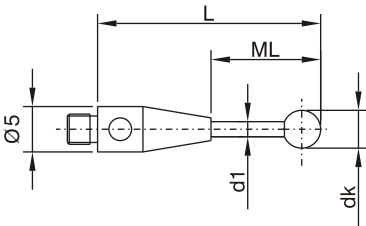
## M3 Thread Styli (Body Ø5mm)

### Styli (Type A)



Order No.	Shaft	Ball	wt	dk mm	d1 mm	L mm	ML mm
0.25-11-5 NTA	TC	Ruby	0.8g	0.25	0.2	11.0	2.5
0.25-25-5 NTA	TC	Ruby	1.0g	0.25	0.2	25.0	4.0
0.3-13-5 NTA	TC	Ruby	0.9g	0.3	0.2	13.0	2.5
0.3-15-5 NTA	TC	Ruby	0.9g	0.3	0.2	15.0	2.5
0.3-18-5 NTA	TC	Ruby	1.0g	0.3	0.2	18.0	2.5
0.3-20-5 NTA	TC	Ruby	1.0g	0.3	0.2	20.0	2.5
0.4-13-5 NTA	TC	Ruby	0.9g	0.4	0.3	13.0	2.5
0.4-15-5 NTA	TC	Ruby	0.9g	0.4	0.3	15.0	2.5
0.4-20-5 NTA	TC	Ruby	1.0g	0.4	0.3	20.0	2.5
0.5-13-5 NTA	TC	Ruby	0.9g	0.5	0.3	13.0	2.5
0.5-15-5 NTA	TC	Ruby	0.9g	0.5	0.3	15.0	2.5
0.5-18-5 NTA	TC	Ruby	1.0g	0.5	0.3	18.0	2.5
0.5-20-5 NTA	TC	Ruby	1.0g	0.5	0.3	20.0	2.5
0.5-24-5 NTA	TC	Ruby	1.0g	0.5	0.3	24.0	2.5
0.6-14-5 NTA	TC	Ruby	0.9g	0.6	0.4	14.0	4.5
0.6-17-5 NTA	TC	Ruby	1.0g	0.6	0.4	17.0	4.5
0.6-20-5 NTA	TC	Ruby	1.0g	0.6	0.4	20.0	4.5
0.6-24-5 NTA	TC	Ruby	1.0g	0.6	0.4	24.0	4.5
0.8-17-5 NTA	TC	Ruby	1.0g	0.8	0.6	17.0	5.0
0.8-20-5 NTA	TC	Ruby	1.0g	0.8	0.6	20.0	5.0
0.8-25-5 NTA	TC	Ruby	1.0g	0.8	0.6	25.0	5.0
0.8-34-5 NTA	TC	Ruby	1.1g	0.8	0.6	34.0	4.0
0.8-35-5 NTA	TC	Ruby	1.1g	0.8	0.6	35.0	5.0
1.0-20-5 NTA	TC	Ruby	1.0g	1.0	0.8	20.0	5.0
1.0-25-5 NTA	TC	Ruby	1.0g	1.0	0.8	25.0	5.0
1.0-30-5 NTA	TC	Ruby	1.1g	1.0	0.8	30.0	5.0
1.0-35-5 NTA	TC	Ruby	1.1g	1.0	0.8	35.0	5.0
1.0-40-5 NTA	TC	Ruby	1.2g	1.0	0.8	40.0	5.0

### Styli (Type B)



Order No.	Shaft	Ball	wt	dk mm	d1 mm	L mm	ML mm
0.8-14-5 NTB	TC	Ruby	1.0g	0.8	0.6	14.0	5.0
1.0-14-5 NTB	TC	Ruby	1.0g	1.0	0.8	14.0	5.0
1.0-17-5 NTB	TC	Ruby	1.0g	1.0	0.8	17.0	8.0
1.0-20-5 NTB	TC	Ruby	1.0g	1.0	0.8	20.0	11.0
1.35-24-5 NTB	TC	Ruby	1.1g	1.35	1.0	24.0	15.0
1.5-14-5 NTB	TC	Ruby	1.0g	1.5	1.0	14.0	5.0
1.5-17-5 NTB	TC	Ruby	1.0g	1.5	1.0	17.0	8.0
1.5-20-5 NTB	TC	Ruby	1.0g	1.5	1.0	20.0	11.0
1.5-25-5 NTB	TC	Ruby	1.1g	1.5	1.0	25.0	16.0
1.5-30-5 NTB	TC	Ruby	1.1g	1.5	1.0	30.0	21.0
1.5-35-5 NTB	TC	Ruby	1.2g	1.5	1.0	35.0	26.0
1.5-40-5 NTB	TC	Ruby	1.2g	1.5	1.0	40.0	31.0
2.0-14-5 NTB	TC	Ruby	1.0g	2.0	1.0	14.0	5.0
2.0-17-5 NTB	TC	Ruby	1.0g	2.0	1.0	17.0	8.0
2.0-20-5 NTB	TC	Ruby	1.0g	2.0	1.0	20.0	11.0
2.0-25-5 NTB	TC	Ruby	1.1g	2.0	1.0	25.0	16.0
2.0-30-5 NTB	TC	Ruby	1.1g	2.0	1.0	30.0	21.0
2.0-35-5 NTB	TC	Ruby	1.6g	2.0	1.5	35.0	26.0
2.0-40-5 NTB	TC	Ruby	1.8g	2.0	1.5	40.0	31.0
2.5-20-5 NTB	TC	Ruby	1.3g	2.5	1.5	20.0	11.0
2.5-25-5 NTB	TC	Ruby	1.4g	2.5	1.5	25.0	16.0
2.5-30-5 NTB	TC	Ruby	1.5g	2.5	1.5	30.0	21.0
2.5-35-5 NTB	TC	Ruby	1.6g	2.5	1.5	35.0	26.0
2.5-40-5 NTB	TC	Ruby	1.8g	2.5	1.5	40.0	31.0

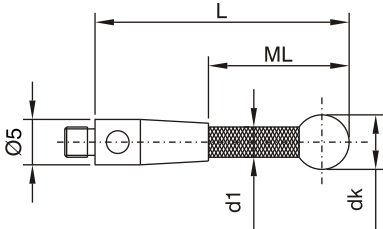
TC = Tungsten Carbide

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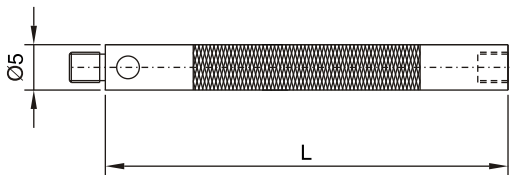
# M3 (Ø 5 mm)

**M3 Thread Styli (Body Ø5mm)**  
**Styli (Type CA)**  
**Carbon Fiber**



Order No.	Shaft	Ball	wt	dk mm	d1 mm	L mm	ML mm
3.0-25-5 NTCA	CF	Ruby	0.6g	3.0	2.0	25.0	16.0
3.0-33-5 NTCA	CF	Ruby	0.7g	3.0	2.0	33.0	24.0
3.0-40-5 NTCA	CF	Ruby	0.8g	3.0	2.0	40.0	31.0
3.0-42-5 NTCA	CF	Ruby	0.8g	3.0	2.0	42.0	33.0
3.0-50-5 NTCA	CF	Ruby	0.8g	3.0	2.0	50.0	41.0
3.0-58-5 NTCA	CF	Ruby	1.0g	3.0	2.0	58.0	49.0
3.0-59-5 NTCA	CF	Ruby	1.0g	3.0	2.0	59.0	50.0
3.0-65-5 NTCA	CF	Ruby	1.0g	3.0	2.0	65.0	56.0
3.0-75-5 NTCA	CF	Ruby	1.0g	3.0	2.0	75.0	66.0
3.0-84-5 NTCA	CF	Ruby	1.1g	3.0	2.0	84.0	75.0
3.0-100-5 NTCA	CF	Ruby	1.1g	3.0	2.0	100.0	91.0
3.0-125-5 NTCA	CF	Ruby	1.2g	3.0	2.0	125.0	116.0
4.0-50-5 NTCA	CF	Ruby	1.0g	4.0	2.0	50.0	41.0
5.0-30-5 NTCA	CF	Ruby	1.1g	5.0	3.0	30.0	21.0
5.0-40-5 NTCA	CF	Ruby	1.2g	5.0	3.0	40.0	31.0
5.0-50-5 NTCA	CF	Ruby	1.4g	5.0	3.0	50.0	41.0
5.0-60-5 NTCA	CF	Ruby	1.5g	5.0	3.0	60.0	51.0
5.0-75-5 NTCA	CF	Ruby	1.8g	5.0	3.0	75.0	66.0
6.0-50-5 NTCA	CF	Ruby	1.5g	6.0	3.0	50.0	41.0
6.0-70-5 NTCA	CF	Ruby	1.8g	6.0	3.0	70.0	61.0
6.0-100-5 NTCA	CF	Ruby	2.4g	6.0	3.0	100.0	91.0
8.0-30-5 NTCA	CF	Ruby	1.8g	8.0	5.0	30.0	30.0
8.0-50-5 NTCA	CF	Ruby	2.1g	8.0	5.0	50.0	50.0
8.0-70-5 NTCA	CF	Ruby	2.6g	8.0	5.0	70.0	70.0
8.0-100-5 NTCA	CF	Ruby	2.7g	8.0	5.0	100.0	100.0
8.0-125-5 NTCA	CF	Ruby	2.9g	8.0	5.0	125.0	125.0

**Extensions, Light-weight Carbon Fiber**

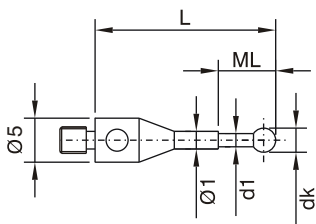


Order No.	Material	wt	L mm
20-5 NVCA	CF	1.7g	20.0
25-5 NVCA	CF	1.8g	25.0
30-5 NVCA	CF	1.9g	30.0
40-5 NVCA	CF	2.1g	40.0
50-5 NVCA	CF	2.2g	50.0
60-5 NVCA	CF	2.4g	60.0
65-5 NVCA	CF	2.5g	65.0
75-5 NVCA	CF	2.6g	75.0
80-5 NVCA	CF	2.7g	80.0
100-5 NVCA	CF	3.0g	100.0
130-5 NVCA	CF	3.5g	130.0
150-5 NVCA	CF	3.8g	150.0

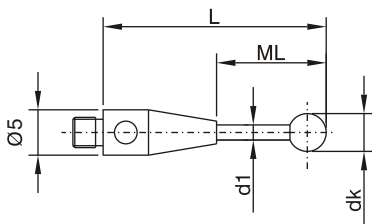
CF = Carbon Fiber

# M4 (Ø 5 mm)

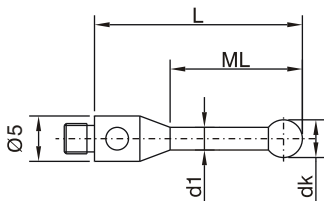
M4 Thread Styli	Order No.	Shaft	Ball	wt	dk mm	d1 mm	L mm	ML mm
<b>Styli (Type A)</b>	0.2-13-4 NTA	TC	Ruby	0.4g	0.2	0.15	13.0	1.5
	0.25-13-4 NTA	TC	Ruby	0.4g	0.25	0.2	13.0	2.5
	0.3-13-4 NTA	TC	Ruby	0.4g	0.3	0.2	13.0	2.5
	0.4-13-4 NTA	TC	Ruby	0.4g	0.4	0.3	13.0	2.5
	0.5-13-4 NTA	TC	Ruby	0.4g	0.5	0.3	13.0	2.5
	0.6-13-4 NTA	TC	Ruby	0.4g	0.6	0.4	13.0	2.5
	0.6-15-4 NTA	TC	Ruby	0.4g	0.6	0.4	15.0	4.5
	0.7-13-4 NTA	TC	Ruby	0.4g	0.7	0.4	13.0	2.5
	0.7-15-4 NTA	TC	Ruby	0.4g	0.7	0.4	15.0	4.5
	0.8-13-4 NTA	TC	Ruby	0.4g	0.8	0.6	13.0	2.5
	0.8-15-4 NTA	TC	Ruby	0.4g	0.8	0.6	15.0	4.5
	0.9-13-4 NTA	TC	Ruby	0.4g	0.9	0.6	13.0	2.5
	0.9-15-4 NTA	TC	Ruby	0.4g	0.9	0.6	15.0	4.5
	1.0-13-4 NTA	TC	Ruby	0.4g	1.0	0.8	13.0	2.5
	1.0-15-4 NTA	TC	Ruby	0.4g	1.0	0.8	15.0	4.5



Styli (Type B)	Order No.	Shaft	Ball	wt	dk mm	d1 mm	L mm	ML mm
<b>Styli (Type B)</b>	1.0-15.5-4 NTB	TC	Ruby	1.7g	1.0	0.7	15.5	7.5
	1.0-20.5-4 NTB	TC	Ruby	1.7g	1.0	0.7	20.5	12.5
	2.0-16-4 NTB	TC	Ruby	1.7g	2.0	1.2	16.0	8.0
	2.0-26-4 NTB	TC	Ruby	1.8g	2.0	1.2	26.0	18.0
	2.0-36-4 NTB	TC	Ruby	1.9g	2.0	1.2	36.0	28.0
	2.0-41-4 NTB	TC	Ruby	2.0g	2.0	1.2	41.0	33.0
	3.0-31.5-4 NTB	TC	Ruby	2.4g	3.0	2.0	31.5	21.5
	3.0-41.5-4 NTB	TC	Ruby	2.6g	3.0	2.0	41.5	31.5
	3.0-51.5-4 NTB	TC	Ruby	2.9g	3.0	2.0	51.5	41.5
	4.0-32-4 NTB	TC	Ruby	2.9g	4.0	2.5	32.0	22.0
	4.0-42-4 NTB	TC	Ruby	3.4g	4.0	2.5	42.0	32.0
	4.0-52-4 NTB	TC	Ruby	3.8g	4.0	2.5	52.0	42.0
	5.0-32.5-4 NTB	TC	Ruby	3.0g	5.0	2.5	32.5	22.5
	5.0-42.5-4 NTB	TC	Ruby	3.5g	5.0	2.5	42.5	32.5
	5.0-52.5-4 NTB	TC	Ruby	3.9g	5.0	2.5	52.5	42.5
	6.0-33-4 NTB	TC	Ruby	3.2g	6.0	3.0	33.0	23.0
	6.0-43-4 NTB	TC	Ruby	3.7g	6.0	3.0	43.0	33.0
	6.0-53-4 NTB	TC	Ruby	4.1g	6.0	3.0	53.0	43.0



Styli (Type C)	Order No.	Shaft	Ball	wt	dk mm	d1 mm	L mm	ML mm
<b>Styli (Type C)</b>	2.0-16-4 NTC	Steel	Ruby	1.3g	2.0	1.3	16.0	10.0
	2.5-21-4 NTC	Steel	Ruby	1.3g	2.5	1.5	21.0	15.0
	3.0-21.5-4 NTC	Steel	Ruby	1.5g	3.0	2.0	21.5	15.5
	4.0-22-4 NTC	Steel	Ruby	1.7g	4.0	2.4	22.0	16.0
	6.0-28-4 NTC	Steel	Ruby	2.6g	6.0	3.0	28.0	22.0



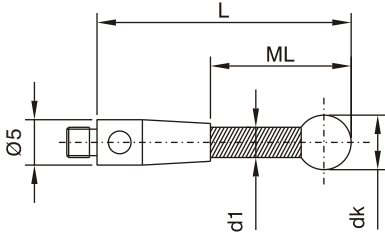
TC = Tungsten Carbide

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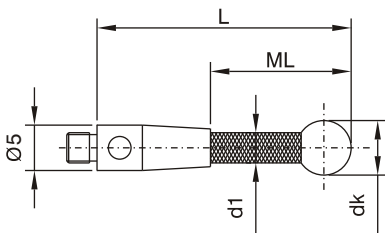
# M4 (Ø 5 mm)

## M4 Thread Styli Styli (Type K), Ceramic



Order No.	Shaft	Ball	wt	dk mm	d1 mm	L mm	ML mm
4.0-32-4 NTKE	Ceramic	Ruby	2.4g	4.0	2.0	32.0	22.0
4.0-42-4 NTKE	Ceramic	Ruby	2.6g	4.0	2.0	42.0	32.0
4.0-52-4 NTKE	Ceramic	Ruby	2.7g	4.0	2.0	52.0	42.0
5.0-42.5-4 NTKE	Ceramic	Ruby	3.1g	5.0	3.0	42.5	32.5
5.0-52.5-4 NTKE	Ceramic	Ruby	3.3g	5.0	3.0	52.5	42.5
5.0-62.5-4 NTKE	Ceramic	Ruby	3.5g	5.0	3.0	62.5	52.5
6.0-43-4 NTKE	Ceramic	Ruby	3.2g	6.0	3.0	43.0	33.0
6.0-53-4 NTKE	Ceramic	Ruby	3.5g	6.0	3.0	53.0	43.0
6.0-63-4 NTKE	Ceramic	Ruby	3.7g	6.0	3.0	63.0	53.0

## Styli (Type CA) Carbon Fiber



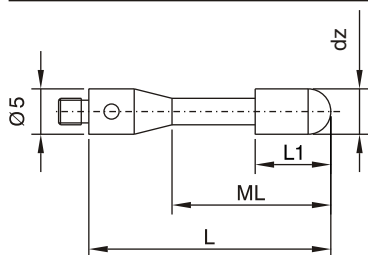
Order No.	Shaft	Ball	wt	dk mm	d1 mm	L mm	ML mm
4.0-32-4 NTCA	CF	Ruby	1.7g	4.0	3.0	32.0	22.0
4.0-42-4 NTCA	CF	Ruby	1.7g	4.0	3.0	42.0	32.0
4.0-52-4 NTCA	CF	Ruby	1.9g	4.0	3.0	52.0	42.0
5.0-42.5-4 NTCA	CF	Ruby	1.9g	5.0	3.0	42.5	32.5
5.0-52.5-4 NTCA	CF	Ruby	1.9g	5.0	3.0	52.5	42.5
5.0-62.5-4 NTCA	CF	Ruby	2.0g	5.0	3.0	62.5	52.5
6.0-43-4 NTCA	CF	Ruby	1.9g	6.0	3.0	43.0	33.0
6.0-53-4 NTCA	CF	Ruby	2.1g	6.0	3.0	53.0	43.0
6.0-63-4 NTCA	CF	Ruby	2.4g	6.0	3.0	63.0	53.0

CF = Carbon Fiber

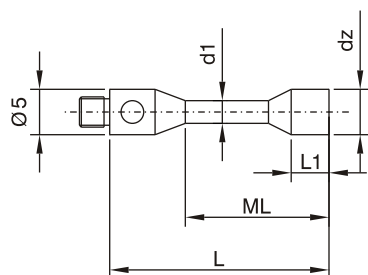


# M4 (Ø 5 mm)

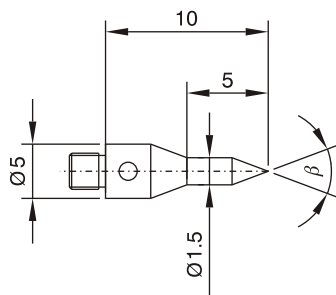
M4 Thread Styli	Order No.	Shaft	Cylinder	wt	dz mm	L1 mm	L mm	ML mm
<b>Cylinder styli (Type A)</b>	2.0-16-4 NZRA	Steel	Ruby	1.3g	2.0	5.0	16.0	8.0
	3.0-22-4 NZRA	Steel	Ruby	1.5g	3.0	10.0	22.0	14.0
	4.0-22-4 NZRA	Steel	Ruby	2.2g	4.0	10.0	22.0	14.0



Cylinder styli (Type H)	Order No.	Shaft / Cylinder	wt	dz mm	d1 mm	L1 mm	L mm	ML mm
	1.5-14-4 NZTH	TC	1.5g	1.5	1.0	2.5	14.0	6.0
	3.0-16-4 NZTH	TC	1.7g	3.0	1.5	3.5	16.0	8.0



Pointed styli	Order No.	Point	wt	$\beta$
	30-13-4 NTS	TC	1.2g	30°
	60-13-4 NTS	TC	1.2g	60°



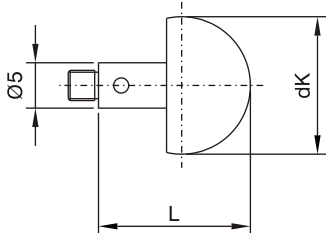
TC = Tungsten Carbide

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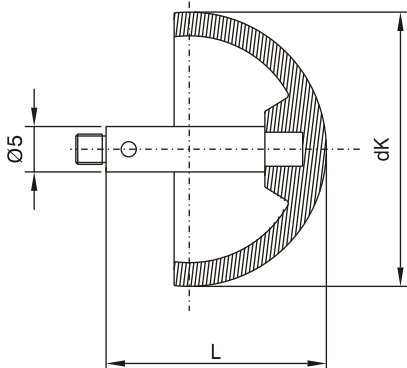
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# M4 (Ø 5 mm)

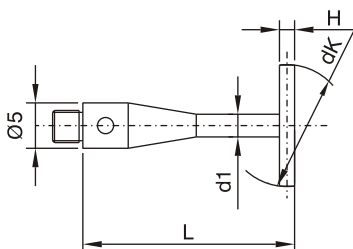
M4 Thread Styli	Order No.	Shaft	Ball	wt	dk mm	L mm
<b>Ceramic ball styli</b>	8.0-10-4 NKK	Steel	Ceramic	1.8g	8.0	10.0
	10.0-11-4 NKK	Steel	Ceramic	2.4g	10.0	11.0



Hollow Ceramic ball styli (Type E)	Order No.	Shaft	Ball	wt	dk mm	L mm
	18.0-16-4 NHKE	Steel	Ceramic	5.3g	18.0	16.0
	24.0-19-4 NHKE	Steel	Ceramic	9.6g	24.0	19.0
	30.0-22-4 NHKE	Steel	Ceramic	13.8g	30.0	22.0

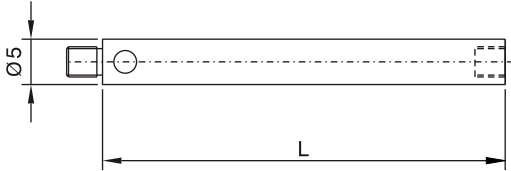


Ball disc styli	Order No.	Shaft	Disc	wt	dk mm	d1 mm	L mm	H mm
	5.0-20-4 NKSK	TC	Ceramic	1.3g	5.0	1.5	20.0	0.5
	10.0-25-4 NKSK	TC	Ceramic	2.2g	10.0	2.0	25.0	0.8
	14.0-25-4 NKSK	TC	Ceramic	3.7g	14.0	2.0	25.0	1.0



# M4 (Ø 5 mm)

M4 Thread Styli	Order No.	Material	wt	L mm
Extensions, Steel	10-4 NV	Steel	1.8g	10.0
	20-4 NV	Steel	3.6g	20.0
	35-4 NV	Steel	6.3g	35.0



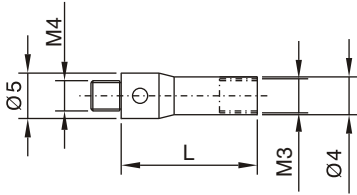
Extensions, Ceramic	Order No.	Material	wt	L mm
	50-4 NVK	Ceramic	4.8g	50.0
	60-4 NVK	Ceramic	5.4g	60.0
	70-4 NVK	Ceramic	5.5g	70.0
	80-4 NVK	Ceramic	5.7g	80.0
	90-4 NVK	Ceramic	5.9g	90.0
	100-4 NVK	Ceramic	6.2g	100.0

Extensions, Carbon Fiber	Order No.	Material	wt	L mm
	50-4 NVCA	CF	2.9g	50.0
	60-4 NVCA	CF	3.4g	60.0
	70-4 NVCA	CF	3.8g	70.0
	80-4 NVCA	CF	4.0g	80.0
	90-4 NVCA	CF	4.6g	90.0
	100-4 NVCA	CF	5.5g	100.0

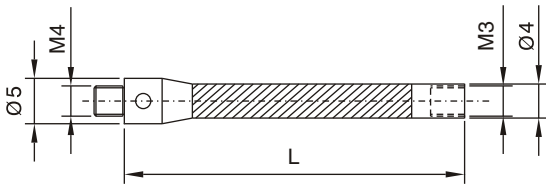
CF = Carbon Fiber

# M4 (Ø 5 mm)

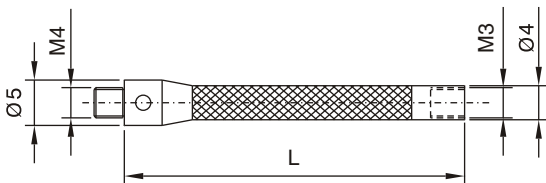
M4 Thread Styli	Order No.	Material	wt	L mm
<b>Extensions / Adaptor M4 / M3 (Steel)</b>	20-4-3 NV	Steel	2.0g	20.0



Extensions / Adaptor M4 / M3 (Ceramic)	Order No.	Material	wt	L mm
	50-4-3 NVK	Ceramic	3.6g	50.0
	75-4-3 NVK	Ceramic	5.2g	75.0
	100-4-3 NVK	Ceramic	6.7g	100.0

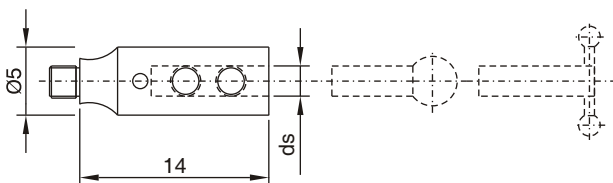


Extensions / Adaptor M4 / M3 (Carbon Fiber)	Order No.	Material	wt	L mm
	50-4-3 NVCA	CF	2.3g	50.0
	75-4-3 NVCA	CF	3.0g	75.0
	100-4-3 NVCA	CF	3.7g	100.0



CF = Carbon Fiber

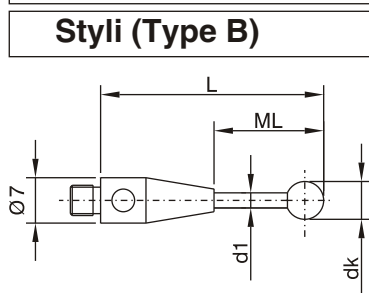
Adaptor for styli (Type Z)	Order No.	Material	wt	ds mm
	1.0-4 NHZ	Steel	1.7g	1.0
	1.5-4 NHZ	Steel	1.7g	1.5
	2.0-4 NHZ	Steel	1.6g	2.0



For use with **Styli (Type F), (Type N)** (Page 7), and **T-Styli (Type H)** (Page 6).

# M4 (Ø 7 mm)

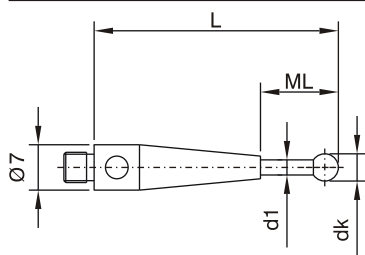
## M4 thread styli (Ø 7mm)



### Styli (Type B)

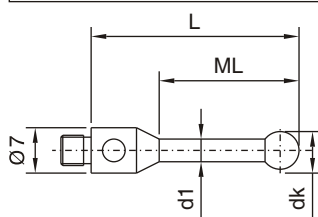
Order No.	Shaft	Ball	wt	dk mm	d1 mm	L mm	ML mm
1.0-20.5-7 NTB	TC	Ruby	2.4g	1.0	0.7	20.5	10.5
2.0-21-7 NTB	TC	Ruby	3.0g	2.0	1.5	21.0	11.0
2.0-51-7 NTB	TC	Ruby	3.3g	2.0	1.5	51.0	41.0
3.0-21.5-7 NTB	TC	Ruby	3.5g	3.0	1.5	21.5	11.5
3.0-51.5-7 NTB	TC	Ruby	4.4g	3.0	2.0	51.5	39.5
4.0-22-7 NTB	TC	Ruby	3.5g	4.0	2.0	22.0	10.0
4.0-52-7 NTB	TC	Ruby	5.0g	4.0	2.0	52.0	40.0
5.0-22.5-7 NTB	TC	Ruby	4.5g	5.0	2.5	22.5	8.5
5.0-52.5-7 NTB	TC	Ruby	6.7g	5.0	2.5	52.5	38.5
6.0-23-7 NTB	TC	Ruby	4.7g	6.0	2.5	23.0	9.0
6.0-53-7 NTB	TC	Ruby	6.9g	6.0	2.5	53.0	39.0

### Styli (Type BS)



Order No.	Shaft	Ball	wt	dk mm	d1 mm	L mm	ML mm
0.5-20-7 NTBS	TC	Ruby	2.8g	0.5	0.3	20.0	2.5
1.0-20-7 NTBS	TC	Ruby	2.9g	1.0	0.8	20.0	5.0

### Styli (Type C)



Order No.	Shaft	Ball	wt	dk mm	d1 mm	L mm	ML mm
2.0-20-7 NTC	Steel	Ruby	2.3g	2.0	1.5	20.0	9.0
3.0-20-7 NTC	Steel	Ruby	2.0g	3.0	2-3	20.0	15.0
4.0-20-7 NTC	Steel	Ruby	2.2g	4.0	3.0	20.0	15.0
5.0-12.5-7 NTC	Steel	Ruby	2.0g	5.0	3.0	12.5	7.5
5.0-20-7 NTC	Steel	Ruby	2.5g	5.0	3.5	20.0	15.0
5.0-22.5-7 NTC	Steel	Ruby	2.5g	5.0	3.0	22.5	17.5
5.0-32.5-7 NTC	Steel	Ruby	3.0g	5.0	3.0	32.5	27.5
5.0-52.5-7 NTC	Steel	Ruby	7.1g	5.0	4.0	52.5	36.5
5.0-102.5-7 NTC	Steel	Ruby	12.0g	5.0	4.0	102.5	86.5
5.0-152.5-7 NTC	Steel	Ruby	17.0g	5.0	4.0	152.5	136.5
6.0-20-7 NTC	Steel	Ruby	3.1g	6.0	4.5	20.0	15.5
6.0-28-7 NTC	Steel	Ruby	3.8g	6.0	4.0	28.0	23.0
8.0-20-7 NTC	Steel	Ruby	3.9g	8.0	5.5	20.0	15.5

TC = Tungsten Carbide

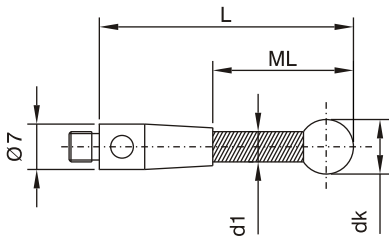
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# M4 (Ø 7 mm)

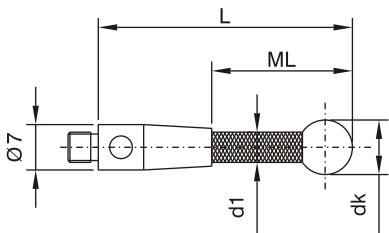
## M4 thread styli (Ø 7mm)

### Styli (Type K)



Order No.	Shaft	Ball	wt	dk mm	d1 mm	L mm	ML mm
4.0-52-7 NTKE	Ceramic	Ruby	4.3g	4.0	3.0	52.0	36.0
4.0-77-7 NTKE	Ceramic	Ruby	4.9g	4.0	3.0	77.0	61.0
4.0-102-7 NTKE	Ceramic	Ruby	5.6g	4.0	3.0	102.0	86.0
5.0-52.5-7 NTKE	Ceramic	Ruby	5.0g	5.0	3.5	52.5	36.5
5.0-77.5-7 NTKE	Ceramic	Ruby	5.7g	5.0	3.5	77.5	61.5
5.0-102.5-7 NTKE	Ceramic	Ruby	6.5g	5.0	3.5	102.5	86.5
6.0-50-7 NTKE	Ceramic	Ruby	5.4g	6.0	4.5	50.0	34.0
6.0-53-7 NTKE	Ceramic	Ruby	5.6g	6.0	4.5	53.0	37.0
6.0-78-7 NTKE	Ceramic	Ruby	6.0g	6.0	4.5	78.0	62.0
6.0-100-7 NTKE	Ceramic	Ruby	8.5g	6.0	4.5	100.0	84.0
6.0-103-7 NTKE	Ceramic	Ruby	8.7g	6.0	4.5	103.0	87.0
6.0-153-7 NTKE	Ceramic	Ruby	11.8g	6.0	4.5	153.0	137.0
8.0-54-7 NTKE	Ceramic	Ruby	6.1g	8.0	4.5	54.0	38.0
8.0-79-7 NTKE	Ceramic	Ruby	7.5g	8.0	4.5	79.0	63.0
8.0-104-7 NTKE	Ceramic	Ruby	9.2g	8.0	4.5	104.0	88.0
8.0-154-7 NTKE	Ceramic	Ruby	12.2g	8.0	4.5	154.0	138.0
8.0-204-7 NTKE	Ceramic	Ruby	15.3g	8.0	4.5	204.0	188.0

### Styli (Type CA)

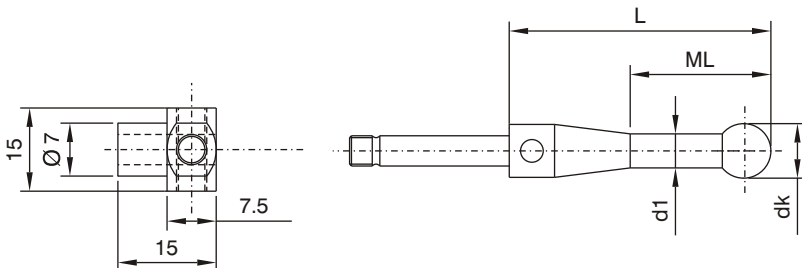


Order No.	Shaft	Ball	wt	dk mm	d1 mm	L mm	ML mm
4.0-52-7 NTCA	CF	Ruby	3.4g	4.0	3.0	52.0	36.0
6.0-53-7 NTCA	CF	Ruby	3.8g	6.0	4.0	53.0	37.0
6.0-103-7 NTCA	CF	Ruby	4.8g	6.0	4.0	103.0	87.0
6.0-153-7 NTCA	CF	Ruby	5.7g	6.0	4.0	153.0	137.0
6.0-203-7 NTCA	CF	Ruby	6.5g	6.0	4.0	203.0	187.0
6.0-303-7 NTCA	CF	Ruby	8.2g	6.0	4.0	303.0	287.0
8.0-304-7 NTCA	CF	Ruby	8.8g	8.0	4.0	304.0	288.0

CF = Carbon Fiber

### Adaptor for styli, rotary Styli (Type KL) ceramic

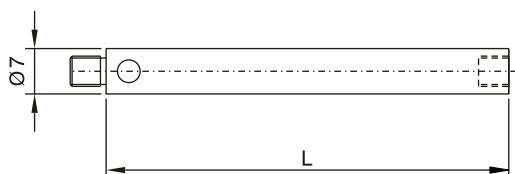
Order No.	Shaft	Ball	wt	dk mm	d1 mm	L mm	ML mm
15.0-15-7 NTHL			10.3g				
6.0-53-7 NTKL	Ceramic	Ruby	7.0g	6.0	4.5	53.0	37.0
6.0-103-7 NTKL	Ceramic	Ruby	7.5g	6.0	4.5	103.0	87.0



# M4 (Ø 7 mm)

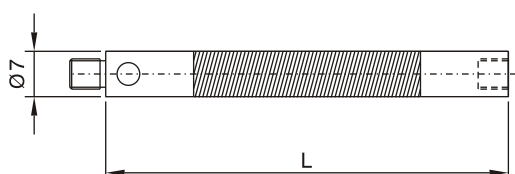
## M4 thread styli (Ø 7mm)

Order No.	Material	wt	L mm
10-7 NV	Steel	2.5g	10.0
15-7 NV	Steel	3.9g	15.0
20-7 NV	Steel	5.4g	20.0
30-7 NV	Steel	8.4g	30.0
35-7 NV	Steel	9.9g	35.0
50-7 NV	Steel	14.0g	50.0



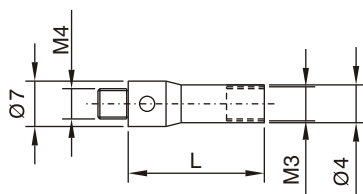
## Extensions, Steel

Order No.	Material	wt	L mm
30-7 NVK	Ceramic	6.7g	30.0
50-7 NVK	Ceramic	8.9g	50.0
100-7 NVK	Ceramic	13.8g	100.0



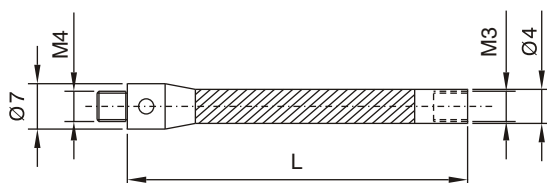
## Extensions / Adaptor M4 / M3 (Steel)

Order No.	Material	wt	L mm
20-7-3 NV	Steel	2.8g	20.0



## Extensions / Adaptor M4 / M3 (Ceramic)

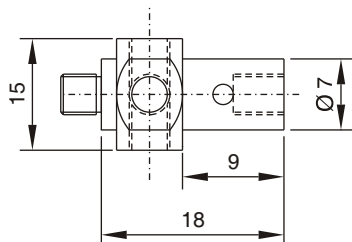
Order No.	Material	wt	L mm
50-7-3 NVK	Ceramic	5.2g	50.0
75-7-3 NVK	Ceramic	6.6g	75.0
100-7-3 NVK	Ceramic	8.4g	100.0



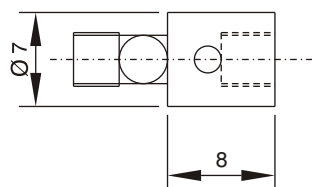
# M4 (Ø 7 mm)

M4 thread styli (Ø 7mm)	<b>Order No.</b>	<b>Material</b>	<b>wt</b>
<b>Adaptor for styli rotary (Type F)</b>	15.0-18-7 NTHF	Steel	11.9g

For use with M4 thread styli. A built in rotating adaptor allows stylus positioning.

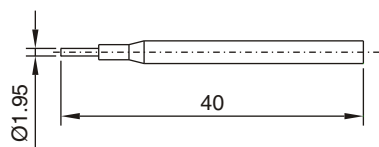


<b>Crash protection adaptor</b>	<b>Order No.</b>	<b>Material</b>	<b>wt</b>
	8-7 NSR	Steel	1.9g

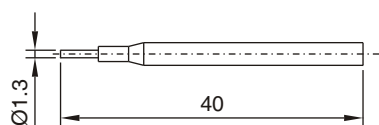


# M4 TOOLS

Tools for components with M4 thread styli (Ø 7mm)	<b>Order No.</b>	<b>Description</b>
<b>Pin key</b>	1.95 NWST	Ø 1.95 mm for M4 thread components



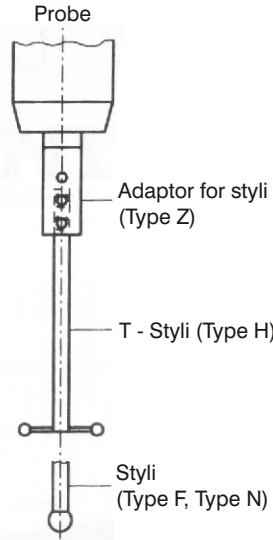
Tools for components with M4 thread styli (Ø 5mm)	<b>Order No.</b>	<b>Description</b>
<b>Pin key</b>	1.3 NWST	Ø 1.3 mm for M4 thread components





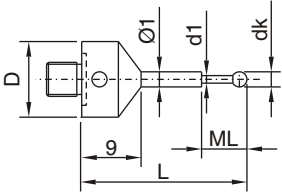
# M4 COMBINATIONS

Combinations For Components With M4 Thread

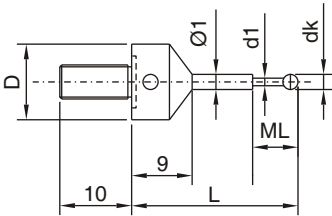


# M5 FOR ZEISS

M5 Thread Styli	Order No.	Zeiss No.	wt	D mm	dk mm	d1 mm	L mm	ML mm
<b>Styli (Type S)</b> Ball: Ruby Shaft: Tungsten Carbide Ferrule: Steel	0.2-21.8-11 NTS	-	6g	11	0.2	0.15	21.8	1.5
	0.25-21.8-11 NTS	-	6g	11	0.25	0.2	21.8	2.5
	0.3-21.8-11 NTS	-	6g	11	0.3	0.2	21.8	2.5
	0.4-21.9-11 NTS	-	6g	11	0.4	0.3	21.9	2.5
	0.5-22.0-11 NTS	-	6g	11	0.5	0.3	22.0	2.5
	0.6-22.1-11 NTS	-	6g	11	0.6	0.4	22.1	4.5
	0.7-22.2-11 NTS	-	6g	11	0.7	0.4	22.2	4.5
	0.8-22.3-11 NTS	-	6g	11	0.8	0.6	22.3	4.5
	0.9-22.4-11 NTS	-	6g	11	0.9	0.6	22.4	4.5
	1.0-22.5-11 NTS	-	6g	11	1.0	0.8	22.5	4.5

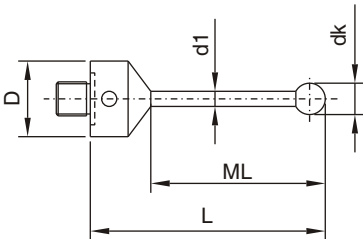


Styli with extended thread ( SL)	Order No.	Zeiss No.	wt	D mm	dk mm	d1 mm	L mm	ML mm
Ball: Ruby Shaft: Tungsten Carbide Ferrule: Steel	0.2-21.8-11 NTSL	-	6g	11	0.2	0.15	21.8	1.5
	0.25-21.8-11 NTSL	-	6g	11	0.25	0.2	21.8	2.5
	0.3-21.8-11 NTSL	600342-8250	6g	11	0.3	0.2	21.8	2.5
	0.4-21.9-11 NTSL	-	6g	11	0.4	0.3	21.9	2.5
	0.5-22.0-11 NTSL	600342-8251	6g	11	0.5	0.3	22.0	2.5
	0.6-22.1-11 NTSL	600342-8252	6g	11	0.6	0.4	22.1	4.5
	0.7-22.2-11 NTSL	-	6g	11	0.7	0.4	22.2	4.5
	0.8-22.3-11 NTSL	600342-8253	6g	11	0.8	0.6	22.3	4.5
	0.9-22.4-11 NTSL	-	6g	11	0.9	0.6	22.4	4.5
	1.0-22.5-11 NTSL	600342-8254	6g	11	1.0	0.8	22.5	4.5

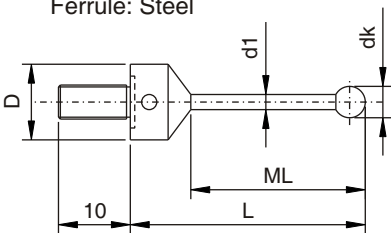


For use with **Disc styli with M5 thread** (Page 50).

Styli (Type S)	Order No.	Zeiss No.	wt	D mm	dk mm	d1 mm	L mm	ML mm
Ball: Ruby Shaft: Tungsten Carbide Ferrule: Steel	1.35-32.9-11 NTS	-	6g	11	1.35	1.0	32.9	23.9
	1.5-33-11 NTS	-	6g	11	1.5	1.0	33.0	24.0
	2.0-33.5-11 NTS	-	7g	11	2.0	1.5	33.5	24.5
	2.5-34-11 NTS	-	7g	11	2.5	1.5	34.0	25.0
	3.0-34.5-18 NTS	-	8g	18	3.0	2.0	34.5	16.5
	5.0-43.5-18 NTS	-	11g	18	5.0	3.5	43.5	25.5



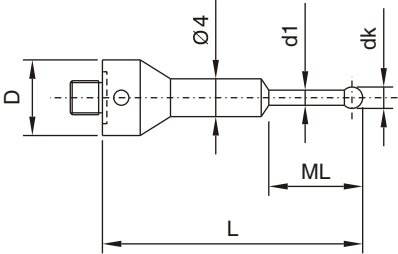
Styli with extended thread ( SL)	Order No.	Zeiss No.	wt	D mm	dk mm	d1 mm	L mm	ML mm
Ball: Ruby Shaft: Tungsten Carbide Ferrule: Steel	1.35-32.9-11 NTSL	600342-8200	6g	11	1.35	1.0	32.9	23.9
	1.5-33-11 NTSL	600342-8201	6g	11	1.5	1.0	33.0	24.0
	2.0-33.5-11 NTSL	600342-8202	7g	11	2.0	1.5	33.5	24.5
	2.5-34-11 NTSL	600342-8203	7g	11	2.5	1.5	34.0	25.0
	3.0-34.5-18 NTSL	600342-8221	8g	18	3.0	2.0	34.5	16.5
	5.0-43.5-18 NTSL	600342-8222	11g	18	5.0	3.5	43.5	25.5



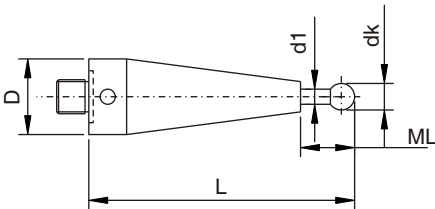
For use with **Disc styli with M5 thread** (Page 50).

# M5 FOR ZEISS

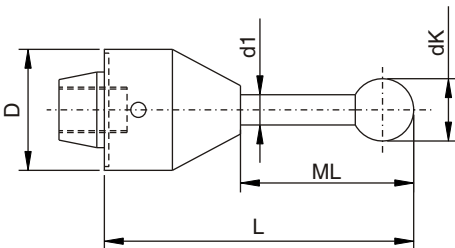
M5 Thread Styli	Order No.	Zeiss No.	wt	D mm	dk mm	d1 mm	L mm	ML mm
<b>Styli</b> Ball: Ruby Shaft: Tungsten Carbide Ferrule: Steel	0.2-32-11 NTB	-	7g	11	0.2	0.15	32.0	1.5
	0.25-32-11 NTB	-	7g	11	0.25	0.2	32.0	2.5
	0.3-32-11 NTB	-	7g	11	0.3	0.2	32.0	2.5
	0.4-32-11 NTB	-	7g	11	0.4	0.3	32.0	2.5
	0.5-32-11 NTB	-	7g	11	0.5	0.3	32.0	2.5
	0.6-32-11 NTB	-	7g	11	0.6	0.4	32.0	4.5
	0.7-32-11 NTB	-	7g	11	0.7	0.4	32.0	4.5
	0.8-32-11 NTB	602030-8060	7g	11	0.8	0.6	32.0	12.0
	0.9-32-11 NTB	-	7g	11	0.9	0.6	32.0	12.0
	1.0-32-11 NTB	602030-8061	7g	11	1.0	0.8	32.0	12.0
	1.35-32-11 NTB	602030-8062	7g	11	1.35	1.0	32.0	12.0
	1.35-44-11 NTB	602030-8063	7g	11	1.35	1.0	44.0	19.0
	1.5-32-11 NTB	602030-8064	7g	11	1.5	1.0	32.0	12.0
	1.5-44-11 NTB	602030-8065	7g	11	1.5	1.0	44.0	19.0
	2.0-32-11 NTB	602030-8066	7g	11	2.0	1.5	32.0	12.0
	2.0-44-11 NTB	602030-8067	8g	11	2.0	1.5	44.0	19.0
	2.0-58-11 NTB	602030-8068	8g	11	2.0	1.5	58.0	33.0
	2.5-32-11 NTB	602030-8069	7g	11	2.5	1.5	32.0	12.0
	2.5-44-11 NTB	602030-8070	8g	11	2.5	1.5	44.0	19.0
	2.5-58-11 NTB	602030-8071	8g	11	2.5	1.5	58.0	33.0



Styli	Order No.	Zeiss No.	wt	D mm	dk mm	d1 mm	L mm	ML mm
Ball: Ruby Shaft: Tungsten Carbide Ferrule: Steel	1.0-55-11 NTF	602030-9019	17g	11	1.0	0.8	55.0	4.0
	1.5-55-11 NTF	602030-9020	17g	11	1.5	1.0	55.0	5.0
	2.0-55-11 NTF	602030-9021	18g	11	2.0	1.5	55.0	5.0
	2.5-55-11 NTF	602030-9022	18g	11	2.5	1.5	55.0	5.0
	3.5-55-11 NTF	602030-9023	18g	11	3.5	2.0	55.0	10.0



Styli with conus	Order No.	Zeiss No.	wt	D mm	dk mm	d1 mm	L mm	ML mm
Ball: Ruby Shaft: Tungsten Carbide Ferrule: Alu 7075	3.0-50-18 NTBK	600331-9096	13g	18	3.0	2.0	50.0	25.0
	3.0-75-18 NTBK	602030-9003	18g	18	3.0	2.0	75.0	35.0
	3.0-115-18 NTBK	600331-9098	31g	18	3.0	2.0	115.0	18.0
	5.0-75-18 NTBK	602030-9005	20g	18	5.0	3.5	75.0	35.0
	5.0-100-18 NTBK	602030-9007	26g	18	5.0	3.5	100.0	60.0
	8.0-80-18 NTBK	600331-9097	37g	18	8.0	6.0	80.0	55.0
	8.0-100-18 NTBK	600331-9099	45g	18	8.0	6.0	100.0	60.0
	8.0-115-18 NTBK	602030-9008	52g	18	8.0	6.0	115.0	75.0
	8.0-140-18 NTBK	602030-9009	65g	18	8.0	6.0	140.0	100.0



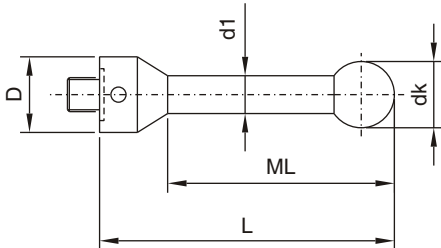
For use with static probe head with conical holding fixture.

# M5 FOR ZEISS

## M5 Thread Styli

### Styli (Type B)

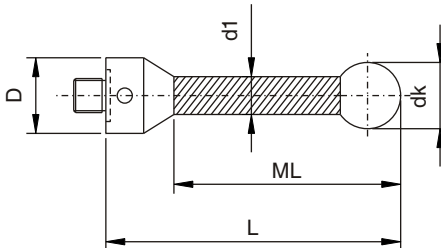
Ball: Ruby  
Shaft: Tungsten Carbide  
Ferrule: Steel



Order No.	Zeiss No.	wt	D mm	dk mm	d1 mm	L mm	ML mm
2.0-20-11 NTB	626115-020-020	6g	11	2.0	1.5	20.0	10.0
2.0-40-11 NTB	626115-0204-040	6g	11	2.0	1.5	40.0	30.0
2.5-20-11 NTB	626115-0250-020	6g	11	2.5	1.5	20.0	10.0
3.0-25-11 NTB	602030-9010	6g	11	3.0	2.0	25.0	15.0
3.0-33.5-11 NTB	600342-8020	6g	11	3.0	2.0	33.5	23.5
3.0-40-11 NTB	626115-0301-040	7g	11	3.0	2.0	40.0	30.0
3.0-50-11 NTB	602030-9011	7g	11	3.0	2.0	50.0	40.0
3.0-58-11 NTB	600342-8021	8g	11	3.0	2.0	58.0	48.0
4.0-33.5-11 NTB	600342-8025	7g	11	4.0	2.0	33.5	23.5
4.0-40-11 NTB	000000-1005-246	7g	11	4.0	2.0	40.0	30.0
4.0-50-11 NTB	626115-0402-050	8g	11	4.0	2.0	50.0	40.0
4.0-64-11 NTB	602030-9012	8g	11	4.0	2.0	64.0	54.0
5.0-40-11 NTB	626115-0500-040	11g	11	5.0	3.5	40.0	30.0
5.0-50-11 NTB	602030-9013	11g	11	5.0	3.5	50.0	40.0
5.0-53-11 NTB	600342-8022	12g	11	5.0	3.5	53.0	43.0
5.0-75-11 NTB	602030-9015	15g	11	5.0	3.5	75.0	65.0
5.0-80-11 NTB	626115-0502-080	16g	11	5.0	3.5	80.0	70.0
5.0-100-11 NTB		19g	11	5.0	3.5	100.0	90.0
6.0-54-11 NTB	600342-8026	12g	11	6.0	3.5	54.0	44.0
6.0-68-11 NTB	626115-0600-068	15g	11	6.0	3.5	68.0	58.0
7.0-55-11 NTB	600342-8027	13g	11	7.0	3.5	55.0	45.0
8.0-63.5-11 NTB	600342-8023	26g	11	8.0	6.0	63.5	50.5
8.0-74-11 NTB	602030-9014	32g	11	8.0	6.0	74.0	61.0
8.0-75-11 NTB	602030-9016	32g	11	8.0	6.0	75.0	62.0
8.0-100-11 NTB	602030-9017	42g	11	8.0	6.0	100.0	87.0
8.0-114.5-11 NTB	600342-8024	46g	11	8.0	6.0	114.5	101.5
8.0-150-11 NTB		62g	11	8.0	6.0	150.0	130.0
8.0-200-11 NTB		82g	11	8.0	6.0	200.0	180.0
9.0-64.5-11 NTB	600342-8028	27g	11	9.0	6.0	64.5	51.5
10.0-65.5-11 NTB	600342-8029	27g	11	10.0	6.0	65.5	52.5
10.0-118-11 NTB	602030-9018	49g	11	10.0	6.0	118.0	105.0
8.0-63.5-18 NTB	600342-8123	42g	18	8.0	6.0	63.5	41.5
8.0-114.5-18 NTB	600342-8124	63g	18	8.0	6.0	114.5	92.5
9.0-64.5-18 NTB	600342-8128	42g	18	9.0	6.0	64.5	42.5
10.0-65.5-18 NTB	600342-8129	43g	18	10.0	6.0	65.5	43.5

## Styli (Type K) Ceramic

Ball: Ruby  
Shaft: Ceramic  
Ferrule: Steel

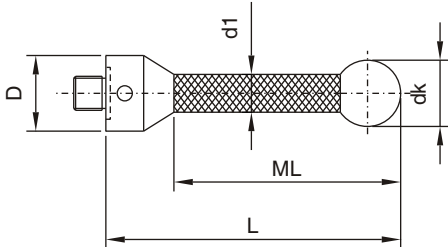


Order No.	Zeiss No.	wt	D mm	dk mm	d1 mm	L mm	ML mm
5.0-53-11 NTKE	600342-8013	7g	11	5.0	3.5	53.0	43.0
6.0-54-11 NTKE	600342-8016	7g	11	6.0	3.5	54.0	44.0
7.0-55-11 NTKE	600342-8017	8g	11	7.0	3.5	55.0	45.0
8.0-63.5-11 NTKE	600342-8014	12g	11	8.0	6.0	63.5	43.5
8.0-114.5-11 NTKE	600342-8015	18g	11	8.0	6.0	114.5	94.5
9.0-64.5-11 NTKE	600342-8018	13g	11	9.0	6.0	64.5	44.5
10.0-65.5-11 NTKE	600342-8019	13g	11	10.0	6.0	65.5	45.5
8.0-63.5-18 NTKE	600342-8114	32g	18	8.0	6.0	63.5	41.5
8.0-114.5-18 NTKE	600342-8115	38g	18	8.0	6.0	114.5	92.5
9.0-64.5-18 NTKE	600342-8118	32g	18	9.0	6.0	64.5	42.5
10.0-65.5-18 NTKE	600342-8119	33g	18	10.0	6.0	65.5	43.5

# M5 FOR ZEISS

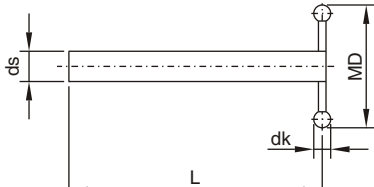
## Styli (Type CA) Carbon fiber

Ball: Ruby  
Shaft: Carbon Fiber  
Ferrule: Steel

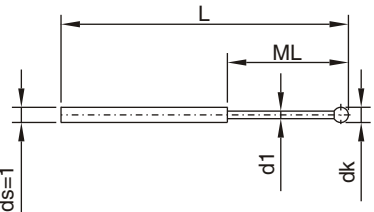


Order No.	Zeiss No.	wt	D mm	dk mm	d1 mm	L mm	ML mm
3.0-25-11 NTCA	-	4g	11	3.0	2.0	25.0	15.0
3.0-33.5-11 NTCA	-	4g	11	3.0	2.0	33.5	23.5
3.0-50-11 NTCA	-	4g	11	3.0	2.0	50.0	40.0
3.0-58-11 NTCA	-	4g	11	3.0	2.0	58.0	48.0
4.0-33.5-11 NTCA	-	5g	11	4.0	3.0	33.5	23.5
4.0-64-11 NTCA	-	5g	11	4.0	3.0	64.0	54.0
5.0-50-11 NTCA	-	6g	11	5.0	4.0	50.0	40.0
5.0-53-11 NTCA	-	6g	11	5.0	3.0	53.0	43.0
5.0-75-11 NTCA	-	6g	11	5.0	4.0	75.0	65.0
5.0-100-11 NTCA	-	6g	11	5.0	4.0	100.0	90.0
6.0-54-11 NTCA	-	6g	11	6.0	4.0	54.0	44.0
7.0-55-11 NTCA	-	7g	11	7.0	4.0	55.0	45.0
8.0-63.5-11 NTCA	-	8g	11	8.0	6.0	63.5	50.5
8.0-75-11 NTCA	-	8g	11	8.0	6.0	75.0	65.0
8.0-100-11 NTCA	-	9g	11	8.0	6.0	100.0	90.0
8.0-114.5-11 NTCA	-	11g	11	8.0	6.0	114.5	101.5
8.0-150-11 NTCA	-	12g	11	8.0	6.0	150.0	137.0
8.0-200-11 NTCA	-	13g	11	8.0	6.0	200.0	187.0
9.0-64.5-11 NTCA	-	9g	11	9.0	6.0	64.5	51.5
10.0-65.5-11 NTCA	-	9g	11	10.0	6.0	65.5	52.5
10.0-118-11 NTCA	-	11g	11	10.0	6.0	118.0	105.0
10.0-150-11 NTCA	-	12g	11	10.0	6.0	150.0	137.0
10.0-200-11 NTCA	-	13g	11	10.0	6.0	200.0	187.0
10.0-350-11 NTCA	-	27g	11	10.0	6.0	350.0	325.0
10.0-500-11 NTCA	-	34g	11	10.0	6.0	500.0	475.0
8.0-63.5-18 NTCA	-	29g	18	8.0	6.0	63.5	41.5
8.0-114.5-18 NTCA	-	31g	18	8.0	6.0	114.5	92.5
9.0-64.5-18 NTCA	-	29g	18	9.0	6.0	64.5	42.5
10.0-65.5-18 NTCA	-	30g	18	10.0	6.0	65.5	43.5

# M5 FOR ZEISS

T-Styli (Type H)	Order No.	Zeiss No.	wt	dk mm	ds mm	MD mm	L mm
Ball: Ruby Shaft: Tungsten carbide  	1.0-50-2 NTTH	-	3g	1.0	2.0	10.0	50.0
	1.0-100-2 NTTH	-	5g	1.0	2.0	10.0	100.0
	2.0-50-2 NTTH	-	3g	2.0	2.0	20.0	50.0
	2.0-100-2 NTTH	-	5g	2.0	2.0	20.0	100.0
	1.0-50-3 NTTH	-	6g	1.0	3.0	10.0	50.0
	1.0-100-3 NTTH	-	10g	1.0	3.0	10.0	100.0
	2.0-50-3 NTTH	-	6g	2.0	3.0	20.0	50.0
	2.0-100-3 NTTH	-	10g	2.0	3.0	20.0	100.0

For use with **Adaptors for styli** (Page 53).

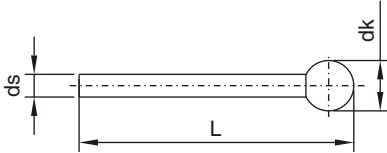
M5 Thread Styli	Order No.	Zeiss No.	wt	dk mm	d1 mm	L mm	ML mm
<b>Styli (Type F)</b>  Ball: Ruby Shaft: Tungsten carbide  	0.2-15.2-1 NTF	-	0.2g	0.2	0.15	15.2	1.5
	0.25-15.3-1 NTF	-	0.2g	0.25	0.2	15.3	2.5
	0.3-15.3-1 NTF	600341-8450	0.2g	0.3	0.2	15.3	2.5
	0.4-15.4-1 NTF	-	0.2g	0.4	0.3	15.4	2.5
	0.5-15.5-1 NTF	600341-8451	0.2g	0.5	0.3	15.5	2.5
	0.6-15.6-1 NTF	600341-8452	0.3g	0.6	0.4	15.6	4.5
	0.7-15.7-1 NTF	-	0.3g	0.7	0.4	15.7	4.5
	0.8-15.8-1 NTF	600341-8453	0.3g	0.8	0.6	15.8	4.5
	0.9-15.9-1 NTF	-	0.3g	0.9	0.6	15.9	4.5
	1.0-16-1 NTF	600341-8454	0.4g	1.0	0.8	16.0	4.5

For use with **Adaptors for styli** (Page 53).

# M5 FOR ZEISS

## Styli (Type N)

Ball: Ruby  
Shaft: Tungsten carbide



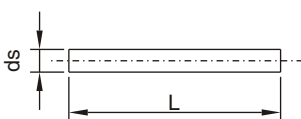
Order No.	Zeiss No.	wt	dk mm	ds mm	L mm
1.35-26.4-1 NTN	600341-8500	0.3g	1.35	1.0	26.4
1.5-26.5-1 NTN	600341-8501	0.3g	1.5	1.0	26.5
2.0-26-1 NTN	-	0.3g	2.0	1.0	26.0
2.0-27-1.5 NTN	600341-8502	0.6g	2.0	1.5	27.0
2.0-45-1 NTN	-	0.5g	2.0	1.0	45.0
2.0-61-1 NTN	-	0.7g	2.0	1.0	61.0
2.0-81-1 NTN	-	1.0g	2.0	1.0	81.0
2.0-101-1 NTN	-	1.3g	2.0	1.0	101.0
2.5-27.5-1.5 NTN	600341-8503	0.6g	2.5	1.5	27.5
3.0-26.5-1.5 NTN	-	0.7g	3.0	1.5	26.5
3.0-38-2 NTN	600341-8510	2.0g	3.0	2.0	38.0
3.0-45-1.5 NTN	-	1.0g	3.0	1.5	45.0
3.0-61.5-1.5 NTN	-	1.6g	3.0	1.5	61.5
3.0-81.5-1.5 NTN	-	2.2g	3.0	1.5	81.5
3.0-101.5-1.5 NTN	-	2.8g	3.0	1.5	101.5
4.0-27-2 NTN	-	1.3g	4.0	2.0	27.0
4.0-45-2 NTN	-	2.1g	4.0	2.0	45.0
4.0-62-2 NTN	-	2.9g	4.0	2.0	62.0
4.0-82-2 NTN	-	3.9g	4.0	2.0	82.0
4.0-102-2 NTN	-	4.9g	4.0	2.0	102.0
5.0-27.5-2 NTN	-	1.4g	5.0	2.0	27.5
5.0-42.5-2 NTN	-	2.3g	5.0	2.0	45.0
5.0-45-3 NTN	600341-8511	6.0g	5.0	3.0	45.0
5.0-62.5-2 NTN	-	3.1g	5.0	2.0	62.5
5.0-82.5-2 NTN	-	4.0g	5.0	2.0	82.5
5.0-102.5-2 NTN	-	5.0g	5.0	2.0	102.5
6.0-28-2 NTN	-	1.6g	6.0	2.0	28.0
6.0-43-2 NTN	-	2.2g	6.0	2.0	43.0
6.0-63-2 NTN	-	3.2g	6.0	2.0	63.0
6.0-73-3 NTN	-	7.5g	6.0	3.0	73.0
6.0-83-2 NTN	-	4.2g	6.0	2.0	83.0
6.0-103-2 NTN	-	4.9g	6.0	2.0	83.0
6.0-103-3 NTN	-	10.5g	6.0	3.0	103.0
8.0-29-2 NTN	-	2.0g	8.0	2.0	29.0
8.0-44-3 NTN	-	6.5g	8.0	3.0	44.0
8.0-64-2 NTN	-	3.6g	8.0	2.0	64.0
8.0-73-3 NTN	-	7.5g	8.0	3.0	73.0
8.0-84-2 NTN	-	4.5g	8.0	2.0	84.0
8.0-103-3 NTN	-	10.5g	8.0	3.0	103.0

For use with **Adaptors for styli** (Page 53).

## M5 Thread Styli

### Styli

Shaft: Tungsten carbide



Order No.	Zeiss No.	wt	ds mm	L mm
1.0-30.0 NTH	-	1g	1.0	30.0
1.0-75.0 NTH	-	1g	1.0	75.0
1.5-30.0 NTH	-	1g	1.5	30.0
1.5-75.0 NTH	-	2g	1.5	75.0
2.0-30.0 NTH	-	2g	2.0	30.0
2.0-75.0 NTH	-	4g	2.0	75.0
3.0-30.0 NTH	-	4g	3.0	30.0
3.0-75.0 NTH	-	7g	3.0	75.0

All the above for use with **Adaptors for styli** (Page 53).

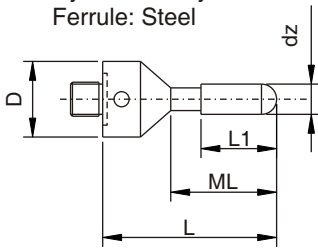
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# M5 FOR ZEISS

## Cylinder styli (Type A)

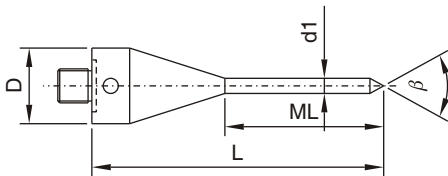
Cylinder: Ruby  
Ferrule: Steel



Order No.	Zeiss No.	wt	D mm	dz mm	L mm	ML mm	L1 mm
2.0-25-11 NZRA	-	6g	11	2.0	25.0	14.0	5.0
3.0-25-11 NZRA	-	6g	11	3.0	25.0	14.0	10.0
4.0-30-11 NZRA	-	7g	11	4.0	30.0	21.0	10.0

## Pointed styli

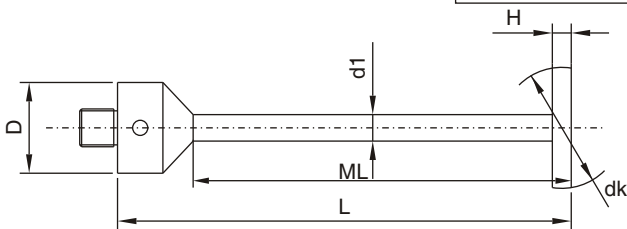
Point: Tungsten carbide  
Ferrule: Steel



Order No.	Zeiss No.	wt	D mm	d1 mm	L mm	ML mm	$\beta$
30-61-11 NTS	600342-8051	12g	11	3.5	61.0	39.0	30°

## Ball disc styli

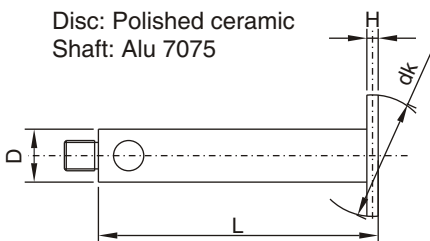
Disc: Polished ceramic  
Shaft: Alu 7075



Order No.	Zeiss No.	wt	D mm	dk mm	H mm	L mm	ML mm	d1 mm
5.0-45-11 NKSK	-	7g	11	5.0	0.5	45.0	35.0	2.0
10.0-55-11 NKSK	-	11g	11	10.0	0.8	55.0	45.0	3.0
14.0-55-11 NKSK	-	11g	11	14.0	1.0	55.0	45.0	3.0

## Ball disc styli

Disc: Polished ceramic  
Shaft: Alu 7075

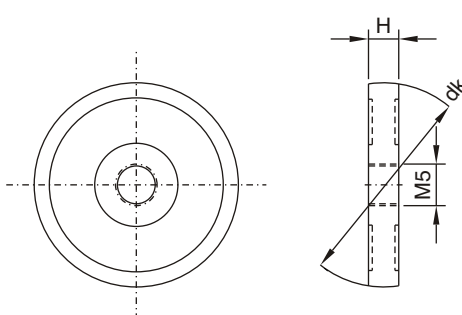


Order No.	Zeiss No.	wt	D mm	dk mm	H mm	L mm
15-40 NKSK	602030-8092	5g	7.0	15.0	1.0	40.0
20-60 NKSK	602030-8091	8g	7.0	20.0	1.0	60.0



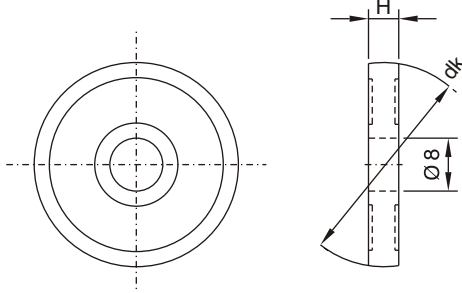
# M5 FOR ZEISS

M5 Thread Styli	Order No.	Zeiss No.	wt	dk mm	H mm
<b>Disc styli with M5 thread</b> Disc: Hardened, polished steel	10-4 NTSG	602030-0003	2g	10.0	4.0
	15-4 NTSG	602030-0004	5g	15.0	4.0
	20-4 NTSG	602030-0005	11g	20.0	4.0
	30-4 NTSG	602030-0006	22g	30.0	4.0
	40-4 NTSG	602030-0007	33g	40.0	4.0
	50-5 NTSG	602030-0008	65g	50.0	5.0
	60-6 NTSG	602030-0009	115g	60.0	6.0



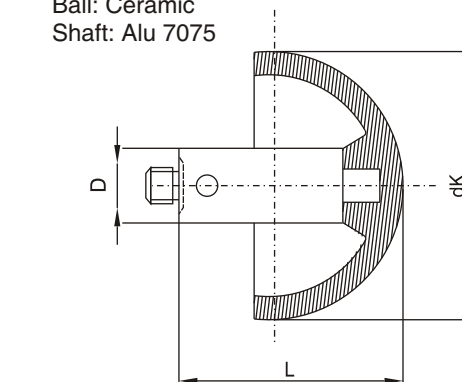
For use with **Styli with extended thread** (Page 43)  
**Oval head screw** (Page 59).

Disc styli with hole $\varnothing 8$ mm	Order No.	Zeiss No.	wt	dk mm	H mm
Disc: Hardened, polished steel	15-4 NTSA	602030-0010	4g	15.0	4.0
	20-2 NTSA	602030-0200	4g	20.0	2.0
	20-4 NTSA	602030-0011	8g	20.0	4.0
	30-4 NTSA	602030-0203	21g	30.0	4.0
	40-4 NTSA	602030-0204	32g	40.0	4.0
	50-5 NTSA	602030-0205	64g	50.0	5.0
	60-6 NTSA	602030-0206	112g	60.0	6.0

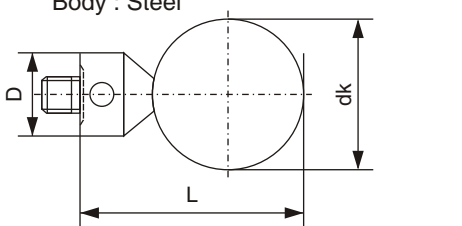


For use with **Screw for disc styli** (Page 59).

Hollow Ceramic ball styli	Order No.	Zeiss No.	wt	D	dk mm	L mm
Ball: Ceramic Shaft: Alu 7075	18.0-16-11 NHKE	-	8g	11	18.0	22.0
	24.0-19-11 NHKE	-	11g	11	24.0	27.0
	30.0-22-11 NHKE	-	14g	11	30.0	29.0



Ceramic ball styli	Order No.	Zeiss No.	wt	D mm	dk mm	L mm
Ball : Ceramic Body : Steel	12.0-28-11 NKE	-	12g	11	12.0	28.0
	14.0-28-11 NKE	-	14g	11	14.0	28.0
	15.0-28-11 NKE	-	15g	11	15.0	28.0
	16.0-28-11 NKE	-	16g	11	16.0	28.0
	18.0-28-11 NKE	-	20g	11	18.0	28.0
	20.0-33-11 NKE	-	24g	11	20.0	33.0
	24.0-37-11 NKE	-	36g	11	24.0	37.0
	30.0-43-11 NKE	-	62g	11	30.0	43.0

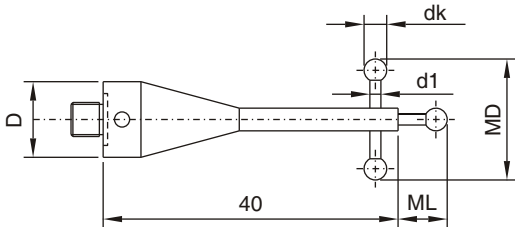


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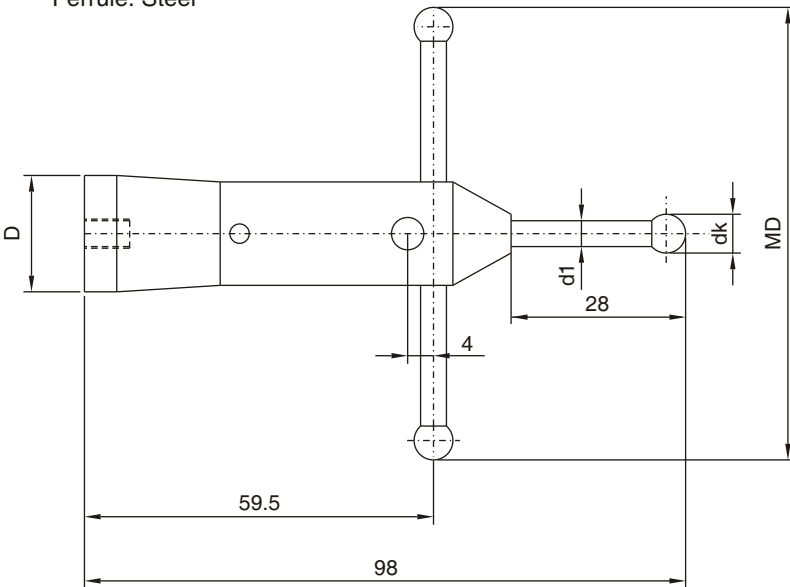
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# M5 FOR ZEISS

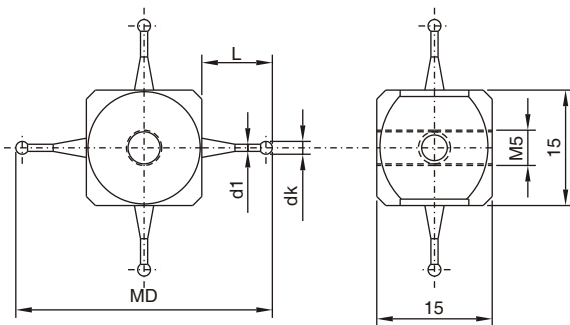
M5 Thread Styli	Order No.	Zeiss No.	wt	D mm	dk mm	d1 mm	MD mm	ML mm
<b>Styli for thread measuring</b> Ball: Ruby Shaft: Tungsten carbide Ferrule: Steel	0.5-40-11 NSTG	602030-9074	7g	11	0.5	0.4	3.5	1.9
	0.8-40-11 NSTG	602030-9073	7g	11	0.8	0.6	5.0	1.9
	1.35-40-11 NSTG	603030-9070	11g	11	1.35	1.05	9.0	2.0
	1.8-40-11 NSTG	602030-9072	12g	11	1.8	1.44	10.0	2.0
	2.3-40-11 NSTG	602030-9071	13g	11	2.3	1.84	12.0	2.5



Star Styli	Order No.	Zeiss No.	wt	D mm	dk mm	d1 mm	MD mm
Ball: Ruby Shaft: Tungsten carbide Ferrule: Steel	5.0-80-19 NST	600331-8093	65.1g	19	5.0	3.5	80.0



Cube stars	Order No.	Zeiss No.	wt	dk mm	d1 mm	MD mm	L mm
Ball: Ruby Cube: Alu 7075	1.0-45 NWST	602030-9024	10g	1.0	0.7	45.0	15.0
	1.5-45 NWST	602030-9025	10g	1.5	1.1	45.0	15.0
	2.0-45 NWST	602030-9026	11g	2.0	1.5	45.0	15.0
	2.5-45 NWST	602030-9027	11g	2.5	1.8	45.0	15.0
	3.5-45 NWST	602030-9028	12g	3.5	2.2	45.0	15.0



M3 thread styli can be replaced in case of damage

Replacement M3 thread styli:

1.0-15-3 NTC	-	1g	1.0	0.7		15.0
1.5-15-3 NTC	-	1g	1.5	1.1		15.0
2.0-15-3 NTC	-	1g	2.0	1.5		15.0
2.5-15-3 NTC	-	1g	2.5	1.8		15.0
3.5-15-3 NTC	-	1g	3.5	2.2		15.0

Replacement cube see Page 56.

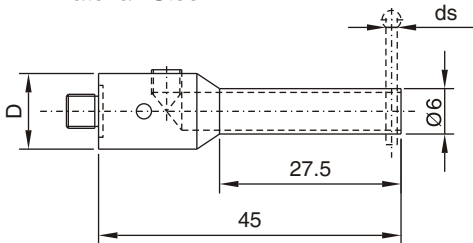
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# M5 FOR ZEISS

M5 Thread Styli	Order No.	Zeiss No.	wt	D mm	ds mm
<b>Adaptor for Styli</b>	1.0-45-11 NHT	600341-8160	16g	11	1-1.5

Material: Steel

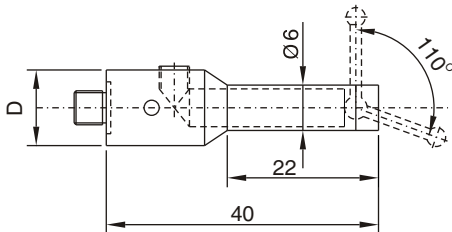
For use with **Styli (Type F)**, (**Type N**) with  $ds = 1 \dots 1.5$ mm (Pages 47 & 48).



<b>Adaptor for styli swiveling</b>	Order No.	Zeiss No.	wt	D mm
Material: Steel	1.0-40-11 NHTS	600341-8180	15g	11

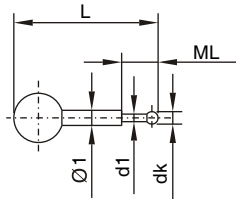
Material: Steel

For use with **Styli (Type S)**.



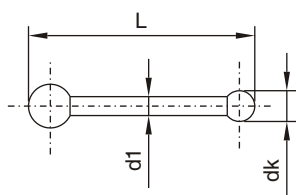
<b>Styli (Type S)</b>	Order No.	Zeiss No.	wt	dk mm	d1 mm	L mm	ML mm
Ball: Ruby Shaft: Tungsten carbide	1.0-17.5 NTES	600341-8183	1g	1.0	0.8	17.5	5.0

Use only with **Adaptor for styli swiveling**.



<b>Styli (Type S)</b>	Order No.	Zeiss No.	wt	dk mm	d1 mm	L mm
Ball: Ruby Shaft: Tungsten carbide	2.0-28.5 NTES	600341-8185	1g	2.0	1.5	28.5

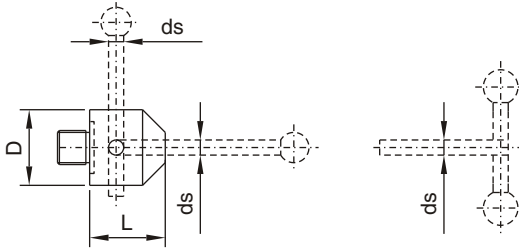
Use only with **Adaptor for styli swiveling**.



# M5 FOR ZEISS

## M5 Thread Styli Adaptors for styli (for max. 5 styli)

Material: Steel

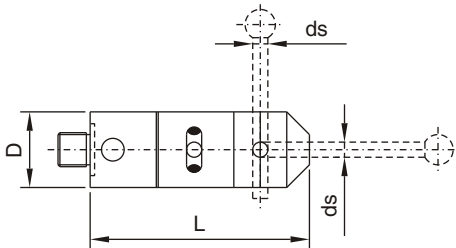


Order No.	Zeiss No.	wt	D mm	ds mm	L mm
1.0-10-11 NHT	600341-8367	6g	11	1.0	10.0
1.5-10-11 NHT	600341-8368	6g	11	1.5	10.0
2.0-10-11 NHT	-	6g	11	2.0	10.0

For use with **Styli (Type F)**, **T-Styli (Type H)**, (Page 47),  
**(Type N)** (Page 48).

## Adaptors for styli rotary (for max. 5 styli)

Material: Steel



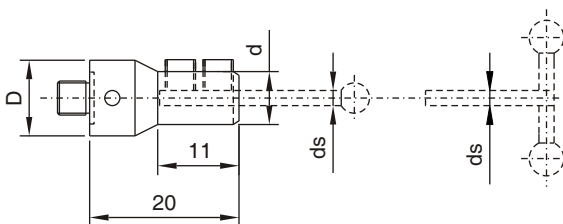
Order No.	Zeiss No.	wt	D mm	ds mm	L mm
1.0-32-11 NHTD	-	15g	11	1.0	32.0
1.5-32-11 NHTD	-	15g	11	1.5	32.0
2.0-32-11 NHTD	-	15g	11	2.0	32.0

For use with **Styli (Type F)**, **T-Styli (Type H)**, (Page 47),  
**(Type N)** (Page 48).

A built-in rotating adaptor allows stylus positioning

## Adaptors for styli

Material: Steel

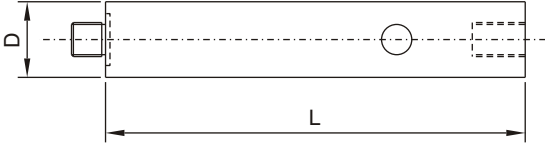


Order No.	Zeiss No.	wt	D mm	ds mm	d mm
1.0-20-11 NHT	-	9g	11	1.0	6.0
1.5-20-11 NHT	-	9g	11	1.5	7.0
2.0-20-11 NHT	-	9g	11	2.0	7.0
3.0-20-11 NHT	-	9g	11	3.0	8.0

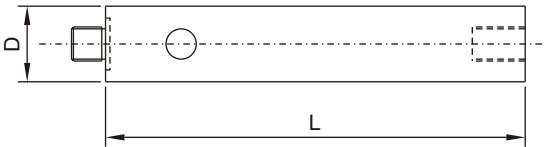
For use with **Styli (Type F)**, **T-Styli (Type H)**, (Page 47),  
**(Type N)** (Page 48).

# M5 FOR ZEISS

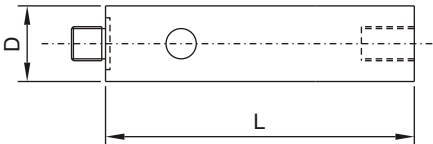
M5 Thread Styli	Order No.	Zeiss No.	wt	D mm	L mm
<b>Extensions, Standard Aluminium</b> Solid Material (Steel thread)	25-11 NVAL	-	6g	11	25.0
	40-11 NVAL	600341-8261	10g	11	40.0
	50-11 NVAL	-	13g	11	50.0
	60-11 NVAL	600341-8262	15g	11	60.0
	80-11 NVAL	600341-8263	20g	11	80.0
	100-11 NVAL	600341-8264	25g	11	100.0
	120-11 NVAL	600341-8265	30g	11	120.0



Extensions, Steel	Order No.	Zeiss No.	wt	D mm	L mm
Solid Material	10-11 NVST	600341-0250	6g	11	10.0
	15-11 NVST	600341-0251	10g	11	15.0
	20-11 NVST	600341-0252	13g	11	20.0
	25-11 NVST	-	17g	11	25.0
	40-11 NVST	600341-0254	28g	11	40.0
	60-11 NVST	600341-0256	42g	11	60.0
	80-11 NVST	600341-0258	56g	11	80.0
	100-11 NVST	600341-0260	70g	11	100.0



Extensions, Alu 7075	Order No.	Zeiss No.	wt	D mm	L mm
Solid Material	10-11 NVPE	-	2g	11	10.0
	15-11 NVPE	-	3g	11	15.0
	20-11 NVPE	-	5g	11	20.0
	25-11 NVPE	-	6g	11	25.0
	40-11 NVPE	-	10g	11	40.0
	50-11 NVPE	-	13g	11	50.0
	15-18 NVPE	-	10g	18	15.0
	25-18 NVPE	-	17g	18	25.0
	40-18 NVPE	-	28g	18	40.0
	50-18 NVPE	-	35g	18	50.0

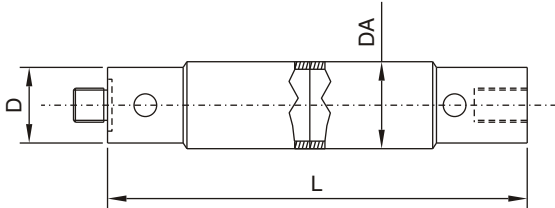


# M5 FOR ZEISS

## M5 Thread Styli

### Extensions, Light-weight Alu 7075

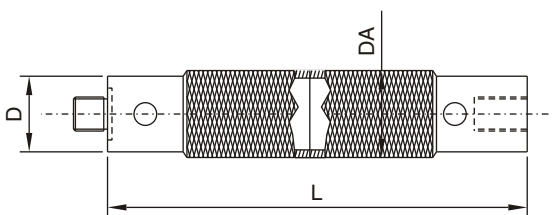
Tube material



Order No.	Zeiss No.	wt	D mm	DA mm	L mm
60-11 NVPE	-	11g	11	12.0	60.0
75-11 NVPE	-	12g	11	12.0	75.0
80-11 NVPE	-	13g	11	12.0	80.0
90-11 NVPE	-	14g	11	12.0	90.0
100-11 NVPE	-	15g	11	12.0	100.0
120-11 NVPE	-	16g	11	12.0	120.0
150-11 NVPE	-	19g	11	12.0	150.0
200-11 NVPE	-	23g	11	12.0	200.0
60-18 NVPE	-	31g	18	20.0	60.0
75-18 NVPE	-	36g	18	20.0	75.0
80-18 NVPE	-	37g	18	20.0	80.0
90-18 NVPE	-	40g	18	20.0	90.0
100-18 NVPE	-	42g	18	20.0	100.0
120-18 NVPE	-	49g	18	20.0	120.0
150-18 NVPE	-	58g	18	20.0	150.0
200-18 NVPE	-	73g	18	20.0	200.0
250-18 NVPE	-	89g	18	20.0	250.0
300-18 NVPE	-	103g	18	20.0	300.0

## Extensions, Light-weight Carbon Fiber

Tube material

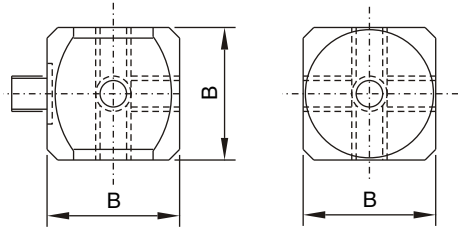


Order No.	Zeiss No.	wt	D mm	DA mm	L mm
40-11 NVCA	602030-0263	6.8g	11	12.0	40.0
50-11 NVCA	602030-0264	8.4g	11	12.0	50.0
60-11 NVCA	602030-0262	9g	11	12.0	60.0
75-11 NVCA	602030-0265	10g	11	12.0	75.0
80-11 NVCA	602030-0261	10g	11	12.0	80.0
90-11 NVCA	602030-0266	10g	11	12.0	90.0
100-11 NVCA	602030-0267	11g	11	12.0	100.0
120-11 NVCA	602030-0259	12g	11	12.0	120.0
150-11 NVCA	602030-0268	13g	11	12.0	150.0
160-11 NVCA	602030-0270	14g	11	12.0	160.0
200-11 NVCA	602030-0275	16g	11	12.0	200.0
210-11 NVCA	602030-0271	17g	11	12.0	210.0
250-11 NVCA	-	19g	11	12.0	250.0
300-11 NVCA	-	22g	11	12.0	300.0
400-11 NVCA	-	28g	11	12.0	400.0
50-18 NVCA	-	23g	18	20.0	50.0
60-18 NVCA	602030-0294	24g	18	20.0	60.0
80-18 NVCA	602030-0293	27g	18	20.0	80.0
100-18 NVCA	602030-0292	30g	18	20.0	100.0
120-18 NVCA	-	33g	18	20.0	120.0
150-18 NVCA	602030-0291	36g	18	20.0	150.0
200-18 NVCA	602030-0290	43g	18	20.0	200.0
250-18 NVCA	602030-0274	50g	18	20.0	250.0
300-18 NVCA	602030-0269	57g	18	20.0	300.0
400-18 NVCA	-	72g	18	20.0	400.0
500-18 NVCA	-	87g	18	20.0	500.0
600-18 NVCA	-	102g	18	20.0	600.0

# M5 FOR ZEISS

M5 Thread Styli	Order No.	Zeiss No.	wt	B mm
<b>Cubes M5</b>	15-15 NWA	602030-8363	8g	15
	20-20 NWA	602030-8362	20g	20

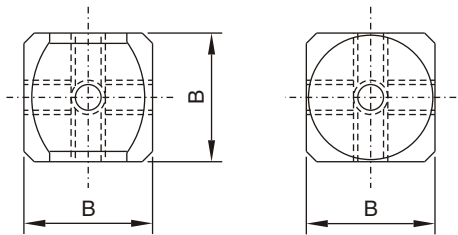
Material: Alu 7075



For use with **M5 thread components**.

For use with **Screw for cube** (Page 59).

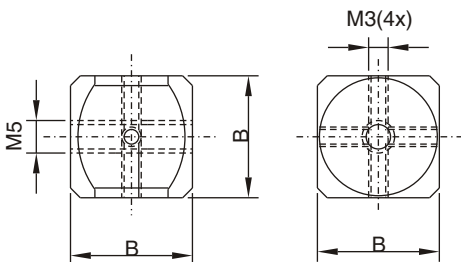
<b>Cubes M5</b>	Order No.	Zeiss No.	wt	B mm
Material: Alu 7075	15-15 NWB	-	7g	15
	20-20 NWB	-	19g	20



For use with **M5 thread components**.

For use with **Screw for cube** (Page 59).

<b>Cubes M5 / M3</b>	Order No.	Zeiss No.	wt	B mm
Material: Alu 7075	15-15 NWST	-	8g	15
	20-20 NWST	-	20g	20



For use with **M3 thread styli** (e.g. cube stars, Page 51).

For use with **Screw for cube** (Page 59).

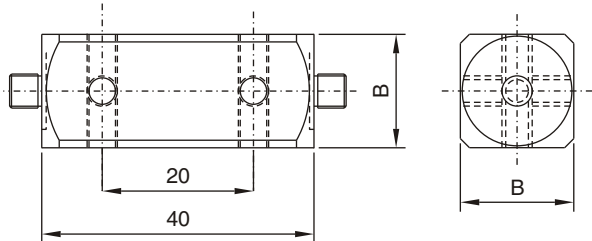
# M5 FOR ZEISS

M5 Thread Styli	Order No.	Zeiss No.	wt	B mm
<b>Double cubes M5</b>	20-20 NDW	600342-8103	40g	20

Material: Alu 7075

For use with **M5 thread components**.

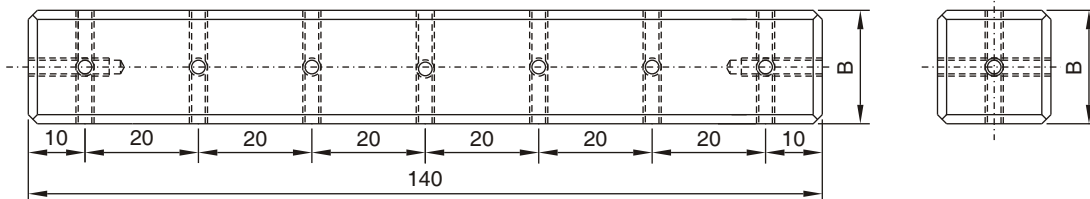
For use with **Screw for cube** (Page 59).



<b>Cube extensions M5</b>	Order No.	Zeiss No.	wt	B mm
Material: Alu 7075	20-20 NMW	-	144g	20

For use with **M5 thread components**.

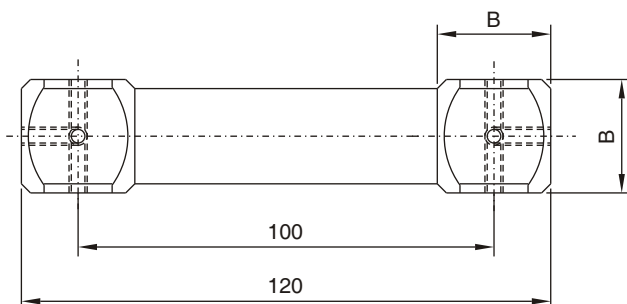
For use with **Screw for cube** (Page 59).



<b>Cube extensions M5</b>	Order No.	Zeiss No.	wt	B mm
Material: Alu 7075	20-20 NWV	602030-0019	55g	20

For use with **M5 thread components**.

For use with **Screw for cube** (Page 59).

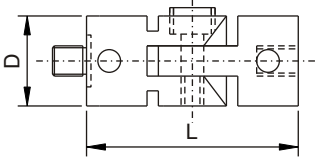




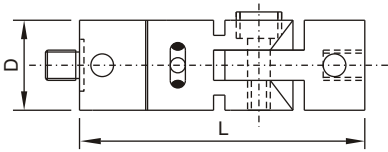
# M5 FOR ZEISS

M5 Thread Styli	Order No.	Zeiss No.	wt	D mm	L mm
<b>Knuckle joints</b>	30-11 NGA	600342-9002	7g	11	30.0
	36-18 NGA	600342-9003	24g	18	36.0

Material: Alu 7075

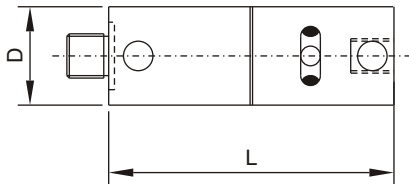


Knuckle joints rotary	Order No.	Zeiss No.	wt	D mm	L mm
Material: Alu 7075	43-11 NGD	-	13g	11	43.0
	55-18 NGD	-	38g	18	55.0



A built-in rotating adaptor allows stylus positioning.

Rotating adaptor	Order No.	Zeiss No.	wt	D mm	L mm
Material: Alu 7075	25-11 NDSP	602030-8358	9g	11	25.0
	25-18 NDSP	602030-8356	21g	18	25.0

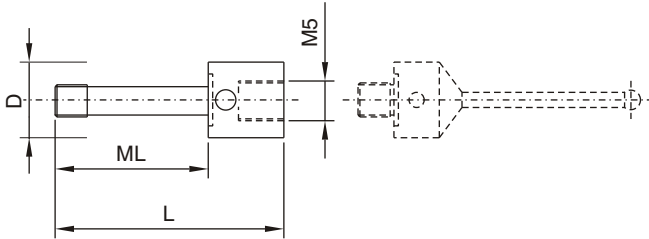


Rotating adaptor allows stylus positioning.

# M5 FOR ZEISS

M5 Thread Styli	Order No.	Zeiss No.	wt	D mm	L mm	ML mm
<b>Screw for cube</b>	5-20 NSWA	-	3g	11	31.0	20.0
	5-25 NSWA	-	3g	11	36.0	25.0

Material: Alu 7075



For cubes with **Cubes M5** (Page 56+57)

**M5 thread styli.**

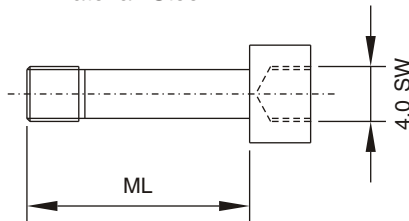
Please Note:

**ML=20** fits to **Cube M5** with B=15

**ML=25** fits to **Cube M5** with B=20

The **Screw for cube** allows to position the cube.

<b>Screw for cube</b>	Order No.	Zeiss No.	wt	ML mm	
Material: Steel	5-20 NSWB	600341-0221	3g	20.0	
	5-25 NSWB	600341-0220	4g	25.0	



For cubes with **Cubes M5** (Page 56+57)

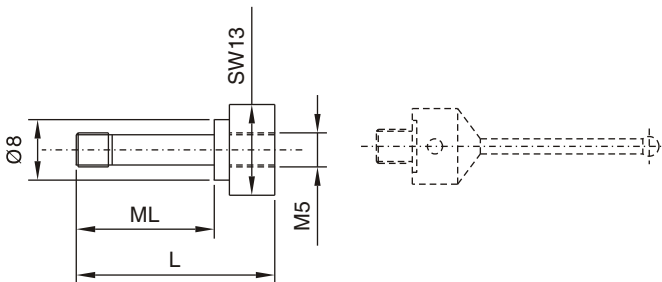
Please Note:

**ML=20** fits to **Cube M5** with B=15

**ML=25** fits to **Cube M5** with B=20

The **Screw for cube** allows to position the cube.

<b>Screw for disc styli</b>	Order No.	Zeiss No.	wt	L mm	ML mm	
Material: Steel	5-15.5 NST	600341-0212	7g	15.5	8.0	
	5-30 NST	600341-0211	9g	30.0	21.0	
	5-35 NST	600341-0210	9g	35.0	26.0	



For use with **Disc styli with hole Ø 8 mm** (Page 50)

Together with **Cube M5** (Page 56+57).

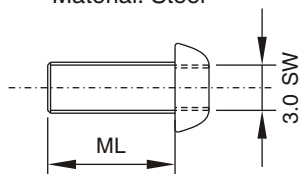
Please Note:

**ML=8** fits to **Extension M5**

**ML=21** fits to **Cube M5** with B=15

**ML=26** fits to **Cube M5** with B=20

<b>Oval head screw</b>	Order No.	Zeiss No.	wt	ML mm	
Material: Steel	5-10 NSL	-	2g	10.0	
	5-12 NSL	-	2g	12.0	

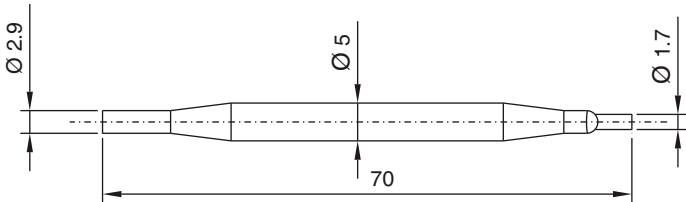


For use with **Disc styli with M5 thread** (Page 50).

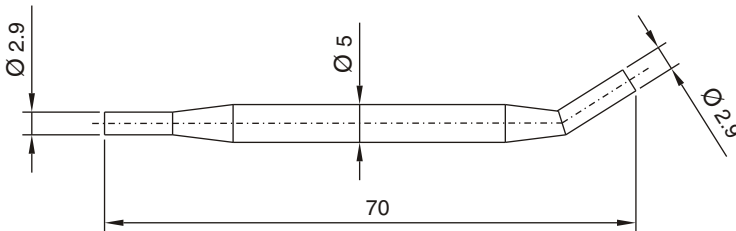
# M5 TOOLS FOR ZEISS

Tools for M5 thread styli	Order No.	Zeiss No.	Description
<b>Pin key</b>	1.7 NWST	602030-0027	Ø 1.7 mm for rotating adaptors D=11
	2.9 NWST	602030-0222	Ø 2.9 mm for M5 thread components
	1.7-2.9 NWST	600341-8596	1X Ø 1.7mm, 1X Ø 2.9 mm

## 1.7 - 2.9 NWST



## 2.9 NWST



Hexagon key	Order No.	Zeiss No.	Description
	0.9 NWSK	-	SW 0.9mm for M2 screws
	1.5 NWSK	-	SW 1.5mm for M3 screws
	2.0 NWSK	-	SW 2.0mm for M4 screws
	2.5 NWSK	-	SW 2.5mm for M3 cylinder screws
	3.0 NWSK	-	SW 3.0mm for M5 oval head screws
	4.0 NWSK	-	SW 4.0mm for M5 cylinder screws

# M5 SETS FOR ZEISS

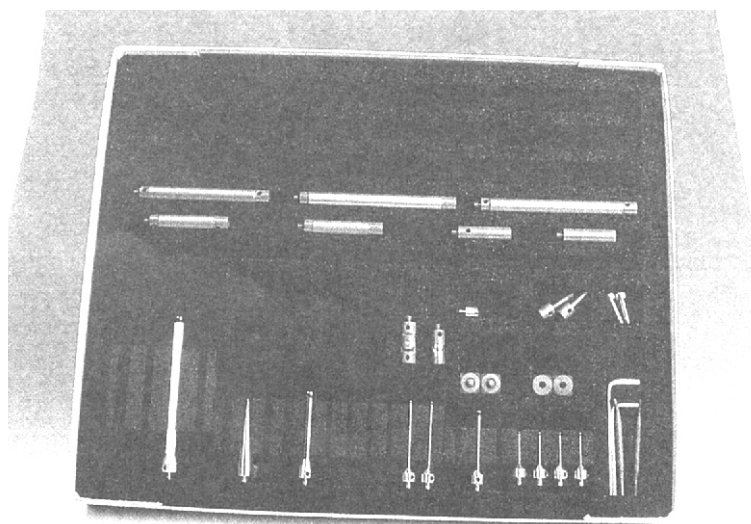
M5 thread styli	Order No.	Contents	
<b>M5 thread stylus set (Standard)</b>	30-11 NTBST	30 Parts	

Styli and accessories are available in stylus sets. This standard set is stocked with the most common styli and accessories needed to perform simple measurements successfully.

The empty spaces offer the possibility of enlarging your set at any time with the components needed for even the most specialized measurement needs.

Your stylus set is protected from dust and damage in a generously sized foam case with a cover.

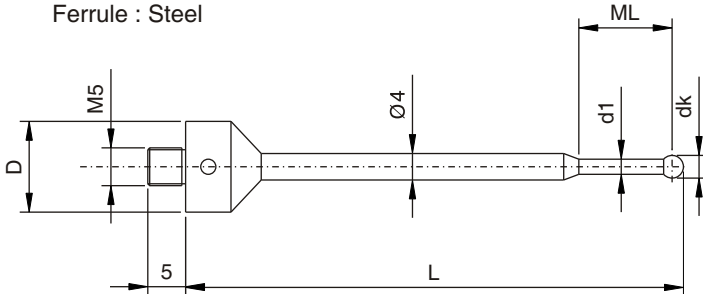
Supplied Equipment:			Drawing
4 Pc	Stylus	3.0-33.5-11 NTB	Page 45
2 Pc	Stylus	3.0-58-11 NTB	Page 45
1 Pc	Stylus	5.0-53-11 NTB	Page 45
1 Pc	Stylus	8.0-63.5-11 NTB	Page 45
1 Pc	Stylus	8.0 - 114.5 - 11 NTKE	Page 45
1 Pc	Stylus	2.0-55-11 NTF	Page 44
1 Pc	Stylus	1.5-26.5-1 NTN	Page 48
1 Pc	Adaptor for styli	1.0-10-11 NHT	Page 53
1 Pc	Rotating adaptor	25-11 NDSP	Page 58
2 Pc	Cube	15-15 NWA	Page 56
2 Pc	Cube	15-15 NWB	Page 56
1 Pc	Knuckle joint	30-11 NGA	Page 58
2 Pc	Screw for cube	5-20 NSWA	Page 59
2 Pc	Screw for cube	5-20 NSWB	Page 59
2 Pc	Extension	40-11 NVPE	Page 54
2 Pc	Extension	60-11 NVPE	Page 55
1 Pc	Extension	100-11 NVPE	Page 55
2 Pc	Extension	120-11 NVPE	Page 55
1 Pc	Pin key set	1.7-2.9 NWST	Page 60



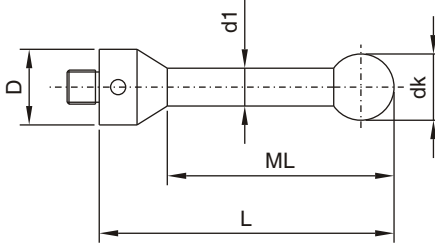
# M5 FOR LEITZ

M5 Thread Styli	Order No.	Leitz No.	wt	D mm	dk mm	d1 mm	L mm	ML mm
<b>Styli (Type BA)</b>	2.0-41-12 NTBA	060-694.150-015	7.2g	12	2.0	1.5	41.0	16.0
	2.0-67-12 NTBA	060-694.150-006	11.0g	12	2.0	1.5	67.0	16.0

Ball: Ruby  
Shaft: Tungsten carbide  
Ferrule : Steel

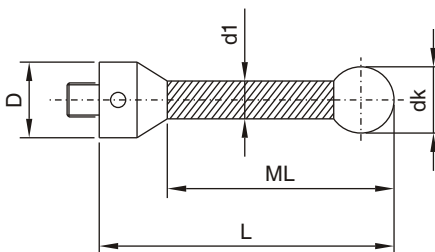


Styli (Type B)	Order No.	Leitz No.	wt	D mm	dk mm	d1 mm	L mm	ML mm
Ball: Ruby Shaft: Tungsten carbide Ferrule : Steel	1.5-28.7-12 NTB	M00-694.150-016	9.0g	12	1.5	1.0	28.7	7.7
	1.5-40.7-12 NTB	060-694.150-010	10.0g	12	1.5	1.0	40.7	19.7
	2.0-31-12 NTB	060-694.150-007	7.3g	12	2.0	1.5	31.0	20.0
	2.0-36-12 NTB	060-694.150-008	7.5g	12	2.0	1.5	36.0	25.0
	2.0-42-12 NTB	060-694.150-013	7.6g	12	2.0	1.5	42.0	31.0
	2.0-61-12 NTB	060-694.150-012	11.1g	12	2.0	1.5	61.0	41.0
	3.0-36.5-12 NTB	060-694.050-000	8.0g	12	3.0	2.0	36.5	25.5
	3.0-51.5-12 NTB	060-694.051-000	8.7g	12	3.0	2.0	51.5	40.5
	3.5-92.7-12 NTB	060-694.150-005	15.5g	12	3.5	3.0	92.7	81.7
	4.0-57-12 NTB	M00-694.150-017	11.8g	12	4.0	3.0	57.0	46.0
	4.0-82-12 NTB	M00-694.150-018	15.0g	12	4.0	2.5	82.0	71.0
	5.0-62.5-12 NTB	060-694.053-000	16.0g	12	5.0	3.5	62.5	51.5
	5.0-82.5-12 NTB	060-694.054-000	16.9g	12	5.0	3.5	82.5	71.5
	8.0-94-12 NTB	060-694.056-000	43.7g	12	8.0	6.0	94.0	78.0
	8.0-129-12 NTB	060-694.057-000	57.7g	12	8.0	6.0	129.0	113.0
	8.0-180-12 NTB	060-694.150-014	78.3g	12	8.0	6.0	180.0	164.0

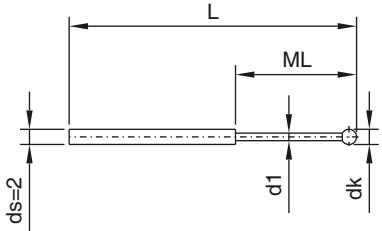


Styli (Type K) Ceramic	Order No.	Leitz No.	wt	D mm	dk mm	d1 mm	L mm	ML mm
Ball: Ruby Shaft: Ceramic Ferrule : Steel	8.0-94-12 NTKE	060-813.042-000	17.0g	12	8.0	6.0	94.0	78.0
	8.0-129-12 NTKE	060-813.041-000	25.4g	12	8.0	6.0	129.0	113.0
	* 15.0-97.5-12 NTKE	M00-694.186-000	26.3g	12	15.0	6.0	97.5	81.5

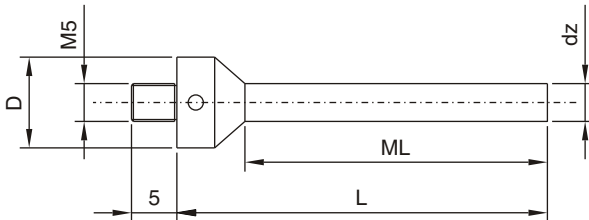
\* Ball supplied is Ceramic.



# M5 FOR LEITZ

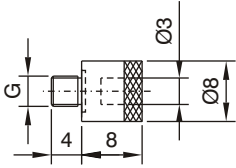
M5 Thread Styli	Order No.	Leitz No.	wt	dk mm	d1 mm	L mm	ML mm
<b>Styli (Type F)</b> Ball: Ruby Shaft: Tungsten carbide 	0.3-15.3-2 NTF	M40-021.810-001	0.5g	0.3	0.2	15.3	2.5
	0.5-15.5-2 NTF	M40-021.810-002	0.5g	0.5	0.3	15.5	2.5
	0.5-22.3-2 NTF	-	0.6g	0.5	0.3	22.3	4.3
	0.6-15.6-2 NTF	M40-021.810-003	0.5g	0.6	0.4	15.6	4.5
	0.8-15.8-2 NTF	M40-021.810-004	0.5g	0.8	0.6	15.8	4.5
	0.8-22.4-2 NTF		0.6g	0.8	0.6	22.4	4.4
	1.0-16-2 NTF	M40-021.810-005	0.5g	1.0	0.8	16.0	4.5
	1.0-22.5-2 NTF	M00-694.062-005	0.6g	1.0	0.8	22.5	4.5
	1.0-34.2-2 NTF	060-694.151-007	0.6g	1.0	0.8	34.2	14.2
	1.0-34.5-2 NTF	060-694.151-009	0.6g	1.0	0.8	34.5	14.5
	1.5-22.7-2 NTF	060-694.066-000	0.7g	1.5	1.2	22.7	10.3
	1.8-46.9-2 NTF	060-694.151-005	1.8g	1.8	1.5	46.9	40.9
	2.0-23-2 NTF	060-694.065-000	0.8g	2.0	1.5	23.0	10.6
	* 4.0-34.5-2 NTF	060-694.151-006	1.2g	4.0	2.0	34.5	34.5

\* Tungsten Carbide flattened ball  
 For use with adaptor for styli (page 53).

Cylinder styli	Order No.	Leitz No.	wt	D mm	dz mm	L mm	ML mm
Cylinder: Tungsten carbide Ferrule : Steel 	3.0-50-12 NZTH	060-694.152-008	11.2g	12	3.0	50.0	39.0
	5.0-50-12 NZTH	060-694.152-009	18.0g	12	5.0	50.0	39.0

# THREAD-INSERTS

Thread positioning inserts	Order No.	Thread G	Pitch mm	Material
<b>Type A</b>	2.0-0.4 NGP	M2	0.4	Steel
	2.5-0.45 NGP	M2.5	0.45	Steel
	3.0-0.5 NGP	M3	0.5	Steel
	4.0-0.7 NGP	M4	0.7	Steel



Type B	Order No.	Thread G	Pitch mm	Material
	5.0-0.8 NGP	M5	0.8	Steel
	6.0-1.0 NGP	M6	1.0	Steel
	7.0-1.0 NGP	M7	1.0	Steel
	8.0-1.25 NGP	M8	1.25	Steel
	9.0-1.25 NGP	M9	1.25	Steel
	10.0-1.5 NGP	M10	1.5	Steel

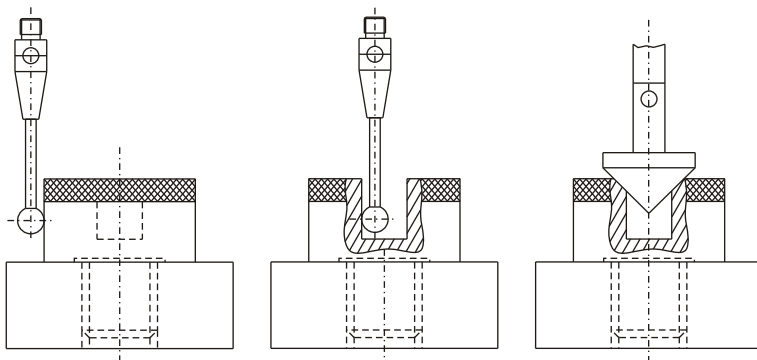
Type C	Order No.	Thread G	Pitch mm	Material
	11.0-1.5 NGP	M11	1.5	Steel
	12.0-1.75 NGP	M12	1.75	Steel
	14.0-2.0 NGP	M14	2.0	Steel
	16.0-2.0 NGP	M16	2.0	Steel

Type D	Order No.	Thread G	Pitch mm	Material
	18.0-2.5 NGP	M18	2.5	Steel
	20.0-2.5 NGP	M20	2.5	Steel
	24.0-3.0 NGP	M24	3.0	Steel

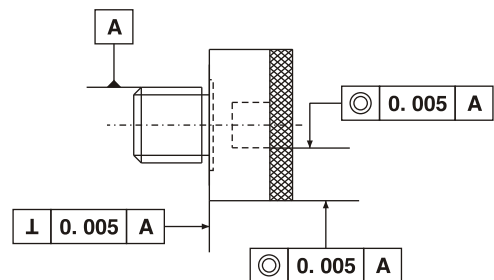
Thread positioning inserts for accurate position measuring of tapped holes.

The following thread types are also available:  
**ISO M, ISO MF, Wwh, G, UNC, UNF, Helicoil**  
 Please enquire for details.

## Thread positioning inserts applications



## Tolerances



INDO SERVICES

TEL : +91 80 23406723, +91 80 23377556, MOBILE : +91 94482 89260, +91 94482 89262, E-mail : info@indoservices.net

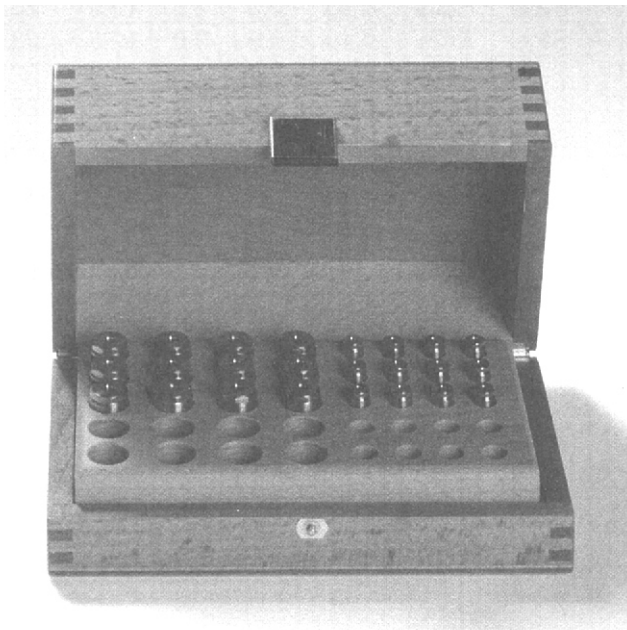
# THREAD-INSERTS SETS

Thread positioning inserts	Order No.	Type	Description
<b>Thread positioning insert sets</b>	2-10 NGSA	A	Thread positioning insert sets M2-M10
	12-24 NGSB	B	Thread positioning insert sets M12-M24

Delivery in a wooden case.

Thread positioning inserts are very useful for accurate position measuring of tapped holes. The wide range of inserts in the sets enable you to fast and precisely determine the position of the most commonly used thread sizes. Special sets with practically all types of thread can be custom-made to suit your requirements.

Your thread positioning inserts are protected from dust and damage in a generously sized wooden case.



Type A



Type B

Set (Type A) contains:			Draw.:
3 Pc	M2	2.0-0.4 NGP	Page 64
3 Pc	M2.5	2.5-0.45 NGP	Page 64
3 Pc	M3	3.0-0.5 NGP	Page 64
3 Pc	M4	4.0-0.7 NGP	Page 64
3 Pc	M5	5.0-0.8 NGP	Page 64
3 Pc	M6	6.0-1.0 NGP	Page 64
3 Pc	M8	8.0-1.25 NGP	Page 64
3 Pc	M10	10.0-1.5 NGP	Page 64

Set (Type B) contains:			Draw.:
3 Pc	M12	12.0-1.75 NGP	Page 64
3 Pc	M16	16.0-2.0 NGP	Page 64
3 Pc	M20	20.0-2.5 NGP	Page 64
3 Pc	M24	24.0-3.0 NGP	Page 64



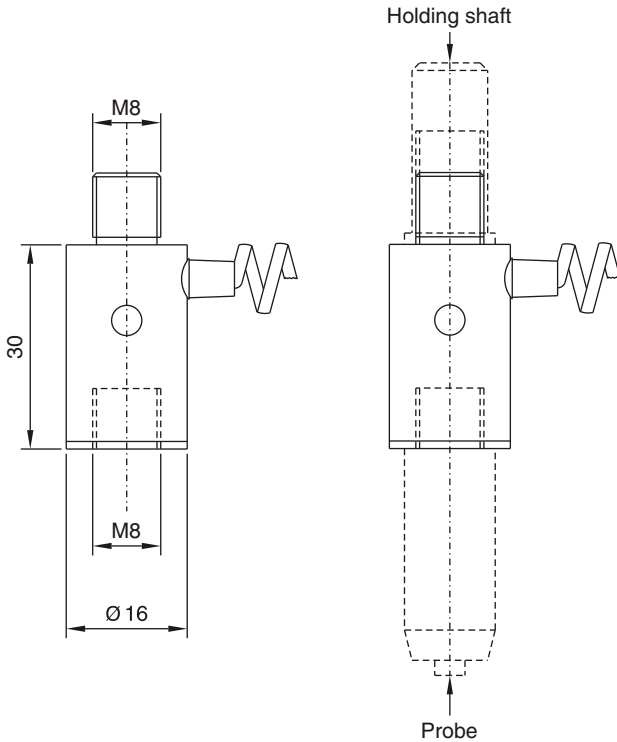
# PROBE HEADS

Probe heads and accessories	Order No.	Cable range
<b>Probe head NTK 16</b>	100 NTK-16	100-300 mm

For use with **Renishaw Probe (TP2,TP6,TP20,TP200)**

The **NTK 16** is a vertical probe head for reliable Fixation of the probe. Its compact and small construction assures greatest possible freedom of movement in the measuring space.

Please order the **Holding shaft** of your choice as listed below.



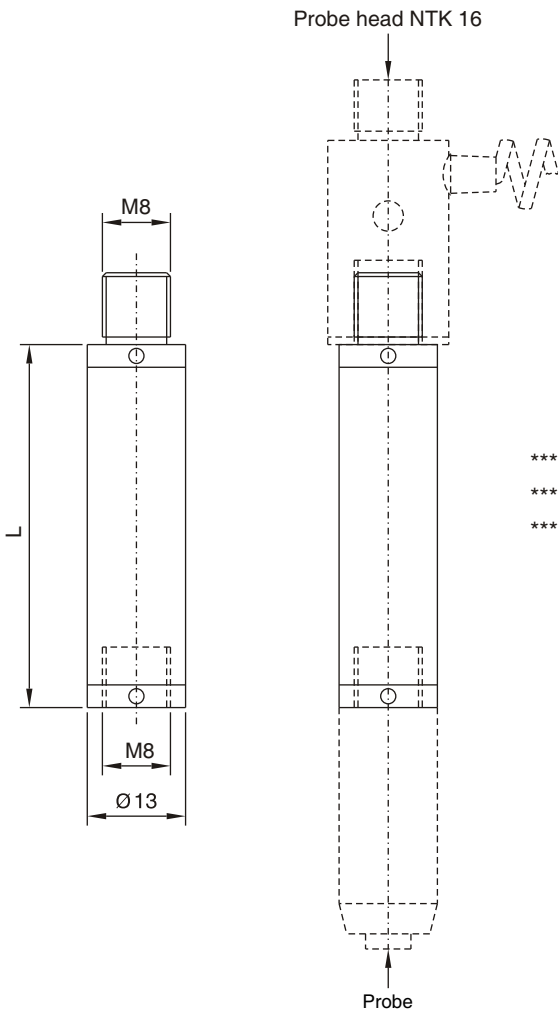
Holding shafts for NTK 16		Order No.	Type	Material	ds mm	D mm	L mm
	9.5-25.4 NASA	A	Steel	9.5	-	25.4	
	9.5-43.9 NASA	A	Steel	9.5	-	43.9	
	10.0-36.7 NASA	A	Steel	10.0	-	36.7	
	10.0-45.6 NASA	A	Steel	10.0	-	45.6	
	12.0-50.0 NASB	B	Steel	12.0	22.0	50.0	
	12.7-31.7 NASB	B	Steel	12.7	22.0	31.7	
	12.7-38.1 NASB	B	Steel	12.7	22.0	38.1	
	14.0-40.0 NASB	B	Steel	14.0	22.0	40.0	
	14.0-50.0 NASB	B	Steel	14.0	22.0	50.0	
	15.0-26.0 NASB	B	Steel	15.0	22.0	26.0	
	15.0-56.0 NASB	B	Steel	15.0	22.0	56.0	
	16.0-35.0 NASB	B	Steel	16.0	22.0	35.0	
	20.0-25.0 NASB	B	Steel	20.0	33.0	25.0	
	20.0-45.0 NASB	B	Steel	20.0	33.0	45.0	
	25.0-32.0 NASB	B	Steel	25.0	33.0	32.0	
	25.0-50.8 NASB	B	Steel	25.0	33.0	50.8	
25.0-85.0 NASB	B	Steel	25.0	33.0	85.0		

For use with **Probe head NTK 16** shown above.

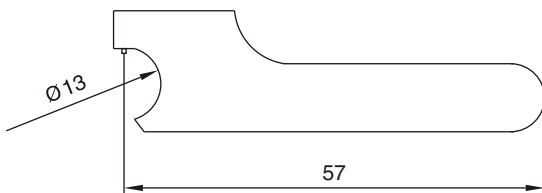
# PROBE HEADS

Probe heads and accessories	Order No.	Material	wt	L mm
<b>Probe extensions</b>	50 NVMA	Aluminium	22g	50.0
	100 NVMA	Aluminium	30g	100.0
	150 NVMA	Aluminium	35g	150.0
	200 NVMA	Aluminium	45g	200.0
	300 NVMA	Aluminium	58g	300.0
	50 NVMS	Steel	30g	50.0
	100 NVMS	Steel	50g	100.0
	150 NVMS	Steel	75g	150.0
	200 NVMS	Steel	95g	200.0
	50 NVMC	Carbon Fiber	20g	50.0
	100 NVMC	Carbon Fiber	22g	100.0
	150 NVMC	Carbon Fiber	24g	150.0
	200 NVMC	Carbon Fiber	26g	200.0
	300 NVMC	Carbon Fiber	32g	300.0
	400 NVMC	Carbon Fiber	39g	400.0
*** 300-20 NVMC	Carbon Fiber	95g	300.0	
*** 400-20 NVMC	Carbon Fiber	105g	400.0	
*** 500-20 NVMC	Carbon Fiber	115g	500.0	

\*\*\* Above items are Dia 20mm (instead of Dia 13mm)



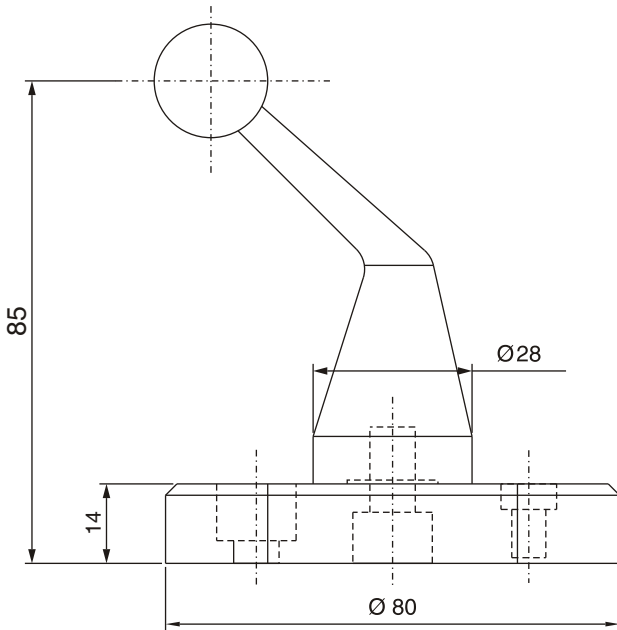
Hook spanner	Order No.	Description
	13.0 NWHA	Ø 13mm for probe extensions



# REFERENCE SPHERES

Reference spheres
<b>Reference spheres with base plate (Type A)</b>

Probing from all 6 semi-axes.



Order No.	Ball Material	Ball-Ø mm
15 NRKA	Ceramic	15.0
20 NRKA	Ceramic	20.0
25 NRKA	Ceramic	25.0
30 NRKA	Ceramic	30.0
25 NRSA	Steel	25.0

#### Supplied equipment:

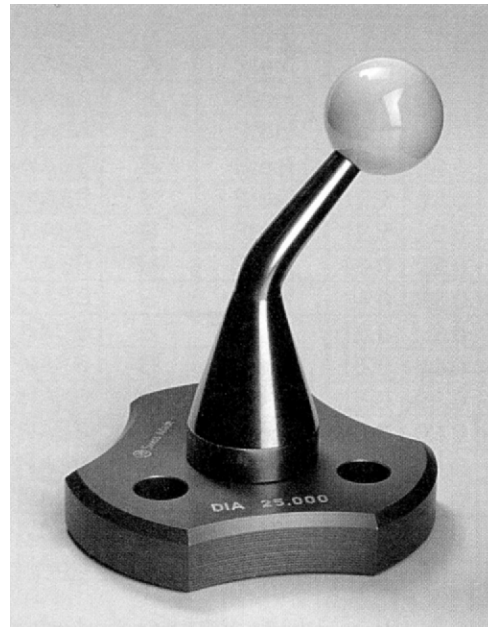
- Ball holder bent 45° with reference sphere L=85mm
- Base plate with 3-Point stand (see draw. Page 75)
- Extension L=70mm (see draw. Page 75)
- Fixing screws (1X M6, 1X M8, 1X M10)
- Test certificate

#### Technical data:

Each reference sphere is supplied with a test certificate with exact diameter and roundness values of the ball.

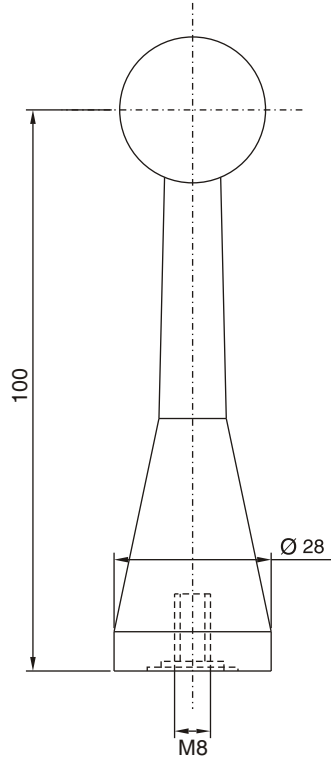
Ceramic-Ball Ø	Material	Form-deviation
15.0 mm	Ceramic Al <sub>2</sub> O <sub>3</sub>	< 0.25 µm
20.0 mm	Ceramic Al <sub>2</sub> O <sub>3</sub>	< 0.25 µm
25.0 mm	Ceramic Al <sub>2</sub> O <sub>3</sub>	< 0.25 µm
30.0 mm	Ceramic Al <sub>2</sub> O <sub>3</sub>	< 0.25 µm

Steel-Ball Ø	Material	Form-deviation
25.0 mm	Steel AISI440C	< 0.25 µm



# REFERENCE SPHERES

Reference spheres	Order No.	Ball Material	Ball-Ø mm
Reference spheres (Type B)	15 NRKB	Ceramic	15.0
	20 NRKB	Ceramic	20.0
	25 NRKB	Ceramic	25.0
	30 NRKB	Ceramic	30.0
	25 NRSB	Steel	25.0



Supplied equipment:

- Ball holder with reference spheres L=100mm
- Test certificate

Please order the appropriate size Fixing bolt to your CMM (Page 75).

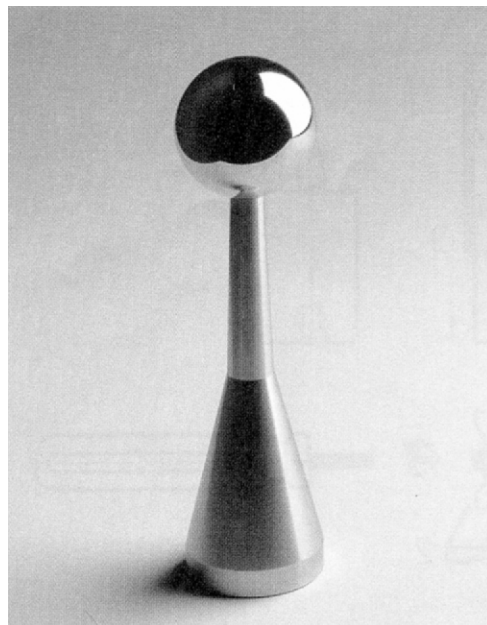
Extensions see Page 75.

#### Technical data:

Each reference sphere is supplied with a test certificate with exact diameter and roundness values of the ball.

Ceramic-Ball Ø	Material	Form-deviation
15.0 mm	Ceramic Al <sub>2</sub> O <sub>3</sub>	< 0.25 µm
20.0 mm	Ceramic Al <sub>2</sub> O <sub>3</sub>	< 0.25 µm
25.0 mm	Ceramic Al <sub>2</sub> O <sub>3</sub>	< 0.25 µm
30.0 mm	Ceramic Al <sub>2</sub> O <sub>3</sub>	< 0.25 µm

Steel-Ball Ø	Material	Form-deviation
25.0 mm	Steel AISI440C	< 0.25 µm



# REFERENCE SPHERES

<b>Reference spheres</b>
<b>Reference spheres (Type C)</b>

Probing from all 6-semi axes.  
Can be fixed to the surface plate with angle gear.

Order No.	Ball Material	Ball-Ø mm
15 NRKC	Ceramic	15.0
20 NRKC	Ceramic	20.0
25 NRKC	Ceramic	25.0
30 NRKC	Ceramic	30.0
25 NRSC	Steel	25.0

Supplied equipment:

- 1) Ball holder bent 45° with reference sphere L=125mm
- 2) Base plate with angle gear and 3-point stand
- 3) Sliding sleeve to protect the reference sphere
- 4) Extension L=50mm (see draw. Page 75)
- 5) Hexagon key 3.0mm
- 6) Pin key 2.9mm (see draw. Page 60)
- 7) Fixing bolts (1X M6, 1X M8, 1X M10. draw (Page 75))

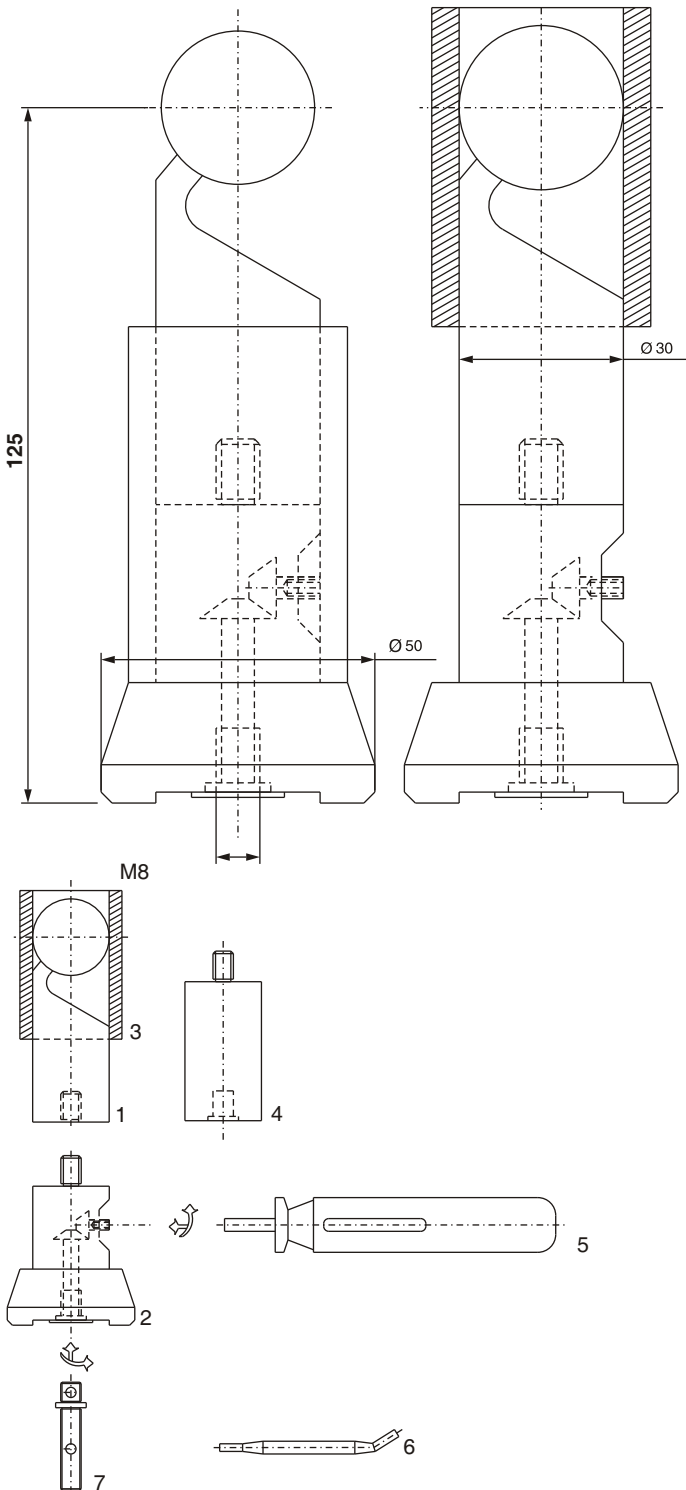
-Test certificate

Technical data:

Each reference sphere is supplied with a test certificate with exact diameter and roundness values of the ball.

Ceramic-Ball Ø	Material	Form-deviation
15.0 mm	Ceramic Al <sub>2</sub> O <sub>3</sub>	< 0.25 µm
20.0 mm	Ceramic Al <sub>2</sub> O <sub>3</sub>	< 0.25 µm
25.0 mm	Ceramic Al <sub>2</sub> O <sub>3</sub>	< 0.25 µm
30.0 mm	Ceramic Al <sub>2</sub> O <sub>3</sub>	< 0.25 µm

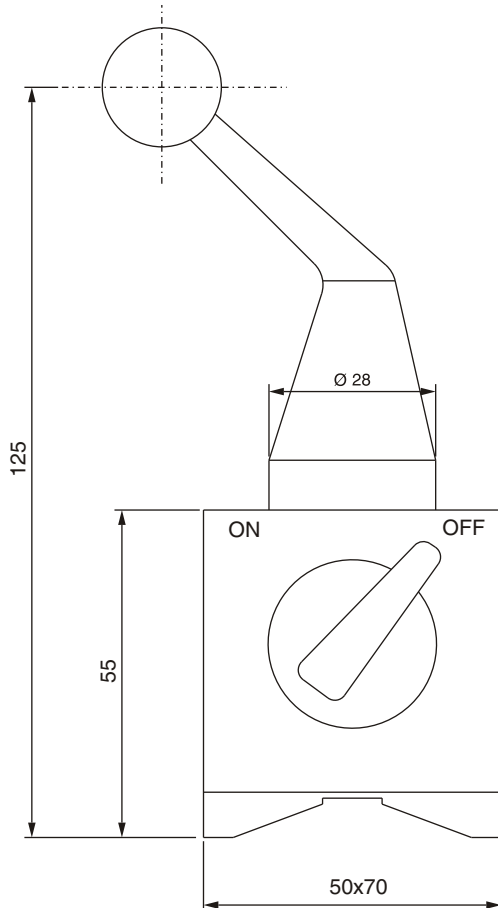
Steel-Ball Ø	Material	Form-deviation
25.0 mm	Steel AISI440C	< 0.25 µm



# REFERENCE SPHERES

Reference spheres	Order No.	Ball Material	Ball-Ø mm
<b>Reference spheres with magnetic base (Type D)</b>	15 NRKD	Ceramic	15.0
	20 NRKD	Ceramic	20.0
	25 NRKD	Ceramic	25.0
	30 NRKD	Ceramic	30.0
	25 NRSD	Steel	25.0

Probing from all 6-semi axes.



### Supplied equipment:

- Ball holder bent 45° with reference sphere L=125mm
- Magnetic base (with on/off switch)
- Extension L=70mm (see draw. Page 75)
- Test certificate

### Technical data:

Each reference sphere is supplied with a test certificate with exact diameter and roundness values of the ball.

Ceramic-Ball Ø	Material	Form-deviation
15.0 mm	Ceramic Al <sub>2</sub> O <sub>3</sub>	< 0.25 µm
20.0 mm	Ceramic Al <sub>2</sub> O <sub>3</sub>	< 0.25 µm
25.0 mm	Ceramic Al <sub>2</sub> O <sub>3</sub>	< 0.25 µm
30.0 mm	Ceramic Al <sub>2</sub> O <sub>3</sub>	< 0.25 µm

Steel-Ball Ø	Material	Form-deviation
25.0 mm	Steel AISI440C	< 0.25 µm

# REFERENCE SPHERES

Reference spheres	Order No.	Ball Material	Ball-Ø mm
Reference spheres with magnetic base (Type E)	15 NRKE	Ceramic	15.0
	20 NRKE	Ceramic	20.0
	25 NRKE	Ceramic	25.0
	30 NRKE	Ceramic	30.0
	25 NRSE	Steel	25.0

### Supplied equipment:

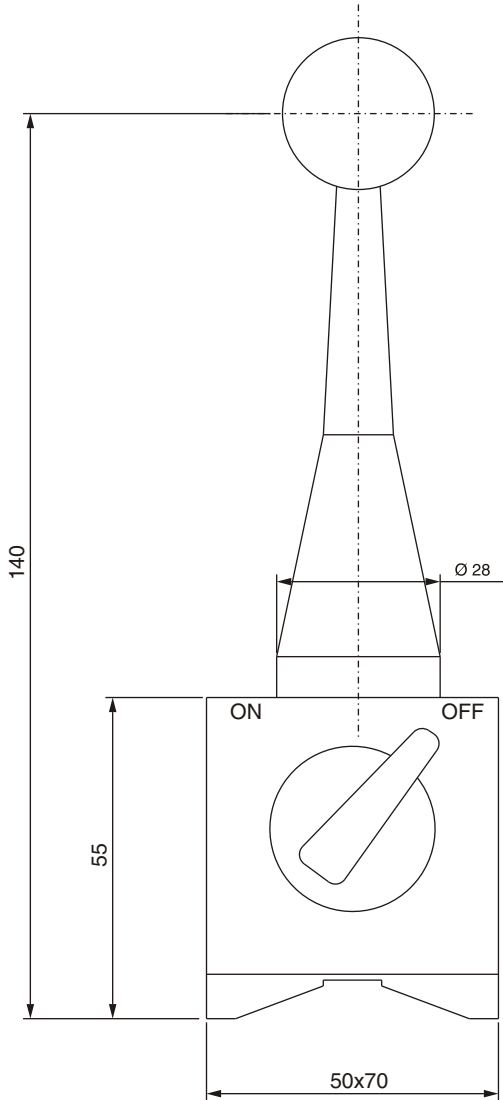
- Ball holder with reference sphere L=155mm
- Magnetic base (with on/off switch)
- Extension L=70mm (see draw. Page 75)
- Test certificate

### Technical data:

Each reference sphere is supplied with a test certificate with exact diameter and roundness values of the ball.

Ceramic-Ball Ø	Material	Form-deviation
15.0 mm	Ceramic Al <sub>2</sub> O <sub>3</sub>	< 0.25 µm
20.0 mm	Ceramic Al <sub>2</sub> O <sub>3</sub>	< 0.25 µm
25.0 mm	Ceramic Al <sub>2</sub> O <sub>3</sub>	< 0.25 µm
30.0 mm	Ceramic Al <sub>2</sub> O <sub>3</sub>	< 0.25 µm

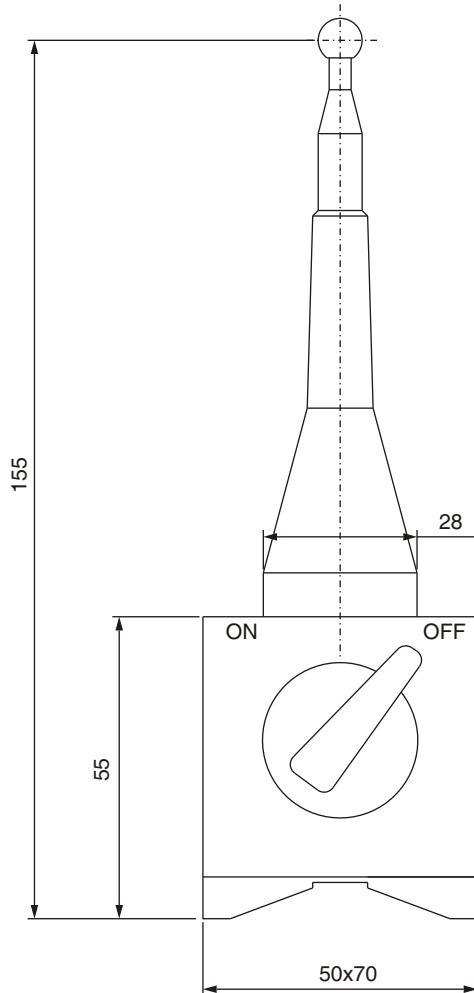
Steel-Ball Ø	Material	Form-deviation
25.0 mm	Steel AISI440C	< 0.25 µm



# REFERENCE SPHERES

Reference spheres	Order No.	Ball Material	Ball-Ø mm
Reference spheres for spark machine (Type F)	245 NRKF	TC	2 / 4 / 5

Electrically conductive reference spheres.



## Supplied equipment:

- Ball holder with reference sphere  
L=155mm
- 3 reference spheres exchangeable  
(1XØ2mm, 1XØ4mm, 1XØ5mm)
- Magnetic base (with on/off switch)
- Extension L=70mm (see draw. Page 75)

## Technical data of reference spheres:

Diameter tolerance:  $\pm 1 \mu\text{m}$   
Form deviation:  $< 0.25 \mu\text{m}$

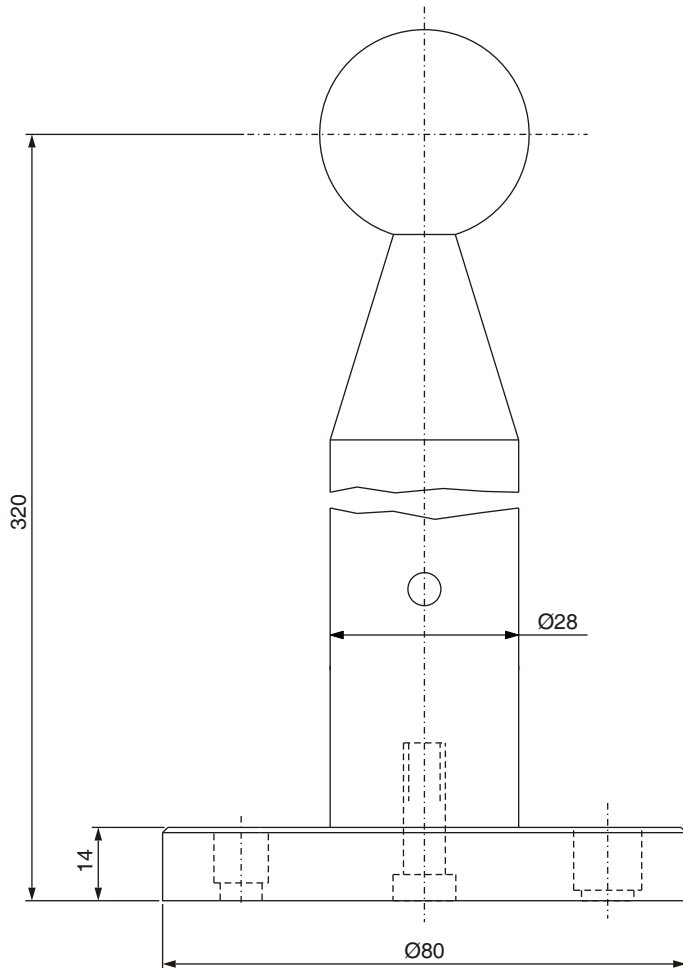
TC=Tungsten Carbide



# REFERENCE SPHERES

Reference spheres	Order No.	Ball Material	Ball-Ø mm
<b>Reference spheres with base plate (Type G)</b>	20 NRKG	Ceramic	20.0
	25 NRKG	Ceramic	25.0
	30 NRKG	Ceramic	30.0
	50 NRKG	Ceramic	50.0
	25 NRSB	Steel	25.0

Large design.



### Supplied equipment:

- Ball holder with reference sphere  
L=320mm
- Base plate
- Extension L=200mm (see draw. below)
- Fixing screws(1X M6, 1X M8, 1X M10)
- Test certificate

### Technical data:

Each reference sphere is supplied with a test certificate with exact diameter and roundness values of the ball.

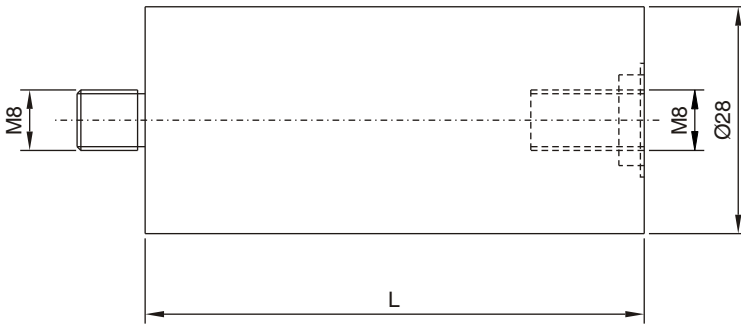
Ceramic-Ball Ø	Material	Form-deviation
20.0 mm	Ceramic Al <sub>2</sub> O <sub>3</sub>	< 0.25 µm
25.0 mm	Ceramic Al <sub>2</sub> O <sub>3</sub>	< 0.25 µm
30.0 mm	Ceramic Al <sub>2</sub> O <sub>3</sub>	< 0.25 µm
50.0 mm	Ceramic Al <sub>2</sub> O <sub>3</sub>	< 0.25 µm

Steel-Ball Ø	Material	Form-deviation
25.0 mm	Steel AISI440C	< 0.25 µm

# REFERENCE SPHERES

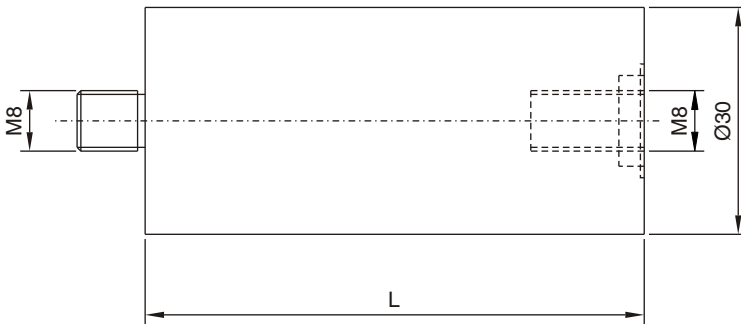
Accessories	Order No.	Material	L mm
<b>Extension</b>	70 NVRA	Steel	70
	100 NVRA	Steel	100
	200 NVRA	Steel	200

For use with **Reference spheres (Type A, B, D, E, F).**



Extensions	Order No.	Material	L mm
	50 NVRC	Aluminium	50.0
	100 NVRC	Aluminium	100.0

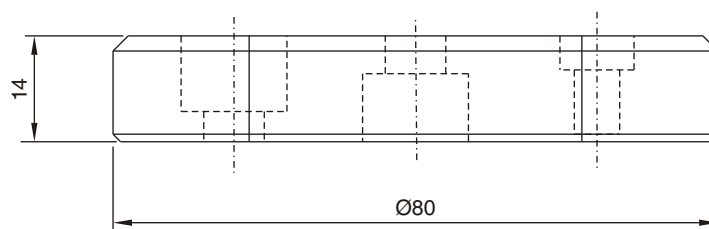
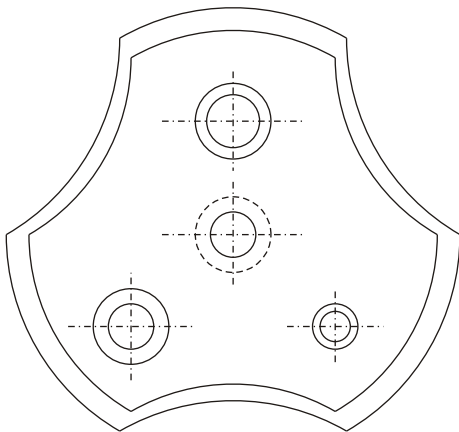
For use with **Reference spheres (Type C).**



Base plate with 3-point stand	Order No.	Material
	80 NGRA	Aluminium

For use with **Reference spheres (Type A, B).**

Delivered with fixing screws(1X M6, 1X M8, 1X M10).



Fixing bolts	Order No.	Thread G
	60-6 NBB	M6
	60-8 NBB	M8
	60-10 NBB	M10
	60-1-4 NBB	1/4-20 UNC
	60-3-8 NBB	3/8-16 UNC

For use with **Reference spheres (Type B, C).**  
Other thread sizes are available. Please contact us for details.